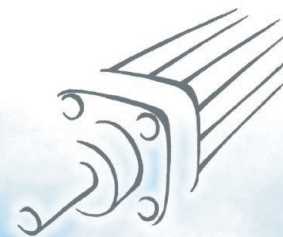
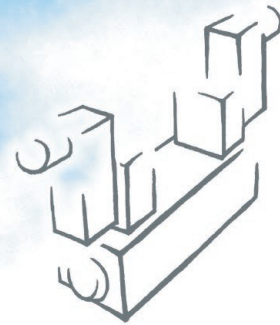
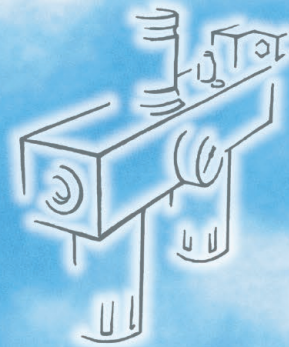


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## ISO 6432 MINI-CYLINDERS



ACTUATORS

ISO 6432 MINI-CYLINDERS

### ISO 6432 MINI-CYLINDERS SERIES STD

TECHNICAL DATA		Polyurethane	NBR			FKM/FPM	Low temperature
Max operating pressure	bar MPa		10				
Temperature range	°C	-10 to +80	-10 to +80			-10 to +150 (non-magnetic cylinders)	-35 to +80
Fluid		Unlubricated air. Lubrication, if used, must be continuous					
Bores	mm	8; 10; 12; 16; 20; 25					
Design		Chamfered barrel					
Standard strokes †	mm	Single-acting:	for bores Ø 8 to 25 strokes from 1 to 50				
		Double-acting:	for bores Ø 8 to 10 strokes from 1 to 100				
			for bores Ø 12 to 16 strokes from 1 to 200				
			for bores Ø 20 to 25 strokes from 1 to 500				
		Double-acting, cushioned:	for bores Ø 16 strokes from 1 to 300				
			for bores Ø 20 to 25 strokes from 1 to 500				
Versions		Double-acting, Double-acting cushioned, Single-acting retracted piston rod, Through-rod, Through-rod cushioned, Version with piston rod block, no-stick slip					
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.					
Inrush pressure		Ø 8	Ø 10	Ø 12	Ø 16	Ø 20	Ø 25
single piston rod	bar	0.8	0.8	0.8	0.6	0.6	0.6
through-rod	bar	1	1	1	0.8	0.8	0.8
Notes		<b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b> † Maximum recommended strokes. Higher values can create operating problems					

#### KEY TO CODES

CYL	1 1 2 TYPE	0	16 BORE	0020 STROKE	C MATERIAL	P GASKETS
	101 SE axial coupling	0 Standard	▼ 08	For the maximum suppliable strokes, look at the technical data	A C45 chrome rod, aluminium piston rod	P Polyurethane
	102 DEM axial coupling	U Bronze rear head bushing	▼ 10		C C45 chrome rod, technopolymer piston rod	N NBR
	104 SE through-rod	V Without head nut	▼ 12	Z Stainless steel piston rod and nut aluminium piston		● V FKM/FPM
■	106 SE cushioned	S Non-magnetic	16		X Stainless steel piston rod and nut technopolymer piston	● B Low temperature
■	109 DEA	▲ G No stick slip	20			
	110 DE		25			
	111 SE					
	112 DEM					
■	113 DEMA					
* ▼	114 DEM through-rod					
* ▼ ■	115 DEMA through-rod					
◆	116 DEM for mechanical lock					
■	117 DEMA for mechanical lock					

DE: Double-acting (non-cushioned, not magnetic)  
 DEM: Magnetic double-acting (non-cushioned)  
 DEMA: Magnetic double-acting (cushioned)  
 DEA: Cushioned double-acting (non-magnetic)  
 SE: Single-acting (magnetic)

● Only available for non-magnetic versions (S)  
 and with aluminium piston (A or Z)  
 ▲ For speeds lower than 0.2 m/s, to prevent surging.  
 Use no-lubricated air only  
 ▼ Stainless steel piston rod

■ Available from Ø 16  
 ◆ Available from Ø 12  
 \* For Ø16 to 25 aluminium piston, stainless steel  
 piston rod



## ISO 6432 MINI-CYLINDERS SERIES TP - TECHNOPOLYMER HEADS

TECHNICAL DATA		POLYURETHANE		
Max operating pressure	bar	10		
	MPa	1		
Temperature range	°C	-10 to +60		
Fluid		Unlubricated air. Lubrication, if used, must be continuous		
Bores	mm	16; 20; 25		
Design		Aluminium liner chamfered on the heads		
Standard strokes <b>+</b>	mm	Ø 16: from 1 to 200		
	mm	Ø 20 to 25: from 1 to 500		
Versions		Double-acting, Double Through-rod (for both there are magnetic and non magnetic versions)		
Inrush pressure	bar	Ø 16	Ø 20	Ø 25
single piston rod	bar	0.6	0.6	0.6
through-rod	bar	0.8	0.8	0.8
Notes		The standard version is lacking of the head nut. <b>Use of fittings with a taper thread is NOT recommended.</b> <b>+</b> Maximum recommended strokes. Higher values can create operating problems.		

### KEY TO CODES

CYL	1 1 0 TYPE	3	16 BORE	0	020 STROKE	C MATERIAL	P GASKETS
	110 DE non-magnetic minicylinder	● 3 TP heads (standard)	■ 16	0 Standard	For the maximum suppliable strokes, look at the technical data	C C45 chrome rod	P Polyurethane
	112 DEM minicylinder	● 4 TP heads (standard) + head nut	■ 20	S Non-magnetic		X Stainless rod	
	114 DEM through-rod minicylinder		■ 25				

DE: Double-acting (non-cushioned, not magnetic).

DEM: Double action magnetic (unless otherwise specified) not cushioned.

As standard the cylinders are already no stick-slip version.

● This version don't provide the nut on the head.

■ Ø 16 will be only in version with stainless rod (X).

## ACCESSORIES

### FOOT MODEL A



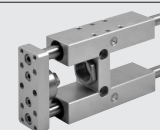
Code	Ø	Description
W0950080001	8/10	Acc. foot Mod. A
W0950120001	12/16	Acc. foot Mod. A
W0950200001	20/25	Acc. foot Mod. A

### NUT FOR PISTON RODS MODEL DA



Code	Ø	Description
0950080011	8/10	Acc. nut for piston rod Mod. DA M4
0950120011	12/16	Acc. nut for piston rod Mod. DA M6
0950200011	20	Acc. nut for piston rod Mod. DA M8
0950322010	25	Acc. nut for piston rod Mod. DA M10x1.25

### H PROFILE: FOR HIGH LOAD



Code
W0700__2__

### FLANGE MODEL C



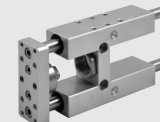
Code	Ø	Description
W0950080002	8/10	Acc. flange Mod. C
W0950120002	12/16	Acc. flange Mod. C
W0950200002	20/25	Acc. flange Mod. C

### FORK MODEL GK-M



Code	Ø	Description
W0950080020	8/10	Acc. fork Mod. GK-M M4
W0950120020	12/16	Acc. fork Mod. GK-M M6
W0950200020	20	Acc. fork Mod. GK-M M8
W0950322020	25	Acc. fork Mod. GK-M M10x1.25

### H PROFILE: FOR HIGH SPEEDS



Code
W0700__3__

### COUNTER-HINGE MODEL BC



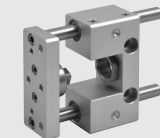
Code	Ø	Description
W0950080005	8/10	Acc. counter-hinge Mod. BC
W0950120005	12/16	Acc. counter-hinge Mod. BC
W0950200005	20/25	Acc. counter-hinge Mod. BC

### ROD EYE MODEL GA-M



Code	Ø	Description
W0950080025	8/10	Acc. rod eye Mod. GA-M M4
W0950120025	12/16	Acc. rod eye Mod. GA-M M6
W0950200025	20	Acc. rod eye Mod. GA-M M8
W0950322025	25	Acc. rod eye Mod. GA-M M10x1.25

### U PROFILE: FOR LIMITED LOADS AND SPEEDS



Code
W0700__1__

### NUT FOR HEADS MODEL D



Code	Ø	Description
0950080010	8/10	Acc. nut for heads Mod. D M12x1.25
0950120010	12/16	Acc. nut for heads Mod. D M16x1.5
0950200010	20/25	Acc. nut for heads Mod. D M22x1.25

### MECHANICAL PISTON ROD LOCK FOR ISO 6432 MINI-CYLINDERS



Code	Ø	Description
W5010001099	12/16	Acc. piston rod MV70 LD
W5010001100	20	Acc. piston rod MV70 LD
W5010001101	25	Acc. piston rod MV70 LD

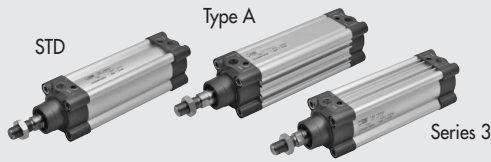
### CODE EXAMPLE TO ORDER

W0700**25**2100

### STANDARD STROKE

50 - 100 - 150 - 200 - 250 - 320 - 400 - 500

## ISO 1552 CYLINDERS



ACTUATORS

ISO 1552 CYLINDERS

TECHNICAL DATA		Polyurethane	NBR	FKM/FPM	Low temperature
Max operating pressure	bar			10	
	MPa			1	
	psi			145	
Temperature range	°C	-10 to +80	-10 to +80	[-10 to +150 (non-magnetic cyl.)]	
Fluid		Unlubricated air. Lubrication, if used, must be continuous			
Bore	mm	32; 40; 50; 63; 80; 100; 125			
Design		Heads with tap type screws			
Standard stroke †	mm	Single-acting: for bores 32 to 63 strokes from 1 to 250 Double-acting: for bores 32 to 80 strokes from 1 to 2800 for bores 100 to 125 strokes from 1 to 2600			
Versions		Double-acting cushioned, Single-acting extended or retracted piston rod cushioned, Through-rod cushioned, Long cushioning, High-temperature, Piston rod lock, Oil seal, Through-rod oil seal, Low friction, Non-stick-slip.			
Sensor magnet		All versions come complete with magnet. Supplied without magnet on request.			
Inrush pressure		Ø 32; 40: 0.4 bar Ø 50; 63 strokes < 1500 mm: 0.3 bar; strokes > 1500 mm: 0.4 bar Ø 80; 100; 125 strokes < 1500 mm: 0.2 bar; strokes > 1500 mm: 0.4 bar			
Notes		<b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b> † Maximum recommended strokes. Higher values can create operating problems			

## ISO 1552 CYLINDERS SERIES STD

### KEY TO CODES SERIES STD

CYL	1 2 1 TYPE	0	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	▼ E
	120 Double-acting, cushioned, non-magnetic	0 Diameter	32	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with ≥ 1000 mm-stroke cylinders and for cylinder with Ø 80 mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets	E Single-acting extended rod
	121 Double-acting, cushioned	S Non-magnetic	40				
	122 Through-rod	▲ G No stick slip	50				
●	124 Double-acting, non-cushioned		63				
	125 Opposed		80				
+	126 Single-acting		100	C C45 chromed rod, technopolymer piston: standard for cylinders of Ø 32 to 63 mm with <1000 mm strokes	● B Low temperature		
	127 Tandem		125				
*	134 Rod lock version						Z Stainless steel piston rod and nut aluminium piston
* ♦	136 Version with piston rod lock						X Stainless steel piston rod and nut technopolymer piston
* ♦	137 Piston rod lock + guide unit						

- In the code of cylinder with letter in fourth position Ø 100 becomes A1; Ø 125 becomes A2
- Only available for versions with aluminium piston (A or Z)
- + Available until Ø 63 and only the versions with piston in aluminum (A or Z)
- 126... Single-acting retracted rod
- 126...E Single-acting extended rod

- ▼ Letter to be added only to the single acting extended rod version
- ▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only
- ♦ Available up to Ø 100
- \* Not available for gaskets V or B

Available low-friction version [123] and long-cushioning version [131]



## ISO 15552 CYLINDERS TYPE A

### KEY TO CODES TYPE A

CYL	1 2 1 TYPE	A	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	▼ E
	121 Double-acting, cushioned	A Standard	32	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with $\geq 1000$ mm-stroke cylinders and for cylinder with $\varnothing 80$ mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets	E Single-acting extended rod
●	122 Through-rod	▲ B No stick slip	40				
	124 Double-acting, non-cushioned	C Non-magnetic	50				
	125 Opposed		63				
+	126 Single-acting		80				
	127 Tandem		A1 = $\varnothing 100$ A2 = $\varnothing 125$				
	134 Rod lock version						
*	136 Version with piston rod lock						
* ♦	137 Piston rod lock + guide unit						
					Z Stainless steel piston rod and nut aluminium piston	● B Low temperature	
				X Stainless steel piston rod and nut technopolymer piston			

- Only available for versions with aluminium piston (A or Z)
- + Available until  $\varnothing 63$  and only the versions with piston in aluminium (A or Z)
- 126... Single-acting retracted rod
- 126...E Single-acting extended rod

- ▼ Letter to be added only to the single acting extended rod version
- ▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only
- ◆ Available up to  $\varnothing 100$
- \* Not available for gaskets V or B

Available low-friction version [129] and long-cushioning version [130]

## ISO 15552 CYLINDERS SERIES 3

### KEY TO CODES SERIES 3

CYL	1 2 1 TYPE	3	3 2 BORE	0 0 5 0 STROKE	C MATERIAL	P GASKETS	▼ E
	121 Double-acting, cushioned	3 Series 3	32	For the maximum applicable strokes, look at the technical data	A C45 chromed rod, aluminium piston rod: standard for all cylinders with $\geq 1000$ mm-stroke cylinders and for cylinder with $\varnothing 80$ mm and over	N NBR gaskets P Polyurethane gaskets V FKM/FPM gaskets	E Single-acting extended rod
●	122 Through-rod	◆ 4 Series 3	40				
	124 Double-acting, non-cushioned		50				
	125 Opposed		63				
+	126 Single-acting	5 Series 3	80				
	127 Tandem		A1 = $\varnothing 100$ A2 = $\varnothing 125$				
■	134 Rod lock version						
■ *	136 Version with piston rod lock						
■ * ◆	137 Piston rod lock + guide unit						
					Z Stainless steel piston rod and nut aluminium piston	● B Low temperature	
				X Stainless steel piston rod and nut technopolymer piston			

- Only available for versions with aluminium piston (A or Z)
- + Available until  $\varnothing 63$  and only the versions with piston in aluminium (A or Z)
- 126... Single-acting retracted rod
- 126...E Single-acting extended rod

- ▼ Letter to be added only to the single acting extended rod version
- ◆ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only
- \* Available until  $\varnothing 100$
- Not available for gasket V or B

### KEY TO CODES ULTRA-LOW FRICTION SERIES 3

CYL	1 2 3 TYPE	3	3 2 BORE	0 1 0 0 STROKE	A MATERIAL	N GASKETS
	123 Ultra-low friction	3 Double-acting magnetic	32	From 1 to 1200 mm	A C45 chromed rod, aluminium piston rod	N NBR gaskets
		5 Double-acting not magnetic	40		Z Stainless steel piston rod and nut aluminium piston	
			50			
			63			

ALL the cylinders are no stick slip.  
ALL the cylinders are non-cushioned.

Ultra-low friction cylinders are not available in the through-rod version.

## ISO 15552 TWO-FLAT CYLINDERS



TECHNICAL DATA		POLYURETHANE			
Max operating pressure	bar	10			
	MPa	1			
	psi	145			
Temperature range	°C	-10 to +80			
Fluid		Unlubricated air. Lubrication, if used, must be continuous			
Bore	mm	32; 40; 50; 63			
Design		Heads with Tap Tite screws			
Maximum stroke	mm	∅ 32 = 300	∅ 40 = 400	∅ 50 = 500	∅ 63 = 500
Versions		Double-acting cushioned, Through-rod cushioned, no-stick slip			
Sensor magnet		All versions come complete with magnet. Supplied without magnet on request.			
Inrush pressure	bar	∅ 32 = 0.4	∅ 40 = 0.4	∅ 50 = 0.3	∅ 63 = 0.3
Max torque on piston rod	Nm	∅ 32 = 0.2	∅ 40 = 0.4	∅ 50 = 1	∅ 63 = 1
Maximum rotation on the rod	degrees	∅ 32 = 0.70°	∅ 40 = 0.75°	∅ 50 = 0.65°	∅ 63 = 0.65°
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.			

### KEY TO CODES FOR ISO 15552 TWO-FLAT STD CYLINDERS

CYL	1 2 1 TYPE	0	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
120	Double-acting, cushioned, non-magnetic	0 Diameter	32 50	+ ∅ 32 stroke 1 to 300 mm	F "Two Flat" piston rod AISI 303 stainless steel nut	P Polyurethane gaskets
121	Double-acting, cushioned	S Non-magnetic	40 63	+ ∅ 40 stroke 1 to 400 mm		
122	Through-rod	▲ G No stick slip		+ ∅ 50 to 63 stroke 1 to 500 mm		

### KEY TO CODES FOR ISO 15552 TWO-FLAT TYPE A CYLINDERS

CYL	1 2 1 TYPE	A	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
121	Double-acting, cushioned	A Standard	32 50	+ ∅ 32 stroke 1 to 300 mm	F "Two Flat" piston rod AISI 303 stainless steel nut	P Polyurethane gaskets
122	Through-rod	▲ B No stick slip	40 63	+ ∅ 40 stroke 1 to 400 mm		
		C Non-magnetic		+ ∅ 50 to 63 stroke 1 to 500 mm		

### KEY TO CODES FOR ISO 15552 TWO-FLAT SERIE 3 CYLINDERS

CYL	1 2 1 TYPE	3	3 2 BORE	0 0 5 0 STROKE	F MATERIAL	P GASKETS
121	Double-acting, cushioned	3 Series 3	32 50	+ ∅ 32 stroke 1 to 300 mm	F "Two Flat" piston rod AISI 303 stainless steel nut	P Polyurethane gaskets
122	Through-rod	▲ 4 Series 3 No stick slip	40 63	+ ∅ 40 stroke 1 to 400 mm		
		5 Series 3 Non-magnetic		+ ∅ 50 to 63 stroke 1 to 500 mm		

- + Maximum recommended strokes. Higher values can create operating problems
- ▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

## TWIN-ROD CYLINDER SERIES TWNC



TECHNICAL DATA		POLYURETHANE			
Max operating pressure	bar	10			
	MPa	1			
	psi	145			
Temperature range	°C	-10 to +80			
Fluid		Filtered, unlubricated air. Lubrication, if used, must be continuous.			
Bores	mm	32; 40; 50; 63; 80; 100			
Strokes +	mm	from 25 to 500			
Design		Extruded profile			
Esecution		Magnetic standard cushioned			
Forces generated at 6 bar thrust/retraction	N	∅ 32: 434/350		∅ 63: 1683/1471	
		∅ 40: 678/597		∅ 80: 2714/2295	
		∅ 50: 1060/940		∅ 100: 4241/3812	
Notes		+ Maximum recommended strokes. Higher values can create operating problems			

### KEY TO CODES

CYL	W 1 4 0 TYPE	0 3 2 BORES	0 0 2 5 STROKE	+ Maximum recommended strokes. Higher values can create operating problems.
W140	Double-acting cylinder, magnetic, cushioned	032 063	+ 0025 to 0500 mm	
W142	Double-acting cylinder, magnetic, cushioned single through-rod	040 080		
		050 100		

## ACCESSORIES EXAMPLE: 0950322007

### FOOT - MODEL A



Code	Description
W095_2001	
W095_3001	For twin-rod

### FEMALE HINGE MODEL B



Code
W095_2003

### MALE HINGE MODEL BA



Code
W095_2004

### ARTICULATED MALE HINGE MODEL BAS



Code
W095_2006

### CETOP HINGE FOR MODEL B - MODEL GL



Code
W095_2008

### ISO HINGE FOR MODEL B - MODEL GS



Code
W095_2108

### ISO 1552 HINGE FOR MODEL B - MODEL AB7



Code
W095_2017

### FRONT-REAR FLANGE MODEL C



Code	Description
W095_2002	
W095_3002	For twin-rod (front)

### ROD NUT - MODEL S



Code	Ø	Description
0950322010	32	Acc. rod nut cyl. 15552 M10x1.25
0950402010	40	Acc. rod nut cyl. 15552 M12x1.25
0950502010	50/63	Acc. rod nut cyl. 15552 M16x1.5
0950802010	80/100	Acc. rod nut cyl. 15552 M20x1.5
0951252010	125	Acc. rod nut cyl. 15552 M27x2

### ROD EYE - MODEL GA-M



Code	Ø	Description
W0950322025	32	Acc. rod eye Mod. GA-M M10x1.25
W0950402025	40	Acc. rod eye Mod. GA-M M12x1.25
W0950502025	50/63	Acc. rod eye Mod. GA-M M16x1.5
W0950802025	80/100	Acc. rod eye Mod. GA-M M20x1.5
W0951252025	125	Acc. rod eye Mod. GA-M M27x2

### FORK - MODEL GK-M



Code	Ø	Description
W0950322020	32	Acc. fork Mod. GK-M M10x1.25
W0950402020	40	Acc. fork Mod. GK-M M12x1.25
W0950502020	50/63	Acc. fork Mod. GK-M M16x1.5
W0950802020	80/100	Acc. fork Mod. GK-M M20x1.5
W0951252020	125	Acc. fork Mod. GK-M M27x2

### SELF ALIGNING ROD COUPLER MODEL GA-K



Code	Ø	Description
W0950322030	032	Acc. self aligning rod coupler Mod. GA-K-M10x1.25
W0950402030	040	Acc. self aligning rod coupler Mod. GA-K-M12x1.25
W0950502030	050/063	Acc. self aligning rod coupler Mod. GA-K-M16x1.5
W0950802030	080/100	Acc. self aligning rod coupler Mod. GA-K-M20x1.5

### INTERMEDIATE HINGE MODEL EN, FOR STD, STD TWO-FLAT SERIES AND TWIN-ROD



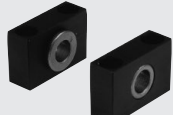
Code
095_2007

### INTERMEDIATE HINGE MODEL EN, FOR TYPE A AND TYPE A TWO-FLAT SERIES



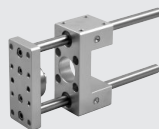
Code
095_2107

### COUNTER-HINGE FOR MODEL EN - MODEL EL



Code	Ø	Description
W0950322009	032	Acc. counter-hinge Mod. EL
W0950402009	040/050	Acc. counter-hinge Mod. EL
W0950632009	063/080	Acc. counter-hinge Mod. EL
W0951002009	100/125	Acc. counter-hinge Mod. EL

### GDS: M PROFILE FOR LIMITED LOADS AND SPEEDS



Code
W070_1_*

### GDH: H PROFILE FOR HIGH LOADS



Code
W070_2_*

### GDM: H PROFILE FOR HIGH SPEED



Code
W070_3_*

### \* CODE EXAMPLE TO ORDER

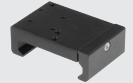
W0700322100  
STANDARD STROKE  
50 - 100 - 150 - 200 - 250 - 320 - 400 - 500

### MECHANICAL ROD BLOCK



Code	Ø	Description
W5010001102	32	Acc. rod block MV5032/LD
W5010001103	40	Acc. rod block MV5040/LD
W5010001104	50	Acc. rod block MV5050/LD
W5010001109	63	Acc. rod block MV5063/LD
W5010001106	80	Acc. rod block MV5080/LD
W5010001107	100	Acc. rod block MV5100/LD
W5010001108	125	Acc. rod block MV5125/LD

### VALVE FIXING BRACKET - CYLINDER SERIES KCV



Code	Description
0950322090	Kit fix. bracket cil. 32 valve
0950402090	Kit fix. bracket cil. 40 valve
0950502090	Kit fix. bracket cil. 50 valve
0950632090	Kit fix. bracket cil. 63 valve
0950802090	Kit fix. bracket cil. 80 valve
0951002090	Kit fix. bracket cil. 100 valve
0951252090	Kit fix. bracket cil. 125 valve

### KIT FOR FIXING VALVES TO BRACKETS, FOR SERIES KCV BRACKETS

Code	Description
0950002001	Kit fix. val. ISO 1 on cyl. ISO 15552
0950002002	Kit fix. val. ISO 2 on cyl. ISO 15552
0950002003	Kit screws fix. val. M16 on cyl. ISO 15552
0950002004	Kit screws fix. val. 1/8 1/4 on cyl. ISO 15552
0950002006	Kit screws fix. val. 1/2 on cyl. ISO 15552

## CYLINDERS ISO 15552 STD, TYPE "A" AND SERIES 3: SPARE PARTS

### NEW RELEASE

Code	Bore	Description
009...0101	Ø 32 to 125	Complete set of polyurethane gaskets
009...0103	Ø 32 to 125	Complete set of high temperature gaskets
009...0502	Ø 32 to 125	Complete set of NBR gaskets
009...0110N	Ø 32 to 125	Complete polyurethane front head kit
009...0304N	Ø 32 to 125	Complete NBR front head kit
009...0111N	Ø 32 to 125	Complete polyurethane rear head kit
009...0305N	Ø 32 to 125	Complete NBR rear head kit
009...0604	Ø 32 to 125	Complete polyurethane piston kit
009...0602	Ø 32 to 125	Complete NBR piston kit
009...0704N	Ø 32 to 125	Complete polyurethane head A+P+piston kit
009...0702N	Ø 32 to 125	Complete NBR head A+P+piston kit
009...0800	Ø 32 to 125	Magnet

### OLD RELEASE

Code	Bore	Description
009...0101	Ø 32 to 125	Complete set of polyurethane gaskets
009...0502	Ø 32 to 125	Complete set of NBR gaskets
009...0110	Ø 32 to 125	Complete polyurethane front head kit
009...0304	Ø 32 to 125	Complete NBR front head kit
009...0111	Ø 32 to 125	Complete polyurethane rear head kit
009...0305	Ø 32 to 125	Complete NBR rear head kit
009...0604	Ø 32 to 125	Complete polyurethane piston kit
009...0602	Ø 32 to 125	Complete NBR piston kit
009...0704	Ø 32 to 125	Complete polyurethane head A+P+piston kit
009...0702	Ø 32 to 125	Complete NBR head A+P+piston kit
009...0800	Ø 32 to 125	Magnet

## CYLINDERS ISO 15552 STD AND TYPE "A" TWO-FLAT: SPARE PARTS

Code	Bore	Description
009...0101F	Ø 32 to 63	Set of polyurethane gaskets
009...0110F	Ø 32 to 63	Complete polyurethane front head kit
009...0111	Ø 32 to 63	Complete polyurethane rear head kit
009...0604	Ø 32 to 63	Complete polyurethane piston kit
009...0704F	Ø 32 to 63	Complete polyurethane head A+P+piston kit
009...0800	Ø 32 to 63	Magnet

## ISO 15552 CYLINDERS Ø 160-200 ROUND BARREL



ACTUATORS

ISO 15552 CYLINDERS Ø 160-200 ROUND BARREL

TECHNICAL DATA		NBR	FKM/FPM
Max operating pressure	bar MPa		10
Temperature range	°C	-10 to +80	-10 to +150
Design		Round barrel with tie rods	
Standard strokes	mm	25-50-75-80-100-125-150-200-250-300-350-400-500-600-700-800-900-1000	

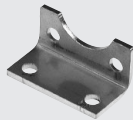
### KEY TO CODES FOR ROUND BARREL

CYL	W 1 2 1 TYPE	1 6 0 DIAMETER-EXECUTION	0 0 5 0 STROKE	0 2 0 0 EXECUTION
W120	Double-acting, cushioned, non magnetic	160 160 200 200	+ 0025 to 2800 mm	Specify H1 value ONLY for version with intermediate hinge
W121	Double-acting, cushioned, non magnetic	XA3 160 stainless steel piston rod		
W122	Double-acting, cushioned, through-rod	XA4 200 stainless steel piston rod		
W123	Double-acting, cushioned, through-rod, non magnetic	VA3 160 FKM/FPM gasket, stainless steel piston rod		
W124	Double-acting, non-cushioned	VA4 200 FKM/FPM gasket, stainless steel piston rod		
		KA3 160 FKM/FPM gasket, C45 piston rod		
		KA4 200 FKM/FPM gasket, C45 piston rod		
		AA3 160 + intermediate hinge		
		AA4 200 + intermediate hinge		
		● GA3 160 no stick-slip		
		● GA4 200 no stick-slip		

- + Maximum recommended strokes. Higher values can create operating problems
- For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

## ACCESSORIES

### FOOT - MODEL A



Code	Description
W0951602001	Acc. foot Mod. A-160
W0952002001	Acc. foot Mod. A-200

### FLANGE - MODEL C (FRONT AND REAR)



Code	Description
W0951602002	Acc. flange Mod. C-160
W0952002002	Acc. flange Mod. C-200

### ROD EYE - MODEL GA-M



Code	Description
W0952002025	Acc. rod eye Mod. GA-M M36X2 160/200

### FEMALE HINGE - MODEL B



Code	Description
W0951602003	Acc. hinge Mod. B-160
W0952002003	Acc. hinge Mod. B-200

### CETOP COUNTER-HINGE - MODEL GL



Code	Description
W0951602008	Acc. counter-hinge Mod. GL-160-200

### FORK - MODEL GK-M



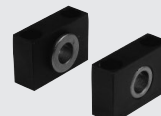
Code	Description
W0951602020	Acc. fork Mod. GK-M M36X2 160/200

### MALE HINGE - MODEL BA



Code	Description
W0951602004	Acc. hinge Mod. BA-160
W0952002004	Acc. hinge Mod. BA-200

### COUNTER-HINGE MODEL EL



Code	Description
W0951602009	Acc. counter-hinge Mod. EL-160/200

### ROD NUT - MODEL S

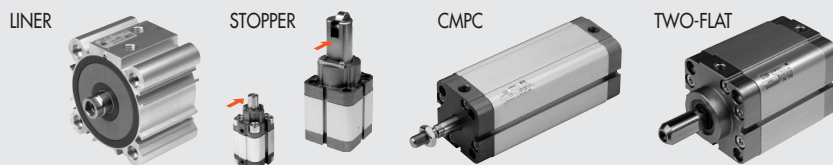


Code	Description
W0951602010	Acc. rod nut Mod. S D. M36X2 160/200

## SPARE PARTS EXAMPLE: W0951602101

Code	Bore	Description
W095_2101	Ø 160 - 200	Complete set of gaskets
W095_2102	Ø 160 - 200	Complete set of high temperature gaskets
W095_0104	Ø 160 - 200	Complete front head kit
W095_0105	Ø 160 - 200	Complete rear head kit
W095_2115	Ø 160 - 200	Complete magnetic piston kit
W095_2118	Ø 160 - 200	Complete non-magnetic piston kit
W095_2120	Ø 160 - 200	Complete head A + P + non-magnetic piston
W095_2119	Ø 160 - 200	Complete head A + P + magnetic piston
W095_2300	Ø 160 - 200	Magnet

## COMPACT CYLINDERS



### ISO 21287 COMPACT CYLINDERS - SERIES LINER

TECHNICAL DATA		POLYURETHANE				FKM/FPM			
Max operating pressure	bar					10			
	MPa					1			
	psi					145			
Temperature range	°C	-10 to +60 (Ø 20 to 63)				-10 to +150 (non-magnetic cylinders)			
		-10 to +80 (Ø 80 to 100)							
Fluid		Unlubricated air. Lubrication, if used, must be continuous.							
Bores	mm	20; 25; 32; 40; 50; 63; 80; 100 with ISO 21287 fixing centre distances							
Design Versions		With profile							
		Double-acting, Double-acting through-rod, Single-acting extended or retracted rod, Single-acting through-rod, Double-acting through-rod perforated, Double-acting non-rotating, Double-acting through-rod non-rotating, No stick slip							
		All versions are available with male or female piston rod.							
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.							
Inrush pressure for single piston rod	bar	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50	Ø 63	Ø 80	Ø 100
		0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4
Inrush pressure for through-rod	bar	0.8	0.8	0.6	0.4	0.4	0.4	0.4	0.4
Notes		For correct operation, it is advisable to use 50 µm filtered air							
		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.							

#### KEY TO CODES

CYL	2 8 TYPE	0	0	20 BORE	0	0 5 0 STROKE	X MATERIAL	P GASKETS
28	Compact cylinder ISO 21287 male piston rod	0 Double-acting	0 Magnetic	20	0 Standard		* C C45 piston rod chromium-plated	P Polyurethane gaskets
		1 Double-acting through-rod	S Non-magnetic	25			▷ X Stainless steel piston rod and nut	▶ V FKM/FPM gaskets
		2 Double-acting through-rod perforated	▲ G No stick slip	32			◁ A C45 chromed rod, aluminium piston	
29	Compact cylinder ISO 21287 female piston rod	3 Single-acting retracting piston rod		40			○ Z Stainless steel piston rod and nut aluminium piston	
		4 Single-acting extended piston rod		50				
		5 Single-acting through-rod		63				
		6 Single-acting through piston rod perforated		80				
		7 Double-acting non-rotating		◆ 100				
		A Double-acting through-rod non-rotating						

- Can also be used as double-acting with spring return
- ▲ For versions 29 only (female piston rod)
- ▼ For Ø 20 to 25 the standard version (0 or S)
- ◆ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only
- ◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
- ▶ Only for standard double acting and standard through rod double acting version
- Compulsory for Ø 20 and Ø 25 version Z

- \* Only for Ø 32 to 63 P version (Polyurethane gaskets)
- ▷ Only for Ø 20 to 63 P version (Polyurethane gaskets)
- ◁ Only for Ø 32 to 100 V version (FKM/FPM gaskets) and for Ø 80 and 100 P version (Polyurethane gaskets)
- Only for Ø 20 to 100 V version (FKM/FPM gaskets) and for Ø 80 and 100 P version (Polyurethane gaskets)

#### STROKES

Standard stroke for single-acting cylinders	Standard stroke for other types	Max. recommended strokes for other types	Max. recommended strokes for non-rotating cylinders	Max recommended strokes for through-rod perforated
Ø 20 to 100 → 25 mm	Ø 20 to 25 → 5 to 60 mm Ø 32 to 100 → 5 to 80 mm	Ø 20 to 25 → 300 mm Ø 32 to 63 → 400 mm Ø 80 to 100 → 500 mm	Ø 20 to 63 → 120 mm Ø 80 to 100 → 150 mm	Ø 20 to 40 → 5 to 80 mm Ø 50 to 63 → 5 to 100 mm Ø 80 to 100 → 5 to 160 mm

Maximum recommended strokes. Higher values can create operating problems

## COMPACT CYLINDERS SERIES CMPC

TECHNICAL DATA		POLYURETHANE					FKM/FPM				
Max operating pressure	bar						10				
	MPa						1				
Temperature range	psi						145				
	°C	-10 to +80					-10 to +150 (non-magnetic cylinders)				
Fluid		Unlubricated air. Lubrication, if used, must be continuous									
Bores	mm	Ø 12; 16; interchangeable with similar products									
	mm	Ø 32; 40; 50; 63; 80; 100 with ISO 15552 fixing centre distances									
	mm	Ø 20; 25; 32; 40; 50; 63; 80; 100 with NFE 49-004-1 and 2 fixing centre distances									
Design Versions		With profile, heads with screws									
		Double-acting, Single-acting extended or retracted rod, Through-rod, Through-rod perforated, Single-acting through-rod, Through-rod non-rotating, no-stick slip									
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.									
Inrush pressure	single piston rod	Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50	Ø 63	Ø 80	Ø 100
	through-rod	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4
Notes		1	0.8	0.8	0.8	0.6	0.4	0.4	0.4	0.4	0.4
		For correct operation, it is advisable to use 50 µm filtered air									
		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.									

### KEY TO CODES

CYL	2 3 TYPE	1	0	2 5 BORE	O	0 5 0 STROKE **	X MATERIAL	P GASKETS
	23 Compact cylinder centre distances to UNITOP male piston rod	0 Double-acting 1 Double-acting through-rod + 2 Double-acting through-rod perforated	0 Magnetic □ S Non-magnetic ▲ G No stick slip	12 16 20 25 32 40 50 63 80 100	0 Standard + A 2-stage tandem + B 3-stage tandem + C 4-stage tandem		* C C45 piston rod chromium-plated ▷ X Stainless steel piston rod and nut ◁ A C45 chromed rod, aluminium piston ○ Z Stainless steel piston rod and nut aluminium piston	P Polyurethane gaskets FKM/FPM gaskets ▶ + V gaskets
	24 Compact cylinder centre distances to UNITOP female piston rod	● 3 Single-acting retracting piston rod ● 4 Single-acting extended piston rod ● 5 Single-acting through-rod		◆ 100	<b>MULTI-POSITION</b> ●● P Stage 1 ●● R Stage 2 ●● T Stage 3			
	■ 25 Compact cylinder centre distances to ISO male piston rod	● + 6 Single-acting through-rod piston rod perforated ▼ 7 Double-acting non-rotating						
	■ 26 Compact cylinder centre distances to ISO female piston rod	A Double-acting through-rod non-rotating						

- ◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
- Codes only for cylinders Ø 32 to 100
- Can also be used as double-acting with spring return
- + Available from Ø 20
- ▼ For versions 24 and 26 only (female piston rod)
- ▲ For Ø 12 to 25 the standard version (0 or S) it's already no stick slip
- For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only**
- ▶ Only for standard double acting and standard through rod double acting version
- Compulsory for Ø 20 and Ø 25 version Z
- \* Only for Ø 32 to 63 P version (Polyurethane gaskets)
- ▷ Only for Ø 12 to 63 P version (Polyurethane gaskets)
- ◁ Only for Ø 32 to 100 V version (FKM/FPM gaskets)
- Only for Ø 20 to 100 V version (FKM/FPM gaskets)

- The ordering codes for a Multi-position cylinder is a combination of several codes, each describing a stage.

**Coding example for a UNITOP multiposition cylinder**  
**2 stages Ø 20 strokes 40 + 10 (total stroke 50 mm) male rod:**  
 1° STAGE (P) : 230020P040XP +  
 2° STAGE (R) : 230020R050XP

**Coding example for a UNITOP multiposition cylinder**  
**3 stages Ø 20 strokes 15 + 30 + 40 (total stroke 85 mm) male rod:**  
 1° STAGE (P) : 230025P015XP +  
 2° STAGE (R) : 230025R045XP +  
 3° STAGE (T) : 230025T085XP

### STROKES

Standard stroke for single-acting cylinders	Standard stroke for other types	Max. recommended strokes for other types	Max. recommended strokes for non-rotating cylinders	Max recommended strokes for through-rod perforated
Ø 12 → 10 mm	Ø 12 to 16 → from 5 to 40 mm	Ø 12 to 25 → 200 mm	Ø 12 to 63 → 120 mm	Ø 20 to 40 → from 5 to 80 mm
Ø 16 to 100 → 25 mm	Ø 20 to 25 → from 5 to 50 mm	Ø 32 to 40 → 300 mm	Ø 80 to 100 → 150 mm	Ø 50 to 63 → from 5 to 100 mm
	Ø 32 to 100 → from 5 to 80 mm	Ø 50 to 63 → 400 mm		Ø 80 to 100 → from 5 to 160 mm
		Ø 80 to 100 → 500 mm		

Maximum recommended strokes. Higher values can create operating problems



## COMPACT CYLINDERS SERIES CMPC TWO-FLAT

TECHNICAL DATA		POLYURETHANE	
Max operating pressure	bar	10	
	MPa	1	
	psi	145	
Temperature range	°C	-10 to +80	
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	32; 40; 50; 63; 80 with ISO 15552 fixing centre distances	
	mm	32; 40; 50; 63; 80 with NFE 49-004-1 and 2 fixing centre distances	
Design		With profile, heads with screws	
Maximum strokes †	mm	Ø 32-40 = 300; Ø 50-63 = 400; Ø 80 = 500	
Versions		Double-acting, Double-acting Through-rod	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request	
Inrush pressure	bar	Ø 32 = 0.8; from Ø 40 to 80 = 0.6	
Max torque on piston rod	Nm	Ø 32 and 40 = 0.2; Ø 50 and 63 = 0.4; Ø 80 = 1	
Maximum rotation on the rod	degrees	Ø 32 and 40 = 0.70°; Ø 50 and 63 = 0.75°; Ø 80 = 0.65°	
Notes		† Maximum recommended strokes. Higher values can create operating problems <b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b>	

### KEY TO CODES

CYL	2 3 TYPE	1	0	3 2 BORE	0	0 5 0 STROKE *	F MATERIAL	P GASKETS
23	Compact cylinder centre distances to UNITOP male piston rod	0 Double-acting 1 Double-acting through-rod	0 Magnetic S Non-magnetic ▲ G No stick slip	32 40 50 63 80	0 Standard		F "TWO-FLAT" piston rod AISI 303 stainless stell	P Polyurethane gaskets
24	Compact cylinder centre distances to UNITOP female piston rod							
25	Compact cylinder centre distances to ISO male piston rod							
26	Compact cylinder centre distances to ISO female piston rod							

\* For the maximum suppliable strokes, look at the technical data

▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

## COMPACT STOPPER CYLINDER

TECHNICAL DATA			
Max operating pressure	bar	10	
	MPa	1	
	psi	145	
Temperature range	°C	-10 to +80	
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Stroke bore	mm	Ø 20 x 15; Ø 32 x 20; Ø 50 x 30; Ø 80 x 30; Ø 80 x 40 a with NFE 49-004-1 and 2 fixing centre distances (UNITOP)	
	mm	Ø 32 x 20; Ø 50 x 30; Ø 80 x 30; Ø 80 x 40 with ISO 15552 fixing centre distances	
Design		With profile, heads with screws	
Versions		Single-acting extended rod. Can be also used as double-acting whith spring return	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request	
Inrush pressure	bar	Ø 20: 1.2; Ø 32-50: 1; Ø 80: 0.5	
Notes		For correct operation, it is advisable to use 50 µm filtered air	

Code	Description	Code	Description	Code	Description
23B0200015XP	Stopper cyl. trunnion D.20 C.15	23C0200015XP	Stopper cyl. roller D.20 C.15	23CS200015XP	Stopper cyl. roller SM D.20 C.15
25B0320020XP	Stopper cyl. trunnion D.32 C.20 ISO 15552	25C0320020XP	Stopper cyl. roller D.32 C.20 ISO 15552	23CS320020XP	Stopper cyl. roller SM D.32 C.20 UNITOP
23B0320020XP	Stopper cyl. trunnion D.32 C.20 UNITOP	23C0320020XP	Stopper cyl. roller D.32 C.20 UNITOP	25CS320020XP	Stopper cyl. roller SM D.32 C.20 ISO 15552
25B0500030XP	Stopper cyl. trunnion D.50 C.30 ISO 15552	25C0500030XP	Stopper cyl. roller D.50 C.30 ISO 15552	23CS500030XP	Stopper cyl. roller SM D.50 C.30 UNITOP
23B0500030XP	Stopper cyl. trunnion D.50 C.30 UNITOP	23C0500030XP	Stopper cyl. roller D.50 C.30 UNITOP	25CS500030XP	Stopper cyl. roller SM D.50 C.30 ISO 15552
23B5200015XP	Stopper cyl. trunnion SM D.20 C.15	25C0800030XP	Stopper cyl. roller D.80 C.30 ISO 15552	23CS800030XP	Stopper cyl. roller SM D.80 C.30 UNITOP
23B5320020XP	Stopper cyl. trunnion SM D.32 C.20 UNITOP	23C0800030XP	Stopper cyl. roller D.80 C.30 UNITOP	23CS800030XP	Stopper cyl. roller SM D.80 C.30 ISO 15552
25B5320020XP	Stopper cyl. trunnion SM D.32 C.20 ISO 15552	25C0800040XP	Stopper cyl. roller D.80 C.40 ISO 15552	25CS800040XP	Stopper cyl. roller SM D.80 C.40 UNITOP
23B5500030XP	Stopper cyl. trunnion SM D.50 C.30 UNITOP	23C0800040XP	Stopper cyl. roller D.80 C.40 UNITOP	23CS800040XP	Stopper cyl. roller SM D.80 C.40 ISO 15552
25B5500030XP	Stopper cyl. trunnion SM D.50 C.30 ISO 15552				

## PISTON ROD ACCESSORIES

			FORK MODEL GK-M	COMPENSATION JOINT MODEL GA	ROD EYE MODEL GA-M	SELF ALIGNING ROD COUPLER - MODEL GA-K
LINER	CMPC	Ø ROD				
20-25	12	M6	W0950120020	-	W0950120025	W0950120030
	16	M8	W0950200020	-	W0950200025	W0950200030
32-40	20-25 / 32-40	M10X1.25	W0950322020	W0950326021	W0950322025	W0950322030
50-63	50-63	M12X1.25	W0950402020	W0950406021	W0950402025	W0950402030
80-100	80	M16X1.25	W0950502020	W0950506021	W0950502025	W0950502030
	100	M20X1.25	W0950802020	W0950806021	W0950802025	W0950802030

## BODY ACCESSORIES EXAMPLE: W0950322006

### FOOT - MODEL A



Code	Description
W095_2001	ISO 32 to 100 - UNITOP 32
W095_6001	UNITOP 40 to 100
W095_6001	UNITOP TF 40 to 63
W0950126001	UNITOP 12-16

### MALE HINGE - MODEL BA



Code	Description
W095_6004	UNITOP 20-25
W095_2004	ISO Ø 32 - 100
W0950126004	UNITOP 12-16

### ARTICULATED MALE HINGE MODEL BAS



Code	Description
W095_2006	ISO 32 to 100

### COUNTER-HINGE CETOP Ø 32 to 100



Code	Description
W095_2008	UNITOP - ISO

### FEMALE HINGE - MODEL B



Code	Description
W095_2003	ISO 32 to 100 - UNITOP 32
W095_6003	UNITOP 40 to 100

### FLANGE - MODEL C



Code	Description
W095_2002	ISO 32 to 100
W095_6002	UNITOP 40 to 100
W095_6002F	UNITOP TF 40 to 63
W095_6302	UNITOP STOPPER 32 to 80 - ISO 32
W095_6312	ISO STOPPER 50-80

### FLANGE FOR OPPOSITE CYLINDERS



Code	Description
095_3060	UNITOP 20 to 100
095_3061	ISO 32 to 100
0950123060	UNITOP 12 to 25

### COUNTER-HINGE Ø 16 to 25 MODEL BC



Code	Description
W0950120005	Mod. BC 12/16
W0950200005	Mod. BC 20/25

## SPARE PARTS FOR ISO 21287 CYLINDERS

### COMPACT CYLINDERS ISO 21287 (POLYURETHANE)

Code	Bores	Type
009...1001	Ø 20 to 100	Complete set of gaskets polyurethane
009...1008	Ø 20 to 100	Complete set of high temperature gaskets
009...1101	Ø 20 to 100	Front head kit
009...1201	Ø 20 to 100	Rear head kit
009...7401	Ø 20, 25, 80, 100	Piston kit polyurethane
009...1401	Ø 32 to 63	Piston kit polyurethane
009...7501	Ø 20, 25, 80, 100	Magnet
009...1501	Ø 32 to 63	Magnet
009...1901	Ø 20 to 100	Front + rear cylinder head + piston kit polyurethane

EXAMPLE: 0090321001

## SPARE PARTS FOR COMPACT CYLINDERS

### COMPACT CYLINDERS, STOPPER

Code	Bores	Type
009...7060	Ø 20; 32; 50; 80	Complete set of gaskets
009...7160	Ø 20; 32; 50; 80	Front cylinder head kit for UNITOP
0090327160	Ø 32	Front cylinder head kit for ISO Ø 32
009...8160	Ø 50; 80	Front cylinder head kit for ISO
009...7201	Ø 20; 32	Rear cylinder head kit for UNITOP Ø 20 - Ø 32
009...7260	Ø 50; 80	Rear cylinder head kit for UNITOP
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32
009...8260	Ø 50; 80	Rear cylinder head kit for ISO
0090207401	Ø 20	Piston kit Ø 20
009...7460	Ø 32; 50; 80	Piston kit
009...7501	Ø 20; 32; 50; 80	Magnet
009...7960	Ø 20; 32; 50; 80	Front + rear cylinder head + piston kit for UNITOP
0090327960	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32
009...8960	Ø 50; 80	Front + rear cylinder head + piston kit for ISO

EXAMPLE: 0090327060

### COMPACT CYLINDERS, SERIES CMPC

Code	Bores	Type
009...7001	Ø 12 to 100	Complete set of gaskets polyurethane
009...7008	Ø 20 to 100	Complete set of high temperature gaskets
009...7101	Ø 12 to 100	Front cylinder head kit for UNITOP polyurethane
0090327101	Ø 32	Front cylinder head kit for ISO Ø 32 polyurethane
009...8101	Ø 40 to 100	Front cylinder head kit for ISO polyurethane
009...7201	Ø 12 to 100	Rear cylinder head kit for UNITOP polyurethane
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32 polyurethane
009...8201	Ø 40 to 100	Rear cylinder head kit for ISO polyurethane
009...7401	Ø 12 to 100	Piston kit polyurethane
009...7501	Ø 12 to 100	Magnet
009...7901	Ø 12 to 100	Front + rear cylinder head + piston kit for UNITOP polyurethane
0090327901	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32 polyurethane
009...8901	Ø 40 to 100	Front + rear cylinder head + piston kit for ISO polyurethane

EXAMPLE: 0090327001

### COMPACT CYLINDERS, SERIES CMPC TWO-FLAT

Code	Bores	Type
009...7001F	Ø 32 to 80	Set of gaskets
009...7101F	Ø 40 to 80	Front cylinder head kit for UNITOP
0090327101F	Ø 32	Front cylinder head kit for ISO Ø 32
009...8101F	Ø 40 to 80	Front cylinder head kit for ISO
009...7201	Ø 40 to 80	Rear cylinder head kit for UNITOP
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32
009...8201	Ø 40 to 80	Rear cylinder head kit for ISO
009...7401	Ø 32 to 80	Piston kit
009...7501	Ø 32 to 80	Magnet
009...7901F	Ø 40 to 80	Front + rear cylinder head + piston kit for UNITOP
0090327901F	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32
009...8901F	Ø 40 to 80	Front + rear cylinder head + piston kit for ISO

EXAMPLE: 0090327001F



## ROUND CYLINDER SERIES RNDC



TECHNICAL DATA		POLYURETHANE	NBR	FKM/FPM	LOW TEMPERATURE
Max operating pressure	bar	10	10	10	10
	MPa	1	1	1	1
	psi	145	145	145	145
Temperature range	°C	-10 to +80	-10 to +80	-10 to +150 (non-magnetic cylinders)	-35 to +80
Fluid		Unlubricated air. Lubrication, if used, must be continuous			
Bores	mm	32; 40; 50			
Design		Screwed heads			
Versions		Double-acting, Double-acting through-rod, Double-acting cushioned, Double-acting through-rod cushioned, Single-acting, Single-acting through-rod, no-stick slip			
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request			
Standard strokes $\pm$	mm	Single-acting: for bores $\varnothing$ 32 to 50 strokes from 1 to 250 Double-acting: for bores $\varnothing$ 32 to 50 strokes from 1 to 500			
Inrush pressure	bar	$\varnothing$ 32 e 40: 0.4 - $\varnothing$ 50: 0.3			
Notes		<b>For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.</b> $\pm$ Maximum recommended strokes. Higher values can create operating problems			

### KEY TO CODES

CYL	1 1 2 TYPE	0	3 2 BORE	0 0 2 5 STROKE	C MATERIAL	P GASKETS
	<ul style="list-style-type: none"> <li>■ 104 SE through-rod</li> <li>109 DEA</li> <li>110 DE</li> <li>■ 111 SE</li> <li>112 DEM</li> <li>113 DEMA</li> <li>114 DEM through-rod</li> <li>115 DEMA through-rod</li> </ul>	<ul style="list-style-type: none"> <li>0 Standard</li> <li>▲ G No stick slip</li> <li>S Non-magnetic</li> </ul>	<ul style="list-style-type: none"> <li>32</li> <li>40</li> <li>50</li> </ul>	<ul style="list-style-type: none"> <li>For the maximum</li> <li>suppliable strokes, look</li> <li>at the technical data</li> </ul>	<ul style="list-style-type: none"> <li>A C45 chrome rod, aluminium piston rod</li> <li>C C45 chrome rod, technopolymer piston rod</li> <li>Z Stainless steel piston rod and nut aluminium piston</li> <li>X Stainless steel piston rod and nut technopolymer piston</li> </ul>	<ul style="list-style-type: none"> <li>P polyurethane</li> <li>N NBR</li> <li>● V FKM/FPM</li> <li>● B low temperature</li> </ul>

DE: Double-acting (non-cushioned, not magnetic)  
 DEM: Magnetic double-acting (non-cushioned)  
 DEMA: Magnetic double-acting (cushioned)  
 DEA: Cushioned double-acting (non-magnetic)  
 SE: Single-acting (magnetic)

- Only available for non-magnetic versions (S) and with aluminium piston (A or Z)
- ▲ **For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only**
- Only available for versions with aluminium piston (A or Z)

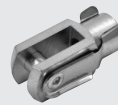
## ACCESSORIES

### FOOT - MODEL AC



Code	Ø	Description
W0950320002	032	Acc. foot Mod. AC
W0950400002	040	Acc. foot Mod. AC
W0950500002	050	Acc. foot Mod. AC

### FORK - MODEL GK-M



Code	Ø	Description
W0950322020	032	Acc. fork Mod. GK-M-M10x1.25
W0950402020	040	Acc. fork Mod. GK-M-M12x1.25
W0950502020	050	Acc. fork Mod. GK-M-M16x1.5

### SELF ALIGNING ROD COUPLER - MODEL GA-K



Code	Ø	Description
W0950322030	032	Acc. self aligning rod coupler Mod. GA-K-M10x1.25
W0950402030	040	Acc. self aligning rod coupler Mod. GA-K-M12x1.25
W0950502030	050	Acc. self aligning rod coupler Mod. GA-K-M16x1.5

### COUNTER-HINGE - MODEL BC



Code	Ø	Description
W0950320005	032	Acc. counter-hinge Mod. BC
W0950400005	040	Acc. counter-hinge Mod. BC
W0950500005	050	Acc. counter-hinge Mod. BC

### ROD EYE - MODEL GA-M



Code	Ø	Description
W0950322025	032	Acc. rod eye Mod. GA-M-M10x1.25
W0950402025	040	Acc. rod eye Mod. GA-M-M12x1.25
W0950502025	050	Acc. rod eye Mod. GA-M-M16x1.5

### HEAD LOCK RING - MODEL G



Code	Ø	Description
W0950320010	032	Acc. head lock ring Mod. G
W0950400010	040	Acc. head lock ring Mod. G
W0950500010	050	Acc. head lock ring Mod. G

### COMPENSATION JOINT - MODEL GA



Code	Ø	Description
W0950326021	032	Acc. compensation joint Mod. GA-M10x1.25
W0950406021	040	Acc. compensation joint Mod. GA-M12x1.25
W0950506021	050	Acc. compensation joint Mod. GA-M16x1.5

## SHORT-STROKE CYLINDERS SERIES SSCY



ACTUATORS

SHORT-STROKE CYLINDERS - SERIES SSCY

TECHNICAL DATA		POLYURETHANE	NBR	FKM/FPM	LOW TEMPERATURE						
Max operating pressure	bar	10	10	10	10						
	MPa	1	1	1	1						
Temperature range	°C	-10 to +80	-10 to +80	-10 to +150 (non-magnetic cylinders)	-35 to +80						
Fluid		Unlubricated air. Lubrication, if used, must be continuous									
Bores	mm	12 ; 16 ; 20 ; 25 ; 32 ; 40 ; 50 ; 63 ; 80 ; 100									
Design		With profile									
Standard strokes †	mm	Double acting: Ø 12 to Ø 25, stroke 5 to 50 mm Ø 32 to Ø 40, stroke 5 to 70 mm Ø 50 to Ø 63, stroke 5 to 110 mm Ø 80 to Ø 100, stroke 5 to 150 mm Single-acting: Ø 12 to Ø 25, stroke 5 to 25 mm Ø 32 to Ø 63, stroke 5 to 50 mm Anti-rotation: Ø 12 to Ø 63, stroke 5 to 120 mm Ø 80 to Ø 100, stroke 5 to 150 mm Perforated through-rod: Ø 20 to Ø 40, stroke 5 to 100 mm Ø 50 to Ø 63, stroke 5 to 130 mm Ø 80 to Ø 100, stroke 5 to 165 mm									
Versions		Double-acting, Double-acting through-rod, Single-acting retracted piston rod, Single acting extended piston rod, Single-acting through-rod, Perforated through-rod, Anti-rotation, Oscillating male, Oscillating female, no-stick slip									
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request									
Inrush pressure	bar	Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50	Ø 63	Ø 80	Ø 100
single piston rod		0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4
through-rod		1	0.8	0.8	0.8	0.6	0.4	0.4	0.4	0.4	0.4
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version <b>No stick-slip and non-lubricated air</b> . † Maximum recommended strokes. Higher values can create operating problems									

### KEY TO CODES

CYL	2 1 2 TYPE	0	4 0 BORE	0 0 1 0 STROKE	C MATERIAL	P GASKETS
■	208 Single-acting retracted rod, non-magnetic	0 Standard	12	For the maximum suppliable strokes, look at the technical data	<b>A</b> C45 chrome rod, aluminium piston rod Ø 12 to 63 mm <b>C</b> C45 chrome rod, technopolymer piston rod (standard Ø 80 to 100 mm) <b>Z</b> Stainless steel piston rod and nut aluminium piston Ø 12 to 63 mm <b>X</b> Stainless steel piston rod and nut technopolymer piston (standard Ø 80 to 100 mm)	<b>P</b> Polyurethane gaskets <b>N</b> NBR gaskets <b>V</b> FKM/FPM gaskets <b>B</b> Low temperature
■	209 Single-acting extended rod, non-magnetic	S Non-magnetic	16			
▲	G No stick slip	20				
		25				
■	210 Single-acting, retracted rod		32			
■	211 Single-acting, extended rod		40			
■	212 Double-acting, magnetic		50			
■	213 Double-acting, non-magnetic		63			
■	214 Double-acting, through-rod		80			
■	215 Single-acting, retracted, anti-rotation		◆ 100			
■	217 Double-acting, anti-rotation					
▼	218 Double-acting, perforated through-rod					
■	221 Oscillating male hinge (up to Ø 63 only)					
■	222 Oscillating female hinge (up to Ø 63 only)					
■	223 Single-acting, through-rod					

- ◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
- Available up to Ø 63
- ▼ Available from Ø 20

- Only available for non-magnetic versions (S) and with aluminium piston (A or Z)
- ▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

### ACCESSORIES EXAMPLE: 21903200

#### MALE NIPPLE



Code  
2190\_\_00

### SPARE PARTS

Code	Bores	Type
009...0010	Ø 12 to 100	Complete polyurethane front head kit
009...0011	Ø 12 to 100	Complete NBR front head kit
009...0015	Ø 12 to 100	Complete NBR rear head kit
009...0021	Ø 12 to 100	Complete polyurethane piston kit
009...0023	Ø 12 to 100	Complete NBR piston kit
009...0005	Ø 12 to 100	Complete set of polyurethane gaskets
009...0006	Ø 12 to 100	Complete set of NBR gaskets
009...0007	Ø 12 to 100	Complete set of high temperature gaskets
009...0031	Ø 12 to 100	Complete polyurethane front+rear head kit + piston
009...0033	Ø 12 to 100	Complete NBR front+rear head kit + piston
009...0001	Ø 12 to 100	Magnet

## CARTRIDGE MICRO-CYLINDER SERIES CRTC



TECHNICAL DATA		WEIGHT			
Operating pressure	bar	2 to 6			
	MPa	0.2 to 0.6			
Temperature range	°C	-10 to +80			
Fluid		Lubricated or unlubricated air. Lubrication, if used, must be continuous			
Bores	mm	6 ; 10 ; 16			
Strokes	mm	5 ; 10 ; 15			
Port		M5			
Versions		Single-acting			
Design		Mechanically edged			
Seal OR on the body (not included in the supply)		Ø 6 : 7 x 1 ; Ø 10 : 9.5 x 1.5 ; Ø 16 : 16 x 1.5			
		Ø	STROKE		
			5	10	15
		6	14 g	16 g	19 g
		10	30 g	35 g	40 g
		16	76 g	84 g	90 g

### KEY TO CODES

CIL	C R T C	0 1 0	0 0 1 0	S 0 0 0	0 0	0 0
	TYPE	DIAMETER	STROKE	TYPE	FURTHER DESCRIPTION	SPECIAL DESIGN
	Cartridge microcylinder	006 010 016	0005 0010 0015	Single-acting retracted piston rod	Not provided	Not provided

Code	Description	Code	Description	Code	Description
W1000060005	Cyl. CRTC-006-0005-S000-00	W1000100005	Cyl. CRTC-010-0005-S000-00	W1000160005	Cyl. CRTC-016-0005-S000-00
W1000060010	Cyl. CRTC-006-0010-S000-00	W1000100010	Cyl. CRTC-010-0010-S000-00	W1000160010	Cyl. CRTC-016-0010-S000-00
W1000060015	Cyl. CRTC-006-0015-S000-00	W1000100015	Cyl. CRTC-010-0015-S000-00	W1000160015	Cyl. CRTC-016-0015-S000-00

## COMPACT GUIDED CYLINDERS SERIES CMPG



TECHNICAL DATA	CUSHIONED	NO-CUSHIONED
Operating pressure	bar	1 to 10
	MPa	0.1 to 1
	psi	14.5 to 145
Temperature range	°C	-10 to +80
	°F	14 to 176
Fluid	Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	16; 20; 25; 32; 40; 50; 63
Strokes	mm	Ø 16: 20-30-40-50 Ø 20; Ø 25: 20-30-40-50-75-100-150 Ø 32 to Ø 63: 25-50-75-100-150-175
		16; 20; 25; 32; 40; 50; 63; 80; 100 Ø 16: 10-20-25-30-40-50-75-100-150-200 Ø 20; Ø 25: 20-25-30-40-50-75-100-150-200 Ø 32 to Ø 100: 25-50-75-100-150-200 Other strokes on request but with the same cylinder dimensions as the standard stroke immediately above
Version	With bronze bushings With ball bearings	

### KEY TO CODES

W 1 4 3	0 3 2	2	0 2 5
TYPE	DIAMETER	VERSION	STROKE
	16 20 25 32 40 50 63 * 80 * A1=100	2 bronze bushings 3 ball bearings 4 cushioned with bronze bushings 5 cushioned with ball bearings	CUSHIONED VERSION Ø 16: 20, 30, 40, 50 Ø 20 to 25: 20, 30, 40, 50, 75, 100, 150 Ø 32 to 63: 25, 50, 75, 100, 150, 175  NOT CUSHIONED VERSION ♦ Ø 16: 10, 20, 25, 30, 40, 50, 75, 100, 150, 200 Ø 20 to 25: 20, 25, 30, 40, 50, 75, 100, 150, 200 Ø 32 to 100: 25, 50, 75, 100, 150, 200

\* Not cushioned version only

♦ Other strokes on request but with the same cylinder dimensions as the standard stroke immediately above.

## RODLESS CYLINDER



### RODLESS CYLINDER SERIES STD

TECHNICAL DATA		NBR	FKM/FPM
Operating pressure	bar		1 to 8
	MPa		0.1 to 0.8
	psi		14.5 to 116
Temperature range	°C		-10 to +80
	°F		14 to 176
Fluid		50 µm unlubricated filtered air Lubrication, if used, must be continuous.	
Bores	mm	Ø 16, 25, 32, 40, 63	
Type of construction		Double-acting rodless cylinder with direct transmission system	
Strokes	mm	Ø 16: from 100 to 5000 with 1mm interval	
		Ø 25, 32 e 40: from 100 to 5700 with 1mm interval	
		Ø 63: from 100 to 5500 with 1mm interval	
Recommended speeds	m/s	<1	≥1
Max. speed with decelerators	m/s	<1	2
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.	

#### KEY TO CODES

CYL	27 TYPE	0	0	2 5 BORE	0 1 5 0 STROKE	C	N GASKETS
	27 Rodless cylinder	0 Standard 1 With swing drive + 2 Twin cushioned series "Double" 3 Double-acting cushioned Magnetic + adjustable limit switches and shock absorbers	0 Magnetic S Non-magnetic ■ G No stick slip	16 25 32 40 63	Ø 16: from 100 to 5000 mm Ø 25 to 40: from 100 to 5700 mm Ø 63 from 100 to 5500 mm		N NBR gasket ● V FKM/FPM gasket

■ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only ● For speed ≥ 1/m/s + Available up to Ø 32

### RODLESS CYLINDER WITH BALL RECIRCULATING GUIDE

TECHNICAL DATA		NBR	FKM/FPM
Operating pressure	bar		1 to 8
	MPa		0.1 to 0.8
	Psi		7 to 116
Temperature range	°C		-10 to +80
	°F		14 to 176
Fluid		50 µm unlubricated filtered air lubrication, if used, must be continuous	
Bores	mm	Ø 16, 25, 32, 40, 63	
Type of construction		Double-acting rodless cylinder with direct transmission system	
Strokes	mm	Ø 16: from 100 to 1350 with 1 interval	
		Ø 25: from 100 to 2300 with 1 interval	
		Ø 32: from 100 to 2300 with 1 interval	
		Ø 40: from 100 to 2250 with 1 interval	
		Ø 63 standard: from 100 to 2100 with 1 interval	
		Ø 63 heavy: from 100 to 2650 with 1 interval	
Threaded ports		M5, G1/8", G1/4", G3/8"	
Assembly		In any position	
Recommended speed		<1	≥1
Max. speed with decelerators		<1	2
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip	

#### KEY TO CODES

CYL	27 TYPE	5	0	2 5 BORE	0 1 5 0 STROKE	C	N GASKETS
	27 Rodless cylinder	5 Double-acting cushioned magnetic with ball circulation guides 6 Double-acting cushioned magnetic with ball circulation guides + adjustable limit switch and shock absorbers	0 STD Magnetic S STD Non-magnetic ■ G STD No stick slip A HEAVY Magnetic ■ B HEAVY No stick slip C HEAVY Non-magnetic	16 25 32 40 63	Ø 16: 100 to 1350 mm Ø 25 - 32: 100 to 2300 mm Ø 40: 100 to 2250 mm Ø 63 std: 100 to 2100 mm Ø 63 heavy: 100 to 2650 mm		N NBR gasket ● V FKM/FPM gasket

■ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only ● For speed ≥ 1/m/s

## RODLESS CYLINDER WITH GUIDE "V"



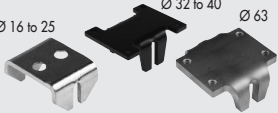
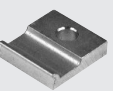

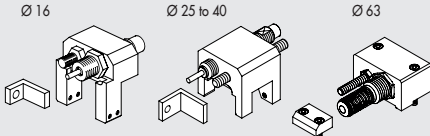
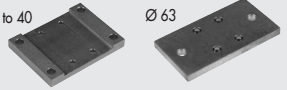
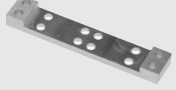
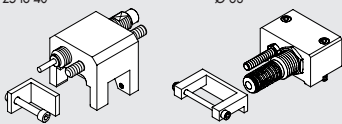



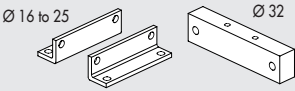

TECHNICAL DATA		NBR	FKM/FPM
Operating pressure	bar		1.5 to 8
	MPa		0.15 to 0.8
	psi		21.8 to 116
Temperature range	°C		-10 to +80
	°F		14 to 176
		50 µm unlubricated filtered air	Lubrication, if used, must be continuous
Fluid Bores	mm		25, 32, 40, 63
Type of construction		Double-acting rodless cylinder with direct transmission system	
Strokes	mm	Ø 25, 32 and 40: from 100 to 5700 with 1mm interval	
		Ø 63: from 100 to 5500 with 1mm interval	
Recommended speeds		< 1	≥ 1
Max. speed with decelerators		< 1	2
Notes	For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.		

### KEY TO CODES

CYL	2 7	7	0	2 5	0 1 5 0	C	N
	TYPE			BORE	STROKE		GASKETS
	27 Rodless cylinder	7 Double-acting cushioned Magnetic with guide "V" 8 Double-acting cushioned Magnetic with guide "V" + adjustable limit switches and decelerator	0 Magnetic S Non-magnetic * G No stick slip	25 32 40 63	Ø 25 to 40: from 100 to 5700 mm Ø 63: from 100 to 5500 mm		N NBR gasket ● V FKM/FPM gasket

\* For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only ● For speed ≥ 1/m/s

### ACCESSORIES EXAMPLE: W0950327001

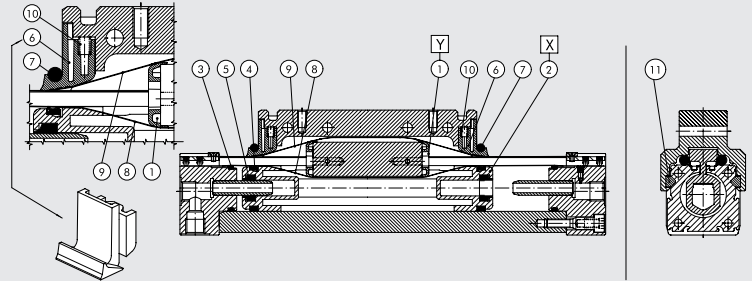
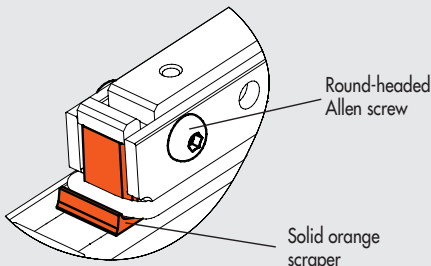
<b>FOOT</b>  Code W095__7001	<b>DOUBLE VERTICAL FOOT</b>  Code Description W0950328035 Acc. double vertical foot D.032	<b>SWING SUPPORT</b>  Code W095__7033 W0950327033 Ø 32-40
<b>INTERMEDIATE FOOT 16/25</b>  Code W095__7031 0950254094 For the guide "V" Ø 25	<b>SENSOR SUPPORT Ø 16 FOR RODLESS CYLINDER WITH RECIRCULATING BALL</b>  Code Description 0950164003 Sensor support short 0950164001 Sensor support std	<b>ADJUSTABLE LIMIT SWITCH AND SHOCK ABSORBERS KIT</b>  Code Description 095__4002 Rodless cylinder limit switch and shock absorbers
<b>INTERMEDIATE FOOT</b>  Code W095__7032 W095__4004 For ball recirculating	<b>DOUBLE INTERMEDIATE FOOT</b>  Code W095__8037	<b>ADJUSTABLE LIMIT SWITCH AND SHOCK ABSORBERS KIT FOR RODLESS CYLINDER WITH GUIDE "V"</b>  Code Description 095__4004 Rodless cylinder limit switch and shock absorbers
<b>INTERMEDIATE SUPPORT KIT Ø 63 FOR HORIZONTAL POSITION BALL RECIRCULATING</b>  Code W0950637036	<b>KIT TO TRANSFORM INTO SWING VERSION</b>  Code W095__7035 W0950327035 Ø 32-40	<b>SHOCK ABSORBERS</b>  Code Ø Description 0950004003 16 Shock absorbers ECO15 MF1 + nut M12x1 0950004004 25 Shock absorbers ECO25 MC2 + nut M14x1.5 0950004005 32 Shock absorbers ECO50 MC2 + nut M20x1.5 0950004006 40 Shock absorbers ECO100 MF2 + nut M25x1.5 0950004007 63 Shock absorbers ECO125 MF3 + nut M36x1.5
<b>DOUBLE FOOT</b>  Code Description W0950168001 Acc. double foot D.16 W0950258001 Acc. double foot D.25 W0950328036 Acc. double foot D.32	<b>DRIVE PIN</b>  Code W095__7034 W0950327034 Ø 32-40	

# SPARE PARTS FOR STD RODLESS CYLINDERS, GUIDE "V", BALL RECIRCULATING GUIDE, DOUBLE

ACTUATORS

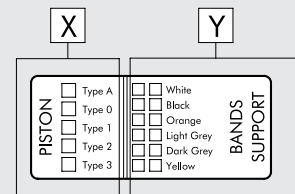
RODLESS CYLINDER

## "LAST RELEASE" CYLINDER



- ① Bands support Kit
- ② Piston kit
- ③ ④ ⑤ ⑥ ⑦ ⑩ NBR gaskets Kit (FKM/FPM for ⑦)
- ③ ④ ⑤ ⑥ ⑦ ⑩ FKM/FPM gaskets Kit
- ⑧ ⑨ Bands Kit (inner/outer)
- ⑪ "V" guide plate kit

Spare parts label on one cylinder side



### BANDS SUPPORT KIT POS 1 (Y)

Ø	Code White	Code Black	Code Orange	Code Light grey	Code Dark grey	Code Yellow
16	0090165080	0090165081	0090165082	0090165083	0090165084	0090165085
25	0090255080	0090255081	0090255082	0090255083	0090255084	0090255085
32	0090325080	0090325081	0090325082	0090325083	0090325084	0090325085
40	0090405080	0090405081	0090405082	0090405083	0090405084	0090405085
63	0090635080	0090635081	0090635082	0090635083	0090635084	0090635085

### BANDS KIT (INNER AND OUTER) POS 8-9

Ø	Code
16	0090166....
25	0090256....
32	0090326....
40	0090406....
63	0090636....

### "V" GUIDE PLATE KIT POS 11

Ø	Code
25	0090255060
32	0090325060
40	0090325060
63	0090635060

Complete the code with the 4 figure cylinder stroke

### PISTON KIT POS 2 (X)

Ø	Code Type 0 (0 rings)	Code Type 1 (1 rings)	Code Type 2 (2 rings)	Code Type 3 (3 rings)	Code Type A (4 rings)
16	0090165015	0090165016	0090165017	0090165018	-
25	0090255015	0090255016	0090255017	0090255018	0090255019
32	0090325015	0090325016	0090325017	0090325018	0090325019
40	0090405015	0090405016	0090405017	0090405018	-
63	0090635015	0090635016	0090635017	0090635018	-

### NBR GASKET KIT POS 3-4-5-6-7-10

Ø	Code
16	0090165022
25	0090255022
32	0090325022
40	0090405022
63	0090635022

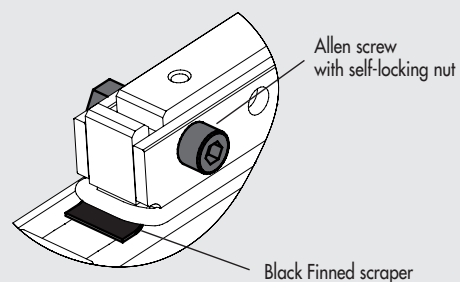
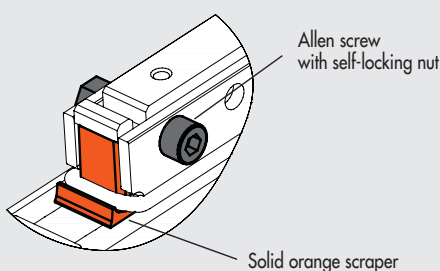
### FKM/FPM GASKET KIT POS 3-4-5-6-7-10

Ø	Code
16	0090165023
25	0090255023
32	0090325023
40	0090405023
63	0090635023

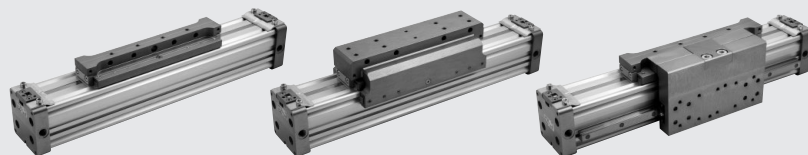
NOTES: If the ends of the carriage appear as below indicated, please contact our commercial department for the spare parts

## "INTERMEDIATE RELEASE"

## "OLD RELEASE"



## RODLESS CYLINDER SERIES PU



## RODLESS CYLINDER SERIES PU

TECHNICAL DATA	
Operating pressure	bar 1 to 8 MPa 0.1 to 0.8 psi 14.5 to 116
Temperature range	°C -10 to +80 °F 14 to +176
Fluid	50 µm unlubricated filtered air Lubrication, if used, must be continuous
Bores	mm 25, 32, 40, 50
Type of construction	Double-acting rodless cylinder with direct transmission system
Strokes	∅ 25 - 40: from 100 to 5700 mm with 1mm interval ∅ 50: from 100 to 5600 mm with 1mm interval
Recommended speeds	m/s < 2
Max. speed with decelerators	m/s < 2
Notes	For speeds lower than 0.2 m / s to prevent surging, use the version No stick-slip and non-lubricated air

### KEY TO CODES

CYL	2 7 TYPE	0	3	2 5 BORE	0 1 0 0 STROKE	C	P GASKETS
	27 Rodless cylinder	0 Double acting cushioned magnetic 1 Double acting with swing carriage 3 Double acting + adjustable limit switch and shock absorbers	3 Magnetic 4 No stick slip 5 Non-magnetic	25 32 40 50	∅ 25 - 40: from 100 to 5700 mm ∅ 50: from 100 to 5600 mm		P Polyurethane gaskets

■ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.

## RODLESS CYLINDER WITH GUIDE "V" SERIES PU

TECHNICAL DATA	
Operating pressure	bar 1 to 8 MPa 0.1 to 0.8 psi 14.5 to 116
Temperature range	°C -10 to +80 °F 14 to +176
Fluid	50 µm unlubricated filtered air Lubrication, if used, must be continuous
Bores	mm 50
Type of construction	Double-acting rodless cylinder with direct transmission system
Strokes	mm from 100 to 5600 mm with 1mm interval
Recommended speeds	m/s < 2
Max. speed with decelerators	m/s < 2
Notes	For speeds lower than 0.2 m / s to prevent surging, use the version No stick-slip and non-lubricated air

### KEY TO CODES

CYL	2 7 TYPE	5	3	5 0 BORE	0 1 0 0 STROKE	C	P GASKETS
	27 Rodless cylinder	5 Double-acting cushioned magnetic with ball circulation guides 6 Double-acting cushioned magnetic with ball circulation guides + adjustable limit switch and shock absorbers	3 Magnetic 4 No stick slip 5 Non-magnetic	50	from 100 to 2470 mm		P Polyurethane gaskets

■ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.



## RODLESS CYLINDER WITH BALL RECIRCULATING GUIDE SERIES PU

TECHNICAL DATA		
Operating pressure	bar	1 to 8
	MPa	0.1 to 0.8
	psi	14.5 to 116
Temperature range	°C	-10 to +80
	°F	14 to 176
Fluid		50 µm unlubricated filtered air lubrication, if used, must be continuous
Bores	mm	Ø 50
Type of construction		Double-acting rodless cylinder with direct transmission system
Strokes	mm	from 100 to 2470 with 1 interval
Threaded ports		G1/4"
Assembly		As required
Recommended speed	m/s	<2
Max. speed with decelerators	m/s	<2
Notes		For speeds lower than 0.2 m / s to prevent surging, use the version No stick-slip and non-lubricated air

### KEY TO CODES

CYL	27 TYPE	7	3	5 0 BORE	0 1 0 0 STROKE	C	P GASKETS
	27 Rodless cylinder	7 Double acting cushioned magnetic with guide "V" 8 Double acting cushioned magnetic with guide "V" + adjustable limit switch and shock absorbers	3 Magnetic 4 No stick slip 5 Non-magnetic	50	from 100 to 5600 mm		P Polyurethane gaskets

■ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only.

### ACCESSORIES EXAMPLE: W0950324041

#### FOOT



INTERMEDIATE SIDE SUPPORT FOR GUIDE "V" VERSION



#### DUST SCRAPER KIT

Code  
095\_\_4041

Code  
0950504052

Ø	Code
25	0090255025P
32	0090255025P
40	0090405025P
50	0090505025P

Note: 2 dust scrapers

#### INTERMEDIATE FOOT FOR STD AND GUIDE "V" VERSION



#### SHOCK ABSORBERS



#### GASKET KIT

Code  
W095\_\_7038

Code	Ø	Description
0950004004	25	Shock absorbers ECO25 MC2 + nut M14x1.5
0950004005	32	Shock absorbers ECO50 MC2 + nut M20x1.5
0950004006	40-50	Shock absorbers ECO100 MF2 + nut M25x1.5

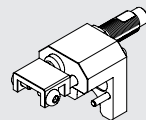
Ø	Code
25	0090255024P
32	0090325024P
40	0090405024P
50	0090505024P

Note: 2 gasket for position

#### INTERMEDIATE SUPPORT FOR BALL RECIRCULATING



#### ADJUSTABLE LIMIT SWITCH AND SHOCK ABSORBERS KIT



#### BANDS KIT (INNER AND OUTER)

Code  
0950504053

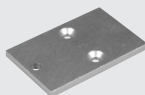
Code  
095\_\_4013

Description  
Rodless cylinder limit switch and shock absorbers

Ø	Code
25	0090256__P
32	0090326__P
40	0090406__P
50	0090506__P

Complete the code with the 4-figure cylinder stroke

#### SIDE INTERMEDIATE FOOT



#### ADJUSTABLE LIMIT SWITCH AND SHOCK ABSORBERS KIT FOR VERSION GUIDE "V"



#### PISTON KIT

Code  
095\_\_4051

Code  
0950504014

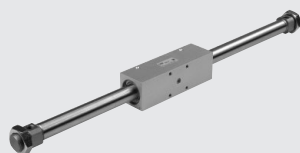
Description  
Rodless cylinder limit switch and shock absorbers Ø 50

Ø	Code
25	0090255009P
32	0090325009P
40	0090405009P
50	0090505009P

Note: 2 pistons



## RODLESS CYLINDER WITH MAGNETIC SLIDING SERIES MAGNETIC SLIDE



TECHNICAL DATA		Ø 16	Ø 20	Ø 25
Operating pressure	bar		2 to 7	
	MPa		0.2 to 0.7	
Temperature range	psi		29 to 101	
	°C		-10 to 60	
	°F		14 to 140	
Fluid		Unlubricated 50 µm filtered air. Lubrication, if used, must be continuous		
Bores	mm		16; 20; 25	
Strokes	mm		from 10 to 1000 with 1 intervals	
Versions			Magnetic uncushioned/cushioned	
			Swinging magnet uncushioned/cushioned	
Design		Double-acting rodless cylinder, with magnetic coupling transmission system		
Position sensing			Magnet for limit switch sensor	
Fixing			Hex nuts (supplied standard) - Legs - Flanges	
Theoretic force at 6 bar	N	118	185	288
Magnetic coupling force (static condition)	N	200	300	500
Max speed	m/s	0.4	0.4	0.4
Notes		Lubricate the slide every 2000 km or once a year, through the lubricators		

### KEY TO CODES

CYL	27 TYPE	A VERSION	0	1 6 BORE	0 0 5 0 STROKE	X MATERIAL	P GASKETS
	27 Rodless cylinder	A Magnetic sliding DEM B Magnetic sliding DEMA C Magnetic sliding swinging DEM D Magnetic sliding swinging DEMA	0 Magnetic	16 20 25	For the maximum suppliable strokes, look at the technical data	X Standard	P Polyurethane

DEM: Magnetic double-acting (non-cushioned)  
DEMA: Magnetic double-acting (cushioned)

## ACCESSORIES

### FLANGE MOD. C



Code	Ø	Description
W0950120002	16	Acc. flange Mod. C
W0950200002	20/25	Acc. flange Mod. C

### KIT FOR SWING VERSION



Code	Ø	Description
0950164050	16	Acc. kit for swing version
0950204050	20	Acc. kit for swing version
0950254050	25	Acc. kit for swing version

### FOOT



Code	Ø	Description
0950164040	16	Acc. foot
0950204040	20/25	Acc. foot

## STAINLESS STEEL CYLINDER

RNDC CYLINDER



MINI-CYLINDER



ISO 15552 CYLINDER



### STAINLESS STEEL ISO 6432 MINI-CYLINDER

TECHNICAL DATA		POLYURETHANE	FKM/FPM
Max operating pressure	bar MPa		10
Temperature range	°C	-10 to +80	-10 to +150 (non-magnetic cylinders)
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	16; 20; 25	
Design		Chamfered heads	
Standard strokes <b>+</b>	mm	max 500	
Versions		Double-acting, Double-acting through-rod	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.	
Notes		<b>+</b> Maximum recommended strokes. Higher values can create operating problems	

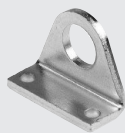
#### KEY TO CODES

W 1 8	0 TYPE	0 VERSION	1 6 DIAMETER	0 0 2 0 STROKE
Stainless steel cylinder	0 DEM 1 DEM through-rod	0 Standard (magnetic) S Non-magnetic ● V FKM/FPM gasket	16 20 25	<b>+</b> 0 to 500 mm

DEM: Magnetic double-acting (non-cushioned)  
**+** Maximum recommended strokes. Higher values can create operating problems  
 ● For this version the cylinder will be not magnetic

## ACCESSORIES

### STAINLESS STEEL LEG MODEL A



Code	Ø	Description
W095X120001	16	Acc. stainless steel leg Mod. A
W095X200001	20-25	Acc. stainless steel leg Mod. A

### STAINLESS STEEL COUNTER-HINGE MODEL BC



Code	Ø	Description
W095X120005	16	Acc. stainless steel counter-hinge Mod. BC
W095X200005	20-25	Acc. stainless steel counter-hinge Mod. BC

### STAINLESS STEEL NUT FOR PISTON RODS



Code	Ø	Description
W095X120011	16	Acc. stainless steel nut for piston rod M6
W095X200011	20	Acc. stainless steel nut for piston rod M8
W095X322011	25	Acc. stainless steel nut for piston rod M10X1.25

### STAINLESS STEEL FLANGE MODEL C



Code	Ø	Description
W095X120002	16	Acc. stainless steel flange Mod. C
W095X200002	20-25	Acc. stainless steel flange Mod. C

### STAINLESS STEEL NUT FOR HEADS



Code	Ø	Description
W095X120010	16	Acc. stainless steel nut for heads M16X1.5
W095X200010	20-25	Acc. stainless steel nut for heads M22X1.5

### STAINLESS STEEL FORK MODEL GK-M



Code	Ø	Description
W095X120020	16	Acc. stainless steel fork Mod. GK-M M6
W095X200020	20	Acc. stainless steel fork Mod. GK-M M8
W095X322020	25	Acc. stainless steel fork Mod. GK-M M10X1.25

## STAINLESS STEEL ROUND CYLINDERS RNDC

TECHNICAL DATA		POLYURETHANE	FKM/FPM
Max operating pressure	bar		10
	MPa		1
	psi		145
Temperature range	°C	-10 to +80	-10 to +150 (non-magnetic cylinders)
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	32; 40; 50; 63	
Design		Chamfered heads	
Versions		Double-acting, Double-acting through-rod	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.	
Standard strokes	mm	max 500	
Notes		+ Maximum recommended strokes. Higher values can create operating problems	

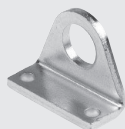
### KEY TO CODES

W 1 8	0 TYPE	0 VERSION	3 2 DIAMETER	0 0 3 2 STROKE
Stainless steel cylinder	0 DEM 1 DEM through-rod	0 Standard (magnetic) S Non-magnetic ● V FKM/FPM gasket	32 40 50 63	+ Ø 32 to 63 stroke 0 to 500 mm

- DEM: Magnetic double-acting (non-cushioned)  
 + Maximum recommended strokes. Higher values can create operating problems  
 ● For this version the cylinder will be not magnetic

### ACCESSORIES EXAMPLE: W095X32002

#### STAINLESS STEEL LEG MODEL AC



Code  
W095X\_0002

#### STAINLESS STEEL COUNTER-HINGE MODEL BC



Code  
W095X\_0005

#### STAINLESS STEEL HEAD RING NUT MODEL G



Code	Ø	Description
W095X320010	32	Acc. stainless steel head ring nut Mod. G
W095X400010	40	Acc. stainless steel head ring nut Mod. G
W095X500010	50-63	Acc. stainless steel head ring nut Mod. G

#### STAINLESS STEEL FORK MODEL GK-M



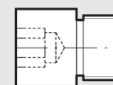
Code	Ø	Description
W095X320020	32	Acc. stainless steel fork Mod. GK-M10X1.5
W095X400020	40	Acc. stainless steel fork Mod. GK-M12X1.75
W095X500020	50-63	Acc. stainless steel fork Mod. GK-M16X2

#### STAINLESS STEEL NUT FOR PISTON RODS



Code	Ø	Description
W095X320011	32	Acc. stainless steel nut for piston rod M10X1.5
W095X400011	40	Acc. stainless steel nut for piston rod M12X1.75
W095X500011	50-63	Acc. stainless steel nut for piston rod M16X2

#### STAINLESS STEEL OSCILLATING PIN



Code  
W095X\_0007

## STAINLESS STEEL ISO 15552 CYLINDERS

TECHNICAL DATA		POLYURETHANE	FKM/FPM
Max operating pressure	bar		10
	MPa		1
Temperature range	psi		145
	°C	-10 to +80	-10 to +150 (non-magnetic cylinders)
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	32; 40; 50; 63; 80; 100	
Design		Heads with tie rods	
Standard strokes †	mm	max 1000	
Versions		Double-acting cushioned, Double-acting through-rod cushioned	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request	
Notes		† Maximum recommended strokes. Higher values can create operating problems	

### KEY TO CODES

W 1 8	4 TYPE	0 VERSION	3 2 DIAMETER	0 0 3 2 STROKE
Stainless steel cylinder	4 DEMA 5 DEMA through-rod	0 Standard (magnetic) S Non-magnetic ● V FKM/FPM gasket	32 63 40 80 50 ■ 100	+ 0 to 1000 mm

DEMA: Magnetic double-acting (cushioned)  
 † Maximum recommended strokes. Higher values can create operating problems

● For this version the cylinder will be not magnetic  
 ■ In the code of cylinder with letter in fifth position Ø 100 becomes A1

### ACCESSORIES EXAMPLE: W095X322007 (FOR Ø 100 = A1)

#### STAINLESS STEEL INTERMEDIATE HINGE MODEL EN



Code  
W095X\_2007

#### STAINLESS STEEL MALE HINGE MODEL BA



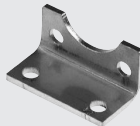
Code  
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#### STAINLESS STEEL FORK MODEL GK-M



Code	Ø	Description
W095X322020	32	Acc. stainless steel fork Mod. GK-M10X1.25
W095X402020	40	Acc. stainless steel fork Mod. GK-M12X1.25
W095X502020	50-63	Acc. stainless steel fork Mod. GK-M16X1.5
W095X802020	80-100	Acc. stainless steel fork Mod. GK-M20X1.5

#### STAINLESS STEEL SHORT FOOT MOUNTING



Code  
W095X\_2001

#### STAINLESS STEEL ISO COUNTER-HINGE FOR MODEL B - MODEL GS



Code  
W095X\_2008

#### SENSOR BRACKET



Code  
W0950001100  
Description  
Acc. stainless steel sensor bracket D. 032-100

#### STAINLESS STEEL FEMALE HINGE MODEL B



Code  
W095X\_2003

#### STAINLESS STEEL FRONT/REAR FLANGE MODEL C



Code  
W095X\_2002

#### FEMALE HINGE INOX PIN



Code  
W095X\_2050

#### STAINLESS STEEL NUT FOR PISTON RODS



Code	Ø	Description
W095X322011	32	Acc. stainless steel nut M10X1.25
W095X402011	40	Acc. stainless steel nut M12X1.25
W095X502011	50-63	Acc. stainless steel nut M16X1.5
W095X802011	80-100	Acc. stainless steel nut M20X1.5

## GRIPPER WITH 2 PARALLEL JAWS SERIES P1



TECHNICAL DATA		P1-20		P1-32	
Operating pressure	bar				2 to 8
	MPa				0.2 to 0.8
	psi				29 to 116
Temperature range	°C				5 to 70
	Fluid				20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous
Bores	mm	20			32
Clamping force at 6.3 bar 20 mm from the top surface during opening and closing	N	70			170
Single jaw stroke	mm	5			5
Weight	kg	0.50			0.70

### GRIPPERS P1-20

Code	Description
W1550200001	Gripper with 2 parallel jaws P1-20

### GRIPPERS P1-32

Code	Description
W1550320001	Gripper with 2 parallel jaws P1-32

## GRIPPERS WITH 2 PARALLEL JAWS SERIES P2



TECHNICAL DATA		P2-16		P2-20		P2-25	
Operating pressure	bar						
	MPa						
	psi						
Operating temperature	°C						
	Maximum operating frequency	cycles/s					
Fluid							
Size		16		20		25	
Bore	mm	16		20		25	
Single jaw stroke	mm	4		5		7	
Clamping force at 6.3 bar 20 mm from the top surface during opening and closing	N	45		100		135	
Weight	kg	0.12		0.24		0.45	

### GRIPPERS P2-16

Code	Description
W1570160200	Gripper with 2 parallel jaws P2-16

### GRIPPERS P2-20

Code	Description
W1570200200	Gripper with 2 parallel jaws P2-20

### GRIPPERS P2-25

Code	Description
W1570250200	Gripper with 2 parallel jaws P2-25

## GRIPPERS WITH 2 PARALLEL LONG-STROKE JAWS – SERIES P4



TECHNICAL DATA		P4-10	P4-12	P4-16	P4-25	P4-30
Operating pressure	bar			3 to 7		
	MPa			0.3 to 0.7		
	psi			43 to 101		
Operating temperature	°C			-10 to +80		
Maximum operating frequency	cycles/s			1		
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous				
Bore	mm	2 x 10	2 x 12	2 x 16	2 x 30	2 x 30
Single jaw stroke	mm	5	10	15	30	60
Clamping force at 6.3 bar 20 mm from the top surface during opening and closing	N	30	45	75	280	280
Weight	kg	0.18	0.3	0.5	2.95	3.7

### GRIPPERS P4-10

Code	Description
W1580100200	Gripper with 2 long-stroke jaws P4-10

### GRIPPERS P4-16

Code	Description
W1580160200	Gripper with 2 long-stroke jaws P4-16

### GRIPPERS P4-30

Code	Description
W1580300200	Gripper with 2 long-stroke jaws P4-30

### GRIPPERS P4-12

Code	Description
W1580120200	Gripper with 2 long-stroke jaws P4-12

### GRIPPERS P4-25

Code	Description
W1580250200	Gripper with 2 long-stroke jaws P4-25

## GRIPPERS WITH 2 HINGED JAWS – SERIES P7



TECHNICAL DATA		P7-16	P7-20	P7-32	P7-50
Operating pressure	bar	2 to 10	2 to 10	2 to 10	2 to 10
	MPa	0.2 to 1	0.2 to 1	0.2 to 1	0.2 to 1
	psi	29 to 145	29 to 145	29 to 145	29 to 145
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous.			
Temperature range	°C			-10 to +80	
Clamping force at 6.3 bar 20 mm from the centre of rotation of the jaws, during opening and closing	N	27	50	120	380
Weight	kg	0.12	0.19	0.5	1.6

### GRIPPERS P7-16

Code	Description
W1590160200	Gripper with 2 hinged jaws P7-16

### GRIPPERS P7-32

Code	Description
W1590320200	Gripper with 2 hinged jaws P7-32

### GRIPPERS P7-20

Code	Description
W1590200200	Gripper with 2 hinged jaws P7-20

### GRIPPERS P7-50

Code	Description
W1590500200	Gripper with 2 hinged jaws P7-50

## TECHNOPOLYMER HINGED GRIPPERS SERIES P8



TECHNICAL DATA		P8-32	P8-40	P8-50
Operating pressure	bar		4 to 7	
	MPa		0.4 to 0.7	
	psi		58 to 101	
Operating temperature	°C		-10 to +60	
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous		
Life		Over 2 million cycles		
Jaw opening angle		8°		
Clamping force per jaw at 6 bar	N	22.5	48	80
Applicable weight (recommended)	kg	0.2	0.4	0.8
Air consumption per cycle	cm <sup>3</sup>	0.5	1	1.8
Opening time	sec	0.04	0.05	0.05
Closing time	sec	0.06	0.08	0.08
Weight of grippers	g	36	45	60
Moment of inertia	kg cm <sup>2</sup>	0.04	0.12	0.15
Repeatability	mm	0.1	0.1	0.1

### GRIPPERS P8-32

Code	Description
W0710010002	Tecnopolimer hinged grippers P8-32

### GRIPPERS P8-40

Code	Description
W0710010003	Tecnopolimer hinged grippers P8-40

### GRIPPERS P8-50

Code	Description
W0710010004	Tecnopolimer hinged grippers P8-50

## GRIPPER 180° WITH 2 HINGED JAWS SERIES P9



TECHNICAL DATA		P9-32	P9-40
Operating pressure	bar		2 to 8
	MPa		0.2 to 0.8
	psi		29 to 116
Temperature range	°C		-10 to +80
Fluid		Filtered, lubricated or unlubricated air; lubrication if used, it must be continuous.	
Bores	mm	32	40
Jaw opening angle		Adjustable 180°	
Clamping force at 6.3 bar 40 mm from the jaw pivot during opening and closing	N	160	260
Weight	kg	0.85	1.5

### GRIPPERS P9-32

Code	Description
W1530320180	Hinged gripper P9-32

### GRIPPERS P9-40

Code	Description
W1530400180	Hinged gripper P9-40

## GRIPPERS WITH 3 PARALLEL JAWS SERIES P11



TECHNICAL DATA		P11-16	P11-20	P11-25	P11-60
Operating pressure	bar			2 to 7	
	MPa			0.2 to 0.7	
	psi			29 to 101	
Temperature range	°C			-10 to +80	
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous.			
Bore	mm	16	20	25	60
Single jaw stroke	mm	3	4	5	12.5
Clamping force at 6.3 bar 22 mm from the top surface, during opening and closing	N	38	62	110	900
Weight	kg	0.12	0.21	0.3	2.7
Maximum operating frequency	cycles/s	1.5	1.5	1.5	1.2

### GRIPPERS P11-16

Code	Description
W1570160300	Grippers with 3 parallel jaws P11-16

### GRIPPERS P11-20

Code	Description
W1570200300	Grippers with 3 parallel jaws P11-20

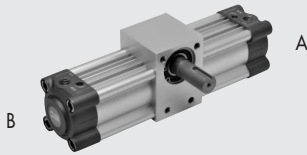
### GRIPPERS P11-25

Code	Description
W1570250300	Grippers with 3 parallel jaws P11-25

### GRIPPERS P11-60

Code	Description
W1570600300	Grippers with 3 parallel jaws P11-60

## ROTARY ACTUATORS SERIES R1



TECHNICAL DATA		32	40	50	63	80	100
Gaskets		NBR					
Operating pressure	bar	10					
	MPa	1					
	psi	145					
Temperature range	°C	- 10 to + 80					
Fluid		Filtered lubricated or unlubricated air.					
		Lubrication, if used, must be continuous.					
Bores	mm	Ø 32 ; Ø 40 ; Ø 50 ; Ø 63 ; Ø 80 ; Ø 100					
Rotation angle		90°; 180°; 270°; 360°					
Type of construction		Extruded profile					
Configuration		Magnetic standard cushioned					
Axial load	N	2500	2800	4500	5600	8500	12200
Max. moment (6 bar - 0.6 Mpa)	Nm	4.5	12.5	16	32	70	120

**N.B.** The product is supplied with negative end-of-stroke piston (in the proximity of head A).

The first cycle involves movement of the piston (towards head B) with consequent anti-clockwise rotation of the pinion.

### ACTUAL ROTATION ANGLE

Cylinders without regulation of the rotation angle: the manufactural tolerance is + 4°/0° compared to the nominal value

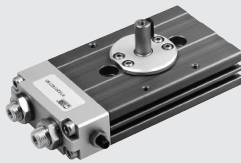
Cylinders with regulation of the rotation angle: the possible regulation ranges from + 2°/- 20°.

### KEY TO CODES

W165 TYPE		050 BORES	1 VERSION	090 ANGLE OF ROTATION •	
W165	cylinder with male pinion	032	1	090	
W166	cylinder with female pinion	040	2	180	
		050		cylinder with adjustment	270
		063		of rotation angle	360
		080			
		100			

• expressed in sexagesimal degrees.

## ROTARY ACTUATORS SERIES R2



TECHNICAL DATA		R2-12	R2-16	R2-20	R2-25
Operating pressure	bar	1.5 to 7			
	MPa	0.15 to 0.7			
	psi	22 to 101			
Temperature range	°C	-10 to +80			
Angle adjustment	degrees	35° (about +10° -25°)			
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous			
Versions		90°/180° rotation			
Ports		Both at the front			
Sizes	mm	12	16	20	25
Theoretical torque (P= pressure in bar)	Nm	0.065 x P	0.14 x P	0.25 x P	0.48 x P
Max. axial load	N	8	14	40	80
Max. radial load	N	8	14	40	80
Weight with 90° rotation	kg	0.18	0.26	0.63	0.8
Weight with 180° rotation	kg	0.21	0.31	0.72	1
Rotation time without load:					
• 90° angle	s	0.2	0.2	0.2	0.2
• 180° angle	s	0.3	0.3	0.3	0.3

### ROTARY ACTUATORS R2-12 90°/180°

Code	Description
W1620122090	Rotary actuator with shaft R2-12-90°
W1620122180	Rotary actuator with shaft R2-12-180°

### ROTARY ACTUATORS R2-16 90°/180°

Code	Description
W1620162090	Rotary actuator with shaft R2-16-90°
W1620162180	Rotary actuator with shaft R2-16-180°

### ROTARY ACTUATORS R2-20 90°/180°

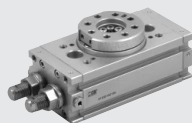
Code	Description
W1620202090	Rotary actuator with shaft R2-20-90°
W1620202180	Rotary actuator with shaft R2-20-180°

### ROTARY ACTUATORS R2-25 90°/180°

Code	Description
W1620252090	Rotary actuator with shaft R2-25-90°
W1620252180	Rotary actuator with shaft R2-25-180°



## ROTARY ACTUATORS SERIES R3



TECHNICAL DATA		R3-16	R3-20	R3-22	R3-25	R3-30	R3-40
Operating pressure	bar				3 to 7		
	MPa				0.3 to 0.7		
	psi				43.5 to 101		
Temperature range	°C				-10 to +80		
Angle adjustment	degrees				0° to 180°		
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Versions		With mechanical stop / hydraulic decelerator					
Sizes		16	20	22	25	30	40
Bores	mm	2 x 16	2 x 20	2 x 22	2 x 25	2 x 30	2 x 40
Theoretical torque at 6 bar	Nm	0.9	1.8	2.7	4.6	9.3	22
Max. axial load	N	74	135	195	300	340	360
Max. radial load	N	78	137	360	450	490	560
Weight	kg	0.53	0.99	1.29	2.08	3.9	6.7
Rotation time without load	s	0.2	0.2	0.2	0.2	0.3	0.3
Admissible kinetic energy	Joule						
WITH MECHANICAL STOP		0.007	0.025	0.049	0.082	0.090	0.150
(with flange W1630_2180 and with shaft W1630_5180)							
WITH HYDRAULIC DECELERATOR		-	-	-	0.29	1.10	1.60
(with flange W1630_2180 and with shaft W1630_5180)							

### ROTARY ACTUATORS R3-16

Code	Description
W1630162180	Rotary actuator with flange R3-16
W1630165180	Rotary actuator with shaft R3-16

### ROTARY ACTUATORS R3-22

Code	Description
W1630222180	Rotary actuator with flange R3-22

### ROTARY ACTUATORS R3-25

Code	Description
W1630252180	Rotary actuator with flange R3-25
W1630253180	Rotary actuator with flange + shock absorbers R3-25
W1630255180	Rotary actuator with shaft R3-25
W1630256180	Rotary actuator with shaft + shock absorbers R3-25

### ROTARY ACTUATORS R3-20

Code	Description
W1630202180	Rotary actuator with flange R3-20
W1630205180	Rotary actuator with shaft R3-20

### ROTARY ACTUATORS R3-30

Code	Description
W1630302180	Rotary actuator with flange R3-30
W1630303180	Rotary act. with flange + shock abs. R3-30
W1630305180	Rotary actuator with shaft R3-30
W1630306180	Rotary act. with shaft + shock abs. R3-30

### ROTARY ACTUATORS R3-40

Code	Description
W1630402180	Rotary actuator with flange R3-40
W1630403180	Rotary actuator with flange + shock absorbers R3-40

## SPARE PARTS

### SHOCK ABSORBERS



Code	Ø	Description
0950004011	25	ECO S 25 MC3 short M14 x 1.5
0950004008	30	ECO 25 MC4 M14 x 1.5
0950004005	40	ECO 50 MC2 + nut M20 x 1.5

## ROTARY ACTUATORS SERIES R3 WITH EXTERNAL SHOCK ABSORBERS



TECHNICAL DATA		R3-16	R3-20	R3-22	R3-25	R3-30	R3-40
Operating pressure	bar				3 to 7		
	MPa				0.3 to 0.7		
	psi				43.5 to 101		
Temperature range	°C				-10 to +80		
Angle adjustment	degrees				90° o 180° ± 3°		
Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Sizes	mm	16	20	22	25	30	40
Bore	mm	2 x 16	2 x 20	2 x 22	2 x 25	2 x 30	2 x 40
Theoretical torque at 6 bar	Nm	0.9	1.8	2.7	4.6	9.3	22
Max. axial load	N	74	135	195	300	340	360
Max. radial load	N	78	137	360	450	490	560
Max overturning moment	Nm	2.4	4	5.3	9.7	12	18
Admissible kinetic energy	J	0.16	0.55	0.85	1.40	1.85	3.35
Rotation time without load	s	0.2	0.2	0.2	0.2	0.3	0.3

### ROTARY ACTUATOR SERIES R3-16 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630164090	Rotary actuator with flange + shock absorbers R3-16-90
W1630164180	Rotary actuator with flange + shock absorbers R3-16-180

### ROTARY ACTUATOR SERIES R3-22 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630224090	Rotary actuator with flange + shock absorbers R3-22-90
W1630224180	Rotary actuator with flange + shock absorbers R3-22-180

### ROTARY ACTUATOR SERIES R3-20 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630204090	Rotary actuator with flange + shock absorbers R3-20-90
W1630204180	Rotary actuator with flange + shock absorbers R3-20-180

### ROTARY ACTUATOR SERIES R3-25 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630254090	Rotary actuator with flange + shock absorbers R3-25-90
W1630254180	Rotary actuator with flange + shock absorbers R3-25-180

### ROTARY ACTUATOR SERIES R3-30 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630304090	Rotary actuator with flange + shock absorbers R3-30-90
W1630304180	Rotary actuator with flange + shock absorbers R3-30-180

### ROTARY ACTUATOR SERIES R3-40 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

Code	Description
W1630404090	Rotary actuator with flange + shock absorbers R3-40-90
W1630404180	Rotary actuator with flange + shock absorbers R3-40-180

## SPARE PARTS

### SHOCK ABSORBERS



Code	Ø	Description
0950004009	16	Shock absorbers ECO 10 MF3 M10 x 1
0950004010	22	Shock absorbers ECO 15 MF4 M12 x 1
0950004011	25-30	Shock absorbers ECO 25 MC3 M14 x 1.5
0950004005	40	Shock absorbers ECO 50 MC2 + nut M20 x 1.5

## TWIN CYLINDER SERIES S10



ACTUATORS

SLIDES

TECHNICAL DATA		S10-12	S10-16	S10-20	S10-25	S10-30
Pressure range	bar			3 to 7		
	MPa			0.3 to 0.7		
	psi			43.5 to 101		
Temperature range	°C			-10 to +80		
Fluid		20 µm dried or lubricated filtered air. Lubrication, if used, must be continuous.				
Piston speed	mm/s			30 to 100		
Versions		System with sliding bushes/System with ball bushes available with stop screw or hydraulic decelerator				
Sizes		12	16	20	25	30
Bores	mm	2 x 12	2 x 16	2 x 20	2 x 25	2 x 30
Piston rod diameter	mm	6	8	10	12	16
Strokes	mm	15	15	25	25	25
	mm	25	25	50	50	50
	mm	50	50	75	75	75
	mm	-	75	100	100	100
	mm	-	-	-	125	125
Weight (C = stroke mm)						
• Sliding version	kg	0.12 + (0.002 x C)	0.24 + (0.0025 x C)	0.51 + (0.005 x C)	0.76 + (0.006 x C)	1.3 + (0.009 x C)
• Ball bearing version	kg	0.21 + (0.002 x C)	0.48 + (0.0025 x C)	0.77 + (0.005 x C)	0.18 + (0.006 x C)	1.92 + (0.009 x C)
Theoretical thrust (P = relative pressure in bar)		(Multiply the value shown by the pressure in bar)				
• Thrust force	da N	2.26 x P	4 x P	6.28 x P	9.8 x P	14.1 x P
• Pull force	da N	1.69 x P	3 x P	4.11 x P	7.5 x P	10.1 x P
Max. loads		(The values shown refer to the min. and max. strokes)				
• Sliding version	N	3 to 1.5	6 to 3	10 to 3.5	12 to 5.6	20 to 7
• Ball bearing version	N	6 to 4	11 to 6	20 to 7	26 to 8	36 to 11

### ON BUSHES Ø 12 to 30 mm

Code	Ø	Code	Ø	Code	Ø
W1440122...	12	W1440202...	20	W1440302...	30
W1440162...	16	W1440252...	25		

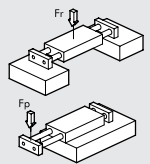
### ON BALL BEARINGS Ø 12 to 30 mm

Code	Ø	Code	Ø	Code	Ø
W1440123...	12	W1440203...	20	W1440303...	30
W1440163...	16	W1440253...	25		

## TWIN CYLINDER SLIDE WITH FIXED BODY SERIES S11



TECHNICAL DATA		S11-12	S11-16	S11-20	S11-25	S11-30
Fluid		20 µm filtered air				
Pressure range	bar			1.5 to 7		
	MPa			0.15 to 0.7		
	psi			43.5 to 101		
Temperature range	°C			-10 to +80		
Piston speed	mm/s			30 to 200		
Versions		With sliding bushes / With ball bearing bushes / With stop screw / With hydraulic shock absorbers				
Bores	mm	12	16	20	25	30
Piston rod diameter	mm	6	8	10	12	16
Strokes	mm	25	25	25	25	25
	mm	50	50	50	50	50
	mm	75	75	75	75	75
	mm	-	100	100	100	100
	mm	-	-	125	125	125
	mm	-	-	-	150	150
Weight = X + (Y · C) where C = stroke	kg					
• Sliding version		X = 0.14 Y = 0.002	X = 0.25 Y = 0.0035	X = 0.5 Y = 0.045	X = 0.7 Y = 0.007	X = 1.24 Y = 0.01
• Ball bearing version		X = 0.25 Y = 0.002	X = 0.37 Y = 0.0035	X = 0.78 Y = 0.045	X = 1.04 Y = 0.007	X = 1.98 Y = 0.01
Theoretical thrust (P = relative pressure in bar)	N	16.9 x P	30 x P	47 x P	75 x P	101 x P
Max. loads		(The values shown refer to the min. and max. strokes)				
• Loads with sliding version	N	Fr: 7 to 3 Fp: 4 to 1.5	Fr: 20 to 4 Fp: 4 to 1.5	Fr: 35 to 4.5 Fp: 12 to 3	Fr: 50 to 5.4 Fp: 15 to 3.5	Fr: 80 to 12 Fp: 20 to 4.5
• Loads with ball bearing version	N	Fr: 13 to 5 Fp: 6 to 3	Fr: 35 to 6.5 Fp: 11 to 3	Fr: 58 to 7 Fp: 18 to 5	Fr: 80 to 8 Fp: 23 to 6	Fr: 130 to 18 Fp: 50 to 8



### ON BUSHES Ø 12 to 30 mm

Code	Ø
W1450122...	12
W1450162...	16
W1450202...	20
W1450252...	25
W1450302...	30

### ON BALL BEARINGS Ø 12 to 30 mm

Code	Ø
W1450123...	12
W1450163...	16
W1450203...	20
W1450253...	25
W1450303...	30

### ON BUSHES WITH SHOCK ABSORBERS - Ø 12 to 30 mm

Code	Ø
W1450124...	12
W1450164...	16
W1450204...	20
W1450254...	25
W1450304...	30

### ON BALL BEARINGS WITH SHOCK ABSORBERS - Ø 12 to 30 mm

Code	Ø
W1450125...	12
W1450165...	16
W1450205...	20
W1450255...	25
W1450305...	30

## SPARE PARTS

### SHOCK ABSORBERS

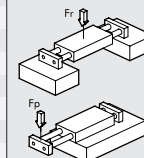
Code	Ø	Description
0950004001	12	Shock absorbers ECO 10 MF3 + nut M10 x 1
0950004002	16-20	Shock absorbers ECO 15 MF3 + nut M12 x 1
0950004003	25	Shock absorbers ECO 25 MC-C + nut M14 x 1
0950004004	30	Shock absorbers ECO 50 MC2 + nut M20 x 1.5



## TWIN CYLINDER SLIDE WITH FIXED PLATES SERIES S12



TECHNICAL DATA	S12-16	S12-20	S12-25	S12-30
Fluid	20 µm filtered air			
Pressure range	bar	1.5 to 7		
	MPa	0.15 to 0.7		
	psi	21.5 to 101		
Temperature range	°C -10 to +80			
Piston speed	mm/s 30 to 200			
Versions	With sliding bushes / With ball bearing bushes / With stop screw / With hydraulic shock absorbers			
Bores	mm 16	20	25	30
Piston rod diameter	mm 8	10	12	16
Strokes	mm 25	25	25	25
	50	50	50	50
	75	75	75	75
	100	100	100	100
	-	125	125	125
	-	-	150	150
Weight = X + (Y · C) where C = stroke	kg			
• Sliding version	X = 0.25 Y = 0.0035	X = 0.5 Y = 0.045	X = 0.7 Y = 0.007	X = 1.24 Y = 0.01
• Ball bearing version	X = 0.37 Y = 0.0035	X = 0.78 Y = 0.045	X = 1.04 Y = 0.007	X = 1.98 Y = 0.01
Theoretical thrust (P = relative pressure in bar)	N 30 x P	47 x P	75 x P	101 x P
Max. loads	(The values shown refer to the min. and max. strokes)			
• Loads with sliding version	N Fr: 20 to 4 Fp: 4 to 1.5	Fr: 35 to 4.5 Fp: 12 to 3	Fr: 50 to 5.4 Fp: 15 to 3.5	Fr: 80 to 12 Fp: 20 to 4.5
• Loads with ball bearing version	N Fr: 35 to 6.5 Fp: 11 to 3	Fr: 58 to 7 Fp: 18 to 5	Fr: 80 to 8 Fp: 23 to 6	Fr: 130 to 18 Fp: 50 to 8



### ON BUSHES Ø 16 to 30 mm

Code	Ø
W1460162...	16
W1460202...	20
W1460252...	25
W1460302...	30

### ON BALL BEARINGS Ø 16 to 30 mm

Code	Ø
W1460163...	16
W1460203...	20
W1460253...	25
W1460303...	30

### ON BUSHES WITH SHOCK ABSORBERS - Ø 16 to 30 mm

Code	Ø
W1460164...	16
W1460204...	20
W1460254...	25
W1460304...	30

### ON BALL BEARINGS WITH SHOCK ABSORBERS - Ø 16 to 30 mm

Code	Ø
W1460165...	16
W1460205...	20
W1460255...	25
W1460305...	30

## SPARE PARTS

### SHOCK ABSORBERS

Code	Ø	Description
0950004002	16-20	Shock absorbers ECO 10 MF2 + nut M10 x 1
0950004003	25	Shock absorbers ECO 15 MF1 + nut M12 x 1
0950004004	30	Shock absorbers ECO 25 MC2 + nut M12 x 1.5



## PRECISION SLIDES SERIES S13



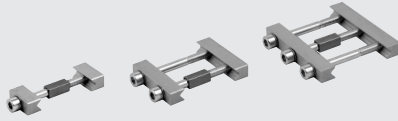
TECHNICAL DATA	Ø 6	Ø 10	Ø 16	Ø 20
Operating pressure	bar	2 to 8		
	MPa	0.2 to 0.8		
	psi	29 to 116		
Operating temperature	°C -10 to +80			
Fluid	Lubricated and unlubricated compressed air at 20 µm, must be uninterrupted when lubricated			
Minimum and maximum speed	mm/s 30 to 500			
Pneumatic fittings	M5			
Type of guide	Ball recirculation			
Versions	Magnetic dual-acting with rubber buffer			
Strokes	mm 10	10	10	10
	25	25	25	25
	---	---	50	50
Theoretical thrust force, at 6 bar	N 17	47	120	188
Theoretical pull force, at 6 bar	N 13	40	104	158
Admitted kinetic energy	Joule 0.012	0.025	0.050	0.100
Stroke tolerance	mm 0 / +1.0			
Assembly position	Any (horizontal and vertical)			

### ORDER CODE

Code	Ø	Code	Ø
W1471063...	6	W1471163...	16
W1471103...	10	W1471203...	20

## K FIXING ELEMENT

### FIXING ELEMENT



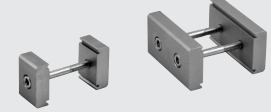
Code	Description
W0950005051K	Fixing element with one screw
W0950005052K	Fixing element with two screws
W0950005053K	Fixing element with three screws

### FIXING ELEMENT QS HEIGHT 8 mm



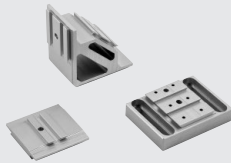
Code	Description
W0950005000K	Fixing element QS 12-8
W0950005001K	Fixing element QS 20-8
W0950005003K	Fixing element QS 55-8

### FIXING ELEMENT QS HEIGHT 22 mm



Code	Description
W0950005002K	Fixing element QS 20-22
W0950005004K	Fixing element QS 55-22

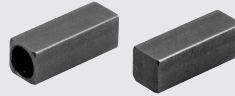
## ADAPTOR V-LOCK



Code	Description
W0950005100K	2-1 parallel adaptor
W0950005110K	2-2 cross adaptor
W0950005120K	2-1 cross adaptor
W0950005200K	Longitudinal bracket
W0950005201K	Transversal bracket
W0950005202K	Cross bracket
0950008001K	Longitudinal adaptor
0950008002K	Transversal adaptor

## ACCESSORIES

### HOLLOW KEY

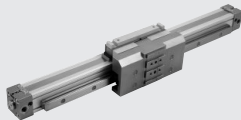


Code	Description
W0950005150K	V-LOCK hollow key kit
W0950005151K	V-LOCK key kit

## SPARE PARTS

Code	Description
W0950005170K	K screw kit
W0950005171K	QS screw kit

## RODLESS CYLINDERS V-LOCK SERIES



TECHNICAL DATA	
Operating pressure	bar MPa psi
Temperature range	°C °F
Fluid	If unlubricated 50 µm unfiltered air is used, lubrication must be deactivated
Bore	mm Ø 16; 25; 32
Design	Double-acting rodless cylinder with direct transmission system
Strokes	mm Ø 16: from 100 to 1350 with intervals of 1 Ø 25: from 100 to 2300 with intervals of 1 Ø 32: from 100 to 2300 with intervals of 1 M5, 1/8", 1/4"
Threaded ports	Free
Fixing position	Free
Max. speed with or without shock absorbers	m/s ≤1
Notes	For speeds lower than 0,2 m/s, to prevent bounce, use the non-stick/slip version with unlubricated. When operating conditions exceed the values shown in the "Diagram of speed and maximum cushionable load", it is advisable to use the version with external shock absorbers. Every 2000 km or once a year (grease code 9910506)
Lubrication	

### KEY TO CODE

CYL	27	5	0	3 2	0 1 0 0	C	N	K
	TYPE			BORE	STROKE		GASKETS	FAMILY
27	Rodless cylinder	5 Dual-acting, cushioned, magnetic, with ball recirculation guides ▲ 6 Dual-acting, cushioned, with ball recirculation guides + adjustable stops and decelerators	0 Magnetic S Non-magnetic ■ G Non-stick-slip	16 25 32	Ø 16: 100 to 1350 mm Ø 25 - 32: 100 to 2300 mm		N NBR gaskets	K V-LOCK

■ Use at speeds lower than 0.2 m/s to prevent bounce. Use unlubricated air only.

▲ For use in conditions exceeding those shown in the "Diagram of speed and maximum cushionable load" on page K3-4.

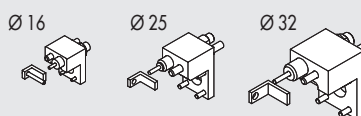
## ACCESSORIES FOR V-LOCK RODLESS CYLINDERS

### FOOT



Code	Description
W0950167001K	Foot D.016 V-Lock
W0950257001K	Foot D.025 V-Lock
W0950327001K	Foot D.032 V-Lock

### ADJUSTABLE LIMIT SWITCH AND SHOCK ABSORBERS KIT



Code	Description
0950164002K	Rodless cylinder limit switch and shock absorbers Ø 16 V-Lock
0950254002K	Rodless cylinder limit switch and shock absorbers Ø 25 V-Lock
0950324002K	Rodless cylinder limit switch and shock absorbers Ø 32 V-Lock

### SHOCK ABSORBERS



Code	Description
0950004003	Shock absorbers ECO 15 MF1 + nut M12x1
0950004004	Shock absorbers ECO 25 MC2 + nut M14x1.5
0950004005	Shock absorbers ECO 50 MC2 + nut M20x1.5

### INTERMEDIATE SUPPORT



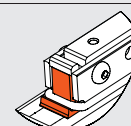
Code	Description
W0950164004K	Intermediate support D.016 V-Lock
W0950254004K	Intermediate support D.025 V-Lock
W0950324004K	Intermediate support D.032 V-Lock

### SENSOR SUPPORT



Code	Description
0950164003	Sensor support short 016
0950164001	Sensor support std 016

### SPARE



See page 24 (pour diamètres 16-25-32)

## COMPACT PRECISION SLIDES SERIES S14K



TECHNICAL DATA		S14K-8	S14K-16	S14K-25
Operating pressure	bar		2 to 8	
	psi		29 to 116	
Temperature range	°C		-10 to +80	
Fluid		Dry or lubricated 10 µm filtered compressed air. Lubrication, if used, must be continuous.		
Maximum speed	m/s	0.8 we always suggest to use flow microregulators	0.8	0.8
Versions		With shock absorbers – With elastic mechanical stop		
Bore	mm	2 x Ø 8	2 x Ø 16	2 x Ø 25
Piston rod diameter	mm	4	8	12
Strokes	mm	10, 20, 30, 40, 50, 80, 100	10, 20, 30, 40, 50, 80, 100, 125, 150	10, 20, 30, 40, 50, 80, 100, 125, 150, 200
Stroke reduction by adjusting the decelerators retraction	mm	16 extension / 16 retraction	12 extension / 12 retraction	30 extension / 30 retraction
Stroke reduction by adjusting the buffers retraction	mm	8 extension / 8 retraction	10 extension / 10 retraction	15 extension / 15 retraction
Maximum impact energy with hydraulic decelerators	J	2	5	20
Maximum impact energy with buffers	J	0.15	0.25	0.5
Sensors		Sensors Magnetic Hall or Reed		
Theoretical thrust force at 6 bar	N	60	240	589
Theoretical pull force at 6 bar	N	46	180	453
Repeatability in stop positions	mm	0.02 (with shock absorbers); 0.02 (with buffers and 5 bar minimum pressure)		
Monitoring position		Any		
Notes		Lubrication recommended: every 2 million cycles for strokes below 100 mm and 1 million for longer strokes (grease code 9910506)		

### KEY TO CODES

W147 TYPE	2 MODEL	08 BORE	3 STOP	050 STROKE	020	K FAMILY
Precision slide	2 S14K	08 16 25	3 with mechanical stop 5 with shock absorbers	See general technical data	Only for version with third-position stop device	K V-Lock

## ACCESSORIES

### GREASE

Code	Description
9910506	Tube of RHEOLUBE 363 AX1 grease

## SPARE PARTS

### GASKET SPARE PARTS KIT

Code	Description
W1472089001K	S14K gasket kit Ø 8
W1472169001K	S14K gasket kit Ø 16
W1472259001K	S14K gasket kit Ø 25

### SHOCK ABSORBERS

Code	Description
W0950005300	Shock absorbers - 2 M8 x 1
W0950005301	Shock absorbers - 2 M10 x 1
W0950005302	Shock absorbers - 2 M14 x 1.5

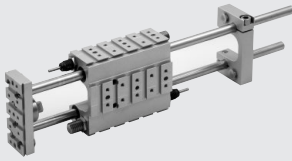
### MECHANICAL STOP

Code	Description
W0950005400K	Mechanical stop M8 x 1
W0950005401K	Mechanical stop M10 x 1
W0950005402K	Mechanical stop M14 x 1.5

## GUIDE UNITS SERIES GDHK AND GDMK

ACTUATORS

V-Lock



TECHNICAL DATA		Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40
Strokes	mm	From 1 to 600					
Stroke reduction via stop adjustment	mm	The total stroke can be shortened using adjusting stops and/or the rear plate.					
Temperature range	°C	-14 per side		-22 per side		-40 per side	-35 per side
Recommended maximum speed	m/s	-10 to +80					
Rear plate torques	Nm	1					
Guide column diameter	mm	7 ±1		22 ±2			35 ±2
Maximum impact energy with shock absorbers	Ec [J]	10		12		16	20
with buffers	Ec [J]	5		20		25	70
without stops		0.5		1		2	2
Repeatability (at 6 bar)		refer to the diagram on page K3-48					
Versions with buffers	mm	±0.02 (with minimum pressure 5 bar)					
Versions with shock absorbers	mm	±0.02					
Lubrication		<p>The guides are supplied lubricated. There are two greasers on the guide bodies (one per column) for periodic lubrication using a pump with a nozzle.</p> <p>The following greases are recommended:</p> <ul style="list-style-type: none"> <li>- version GDHK: code 9910502 (RHEOLUBE 362 HB)</li> <li>- version GDMK: code 9910506 (RHEOLUBE 363AX1)</li> </ul> <p>The lubrication interval depends on numerous factors such as load, temperature, speed, stroke, lubricant, environmental conditions and assembly position.</p> <p><b>As a general rule, lubrication is recommended every 500.000 – 1.000.000 cycles.</b></p>					

### KEY TO CODES

W070 TYPE	012 BORE	2 VERSION	050 STROKE	00 EXECUTION	K FAMILY
Guide unit	012 12 012 16 020 20 025 25 032 32 040 40	2 Version H 3 Version M	See general technical data	00 Without stop 01 With front stop and buffers 02 With front stop and shock absorber 03 With front and rear stops and buffers 04 With front and rear stops and shock absorbers 05 With short columns for Elektro cylinder	K V-Lock

■ For Ø 32 only

## ACCESSORIES AND SPARE PARTS

### ELASTIC MECHANICAL STOP



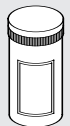
Code	Description
W0950005401K	Elastic mechanical stop M10x1 + nut
W0950005402K	Elastic mechanical stop M14x1.5 + nut
W0950005403K	Elastic mechanical stop M20x1.5 + nut
W0950005404K	Elastic mechanical stop M25x1.5 + nut

### SHOCK ABSORBERS



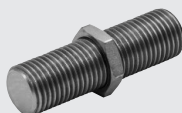
Code	Description
W0950005301	Shock absorbers 2 M10x1 + nut
0950004004	Shock absorbers ECO25 MC2 + nut M14x1.5
0950004005	Shock absorbers ECO50 MC2 + nut M20x1.5
0950004006	Shock absorbers ECO100 MF2 + nut M25x1.5

### GREASE



Code	Description
9910502	Tube of RHEOLUBE 362 grease (for GDHK version)
9910506	Tube of RHEOLUBE 363 AX1 grease (for GDMK version)

### MECHANICAL STOPS



Code	Description
W0950005501K	Mechanical stop M10x1 + nut
W0950005502K	Mechanical stop M14x1.5 + nut
W0950005503K	Mechanical stop M20x1.5 + nut
W0950005504K	Mechanical stop M25x1.5 + nut

### REAR PLATE KITS

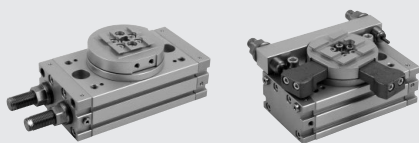


Code	Description
W0950005600K	Rear plate kit GD_K
W0950005601K	Rear plate kit GD_K
W0950005602K	Rear plate kit GD_K
W0950005603K	Rear plate kit GD_K

Note: individually packed with 2 screws



## ROTARY ACTUATOR SERIES R3K



TECHNICAL DATA		R3K-16	R3K-20	R3K-25
Operating pressure	bar		3 to 7	
	MPa		0.3 to 0.7	
	psi		43 to 101	
Temperature range	°C		-10 to 80	
	Fluid	Lubricated or unlubricated 20 µm filtered air. If lubricated air is used, lubrication must be continuous.		
Bore	mm	2 x 16	2 x 20	2 x 25
Theoretical torque at 6 bar	Nm	0.9	1.8	4.6
Maximum axial load	N	74	135	300
Maximum radial load	N	78	137	450
Maximum overturning moment	Nm	2.4	4	9.7
Rotation time without load	s	0.2	0.2	0.2
Maximum kinetic energy:	with mechanical stop	Joule	0.007	0.025
	with inner decelerators	Joule	-	-
Weight	kg	0.16	0.55	1.40

### ROTARY ACTUATOR R3K

Code	Description
W1630162180K	Rotary actuator R3K-16-180
W1630202180K	Rotary actuator R3K-20-180
W1630252180K	Rotary actuator R3K-25-180
W1630253180K	Rotary actuator + shock absorbers R3K-25-180

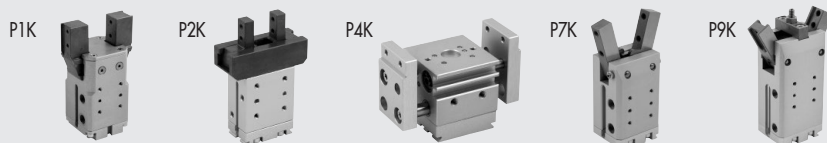
### ROTARY ACTUATOR WITH EXTERNAL SHOCK ABSORBERS

Code	Description
W1630164090K	Rotary actuator with external shock absorbers R3K-16-90
W1630164180K	Rotary actuator with external shock absorbers R3K-16-180
W1630204090K	Rotary actuator with external shock absorbers R3K-20-90
W1630204180K	Rotary actuator with external shock absorbers R3K-20-180
W1630254090K	Rotary actuator with external shock absorbers R3K-25-90
W1630254180K	Rotary actuator with external shock absorbers R3K-25-180

### SPARE PARTS

See page 35

## GRIPPERS



TECHNICAL DATA	P1K-20	P1K-32	P2K-20	P4K-12	P7K-20	P7K-32	P9K-32	P9K-40	
Operating pressure	bar	2 to 8	2 to 8	3 to 8	2 to 10	2 to 10	2 to 8	2 to 8	
	MPa	0.2 to 0.8	0.2 to 0.8	0.3 to 0.8	0.2 to 1.0	0.2 to 1.0	0.2 to 0.8	0.2 to 0.8	
	psi	29 to 116	29 to 116	43 to 116	43 to 116	29 to 145	29 to 116	29 to 116	
Temperature range	°C	5 to 70	-10 to 80	-10 to 80	-10 to 80	-10 to 80	-10 to 80	-10 to 80	
	Fluid	20 µm filtered air, lubricated or unlubricated. If lubricated air is used, lubrication must be continuous							
Bore	mm	20	32	20	2 x 12	20	32	40	
Clamping force of a single jaw at 6.3 bar, 20 mm (40 mm for P9) from the upper surface, on opening and closing	N	70	170	100	45	50	120	160	
Stroke of each jaw	mm	5	5	5	10	-	-	-	
Max. frequency on continuous operation	Hz	> 5	> 5	> 5	> 4	> 5	> 5	> 5	
Minimum opening/closing time	s	0.009 / 0.016	0.02 / 0.02	0.012 / 0.02	0.008 / 0.008	0.042 / 0.016	0.017 / 0.010	0.034 / 0.041	
Repeatability	mm	> 0.02	> 0.02	0.01	< 0.04	0.01	0.01	< 0.02	
Lubrication		Grease the sliding surfaces of the jaws every one million cycles. Use grease code 9910509							
Max. admissible static loads:	- Fa	N	200	350	450	200	200	350	
	- Mx	Nm	6	10	12	6	6	10	
	- My	Nm	6	10	12	6	6	10	
	- Mz	Nm	8	12	16	8	8	12	
Weight	kg	0.50	0.85	0.4	0.35	0.22	0.54	0.76	

### GRIPPERS WITH TWO PARALLEL JAWS

Code	Description
W1550200001K	Gripper with 2 parallel jaws P1K-20
W1550320001K	Gripper with 2 parallel jaws P1K-32
W1570200200K	Gripper with 2 parallel jaws P2K-20
W1580120200K	Gripper with 2 jaws, long stroke, P4K-12

### GRIPPERS WITH TWO HINGED JAWS

Code	Description
W1590200200K	Gripper with 2 hinged jaws P7K-20
W1590320200K	Gripper with 2 hinged jaws P7K-32
W1530320180K	Gripper with 2 hinged jaws P9K-32
W1530400180K	Gripper with 2 hinged jaws P9K-40

## ACCESSORIES

### ADAPTORS



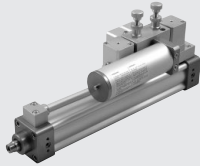
Code	Description
0950008003K	Side adaptor kit type 1 for P4K-12
0950008004K	Side adaptor kit type 2 for P1K, P2K, P7K, P9K-32
0950008005K	Side adaptor kit type 3 for P9K-40

### GREASE

Code	Description
9910509	Grease pipe NYOGEL 774 H



## HYDRAULIC BRAKE SERIES BRK FOR CYLINDER ISO 15552



ACTUATORS

HYDRAULIC BRAKE

TECHNICAL DATA		Ø 40	Ø 63
Operating temperature	°C	From -10 to +70	
Fluid		Oil, brake fluid provided	
Maximum applicable load	N	7000	25000
Speed	mm/min	See attached diagram	
Standard strokes	mm	50, 100, 150, 200, 250, 300, 350, 400, 450, 500 special strokes up to 1000 on request.	
Versions		Regulation in piston rod extension and/or retraction. SKIP valves. STOP valves. NC or NO Tank in-line or on the side.	
Cylinder fixing		Using flange kit	
ISO 15552 cylinders connected	mm	From Ø 40 to Ø 100	From Ø 100 to Ø 200

### KEY TO CODES

W 1 7 0	0	1	2	0300 STROKE	L
<b>W170</b> BRK hydraulic brake	<b>0</b> Regulation <b>1</b> Regulation + SKIP <b>2</b> Regulation + STOP <b>3</b> Regulation + SKIP + STOP	<b>0</b> Extension <b>1</b> Retraction <b>2</b> Extension and retraction	<b>1</b> No valve or NO <b>2</b> NC <b>* 3</b> + NO STOP in extension <b>* 4</b> + NC STOP in extension <b>* 5</b> + NO STOP in retraction <b>* 6</b> + NC STOP in retraction <b>▲ A</b> + NO SKIP in extension <b>▲ B</b> + NC SKIP in extension <b>▲ C</b> + NO SKIP in retraction <b>▲ D</b> + NC SKIP in retraction	Enter the desired stroke in four digits (e.g. 0500 for stroke 500)	- Ø 40 ● <b>L</b> Ø 40 In-line tank ● <b>63</b> Ø 63 ● <b>63L</b> Ø 63 In-line tank

- Only for versions with piston rod regulation in extension
- \* In combination with regulation in extension/retraction or regulation + SKIP in extension/retraction
- ▲ In combination with regulation in extension/retraction

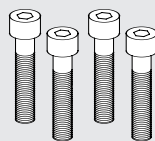
## ACCESSORIES

### FLANGE FOR MOUNTING WITH ISO 15552 CYLINDER



Code	Ø	Description
W0950402012	40	Flange Mod. CF-040
W0950502012	50	Flange Mod. CF-050
W0950632012	63	Flange Mod. CF-063
W0950802012	80	Flange Mod. CF-080
W0951002012	100	Flange Mod. CF-100

### FLANGE SCREW KIT



Code	Description	Weight [g]
W0950402111	Kit BRK-P/C-040	58
W0950502111	Kit BRK-P/C-050	93
W0950632111	Kit BRK-P/C-063	97
W0950802111	Kit BRK-P/C-080-100	151

## INTEGRATED HYDRAULIC BRAKE



TECHNICAL DATA		Ø 50	Ø 63	Ø 80
Operating pressure	bar		1 to 8	
	MPa		0.1 to 0.8	
NC valve actuation pressure	psi		14.5 to 116	
	bar		3 to 8	
Operating temperature range	MPa		0.3 to 0.8	
	psi		43.5 to 116	
Operating temperature range	°C		-10 to +70	
	°F		14 to 156	
Pneumatic circuit fluid		Lubricated or unlubricated filtered air.		
Hydraulic circuit fluid		DEXRON ATF – the list of compatible oils is available on the web site <a href="http://www.metalwork.it">www.metalwork.it</a>		
Bore	mm		63	
Thrust force generated at 6 bar	N	1.109	1.801	2.946
Pull force generated at 6 bar	N	600	1.292	2.437
Maximum load which can be applied from outside while the rod is lock N				
• Version without valves and with closed pins:				
Thrust Load on the rod			6.000	
Traction Load on the rod			5.000	
• Version with STOP NC valves not operated:				
Thrust Load on the rod			6.000	
Traction Load on the rod			5.000	
• Version with STOP NO valves operated at 6 bar:				
Thrust Load on the rod			6.000	
Traction Load on the rod			5.000	
• Version with STOP NO valves operated at 8 bar:				
Thrust Load on the rod			6.000	
Traction Load on the rod			5.000	
Standard strokes	mm	50, 100, 150, 200, 250, 300, 350, 400, 450, 500		
Valve combinations		Other special strokes up to 500 available on request, but the dimensions of the brake are the same of the immediately higher stroke ones, and the front damping has no action. Piston-out, piston-in and dual regulation The following combinations of valves can be mounted on each regulated section: STOP NO, STOP NC, SKIP NO, SKIP NC, DOPPIO STOP NO, DOPPIO STOP NC, DOPPIO SKIP NO, DOPPIO SKIP NC, STOP NO+STOP NC, SKIP NO+SKIP NC, STOP NO+SKIP NO, STOP NC+SKIP NC, STOP NO+SKIP NC, STOP NC+SKIP NO All versions are provided with a magnet		
Sensor magnet				

ACCESSORIES - SEE ISO 15552 CYLINDERS STD PAGE 13

### KEY TO CODES

W 1 7 3	2	3	1	0	0 5 0 0
INTEGRATED BRAKE	REGULATION	PISTON ROD EXTENSION CONTROL VALVES	PISTON ROD RETRACTION CONTROL VALVES	BORE	STROKE
W173 Integrated brake	0 Out 1 In 2 Dual	0 Without valves 1 NO Stop 2 NC Stop 3 NO Skip 4 NC Skip 5 NO Stop NO Skip 6 NO Stop NC Skip 7 NC Stop NO Skip 8 NC Stop NC Skip	0 Without valves 1 NO Stop 2 NC Stop 3 NO Skip 4 NC Skip 5 NO Stop NO Skip 6 NO Stop NC Skip 7 NC Stop NO Skip 8 NC Stop NC Skip	A Ø 50 0 Ø 63 1 Ø 80	Specify the desired stroke in 4 digits (e.g. 0500 for stroke 500)

N.B. With at least one extension control valve and one retraction control valve, type W1732\_\_ is required.

## ELECTRIC CYLINDER SERIES ELEKTRO ISO 15552

in-line version



geared version



TECHNICAL DATA	32	50	63 - 63 HD
Piston rod thread	M10x1.25	M16x1.5	M16x1.5
Environmental temperature range for STEPPING motors	from -10 to +50		
BRUSHLESS motors	from 0 to +40		
Electrical protection rating with STEPPING motors	IP40 or IP55 (see key to codes nex page)		
BRUSHLESS motors	IP40 or IP65 (see key to codes nex page)		
Maximum relative humidity of the air for IP55 STEPPING motor	90% at 40°C; 57% at 50°C (no condensate)		
IP65 BRUSHLESS motor	90% (no condensate)		
Minimum stroke for version with non-rotating	Twice the screw pitch (to guarantee ball lubrication)		
Minimum stroke for version without non-rotating	80 (in order to re-grease the screw)		
Maximum stroke	1370	1500	
Overall radial oscillation of the piston rod (without load) for 100 mm of stroke	0.4		
Versions	With or without piston rod non-rotating		
Uncontrolled impact at the end of stroke	NOT ALLOWED (it provides an extra-stroke minimum 5 mm)		
Sensor magnet	YES		
Maximum angle of twist of the piston rod for non-rotating version	1°30'	1°	0°45'
Work position	Any		

MECHANICAL FEATURES	32		50			63			63 HD		
Worm screw pitch (p)	4	12	5	10	16	5	10	20	5	10	
Worm screw diameter	12	12	16	16	16	20	20	20	20	20	
Static axial load (F <sub>s</sub> )*	3200		4000			6500			12800		
Dynamic axial load (F)	5200	5600	10500	6670	4330	10010	12800	4880	17600	18980	
Maximum number of revs	Calculate mean axial load and the calculate life (see general catalogue)										
Maximum speed (V <sub>max</sub> )	4000		3000			2500			2500		
	267	800	250	500	800	208	417	833	208	417	

\* N.B. Static loads bearable without damage.  
Useful loads are shown in the diagrams on the general catalogue.

WEIGHTS	32		50			63 - 63 HD		
Worm screw pitch (p)	4	12	5	10	16	5	10	20
Weight at stroke 0	896	973	1990	2043	2086	2942	3209	3056
Additional weight per mm of stroke	3.98	3.96	6.64	6.62	6.55	6.25	6.32	6.32
Moving mass at stroke 0 (non-rotating version)	270	353	586	629	703	956	1215	1067
Additional moving mass per mm of stroke	1.25		1.84			1.98		

MASS MOMENTS OF INERTIA	32		50			63 - 63 HD		
Worm screw pitch	4	12	5	10	16	5	10	20
J0 at stroke 0	1.2407	2.4309	5.3455	6.1360	9.1113	12.4043	14.8767	23.5427
J1 per metre of stroke	12.2592	17.8468	35.2305	38.5264	49.1936	86.2990	96.6652	116.3671
J2 per kg of load	0.4053	4.0858	0.6333	2.5332	6.4849	0.6333	2.5332	10.1327
Total mass moment o inertia Jtot = J0 + J1 · stroke [m] + J2 · load [kg]								

**MOTOR-DRIVE COUPLINGS FOR VARIOUS CYLINDER BORES**

MOTOR CODES		DRIVES CODES			
		Metal Work	37D1222000	37D1332000	37D1442000
Metal Work	Manufacturer	RTA CSD 94	RTA NDC 96	RTA PLUS A4	RTA PLUS B7
		(4.4A 24÷48VDC)	(6A 24÷75VDC)	(6A 77÷140VDC)	(10A 28÷62VAC) ●
<b>STEPPING</b>					
37M1110000	Motor SANYO DENKY 103-H7123-1749 (4A 75V max)	∅ 32	∅ 32 ◆	-	∅ 32 ■
37M1120000	Motor SANYO DENKY 103-H7126-1740 (4A 75V max)	∅ 32	∅ 32 ◆	-	∅ 32 ■
37M1120001	Motor SANYO DENKY 103-H7126-6640 (5.6A 75V max)	-	∅ 32	-	∅ 32 ■
37M1430000	Motor SANYO DENKY 103-H8221-6241 (6A 140V max)	-	∅ 50	∅ 50	∅ 50 ◆
37M1440000	Motor SANYO DENKY 103-H8222-6340 (6A 140V max)	-	∅ 50	∅ 50	∅ 50 ◆
37M1450000	Motor SANYO DENKY SM-2863-5255 (6A 140V max)	-	∅ 63 - ∅ 63 HD	∅ 63 - ∅ 63 HD	∅ 63 - ∅ 63 HD ◆
37M1470000	Motor B&R 80MPH6.101S000-01 (10A 80V max)	-	-	-	∅ 63 HD
<b>STEPPING WITH BRAKE + ENCODER</b>					
37M3220000	Motor B&R 80MPF3.500D114-01 (5A 80V max)	-	∅ 32 ◆	∅ 32 ■	∅ 32 ■
37M3230000	Motor B&R 80MPF5.500D114-01 (5A 80V max)	-	∅ 32 ◆	∅ 32 ■	∅ 32 ■
37M3430000	Motor B&R 80MPH1.600D114-01 (6A 80V max)	-	∅ 50	∅ 50 ▲	∅ 50 ◆
37M3460000	Motor B&R 80MPH3.600D114-01 (6A 80V max)	-	∅ 50 - ∅ 63 - ∅ 63 HD	∅ 50 - ∅ 63 - ∅ 63 HD ▲	∅ 50 - ∅ 63 - ∅ 63 HD ◆
37M3450000	Motor B&R 80MPH4.101D114-01 (10A 80V max)	-	-	-	∅ 63 - ∅ 63 HD
37M3470000	Motor B&R 80MPH6.101D114-01 (10A 80V max)	-	-	-	∅ 63 HD

MOTOR CODES		DRIVES CODES	
		Metal Work	37D2200000
Metal Work	Manufacturer	SANYO DENKY RS1A01	SANYO DENKY RS1A03
		(15A 200W)	(30A 400÷750÷1000 W)
<b>BRUSHLESS</b>			
37M2200000	Motor SANYO DENKY R2AA06020FXH11M (200W)	∅ 32	-
37M2220000	Motor SANYO DENKY R2AA06040FXH11M (400W)	-	∅ 32 - ∅ 50
37M2330000	Motor SANYO DENKY R2AA08075FXH11M (750W)	-	∅ 50 - ∅ 63 - ∅ 63 HD
37M2540000	Motor SANYO DENKY R2AAB8100HXH29M (1000W)	-	∅ 63 HD
<b>BRUSHLESS WITH BRAKE</b>			
37M4200000	Motor SANYO DENKY R2AA06020FCH11M (200W)	∅ 32	-
37M4220000	Motor SANYO DENKY R2AA06040FCH11M (400W)	-	∅ 32 - ∅ 50
37M4330000	Motor SANYO DENKY R2AA08075FCH11M (750W)	-	∅ 50 - ∅ 63 - ∅ 63 HD
37M4540000	Motor SANYO DENKY R2AAB8100HCH29M (1000W)	-	∅ 63 HD

◆ Important! Limit current

■ Important! Limit current and voltage

▲ Important! Limit voltage

 ● Important! AC drive to continuous voltage  $VDC = VAC \cdot \sqrt{2}$ 
**KEY TO CODES – SINGLE CYLINDER**

CYL	37 TYPE	1	0	32 BORE	0100 STROKE	1 SCREW PITCH	5 VERSION
	37 Electric actuators	1 ISO 15552 electric cylinder	0 STD	32 50 63		1 Screw pitch 4 2 Screw pitch 5 4 Screw pitch 10 5 Screw pitch 12 6 Screw pitch 16 7 Screw pitch 20	5 Without antirotation IP40 6 With antirotation IP40 7 Without antirotation IP55/IP65 8 With antirotation IP55/IP65

◆ Only for ∅ 63 with screw pitch 5 or pitch 10

**KEY TO CODES - ELECTRIC CYLINDER WITH MOTOR**

CIL	37 TYPE	1	0	32 BORE	0100 STROKE	1 SCREW PITCH	1 VERSION	1	2	2	0
	37 Electric actuators	1 ISO 15552 electric cylinder	0 STD ◆ H Heavy duty	32 50 63		1 Screw pitch 4 2 Screw pitch 5 4 Screw pitch 10 5 Screw pitch 12 6 Screw pitch 16 7 Screw pitch 20	● 1 In-line without antirotation IP40 ● 2 In-line with antirotation IP40 ■ 3 In-line without antirotation IP55/IP65 ■ 4 In-line with antirotation IP55/IP65 ● 5 Geared without antirotation IP40 ● 6 Geared with antirotation IP40 ■ 7 Geared without antirotation IP55/IP65 ■ 8 Geared with antirotation IP55/IP65	1 STEPPING motor 2 BRUSHLESS motor 3 STEPPING motor with BRAKE + Encoder 4 BRUSHLESS motor with BRAKE	1 NEMA flange 23 2 Flange 60 3 Flange 80 4 NEMA flange 34 5 Flange 86	0 Torque 0÷0.79 Nm 1 Torque 0.8÷1.19 Nm 2 Torque 1.2÷2.19 Nm 3 Torque 2.2÷3 Nm 4 Torque 3.01÷5 Nm 5 Torque 6.21÷7 Nm 6 Torque 5.01÷6.2 Nm 7 Torque >7 Nm	0 Base 1 Greater rpm

◆ Only for ∅ 63 with screw pitch 5 or pitch 10

● version available for all STEPPING and BRUSHLESS motors, all sizes

■ version IP55 available for STEPPING motors, for only the sizes 50 and 63 all the motors, with the exception of motor code 37M1470000; for ∅ 32 only for motor code 37M1120001; version IP65 available for BRUSHLESS motors, BRUSHLESS with BRAKE and STEPPING with BRAKE + ENCODER motors (all sizes).



## ELECTRIC MOTORS



### TECHNICAL FEATURES OF ELECTRIC STEPPING MOTORS

TECHNICAL DATA		MOTOR 37M1110000	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	0.8	
Coupling flange		NEMA 23	
Base step angle		1.8°±0.09°	
Bipolar current	A	4	
Resistance	Ω	0.41	
Inductance	mH	1.6	
Bipolar retaining torque	Nm	1.1	
Rotor inertia	kgmm <sup>2</sup>	21	
Theoretical acceleration	rad · s <sup>-2</sup>	50000	
Back E.M.F.	V/krpm	20	
Mass	kg	0.65	
Degree of protection		IP40	

TECHNICAL DATA		MOTOR 37M1120001	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	1.2	
Coupling flange		NEMA 23	
Base step angle		1.8°±0.09°	
Bipolar current	A	5.6	
Resistance	Ω	0.3	
Inductance	mH	0.85	
Bipolar retaining torque	Nm	1.65	
Rotor inertia	kgmm <sup>2</sup>	36	
Theoretical acceleration	rad · s <sup>-2</sup>	45800	
Back E.M.F.	V/krpm	23	
Mass	kg	1	
Degree of protection		IP43	

TECHNICAL DATA		MOTOR 37M1440000	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	4.2	
Coupling flange		NEMA 34	
Base step angle		1.8°±0.09°	
Bipolar current	A	6	
Resistance	Ω	0.35	
Inductance	mH	2.7	
Bipolar retaining torque	Nm	5.6	
Rotor inertia	kgmm <sup>2</sup>	290	
Theoretical acceleration	rad · s <sup>-2</sup>	19300	
Back E.M.F.	V/krpm	93	
Mass	kg	2.5	
Degree of protection		IP43	

TECHNICAL DATA		MOTOR 37M1120000	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	1.2	
Coupling flange		NEMA 23	
Base step angle		1.8°±0.09°	
Bipolar current	A	4	
Resistance	Ω	0.48	
Inductance	mH	2.2	
Bipolar retaining torque	Nm	1.65	
Rotor inertia	kgmm <sup>2</sup>	36	
Theoretical acceleration	rad · s <sup>-2</sup>	45800	
Back E.M.F.	V/krpm	31	
Mass	kg	1	
Degree of protection		IP40	

TECHNICAL DATA		MOTOR 37M1430000	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	2.4	
Coupling flange		NEMA 34	
Base step angle		1.8°±0.09°	
Bipolar current	A	6	
Resistance	Ω	0.3	
Inductance	mH	1.65	
Bipolar retaining torque	Nm	3	
Rotor inertia	kgmm <sup>2</sup>	145	
Theoretical acceleration	rad · s <sup>-2</sup>	20600	
Back E.M.F.	V/krpm	50	
Mass	kg	1.5	
Degree of protection		IP43	

TECHNICAL DATA		MOTOR 37M1450000	
Motor type		STEPPING	
Seal torque (with motor stopped)	Nm	6.7	
Coupling flange		NEMA 34	
Base step angle		1.8°±0.09°	
Bipolar current	A	6	
Resistance	Ω	0.46	
Inductance	mH	3.8	
Bipolar retaining torque	Nm	9.2	
Rotor inertia	kgmm <sup>2</sup>	450	
Theoretical acceleration	rad · s <sup>-2</sup>	20500	
Back E.M.F.	V/krpm	161	
Mass	kg	4	
Certifications		UL, CSA, CE, RoHS	
Tension d'isolement		250VAC (350VDC)	
Degree of protection		IP43 - F	

TECHNICAL DATA		MOTOR 37M1470000	
Motor type		STEPPING	
Nominal torque	Nm	9.3	
Coupling flange		NEMA 34	
Base step angle		1.8°	
Bipolar current	A	10	
Resistance	Ω	0.24	
Inductance	mH	1.6	
Bipolar holding torque	Nm	13.6	
Rotor inertia	kgmm <sup>2</sup>	392	
Mass	kg	4.2	
Degree of protection		IP40	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Power cable for stepping motors with brake, 5 metres		37C1350000	

**TECHNICAL FEATURES OF ELECTRIC STEPPING MOTOR WITH BRAKE + ENCODER**

TECHNICAL DATA		MOTOR 37M3220000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	1.2	
Coupling flange		60	
Base step angle		1.8°	
Current	A	5	
Resistance	Ω	0.38	
Inductance	mH	1.4	
Bipolar holding torque	Nm	1.7	
Rotor inertia	kgmm <sup>2</sup>	44	
Mass	kg	1.28	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	2	
Power consumption	W	11	
Connecting time	ms	6	
Delay time	ms	2	
Disconnection time	ms	25	

TECHNICAL DATA		MOTOR 37M3430000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	2.9	
Coupling flange		NEMA 34	
Base step angle		1.8°	
Bipolar current	A	6	
Resistance	Ω	0.4	
Inductance	mH	3.2	
Bipolar holding torque	Nm	4	
Rotor inertia	kgmm <sup>2</sup>	131	
Mass	kg	2.5	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	9	
Power consumption	W	18	
Connecting time	ms	7	
Delay time	ms	2	
Disconnection time	ms	40	

TECHNICAL DATA		MOTOR 37M3230000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	2.5	
Coupling flange		60	
Base step angle		1.8°	
Bipolar current	A	5	
Resistance	Ω	0.6	
Inductance	mH	2.8	
Bipolar holding torque	Nm	3.5	
Rotor inertia	kgmm <sup>2</sup>	92	
Mass	kg	1.8	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	2	
Power consumption	W	11	
Connecting time	ms	6	
Delay time	ms	2	
Disconnection time	ms	25	

TECHNICAL DATA		MOTOR 37M3450000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	6.3	
Coupling flange		NEMA 34	
Base step angle		1.8°	
Bipolar current	A	10	
Resistance	Ω	0.2	
Inductance	mH	1.4	
Bipolar holding torque	Nm	9.5	
Rotor inertia	kgmm <sup>2</sup>	261	
Mass	kg	3.7	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	9	
Power consumption	W	18	
Connecting time	ms	7	
Delay time	ms	2	
Disconnection time	ms	40	



TECHNICAL DATA		MOTOR 37M3460000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	5.5	
Coupling flange		NEMA 34	
Base step angle		1.8°	
Bipolar current	A	6	
Resistance	Ω	0.6	
Inductance	mH	4.3	
Bipolar holding torque	Nm	7.8	
Rotor inertia	kgmm <sup>2</sup>	261	
Mass	kg	3.7	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	9	
Power consumption	W	18	
Connecting time	ms	7	
Delay time	ms	2	
Disconnection time	ms	40	

TECHNICAL DATA		MOTOR 37M3470000	
Motor type		STEPPING with BRAKE + ENCODER	
Nominal torque	Nm	9.3	
Coupling flange		NEMA 34	
Base step angle		1.8°	
Bipolar current	A	10	
Resistance	Ω	0.24	
Inductance	mH	1.6	
Bipolar holding torque	Nm	13.6	
Rotor inertia	kgmm <sup>2</sup>	392	
Mass	kg	4.2	
Degree of protection		IP65	
Encoder cable for stepping motors with brake, 3 metres		37C1230000	
Power cable for stepping motors with brake, 3 metres		37C1330000	
Encoder cable for stepping motors with brake, 5 metres		37C1250000	
Power cable for stepping motors with brake, 5 metres		37C1350000	
<b>ENCODER</b>			
Number of outputs		3 A / B / R	
Resolution	positions per rev	1024	
Supply voltage	VDC	18 - 30	
<b>BRAKE</b>			
Supply voltage	VDC	24 +6% / -10%	
Braking torque	Nm	9	
Power consumption	W	18	
Connecting time	ms	7	
Delay time	ms	2	
Disconnection time	ms	40	

**TECHNICAL FEATURES OF ELECTRIC BRUSHLESS MOTORS**

TECHNICAL DATA		MOTOR 37M2200000	
Motor type		BRUSHLESS	
Nominal torque	Nm	0.64	
Coupling flange (square)	mm	60	
Nominal power	W	200	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	0.686	
Maximum torque	Nm	2.2	
Rotor inertia	kgmm <sup>2</sup>	21.9	
Mass	kg	0.84	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2200000	
Brushless motor-drive connecting cable 3 metres		37C2130000	
Brushless motor-drive-encoder connecting cable 3 metres		37C2230000	
Brushless motor-drive connecting cable 5 metres		37C2150000	
Brushless motor-drive-encoder connecting cable 5 metres		37C2250000	

TECHNICAL DATA		MOTOR 37M2220000	
Motor type		BRUSHLESS	
Nominal torque	Nm	1.27	
Coupling flange (square)	mm	60	
Nominal power	W	400	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	1.37	
Maximum torque	Nm	4.8	
Rotor inertia	kgmm <sup>2</sup>	41.2	
Mass	kg	1.3	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable 3 metres		37C2130000	
Brushless motor-drive-encoder connecting cable 3 metres		37C2230000	
Brushless motor-drive connecting cable 5 metres		37C2150000	
Brushless motor-drive-encoder connecting cable 5 metres		37C2250000	

TECHNICAL DATA		MOTOR 37M2330000	
Motor type		BRUSHLESS	
Nominal torque	Nm	2.39	
Coupling flange (square)	mm	80	
Nominal power	W	750	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	2.55	
Maximum torque	Nm	7.1	
Rotor inertia	kgmm <sup>2</sup>	182	
Mass	kg	2.6	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable 3 metres		37C2130000	
Brushless motor-drive-encoder connecting cable 3 metres		37C2230000	
Brushless motor-drive connecting cable 5 metres		37C2150000	
Brushless motor-drive-encoder connecting cable 5 metres		37C2250000	

TECHNICAL DATA		MOTOR 37M2540000	
Motor type		BRUSHLESS	
Nominal torque	Nm	3.18	
Coupling flange (square)	mm	86	
Nominal power	W	1000	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	3.92	
Maximum torque	Nm	11.6	
Rotor inertia	kgmm <sup>2</sup>	238.3	
Mass	kg	3.5	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable 3 metres		37C2130000	
Brushless motor-drive-encoder connecting cable 3 metres		37C2230000	
Brushless motor-drive connecting cable 5 metres		37C2150000	
Brushless motor-drive-encoder connecting cable 5 metres		37C2250000	

TECHNICAL FEATURES OF ELECTRIC BRUSHLESS MOTOR WITH BRAKE

TECHNICAL DATA		MOTOR 37M4200000	
		BRUSHLESS with BRAKE	
Motor type			
Nominal torque	Nm	0.64	
Coupling flange (square)	mm	60	
Nominal power	W	200	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	0.686	
Maximum torque	Nm	2.2	
Rotor inertia	kgmm <sup>2</sup>	27.9	
Mass	kg	1.23	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2200000	
Brushless motor-drive connecting cable		37C2130000	
3 metres			
Brushless motor-drive-encoder connecting cable		37C2230000	
3 metres			
Brushless motor-brake connecting cable		37C2330000	
3 metres			
Brushless motor-drive connecting cable		37C2150000	
5 metres			
Brushless motor-drive-encoder connecting cable		37C2250000	
5 metres			
Brushless motor-brake connecting cable		37C2350000	
5 metres			
<b>BRAKE</b>			
Supply voltage	VDC	24 ±10%	
Braking torque static	Nm	1.37 min	

TECHNICAL DATA		MOTOR 37M4330000	
		BRUSHLESS with BRAKE	
Motor type			
Nominal torque	Nm	2.39	
Coupling flange (square)	mm	80	
Nominal power	W	750	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	2.55	
Maximum torque	Nm	8.5	
Rotor inertia	kgmm <sup>2</sup>	207	
Mass	kg	2.19	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable		37C2130000	
3 metres			
Brushless motor-drive-encoder connecting cable		37C2230000	
3 metres			
Brushless motor-brake connecting cable		37C2330000	
3 metres			
Brushless motor-drive connecting cable		37C2150000	
5 metres			
Brushless motor-drive-encoder connecting cable		37C2250000	
5 metres			
Brushless motor-brake connecting cable		37C2350000	
5 metres			
<b>BRAKE</b>			
Supply voltage	VDC	24 ±10%	
Braking torque static	Nm	2.55 min	

TECHNICAL DATA		MOTOR 37M4220000	
		BRUSHLESS with BRAKE	
Motor type			
Nominal torque	Nm	1.27	
Coupling flange (square)	mm	60	
Nominal power	W	400	
Nominal speed	rpm	3000	
Maximum speed	rpm	6000	
Stall torque	Nm	1.37	
Maximum torque	Nm	4.8	
Rotor inertia	kgmm <sup>2</sup>	47.2	
Mass	kg	1.69	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable		37C2130000	
3 metres			
Brushless motor-drive-encoder connecting cable		37C2230000	
3 metres			
Brushless motor-brake connecting cable		37C2330000	
3 metres			
Brushless motor-drive connecting cable		37C2150000	
5 metres			
Brushless motor-drive-encoder connecting cable		37C2250000	
5 metres			
Brushless motor-brake connecting cable		37C2350000	
5 metres			
<b>BRAKE</b>			
Supply voltage	VDC	24 ±10%	
Braking torque static	Nm	1.37 min	

TECHNICAL DATA		MOTOR 37M4540000	
		BRUSHLESS with BRAKE	
Motor type			
Nominal torque	Nm	3.18	
Coupling flange (square)	mm	86	
Nominal power	W	1000	
Nominal speed	rpm	3000	
Maximum speed	rpm	3000	
Stall torque	Nm	3.92	
Maximum torque	Nm	11.6	
Rotor inertia	kgmm <sup>2</sup>	272.6	
Mass	kg	4.34	
Encoder	pulse/rev	131072 (17 bit)	
Degree of protection		IP65	
Drive code		37D2400000	
Brushless motor-drive connecting cable		37C2130000	
3 metres			
Brushless motor-drive-encoder connecting cable		37C2230000	
3 metres			
Brushless motor-brake connecting cable		37C2330000	
3 metres			
Brushless motor-drive connecting cable		37C2150000	
5 metres			
Brushless motor-drive-encoder connecting cable		37C2250000	
5 metres			
Brushless motor-brake connecting cable		37C2350000	
5 metres			
<b>BRAKE</b>			
Supply voltage	VDC	24 ±10%	
Braking torque static	Nm	3.92 min	

## DRIVERS FOR STEPPING MOTORS

### 4.4A - 48VDC DRIVE FOR STEPPING MOTORS, CODE 37D1222000



Drive code		<b>37D1222000</b>
Type of STEPPING motor drive		Metal box
Dimensions	mm	90 x 99 x 21
Connectors		Screw type, pull-out
Onboard power supply		NO
Control		Step and direction
Operating voltage range	VDC	24 - 48
Current range	A	2.6 - 4.4
Current values selected via a dip-switch		8
Pulses per rev values selected by dip-switch	1/U	400, 800, 1600, 3200
Automatic current reduction with motor off		YES (50%)
Type of inputs		Pull-up or Pull-down, settable
Protections		Maximum and minimum voltage. Motor output short-circuiting. Thermal protection. Electronic damping circuit for maximum control of noise and vibration.
Suitable for motors code		See table on page 45

### 6A 75V DC DRIVE TECHNICAL DATA FOR STEPPING MOTORS, CODE 37D1332000



Drive code		<b>37D1332000</b>
Type of STEPPING motor drive		Metal box
Dimensions	mm	110 x 108 x 34
Connectors		Screw type, pull-out
Onboard power supply		NO
Control		Step and direction
Operating voltage range	VDC	24 - 75
Current range	A	1.9 - 6
Current values selected via a dip-switch		8
Pulses per rev values selected by dip-switch	pulse/rev	400, 500, 800, 1000, 1600, 2000, 3200, 4000
Automatic current reduction with motor off		YES (50%)
Type of inputs		Opto-isolated
Protections		Maximum and minimum voltage. Motor output short-circuiting. Thermal protection. Electronic damping circuit for maximum control of noise and vibration.
Suitable for motors code		See table on page 45
Encoder cable for stepping motors with brake, 3 metres		<b>37C1230000</b>
Power cable for stepping motors with brake, 3 metres		<b>37C1330000</b>
Encoder cable for stepping motors with brake, 5 metres		<b>37C1250000</b>
Power cable for stepping motors with brake, 5 metres		<b>37C1350000</b>

### 6A 140V DC DRIVE FOR STEPPING MOTORS, CODE: 37D1442000 10A 62V DC DRIVE FOR STEPPING MOTORS, CODE: 37D1552000



Drive code		<b>37D1442000</b>		<b>37D1552000</b>
Type of STEPPING motor drive			Metal box	
Dimensions	mm		152 x 129 x 46	
Connectors			Screw type, pull-out	
Onboard power supply			NO	
Control			Step and direction	
Operating voltage range	VDC	77 - 140 VDC		28 - 62 VAC
Current range	A	1.9 - 6		3 - 10
Current values selected via a dip-switch			8	
Pulses per rev values selected by dip-switch	pulse/rev	400, 500, 800, 1000, 1600, 2000, 3200, 4000		YES (50%)
Automatic current reduction with motor off		YES (50%)		YES (50%)
Type of inputs			Opto-isolated	
Protections			Maximum and minimum voltage. Motor output short-circuiting. Thermal protection. Electronic damping circuit for maximum control of noise and vibration.	
Suitable for motors code			See table on page 45	
Encoder cable for stepping motors with brake, 3 metres			<b>37C1230000</b>	
Power cable for stepping motors with brake, 3 metres			<b>37C1330000</b>	
Encoder cable for stepping motors with brake, 5 metres			<b>37C1250000</b>	
Power cable for stepping motors with brake, 5 metres			<b>37C1350000</b>	

## ACCESSORIES

### POWER CABLE FOR MOTOR WITH BRAKE

Code	Description
<b>37C1330000</b>	Power cable for stepping motor with brake, 3 metres
<b>37C1350000</b>	Power cable for stepping motor with brake, 5 metres

### ENCODER CABLE

Code	Description
<b>37C1230000</b>	Encoder cable for stepping motors with brake, 3 metres
<b>37C1250000</b>	Encoder cable for stepping motors with brake, 5 metres

## DRIVES FOR BRUSHLESS MOTORS

### 15A DRIVE TECHNICAL DATA FOR BRUSHLESS MOTORS, CODE 37D2200000



Drive code		<b>37D2200000</b>
Type of drive for BRUSHLESS motors		Metal box
Dimensions	mm	45 x 168 x 130
Power connectors and motor power		Screw-type, pull-out
Encoder connectors and signals		Plug-type 3M
Max output current	A	15
Motor output stage		IGBT, PWM control, sinusoidal current
Power voltage		Single-phase or three-phase (user configurable) 200-230VAC (+10%, -15%) 50/60 Hz (± 3 Hz)
Logic voltage		Single-phase 200-230VAC (+10%, -15%) 50/60 Hz (± 3 Hz)
Control		With analogue signal (proportional to speed and torque). Pulse-train (clock + direction; forward + backward pulse; 90° phase difference) 8 inputs and 8 outputs, user configurable
Auto-tuning		Yes
Communication interface		RS232 for settings and monitoring via a personal computer
Protections		Integrated against overloads, input extra-voltages, incorporated filters for suppressing the system's own resonance frequencies.
Standards		CE, UL and CSA.
Other features		5-digit display and programming keypad. Integrated closed-loop system with position, speed and torque control modes. Instant changeover option: position + speed; position + torque; speed + torque. Automatic dynamic braking circuit in a alarm and power-off conditions. Connector for external braking resistance (optional). Configuration and control software (optional).
Suitable for motors code		See table on page 45
Brushless motor-drive connecting cable 3 metres		<b>37C2130000</b>
Brushless motor-drive-encoder connecting cable 3 metres		<b>37C2230000</b>
Brushless motor-brake connecting cable 3 metres		<b>37C2330000</b>
Brushless motor-drive connecting cable 5 metres		<b>37C2150000</b>
Brushless motor-drive-encoder connecting cable 5 metres		<b>37C2250000</b>
Brushless motor-brake connecting cable 5 metres		<b>37C2350000</b>

### 30A DRIVE TECHNICAL DATA FOR BRUSHLESS MOTORS, CODE 37D2400000



Drive code		<b>37D2400000</b>
Type of drive for BRUSHLESS motors		Metal box
Dimensions	mm	50 x 168 x 130
Power connectors and motor power		Screw-type, pull-out
Encoder connectors and signals		Plug-type 3M
Max output current	A	30
Motor output stage		IGBT, PWM control, sinusoidal current
Power voltage		Single-phase or three-phase (user configurable) 200-230VAC (+10%, -15%) 50/60 Hz (± 3 Hz)
Logic voltage		Single-phase 200-230VAC (+10%, -15%) 50/60 Hz (± 3 Hz)
Control		With analogue signal (proportional to speed and torque). Pulse-train (clock + direction; forward + backward pulse; 90° phase difference) 8 inputs and 8 outputs, user configurable.
Auto-tuning		Yes
Communication interface		RS232 for settings and monitoring via a personal computer.
Protections		Integrated against overloads, input extra-voltages, incorporated filters for suppressing the system's own resonance frequencies
Standards		CE, UL and CSA.
Other features		5-digit display and programming keypad. Integrated closed-loop system with position, speed and torque control modes. Instant changeover option: position + speed; position + torque; speed + torque. Automatic dynamic braking circuit in a alarm and power-off conditions. Connector for external braking resistance (optional). Configuration and control software (optional).
Suitable for motors code		See table on page 45
Brushless motor-drive connecting cable 3 metres		<b>37C2130000</b>
Brushless motor-drive-encoder connecting cable 3 metres		<b>37C2230000</b>
Brushless motor-brake connecting cable 3 metres		<b>37C2330000</b>
Brushless motor-drive connecting cable 5 metres		<b>37C2150000</b>
Brushless motor-drive-encoder connecting cable 5 metres		<b>37C2250000</b>
Brushless motor-brake connecting cable 5 metres		<b>37C2350000</b>

## ACCESSORIES

### ENCODER CABLE



Code	Description
<b>37C2230000</b>	BRUSHLESS motor-drive-encoder connecting cable 3m
<b>37C2250000</b>	BRUSHLESS motor-drive-encoder connecting cable 5m

### MOTOR POWER CABLE



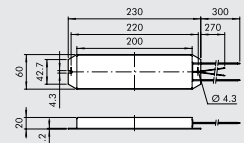
Code	Description
<b>37C2130000</b>	BRUSHLESS motor-drive connecting cable 3m
<b>37C2150000</b>	BRUSHLESS motor-drive connecting cable 5m

### EXTERNAL BRAKING RESISTANCES



Code	Description
<b>37C2330000</b>	BRUSHLESS motor-brake connecting cable 3m
<b>37C2350000</b>	BRUSHLESS motor-brake connecting cable 5m

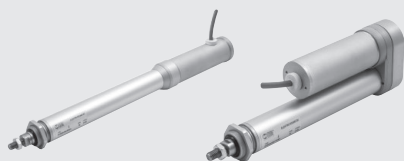
### EXTERNAL BRAKING RESISTANCES



Code	Description
<b>37D2R00000</b>	220W 50 Ω braking resistance for RS1A03
<b>37D2R00001</b>	220W 100 Ω braking resistance for RS1A01

Under certain operating conditions, such as sudden deceleration with high inertial load, it may be necessary to dissipate externally the reverse energy generated by the motor. The drive indicates this requirement via a specific alarm. Excess energy is dissipated externally via a braking resistance.

## ELECTRIC CYLINDER SERIES ELEKTRO ROUND DC



TECHNICAL DATA		Ø 32 Pitch 4	Ø 32 Pitch 20
Temperature range	°C	from -20 to +60	
Degree of protection		IP65	
Gearing ratio of the planetary gear unit		1/13 or 1/25	
Minimum stroke	mm	25	50
Maximum stroke	mm	1000	
Piston rod diameter	mm	20	
Maximum thrust	N	see general catalogue	
Maximum speed	mm/s	see general catalogue	
Maximum load in vertical position and motor powered off (reversibility)	N	irreversible (max recommended 1000)	90 with 1/25 gear ratio 40 with 1/13 gear ratio
Work cycle at 25°C (duty cycle)	%	20 (example: 2 min. ON 8 min. OFF)	
Overall radial oscillation of the piston rod (without load) for 100 mm of stroke	mm	0.4	
Versions		In-line or geared	
Uncontrolled impact at the end of stroke		NOT ALLOWED (it provides an extra-stroke minimum 5 mm)	
Sensor magnet		YES	
Work position		Any	
Motor		Direct current DC	
Supply voltage	VDC	12 or 24	
Input power with MAX torque	W	24	
Input current with MAX torque	A	2 (12VDC) 1 (24VDC)	
Interference suppression		VDR and capacitors	
Direction of rotation		according to polarity	
Encoder		two channels, optional opzionale	
Motor protection		Overload and short-circuiting protection using resettable fuse (optional)	
Power cable (length)	m	2	
Weight at stroke 0, in-line version	g	1247	1224
Weight at stroke 0, geared version	g	1461	1437
Additional weight for each mm stroke	g	1.4	

### KEY TO CODES

CYL	37 TYPE	2	0	32 BORE	0100 STROKE	1 SCREW PITCH	3 VERSION	3 DRIVE	2 SUPPLY VOLTAGE	0 GEAR RATIO	1 CYLINDER END TYPES
	37 Electric actuators	2 Cylinder Elektro Round DC	0 STD	32		1 Screw pitch 4 7 Screw pitch 20	3 In-line without antirotation IP65 7 Geared without antirotation IP65	3 Motor Direct current	1 12VDC 2 24VDC 3 12VDC + Encoder 4 24VDC + Encoder 5 12VDC + fuse 6 24VDC + fuse 7 12VDC + Encoder + fuse 8 24VDC + Encoder + fuse	0 1/13 1 1/25	1 Thread male 2 Nose piece drilled 3 Nose piece female 4 Piston rod female 5 Nose piece drilled and rear hinge

◆ For the version with a female piston rod, a cap must be provided on the piston rod to ensure IP65 protection.

## ACCESSORIES

### FOOT



Code	Description
W095032C001	Foot for cylinder Elektro ROUND DC Ø 32

### INTERMEDIATE HINGE



Code	Description
W095032C027	Intermediate hinge for cylinder Elektro ROUND DC Ø 32

### ROD NUT - MODEL S



Code	Description
0950322010	Rod nut modele S M10x1.25

### ARTICULATED MALE HINGE



Code	Description
W095032C006	Articulated male hinge for cylinder Elektro ROUND DC Ø 32

### HEAD PIECE RING NUT



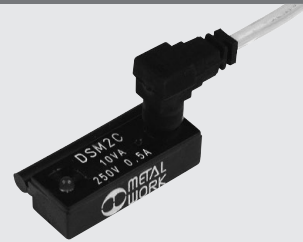
Code	Description
W095032C010	Head piece ring nut for cylinder Elektro ROUND DC Ø 32

## MAGNETIC SENSORS

### SENSOR SERIES DSM

FOR ISO 15552, ISO 15552 Ø 160 to 200, ISO 6432  
TWIN-ROD, ROUND, ROTARY R1, HYDRAULIC BRAKE

Code	Description
W0950000201	Acc. REED sensor DSM2-C525 HS
W0950000222	Acc. E. HALL PNP sensor DSM3-N225
W0950000232	Acc. E. HALL NPN sensor DSM3-M225

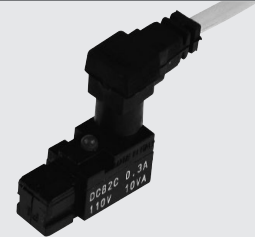


TECHNICAL DATA		REED + VARISTOR + LED 2 WIRES REED + VARISTOR + LED NO 3 to 48 (DC); 3 to 220 (AC)	HALL VERSION PNP/NPN 3 WIRES HALL EFFECT NO PNP/NPN 6 to 24 (DC)
Type			
Contact			
Max AC/DC voltage	V	3 to 48 (DC); 3 to 220 (AC)	6 to 24 (DC)
Max current at 25°C	mA	500	250
Power with inductive load	VA	10	-
Power with resistive load	Watt	50	6
Switch-on time	m sec	1.2	0.8
Switch-off time	m sec	0.1	3
Switch-on point	Gauss	110	15
Switch-off point	Gauss	95	8
Operating life		10 <sup>7</sup> impulses	10 <sup>9</sup> impulses
Contact resistance		0.1	-
Cable length	m	2.5	2.5
Cable cross section	mm <sup>2</sup>	0.35	0.35
Cable material		Soft PVC	Soft PVC

### SENSOR SERIES DCB

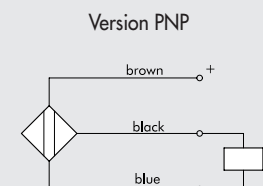
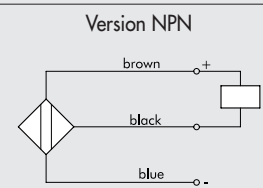
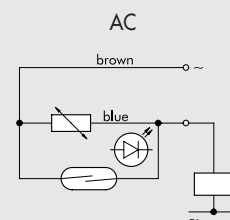
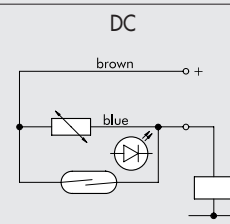
FOR SSCY

Code	Version	Bore	Model
W0950000252	Reed connector + bracket - CB	12 to 100	REED sensor DCB 2C-425
W0950000253	Hall PNP connector + bracket - CB	12 to 100	E HALL PNP sensor DCB3-N225
W0950014360	Hall NPN connector + bracket - CB	12 to 100	E HALL NPN sensor DCB3-M225



TECHNICAL DATA		REED + VARISTOR + LED 2 WIRES REED + VARISTOR + LED NO 3 to 48 (DC); 3 to 110 (AC)	HALL VERSION PNP/NPN 3 WIRES HALL EFFECT NO PNP/NPN 6 to 24 (DC)
Type			
Contact			
Max AC/DC voltage	V	3 to 48 (DC); 3 to 110 (AC)	6 to 24 (DC)
Max current at 25°C	mA	300	250
Power with inductive load	VA	8	-
Power with resistive load	Watt	15	6
Switch-on time	m sec	0.5	0.8
Switch-off time	m sec	0.1	3
Switch-on point	Gauss	110	15
Switch-off point	Gauss	60	8
Operating life		10 <sup>7</sup> impulses	10 <sup>9</sup> impulses
Contact resistance		0.1	-
Cable length	m	2.5	2.5
Cable cross section	mm <sup>2</sup>	0.35	0.35
Cable material		Soft PVC	Soft PVC

#### WIRING DIAGRAM SERIES DSM AND DCB SENSORS





## RETRACTABLE SENSOR WITH INSERTION FROM ABOVE

For ISO 6432, ISO 15552, ISO 15552 Ø 160-200, ISO 15552 ELEKTRO, COMPACT, COMPACT GUIDED, LINER, ROUND, RODLESS, RODLESS V-LOCK, HIDRAULIC BRAKE, GRIPPERS P1 - P1K - P4 (Ø 12-30) - P4K - P7 - P7K - P8 - P9 - P9K, ROTARY R1, R3, R3K, SLIDES S10 (Ø 16-30), S11 (Ø 16-30), S12

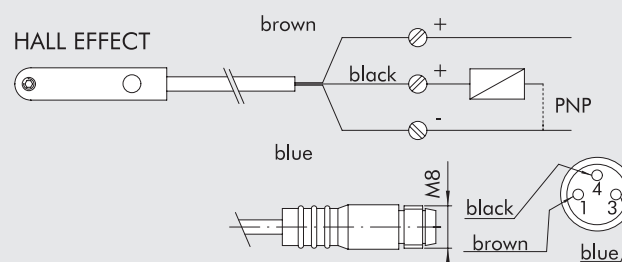
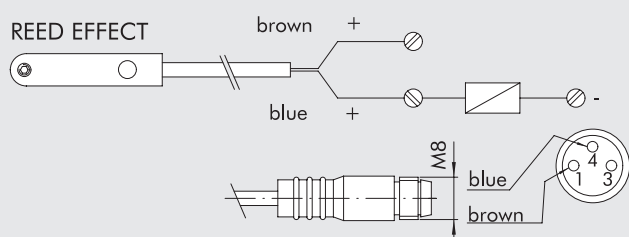
Code	Description	Code	Description
W0952025390	HALL N.O. sensor, vertical insertion 2.5 m	W0952025500*	HALL N.O. sensor, vertical insertion HS 2.5 m
W0952029394	HALL N.O. sensor, vertical insertion 300 mm M8	W0952029504*	HALL N.O. sensor, vertical insertion HS 300 mm M8
W0952022180	REED N.O. sensor, vertical insertion 2.5 m	W0952022500*	REED N.O. sensor, vertical insertion HS 2.5 m
W0952028184	REED N.O. sensor, vertical insertion 300 mm M8	W0952128184*	REED N.O. sensor, vertical insertion HS 300 mm M8
W0952125556	HALL N.O. sensor, vertical insertion 2 m ATEX		

\* For use on the rodless cylinder guide "V" Ø 25 or when standard sensors do not detect the magnet, e.g. near metal masses.



TECHNICAL DATA	REED		HALL EFFECT		ATEX	
	N.O.		N.O.		HALL EFFECT	
Type of contact	-		PNP		N.O.	
Switch	-		-		PNP	
Supply voltage (U <sub>b</sub> )	V	10 to 30 AC/DC	10 to 30 DC		18 to 30 DC	
Power	W	3 (peak valve = 6)	3		≤ 1.7	
Voltage variation	-		≤ 10% of U <sub>b</sub>		≤ 10% of U <sub>b</sub>	
Voltage drop	V	-	≤ 2		≤ 2.2	
Input current	mA	-	≤ 10		≤ 10	
Output current	mA	≤ 100	≤ 100		≤ 70	
Switching frequency	Hz	≤ 400	≤ 5000		1000	
Short-circuit protection	-		Yes		Yes	
Over-voltage suppression	-		Yes		Yes	
Polarity inversion protection	-		Yes		Yes	
EMC	EN 60 947-5-2		EN 60 947-5-2		EN 60 947-5-2	
LED display	Yellow		Yellow		Yellow	
Magnetic sensitivity	2.8 mT ± 25%		2.8 mT ± 25%		2.6	
Repeatability	1.9 mT ± 20% (for HS)		1.9 mT ± 20% (for HS)		-	
Degree of protection (EN 60529)	≤ 0.1 mT		≤ 0.1 mT		≤ 0.1 mT (U <sub>b</sub> and ta fixed)	
Vibration and shock resistance	IP 67		IP 67		IP 68, IP 69K	
Operating life	30 g, 11 ms, 10 to 55 Hz, 1 mm		30 g, 11 ms, 10 to 55 Hz, 1 mm		30 g, 11 ms, 10 to 55 Hz, 1 mm	
Temperature range	°C	10 <sup>7</sup> impulses	10 <sup>9</sup> impulses		10 <sup>9</sup> impulses	
Sensor capsule material	-25 to +75		-25 to +75		-20 to +45	
2.5 m/2 m connecting cable	PA66 + PA6I/6T		PA66 + PA6I/6T		PA	
Connecting cable with M8x1	PVC; 2 x 0.12 mm <sup>2</sup>		PVC; 3 x 0.14 mm <sup>2</sup>		PVC; 3 x 0.12 mm <sup>2</sup>	
Wire NO.	Polyurethane; 2 x 0.14 mm <sup>2</sup>		Polyurethane; 3 x 0.14 mm <sup>2</sup>		-	
Category ATEX	2		3		3	
Certifications	-		-		II 3G Ex nA op is IIC T4 Gc X II 3D EX tc IIIC T1 35°C Dc IP 67 X	
	CE		CE		CE cULus EEx	

### WIRING DIAGRAM

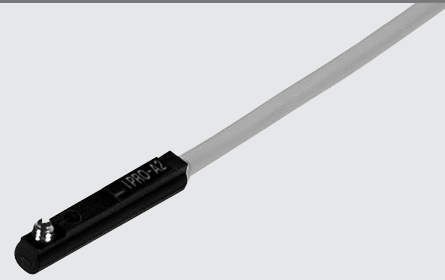




## SENSOR Ø 4

FOR GRIPPERS P2 - P2K - P4 (Ø 10-30) - P4K - P11, ROTARY R2 - SLIDES S10 (Ø 12) S11 (Ø 12) - S13 - S14K

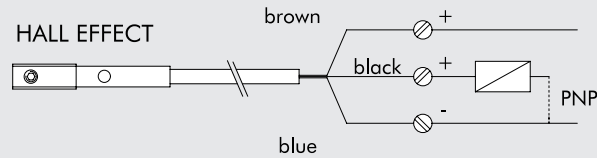
Code	Description
W0950044180	Sensor REED 2 wires 24 VDC 2.5 m
W0950045390	Sensor HALL 3 wires 24 VDC 2 m



### TECHNICAL DATA FOR SENSOR COD. W0950045390

Switch		HALL EFFECT
Tension in DC	V	PNP
Tension in AC	V	From 6 to 30
Current at 25°C	A	---
Power (ohmic load)	W	0.2
On time	µs	MAX 6
Off time	µs	0.8
On point	Gauss	0.3
Off point	Gauss	30
Electric life (pulses)		25
On voltage drop	V	10 <sup>9</sup>
Nominal operating point	Gauss	< 1
Operating frequency	Hz	From 30 to 50
Polarity reversal protection		MAX 200
Short-circuit protection		YES
Degree of protection (EN 60529)		NO
Temperature range	°C	IP 67
Sensor capsule material		From -10 to +70
LED display		PA (+G)
Wiring NO.		YELLOW
		3

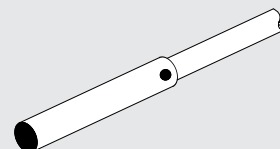
### WIRING DIAGRAM FOR W0950045390



## INDUCTION SENSOR Ø 4

FOR GRIPPER P8

Code	Description
W0950037391	Induction sensor Ø 4 mm PNP-NO-2 m





## POSITION SENSOR

Position sensor LTS



Position sensor LTL



Position sensor LTE



### POSITION SENSOR LTS

#### TECHNICAL DATA

Measuring length ( $\pm 1$ mm)	mm	from 0 to 256
Electrical connection		M8x1 - 4 pin
Electromagnetic compatibility in accordance with standard		EN 60947-5-7
Sample time	ms	1
IEC 60068-2-6 shock test		30 g, 11 ms
IEC 60068-2-6 vibration test		10 Hz ... 55 Hz, 1 mm
Maximum displacement speed	m/s	< 3
Linearity*	mm	0,3
Resolution	mm	0.03 % FSR ( $\geq 0.05$ mm)
Repeatability	mm	0.06 % FSR ( $\geq 0.1$ mm)
Operating temperature	$^{\circ}\text{C}$	-20 to +70
Index of protection		IP 67
Protection class		III
Voltage	V	15 - 30
Black current (without load)	mA	< 25
Analogue output (voltage)	V	0 to 10
Out-of-range analogue output	V	11
Analogue output (current)	mA	4 to 20
Out-of-range analogue output	mA	3
Max. load resistance (current output)	$\Omega$	500
Min. load resistance (voltage output)	$\Omega$	2000
Polarity inversion protection		YES
Short-circuit protection		YES
Overload protection		YES

\* In some applications, linearity may be higher than the value indicated.

Code	Description
W0950000470	LTS-032 position sensor with M8 4-PIN 0.3 m connector
W0950000471	LTS-064 position sensor with M8 4-PIN 0.3 m connector
W0950000472	LTS-096 position sensor with M8 4-PIN 0.3 m connector
W0950000473	LTS-128 position sensor with M8 4-PIN 0.3 m connector

Code	Description
W0950000474	LTS-160 position sensor with M8 4-PIN 0.3 m connector
W0950000475	LTS-192 position sensor with M8 4-PIN 0.3 m connector
W0950000476	LTS-224 position sensor with M8 4-PIN 0.3 m connector
W0950000477	LTS-256 position sensor with M8 4-PIN 0.3 m connector

### POSITION SENSOR LTL

#### TECHNICAL DATA

Measuring length ( $\pm 1$ mm)	mm	from 257 to 503
Electrical connection		M8x1 - 4 pin
Electromagnetic compatibility in accordance with standard		EN 60947-5-7
Sample time	ms	1.15
IEC 60068-2-6 shock test		30 g, 11 ms
IEC 60068-2-6 vibration test		10 Hz ... 55 Hz, 1 mm
Maximum displacement speed	m/s	< 3
Linearity	mm	0,5
Resolution	mm	0.03 % FSR ( $\geq 0.06$ mm)
Repeatability	mm	0.06 % FSR ( $\geq 0.1$ mm)
Operating temperature	$^{\circ}\text{C}$	-20 to +70
Index of protection		IP 65, IP 67
Protection class		III
Voltage	V	15 to 30
Black current (without load)	mA	< 35
Analogue output (voltage)	V	0 to 10
Out-of-range analogue output	V	11
Analogue output (current)	mA	4 to 20
Out-of-range analogue output	mA	3
Max. load resistance (current output)	$\Omega$	< 500
Min. load resistance (voltage output)	$\Omega$	> 2000
Polarity inversion protection		YES
Short-circuit protection		YES

Code	Description
W0950000478	LTL-287 Position sensor with M8 4-PIN 0.3 m connector
W0950000479	LTL-359 Position sensor with M8 4-PIN 0.3 m connector
W0950000480	LTL-431 Position sensor with M8 4-PIN 0.3 m connector
W0950000481	LTL-503 Position sensor with M8 4-PIN 0.3 m connector

#### T-SLOT BRACKET



Code	Description
W0950000721	Bracket for mounting LTL on cylinder with T-slot

Bracket for fixing the LTL position sensor in the T-slot of the actuator.

## POSITION SENSOR LTE

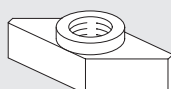
TECHNICAL DATA		
Measuring length	mm	150 - 200 - 250 - 300 - 350 - 400 - 450 - 500
Electrical connection		M8x1 - 4 pin
Sample time	ms	1 for measuring lengths up to 600 mm, 1.5 for greater lengths
DIN IEC68T2-27 shock test		100 g - 11 ms - single stroke
DIN IEC68T2-6 vibration test		12g / 10 ... 2000 Hz
Maximum displacement speed	m/s	≤ 10
Maximum acceleration	m/s <sup>2</sup>	≤ 100
Resolution		Endless
Linearity*	mm	≤ ±0.2% f.s. (min ±1 mm)
Maximum repeatability	mm	≤ 0.05
Maximum hysteresis	mm	≤ 0.2
Operating temperature	°C	0 to +50
Storage temperature	°C	-40 to +100
Temperature coefficient		≤ ±0.01% f.s./°C (min 0.015 mm/°C)
Index of protection		IP 65
Spam		9 VDC ± 100 mV max
Voltage	V	24 ± 20%
Electrical zero	V	0.8
Maximum ripple voltage		1 V <sub>pp</sub>
Output current consumption	mA	35
Output load	kΩ	≥ 10
Max. output value	V	12
Alarm output value	V	10.5
Electrical insulation	V	50
Polarity inversion protection		YES
Short-circuit protection		YES
Overload protection		YES

\* In some applications, linearity may be higher than the value indicated.

Code	Description Metal Work	Description GEFRAN	Code	Description Metal Work	Description GEFRAN
W0950000482	LTE-150 position sensor	ONPP-A-S-0150-N	W0950000486	LTE-350 position sensor	ONPP-A-S-0350-N
W0950000483	LTE-200 position sensor	ONPP-A-S-0200-N	W0950000487	LTE-400 position sensor	ONPP-A-S-0400-N
W0950000484	LTE-250 position sensor	ONPP-A-S-0250-N	W0950000488	LTE-450 position sensor	ONPP-A-S-0450-N
W0950000485	LTE-300 position sensor	ONPP-A-S-0300-N	W0950000489	LTE-500 position sensor	ONPP-A-S-0500-N

## ACCESSORIES

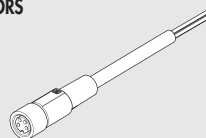
### SLOTTED FIXING PLATE WITH INSERTION FROM ABOVE



Code	Description	Weight [g]
W0950000469	M4 T-slotted fixing plate	4

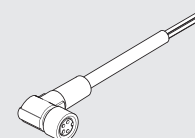
Note: 2 items plus 2 M4x14 screws per pack  
Materials: Stainless steel plate and screws

### STRAIGHT M8 CONNECTORS



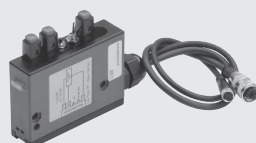
Code	Description
0240009100	M8 4-pin connector - female, straight L = 2 m
0240009101	M8 4-pin connector - female, straight L = 5 m

### 90° M8 CONNECTORS



Code	Description
0240009102	M8 4-pin connector - female, 90° angle L = 2 m
0240009103	M8 4-pin connector - female, 90° angle L = 5 m

## SENSOR TESTER



TECHNICAL DATA		
Container material		PA 6.6 blue
Degree of protection		IP00
Connections		M8 and M12 plug-socket type with 40 cm cable
Additional connections		3 terminals for wire connection
Power supply		9V DC (battery type 6LR61)
Internal voltage		15V DC
Green light		tester switched on
Yellow light		sensor in operation
Red light		battery flat

Code	Description
W0950060000	Sensor tester

## MINIVALVES, MECHANICALLY AND HAND OPERATED SERIES VME



### TECHNICAL DATA

Valve fitting port		Push-in fitting for pipe diam. 4 and M5 (axial or side)
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous
Type		With poppet
Versions		Mechanical and manual
Operators:		With Plunger – Plunger for wall-mounting – Roller lever – Unidirectional roller lever
• mechanical		Depending on the type of actuation panel selected
• manual		
Operating pressure	bar	0.5 to 10
Operating temperature range	°C	-10° to +60
Nominal diameter	mm	2.5
Conductance C	NI/min · bar	16.5
Critical ratio b	bar/bar	0.03
Flow rate at 6 Bar ΔP 0.5 Bar	NI/min	35
Flow rate at 6 Bar ΔP 1 Bar	NI/min	60
Actuation force – Plunger at 6 Bar	N	8
Recommended lubricant		ISO and UNI FD22
Installation		In any position

DISTRIBUTORS

MINIVALVES, MECHANICALLY AND HAND OPERATED SERIES VME

### PLUNGER 3/2 NO - AXIAL FITTINGS

Symbol	Code	Description
	W3501000101	VME1-10 NO Ø 4
	W3501000110	VME1-16 NO M5

### PLUNGER 3/2 NC - AXIAL FITTINGS

Symbol	Code	Description
	W3501000100	VME1-01 NC Ø 4
	W3501000111	VME1-11 NC M5

### PLUNGER FOR WALL MOUNTING, 3/2 NC - AXIAL FITTINGS

Symbol	Code	Description
	W3501000400	VME1-04 NC Ø 4
	W3501000411	VME1-14 NC M5

### UNIDIRECTIONAL ROLLER LEVER, 3/2 NC - AXIAL FITTINGS

Symbol	Code	Description
	W3501000300	VME1-03 NC Ø 4
	W3501000311	VME1-13 NC M5

### ROLLER LEVER, 3/2 NO - AXIAL FITTINGS

Symbol	Code	Description
	W3501000201	VME1-05 NO Ø 4
	W3501000210	VME1-15 NO M5

### ROLLER LEVER, 3/2 NC - AXIAL FITTINGS

Symbol	Code	Description
	W3501000200	VME1-02 NC Ø 4
	W3501000211	VME1-12 NC M5

### PLUNGER 3/2 NO - SIDE FITTINGS

Symbol	Code	Description
	W3501001100	VME2-00 NO Ø 4
	W3501001110	VME2-10 NO M5

### PLUNGER 3/2 NC - SIDE FITTINGS

Symbol	Code	Description
	W3501001101	VME2-01 NC Ø 4
	W3501001111	VME2-11 NC M5

### PLUNGER FOR WALL MOUNTING, 3/2 NC - SIDE FITTINGS

Symbol	Code	Description
	W3501001401	VME2-04 NC Ø 4
	W3501001411	VME2-14 NC M5

### UNIDIRECTIONAL ROLLER LEVER, 3/2 NC - SIDE FITTINGS

Symbol	Code	Description
	W3501001301	VME2-03 NC Ø 4
	W3501001311	VME2-13 NC M5

### ROLLER LEVER, 3/2 NO - SIDE FITTINGS

Symbol	Code	Description
	W3501001200	VME2-05 NO Ø 4
	W3501001210	VME2-15 NO M5

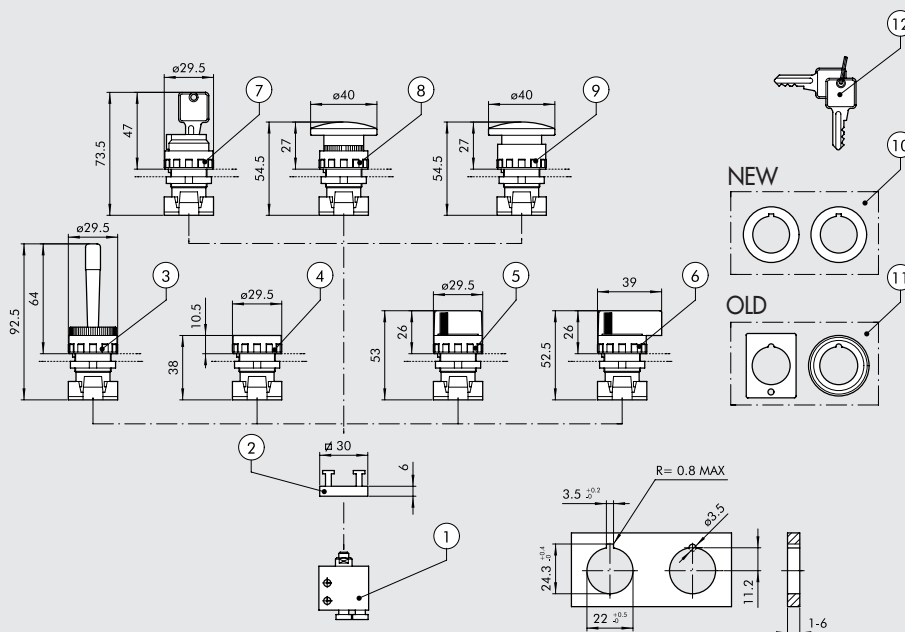
### ROLLER LEVER, 3/2 NC - SIDE FITTINGS

Symbol	Code	Description
	W3501001201	VME2-02 NC Ø 4
	W3501001211	VME2-12 NC M5

## MANUAL VME VALVES – ASSEMBLY DIAGRAM

### NOTES:

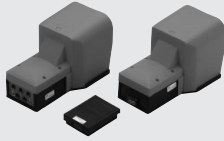
- For 5/2 pneumatic operation, assemble a 3/2 NC plunger valve and a 3/2 NO one on the adapter.
- For 5/3 pneumatic operation with open centres, assemble two 3/2 NC plunger valves on the adapter.
- For 5/3 pneumatic operation with pressure centres, assemble two 3/2 NO plunger valves on the adapter.



### ORDERING CODES

Symbol	Reference	Code	Description	Weight [g]
	①	W3501000100	3/2 NC Axial fittings Ø 4	42
		W3501000111	3/2 NC Axial fittings M5	36
		W3501001101	3/2 NC Side fittings Ø 4	34
		W3501001111	3/2 NC Side fittings M5	34
		W3501000101	3/2 NO Axial fittings Ø 4	42
	①	W3501000110	3/2 NO Axial fittings M5	36
		W3501001100	3/2 NO Side fittings Ø 4	34
		W3501001110	3/2 NO Side fittings M5	34
		②	0351000050	2 places adaptor thickness 6.8 mm
	③	W0351000015	Red handler with horizontally pivoted lever	25
	④	W0351000011	Fat push button + 2 red/black coloured disks ◆ Bistable fat push button without disk	15
	⑤	W0351000030	Black selector short lever at 2 positions with return	20
		W0351000031	Black selector short lever at 2 positions	20
	⑤	W0351000032	Black selector short lever at 3 positions with return	20
		W0351000033	Black selector short lever at 3 positions	20
	⑥	W0351000034	Black selector long lever at 2 positions with return	26
		W0351000035	Black selector long lever at 2 positions	26
	⑥	W0351000036	Black selector long lever at 3 positions with return	26
		W0351000037	Black selector long lever at 3 positions	26
	⑦	W0351000016	2 positions key selector with extractable key in 2 positions	50
		W0351000018	2 positions key selector with extractable key in 0	50
	⑧	W0351000013	Red mushroom-head push button Ø 40	27
		W0351000017	Black mushroom-head push button Ø 40	27
	⑨	W0351000014	Red mushroom-head push button with lock Ø 40	29
◆ It can't be supplied. As working replaced by selector with bistable short lever at 2 positions ⑤.	⑩	W0351000049	♣ Reducer from 30 to 22.5 mm	
	⑪	W0351000050	▲ Adapter for bore Ø 30 G2326	
	⑫	W0351000021	♣ Key for ESC selectors	
♣ Usable only with technopolymer body selectors.				
▲ Usable only with metal body selectors.				
		W0351000056	Green disk for push button ④	

## VALVES SERIES PEV PEDAL OPERATED



TECHNICAL DATA		Ø 4	M5	1/4"
Valve fitting port	Type	Mono/ bistable guarded	Monostable not guarded	Mono/ bistable guarded
Operating pressure	bar	2.5 to 10	2.5 to 10	-
	Mpa	0.25 to 1	0.25 to 1	
	psi	36 to 145	36 to 145	
Operating temperature range	°C	-10 + 60	-10 + 60	
Nominal diameter	mm	2.5	2.5	7.5
Conductance C	Nl/min · bar	16.5	16.5	264.26
Critical ratio b	bar/bar	0.03	0.03	0.32
Flow rate at 6.3 bar ΔP 0.5 bar	Nl/min	60	60	640
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	95	95	840
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous		

### GUARDED PEDAL WITH VALVES 5/2 1/4" - 3/2 M5 - 3/2 Ø 4

Symbol	Code	Description	Abbrev.	Symbol	Code	Description	Abbrev.
	W312000001	5/2 - 1/4" monostable, guarded	PEV 35 PES PR		W312000021	5/2 - 1/4" monostable, with mechanical block and guarden ■	PEV 35 PEC PR
	W312000011	5/2 - 1/4" bistable, guarded ●	PEV 35 PEB PR				
	W3120000301	3/2 M5 monostable, guarded	PEV 03 PES PR				
	W3120000321	3/2 Ø 4 monostable, guarded	PEV F3 PES PR				
	W3120000331	3/2 M5 bistable, guarded ●	PEV 03 PEB PR				
	W3120000311	3/2 Ø 4 bistable, guarded ●	PEV F3 PEB PR				

● The pedal-down position is maintained by a lever. When the foot presses on the lever, the pedal releases and can rise.  
 ■ When the foot presses on a locking lever, the pedal can be lowered.

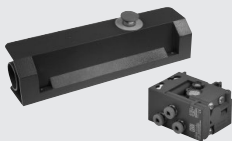
### NOT-GUARDED PEDAL WITH VALVES 3/2 M5 - 3/2 Ø 4

Symbol	Code	Description	Abbrev.
	W3120000411	3/2 - M5 monostable, not guarded	PEV 03 PES WP
	W3120000401	3/2 Ø 4 monostable, not guarded	PEV F3 PES WP

### SYNOPTIC, SIZES AND VERSIONS

PEV FAMILY	F DIMENSIONS	3 FUNCTION	PE OPERATORS 14	C RESETTING (12)	WP FURTHER DETAILS
PEV valve with pedal	3 1/4 0 M5 F Ø 4	3 3/2 5 5/2	PE pedal operated	S mechanical springs C mechanical block B bistable	WP not guarded PR guarded

## TWO HAND SAFETY VALVE SERIES SAFE AIR®



TECHNICAL DATA	
Compressed air couplings	mm
Fluid	Push-in fitting for Ø 4 pipe
Version	Filtered, unlubricated compressed air, max 50 µm
Standard	Single-control - Complete pushbutton panel
	EN574 type IIA, TÜV approved according to 2006/42/EC
	Certified TÜV-A-MHF/MG/13-05260 (code W360500001)
	Certified Bureau Veritas CV 003-12-2011 (code 0227700000)
Synchronisation, max. time between two signals	s
De-activation time, with pipe L = max 1000 mm	s
Actuation	0.4
Reset	< 0.05
Operating pressure	pneumatic
Temperature range	spring operated
Nominal diameter	bar
Flow rate at 6 bar (0.6 Mpa - 87 psi) ΔP 1 bar (0.1MPa - 1.45 psi)	°C
Mounting position	2.5 to 8
	- 10 to +60
	mm
	2.7
	Nl/min
	85
	In any direction

TWO HAND SAFETY VALVE		PUSHBUTTON HOUSING		COMPLETE PUSHBUTTON PANEL	
Code	Description	Code	Description	Code	Description
W360500001	Two hand safety valve	W3120000212	Pushbutton housing	0227700000	Complete pushbutton panel
<b>Materials</b>				<b>Materials</b>	
Body: technopolymer				Pressure die-cast and painted aluminium alloy	
Internal parts: brass and technopolymer					
Gaskets: NBR					
Spring: alloy steel					



## SERIES 70 VALVES



### VALVES SERIES 70, HAND OPERATED

TECHNICAL DATA		1/8"	1/4"	1/2"
Operating pressure range:				
• version with direct control	bar		Vacuum to 10	
• pilot-assisted version	bar		2.5 to 10	
Operating temperature range	°C		-10 to +60	
Nominal diameter	mm	5	7.5	15
Conductance C	Nl/min · bar	121.43	264.26	971.43
Critical ratio b	bar/bar	0.32	0.27	0.43
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	400	750	3200
Flow rate at 6 bar ΔP 1 bar	Nl/min	550	1100	4600

#### SYNOPTIC, SIZES AND VERSIONS

M A V FAMILY		2 DIMENSIONS		3 FUNCTION		P P OPERATORS 14		S RESETTING (12)		N C FURTHER DETAILS	
MAV	manual valves	2	1/8"	3	3/2	PP	drawer	A	pneumatic/mechanical springs*	NC	normally closed
		3	1/4"	5	5/2	VL	axial lever	S	mechanical springs	NO	normally open
		4	1/2"	6	5/3	LE	90° lever	B	bistable	OO	no indication
				8	2 x 3/2	BRE	arranged for manual panel actuators	D	differential	CC	closed centres
								O	stable for 5/3	OC	open centres
										PC	pressure centres

\*on demand

#### 90° LEVER 3/2

Symbol	Code	Abbrev.
	7010000100	MAV 23 LES NC 1/8"
	7020000100	MAV 33 LES NC 1/4"
	7030000100	MAV 43 LES NC 1/2"
	7010000200	MAV 23 LEB OO 1/8"
	7020000200	MAV 33 LEB OO 1/4"
	7030000200	MAV 43 LEB OO 1/2"

#### FRONT LEVER 5/3

Symbol	Code	Abbrev.
	7010001150	MAV 28 VLO OC 1/8"
	7010001160	MAV 28 VLS OC 1/8"

#### DRAWER 3/2

Symbol	Code	Abbrev.
	7010001300	MAV 23 PPB OO 1/8"
	7010001200	MAV 23 PPS NC 1/8"

#### 90° LEVER 5/2

Symbol	Code	Abbrev.
	7010000300	MAV 25 LES OO 1/8"
	7020000300	MAV 35 LES OO 1/4"
	7030000300	MAV 45 LES OO 1/2"
	7010000400	MAV 25 LEB OO 1/8"
	7020000400	MAV 35 LEB OO 1/4"
	7030000400	MAV 45 LEB OO 1/2"

#### 90° LEVER 5/3

Symbol	Code	Abbrev.
	7010000500	MAV 26 LEO CC 1/8"
	7020000500	MAV 36 LEO CC 1/4"
	7030000500	MAV 46 LEO CC 1/2"
	7010000600	MAV 26 LEO OC 1/8"
	7020000600	MAV 36 LEO OC 1/4"
	7030000600	MAV 46 LEO OC 1/2"
	7010000700	MAV 26 LEO PC 1/8"
	7020000700	MAV 36 LEO PC 1/4"
	7030000700	MAV 46 LEO PC 1/2"

#### DRAWER 5/2

Symbol	Code	Abbrev.
	7010001600	MAV 25 PPB OO 1/8"
	7010001500	MAV 25 PPS OO 1/8"

#### FRONT LEVER 3/2

Symbol	Code	Abbrev.
	7010001400	MAV 23 VLB OO 1/8"
	7020001400	MAV 33 VLB OO 1/4"

#### FRONT LEVER 5/2

Symbol	Code	Abbrev.
	7010001700	MAV 25 VLB OO 1/8"
	7020001700	MAV 35 VLB OO 1/4"

#### PILOT-ASSISTED PLUNGER 3/2 FOR PANEL ACTUATORS

Symbol	Code	Abbrev.
	7010001800	MAV 23 BRE NC 1/8"

#### PILOT-ASSISTED PLUNGER 5/2 FOR PANEL ACTUATORS

Symbol	Code	Abbrev.
	7010001900	MAV 25 BRE OO 1/8"



## VALVES SERIES 70, MECHANICALLY OPERATED



TECHNICAL DATA		
Thread at valve ports		1/8"
Operation force at 6 bar:		
• version with direct control	N	50
• pilot-assisted version	N	6
Operating pressure:		
• version with direct control	bar	Vacuum to 10
• pilot-assisted version	bar	2.5 to 10
Operating temperature range	°C	-10 to +60
Nominal diameter	mm	5
Conductance C	Nl/min · bar	121.43
Critical ratio b	bar/bar	0.32
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	400
Flow rate at 6 bar ΔP 1 bar	Nl/min	550

### SYNOPTIC, SIZES AND VERSIONS

M EV FAMILY	2 DIMENSIONS	3 FUNCTION	T A OPERATORS 14	S RESETTING (12)	N C FURTHER DETAILS
MEV mechanically-operated valves	2 1/8"	3 3/2 5 5/2	TA plunger BR bidirectional roller UR unidirectional roller TS sensitive plunger RS sensitive roller AS sensitive aerial LL frontal roller lever	S mechanical springs A pneumatic/mechanical spring* *on demand	NC normally closed OO 5/2

#### PLUNGER 3/2

Symbol	Code	Abbrev.
	7001000100	MEV 23 TAS NC 1/8"

#### UNIDIRECTIONAL ROLLER LEVERS 5/2

Symbol	Code	Abbrev.
	7001000610	MEV 25 URS OO 1/8"

#### PILOT-ASSISTED AERIAL 3/2 NC

Symbol	Code	Abbrev.
	7001000700	MEV 23 ASS NC 1/8"

#### PLUNGER 5/2

Symbol	Code	Abbrev.
	7001000110	MEV 25 TAS OO 1/8"

#### PILOT-ASSISTED PLUNGER 3/2 NC

Symbol	Code	Abbrev.
	7001000200	MEV 23 TSS NC 1/8"

#### PILOT-ASSISTED AERIAL 5/2

Symbol	Code	Abbrev.
	7001000710	MEV 25 ASS OO 1/8"

#### ROLLER LEVER 3/2

Symbol	Code	Abbrev.
	7001000500	MEV 23 BRS NC 1/8"

#### PILOT-ASSISTED PLUNGER 5/2

Symbol	Code	Abbrev.
	7001000210	MEV 25 TSS OO 1/8"

#### ROLLER LEVER 3/2

Symbol	Code	Abbrev.
	7001000900	MEV 23 LLS NC 1/8"

#### ROLLER LEVER 5/2

Symbol	Code	Abbrev.
	7001000510	MEV 25 BRS OO 1/8"

#### PILOT-ASSISTED ROLLER LEVER 3/2 NC

Symbol	Code	Abbrev.
	7001000400	MEV 23 RSS NC 1/8"

#### ROLLER LEVER 5/2

Symbol	Code	Abbrev.
	7001000910	MEV 25 LLS OO 1/8"

#### UNIDIRECTIONAL ROLLER LEVERS 3/2

Symbol	Code	Abbrev.
	7001000600	MEV 23 URS NC 1/8"

#### PILOT-ASSISTED ROLLER LEVER 5/2

Symbol	Code	Abbrev.
	7001000410	MEV 25 RSS OO 1/8"

# VALVES SERIES 70, PNEUMATIC



DISTRIBUTORS

SERIES 70 VALVES

TECHNICAL DATA		1/8"	1/4"	3/8"	1/2"
Operating pressure	bar	Vacuum to 10			
Minimum pilot pressure					
• monostable	bar	2.5			
• bistable	bar	1			
Operating temperature range	°C	-10 to +60			
Nominal diameter	mm	5	7.5	13.3	15
Conductance C	Nl/min · bar	121.43	264.26	505.52	971.43
Critical ratio b	bar/bar	0.32	0.27	0.32	0.43
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	400	750	1560	3200
Flow rate at 6 bar ΔP 1 bar	Nl/min	550	1100	2150	4600
TRA / TRR monostable at 6 bar	ms	6/15	7/15	5/28	16/46
TRA / TRR bistable at 6 bar	ms	7/7	7/7	13/13	16/16

## SYNOPTIC, SIZES AND VERSIONS

P N V FAMILY		2 DIMENSIONS		3 FUNCTION		P N OPERATORS 14		S RESETTING (12)		N C FURTHER DETAILS	
PNV	pneumatic valves	2	1/8"	3	3/2	PN	pneumatic	S	mechanical springs	OO	5/2
		3	1/4"	5	5/2			B	bistable	NC	normally closed
		C	3/8"	6	5/3			D	differential	NO	normally open
		4	1/2"					O	stable for 5/3	CC	closed centres
								A	pneumatic/mechanical spring*	OC	open centres
										PC	pressure centres

\*on demand

### MONOSTABLE 3/2 NO

Symbol	Code	Abbrev.
	7010010400	PNV 23 PNS NO 1/8"
	7020010400	PNV 33 PNS NO 1/4"
	7040010400	PNV C3 PNS NO 3/8"
	7030010400	PNV 43 PNS NO 1/2"

### MONOSTABLE 5/2

Symbol	Code	Abbrev.
	7010011100	PNV 25 PNS OO 1/8"
	7020011100	PNV 35 PNS OO 1/4"
	7040011100	PNV C5 PNS OO 3/8"
	7030011100	PNV 45 PNS OO 1/2"

### BISTABLE 3/2

Symbol	Code	Abbrev.
	7010010100	PNV 23 PNB OO 1/8"
	7020010100	PNV 33 PNB OO 1/4"
	7040010100	PNV C3 PNB OO 3/8"
	7030010100	PNV 43 PNB OO 1/2"

### MONOSTABLE 3/2 NC

Symbol	Code	Abbrev.
	7010010200	PNV 23 PNS NC 1/8"
	7020010200	PNV 33 PNS NC 1/4"
	7040010200	PNV C3 PNS NC 3/8"
	7030010200	PNV 43 PNS NC 1/2"

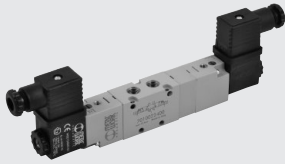
### BISTABLE 5/2

Symbol	Code	Abbrev.
	7010011200	PNV 25 PNB OO 1/8"
	7020011200	PNV 35 PNB OO 1/4"
	7040011200	PNV C5 PNB OO 3/8"
	7030011200	PNV 45 PNB OO 1/2"
	7010011300	PNV 25 PND OO 1/8"
	7020011300	PNV 35 PND OO 1/4"
	7040011300	PNV C5 PND OO 3/8"
	7030011300	PNV 45 PND OO 1/2"

### MONOSTABLE 5/3

Symbol	Code	Abbrev.
	7010012100	PNV 26 PNS CC 1/8"
	7020012100	PNV 36 PNS CC 1/4"
	7040012100	PNV C6 PNS CC 3/8"
	7030012100	PNV 46 PNS CC 1/2"
	7010012200	PNV 26 PNS OC 1/8"
	7020012200	PNV 36 PNS OC 1/4"
	7040012200	PNV C6 PNS OC 3/8"
	7030012200	PNV 46 PNS OC 1/2"
	7010012300	PNV 26 PNS PC 1/8"
	7020012300	PNV 36 PNS PC 1/4"
	7040012300	PNV C6 PNS PC 3/8"
	7030012300	PNV 46 PNS PC 1/2"

# VALVES SERIES 70, SOLENOID/PNEUMATIC



TECHNICAL DATA	1/8"	1/4"	3/8"	1/2"
Operating pressure:				
• monostable			2.5 to 10	
• bistable			1 to 10	
• asserved			Vacuum to 10	
Minimum pilot pressure			2.5	
Operating temperature range			-10 to +60	
Nominal diameter	5	7.5	13.3	15
Conductance C	Nl/min · bar	121.43	264.26	505.52
Critical ratio b	bar/bar	0.32	0.27	0.32
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	400	750	1530
Flow rate at 6 bar ΔP 1 bar	Nl/min	550	1100	2150
TRA / TRR monostable at 6 bar	ms	15/35	19/45	21/72
TRA / TRR bistable at 6 bar	ms	20/20	21/21	18/18
Hand operation			bistable	
Coil voltage values			12; 24VDC - 24; 110; 220VAC 50/60Hz	
Power			2 W (DC) 3.5VA (AC)	
Voltage tolerance	%		-10 to +15	
Insulation class			F 155	
Maximum coil nut torque	Nm		1	

## SYNOPTIC, SIZES AND VERSIONS

SOV FAMILY	2 DIMENSIONS	3 FUNCTION	SO OPERATORS 14	S RESETTING (12)	NC FURTHER DETAILS
SOV solenoid/pneumatic	2 1/8" 3 1/4" C 3/8" 4 1/2"	3 3/2 5 5/2 6 5/3	SO solenoid SE solenoid assisted	S mechanical springs B bistable D differential P pneumatic A pneumatic/mechanical spring*	NC normally closed NO normally open CC closed centres OC open centres PC pressure centres OO 5/2

\*on demand

### MONOSTABLE 3/2 NO

Symbol	Code	Abbrev.
	7010020400	SOV 23 SOS NO 1/8"
	7020020400	SOV 33 SOS NO 1/4"
	7040020400	SOV C3 SOS NO 3/8"
	7030020400	SOV 43 SOS NO 1/2"
	7040020600	SOV C3 SES NO 3/8"

### MONOSTABLE 3/2 NC

Symbol	Code	Abbrev.
	7010020200	SOV 23 SOS NC 1/8"
	7020020200	SOV 33 SOS NC 1/4"
	7040020200	SOV C3 SOS NC 3/8"
	7030020200	SOV 43 SOS NC 1/2"
	7010020500	SOV 23 SES NC 1/8"
	7020020500	SOV 33 SES NC 1/4"
	7040020500	SOV C3 SES NC 3/8"
	7030020500	SOV 43 SES NC 1/2"

### MONOSTABLE 5/2

Symbol	Code	Abbrev.
	7010021100	SOV 25 SOS OO 1/8"
	7020021100	SOV 35 SOS OO 1/4"
	7040021100	SOV C5 SOS OO 3/8"
	7030021100	SOV 45 SOS OO 1/2"
	7010021500	SOV 25 SES OO 1/8"
	7020021500	SOV 35 SES OO 1/4"
	7040021500	SOV C5 SES OO 3/8"
	7030021500	SOV 45 SES OO 1/2"

### BISTABLE 5/2

Symbol	Code	Abbrev.
	7010021200	SOV 25 SOB OO 1/8"
	7020021200	SOV 35 SOB OO 1/4"
	7040021200	SOV C5 SOB OO 3/8"
	7030021200	SOV 45 SOB OO 1/2"
	7010021300	SOV 25 SOD OO 1/8"
	7020021300	SOV 35 SOD OO 1/4"
	7040021300	SOV C5 SOD OO 3/8"
	7030021300	SOV 45 SOD OO 1/2"
	7010021600	SOV 25 SEB OO 1/8"
	7020021600	SOV 35 SEB OO 1/4"
	7040021600	SOV C5 SEB OO 3/8"
	7030021600	SOV 45 SEB OO 1/2"

### BISTABLE 3/2

Symbol	Code	Abbrev.
	7010020100	SOV 23 SOB OO 1/8"
	7020020100	SOV 33 SOB OO 1/4"
	7040020100	SOV C3 SOB OO 3/8"
	7030020100	SOV 43 SOB OO 1/2"
	7010020300	SOV 23 SEB OO 1/8"
	7020020300	SOV 33 SEB OO 1/4"
	7040020300	SOV C3 SEB OO 3/8"
	7030020300	SOV 43 SEB OO 1/2"

### MONOSTABLE 5/3

Symbol	Code	Abbrev.
	7010022100	SOV 26 SOS CC 1/8"
	7020022100	SOV 36 SOS CC 1/4"
	7040022100	SOV C6 SOS CC 3/8"
	7030022100	SOV 46 SOS CC 1/2"
	7010022200	SOV 26 SOS OC 1/8"
	7020022200	SOV 36 SOS OC 1/4"
	7040022200	SOV C6 SOS OC 3/8"
	7030022200	SOV 46 SOS OC 1/2"
	7010022300	SOV 26 SOS PC 1/8"
	7020022300	SOV 36 SOS PC 1/4"
	7040022300	SOV C6 SOS PC 3/8"
	7030022300	SOV 46 SOS PC 1/2"
	7010022400	SOV 26 SES CC 1/8"
	7020022400	SOV 36 SES CC 1/4"
	7040022400	SOV C6 SES CC 3/8"
	7030022400	SOV 46 SES CC 1/2"
	7010022500	SOV 26 SES OC 1/8"
	7020022500	SOV 36 SES OC 1/4"
	7040022500	SOV C6 SES OC 3/8"
	7030022500	SOV 46 SES OC 1/2"
	7010022600	SOV 26 SES PC 1/8"
	7020022600	SOV 36 SES PC 1/4"
	7040022600	SOV C6 SES PC 3/8"
	7030022600	SOV 46 SES PC 1/2"

## ACCESSORIES FOR SERIES 70 VALVES

### MANIFOLD FOR PNV-SOV VALVES



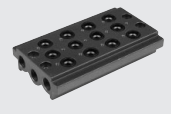
Code	Description
0221000190	Kit high bracket + fit valv. 1/8
0221000191	Kit low bracket + fit valv. 1/8
0221000192	Kit extra low bracket + fit valv. 1/8
0221000200	Kit manifold 2-position CSA-18-02
0221000300	Kit manifold 3-position CSA-18-03
0221000400	Kit manifold 4-position CSA-18-04
0221000500	Kit manifold 5-position CSA-18-05
0221000600	Kit manifold 6-position CSA-18-06
0221000700	Kit manifold 6-position CSA-18-07
0222000190	Kit high bracket + fit valv. 1/4
0222000191	Kit low bracket + fit valv. 1/4
0222000192	Kit extra low bracket + fit valv. 1/4
0222000200	Kit manifold 2-position CSA-14-02
0222000300	Kit manifold 3-position CSA-14-03
0222000400	Kit manifold 4-position CSA-14-04
0222000500	Kit manifold 5-position CSA-14-05
0222000600	Kit manifold 6-position CSA-14-06
0222000700	Kit manifold 7-position CSA-14-07

### MODULAR BASES FOR SOV-PNV VALVES



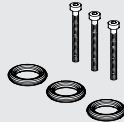
Code	Description
0226004000	Acc. intermediate diaphragm 1/8
0226004001	Complete plug 3/2 1/8
0226004150	Acc. modular manifold base 1/8
0226004200	Acc. end plate with OR 1/8
0226004201	Acc. end plate without OR 1/8
0226004300	Acc. intermediate part for upper feed 1/8
0226004500	Acc. blanking plate 1/8
0226004600	Acc. adapter for omega bar 1/8
0226005000	Acc. intermediate diaphragm 1/4
0226005001	Complete plug 3/2 1/4
0226005150	Acc. modular manifold base 1/4
0226005200	Acc. end plate with OR 1/4
0226005201	Acc. end plate without OR 1/4
0226005300	Acc. intermediate part for upper feed 1/4
0226005500	Acc. blanking plate 1/4
0226005600	Acc. adapter for omega bar 1/4
0226006600	Dimensional adapter 1/8-1/4

### MULTIPLE BASES FOR SOV-PNV VALVES



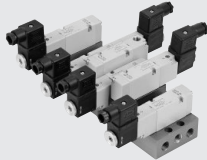
Code	Description
0223000201	2-position base CVM-18-02
0223000301	3-position base CVM-18-03
0223000401	4-position base CVM-18-04
0223000501	5-position base CVM-18-05
0223000601	6-position base CVM-18-06
0223000701	7-position base CVM-18-07
0223000801	8-position base CVM-18-08
0223000901	9-position base CVM-18-09
0223001001	10-position base CVM-18-10
0224000201	2-position base CVM-14-02
0224000301	3-position base CVM-14-03
0224000401	4-position base CVM-14-04
0224000501	5-position base CVM-14-05
0224000601	6-position base CVM-14-06
0224000701	7-position base CVM-14-07
0224000801	8-position base CVM-14-08
0224000901	9-position base CVM-14-09
0224001001	10-position base CVM-14-10

### GASKET KIT



Code	Description
0226004701	Kit gasket for 1/8" base
0226005701	Kit gasket for 1/4" base

## VALVES SERIES 70, ON BASE

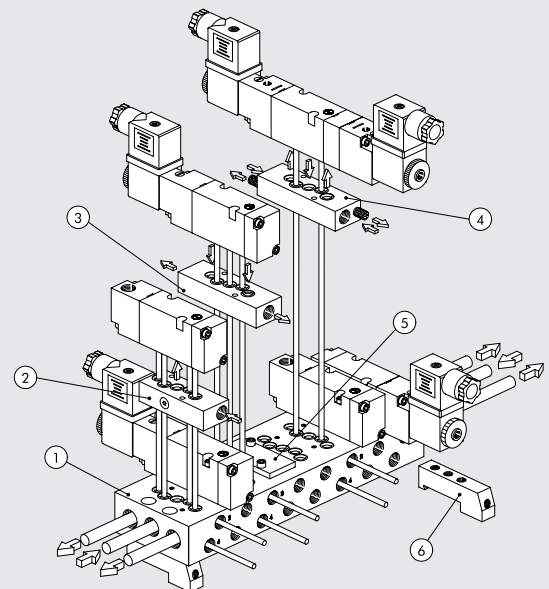


### SYNOPTIC, SIZES AND VERSIONS

P N V FAMILY		B DIMENSIONS	5 FUNCTION		P N OPERATORS 14		S RESETTING (12)		O O FURTHER DETAILS	
PNV	pneumatic	B 1/8" on base	5	5/2	PN	pneumatic	S	mechanical springs	OO	5/2
SOV	elettro-pneumatic		6	5/3	SO	solenoid	B	bistable	CC	closed centres
					SE	solenoid assisted	D	differential	OC	open centres
									PC	pressure centres

### MULTI-PURPOSE BASE FOR VALVES SERIES 70 ON BASE

Reference	Code	Description
①	0223100201	2-position base 1/8 on base
	0223100401	4-position base 1/8 on base
	0223100601	6-position base 1/8 on base
	0223100801	8-position base 1/8 on base
	0223101001	10-position base 1/8 on base
②	0223106301	Separate feed kit
③	0223106303	Exhaust regulation kit
④	0223106302	Exhaust feed kit
⑤	0223106500	Blanking plate
⑥	0226004600	Adapter for omega bar

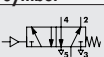


## VALVES, SERIES 70, PNEUMATIC, ON BASE

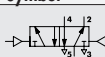
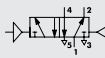


TECHNICAL DATA			
Operating pressure	bar		Vacuum to 10
Minimum actuation pressure:			
• monostable	bar		2.5
• bistable	bar		1
Operating temperature range	°C		-10 to +60
Nominal diameter	mm		5
Conductance C	NI/min · bar		107.69
Critical ratio b	bar/bar		0.29
Flow rate at 6 bar ΔP 0.5 bar	NI/min		320
Flow rate at 6 bar ΔP 1 bar	NI/min		450
TRA / TRR monostable at 6 bar	ms		6/15
TRA / TRR bistable at 6 bar	ms		7/7

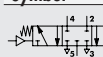
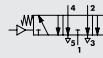
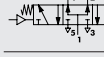
### MONOSTABLE 5/2

Symbol	Code	Abbrev.
	7011011100	PNV B5 PNS OO

### BISTABLE 5/2

Symbol	Code	Abbrev.
	7011011200	PNV B5 PNB OO
	7011011300	PNV B5 PND OO

### MONOSTABLE 5/3

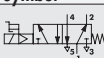
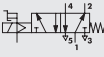
Symbol	Code	Abbrev.
	7011012100	PNV B6 PNS CC
	7011012200	PNV B6 PNS OC
	7011012300	PNV B6 PNS PC

## VALVES SERIES 70, SOLENOID/PNEUMATIC, ON BASE

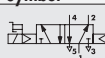
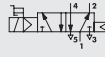
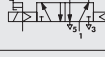


TECHNICAL DATA			
Operating pressure:			
• monostable	bar		2.5 to 10
• bistable	bar		1 to 10
• pilot-assisted	bar		Vacuum to 10
Minimum pilot pressure	bar		2.5
Operating temperature range	°C		-10 to +60
Nominal diameter	mm		5
Conductance C	NI/min · bar		107.69
Critical ratio b	bar/bar		0.29
Flow rate at 6 bar ΔP 0.5 bar	NI/min		320
Flow rate at 6 bar ΔP 1 bar	NI/min		450
TRA / TRR monostable at 6 bar	ms		15 / 35
TRA / TRR bistable at 6 bar	ms		20 / 20
<b>Electrical technical data</b>			
Coil voltage values			12VDC to 24VDC to 24VAC to 110VAC to 220VAC 50/60Hz
Power			2 W (DC) 3.5VA (AC)
Voltage tolerance	%		-10 to +15
Insulation class			F 155
Maximum coil nut torque	Nm		1

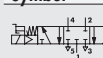
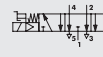
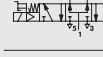
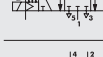
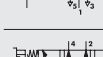

### MONOSTABLE 5/2

Symbol	Code	Abbrev.
	7011021100	SOV B5 SOS OO
	7011021500	SOV B5 SES OO

### BISTABLE 5/2

Symbol	Code	Abbrev.
	7011021200	SOV B5 SOB OO
	7011021300	SOV B5 SOD OO
	7011021600	SOV B5 SEB OO

### MONOSTABLE 5/3

Symbol	Code	Abbrev.
	7011022100	SOV B6 SOS CC
	7011022200	SOV B6 SOS OC
	7011022300	SOV B6 SOS PC
	7011022400	SOV B6 SES CC
	7011022500	SOV B6 SES OC
	7011022600	SOV B6 SES PC



# NAMUR VALVES



### TECHNICAL DATA

Operating pressure:		
• monostable, electric	bar	2.5 to 10
• bistable, electric	bar	1 to 10
• pilot-assisted, electric	bar	Vacuum to 10
Minimum actuation pressure:		
• monostable, pneumatic	bar	2.5
• bistable, pneumatic	bar	1
Operating temperature range	°C	-10 to +60
Nominal diameter	mm	7.5
Conductance C	Nl/min · bar	264.26
Critical ratio b	bar/bar	0.27
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	750
Flow rate at 6 bar ΔP 1 bar (0.1 Mpa - 14.5 psi)	Nl/min	1100
Response time at 6 bar:		
• TRA/TRR monostable, pneumatic at 6 bar	ms	7 / 15
• TRA/TRR bistable, pneumatic at 6 bar	ms	7 / 7
• TRA/TRR monostable electric at 6 bar	ms	19 / 45
• TRA/TRR bistable electric at 6 bar	ms	21 / 21

### SYNOPTIC, SIZES AND VERSIONS

P N V FAMILY		A DIMENSIONS		5 FUNCTION		P N OPERATORS 14		S RESETTING (12)		O O FURTHER DETAILS	
PNV	pneumatic	A	NAMUR	5	5/2	PN	pneumatic	S	mechanical springs	OO	5/2
SOV	electro-pneumatic			4	4/2	SO	solenoid	B	bistable	NC	normally closed

#### MONOSTABLE, PNEUMATIC 4/2

Symbol	Code	Abbrev.
	7021010110	PNV A4 PNS NC

#### BISTABLE, SOLENOID/PNEUMATIC 4/2

Symbol	Code	Abbrev.
	7021020210	SOV A4 SOB OO

#### MONOSTABLE, SOLENOID/PNEUMATIC 5/2

Symbol	Code	Abbrev.
	7021020100	SOV A5 SOS OO

#### BISTABLE, PNEUMATIC 4/2

Symbol	Code	Abbrev.
	7021010210	PNV A4 PNB OO

#### MONOSTABLE, PNEUMATIC 5/2

Symbol	Code	Abbrev.
	7021010100	PNV A5 PNS OO

#### BISTABLE, SOLENOID/PNEUMATIC 5/2

Symbol	Code	Abbrev.
	7021020200	SOV A5 SOB OO

#### MONOSTABLE, SOLENOID/PNEUMATIC 4/2

Symbol	Code	Abbrev.
	7021020110	SOV A4 SOS NC

#### MONOSTABLE, PNEUMATIC 5/2

Symbol	Code	Abbrev.
	7021010200	PNV A5 PNB OO

## 10-mm SOLENOID VALVES SERIES PLT-10



TECHNICAL DATA		
Type		3/2 NC
Operating temperature range (Te)	°C	5 to 50
Fluid temperature (Tg)	°C	5 to 50
Fluid		Filtered, lubricated or unlubricated air
Operating life		Over 50 million cycles
Weight	g	12
Voltage tolerance	ΔV	± 10 %
Max operating frequency	f	30 Hz
Switching factor	ED	100 %
Insulation class		F155
Index of protection		IP51
Power connection		PLUG IN

### SYNOPTIC, SIZES AND VERSIONS

7 2 2	1	1	3	3	4	0	1	0 0
FAMILY	POSITIONING	POWER CONNECTION	Ø THROUGH	POWER	VOLTAGE	LED	MANUAL CONTROL	VERSION
Solenoid valves series "PLT-10"	1 Base and connection on same side 2 Base and connection opposite sides	1 Plug-in	3 0.6 mm 6 1.2 mm	3 0.7 W 5 0.8 W 8 3/0.3 W 9 4.2/0.7 W	3 12 VDC 4 24 VDC	0 - 1 LED	0 - 1 manual monostable	00 Standard

### PLT-10 WITH BASE AND CONNECTION ON THE SAME SIDE

Version (3/2 NC)	Code	Manual	Voltage [Volt]	Power [Watt]	Through Ø [mm]	Operating press. [bar]	Flow rate at 6 ΔP=1 bar [Nl/min]	Tmax coil a 24VDC Te 20°C α ED100% [°C]	Weight [g]
Without LED	722113330000	without	12 VDC	0.7	0.6	3 to 7	9	93	12
	722113330100	with	12 VDC	0.7	0.6	3 to 7	9	93	12
	722113340000	without	24 VDC	0.7	0.6	3 to 7	9	93	12
	722113340100	with	24 VDC	0.7	0.6	3 to 7	9	93	12
With LED	722113531000	without	12 VDC	0.8	0.6	3 to 7	9	93	12
	722113531100	with	12 VDC	0.8	0.6	3 to 7	9	93	12
	722113541000	without	24 VDC	0.8	0.6	3 to 7	9	93	12
	722113541100	with	24 VDC	0.8	0.6	3 to 7	9	93	12
SPEED-UP and LED	722116841000	without	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722116841100	with	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722116941000	without	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12
	722116941100	with	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12

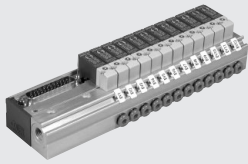
### PLT-10 WITH BASE AND CONNECTION ON OPPOSITE SIDES

Version (3/2 NC)	Code	Manual	Voltage [Volt]	Power [Watt]	Through Ø [mm]	Operating press. [bar]	Flow rate at 6 ΔP=1 bar [Nl/min]	Tmax coil a 24VDC Te 20°C α ED100% [°C]	Weight [g]
Without LED	722213330000	without	12 VDC	0.7	0.6	3 to 7	9	93	12
	722213330100	with	12 VDC	0.7	0.6	3 to 7	9	93	12
	722213340000	without	24 VDC	0.7	0.6	3 to 7	9	93	12
	722213340100	with	24 VDC	0.7	0.6	3 to 7	9	93	12
With LED	722213531000	without	12 VDC	0.8	0.6	3 to 7	9	93	12
	722213531100	with	12 VDC	0.8	0.6	3 to 7	9	93	12
	722213541000	without	24 VDC	0.8	0.6	3 to 7	9	93	12
	722213541100	with	24 VDC	0.8	0.6	3 to 7	9	93	12
SPEED-UP and LED	722216841000	without	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722216841100	with	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722216941000	without	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12
	722216941100	with	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12

### BASES FOR PLT-10

Code	Description	Code	Description	Code	Description
W0400100101	Base 1 posn. for PLT-10	W0400100105	Base 5 posn. for PLT-10	W0400100109	Base 9 posn. for PLT-10
W0400100102	Base 2 posn. for PLT-10	W0400100106	Base 6 posn. for PLT-10	W0400100110	Base 10 posn. for PLT-10
W0400100103	Base 3 posn. for PLT-10	W0400100107	Base 7 posn. for PLT-10		
W0400100104	Base 4 posn. for PLT-10	W0400100108	Base 8 posn. for PLT-10		

## BASES FOR PLT-10 MULTIPLE CONNECTION



TECHNICAL DATA		
Supply voltage		12 VDC or 24 VDC
Max input	W	0.7 for position for PLT-10 STD without LED 0.8 for position for PLT-10 STD with LED 3/0.3 for position for PLT-10 NC with Speed-up 3/0.7 for position for PLT-10 NO with Speed-up 4.2/0.7 for position for PLT-10 NC with Speed-up high flow Led mounted on the PLT-10 (on versions of solenoid valve where envisaged)
Valve actuation indicator		
Operating temperature range	°C	5 to 50
Protection degree (with valves and connectors mounted)		IP 40
Maximum number of mountable PLT-10s		24
Number of contacts		9, of which 1 common, for versions with 4 and 8 positions 25, of which 1 common, for versions with 4, 8, 12, 16, 20, 24 positions

### CONNECTION DIAGRAM

25 PIN							9 PIN		
Position of electrical contact	N° PLT	Position of electrical contact	N° PLT	Position of electrical contact	N° PLT	Position of electrical contact	N° PLT	Position of electrical contact	N° PLT
1	PLT1	8	PLT8	15	PLT15	22	PLT22	1	PLT1
2	PLT2	9	PLT9	16	PLT16	23	PLT23	2	PLT2
3	PLT3	10	PLT10	17	PLT17	24	PLT24	3	PLT3
4	PLT4	11	PLT11	18	PLT18	25	COMMON (-)	4	PLT4
5	PLT5	12	PLT12	19	PLT19			5	PLT5
6	PLT6	13	PLT13	20	PLT20			6	PLT6
7	PLT7	14	PLT14	21	PLT21			7	PLT7
								8	PLT8
								9	COMMON (-)

### CODES FOR BASES 9 AND 25 PINS

Code	Description	Weight [g]
0210040004	4-posn. base PLT 10 9-PIN mult conn.	160
0210040008	8-posn. base PLT 10 9-PIN mult conn.	235
0210240004	4-posn. base PLT 10 25-PIN mult conn.	210
0210240008	8-posn. base PLT 10 25-PIN mult conn.	280
0210240012	12-posn. base PLT 10 25-PIN mult conn.	355
0210240016	16-posn. base PLT 10 25-PIN mult conn.	430
0210240020	20-posn. base PLT 10 25-PIN mult conn.	500
0210240024	24-posn. base PLT 10 25-PIN mult conn.	575

## PLT-10 FOR MULTIPLE ELECTRIC CONNECTION

TECHNICAL DATA	NC	NO
Type		3/2 NC et NO
Operating temperature range (Te)		5 to 50
Fluid temperature (Tg)		5 to 50
Fluid		Filtered, lubricated or unlubricated air
Operating life		Over 50 million cycles
Weight		12 g
Voltage tolerance		± 10 %
Max operating frequency		30 Hz
Switching factor		100 %
Insulation class		F155
Degree of protection	IP 51	IP 50

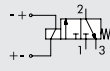
### KEY TO CODES

7 2 2	1	1	3	3	4	0	1	0	0
FAMILY	POSITIONING	POWER CONNECTION	Ø THROUGH	POWER	VOLTAGE	LED	MANUAL CONTROL	VERSION	
Solenoid valves series "PLT-10"	1 Base and connection on same side	1 For multiple base	3 0.6 mm 6 1.2 mm	3 0.7 W 5 0.9 W 8 3/0.3 W for NC 3/0.7 W for NO 9 4.2/0.7 W	3 12 VDC 4 24 VDC	0 - 1 LED	0 - 1 manual monostable	0 NC 1 NO	0 Standard

### PLT-10 NC-NO FOR MULTIPLE ELECTRIC CONNECTION

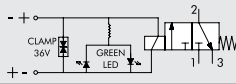
Version (3/2 NC)

	Code	Manual	Voltage [Volt]	Power [Watt]	Ø Through [mm]	Operating pressure [bar]	Flow rate at 6 ΔP=1 bar [Nl/min]	T Max coil T at 24VDC Te 20°C α ED100% [°C]	Weight [g]
Without LED	722123330000	without	12 VDC	0.7	0.6	3 to 7	9	93	12
	722123330100	with	12 VDC	0.7	0.6	3 to 7	9	93	12
	722123340000	without	24 VDC	0.7	0.6	3 to 7	9	93	12
	722123340100	with	24 VDC	0.7	0.6	3 to 7	9	93	12



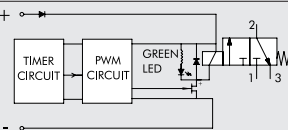
With LED

With LED	722123531000	without	12 VDC	0.8	0.6	3 to 7	9	93	12
	722123531100	with	12 VDC	0.8	0.6	3 to 7	9	93	12
	722123541000	without	24 VDC	0.8	0.6	3 to 7	9	93	12
	722123541100	with	24 VDC	0.8	0.6	3 to 7	9	93	12



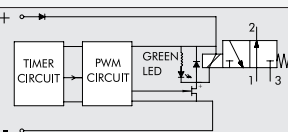
SPEED-UP and LED

SPEED-UP and LED	722126841000	without	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722126841100	with	24 VDC	3/0.3	1.2	2 to 7	16	51	12
	722126941000	without	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12
	722126941100	with	24 VDC	4.2/0.7	1.2	2 to 7	30	51	12



Version (3/2 NO)

	Code	Manual	Voltage [Volt]	Power [Watt]	Ø Through [mm]	Operating pressure [bar]	Flow rate at 6 ΔP=1 bar [Nl/min]	T Max coil T at 24VDC Te 20°C α ED100% [°C]	Weight [g]
SPEED-UP and LED	722126841010	without	24 VDC	3/0.7	1.0	2 to 7	14	51	12
	722126841110	with	24 VDC	3/0.7	1.0	2 to 7	14	51	12



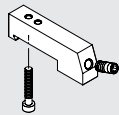
## ACCESSORIES

### CAP FOR UNUSED POSITION



Code	Description	Weight [g]
W0400100200	Cap 10 mm	6

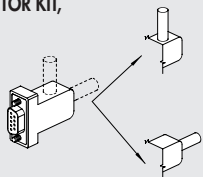
### CONNECTION BRACKETS ON BAR OMEGA (DIN EN 50022)



Code	Description	Weight [g]
0227301610	Connection brackets on DIN BAR PLT-10	30

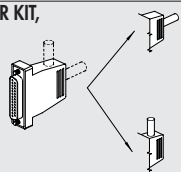
Supplied complete with one M3x20 screws and one M6 grub screw. Individually packed

### STRAIGHT AND 90° CONNECTOR KIT, 9 WIRES



Code	Description	Weight [g]
0226180102	Straight and 90° connector kit, 9 wires	31

### STRAIGHT AND 90° CONNECTOR KIT, 25 WIRES



Code	Description	Weight [g]
0226180101	Straight and 90° connector kit, 25 wires	48

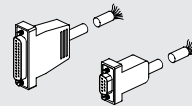
### CABLES



Code	Description	Weight [g]
0226107201	10-wire cable	86
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Specify the number of metres desired

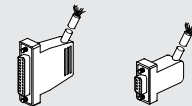
### STRAIGHT PRE-WIRED CONNECTOR KIT



Code	Description	Weight [g]
0226900100	Connector + 9-wire axial cable L = 1 m	90
0226900250	Connector + 9-wire axial cable L = 2.5 m	220
0226900500	Connector + 9-wire axial cable L = 5 m	434

0226920100	Connector + 25-wire axial cable L = 1 m	132
0226920250	Connector + 25-wire axial cable L = 2.5 m	320
0226920500	Connector + 25-wire axial cable L = 5 m	636

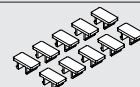
### PRE-WIRED 90° CONNECTOR



Code	Description	Weight [g]
0226910100	Connector + 9-wire 90° cable L = 1 m	90
0226910250	Connector + 9-wire 90° cable L = 2.5 m	220
0226910500	Connector + 9-wire 90° cable L = 5 m	434

0226930100	Connector + 25-wire 90° cable L = 1 m	132
0226930250	Connector + 25-wire 90° cable L = 2.5 m	320
0226930500	Connector + 25-wire 90° cable L = 5 m	636

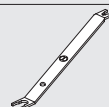
### IDENTIFICATION PLATE KIT



Code	Description	Weight [g]
0226107000	Identification plate kit	30

Comes in 10-pc. packs

### R17 - PIPE RELEASE SPANNER

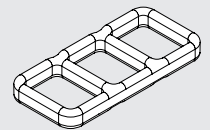


Code	Description	Ø Tube
2L17001	RL17	from Ø 3 to Ø 10

Note: For racc. R et racc. Fox

## SPARE PARTS

### INTERFACE GASKET



Code	Description
0226009701	PLT-10 gasket

N.B. 50 for pack

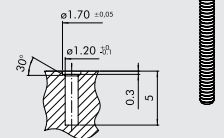
### STANDARD SECURING SCREW (FOR ALUMINIUM)



Code	Description
0226009702	PLT-10 screw for aluminium

N.B. 100 for pack

### SECURING SCREWS FOR TECHNOPOLYMER



Code	Description
0226009703	Screw PLT-10 for technopol.

N.B. 100 for pack

When mounting on technopolymer bodies, use these screws instead of the ones supplied with the PLT-10.

**ATTENTION: approximative dimensions for not added glass plastic materials It's always advisable to effect assembling tests.**

## SOLENOID VALVES PIV.M 15 mm





TECHNICAL DATA		
Voltage tolerance	%	-10 to +15
Frequenza tensione alternativa (AC)	Hz	50/60
Max operating frequency	Hz	30
Solenoid rating		100% ED
Response time	ms	~ 10
Type of protection		IP 65 EN 60529
Power connection		9.4 mm micro centre distance
Insulation class		155
Ambient temperature	°C	-10 to + 50
Fluid temperature	°C	-10 to + 50
Fluid		Filtered lubricated or unlubricated air
Operating life		100 million cycles
Materials		Body: PPS Spring: 302 stainless steel FKM/FPM gaskets
Weight	g	30
Manual control		Monostable
Assembly position		In any position

### SYNOPTIC, SIZES AND VERSIONS

P I V FAMILY	1 AIR HOLE	3 NUMBER OF WAYS	M DIMENSIONS	0 THREAD	1 VERSION	N C FURTHER DETAILS
1	1 mm	3 3 ways	M 15 x 15	0 on base	1 24 VDC	NC normally closed
3	1.1 mm				3 24 VAC	NO normally open
6	1.5 mm				5 110 VAC	
					7 220 VAC	

### PIV.M STD

Symbol	Code	Description	Voltage [Volt]	Flow rate [Watt]	Air hole Ø [mm]	kv Factor	Operating [bar]
	W4015001000	PIV33M01 NC	24VDC	2.5W	1.1	0.42	0 to 10
	W4015001010	PIV33M03 NC	24VAC	2W - 3VA	1.1	0.42	0 to 10
	W4015001020	PIV33M05 NC	110VAC	2W - 3VA	1.1	0.42	0 to 10
	W4015001030	PIV33M07 NC	220VAC	2W - 3VA	1.1	0.42	0 to 10
	W4015001100	PIV63M01 NC	24VDC	2.5W	1.5	0.55	0 to 6
	W4015001110	PIV63M03 NC	24VAC	2W - 3VA	1.5	0.55	0 to 6
	W4015001120	PIV63M05 NC	110VAC	2W - 3VA	1.5	0.55	0 to 6
	W4015001130	PIV63M07 NC	220VAC	2W - 3VA	1.5	0.55	0 to 6
	W4015002000	PIV13M01 NO	24VDC	2.5W	1	0.33	0 to 6
	W4015002010	PIV13M03 NO	24VAC	2W - 3VA	1	0.33	0 to 6
	W4015002020	PIV13M05 NO	110VAC	2W - 3VA	1	0.33	0 to 6
	W4015002030	PIV13M07 NO	220VAC	2W - 3VA	1	0.33	0 to 6

### MULTIPLE BASE FOR PIV.M

Code	Description	Abbrev.	Weight [g]
W0400101001	Single base 1 position	B5001	6
W0400101002	Multiple base 2 positions	B5002	24
W0400101003	Multiple base 3 positions	B5003	34
W0400101004	Multiple base 4 positions	B5004	46
W0400101005	Multiple base 5 positions	B5005	58
W0400101006	Multiple base 6 positions	B5006	70
W0400101007	Multiple base 7 positions	B5007	82
W0400101008	Multiple base 8 positions	B5008	98
W0400101009	Multiple base 9 positions	B5009	106
W0400101010	Multiple base 10 positions	B5010	114

### MICRO ELECTRIC CONNECTOR 15 mm

Code	Colour	Type
W0970500011	Black	Standard
W0970500012	Transparent	LED 24V
W0970500013	Transparent	LED 110V
W0970500015	Transparent	LED + VDR 24V
W0970500016	Transparent	LED + VDR 110V

### END PLUG - UNUSED POSITION

Code	Description	Weight [g]
W0400102000	End plug	6

### END PLUG - PORT 1

Code	Description	Weight [g]
W0400102002	End plug - port 1	4

## PIV VALVES ON BASE





TECHNICAL DATA	PIV.I ON BASE	PIV.T ON BASE	PIV.B ON BASE
Absorption	5W - 5VA	3.8W - 6.5VA	10W - 13VA
Voltage available	12-24 VDC / 24-110-220 VAC	24VDC / 24-110-220 VAC	24VDC / 24-110-220 VAC
Voltage tolerance	% -10 to +15	% -10 to +15	% -10 to +15
Max operating frequency	Hz 30	Hz 30	Hz 15
Solenoid rating	% 100	% 100	% 100
Response time	ms 8 to 15	ms 8 to 15	ms 10 to 15
Type of protection	IP 65	IP 65	IP 65
Type of coil	Coil side 22 Ø 8 DIN 43650	Coil side 22 Ø 9 DIN 43650	Coil side 30 DIN 43650
Insulation class	155	155	155
Ambient temperature	°C -15 to 50	°C -15 to 50	°C -15 to 50
Fluid temperature	°C -15 to 50	°C -15 to 50	°C -15 to 50
Fluid	Filtered lubricated or unlubricated air 25 million cycles	Filtered lubricated or unlubricated air 25 million cycles	Filtered lubricated or unlubricated air
Working life			-
Weight	g 80 to 120 (according to the version)	g 85	g 250
Maximum coil nut torque	Nm 1	Nm 1	Nm 1



### SYNOPTIC, SIZES AND VERSIONS

PIV FAMILY	5 AIR HOLE	3 NUMBER OF WAYS	T CONNECTION	0 THREAD	O VERSION	N C FURTHER DETAILS
	4 1.2 mm 7 1.6 mm 8 1.8 mm Y 2.4 mm	2 2 ways 3 3 ways	I 22x22 operator Ø 8 T 22x22 operator Ø 9 B 30x30 operator Ø 13	0 on base	O on base with conveyed exhaust B on base S standard	NC normally closed NO normally open



#### PIV.I VALVES, OPERATOR Ø 8, ON BASE

Symbol	Code	Description	Air hole Ø [mm]	Kv Factor	Max oper. pressure [bar]	
					DC	AC
	W4018000200	PIV42IOS NC	1.2	0.65	10	10
	W4018000300	PIV72IOS NC	1.6	1	8	8
	W4018001200	PIV43IOS NC	1.2	0.65	10	10
	W4018001300	PIV73IOS NC	1.6	1	8	8


#### PIV.T VALVES, OPERATOR Ø 9, ON BASE WITH CONVEYED EXHAUST

Symbol	Code	Description	Air hole Ø [mm]	Kv Factor	Pressure range [bar]	
					DC	AC
	W4025002001	PIV73T00 NO	1.6	0.75	0.5 to 7	0.5 to 7
	W4025002501	PIV83T00 NO	1.8	0.85	0 to 6	0.5 to 6.5
	W4025002000	PIV73T00 NC	1.6	0.8	0.5 to 10	0.5 to 10
	W4025002500	PIV83T00 NC	1.8	1	0.5 to 8	0.5 to 8

#### PIV.T VALVES, OPERATOR Ø 9, ON BASE

Symbol	Code	Description	Air hole Ø [mm]	Kv Factor	Pressure range [bar]	
					DC	AC
	W4025002101	PIV73TOB NO	1.6	0.75	0.5 to 7	0.5 to 7
	W4025002301	PIV83TOB NO	1.8	0.85	0.5 to 6.5	0.5 to 6.5
	W4025002100	PIV73TOB NC	1.6	0.8	0.5 to 10	0.5 to 10
	W4025002300	PIV83TOB NC	1.8	1	0.5 to 8	0.5 to 8

#### PIV.T VALVES, OPERATOR Ø 13, ON BASE

Symbol	Code	Description	Air hole Ø [mm]	Kv Factor	Max oper. pressure [bar]	
					DC	AC
	W4026003000	PIVY3BOS NC	2.4	2.2	8	10

## ACCESSORIES

### MULTIPLE BASES FOR PIV.I SOLENOID VALVES, OPERATOR Ø 8

Code	Description	Abbrev.
W0400111101	Base 1 position	EB 6001
W0400111102	Base 2 positions	EB 6002
W0400111103	Base 3 positions	EB 6003
W0400111104	Base 4 positions	EB 6004
W0400111105	Base 5 positions	EB 6005
W0400111106	Base 6 positions	EB 6006
W0400111107	Base 7 positions	EB 6007
W0400111108	Base 8 positions	EB 6008
W0400111109	Base 9 positions	EB 6009
W0400111110	Base 10 positions	EB 6010

### MULTIPLE BASES FOR PIV.T SOLENOID VALVES, OPERATOR Ø 9

Code	Description	Abbrev.
W0400101101	Base 1 position	19001
W0400101102	Base 2 positions	19002
W0400101103	Base 3 positions	19003
W0400101104	Base 4 positions	19004
W0400101105	Base 5 positions	19005
W0400101106	Base 6 positions	19006
W0400101107	Base 7 positions	19007
W0400101108	Base 8 positions	19008
W0400101109	Base 9 positions	19009
W0400101110	Base 10 positions	19010

### MULTIPLE BASES FOR PIV.B VALVES

Code	Description	Abbrev.
W0400101201	Base 1 position	B4001
W0400101202	Base 2 positions	B4002
W0400101203	Base 3 positions	B4003
W0400101204	Base 4 positions	B4004
W0400101205	Base 5 positions	B4005
W0400101206	Base 6 positions	B4006
W0400101207	Base 7 positions	B4007
W0400101208	Base 8 positions	B4008
W0400101209	Base 9 positions	B4009

### MANIFOLD BASES FOR PIV.I SOLENOID VALVES, OPERATOR Ø 8

Code	Description	Abbrev.
W0400111200	Manifold base	EB 8000 I
W0400111201	LH end plate	EB 8000 TI
W0400111202	RH end plate	EB 8000 T2

### BASE BLANKING PLATE FOR PIV.T AND PIV.I VALVES, UNUSED POSITIONS

Code	Description	Abbrev.
W0400112000	Blanking plate	B 6000

### BASE BLANKING PLATE FOR PIV.B VALVES, UNUSED POSITIONS

Code	Description
W0400112001	Blanking plate

### NC/NO ADAPTER FOR PIV.T VALVES

Code	Description	Abbrev.
W0400101190	NC/NO adapter	I-9000

DISTRIBUTORS

PIV VALVES

## PIV VALVES IN LINE



TECHNICAL DATA	PIV.I IN LINE	PIV.B IN LINE
Absorption	5W to 5VA	10W - 13VA
Voltage available	12; 24VDC - 24; 110; 220 VAC - 50/60 Hz	24VDC - 24; 110; 220 VAC - 50/60 Hz
Voltage tolerance	%	-10 to 15
Max operating frequency	Hz	15
Solenoid rating	%	100
Response time	ms	10 to 15
Type of protection	IP 65	IP 65
Type of coil	Coil side 22 Ø 8 DIN 43650	Coil side 30 DIN 43650
Insulation class	155	155
Ambient temperature	°C	-15 to 50
Fluid temperature	°C	-15 to 50
Fluid	Filtered lubricated or unlubricated air	Filtered lubricated or unlubricated air
Working life	25 million cycles	-
Weight	35 to 40 (depending on version)	130
Maximum coil/nut torque	Nm	1

**Note on use:**  
The 2/2 NC and 2/2 NO valves work only with inlet pressure ≥ outlet pressure.

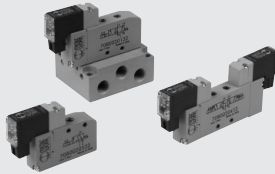
### SYNOPTIC, SIZES AND VERSIONS

P I V FAMILY	7 AIR HOLE	2 NUMBER OF WAYS	B CONNECTION	4 THREAD	5 VERSION	N C FURTHER DETAILS
	4 1.2 mm	2 2 ways	I 22 x 22 operator Ø 8	5 M5	S standard	NC normally closed
	7 1.6 mm	3 3 ways	B 30 x 30 operator Ø 13	4 G1/4"		NO normally open
	9 2.4 mm			8 G1/8"		
	W 3 mm					
	X 4 mm					
	Z 6 mm					





## VALVES MINIMACH



TECHNICAL DATA		
Valve port thread		M5
Type of actuation		electric-pneumatic
Maximum external diameter of fittings	mm	Ø 11
Operating temperature range	°C	-10 to +60
	°F	14 to +140
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous
Pressure range	MPa	0.3 to 0.7
	bar	3 to 7
	psi	44 to 102
Flow rate at 6 bar ΔP 1 3/2	NI/min	140
Flow rate at 6 bar ΔP 1 5/2	NI/min	170
Flow rate at 6 bar ΔP 1 5/3	NI/min	80
Voltage range		24 VDC ± 10%
Power	W	0.9
Solenoid rating		100% ED
Manual operator		Monostable
TRA/TRR 3/2 at 6 bar	ms	8/23
TRA/TRR 5/2 monostable at 6 bar	ms	8/30
TRA/TRR 5/2 bistable at 6 bar	ms	15/15
TRA/TRR 5/3 at 6 bar	ms	9/30
Insulation class		F155
Degree of protection		IP 51
Installation		In any position. As for the bistable ones, if subject to vibration, the vertical assembly is not advisable

### SYNOPTIC, SIZES AND VERSIONS

M S V	0	5	S O	B	O O	2 4 V D C
FAMILY	DIMENSIONS	FUNCTION	OPERATORS 14	RESETTING (12)	FURTHER DETAILS	
MSV minivalves solenoid	0 M5	3 3/2 5 5/2 6 5/3	SO solenoid	B bistable S mechanical springs	NC normally closed NO normally open OO 5/2 standard CC closed centres OC open centres PC pressure centres	24VDC

#### MONOSTABLE 3/2

Symbol	Code	Abbrev.	Weight [g]
	7080020532	MSV 03 SOS NC 24VDC	36.2
	7080020632	MSV 03 SOS NO 24VDC	36.2

#### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7080020132	MSV 05 SOS OO 24VDC	43.3

#### BISTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7080020112	MSV 05 SOB OO 24VDC	57

#### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7080020212	MSV 06 SOS CC 24VDC	57
	7080020312	MSV 06 SOS OC 24VDC	57
	7080020412	MSV 06 SOS PC 24VDC	57

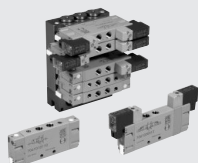
### ACCESSORIES

Code	Description	Position
0225004600	Adapter for bar omega (Din EN 50022)	
0226009010	Multiple base diaphragm	
0225010201	Base 2 posn. for 3/2 valves Minimach	2
0225010401	Base 4 posn. for 3/2 valves Minimach	4
0225010601	Base 6 posn. for 3/2 valves Minimach	6
0225010801	Base 8 posn. for 3/2 valves Minimach	8
0226009500	Blanking plate for 3/2 bases Minimach	
0225020201	Base 2 posn. for 5/2-5/3 valves Minimach	2
0225020401	Base 4 posn. for 5/2-5/3 valves Minimach	4
0225020601	Base 6 posn. for 5/2-5/3 valves Minimach	6
0225020801	Base 8 posn. for 5/2-5/3 valves Minimach	8
0226009501	Blanking plate for 5/2-5/3 bases Minimach	

### SPARE PARTS

Code	Description
0226009000	Kit of spare gasket bases for 3/2 valves
0226009001	Kit of spare gasket bases for 5/2-5/3 valves

## MACH 11 VALVES



TECHNICAL DATA				
Valve port thread		M7		
Pilot thread		M5		
Maximum external diameter of fittings	mm	Pneumatic: M7 = Ø 11 - M5 = Ø 9 - Electric: M7 - M5 = Ø 11		
Operating temperature range	°C	-10 to +60		
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous		
Screw for valve wall-mounting		M3		
Flow rate at 6 bar ΔP 1 bar	Nl/min	400		
Pressure range	bar	<b>Electric</b>	<b>Electric pilot-assisted</b>	<b>Pneumatic</b>
		monostable: 2 to 7	pilot pressure: 2 to 7	monostable control pres. values: 2 to 10
		bistable: 2 to 7	valve: vacuum to 10	bistable control pres. values: 1 to 10
		5/3: 2 to 7		control pressure 5/3: 2 to 10
				valve: vacuum to 10
Voltage range		24 VDC ± 10%	24 VDC ± 10%	-
Power	W	0.9	0.9	-
Insulation class		F155	F155	-
Degree of protection		IP 51	IP 51	-
Solenoid rating		100% ED	100% ED	-
TRA/TRR monostable at 6 bar	ms	10 / 45	10 / 45	4 / 9
TRA/TRR bistable at 6 bar	ms	22 / 22	22 / 22	4 / 4
TRA/TRR 5/3 monostable at 6 bar	ms	22 / 22	22 / 22	4 / 4

### SYNOPTIC, SIZES AND VERSIONS

M S V FAMILY	1 DIMENSIONS	5 FUNCTION	S O OPERATORS 14	B RESETTING (12)	O O FURTHER DETAILS	2 4 V D C
MSV mini-solenoid valve	1 M7	5 5/2 6 5/3	SO solenoid SE solenoid assisted PN pneumatic	B bistable S mechanical springs	OO 5/2 standard CC closed centres OC open centres PC pressure centres	24VDC
MSV mini-pneumatic valve						

## MACH 11 VALVES, PNEUMATIC

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7061010130	MPV 15 PNS OO	52

### BISTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7061010110	MPV 15 PNB OO	52

### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7061010210	MPV 16 PNS CC	62
	7061010310	MPV 16 PNS OC	62
	7061010410	MPV 16 PNS PC	62

## MACH 11 VALVES, SOLENOID-PNEUMATIC

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7061020132	MSV 15 SOS OO 24VDC	60
	7061030132	MSV 15 SES OO 24VDC	60

### BISTABLE 5/2

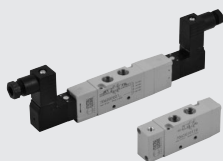
Symbol	Code	Abbrev.	Weight [g]
	7061020112	MSV 15 SOB OO 24VDC	72
	7061030112	MSV 15 SEB OO 24VDC	88

### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7061020212	MSV 16 SOS CC 24VDC	82
	7061020312	MSV 16 SOS OC 24VDC	82
	7061020412	MSV 16 SOS PC 24VDC	82
	7061030212	MSV 16 SES CC 24VDC	82
	7061030312	MSV 16 SES OC 24VDC	82
	7061030412	MSV 16 SES PC 24VDC	82



## VALVOLE MACH 16



TECHNICAL DATA	
Valve port thread	1/8"
Type of control	M5 pneumatic actuation - Solenoid/pneumatic operation with integrated coil
Maximum outer diameter of gaskets for ports 1 - 3 - 5	mm 15
Maximum outer diameter for ports 2 - 4	mm 15
Operating temperature range	°C -10 to +60
Minimum pressure pilot-pneumatic controls	bar Monostable with pneumatic spring: see picture page 2-82 of the general catalogue bar 1.6 bar for monostable valves - mechanical spring bar 1 bar for bistable valves - 1.9 bar for valves 5/3 bar vacuum -10
Operating pressure	
Fluid	Filtered lubricated or unlubricated air lubrication, if used, must be continuous
Recommended lubricant	ISO e UNI FD22
Solenoid pilot	Integrated coil DIN 43650 C shape
Manual	Monostable on solenoid pilot (with bistable manual valve on request)
Number of ways in base	1-3-5 and pilot exhaust
Screws for wall-mounting single valve	2 screws M3
Screws for base-mounting valve	2 screws M2.5x30
Installation	In any position (vertical assembly is not recommended for bistable valves subjected to vibration)

### SYNOPTIC, SIZES AND VERSIONS

M S V FAMILY	2 DIMENSIONS	5 FUNCTION	S O OPERATORS 14	B RESETTING 12	O O FURTHER DETAILS	2 4 V D C VOLTAGE
MSV solenoid/pneumatic MPV pneumatic	2 1/8"	5 5/2 6 5/3	SO solenoid/pneumatic SE solenoid pilot PN pneumatic	P pneumatic spring S mechanical springs B bistable	OO 5/2 CC closed centres OC open centres PC pressure centres	24VDC 24VAC 110VAC 220VAC

## MACH 16 VALVES MPV, PNEUMATIC



TECHNICAL DATA	
Operating pressure	bar Vacuum to 10
Minimum operating pressure:	bar
• monostable with pneumatic spring	see graph page 2-82 of the general catalogue
• monostable with mechanical spring	1.6
• monostable 5/3	1.9
• bistable	1
Conductance C	NI/min · bar 149.8
Critical ratio b	bar/bar 0.525
Flow rate at 6 bar ΔP 0.5 bar	NI/min 540
Flow rate at 6 bar ΔP 1 bar	NI/min 750
Actuation response times at 6 bar:	
• monostable	ms 4
• bistable	ms 4
Repositioning response times at 6 bar:	
• monostable	ms 8.4
• bistable	ms 4

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7062010100	MPV 25 PNP OO	60
	7062010130	MPV 25 PNS OO	61

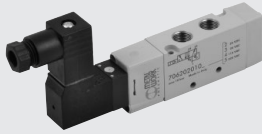
### BISTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7062010110	MPV 25 PNB OO	62

### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7062010210	MPV 26 PNS CC	73
	7062010310	MPV 26 PNS OC	73
	7062010410	MPV 26 PNS PC	73

# MACH 16 VALVES MPV, SOLENOID/PNEUMATIC



### TECHNICAL DATA

Operating pressure:	bar	1.9 to 10
• monostable		1 to 10
• bistable		Vacuum to 10
• pilot-assisted		2
Minimum pilot pressure	bar	-10 to +60
Operating temperature range	°C	149.8
Conductance C	Nl/min · bar	0.525
Critical ratio b	bar/bar	540
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	750
Flow rate at 6 bar ΔP 1 bar	Nl/min	12 / 26
TRA / TRR monostable at 6 bar	ms	21 / 21
TRA / TRR bistable at 6 bar	ms	monostable on the solenoid pilot (also with bistable manual valve on request) 24 VDC - 24 VAC - 110 VAC - 220 VAC
Type of operation: Manual		1
Pilot with integrated coil		-10% to +15%
Power	W	F 155
Voltage tolerance		IP 65 EN60529 with connector
Insulation class		100% ED
Degree of protection		DIN 43650 C shape
Solenoid rating		
Electrical contacts		

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7062020102	MSV 25 SOP OO 24VDC	92
	7062020103	MSV 25 SOP OO 24VAC	92
	7062020104	MSV 25 SOP OO 110VAC	92
	7062020105	MSV 25 SOP OO 220VAC	92
	7062020132	MSV 25 SOS OO 24VDC	93
	7062020133	MSV 25 SOS OO 24VAC	93
	7062020134	MSV 25 SOS OO 110VAC	93
	7062020135	MSV 25 SOS OO 220VAC	93
	7062030132	MSV 25 SES OO 24VDC	93
	7062030133	MSV 25 SES OO 24VAC	93
	7062030134	MSV 25 SES OO 110VAC	93
	7062030135	MSV 25 SES OO 220VAC	93

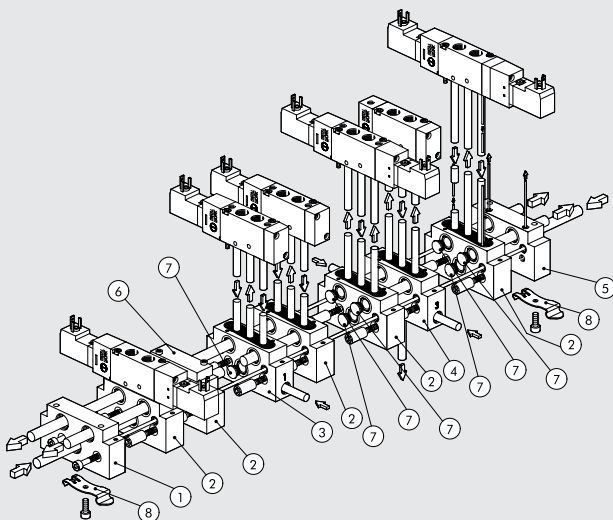
### BISTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7062020112	MSV 25 SOB OO 24VDC	124
	7062020113	MSV 25 SOB OO 24VAC	124
	7062020114	MSV 25 SOB OO 110VAC	124
	7062020115	MSV 25 SOB OO 220VAC	124
	7062030112	MSV 25 SEB OO 24VDC	125
	7062030113	MSV 25 SEB OO 24VAC	125
	7062030114	MSV 25 SEB OO 110VAC	125
	7062030115	MSV 25 SEB OO 220VAC	125

### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7062020212	MSV 26 SOS CC 24VDC	142
	7062020213	MSV 26 SOS CC 24VAC	142
	7062020214	MSV 26 SOS CC 110VAC	142
	7062020215	MSV 26 SOS CC 220VAC	142
	7062020312	MSV 26 SOS OC 24VDC	142
	7062020313	MSV 26 SOS OC 24VAC	142
	7062020314	MSV 26 SOS OC 110VAC	142
	7062020315	MSV 26 SOS OC 220VAC	142
	7062020412	MSV 26 SOS PC 24VDC	142
	7062020413	MSV 26 SOS PC 24VAC	142
	7062020414	MSV 26 SOS PC 110VAC	142
	7062020415	MSV 26 SOS PC 220VAC	142
	7062030212	MSV 26 SES CC 24VDC	143
	7062030213	MSV 26 SES CC 24VAC	143
	7062030214	MSV 26 SES CC 110VAC	143
	7062030215	MSV 26 SES CC 220VAC	143
	7062030312	MSV 26 SES OC 24VDC	143
	7062030313	MSV 26 SES OC 24VAC	143
	7062030314	MSV 26 SES OC 110VAC	143
	7062030315	MSV 26 SES OC 220VAC	143
	7062030412	MSV 26 SES PC 24VDC	143
	7062030413	MSV 26 SES PC 24VAC	143
	7062030414	MSV 26 SES PC 110VAC	143
	7062030415	MSV 26 SES PC 220VAC	143

## MANIFOLD BASES



Reference	Code	Description
①	0227100201	Input end-plate kit M16/VDMA
②	0227100150	Manifold base kit M16
③	0227100301	Manifold base kit-separate feed M16
④	0227100302	Manifold base kit-exhaust feed M16
⑤	0227100200	Output end-plate kit M16/VDMA
⑥	0225004500	Accessories - blanking plate for Mach 16
⑦	0227100000	Intermediate diaphragm
⑧	0227300600	Connection bracket on DIN bar

## MULTIPLE BASES FOR MACH 16 VALVES

## SPARE PARTS

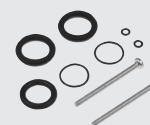
### MULTIPLE BASE FOR MACH 16



### INTERMEDIATE DIAPHRAGM



### GASKET KIT (FOR OLD BASES)



Code	Description	N° of posiz.	Weight [g]
0225000201	Base CVM.PN-08-02-0-000	2	180
0225000401	Base CVM.PN-08-04-0-000	4	286
0225000601	Base CVM.PN-08-06-0-000	6	390
0225000801	Base CVM.PN-08-08-0-000	8	500
0225001001	Base CVM.PN-08-10-0-000	10	613
0225001201	Base CVM.PN-08-12-0-000	12	706

Code	Description	Weight [g]
0227100001	Acc. multiple base diaphragm	6

Code	Description	Weight [g]
0226007001	M16 multiple base gasket kit	5

### ADATTATORE BARRA OMEGA (DIN EN 50022)



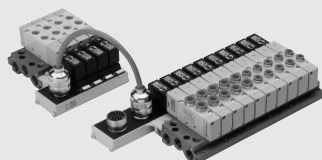
### KIT OF SPARE INTEGRATED GASKET



Code	Description	Weight [g]
0225004600	Adattatore omega Mach 16	46

Code	Description	Weight [g]
0226007003	M16 multiple base gasket kit	5

## MULTIPLE CONNECTORS MACH 16



TECHNICAL DATA		
Supply voltage		24VDC - 24VAC
Maximum absorption		50 mA for each position
Valve actuation indicator		Yellow LED
Protection		Fuse
Operating temperature range	°C	-10 to +60
Degree of protection with valves mounted		IP65
Insulation class		In compliance with IEC 664-1 and VDE 0110 Group C
Electromagnetic compatibility		In compliance with EEC 366/89
Maximum number of solenoid valves which can be applied		16
n° of contacts		19, 16 of which for solenoid valves, 2 common and 1 earth
<b>Pre-wired version</b>		
Cable length	m	5
n° of wires		19, 16 of which for solenoid valves, 2 common and 1 earth
Wire section	mm <sup>2</sup>	0.22
Shielding		Tin plated - covering 80 to 90%
Cable		Outer oil-proof and flame-proof PVC sheath
Cable outside diameter	mm	8.5

### SYNOPTIC, SIZES AND VERSIONS

A	0 8	B	W C 5	0 8	M M V L	2 4 V D C
FAMILY	NO. OF POSITIONS			SIZE		VOLTAGE
A	multiple base for solenoid/pneumatic connection Mach 16	04 4 posn. 06 6 posn. 08 8 posn. 10 10 posn. 12 12 posn.	M electrical connection only for monostable valves	MCN electrical connection	08 G 1/8"	24VDC 24VAC
B	manifold base for Mach 16 solenoid/pneumatic connection		B electrical connection for bistable valves	WC5 pre-wired cable 5 m ACM additional connection for monostable battery		
					M MSV 25 SMS OO V MSV 25 SCS OO L MSV 25 SMP OO J MSV 25 SMB OO K MSV 25 SCB OO G MSV 26 SMS CC O MSV 26 SCS CC E MSV 26 SMS OC F MSV 26 SCS OC B MSV 26 SMS PC C MSV 26 SCS PC A blanking plate D intermediate diaphragm	

N.B.: The valve insertion order inside the descriptive key is the following, starting from the connector, from the left towards the right: the first left square corresponds to the first valve close to the connector on the base. There are 12 squares available for the description: if you order a base with less than 12 positions, complete by placing a 0 in the remaining boxes.



## MACH 16 VALVES FOR MULTIPLE CONNECTOR

### (M) MONOSTABLE 5/2, SOLENOID/PNEUMATIC - MECHANICAL SPRING

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040132	MSV 25 SMS OO 24VDC	1/8"	92
	7062040133	MSV 25 SMS OO 24VAC	1/8"	92

### (V) MONOSTABLE 5/2, SOLENOID/PNEUMATIC, PILOT-ASSISTED - MECHANICAL SPRING

Symbol	Code	Abbrev.	Port	Weight [g]
	7062060132	MSV 25 SCS OO 24VDC	1/8"	93
	7062060133	MSV 25 SCS OO 24VAC	1/8"	93

### (L) MONOSTABLE 5/2, SOLENOID/PNEUMATIC - PNEUMATIC SPRING

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040102	MSV 25 SMP OO 24VDC	1/8"	93
	7062040103	MSV 25 SMP OO 24VAC	1/8"	93

### (J) BISTABLE 5/2, SOLENOID/PNEUMATIC

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040112	MSV 25 SMB OO 24VDC	1/8"	139
	7062040113	MSV 25 SMB OO 24VAC	1/8"	139

### (K) BISTABLE 5/2, SOLENOID/PNEUMATIC, PILOT-ASSISTED

Symbol	Code	Abbrev.	Port	Weight [g]
	7062060112	MSV 25 SCB OO 24VDC	1/8"	140
	7062060113	MSV 25 SCB OO 24VAC	1/8"	140

### (G) MONOSTABLE 5/3, SOLENOID/PNEUMATIC - CLOSED CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040212	MSV 26 SMS CC 24VDC	1/8"	142
	7062040213	MSV 26 SMS CC 24VAC	1/8"	142

### (O) MONOSTABLE 5/3, SOLENOID/PNEUMATIC, PILOT-ASSISTED - CLOSED CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062060212	MSV 26 SCS CC 24VDC	1/8"	143
	7062060213	MSV 26 SCS CC 24VAC	1/8"	143

### (E) MONOSTABLE 5/3 SOLENOID/PNEUMATIC - OPEN CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040312	MSV 26 SMS OC 24VDC	1/8"	142
	7062040313	MSV 26 SMS OC 24VAC	1/8"	142

### (F) MONOSTABLE 5/3 SOLENOID/PNEUMATIC, PILOT-ASSISTED - OPEN CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062060312	MSV 26 SCS OO 24VDC	1/8"	143
	7062060313	MSV 26 SCS OO 24VAC	1/8"	143

### (B) MONOSTABLE 5/3, SOLENOID/PNEUMATIC - PRESSURE CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062040412	MSV 26 SMS PC 24VDC	1/8"	142
	7062040413	MSV 26 SMS PC 24VAC	1/8"	142

### (C) MONOSTABLE 5/3, SOLENOID/PNEUMATIC, PILOT-ASSISTED - PRESSURE CENTRES

Symbol	Code	Abbrev.	Port	Weight [g]
	7062060412	MSV 26 SCS PC 24VDC	1/8"	143
	7062060413	MSV 26 SCS PC 24VAC	1/8"	143

## MODULAR MULTIPLE CONNECTOR KIT

### MAIN KIT - VERSION WITH CONNECTOR

Code	Description	Weight [g]
0226500401	Main multiple connection kit, 4 positions 24VDC	245
0226510401	Main multiple connection kit, 4 positions 24VAC	245
0226500601	Main multiple connection kit, 6 positions 24VDC	280
0226510601	Main multiple connection kit, 6 positions 24VAC	280
0226500801	Main multiple connection kit, 8 positions 24VDC	308
0226510801	Main multiple connection kit, 8 positions 24VAC	308
0226501001	Main multiple connection kit, 10 positions 24VDC	344
0226511001	Main multiple connection kit, 10 positions 24VAC	344
0226501201	Main multiple connection kit, 12 positions 24VDC	396
0226511201	Main multiple connection kit, 12 positions 24VAC	396

### SECONDARY KIT

Code	Description	Weight [g]
0226200401	Multiple secondary connector kit, 4 positions 24VDC	166
0226210401	Multiple secondary connector kit, 4 positions 24VAC	166
0226200601	Multiple secondary connector kit, 6 positions 24VDC	210
0226210601	Multiple secondary connector kit, 6 positions 24VAC	210
0226200801	Multiple secondary connector kit, 8 positions 24VDC	257
0226210801	Multiple secondary connector kit, 8 positions 24VAC	257

### MAIN MULTIPLE PRE-WIRED CONNECTION KIT

Code	Description	Weight [g]
0226400401	Pre-wired multiple main connector kit, 4 positions 24VDC	3350
0226410401	Pre-wired multiple main connector kit, 4 positions 24VAC	3350
0226400601	Pre-wired multiple main connector kit, 6 positions 24VDC	3400
0226410601	Pre-wired multiple main connector kit, 6 positions 24VAC	3400
0226400801	Pre-wired multiple main connector kit, 8 positions 24VDC	3423
0226410801	Pre-wired multiple main connector kit, 8 positions 24VAC	3423
0226401001	Pre-wired multiple main connector kit, 10 positions 24VDC	3460
0226411001	Pre-wired multiple main connector kit, 10 positions 24VAC	3460
0226401201	Pre-wired multiple main connector kit, 12 positions 24VDC	3490
0226411201	Pre-wired multiple main connector kit, 12 positions 24VAC	3490

### ADDITIONAL SECONDARY KIT

Code	Description	Weight [g]
0226300401	Multiple secondary connector kit, 4 positions 24VDC	158
0226310401	Multiple secondary connector kit, 4 positions 24VAC	158
0226300601	Multiple secondary connector kit, 6 positions 24VDC	199
0226310601	Multiple secondary connector kit, 6 positions 24VAC	199
0226300801	Multiple secondary connector kit, 8 positions 24VDC	243
0226310801	Multiple secondary connector kit, 8 positions 24VAC	243

## BASES WITH MULTIPLE CONNECTION

### MONOSTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8, 10, 12 POSITIONS

	N. pos.	Description	Code 24VDC	Code 24VAC	Weight [g]
With multiple connector	4	CVM EP 08 04 M MCN . . . . .	0225100401	0225110401	504
	6	CVM EP 08 06 M MCN . . . . .	0225100601	0225110601	644
	8	CVM EP 08 08 M MCN . . . . .	0225100801	0225110801	784
	10	CVM EP 08 10 M MCN . . . . .	0225101001	0225111001	924
	12	CVM EP 08 12 M MCN . . . . .	0225101201	0225111201	1264
With pre-wired cable	4	CVM EP 08 04 M WCS . . . . .	0225400401	0225410401	3642
	6	CVM EP 08 06 M WCS . . . . .	0225400601	0225410601	3781
	8	CVM EP 08 08 M WCS . . . . .	0225400801	0225410801	3923
	10	CVM EP 08 10 M WCS . . . . .	0225401001	0225411001	4070
	12	CVM EP 08 12 M WCS . . . . .	0225401201	0225411201	4195

..... : • 24VDC = direct current • 24VAC = alternating current

### BISTABLE SOLENOID/PNEUMATIC BASE WITH 12 POSITIONS

	N. pos.	Description	Code 24VDC	Code 24VAC	Weight [g]
With multiple connector	12	CVM EP 08 12 B MCN . . . . .	0225201201	0225211201	1315
With pre-wired cable	12	CVM EP 08 12 B WCS . . . . .	0225501201	0225511201	4700

..... : • 24VDC = direct current • 24VAC = alternating current

### BISTABLE SOLENOID/PNEUMATIC BASE WITH 10 POSITIONS

	N. pos.	Description	Code 24VDC	Code 24VAC	Weight [g]
With multiple connector	10	CVM EP 08 10 B MCN . . . . .	0225201001	0225211001	1245
With pre-wired cable	10	CVM EP 08 10 B WCS . . . . .	0225501001	0225511001	4600

..... : • 24VDC = direct current • 24VAC = alternating current

### BISTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8 POSITIONS

	N. pos.	Description	Code 24VDC	Code 24VAC	Weight [g]
With multiple connector	4	CVM EP 08 04 B MCN . . . . .	0225200401	0225210401	770
	6	CVM EP 08 06 B MCN . . . . .	0225200601	0225210601	965
	8	CVM EP 08 08 B MCN . . . . .	0225200801	0225210801	1200
With pre-wired cable	4	CVM EP 08 04 B WCS . . . . .	0225500401	0225510401	3910
	6	CVM EP 08 06 B WCS . . . . .	0225500601	0225510601	4086
	8	CVM EP 08 08 B WCS . . . . .	0225500801	0225510801	4264

..... : • 24VDC = direct current • 24VAC = alternating current

### ADDITIONAL MONOSTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8 POSITIONS

	N. pos.	Description	Code 24VDC	Code 24VAC	Weight [g]
	4	CVM EP 08 04 M ACM . . . . .	0225300401	0225310401	500
	6	CVM EP 08 06 M ACM . . . . .	0225300601	0225310601	640
	8	CVM EP 08 08 M ACM . . . . .	0225300801	0225310801	780

..... : • 24VDC = direct current • 24VAC = alternating current

## ACCESSORIES FOR MACH 16 MULTIPLE CONNECTOR

### 10-WIRE RETURN CABLE

Code	Description
0226150022	10-wire return cable L = 22 cm
022615....	10-wire return cable

Please contact our sales offices  
....Length in cm

### 10-WIRE RETURN CABLE - ONE END WITH CONNECTOR

Code	Description
022613....	10-wire return cable - one end with connector

Please contact our sales offices  
....Length in cm

### ELECTRIC CONTACT GASKETS

Code	Description
0226107001	Set of electric contact gaskets

Confezione 10 pezzi

### 10-WIRE CONNECTOR KIT

Code	Description
0226170002	10-wire connector kit

### SET OF IDENTIFICATION PLATES

Code	Description
0226107000	Set of identification plates

Package: 10 pieces

### 19-WIRE CABLE, ONE END WITH CONNECTOR

Code	Description
0226140250	19-wire cable, one end with connector L = 2.5 m
0226140500	19-wire cable, one end with connector L = 5 m
0226141000	19-wire cable, one end with connector L = 10 m
0226141500	19-wire cable, one end with connector L = 15 m
0226142000	19-wire cable, one end with connector L = 20 m
0226143000	19-wire cable, one end with connector L = 30 m

### CABLE WITH 10 CONNECTORS

Code	Description
0226107201	10-wires cable

Please specify the desired length in metres

### SET OF MULTIPLE BASE GASKETS

Code	Description
0226007001	Set of M16 multiple base gaskets

### ELECTRIC CONNECTION BLANKING PLATE

Code	Description
0225004502	Mach 16 electric connection blanking plate

### BASE BLANKING PLATE

Code	Description
0225004500	Mach 16 base blanking plate

### MALE CONNECTOR

Code	Description
W0970504021	Male connector 2 mm

Max power for each position = 5W  
Max total power of multiple connector = 36W

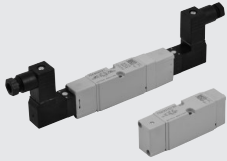
### KIT OF MULTIPLE BASE GASKETS

Code	Description
0226007003	Kit of M16 multiple base integrate gaskets

### REDUCER WITH GAUGE FOR VALVES, SERIES RMV

Code	Description
9061601	RMV 1/8"

## VALVES TO ISO 15407-1/ VDMA 24563-02 SERIES MACH 18



TECHNICAL DATA		
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous
Operating pressure:	bar	
• monostable		1.5 to 10
• monostable 5/3		Vacuum to 10 pneumatic/1.9 to 10 solenoid/pneumatic
• bistable		Vacuum to 10 pneumatic/1 to 10 solenoid/pneumatic
• pilot-assisted		Vacuum to 10
Minimum pilot pressure	bar	2 to 10
Operating temperature range	°C	-10 to +60
Conductance C	NI/min · bar	114.86
Critical ratio b	bar/bar	0.25
Flow rate at 6 bar ΔP 0.5 bar	NI/min	340
Flow rate at 6 bar ΔP 1 bar	NI/min	470
Installation		In any position (vertical assembly is not recommended for bistable valves subjected to vibration)
Assembly		On manifold bases
Recommended lubricant		ISO and UNI FD 22
Solenoid pilot		Integrated coil to DIN 43650 C-shape
Manual		Monostable on solenoid pilot (with manual monostable on request)

### SYNOPTIC, SIZES AND VERSIONS

M S V FAMILY	D DIMENSIONS	5 FUNCTION	S O OPERATORS 14	S RESETTING (12)	O O FURTHER DETAILS	2 4 V D C VOLTAGE
MSV solenoid/pneumatic	D ISO 15407-1/ VDMA 24563-02	5 5/2 6 5/3	SO solenoid/pneumatic SE solenoid-pilot-assisted PN pneumatic	S mechanical springs B bistable	OO 5/2 CC closed centres OC open centres PC pressure centres	24VDC 24VAC 110VAC 220VAC

## MACH 18 ISO 15407-1/VDMA 24563-02 MPV PNEUMATIC



TECHNICAL DATA		
Operating pressure:	bar	Vacuum to 10
Minimum operating pressure:	bar	
• monostable		1.5
• monostable 5/3		1.9
• bistable		1
Conductance C	NI/min · bar	114.86
Critical ratio b	bar/bar	0.25
Flow rate at 6 bar ΔP 0.5 bar	NI/min	340
Flow rate at 6 bar ΔP 1 bar	NI/min	470
Actuation response times at 6 bar:	ms	
• monostable		4
• bistable		4
Repositioning response times at 6 bar:	ms	
• monostable		8.4
• bistable		4
Operating temperature range	°C	-10 + 60

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7063010130	MPV D5 PNS OO	80

### BISTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7063010110	MPV D5 PNB OO	78

### MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7063010210	MPV D6 PNS CC	93
	7063010310	MPV D6 PNS OC	93
	7063010410	MPV D6 PNS PC	93

## MACH 18 ISO 15407-1/VDMA 24563-02 SOLENOID/PNEUMATIC MSV



TECHNICAL DATA		
Operating pressure:	bar	1.5 to 10
• monostable		1.9 to 10
• monostable 5/3		1 to 10
• bistable		Vacuum to 10
• pilot-assisted		2
Minimum pilot pressure	bar	-10 to +60
Operating temperature range	°C	114.86
Conductance C	Nl/min · bar	0.25
Critical ratio b	bar/bar	340
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	470
Flow rate at 6 bar ΔP 1 bar	Nl/min	12 / 26
TRA / TRR monostable at 6 bar	ms	21 / 21
TRA / TRR bistable at 6 bar	ms	Monostable on solenoid pilot (with bistable manual valve on request) 24 VDC - 24 VAC - 110 VAC - 220 VAC
Type of manual actuation		1
Pilot with integrated coil		-10% to -15%
Power	W	F 155
Voltage tolerance		IP 65 EN60529 with connector
Insulation class		100% ED
Degree of protection		DIN 43650 C Shape
Solenoid rating		
Electrical contacts		

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7063020132	MSV D5 SOS OO 24VDC	110
	7063020133	MSV D5 SOS OO 24VAC	110
	7063020134	MSV D5 SOS OO 110VAC	110
	7063020135	MSV D5 SOS OO 220VAC	110
	7063030132	MSV D5 SES OO 24VDC	110
	7063030133	MSV D5 SES OO 24VAC	110
	7063030134	MSV D5 SES OO 110VAC	110
	7063030135	MSV D5 SES OO 220VAC	110

### MONOSTABLE 5/3

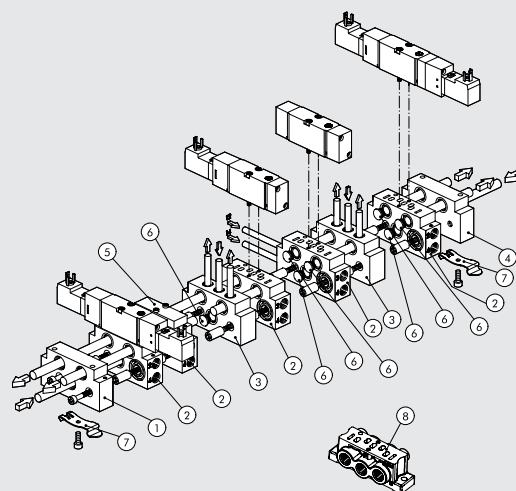
Symbol	Code	Abbrev.	Weight [g]
	7063020212	MSV D6 SOS CC 24VDC	156
	7063020213	MSV D6 SOS CC 24VAC	156
	7063020214	MSV D6 SOS CC 110VAC	156
	7063020215	MSV D6 SOS CC 220VAC	156
	7063020312	MSV D6 SOS OC 24VDC	156
	7063020313	MSV D6 SOS OC 24VAC	156
	7063020314	MSV D6 SOS OC 110VAC	156
	7063020315	MSV D6 SOS OC 220VAC	156
	7063020412	MSV D6 SOS PC 24VDC	156
	7063020413	MSV D6 SOS PC 24VAC	156
	7063020414	MSV D6 SOS PC 110VAC	156
	7063020415	MSV D6 SOS PC 220VAC	156
	7063030212	MSV D6 SES CC 24VDC	156
	7063030213	MSV D6 SES CC 24VAC	156
	7063030214	MSV D6 SES CC 110VAC	156
	7063030215	MSV D6 SES CC 220VAC	156
	7063030312	MSV D6 SES OC 24VDC	156
	7063030313	MSV D6 SES OC 24VAC	156
	7063030314	MSV D6 SES OC 110VAC	156
	7063030315	MSV D6 SES OC 220VAC	156
	7063030412	MSV D6 SES PC 24VDC	156
	7063030413	MSV D6 SES PC 24VAC	156
	7063030414	MSV D6 SES PC 110VAC	156
	7063030415	MSV D6 SES PC 220VAC	156

### BISTABLE 5/2

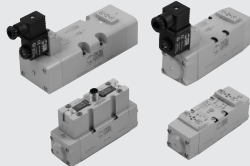
Symbol	Code	Abbrev.	Weight [g]
	7063020112	MSV D5 SOB OO 24VDC	143
	7063020113	MSV D5 SOB OO 24VAC	143
	7063020114	MSV D5 SOB OO 110VAC	143
	7063020115	MSV D5 SOB OO 220VAC	143
	7063030112	MSV D5 SEB OO 24VDC	143
	7063030113	MSV D5 SEB OO 24VAC	143
	7063030114	MSV D5 SEB OO 110VAC	143
	7063030115	MSV D5 SEB OO 220VAC	143

## BASES TO ISO 15407-1/VDMA 24563-02 FOR MACH 18 VALVES

Reference	Code	Description
①	0227100201	ISO 15407-1 input end plate kit
②	0227200150	ISO 15407-1 manifold base, side ports kit
③	0227200300	ISO 15407-1 intermediate upper ports kit
④	0227100200	ISO 15407-1 output end-plate kit
⑤	0227200500	ISO 15407-1 blanking plate
⑥	0227100000	Intermediate diaphragm
⑦	0227300600	Connection brackets on DIN bar
⑧	0227200800	ISO 15407-1 individual base kit



## VALVES ISO 5599/1, SERIES IPV-ISV



TECHNICAL DATA		ISO 1	ISO 2	ISO 3
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous		
Operating pressure:	bar	Vacuum to 10 pneumatic / 2.5 to 10 solenoid/pneumatic		
• monostable		Vacuum to 10 pneumatic / 1 to 10 solenoid/pneumatic		
• bistable		Vacuum to 10		
• pilot-assisted		2.5		
Minimum pilot pressure	bar	-10 to +60		
Operating temperature range	°C	7.5	12	15
Nominal diameter	mm	250	657.14	971.43
Conductance C	Nl/min · bar	0.36	0.25	0.43
Critical ratio b	bar/bar	700	1800	3200
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	1100	2700	4600
Flow rate at 6 bar ΔP 1 bar	Nl/min	In any position (vertical assembly is not recommended for bistable valves subjected to vibration)		
Installation		On single and manifold bases according to ISO 5599/1		
Assembly		ISO and UNI FD 22		
Recommended lubricant		to CNOMO/in-line pilot / M12		
Solenoid pilot		Bistable on solenoid pilot		
Manual		Monostable on valve body		
Maximum coil nut torque	Nm	1		

### SYNOPTIC, SIZES AND VERSIONS

I P V FAMILY	5 DIMENSIONS	5 FUNCTION	P N OPERATORS 14	S RESETTING (12)	O O FURTHER DETAILS
IPV ISO pneumatic	5 ISO 1	5 5/2	PN pneumatic	S mechanical springs	OO 5/2
ISV ISO solenoid/pneumatic	6 ISO 2	6 5/3	SO solenoid/pneumatic	B bistable	CC closed centres
	7 ISO 3		SE electric pilot-assisted	D differential	OC open centres
			* DO solenoid/pneumatic in line		PC pressure centres
			* DE solenoid assisted in line M12		
			● CO M12 solenoid/pneumatic		
			● CE M12 solenoid assisted		

\* Only for ISO 1  
● Only for ISO 1 and ISO 2

## VALVES ISO 5599/1, PNEUMATIC SERIES IPV



TECHNICAL DATA		ISO 1	ISO 2	ISO 3
Operating pressure	bar	Vacuum to 10		
Minimum operation pressure:		2.5		
• monostable	bar	1		
• bistable	bar	-10 to +60		
Operating temperature range	°C	7.5	12	15
Nominal diameter	mm	250	657.14	971.43
Conductance C	Nl/min · bar	0.36	0.25	0.43
Critical ratio b	bar/bar	700	1800	3200
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	1100	2700	4600
Flow rate at 6 bar ΔP 1 bar	Nl/min	monostable on valve body		
Actuation response times at 6 Bar:				
• monostable	ms	12	24	35
• bistable	ms	20	30	45
Repositioning response times at 6 Bar:				
• monostable	ms	30	43	55
• bistable	ms	20	30	45
Manual				

### PNEUMATIC ACTUATION

Symbol	Code	Abbrev.	Weight [g]	Symbol	Code	Abbrev.	Weight [g]
	7051011100	IPV 55 PNS OO ISO 1	310		7051012100	IPV 55 PNS CC ISO 1	310
	7052011100	IPV 65 PNS OO ISO 2	705		7052012100	IPV 65 PNS CC ISO 2	705
	7056011100	IPV 75 PNS OO ISO 3	1175		7056012100	IPV 75 PNS CC ISO 3	1290
	7051011200	IPV 55 PNB OO ISO 1	310		7051012200	IPV 55 PNS OC ISO 1	310
	7052011200	IPV 65 PNB OO ISO 2	705		7052012200	IPV 65 PNS OC ISO 2	705
	7056011200	IPV 75 PNB OO ISO 3	1175		7056012200	IPV 75 PNS OC ISO 3	1290
	7051011300	IPV 55 PND OO ISO 1	310		7051012300	IPV 55 PNS PC ISO 1	310
	7052011300	IPV 65 PND OO ISO 2	705		7052012300	IPV 65 PNS PC ISO 2	705
	7056011300	IPV 75 PND OO ISO 3	1175		7056012300	IPV 75 PNS PC ISO 3	1290

## VALVES ISO 5599/1, SOLENOID/PNEUMATIC, SERIES ISV



TECHNICAL DATA		ISO 1	ISO 2	ISO 3
Operating pressure:	bar		2.5 to 10	
• monostable			1 to 10	
• bistable			Vacuum to 10	
• pilot-assisted			2.5	
Minimum pilot pressure	bar		-10 to +60	
Operating temperature range	°C		12	15
Nominal diameter	mm	7.5	12	15
Conductance C	Nl/min · bar	250	657.14	971.43
Critical ratio b	bar/bar	0.36	0.25	0.43
Flow rate at 6 bar ΔP 0.5 bar	Nl/min	700	1800	3200
Flow rate at 6 bar ΔP 1 bar	Nl/min	1100	2700	4600
TRA / TRR monostable at 6 bar	ms	24 / 50	39 / 60	50 / 120
TRA / TRR bistable at 6 bar	ms	20 / 20	25 / 25	35 / 35
Solenoid pilot			Standards CNOMO	
Manual			Bistable on solenoid pilot	
			Monostable on valve body	
Coils			30 mm side DIN 43650 Form A – ISO	
			22 mm side	
Maximum coil nut torque	Nm		1	

### MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]
	7051021100	ISV 55 SOS OO ISO 1	344
	7052021100	ISV 65 SOS OO ISO 2	715
	7056021100	ISV 75 SOS OO ISO 3	1207

Symbol	Code	Abbrev.	Weight [g]
	7051021400	ISV 55 SES OO ISO 1	344
	7052021400	ISV 65 SES OO ISO 2	715
	7056021400	ISV 75 SES OO ISO 3	1207

### BISTABLE 5/2 - MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]
	7051021200	ISV 55 SOB OO ISO 1	388
	7052021200	ISV 65 SOB OO ISO 2	740
	7056021200	ISV 75 SOB OO ISO 3	1230
	7051021300	ISV 55 SOD OO ISO 1	375
	7052021300	ISV 65 SOD OO ISO 2	710
	7056021300	ISV 75 SOD OO ISO 3	1230
	7051022100	ISV 56 SOS CC ISO 1	372
	7052022100	ISV 66 SOS CC ISO 2	720
	7056022100	ISV 76 SOS CC ISO 3	1355
	7051022200	ISV 56 SOS OC ISO 1	372
	7052022200	ISV 66 SOS OC ISO 2	720
	7056022200	ISV 76 SOS OC ISO 3	1355
	7051022300	ISV 56 SOS PC ISO 1	372
	7052022300	ISV 66 SOS PC ISO 2	720
	7056022300	ISV 76 SOS PC ISO 3	1355

Symbol	Code	Abbrev.	Weight [g]
	7051021500	ISV 55 SEB OO ISO 1	388
	7052021500	ISV 65 SEB OO ISO 2	740
	7056021500	ISV 75 SEB OO ISO 3	1230
	7051021600	ISV 55 SED OO ISO 1	375
	7052021600	ISV 65 SED OO ISO 2	710
	7056021600	ISV 75 SED OO ISO 3	1230
	7051022400	ISV 56 SES CC ISO 1	372
	7052022400	ISV 66 SES CC ISO 2	720
	7056022400	ISV 76 SES CC ISO 3	1355
	7051022500	ISV 56 SES OC ISO 1	372
	7052022500	ISV 66 SES OC ISO 2	720
	7056022500	ISV 76 SES OC ISO 3	1355
	7051022600	ISV 56 SES PC ISO 1	372
	7052022600	ISV 66 SES PC ISO 2	720
	7056022600	ISV 76 SES PC ISO 3	1355

## VALVES ISO 5599/1, PNEUMATIC, SERIES ISV WITH IN-LINE SOLENOID PILOT



LOOK ABOVE TABLE FOR TECHNICAL DATA

### MONOSTABLE 5/2 ISO 1

Symbol	Code	Abbrev.	Weight [g]
	7053021100	ISV 55 DOS OO	396
	7053021400	ISV 55 DES OO	396

### BISTABLE 5/2 ISO 1

Symbol	Code	Abbrev.	Weight [g]
	7053021200	ISV 55 DOB OO	450
	7053021500	ISV 55 DEB OO	450

### MONOSTABLE 5/3 ISO 1

Symbol	Code	Abbrev.	Weight [g]
	7053022100	ISV 56 DOS CC	517
	7053022200	ISV 56 DOS OC	516
	7053022300	ISV 56 DOS PC	516

Symbol	Code	Abbrev.	Weight [g]
	7053022400	ISV 56 DES CC	517
	7053022500	ISV 56 DES OC	516
	7053022600	ISV 56 DES PC	515



# VALVES ISO 5599/1, SOLENOID/PNEUMATIC, SERIES ISV WITH M12 CONNECTOR

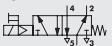
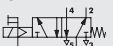
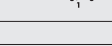
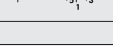


TECHNICAL DATA		ISO 1	ISO 2
Operating pressure:	bar		2.5 to 10 1 to 10 Vacuum to 10
• monostable			2.5
• bistable			-10 to +60
• pilot-assisted			
Minimum pilot pressure	bar		2.5
Operating temperature range	°C		-10 to +60
Nominal diameter	mm	7.5	12
Conductance C	NI/min · bar	250	657.14
Critical ratio b	bar/bar	0.36	0.25
Flow rate at 6 bar ΔP 0.5 bar	NI/min	700	1800
Flow rate at 6 bar ΔP 1 bar	NI/min	1100	2700
TRA / TRR monostable at 6 bar	ms	22 / 60	78 / 180
Solenoid pilot			With built-in coil
Manual			Monostable on solenoid pilot
			Monostable on valve body
Coil power	W		1.2
Voltage			24 VDC ±10%
Electrical connection			M12
Degree of protection			IP65 EN60529
Electrical protection			Transil

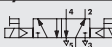
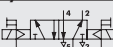
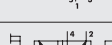
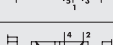
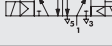
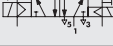
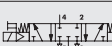
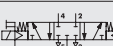
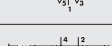
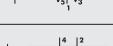
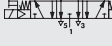
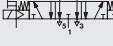
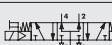
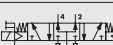

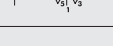
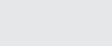
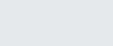
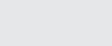
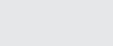
DISTRIBUTORS

VALVES ISO 5599/1, SERIES IPV-ISV

## MONOSTABLE 5/2

Symbol	Code	Abbrev.	Weight [g]	Symbol	Code	Abbrev.	Weight [g]
	7054021100	ISV 55 COS OO ISO 1	508		7054021400	ISV 55 CES OO ISO 1	508
	7055021100	ISV 65 COS OO ISO 2	901		7055021400	ISV 65 CES OO ISO 2	901

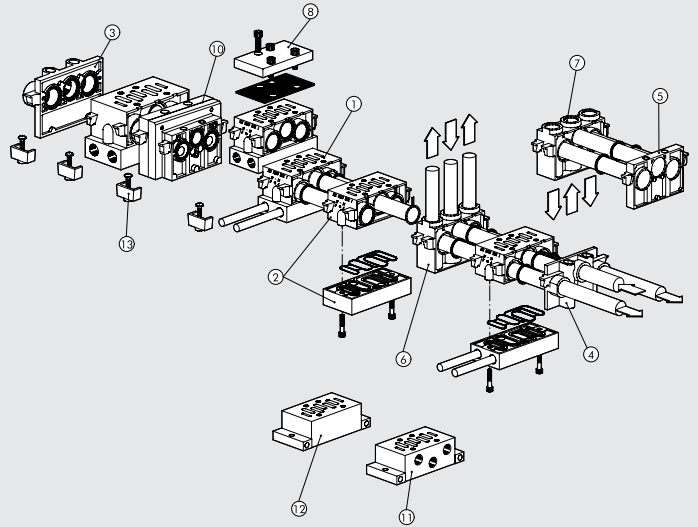
## BISTABLE 5/2 - MONOSTABLE 5/3

Symbol	Code	Abbrev.	Weight [g]	Symbol	Code	Abbrev.	Weight [g]
	7054021200	ISV 55 COB OO ISO 1	512		7054021500	ISV 55 CEB OO ISO 1	512
	7055021200	ISV 65 COB OO ISO 2	860		7055021500	ISV 65 CEB OO ISO 2	860
	7054021300	ISV 55 COD OO ISO 1	490		7054021600	ISV 55 CED OO ISO 1	490
	7055021300	ISV 65 COD OO ISO 2	860		7055021600	ISV 65 CED OO ISO 2	860
	7054022100	ISV 56 COS CC ISO 1	496		7054022400	ISV 56 CES CC ISO 1	496
	7055022100	ISV 66 COS CC ISO 2	868		7055022400	ISV 66 CES CC ISO 2	868
	7054022200	ISV 56 COS OC ISO 1	496		7054022500	ISV 56 CES OC ISO 1	496
	7055022200	ISV 66 COS OC ISO 2	868		7055022500	ISV 66 CES OC ISO 2	868
	7054022300	ISV 56 COS PC ISO 1	496		7054022600	ISV 56 CES PC ISO 1	496
	7055022300	ISV 66 COS PC ISO 2	868		7055022600	ISV 66 CES PC ISO 2	868



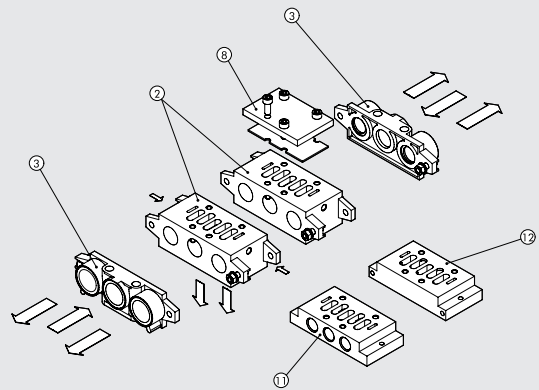
## BASES ISO 5599/1 FOR VALVES SERIES IPV-ISV SIZE 1 AND 2

Reference	Code ISO 1	Code ISO 2	Description
①	0228000150	0228001150	Manifold base - side ports
②	0228000155	0228001155	Manifold base with bottom ports
③	0228000200	0228001200	Input end plate
④	0228000201	0228001201	Additional input end plate
⑤	0228000210	0228001210	Blind end plate
⑥	0228000300	0228001300	Intermediate - top ports
⑦	0228000301	0228001301	Intermediate - back ports
⑧	0228000500	0228001500	Blanking plate
⑨	0228000400	0228001400	Intermediate diaphragm
⑩	0228000600	-	ISO 1/ISO 2 port adapter
⑪	0228000100	0228001100	Individual base - side ports
⑫	0228000110	0228001110	Base - bottom ports
⑬	0228000700	0228001700	Assembly kit



## BASES ISO 5599/1 FOR VALVES SERIES IPV-ISV SIZE ISO 3

Reference	Code ISO 3	Description
②	0228002155	Manifold base with bottom ports
③	0228002200	Input end plate
⑧	0228002500	Blanking plate
⑪	0228002100	Individual base - side ports
⑫	0228002110	Base - bottom ports



## SANDWICH REGULATORS FOR ISO 5599/1 BASES ISO 1-2



TECHNICAL DATA	ISO 1		ISO 2	
	Max upstream pressure	bar		13
Pressure range	bar		0 to 12	
Pressure gauge range	bar		0 to 12	
Flow rate at 6 bar ΔP 1 bar	Nl/min		400	
Operating temperature range	°C		-10 to +60	
Fixing screw on ISO 5599/1 base	M5 ant-extraction		M6 ant-extraction	
Installation	In any position			
Instructions for use	Downstream pressure must always be set to increasing values			

### SANDWICH REGULATOR FOR ISO 1 VALVES

Symbol	Code	Description	Weight [g]
	0228000804	Sandwich regulator 1 0 to 12 bar ISO 1	760
	0228000814*	Sandwich regulator 3 0 to 12 bar ISO 1	760

### SANDWICH REGULATOR FOR ISO 2 VALVES

Symbol	Code	Description	Weight [g]
	0228001804	Sandwich regulator 1 0 to 12 bar ISO 2	900
	0228001814*	Sandwich regulator 3 0 to 12 bar ISO 2	900

\* A pilot-assisted valve needs to be used since port 1 relieves pressure, it is not under pressure

\* A pilot-assisted valve needs to be used since port 1 relieves pressure, it is not under pressure

## VALVES ISO 5599/1 SERIES SAFE AIR®



### SINGLE VALVE ISO 5599/1 SERIES SAFE AIR®

TECHNICAL DATA	ISO 1	ISO 2	ISO 3
Fluid	Filtered unlubricated air (50µm); lubrication, if used, must be continuous		
Operation	5/2 monostable		
Operating pressure:	bar		
• non-assisted	from 2.5 to 10		
• pilot-assisted	from vacuum to 10		
Minimum pilot pressure	bar		
Operating temperature range	°C		
Nominal diameter	mm		
Conductance C	NL/min · bar		
Critical ratio b	bar/bar		
Flow rate at 6.3 bar Δp 0.5 bar	NL/min		
Flow rate at 6.3 bar Δp 1 bar	NL/min		
TRA/TRR at 6.3 bar	ms/ms		
Conductance C on relief	NL/min · bar		
Critical ratio b on relief	bar/bar		
Flow rate on free exhaust at 6.3 bar	NL/min		
Installation	any position		
Assembly	On single or manifold bases to ISO 5599/1 (*) to CNOMO		
Solenoid pilot	Monostable on solenoid pilot and valve body		
Manual actuator	ISO and UNI FD 22		
Recommended lubricant	30 mm side, ø 8 hole – EN175301-803 connection, type A		
Coils	22 mm side, ø 8 hole – EN175301-803 connection, type B		
	Certified EN 60204.1 and VDE 0580		
	Refer to the Accessories section for the electrical features page 94 (*)		
Class of protection	IP65 with coil and connector mounted		
Noise level	Max. 78 dBA with silenced relief		
Max coil ring nut torque	Nm		
CE marking	1		
ATEX category (only for versions with an ATEX sensor)	In accordance with Machinery Directive, Annex V (**)		
	⊕ II 3G Ex nA c IIC T4 Gc x -10°C<Ta<45°C		
	⊕ II 3D Ex tc IIIC T135°C IP65 Dc		
Safety function	Cuts off the power supply and relieves the air circuit connected to port 4		
Type of sensor used	Hall effect (refer to page 49 for sensor details)		
B10d	40 x 10 <sup>6</sup> cycles		
Category - ISO EN 13849	2		
DC	Low (80%)		
PL - ISO EN 13849	Suitable for use in safety circuits up to PL=c		

\* To avoid malfunctions, we recommend using Metal Work accessories

\*\* The declaration can be downloaded from [www.metalwork.it](http://www.metalwork.it)

**IMPORTANT:** Do not mount 2 or more SAFE AIR® valves in adjacent positions.

Any ferromagnetic masses must be at least 30 mm from the sensor.

Prevent magnetic fields from creating disturbance in the sensor area.

#### 5/2 MONOSTABLE

Symbol	Code	Abbrev.	Sensor	Weight [g]	Symbol	Code	Abbrev.	Sensor	Weight [g]
	7057021100	ISV 55 SOS OO 3F ISO 1	2.5 m 3 wires	380		7057021400	ISV 55 SES OO 3F ISO 1	2.5 m 3 wires	380
	7057121100	ISV 55 SOS OO M8 ISO 1	0.3 m M8	350		7057121400	ISV 55 SES OO M8 ISO 1	0.3 m M8	350
	7057221100	ISV 55 SOS OO AT ISO 1	2 m ATEX	370		7057221400	ISV 55 SES OO AT ISO 1	2 m ATEX	370
	7058021100	ISV 65 SOS OO 3F ISO 2	2.5 m 3 wires	750		7058021400	ISV 65 SES OO 3F ISO 2	2.5 m 3 wires	750
	7058121100	ISV 65 SOS OO M8 ISO 2	0.3 m M8	720		7058121400	ISV 65 SES OO M8 ISO 2	0.3 m M8	720
	7058221100	ISV 65 SOS OO AT ISO 2	2 m ATEX	740		7058221400	ISV 65 SES OO AT ISO 2	2 m ATEX	740
	7059021100	ISV 75 SOS OO 3F ISO 3	2.5 m 3 wires	1240		7059021400	ISV 75 SES OO 3F ISO 3	2.5 m 3 wires	1240
	7059121100	ISV 75 SOS OO M8 ISO 3	0.3 m M8	1210		7059121400	ISV 75 SES OO M8 ISO 3	0.3 m M8	1210
	7059221100	ISV 75 SOS OO AT ISO 3	2 m ATEX	1230		7059221400	ISV 75 SES OO AT ISO 3	2 m ATEX	1230



## DOUBLE VALVE ISO 5599/1 SERIES SAFE AIR®

TECHNICAL DATA	ISO 1	ISO 2	ISO 3
Fluid	Filtered unlubricated air (50µm); lubrication, if used, must be continuous		
Operation	double 5/2 monostable		
Operating pressure:	bar		
• non-assisted	from 2.5 to 10		
• pilot-assisted	from vacuum to 10		
Minimum pilot pressure	bar		
Operating temperature range	°C		
Conductance C	NL/min · bar		
Critical ratio b	bar/bar		
Flow rate at 6.3 bar Δp 0.5 bar	NL/min		
Flow rate at 6.3 bar Δp 1 bar	NL/min		
Conductance C on relief	NL/min · bar		
Critical ratio b on relief	bar/bar		
Flow rate on free exhaust at 6.3 bar	NL/min		
TRA/TRR at 6.3 bar	ms/ms		
Installation	any position to CNOMO		
Solenoid pilot	monostable on solenoid pilot and valve body		
Manual actuator	ISO and UNI FD 22		
Recommended lubricant	30 mm side, ø 8 hole – EN175301-803 connection, form A		
Coils	22 mm side, ø 8 hole – EN175301-803 connection, form B		
	Certified EN 60204.1 and VDE 0580		
	Refer to the Accessories section for electrical features page 94 (*)		
Class of protection	IP65 with coil and connector mounted		
Noise level	Max. 78 dBA with silenced relief		
CE marking	in accordance with Machinery Directive, Annexe V (**)		
ATEX category (only for versions with an ATEX sensor)	Ⓢ II 3G Ex nA c IIC T4 Gc x -10°C < Ta < 45°C Ⓢ II 3D Ex tc IIIC T135°C IP65 Dc		
Max coil ring nut torque	Nm		
Safety function	cuts off the power supply and relieves the air circuit connected to port 4		
Type of sensor used	Hall effect (refer to page 49 for sensor details)		
B10d	40x10 <sup>6</sup> cycles		
Category - ISO EN 13849	4		
DC	High (≥ 99 %)		
CCF	80		
PL - ISO EN 13849	Suitable for use in safety circuits up to PL=e		

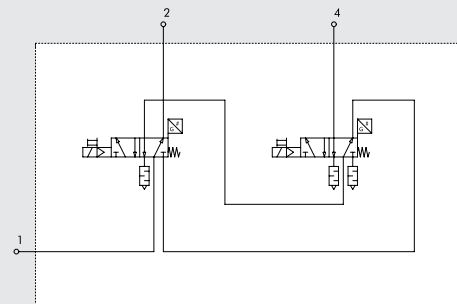
\* To avoid malfunctions, we recommend using Metal Work accessories

\*\* The declaration can be downloaded from [www.metalwork.it](http://www.metalwork.it)

**IMPORTANT:** Any ferromagnetic masses must be at least 30 mm from the sensor. Prevent magnetic fields from creating disturbance in the sensor area.

Code	Size	Abbrev.	Weight [g]
7057021110	ISO 1	ISV 55 SOS DD 3F	2100
7057121110	ISO 1	ISV 55 SOS DD M8	2100
7057221110	ISO 1	ISV 55 SOS DD AT	2100
7057021410	ISO 1	ISV 55 SES DD 3F	2100
7057121410	ISO 1	ISV 55 SES DD M8	2100
7057221410	ISO 1	ISV 55 SES DD AT	2100
7058021110	ISO 2	ISV 65 SOS DD 3F	4000
7058121110	ISO 2	ISV 65 SOS DD M8	4000
7058221110	ISO 2	ISV 65 SOS DD AT	4000
7058021410	ISO 2	ISV 65 SES DD 3F	4000
7058121410	ISO 2	ISV 65 SES DD M8	4000
7058221410	ISO 2	ISV 65 SES DD AT	4000
7059021110	ISO 3	ISV 75 SOS DD 3F	5300
7059121110	ISO 3	ISV 75 SOS DD M8	5300
7059221110	ISO 3	ISV 75 SOS DD AT	5300
7059021410	ISO 3	ISV 75 SES DD 3F	5300
7059121410	ISO 3	ISV 75 SES DD M8	5300
7059221410	ISO 3	ISV 75 SES DD AT	5300

### WIRING DIAGRAM



### SYNOPTIC, SIZES AND VERSIONS

ISV FAMILY		5 DIMENSIONS	5 FUNCTION	SO OPERATORS 14	S RESETTING 12	OO FURTHER DETAILS	3F SENSOR
ISV	ISO solenoid/pneumatic	5 ISO1 6 ISO2 7 ISO3	5 5/2	SO solenoid/pneumatic SE electric pilot-assisted	S mechanical springs	OO 5/2	3F 2.5 m 3 wires M8 0.3 m M8 AT 2 m ATEX

## COILS AND CONNECTORS L=15 mm , L=22 mm , L=30 mm

### COILS SIDE 22 mm

- Voltage tolerance: -10 to +15%
- Insulation class: F155
- Degree of protection: IP65 – EN60529 with connector
- Avoid prolonged exposure to the atmospheric agents.
- Maximum coil temperature at 100% use: 70°C at 20° ambient temperature
- According to ATEX 94/9 CE rule, group II, category 3 GD



### STANDARD

Code	Abbrev.	Nominal voltage	Absorption	
			Inrush	Holding
<b>COILS FOR PIV.I SOLENOID VALVES</b>				
W0215000051	Coil 22 Ø 8 5W-12VDC	12VDC	5W	5W
W0215000001	Coil 22 Ø 8 5W-24VDC	24VDC	5W	5W
W0215000011	Coil 22 Ø 8 5VA-24VAC	24V 50/60Hz	8VA	5VA
W0215000021	Coil 22 Ø 8 5VA-110VAC	110V 50/60Hz	8VA	5VA
W0215000031	Coil 22 Ø 8 5VA-220VAC	220V 50/60Hz	8VA	5VA

### COILS FOR SERIES 70 SOLENOID VALVES - ISO 5599/1

W0215000151	Coil 22 Ø 8 BA 2W-12VDC	12VDC	2W	2W
W0215000101	Coil 22 Ø 8 BA 2W-24VDC	24VDC	2W	2W
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC	24V 50/60Hz	5.3VA	3.5VA
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC	110V 50/60Hz	5.3VA	3.5VA
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC	220V 50/60Hz	5.3VA	3.5VA

### COILS FOR PIV.T SOLENOID VALVES, OPERATOR Ø 9

W0216000001	Coil 22 Ø 9 3.8W-24VDC	24VDC	3.8W	3.8W
W0216000011	Coil 22 Ø 9 6.5VA-24VAC	24V 50/60Hz	9VA	6.5VA
W0216000021	Coil 22 Ø 9 6.5VA-110VAC	110V 50/60Hz	9VA	6.5VA
W0216000031	Coil 22 Ø 9 6.5VA-220VAC	220V 50/60Hz	9VA	6.5VA

### "UL" AND "CSA" COILS 22 mm

### FOR SERIES 70 - NAMUR - ISO 5599/1 - CNOMO



Code	Abbrev.	Nominal voltage	Absorption	
			Inrush	Holding
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR	12VDC	2W	2W
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR	24VDC	2W	2W
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR	24V 50/60Hz	5.3VA	3.5VA
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR	110V 50/60Hz	5.3VA	3.5VA
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR	220V 50/60Hz	5.3VA	3.5VA

### COILS SIDE 30 mm FOR PIV.B SOLENOID VALVES

- Voltage tolerance: -10 to +15%
- Insulation class: M180
- Degree of protection: IP65 – EN60529 with connector
- Avoid prolonged exposure to the atmospheric agents
- According to ATEX 94/9 CE rule, group II, category 3 GD



Code	Abbrev.	Nominal voltage	Power absorption (average power input)	
			Inrush	Holding
W0216001001	Coil 30 Ø13 10W-24VDC	24Vcc	10W	
W0216001011	Coil 30 Ø13 13VA-24VAC	24V 50/60Hz	13VA	
W0216001021	Coil 30 Ø13 13VA-110VAC	110V 50/60Hz	13VA	
W0216001031	Coil 30 Ø13 13VA-220VAC	220V 50/60Hz	13VA	

### COILS, SIDE 30 mm FOR SOLENOID VALVES ISO 5599/1 - CNOMO

- Electric contact DIN 43650 Shape A
- Voltage tolerance: -10% to +10%
- Insulation class: F155
- Degree of protection: IP65 EN 60529 with connector
- Solenoid rating: 100% ED
- Maximum coil temperature at 100% ED use 70°C at 20° ambient temperature

Code	Abbrev.	Nominal voltage	Absorption	
			Inrush	Holding
W0210010100	Coil 30 Ø8 4W-24VDC	24Vcc	5W	4W
W0210011100	Coil 30 Ø8 4VA-24VAC	24V 50/60Hz	10VA	4VA
W0210012100	Coil 30 Ø8 4VA-110VAC	110V 50/60Hz	10VA	4VA
W0210013100	Coil 30 Ø8 4VA-220VAC	220V 50/60Hz	10VA	4VA

### KIT COIL EEXM FOR SERIES 70 - ISO 5599/1 - ATEX

- According to ATEX 94/9 CE rule,  
 Ⓢ II 2G Ex mb IIC T4/T5 Gb  
 Ⓢ II 2D Ex tb IIIC T130/T95 °C IP66 Db



Code	Description
0227606913	Kit for coil 30 24VDC EEXMT5 cable 3 m
0227606915	Kit for coil 30 24VDC EEXMT5 cable 5 m
0227608013	Kit for coil 30 24VAC EEXMT5 cable 3 m
0227608015	Kit for coil 30 24VAC EEXMT5 cable 5 m
0227608023	Kit for coil 30 110VAC EEXMT5 cable 3 m
0227608025	Kit for coil 30 110VAC EEXMT5 cable 5 m
0227608033	Kit for coil 30 230VAC EEXMT5 cable 3 m
0227608035	Kit for coil 30 230VAC EEXMT5 cable 5 m

### KIT COILS SIDE 22 IP65 FOR SERIES 70 - ISO 5599/1

Improved IP65 protection, even after prolonged exposure to atmospheric agents.  
 Applicable to valves with a technopolymer control.



Code	Description
0222100100	Kit for coils 22 - IP65

### CONNECTOR 15 mm SHAPE C TO DIN 43650 FOR SOLENOID VALVES MACH 16 - MACH 18



Code	Description
W0970501021	Connector 15 mm shape C DIN 43650
W0970501022	Connector 15 mm shape C DIN 43650 LED 24V
W0970501025	Connector 15 mm shape C DIN 43650 LED+VDR 24V

### COIL CONNECTORS, SIDE 22 mm

### FOR SOLENOID VALVES PIV.I - PIV.T - SERIES 70 - ISO 5599/1

Code	Type	Colour	Ø Cable
W0970510011	Standard	22 mm	Black PG9
W0970510012	LED 24V	22 mm	Transparent PG9
W0970510013	LED 110V	22 mm	Transparent PG9
W0970510014	LED 220V	22 mm	Transparent PG9
W0970510015	LED + VDR 24V	22 mm	Transparent PG9
W0970510016	LED + VDR 110V	22 mm	Transparent PG9
W0970510017	LED + VDR 220V	22 mm	Transparent PG9
W0970510070	Atex II 2 GD	22 mm	Black PG9

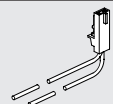
### CONNECTORS, SIDE 30 mm

### FOR SOLENOID VALVES PIV.B - ISO 5599/1 - CNOMO

Code	Type	Colour	Ø Cable
W0970520033	Standard	30 mm	Black PG11
W0970520034	LED 24V	30 mm	Transparent PG11
W0970520035	LED 110V	30 mm	Transparent PG11
W0970520036	LED 220V	30 mm	Transparent PG11
W0970520037	LED + VDR 24V	30 mm	Transparent PG11
W0970520038	LED + VDR 110V	30 mm	Transparent PG11
W0970520039	LED + VDR 220V	30 mm	Transparent PG11

### PLUG-IN CONNECTOR

### FOR SOLENOID VALVES MINIMACH - MACH 11



Code	Description
W0970512000	MACH 11 PLUG-IN connector L = 300

## SPARE PARTS

### PLUG-IN PILOT

### FOR SOLENOID VALVES MINIMACH - MACH 11



Code	Description
722113541100	PLT-10 24 VDC 0.9W with led manual

### NEW PILOT

### FOR SOLENOID VALVES - MACH 16 - MACH 18



Code	Description	
W4015301000	In-line pilot M16 24VDC	(OLD W4015101000)
W4015301010	In-line pilot M16 24VAC 50/60 HZ	(OLD W4015101010)
W4015301020	In-line pilot M16 110VAC 50/60 HZ	(OLD W4015101020)
W4015301030	In-line pilot M16 220VAC 50/60 HZ	(OLD W4015101030)
W4015401000	In-line pilot multiple connection 24 VDC	(OLD W4015201000)
W4015401010	In-line pilot multiple connection 24 VAC	(OLD W4015201010)

N.B.: if the pilot to be replaced bears the writing **CE**, you have to order among the NEW pilots, otherwise order among the OLD pilots.

## HDM + MULTI-POLE CONNECTION



TECHNICAL DATA						
Valve port connections		Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or Ø 12 mm automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port				
Connection on the end-plate for the supply of pilots		Automatic fitting Ø 4 mm				
Maximum number of pilots		16				
Maximum number of valves		16 ( same as the max. no. of pilots )				
Operating temperature range	°C	-10 to +60				
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous				
Pressure range	bar	X (pilot supply)		1-11 (valve supply)		
	Terminal 1-1	3 to 7		vacuum at 10		
	Terminal 1			3 to 7		
Voltage range		24 VDC ± 10%				
Power	W	0.9				
Control		PNP o NPN				
Insulation class		F155				
Degree of protection		IP65 (with conveyed exhaust)				
Solenoid rating		100% ED				
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	11.5 mm Ø 4	11.5 mm Ø 6	14 mm Ø 8	23 mm Ø 8	23 mm Ø 10
	version 5/2 and 3/2	200	500	650	1000	1200
	version 5/3	200	300	300	500	500
TRA/TRR 2x3/2 monostable at 6 bar	ms		8 / 45			8 / 60
TRA/TRR 5/2 monostable at 6 bar	ms		8 / 33			9 / 60
TRA/TRR 5/2 bistable at 6 bar	ms		20 / 20			8 / 8
TRA/TRR 5/3 cc monostable at 6 bar	ms		20 / 20			15 / 15
Note on use		Insert the pipes in the fittings, before passing air through the valves, otherwise the basket may be pulled out of its seat by the flow of air. Refer to page 91 for valves, intermediates elements and common accessories.				

### SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	2 INPUT END-PLATE	8 ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 4 - 1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 pipe Ø 10 3 End-plate 1 pipe Ø 10 25 End-plate 1-11 pipe Ø 12	8 D-Sub 25 wire	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 8S Cartridge 8 - 23 mm 10 Cartridge 10	14 IP65 25-wire shell 16 n° 2 brackets for DIN bar

\* Uses a single PIN (like the V) and occupies 2 signals.

#### END-PLATE 1-11-25D

Code	Description	Weight [g]
0227301200	End-plate HDM 1-11-25D Ø 10	370
0227301220	End-plate HDM 1-11-25D Ø 12	370

This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

#### END-PLATE 1-25D - PIPE Ø 10

Code	Description	Weight [g]
0227301201	End-plate HDM 1-25D Ø 10	370

## ACCESSORIES

#### 45° CONNECTOR KIT, 25 WIRES IP65

Code	Description	Weight [g]
0226180107	45° connector kit, 25 wires IP 65	65

#### IDENTIFICATION PLATE KIT

Code	Description
0226107000	Identification plate kit

#### PRE-WIRED 45° CONNECTOR KIT, 25 WIRES IP65

Code	Description	Weight [g]
0226960100	Connector IP 65 + 25-wire 45° cable L = 1 m	190
0226960250	Connector IP 65 + 25-wire 45° cable L = 2.5 m	390
0226960500	Connector IP 65 + 25-wire 45° cable L = 5 m	740

#### CABLES

Code	Description	Weight [g]
0226107201	10-wire cable	86
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Specify the number of metres desired.



## HDM + AS-Interface



### TECHNICAL DATA

Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port
Maximum number of pilots	Terminal with 1 node = 4 / terminal with 2 node = 8
Maximum number of valves	Terminal with 1 node = 4 ( same as the max. no. of pilots ) / terminal with 2 node = 8 (same as the max. no. of pilots)
Notes	If you use valves 8S type or 10 exploiting their low capacity it is necessary that the feeding pressure is at least 6 bar (to avoid the pressure to decrease too much on the pilots). *with right-end-plate 1-11

For valves technical data see HDM+multi-pole connection. Refer to page 95 for valves, intermediates elements and common accessories.

### SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	3 INPUT END-PLATE	A S - 4 ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	3 End-plate 1	Version with standard address <b>AS-4</b> 1 node, 4 out, yellow cable <b>AS-8</b> 2 nodes, 8 out, yellow cable <b>AO-4</b> 1 node, 4 out e 4 in M8, yellow cable <b>AP-4</b> 1 node, 4 out e 4 in M12, yellow cable <b>AZ-4</b> 1 node, 4 out, yellow cable and black cable <b>AZ-8</b> 2 nodes, 8 out, yellow cable and black cable <b>AE-4</b> 1 node, 4 out e 4 in M8, yellow cable and black cable <b>AE-8</b> 2 nodes, 8 out e 8 in M8, yellow cable and black cable	<b>M</b> Monostable manual control <b>B</b> Bistable manual control	<b>I</b> n° 2 3/2 NC <b>W</b> n° 2 3/2 NO <b>L</b> 3/2 NO + 3/2 NC <b>V</b> 5/2 monostable <b>K</b> 5/2 bistable <b>O</b> 5/3 monostable <b>*F</b> 5/2 monostable <b>4</b> right-end-plate 1-11 pipe Ø12 <b>5</b> blind end-plate <b>6</b> Passing-intermede <b>7</b> Blind intermediate <b>20</b> Exhaust section <b>4</b> Cartridge 4 <b>6</b> Cartridge 6 <b>8</b> Cartridge 8 - 14 mm <b>8S</b> Cartridge 8 - 23 mm <b>10</b> Cartridge 10	<b>16</b> n° 2 brackets for DIN bar

\* Uses a single PIN (like the V) and occupies 2 signals

#### END-PLATE 1 AS-4, AS-8

Code	Description	Weight [g]
0227301202	End-plate HDM 1 AS-4 1 node, 4 Out, yellow cable	465
0227301208	End-plate HDM 1 AS-8 2 nodes, 8 Out, yellow cable	454

#### END-PLATE 1 AP-4, M12

Code	Description	Weight [g]
0227301212	End-plate HDM 1 AP-4 1 node, 4 Out and 4 In M12, yellow cable	756

#### END-PLATE 1 AE-8, M8

Code	Description	Weight [g]
0227301216	End-plate HDM 1 AE-8 2 nodes, 8 Out and 8 In M8, yellow cable and black cable	773

#### END-PLATE 1 AO-4, M8

Code	Description	Weight [g]
0227301218	End-plate HDM 1 AO-4 1 node, 4 Out and 4 In M8, yellow cable	759

#### END-PLATE 1 AE-4, M8

Code	Description	Weight [g]
0227301214	End-plate HDM 1 AE-4 1 node, 4 Out and 4 In M8, yellow cable and black cable	761

#### END-PLATE 1 AZ-4, AZ-8

Code	Description	Weight [g]
0227301204	End-plate HDM 1 AZ-4 1 node, 4 Out, yellow cable and black cable	467
0227301210	End-plate HDM 1 AZ-8 2 nodes, 8 Out, yellow cable and black cable	456

## ACCESSORIES

#### AS-interface ADDRESS CONNECTOR KIT

Code	Description
0226950150	AS-interface address connector cable L = 1 m

#### M8 - M12 PLUG

Code	Description
0240009039	Plug M8
0240009040	Plug M12

#### AS-interface CONNECTOR KIT

Code	Description
0226950151	AS-interface connector kit

## HDM + PROFIBUS-DP



TECHNICAL DATA	
Valve port connections	Ø 4, 6, 8, 10 mm automatic fitting for ports 2 and 4 / power supply port for Ø 10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port
Maximum number of pilots	16
Maximum number of valves	16 (same as the max. no. of pilots)
Voltage range	24 VDC ±10% (slave protected against overload and reverse polarity)
Degree of protection	IP65 (with conveyed exhaust, and that - in case of no use - the BUS OUT connector gets plugged)
Notes	*with right-end-plate 1-11
<b>Profibus DP module for HDM valves</b>	
Protection	Outputs protected against overloads and shortcircuits
Max input power (all valves ON)	~500 mA
Addressing	By rotary selectors
Highest settable address number	99
Default address	3
Peripheral defect diagnosis	Local LED indicator and relay to Master
Defects reported	Output shortcircuit or overload. Auxiliary power supply failure.
Module status in the event of peripheral defect	The "peripheral defect" bit is active and accessible at the master station.
Data bit value	0 = not enabled
Output status in the absence of communication	1 = enabled Disabled
For valves technical data see HDM+multi-pole connection. Refer to page 95 for valves, intermediates elements and common accessories.	

### SYNOPTIC, SIZES AND VERSIONS

H D M	2	P	M	16 - W 8 - W 6 - O 4 - L 8 - 5	1 6
VALVE	INPUT END-PLATE	ELECTRICAL BASE	MANUAL TYPE	TYPE OF VALVE	FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	P profibus-DP	M Monostable manual control B Bistable manual control	1 n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

\* Uses a single PIN (like the V) and occupies 2 signals.

#### END-PLATE 1-11 PROFIBUS-DP

Code	Description	Weight [g]
0227301231	End-plate HDM 1-11 PROFIBUS	730

#### END-PLATE 1 PROFIBUS-DP

Code	Description	Weight [g]
0227301230	End-plate HDM 1 PROFIBUS	730

## ACCESSORIES

#### M12 MALE CONNECTOR OUT-BUS

Code	Description
0240009035	Male connector B coding

#### M8 CONNECTOR FOR POWER SUPPLY

Code	Description
0240009037	M8 connector for power supply wire 5 m

#### M12 FEMALE CONNECTOR IN-BUS

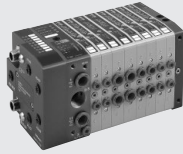
Code	Description
0240009036	M12 female connector B coding

#### M8 - M12 PLUG

Code	Description
0240009039	Plug M8
0240009040	Plug M12



## HDM + CANopen



TECHNICAL DATA	
Valve port connections	Ø 4, 6, 8, 10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port
Maximum number of pilots	16
Maximum number of valves	16 (same as the max. no. of pilots)
Voltage range	24 VDC ±10% (slave protected against overload and reverse polarity)
Degree of protection	IP65 (with conveyed exhausts and with not used connectors plugged)
Notes	* with right-end-plate 1-11
<b>CANopen module for HDM valves</b>	
Protection	Outputs protected against overloads and shortcircuits
Max input power (all valves ON)	~800 mA
Addressing	By DIP SWITCH
Highest settable address number	127
Default address	1
Peripheral defect diagnosis	Local LED indicator and relay to Master
Defects reported	Output shortcircuit or overload. Auxiliary power supply failure.
Module status in the event of peripheral defect	CANopen communication active. The "peripheral defect" bit is active and accessible at the master station.
Data bit value	0 = not enabled 1 = enabled
Output status in the absence of communication	Disabled
<b>INPUT module for HDM valves</b>	
Sensor supply voltage	24 VDC ±10% (depending on the supply of the CANopen module)
Max sensor power (distributed over eight connectors) mA	40
Type of input	PNP for sensor 2-3 wires according to EN 60947-5-2
Protection	Protected inputs against overload and short-circuit
Active INPUT signalling	One LED for each INPUT
<b>For valves technical data see HDM+multi-pole connection. Refer to page 95 for valves, intermediates elements and common accessories.</b>	

### SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	2 INPUT END-PLATE	CAN O ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	<b>CAN O</b> CANopen 16 OUTPUT <b>CAN I/O</b> CANopen 8 INPUT e 16 OUTPUT	<b>M</b> Monostable manual control <b>B</b> Bistable manual control	<b>I</b> n° 2 3/2 NC <b>W</b> n° 2 3/2 NO <b>L</b> 3/2 NO + 3/2 NC <b>V</b> 5/2 monostable <b>K</b> 5/2 bistable <b>O</b> 5/3 monostable <b>*F</b> 5/2 monostable <b>4</b> right-end-plate 1-11 pipe Ø12 <b>5</b> blind end-plate <b>6</b> Passing-intermediate <b>7</b> Blind intermediate <b>20</b> Exhaust section <b>4</b> Cartridge 4 <b>6</b> Cartridge 6 <b>8</b> Cartridge 8 - 14 mm <b>8S</b> Cartridge 8 - 23 mm <b>10</b> Cartridge 10	<b>16</b> n° 2 brackets for DIN bar

\* Uses a single PIN (like the V) and occupies 2 signals.

#### END-PLATE 1-11 CANopen O

Code	Description	Weight [g]
0227301251	End-plate 1-11 HDM CANopen OUTPUT Handles 16 OUTPUTS (solenoid pilots)	745

#### END-PLATE 1-11 CANopen I/O

Code	Description	Weight [g]
0227301250	End-plate 1-11 HDM CANopen IN-OUT Handles 16 OUTPUTS (solenoid pilots)	734

#### END-PLATE 1 CANopen O

Code	Description	Weight [g]
0227301253	End-plate 1 HDM CANopen OUTPUT Handles 16 OUTPUTS (solenoid pilots)	746

#### END-PLATE 1 CANopen I/O

Code	Description	Weight [g]
0227301252	End-plate 1 HDM CANopen IN-OUT Handles 16 OUTPUTS (solenoid pilots)	735

## ACCESSORIES FOR HDM+CANopen

### STRAIGHT CONNECTOR FOR CANopen POWER SUPPLY

Code	Description
W0970513001	Acc. 5-pin M12x1 straight connector

### FEMALE CONNECTOR FOR CANopen BUS-IN

Code	Description
0240009055	M12 female connector, A coding

### STRAIGHT CONNECTOR WITHOUT CABLE FOR CANopen INPUT

Code	Description
0240009021	Straight fitting without cable

### Y-DISTRIBUTOR WITH CABLE AND M12 STRAIGHT CONNECTORS FOR CANopen INPUT

Code	Description
0240009031	Y-Distributor cable 0.6 m
0240009032	Y-Distributor cable 1.5 m

### STRAIGHT CONNECTOR WITH CANopen POWER CABLE

Code	Description
W0970513002	Acc. 5-pin M12x1 straight connector with wire L = 5 m

### MALE CONNECTOR FOR CANopen BUS-OUT

Code	Description
0240009038	Male connector Bus A coding

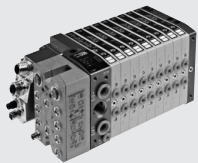
### STRAIGHT CONNECTOR WITH CABLE FOR CANopen INPUT

Code	Description
0240009002	Straight, with 1.5 m cable
0240009003	Straight, with 5 m cable

### M12 PLUG FOR BUS OUT E INPUT CANopen

Code	Description
0240009002	Plug M12

## HDM + B&R



### IP20 7XV--50-11 SMART CONNECTOR

It is a plug connector with IP20 protection that contains the X system electronics. It can be connected with HDM islands, using the special input end-plate, type 1, code 0227301207 or the special input end-plate type 1-11, code 0227301206.



### IP67 7XV--50-51 SMART CONNECTOR

It is a plug connector with IP67 protection, that contains the X system electronics. It can be connected with HDM islands, using the special input end-plate type 1, code 0227301207, or the special input end-plate, type 1-11 code 0227301206.

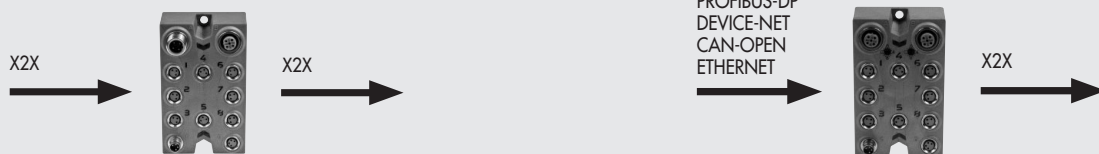


### X67 1/O SYSTEM MODULES

These are modules with IP67 protection, connected to the X system, for handling inputs and outputs. It is interesting to note that their size is such that they can be fixed directly to the HDM input end-plate type 1-11, code 0227301206 (N.B. NOT to be fixed to the HDM end-plate type 1, code 0227301207).

### X67 BUS CONTROLLER MODULES

These are modules with protection IP67, receiving a signal according to one of the DP Profibus, CAN open, Device Net, Ethernet Powerlink protocols (the module code differs obviously according to the protocol being controlled). The output signal is according to the X-system. These are gateways converting the signals of a field bus into an X-system. These modules control the inputs and/or outputs via the M8 connectors provided. They can be fixed directly to the HDM input end-plate type 1-11, code 0227301206 (N.B. NOT to be fixed to the HDM end-plate, type 1, code 0227301207).



### KEY TO CODES

H D M VALVE	2 INPUT END-PLATE	B & R ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	B&R Fit for B&R	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 Right-end-plate 1-11 pipe Ø12 5 Blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 8S Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

\* Uses a single PIN (like the V) and occupies 2 signals.

### HDM 1-11 END-PLATE FOR B&R

Code	Description	Weight [g]
0227301206	HDM 1-11 end-plate kit for B&R	340

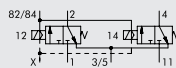

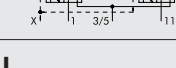
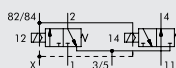
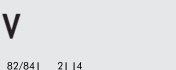
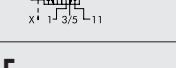
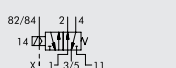
### HDM 1 END-PLATE FOR B&R

Code	Description	Weight [g]
0227301207	HDM 1 end-plate kit for B&R	380

## HDM - VALVES, INTERMEDIATES ELEMENTS AND ACCESSORIES



### VALVES HDM

Symbol	Ø	Code	Manual control	Weight [g]
	4	707103053		130
	6	707203053		130
	8	707303053	final 0 monostable manual	140
	8S	707703053	final 1 bistable manual	260
	10	707803053		250
	4	707103063		130
	6	707203063		130
	8	707303063	final 0 monostable manual	140
	8S	707703063	final 1 bistable manual	260
	10	707803063		250
	4	707103073		130
	6	707203073		130
	8	707303073	final 0 monostable manual	140
	8S	707703073	final 1 bistable manual	260
	10	707803073		250
	4	707103013		115
	6	707203013		115
	8	707303013	final 0 monostable manual	130
	8S	707703013	final 1 bistable manual	241
	10	707803013		231
	4	707103053		115
	6	707203053		115
	8	707303053	final 2 monostable manual	130
	8S	707703053	final 3 bistable manual	241
	10	707803053		231
	4	707103011		130
	6	707203011		130
	8	707303011	final 0 monostable manual	140
	8S	707703011	final 1 bistable manual	253
	10	707803011		243
	4	707103021		130
	6	707203021		130
	8	707303021	final 0 monostable manual	140
	8S	707703021	final 1 bistable manual	262
	10	707803021		252

### INTERMEDIATE THROUGH

Code	Description	Weight [g]
0227301301	Intermediate through HDM	120

### INTERMEDIATE BLIND

Code	Description	Weight [g]
0227301302	Intermediate blind HDM	117

### INTERMEDIATE EXHAUST SWITCH

Code	Description	Weight [g]
0227301303	Intermediate exhaust switch HDM	125

### RIGHT-END-PLATE 1-11 PIPE Ø 12

Code	Description	Weight [g]
0227301221	Rigth-end-plate HDM 1-11 Ø 12	630

### BLIND END-PLATE

Code	Description	Weight [g]
0227301500	Blind end-plate HDM	230

## ACCESSORIES

### CONNECTION BRACKETS ON DIN BAR

Code	Description	Weight [g]
0227301600	Connection brackets on DIN bar HDM/CM	30

### SILENCER FOR FITTING, Ø 8

Code	Description	Weight [g]
W0970530084	Silencer for fitting, Ø 8	8

At the 3/5-exhaust port of the intermediate and of the intermediate exhaust switch

### R17 - PIPE RELEASE SPANNER

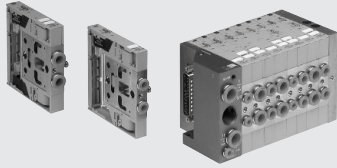
Code	Rif.	Ø Tube
2L17001	RL17	from 3 to 10
2017001	R17	from 4 to 14

## SPARE PARTS

### GRUB SCREW KIT

Code	Description
0227301800	Grub screw for Multimach HDM/CM

### MULTIMACH



TECHNICAL DATA		
Valve port connections	Ø 4, 6, 8 mm automatic fitting for ports 2 and 4 / power supply port for Ø 8 or Ø 10 automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port	
Connection on the end-plate for the supply of pilots	Automatic fitting Ø 4	
Operating temperature range	°C -10 to +60	
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous	
Flow rate at 6 bar ΔP 1bar	Nl/min	11 mm Ø 4: 200      11 mm Ø 6: 500      14 mm Ø 8: 700
Voltage range	24 VDC ±10%	
Power	W 1.2	
Insulation class	F155	
Degree of protection	IP51	
Solenoid rating	100% ED	
Pressure range	X (pilot supply) 3 to 7 max	1-11 (valve supply) vacuum at 10 bar
Terminal 1-11	bar	
Terminal 1	bar	3 to 7
Terminal 1 reduced	bar	3 to 7
TRA/TRR 2x3/2 monostable at 6 bar	ms	8 / 45
TRA/TRR 5/2 monostable at 6 bar	ms	8 / 33
TRA/TRR 5/2 bistable at 6 bar	ms	20 / 20
TRA/TRR 5/3 cc monostable at 6 bar	ms	20 / 20
Note on use	Insert the pipes in the fittings, before passing air through the valves, otherwise the basket may be pulled out of its seat by the flow of air.	

### SYNOPTIC, SIZES AND VERSIONS

M 5 1 VALVE	2 INPUT END-PLATE	8 ELECTRICAL BASE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 2 - 1 4 FURTHER DETAILS
Multimach IP51	2 End-plate 1-11 3 End-plate 1 4 Reduced End-plate 1	8 Axial 25-wire connector base 9 Axial 9-wire connector base 10 25-wire rear connector base 11 9-wire rear connector base	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable 5 Blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8	12 9-wire connector 14 25-wire connector 16 Brackets for DIN bar

#### VALVE

Symbol	Code	Abbrev.	Manual control	Weight [g]
	7068030532	NSV F8 SES NC	monostable	118
	7069030532	NSV G8 SES NC	monostable	110
	7070030532	NSV H8 SES NC	monostable	124
	7068030632	NSV F8 SES NO	monostable	118
	7069030632	NSV G8 SES NO	monostable	110
	7070030632	NSV H8 SES NO	monostable	124
	7068030732	NSV F8 SES 00	monostable	118
	7069030732	NSV G8 SES 00	monostable	110
	7070030732	NSV H8 SES 00	monostable	124
	7068030132	NSV F5 SES 00	monostable	100
	7069030132	NSV G5 SES 00	monostable	90
	7070030132	NSV H5 SES 00	monostable	105
	7068030112	NSV F5 SEB 00	monostable	114
	7069030112	NSV G5 SEB 00	monostable	107
	7070030112	NSV H5 SEB 00	monostable	120
	7068030212	NSV F6 SES CC	monostable	115
	7069030212	NSV G6 SES CC	monostable	108
	7070030212	NSV H6 SES CC	monostable	121

#### END-PLATE 1-11

Code	Description	Weight [g]
0227300200	End-plate kit 1-11	223

This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply

#### END-PLATE 1

Code	Description	Weight [g]
0227300201	End-plate kit 1	224

#### REDUCED END-PLATE 1

Code	Description	Weight [g]
0227300300	Reduced end-plate kit 1	148

#### BLIND END-PLATE

Code	Description	Weight [g]
0227300500	Blind end-plate	168

#### INTERMEDIATE THROUGH

Code	Description	Weight [g]
0227300301	Intermediate through	92

#### INTERMEDIATE BLIND

Code	Description	Weight [g]
0227300302	Intermediate blind	89

#### INTERMEDIATE EXHAUST SWITCH

Code	Description	Weight [g]
0227300303	Intermediate exhaust switch	95

#### AXIAL CONNECTOR BASE, 25 WIRES

Code	Description	Weight [g]
0226180001	Axial connector base kit, 25 wires	54

#### AXIAL CONNECTOR BASE, 9 WIRES

Code	Description	Weight [g]
0226180002	Axial connector base kit, 9 wires	51

#### REAR CONNECTOR BASE, 25 WIRES

Code	Description	Weight [g]
0226180003	Rear connector base kit, 25 wires	73

#### REAR CONNECTOR BASE, 9 WIRES

Code	Description	Weight [g]
0226180004	Rear connector base kit, 9 wires	77

#### STRAIGHT AND 90° CONNECTOR KIT, 9 WIRES

Code	Description	Weight [g]
0226180102	Straight and 90° connector kit, 9 wires	31

#### STRAIGHT AND 90° CONNECTOR KIT, 25 WIRES

Code	Description	Weight [g]
0226180101	Straight and 90° connector kit, 25 wires	48

#### CONNECTION BRACKETS ON THE BAR OMEGA (DIN EN 50022)

Code	Description	Weight [g]
0227300600	Connection brackets on DIN bar	8

#### CONNECTOR KIT + WIRE

Code	Description	Weight [g]
0226180399	Connector kit + wire 1-6*	3
0226180400	Connector kit + wire 7-12**	4
0226180401	Connector kit + wire 13-30***	5

\* For valve connection from 1st to 6th position counting from the connector

\*\* For valve connection from 7th to 12th position, counting from the connector

\*\*\* For valve connection from 13th to 30th position, counting from the connector

#### SILENCER FOR FITTING, Ø 8

Code	Description	Weight [g]
W0970530084	Silencer for fitting, Ø 8	15

At the 3/5-exhaust port of the reduced end-plate 1, and of the intermediate through, or intermediate exhaust switch

#### STRAIGHT PRE-WIRED CONNECTOR KIT

Code	Description	Weight [g]
0226900100	Connector + 9-wire axial cable L = 1 m	90
0226900250	Connector + 9-wire axial cable L = 2.5 m	220
0226900500	Connector + 9-wire axial cable L = 5 m	434
0226920100	Connector + 25-wire axial cable L = 1 m	132
0226920250	Connector + 25-wire axial cable L = 2.5 m	320
0226920500	Connector + 25-wire axial cable L = 5 m	636

#### MALE CONNECTOR KIT + CONTACTS + COMMON TERMINAL

Code	Description
0226180201	Male connector kit - 25 pins
0226180202	Male connector kit - 9 pins

#### GRUB SCREW

Code	Description
0227300800	Grub screw for Multimach

Comes in 10-pc. pack

#### CABLES

Cod.	Description	Weight [g]
0226107201	10-wire cable	86
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Specify the number of metres desired

#### PRE-WIRED 90° CONNECTOR

Code	Description	Weight [g]
0226910100	Connector + 9-wire 90° cable L = 1 m	90
0226910250	Connector + 9-wire 90° cable L = 2.5 m	220
0226910500	Connector + 9-wire 90° cable L = 5 m	434
0226930100	Connector + 25-wire 90° cable L = 1 m	132
0226930250	Connector + 25-wire 90° cable L = 2.5 m	320
0226930500	Connector + 25-wire 90° cable L = 5 m	636

#### IDENTIFICATION PLATE KIT

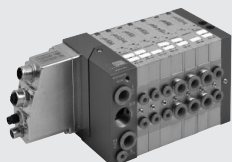
Code	Description
0226107000	Identification plate kit

Comes in 10-pc. packs

#### R17 - PIPE RELEASE SPANNER

Code	Description	Ø Tube
2L17001	RL17	from Ø 3 to Ø 10

## MULTIMACH + B&R



#### MULTIMACH CONNECTOR SUPPORT FOR B&R

Code	Description	Weight [g]
0226180005	25-pin connector support kit for B&R	140

## CM CLEVER MULTIMACH



TECHNICAL DATA	
Valve port connections	Ø 4, 6, 8 mm automatic fitting for ports 2 and 4 / power supply port for Ø 10 automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port
Connection on the end-plate 1-11 for the supply of pilots	Automatic fitting Ø 4 mm
Maximum number of pilots	32
Maximum number of valves	32 (same as the max. no. of pilots)
Operating temperature range	-10 to +60 °C
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous
Flow rate at 6 bar ΔP 1bar	11 mm Ø 4 = 200 NI/min
Pressure range	X (pilot supply)
	Terminal 1-11
Voltage range	Terminal 1
	3 to 7 bar
Power for each pilot	24 VDC ±10% (slave protected against overload and reverse polarity)
Solenoid Pilot Insulation class	0.9
Degree of protection	F155
DC input current without valve modules	IP65 (with conveyed exhaust, and that - in case of no use)
Max input current with all valves ON	Nominal Icc 30 mA - Instantaneous Icc (+ ≤ 25 ms) 650 mA
Diagnosis	1.5
Solenoid rating	Local through LED and OUT fault reporting. For defects signalled look at the manual.
Maximum latency time of the serial transmission	Outlets protected against overload and short-circuit
TRA/TRR 2x3/2 monostable at 6 bar	100% ED
TRA/TRR 5/2 monostable at 6 bar	<10
TRA/TRR 5/2 bistable at 6 bar	8 / 45
TRA/TRR 5/3 cc monostable at 6 bar	8 / 33
Note on use	20 / 20
	20 / 20
	Insert the pipes in the fittings, before passing air through the valves, otherwise the gasket may be pulled out of its seat by the flow of air.
<b>INPUT module for CM islands</b>	
Sensor supply voltage	24 VDC ±10%
Maximum current for each single connector	200 mA
Maximum current for each module	400 mA
Maximum total current of all the modules	1000 mA
Input impedance	3.9 KΩ
Max input voltage	Vcc
Type of input	-5 to +30
Protection	PNP/NPN configurable via dip switch
Active input signalling	Protected inputs against overload and short-circuit
	One LED for each INPUT

### SYNOPTIC, SIZES AND VERSIONS

C M VALVE	2 INPUT END-PLATE	I / O FUNCTION	M MANUAL TYPE	16 - W8 - W6 - O4 - L8 - 5 TYPE OF VALVE	M8 - M8 - 15 - 16 FURTHER DETAILS
Clever Multimach	2 End-plate 1-11 3 End-plate 1	O Only valves I/O Input/Output and valves ADD Additional (slave)	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable 5 blind end-plate 6 Passing-intermede 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8	M8 Module 8 input M8 14 Shell 44 pin 15 Shell 44 + 44 pin 16 n° 2 brackets for DIN bar

### VALVE CM

Symbol	Ø	Code	Manual control	Weight [g]	Symbol	Ø	Code	Manual control	Weight [g]
I	82/84	4	7074030530	130	V	82/84	4	7074030130	115
		6	7075030530	130			6	7075030130	115
		8	7076030530	140			8	7076030130	130
W	82/84	4	7074030630	130	K	82/84	4	7074030110	130
		6	7075030630	130			6	7075030110	130
		8	7076030630	140			8	7076030110	140
L	82/84	4	7074030730	130	O	82/84	4	7074030210	130
		6	7075030730	130			6	7075030210	130
		8	7076030730	140			8	7076030210	140

**OUTPUT END-PLATE 1-11**

Code	Description	Weight [g]
0227302200	End-plate CM kit 1-11 OUT	722
This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply Note: terminator included		

**OUTPUT END-PLATE 1**

Code	Description	Weight [g]
0227302201	End-plate CM kit 1 OUT	722
Note: terminator included		

**INPUT END-PLATE 1-11**

Code	Description	Weight [g]
0227302223	End-plate CM kit 1-11 IN	722
This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply Note: terminator included		

**INPUT END-PLATE 1**

Code	Description	Weight [g]
0227302225	End-plate CM kit 1 IN	722
Note: terminator included		

**ADDITIONAL END-PLATE 1-11**

Code	Description	Weight [g]
0227302224	End-plate CM kit 1-11 ADD	770
This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply		

**ADDITIONAL END-PLATE 1**

Code	Description	Weight [g]
0227302226	End-plate CM kit 1 ADD	770

**BLIND EN-PLATE**

Code	Description	Weight [g]
0227302500	Blind en-plate CM	230

**INTERMEDIATE THROUGH**

Code	Description	Weight [g]
0227302301	Intermediate through CM	120

**INTERMEDIATE BLIND**

Code	Description	Weight [g]
0227302302	Intermediate blind CM	117

**INTERMEDIATE EXHAUST SWITCH**

Code	Description	Weight [g]
0227302303	Intermediate exhaust switch CM	125

**44-PIN CUP CONNECTOR KIT IP 65**

Code	Description	Weight [g]
0226180108	44-pin cup connector kit IP65	60

**44+44 PIN CUP CONNECTOR KIT IP 65 FOR I/O**

Code	Description	Weight [g]
0226180109	44+44 pin cup connector kit IP65 for I/O	80

**CONNECTION BRACKETS ON DIN BAR**

Code	Description	Weight [g]
0227301600	Connection brackets on DIN bar HDM/CM	30

**SILENCER FOR FITTING, Ø 8**

Code	Description	Weight [g]
W0970530084	Silencer for fitting, Ø 8	15

At the 3/5-exhaust port of the intermediate through and the intermediate exhaust switch

**M8 8-INPUT/OUTPUT MODULE**

Code	Description	Weight [g]
0227302900	M8 8-input module CM	273

**CABLES**

Code	Description	Weight [g/m]
0226107201	10-wire cable	86
0226107101	19-wire cable	122
0226107102	25-wire cable	130
0226107103	44-wire cable	160

Specify the number of metres desired

**M8 PLUG**

Code	Description
0240009039	Plug M8

**M8 INPUT CONNECTOR**

Code	Description
0240009009	M8-M8 straight connector with 3 m cable

**44-PIN PRE-WIRED CUP CONNECTOR**

Code	Description	Weight [g]
0226950500	Acc. connet. IP 65 + cable 44-wire L = 5 m	740

**44+44-PIN PRE-WIRED CUP CONNECTOR**

Code	Description	Weight [g]
0226980500	Acc. connet. IP 65 + cable 44 + 44-wire L = 5 m	1550

**8 PREWIRED CONNECTOR FOR VALVE ISLANDS CONNECTIONS**

Code	Description
0240005003	M8 prewired connector for valve islands conn. CM L = 5 m
0240005005	M8 prewired connector for valve islands conn. CM L = 1 m
0240005006	M8 prewired connector for valve islands conn. CM L = 3 m
0240005008	M8 prewired connector for valve islands conn. CM L = 10 m

**M8 INPUT CONNECTOR**

Code	Description
0240009010	M8 3-pin straight connector

**IDENTIFICATION PLATE KIT**

Code	Description
0226107000	Identification plate kit

Comes in 10-pc. packs

**GRUB SCREW KIT**

Code	Description
0227301800	Grub screw for Multimach HDM/CM

Comes 1 + 1 packs

**R17 - DISASSEMBLY KEY**

Code	Description	Ø Tube
2L17001	RL17	from Ø 3 to Ø 10





**8-DIGITAL OUTPUT MODULE**

Code	Description
0240004051	DO 8XDC24V 0.5A unit
<b>Technical data</b>	
Nominal voltage	24 VDC
Number of outputs	8
Output data	1 Byte
Absorption for each channel	1A (max 8A)
Internal Bus voltage	5V
Absorption 5V BUS	70 mA

**4-ANALOG OUTPUT MODULE**

Code	Description
0240004055	AO 4X12 BIT unit
<b>Technical data</b>	
Number of outputs	4
Output data	8 Byte
Output range	Voltage 0...10V, ±10V, 1...5V Current 0...20 mA, 4...20 mA, ±20 mA
Resolution	12 BIT
Output resistance	Minimum voltage 1 kΩ, Maximum current 500 Ω
Conversion time	0.45 ms
Internal Bus voltage	5 V
Absorption 5V BUS	75 mA

**4-ANALOG INPUT MODULE**

Code	Description
0240004054	AL 4X16 BIT unit
<b>Technical data</b>	
Number of Inputs	4
Input data	8 Byte
Input range	Voltage 0 to 50 mV, 0...10V, ± 4 mV, ± 4V, ± 10V, Current 0/4...20 mA, +/-20 mA Temperature Pt100, Pt1000, Ni100, Ni1000 Resistance 60 Ω, 600 Ω, 3000 Ω, 16000 Ω Thermoelements J, K, N, R, T, S
Resolution	12/16 Bit
Input resistance	20M Ω voltage, 85 Ω current
Time	5...70 ms
Internal Bus voltage	5 V
Absorption 5V BUS	280 mA

**SLAVE/MULTIMACH CONNECTION KIT**

Code	Description
0226940000	Slave/Multimach connection kit

**25-PIN PLUG CONNECTOR KIT, DOUBLE OUTPUT FOR SLAVE**

Code	Description
0226180105	25-pin plug connector for slave
Complete with 2 cable clamps for wiring 2 cables	

**25-PIN PLUG CONNECTOR KIT, DOUBLE OUTPUT FOR MULTIMACH AND PLT-10**

Code	Description
0226180106	25-wire connector – double output kit
Complete with 2 cable clamps for wiring 2 cables	

**9-PIN PLUG CONNECTOR, STRAIGHT OR 90° OUTPUT FOR MULTIMACH**

Code	Description
0226180102	9-pin plug connector

**CABLES**

Code	Description	Weight [g/m]
0226107201	10-wire cable	86
0226107101	19-wire cable	122
0226107102	25-wire cable	130
Indicate the desired length in metres		

## INPUT/OUTPUT PROFIBUS-DP IP 67 M12



TECHNICAL DATA		
Application		8 inputs or outputs + 8 inputs or outputs or diagnostic
Supply voltage		24 VDC (18V.....30,2V), according to EN 61131-2
Degree of protection		IP67
Temperature		0 to 55°C (32 to 131° F)
Field Bus Data	Transmission protocol	Profibus-DP EN 50170
	Transmission mode	synchronous or Freeze-Mode
	Transmission speed	12MBit/s
	Addresses	rotating switches BCD, 0.....99
Inputs Output Technical Data	Type	pnp proximity sensors or EN 61131-2 compatible mechanical limit switch
	Supply	24 VDC (18-30,2V) to EN 61131-2; ≥ 200 mA for M12 coupling point.
Output Technical Data	Indicator	One LED for each
	Voltage	24 VDC (18-30,2V) output, to EN 61131-2; cumulative I ≥ 9A
	Maximum current for each actuator	1.6 A, system protected by fuse in case of short-circuit
	Maximum current contemporary	10W
Autotest	Maximum signal exchange frequency	20 Hz Ohm, 20 Hz induction
	Indicator LED	One LED for each output
	Field bus	RUN-LED
Autotest	Insufficient voltage signal	LED + alarm signal to master
	Short-circuit sensor INPUT or OUTPUTS	Red LED for channel on M12 coupling point
	Desina® (pin 2)	PIN 2 diagnostic with red LED for M12 coupling point and signal to master
		<b>N.B.:</b> for the disposition of the contact, please look at the connectors at the following pages

### KEY TO CODES SLAVE, COMPLETE WITH SERIES 70 VALVES

B	U	S	P	V	B	O	0	2	D	D						
			P	V	B	O	02	04	06	08	10	12	14	16	D	
			Profibus	IP67	70 1/8"	Multiple base	2 positions	4 positions	6 positions	8 positions	10 positions	12 positions	14 positions	16 positions	SOV 23 SOS NO - SOV 33 SOS NO	
					70 1/4"										SOV 23 SOS NC - SOV 33 SOS NC	
															SOV 23 SOB 00 - SOV 33 SOB 00	
															SOV 25 SOS 0 - SOV 35 SOS 00	
															SOV 25 SOB 00 - SOV 35 SOB 00	
															SOV 26 SOS CC - SOV 36 SOS CC	
															SOV 26 SOS OC - SOV 36 SOS OC	
															SOV 26 SOS PC - SOV 36 SOS PC	
															Blanking plate	

### KEY TO CODES IP67 SLAVE, COMPLETE WITH ISO VALVES

B	U	S	P	V	D	I	0	2	M	M						
			P	V	D	I	02	04	06	08	10	12	14	16	M	
			Profibus	IP67	ISO1	Manifold base	2 positions	4 positions	6 positions	8 positions	10 positions	12 positions	14 positions	16 positions	ISV 55 SOS 00 - ISV 65 SOS 00	
					ISO2	side									ISV 55 SOB 00 - ISV 65 SOB 00	
															ISV 56 SOS CC - ISV 66 SOS CC	
															ISV 56 SOS OC - ISV 66 SOS OC	
															ISV 56 SOS PC - ISV 66 SOS PC	
															Blanking plate	

### SLAVE IP67

Code	Description
0240008001	8 I/O + 8 I/O/autotest Profibus

## ACCESSORIES

#### 90° ELBOW WITHOUT CABLE

Code	Description
0240009001	90° Elbow without cable

#### 90° ELBOW WITH CABLE

Code	Description
0240009022	90° curve with cable 1.5 m
0240009023	90° curve with cable 5 m

#### Y-DISTRIBUTOR WITH CABLE AND M12 STRAIGHT CONNECTORS

Code	Description
0240009031	Y-Distributor cable 0.6 m
0240009032	Y-Distributor cable 1.5 m

#### FEMALE CONNECTOR FOR FEEDING "OUT"

Code	Description
0240009034	Female connector "OUT" feeding

#### MALE CONNECTOR FOR FEEDING "IN"

Code	Description
0240009033	Male connector "IN" feeding

#### M12 FEMALE CONNECTOR IN-BUS

Code	Description
0240009036	M12 female connector B coding

#### M12 MALE CONNECTOR OUT-BUS

Code	Description
0240009035	M12 male connector B coding

#### STRAIGHT FITTING WITHOUT CABLE

Code	Description
0240009021	Straight fitting without cable

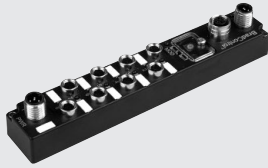
#### STRAIGHT FITTING WITH CABLE

Code	Description
0240009002	Straight, with 1.5 m cable
0240009003	Straight, with 5 m cable

#### PLUG M12

Code	Description
0240009040	M12 plug

## INPUT PROFIBUS-DP IP67 M8



### TECHNICAL DATA

Application	8 PNP inputs	
Power supply	24 VDC (13-28 V)	
Index of protection	IP67	
Temperature range	-20 to +70°C RH 5-95% - no condensate	
<b>Field Bus technical data</b>	Transmission protocol	DP-VO Profibus to EN 50170
	Transmission mode	Synchronous or Freeze-Mode
	Transfer rate	Up to 12 MBit/s
	Addresses	Rotary switches, 1...99
<b>Input technical data</b>	Type	PNP proximity sensors or IEE 1131-2 compact mechanical stop
	Power supply	24 VDC (18 to 28 V)
	Signal	One green LED for each input
	Input 0 signal voltage	2...5 V
<b>Diagnosis</b>	Input 1 signal voltage	10...30 V
	Field bus	"NET" LED+alarm signal to master
	INPUT short-circuit sensor	Red LED for each channel at M8 connection point M8 (600 mA)

### SLAVE IP67

Code	Description
0240008002	IP67 M8 PROFIBUS INPUT

### M12 BUS-OUT MALE CONNECTOR

Code	Description
0240009035	M12 male connector, B coding

### M8-M12 PLUG

Code	Description
0240009039	M8 plug
0240009040	M12 plug

### M8 INPUT CONNECTOR

Code	Description
0240009010	M8 3-pin straight connector

### M12 STRAIGHT SUPPLY CONNECTOR WITH CABLE

Code	Description
W0970513002	5-pin M12x1 straight connector with 5 m cable

### M12 BUS-IN FEMALE CONNECTOR

Code	Description
0240009036	M12 female connector, B coding

### M8 INPUT CONNECTOR WITH CABLE

Code	Description
0240009009	M8-M8 straight connector with 3 m cable

### M12 STRAIGHT SUPPLY CONNECTOR

Code	Description
W0970513001	5-pin M12x1 straight connector

### M12 90° SUPPLY CONNECTOR

Code	Description
W0970513003	M12x1 5-pin 90° connector

### M12 90° SUPPLY CONNECTOR WITH CABLE

Code	Description
W0970513004	M12x1 5-pin 90° connector with 5m cable



GENERAL TECHNICAL DATA	SIZE 1			SIZE 2			
	Threaded port	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"
Max. input pressure	bar	15			13		
	MPa	1.5			1.3		
	psi	217			188		
Flow rate	See catalogue of the various elements						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C from -10 to +50			°C from -10 to +50			
Padlockable knob	The knobs of the regulators, filter regulators and standard sectioning valves can all be padlocked						
Fluid	Compressed air or other inert gases						
Mounting position	See catalogue of the various elements						
Direction of flow	Flow options right to left or vice versa						
Additional air take-off, for pressure gauges or fittings	1/8", front and rear, on all modules			1/4", front and rear, on all modules			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Certification for potentially explosive atmosphere according to 94/9/CE	Ex II 3 GD c T5 T 100°C -20°C < Ta < 50°C						

KEY TO CODES SINGLE ELEMENT

56	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port  0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air take-off	Varies from element to element	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port  0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

- The anti-corrosion version of this element is only available with manual actuation.
- ▲ Not available in the anti-corrosion version.

KEY TO CODES UNIT COMPOSED OF TWO OR THREE ELEMENTS

56	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT 1	TYPE	ELEMENT 2	TYPE	ELEMENT 3	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	1 1/8" port 2 1/4" port 3 3/8" port 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	1 1/8" port 2 1/4" port 3 3/8" port 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

- The anti-corrosion version of this element is only available with manual actuation.
- ▲ Not available in the anti-corrosion version.

## FILTER



TECHNICAL DATA	FIL SY 1				FIL SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Threaded port								
Degree of filtration	5 (yellow) - output air purity class ISO8573-1: 3.7.4 20 (white) - output air purity class ISO8573-1: 4.7.4 50 (blue) - output air purity class ISO8573-1: 5.7.4							
Max. input pressure	bar			bar				
	15			13				
	MPa			1.3				
	1.5			1.3				
	psi			188				
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1200	1300	3400	3800	3800	
	scfm	32	42	46	120	135	135	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1300	1650	1750	4500	5200	5200	
	scfm	46	58	62	159	184	184	
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C							
Weight	g			g				
Condensate drain	178      173      164      488      461      457      445 RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate <b>Note: the maximum input pressure for the RA version must not exceed 10 bar</b> Compressed air or other inert gases							
Fluid								
Condensate bowl capacity	cm <sup>3</sup>			cm <sup>3</sup>				
Mounting position	Vertical			Vertical				
Port for additional air take-off	1/8", front and rear			1/4", front and rear				
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1500			
	scfm	18			53			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws				

UNITS

SYNTESI

### KEY TO CODES

56	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing	F Filter	10 5 μm RMSA	0 Without bushing
5X Syntesi anti-corrosion		1 1/8" port		20 20 μm RMSA	
		2 1/4" port		30 50 μm RMSA	
	3 3/8" port	40 5 μm RA			
	2 Size 2	0 Without bushing		50 20 μm RA	
		3 3/8" port		60 50 μm RA	
		4 1/2" port			
		5 3/4" port			0 Without bushing
		6 1" port			3 3/8" port
					4 1/2" port
					5 3/4" port
					6 1" port

RMSA: Drain with manual condensate discharge and automatic discharge at zero pressure.  
 RA: Automatic drain with condensate discharge, independent of pressure and flow rate.

DEPURATOR



TECHNICAL DATA	DEP SY 1			DEP SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	0.01 - output air purity class ISO8573-1: 1.7.2						
Degree of filtration	μm						
Max. input pressure	bar			MPa			
	15			13			
	1.5			1.3			
	217			188			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	NL/min			scfm			
	460			620			
	9			37			
	N.B.: flow rates higher than the recommended value reduces purification efficiency						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
Weight	From -10 to +50			From -10 to +50			
	194	189	180	483	456	452	440
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
Fluid	Compressed air or other inert gases						
Bowl capacity	cm³			cm³			
	15			40			
Mounting position	Vertical			Vertical			
Port for additional air take-off (not purified air)	1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	NL/min			scfm			
	500			1500			
	18			53			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Notes on use	It is advisable to mount a 5 μm filter upstream of the purifier to retain solid particles						

KEY TO CODES

56	1	1	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port  0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	D Depurator	10 RMSA	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port  0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

RMSA: Drain with manual condensate discharge and automatic discharge at zero pressure.



## ACTIVE CARBON FILTER



TECHNICAL DATA	FIL CA SY 1			FIL CA SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	0.003 - output air purity class ISO8573-1: 1.7.1						
Residual oil at 20°C *	mg/m <sup>3</sup>			4000			
Duration of cartridge *	hours			13			
Max. inlet pressure	bar			1.5			
	MPa			1.3			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	psi			217			
	NI/min			350			
	scfm			12			
	N.B.: flow rates higher than the recommended value reduces purification efficiency						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			From -10 to +50			
Weight	195	190	181	483	456	452	440
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
Fluid	0.01 µm filtered and deperated air						
Mounting position	In any position			In any position			
Additional air take-off port (unfiltered air from cartridge CA)	1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	NI/min			500			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm			18			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Notes on use	Upstream it's necessary to mount a coalescence filter deperator of 0.01 µm.						
* if the load loss of 75 mbar is not exceeded							

UNITS

SYNTESI

### KEY TO CODES

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	C ELEMENT	10 TYPE	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port  0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	C Active carbon filter	10 RMSA	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

RMSA: Drain with manual condensate discharge and automatic discharge at zero pressure.

REGULATOR



TECHNICAL DATA	REG SY 1			REG SY 2				
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Threaded port								
Max. inlet pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	570	1600	2900	3000	4300	4700	
(inlet pressure 10 bar)	scfm	20	57	103	106	152	166	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1200	2800	3350	5300	7400	7600	
(inlet pressure 10 bar)	scfm	42	99	119	188	261	267	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70				100		
	scfm	2.5				3.5		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Full outflow with zero inlet pressure		Included						
Padlockable knob		Included						
Upstream pressure compensation		Included, via balanced valve						
Weight	g	193	188	179	546	519	515	
Fluid		Compressed air or other inert gases						
Mounting position		In any position			In any position			
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1400			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			50			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Notes on use		The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. On request version without overpressure exhaust						

KEY TO CODES

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	R ELEMENT	14 SETTING RANGE	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	R Pressure regulator	● 10 0 to 2 bar ● 12 0 to 4 bar 14 0 to 8 bar 16 0 to 12 bar	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

● Not available in the anti-corrosion version.

## IN-SERIES REGULATOR



TECHNICAL DATA	IN-SERIES REGULATOR SY1			IN-SERIES REGULATOR SY2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded inlet port, through							
Utility threaded port		1/8"				1/4"	
Max. input pressure		bar				bar	
		MPa				MPa	
		psi				psi	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)		Nl/min				Nl/min	
		scfm				scfm	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)		Nl/min				Nl/min	
		scfm				scfm	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)		Nl/min				Nl/min	
		scfm				scfm	
Min/max temperature at 10 bar; 1 MPa; 145 psi		°C				°C	
Full outflow with zero inlet pressure							
Padlockable knob							
Upstream pressure compensation							
Weight		g				g	
Fluid							
Mounting position							
Wall fixing screws							
Notes on use							

Included  
Included  
Included, via balanced valve  
Compressed air or other inert gases  
In any position  
No. 2 M4 screws | No. 2 M5 screws  
The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.  
On request version without overpressure exhaust

UNITS

SYNTESI

### KEY TO CODES

56	1	1	R	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	IN-SERIES REGULATOR SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1  2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	R Pressure regulator	● 20 0 to 2 bar ● 22 0 to 4 bar 24 0 to 8 bar 26 0 to 12 bar	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

● Not available in the anti-corrosion version.

**FILTER-REGULATOR**



TECHNICAL DATA	FR SY 1				FR SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Threaded port								
Degree of filtration	5 (yellow) - output air purity class ISO8573-1: 3.7.4 20 (white) - output air purity class ISO8573-1: 4.7.4 50 (blue) - output air purity class ISO8573-1: 5.7.4							
Max. inlet pressure	bar			bar				
	MPa			MPa				
	psi			psi				
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	500	800	2200	3200	4300	5200		
(inlet pressure 10 bar)	18	28	78	113	152	184		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	1300	2000	3000	5800	7200	7400		
(inlet pressure 10 bar)	46	71	106	205	255	262		
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	NL/min			NL/min				
	scfm			scfm				
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C				
Full outflow with zero inlet pressure	From -10 to +50			From -10 to +50				
Padlockable knob	Included			Included				
Upstream pressure compensation	Included, via balanced valve			Included				
Weight	244	239	230	623	596	592	580	
Fluid	Compressed air or other inert gases							
Mounting position	Vertical							
Additional air take-off, for pressure gauges or fittings	1/8", front and rear			1/4", front and rear				
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	NL/min			NL/min				
	scfm			scfm				
Bowl capacity	cm <sup>3</sup>			cm <sup>3</sup>				
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Nota d'uso: <b>the maximum input pressure for the RA version must not exceed 10 bar</b> No. 2 M4 screws   No. 2 M5 screws							
Wall fixing screws	The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. On request version without overpressure exhaust.							
Notes on use								

**KEY TO CODES**

56	1	1	B	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	B Filter-regulator	<ul style="list-style-type: none"> <li>● 10 5 μm, RMSA, 0 to 2 bar</li> <li>● 20 20 μm, RMSA, 0 to 2 bar</li> <li>● 30 50 μm, RMSA, 0 to 2 bar</li> <li>● 40 5 μm, RA, 0 to 2 bar</li> <li>● 50 20 μm, RA, 0 to 2 bar</li> <li>● 60 50 μm, RA, 0 to 2 bar</li> <li>● 12 5 μm, RMSA, 0 to 4 bar</li> <li>● 22 20 μm, RMSA, 0 to 4 bar</li> <li>● 32 50 μm, RMSA, 0 to 4 bar</li> <li>● 42 5 μm, RA, 0 to 4 bar</li> <li>● 52 20 μm, RA, 0 to 4 bar</li> <li>● 62 50 μm, RA, 0 to 4 bar</li> <li>14 5 μm, RMSA, 0 to 8 bar</li> <li>24 20 μm, RMSA, 0 to 8 bar</li> <li>34 50 μm, RMSA, 0 to 8 bar</li> <li>44 5 μm, RA, 0 to 8 bar</li> <li>54 20 μm, RA, 0 to 8 bar</li> <li>64 50 μm, RA, 0 to 8 bar</li> <li>16 5 μm, RMSA, 0 to 12 bar</li> <li>26 20 μm, RMSA, 0 to 12 bar</li> <li>36 50 μm, RMSA, 0 to 12 bar</li> <li>46 5 μm, RA, 0 to 12 bar</li> <li>56 20 μm, RA, 0 to 12 bar</li> <li>66 50 μm, RA, 0 to 12 bar</li> </ul>	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port
5X Syntesi anti-corrosion	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			

● Not available in the anti-corrosion version.  
 RMSA: Drain with manual condensate discharge and automatic discharge at zero pressure.  
 RA: Automatic drain with condensate discharge, independent of pressure and flow rate.

## LUBRICATOR



TECHNICAL DATA	LUB SY 1			LUB SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	Oil mist						
Type of lubrication	Manual filling from the top						
Version							
Max. input pressure	bar			bar			
	MPa			MPa			
	psi			psi			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	1300	1700	2200	2300	3900	3900
	scfm	46	60	78	81	138	138
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1600	3000	3650	3650	6100	6100
	scfm	57	106	129	129	216	216
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
Weight	g			g			
Fluid	Compressed air or other inert gases						
Quantity of filled oil	cm <sup>3</sup>			cm <sup>3</sup>			
Mounting position	Vertical			Vertical			
Port for additional air take-off	1/8", front and rear, lubricated air			1/4", front and rear, lubricated air			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	450			800		
	scfm	16			53		
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Recommended oils	ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Notes on use	Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general. For the best lubrication results, set the drip rate to one drop for 300-600 Nl.						

UNITS

SYNTESI

### KEY TO CODES

56	1	1	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
56 Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	L Lubricator	10 Manual filling from the top	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

**SHUT-OFF VALVE**



TECHNICAL DATA	V3V SY 1			V3V SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	1/8"			1/4"			
Threaded discharge port	1/8"			1/4"			
Type of control	Manual - pneumatic - Elpn - Elpn pilot-assisted			Manual - Pneumatic - Cnomo elpn - Cnomo elpn pilot-assisted			
Max inlet pressure for pneumatic and solenoid pilot-assisted versions	bar 15			bar 13			
	MPa 1.5			MPa 1.3			
	psi 217			psi 188			
Inlet pressure for solenoid version	bar 3 - 10			bar 3 - 10			
	MPa 0.3 - 1			MPa 0.3 - 1			
	psi 43 - 145			psi 43 - 145			
Pilot pressure for pneumatic and solenoid pilot-assisted versions	bar 3 - 10			bar 3 - 10			
	MPa 0.3 - 1			MPa 0.3 - 1			
	psi 43 - 145			psi 43 - 145			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min 800	1000	1100	2800	3000	3000	
	scfm 28	35	39	99	106	106	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min 1100	1500	1600	3600	4000	4000	
	scfm 39	53	57	127	141.5	141.5	
Exhaust flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min 500			2000			
	scfm 18			71			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C From -10 to +50			°C From -10 to +50			
Padlockable knob				Included			
Weight	g 197	192	183	476	449	445	433
Fluid	Compressed air or other inert gases						
Mounting position				In any position			
Additional air take-off, for pressure gauges or fittings	1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min 500			1500			
	scfm 18			53			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Bobbin capacity for electro-pneumatic version	W 12 VDC and 24 VDC = 2W			24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA			
Manual control of electro-pneumatic versions	24 VAC, 110 VAC and 220 VAC = 3.5 VA Bistable, with screwdriver slot: horizontal = OFF, vertical = ON						

**KEY TO CODES**

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	V ELEMENT	10 TYPE	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	V Shut-off valve	10 Manual ● 20 Pneumatic ● 30 Solenoid pilot-assisted ● 70 Solenoid	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

● Not available in the anti-corrosion version.

## PROGRESSIVE STARTER

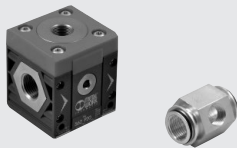


TECHNICAL DATA	APR SY 1			APR SY 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port		1/8"			1/4"		
Threaded discharge port						1/4"	
Type of control		Solenoid		Solenoid - Cnomo solenoid			
Inlet pressure	bar	3 - 10		3 - 10			
	MPa	0.3 - 1		0.3 - 1			
	psi	43 - 145		43 - 145			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1000	1100	2800	3600	3600
	scfm	32	39	39	99	127	127
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1250	1500	1600	4400	4800	4800
	scfm	44	53	57	156	170	170
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500			2700		
	scfm	18			96		
Maximum flow rate start-up, at 6.3 bar (0.63 MPa; 91 psi) with regulation pin completely unscrewed	Nl/min	170			700		
	scfm	6			25		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50		
Weight	g	203	198	189	503	476	472
Fluid		Compressed air or other inert gases					
Mounting position		In any position			In any position		
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear		
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1500		
	scfm	18			53		
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws		
Bobbin capacity for electro-pneumatic version	W	12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA for Cnomo versions: 24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA					
Manual control		Bistable, with screwdriver slot: horizontal = OFF; vertical = ON					

### KEY TO CODES

56	1	1	A	70	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	A Progressive starter APR	70 Solenoid * 71 Cnomo solenoid	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

## AIR TAKE-OFF



TECHNICAL DATA	AIR TAKE-OFF		AIR INTAKE, 4-WAY	
	SIZE 1	SIZE 2	SIZE 1	SIZE 2
Flow rate of the air take-off at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1550	7000	500 - 2000
	scfm	55	248	18 - 71
Usage temperature and pressure		Given by the Syntesi® modules it's connected to		
Weight	g	62	75	100
Fluid		Compressed air or other inert gases		

### KEY TO CODE FOR 4-WAY VERSION

56	1	1	P	10	1	Code	Description
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION		
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	P Air take-off	20 4-way	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	5610P100	PA SY1
5X Syntesi anti-corrosion	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	5620P100	PA SY2

**NOTE**  
Anti-corrosion version  
5X-----  
Example  
5X11P201 PA 4-way SY1 1/8 anti-corrosion



**PRESSURE SWITCHES**



TECHNICAL DATA	SY 1 PRESSURE SWITCHES			SY 2 PRESSURE SWITCHES			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port	0.5 ÷ 10			0.5 ÷ 10			
Adjustable pressure interval	bar			From 0.4 to 0.8			
Hysteresis (not adjustable)	bar			bar			
Maximum pressure	MPa			MPa			
	psi			psi			
Min/Max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
Maximum current	A			A			
Maximum voltage	V			V			
Outside diameter of cable	mm			mm			
Number of wires and cross section	3 x 0.5 mm <sup>2</sup>			3 x 0.5 mm <sup>2</sup>			
Contacts	Normally-Open (NO) and Normally-Closed (NC)						
Protection	IP65			IP65			
Number of switchings	5 x 10 <sup>6</sup>			5 x 10 <sup>6</sup>			
Fluid	Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous						
Mounting position	In any position						
Additional air take-off, for pressure gauges or fittings	1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	l/min			l/min			
	scfm			scfm			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Weight	g	g	g	g	g	g	g
	255	250	241	443	416	412	400

**KEY TO CODES**

56	1	1	S	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	S Pressure switches	10 2 m cable 20 300 mm cable with M8 connector	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

**SECURITY KNOB**

Code	Description
9200703	Security knob

**ACCESSORIES**

**MOUNTING BRACKET FOR REG. AND FR**



Code	Description
9200701	Acc. SF 100 - BIT-ND 1/4 SY1
9400701	Acc. SF200-ND-3/8 1/2 - SY2

**PRESSURE GAUGES**



Code	Description
9700101	Acc. M 40 1/8 12
9700102	Acc. M 40 1/8 04
9800101	Acc. M 50 1/8 12
9800102	Acc. M 50 1/8 04
9900101	Acc. M 63 1/4 04
9700109	Acc. M 40 x 40 1/8 04
9700110	Acc. M 40 x 40 1/8 012

**ADAPTERS FOR PRESSURE GAUGES (SY2)**



Code	Description
9210005	1/4 adapter for 1/8 pressure gauge

Note: no. 20 each box

**KIT FOR COIL EEXM**



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 3 m
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 5 m
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 3 m
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 5 m
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 3 m
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 5 m
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 3 m
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 5 m

According to ATEX 94/9 CE rule,  
 ⓧ II 2G Ex mb IIC T4/T5 Gb  
 ⓧ II 2D Ex tb IIIC T130/T95 °C IP66 Db

**COIL 30 mm**



Code	Description
W0210010100	Coil 30 Ø 8 4W-24VDC
W0210011100	Coil 30 Ø 8 4VA-24VAC 50/60 HZ
W0210012100	Coil 30 Ø 8 4VA-110VAC 50/60 HZ
W0210013100	Coil 30 Ø 8 4VA-220VAC 50/60 HZ

**COIL 22 mm**



Code	Description
W0215000151	Coil 22 Ø 8 BA 2W-12VDC
W0215000101	Coil 22 Ø 8 BA 2W-24VDC
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC

**"UL" AND "CSA" COIL 22 mm**



**CRAUS**

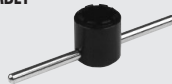
Code	Description
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR

**ELECTRIC CONNECTOR 22 mm**


Code	Description
W0970510011	Connector standard
W0970510012	Connector 22 LED 24V
W0970510013	Connector 22 LED 110V
W0970510014	Connector 22 LED 220V
W0970510015	Connector 22 LED VDR 24V
W0970510016	Connector 22 LED VDR 110V
W0970510017	Connector 22 LED VDR 220V
W0970510070	Connector 22 II 2 GD ATEX

**ELECTRIC CONNECTOR 30 mm**


Code	Description
W0970520033	Connector 30 STD
W0970520034	Connector 30 LED 24V
W0970520035	Connector 30 LED 110V
W0970520036	Connector 30 LED 220V
W0970520037	Connector 30 LED VDR 24V
W0970520038	Connector 30 LED VDR 110V
W0970520039	Connector 30 LED VDR 220V

**BOWL DISASSEMBLY SPANNER**


Code	Description
9170601	CS TF - TL BIT/SY1
9210050	CS TF - TL SY2

**KIT COIL SIDE 22 IP65**


Code	Description
0222100100	Kit for coils 22 - IP65 Improved IP65 protection, even after prolonged exposure to atmospheric agents. Applicable to valves with a technopolimer control.

**CONNECTING NIPPLE KIT**


Code	Description
9210000	Connecting nipple kit SY1
9210010	Connecting nipple kit SY2
9210000X	Connecting nipple kit SY1 anti-corrosion
9210010X	Connecting nipple kit SY2 anti-corrosion

Note: no. 20 each box; Max torque 0.4 Nm  
Note: no. 10 each box; Max torque 2.5 Nm

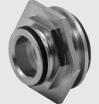
**THREADED PORT**


Code	Description
9210001*	Acc. kit IN OUT 1/8 SY1
9210002*	Acc. kit IN OUT 1/4 SY1
9210003*	Acc. kit IN OUT 3/8 SY1
9210011**	Acc. kit IN OUT 3/8 SY2
9210012**	Acc. kit IN OUT 1/2 SY2
9210013**	Acc. kit IN OUT 3/4 SY2
9210014**	Acc. kit IN OUT 1 SY2
9210001X	Acc. kit IN OUT 1/8 SY1 anti-corrosion
9210002X	Acc. kit IN OUT 1/4 SY1 anti-corrosion
9210003X	Acc. kit IN OUT 3/8 SY1 anti-corrosion
9210011X	Acc. kit IN OUT 3/8 SY2 anti-corrosion
9210012X	Acc. kit IN OUT 1/2 SY2 anti-corrosion
9210013X	Acc. kit IN OUT 3/4 SY2 anti-corrosion
9210014X	Acc. kit IN OUT 1 SY2 anti-corrosion

\* Note: no. 20 each box; Max torque 0.4 Nm  
\*\* Note: no. 10 each box; Max torque 2.5 Nm

**ADAPTOR FOR REGTRONIC**


Code	Description
9210004	Adaptor for REGTRONIC 1/4 SY1

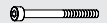
**SY1 - SY2 SIZE ADAPTER**


Code	Description
9210006	SY1 - SY2 size adapter
9210006X	SY1 - SY2 size adapter anti-corrosion

Max torque: 0.4 Nm for SY1  
Max torque: 2.5 Nm for SY2

**PADLOCK**


Code	Description
9062401	Padlock

**WALL-FIXING SCREW**


Code	Description
9210030	M4 x 55 fixing screw SY1
9210031	M5 x 75 fixing screw SY2

Note: no. 20 screws and 20 washers each box  
Max torque 0.8 Nm for SY1  
Max torque 2.0 Nm for SY2

**SPARE PARTS**
**AUTOMATIC DRAIN (RA)**


Code	Description
9000802	RA automatic drain spare part

**BOWL RMSA/RA**


Code	Description
9210100	Bowl FIL FR DEP RMSA SY1
9210101	Bowl FIL FR RA SY1
9210105	Bowl FIL FR DEP RMSA SY2
9210106	Bowl FIL FR RA SY2

**LUBRICATOR BOWL**

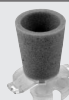

Code	Description
9210110	Bowl LUB SY1
9210115	Bowl LUB SY2

**PURIFIER FILTERING ELEMENT**


Code	Description
9210160	Cartridge DEP SY1
9210165	Cartridge DEP SY2

**AC FILTERING ELEMENT (ACTIVE CARBON)**


Code	Description
9210161	Cartridge AC SY1
9210166	Cartridge AC SY2

**FILTERING ELEMENT**


Code	Description
9210150	Filtering element 5 µm (yellow) SY1
9210151	Filtering element 20 µm (white) SY1
9210152	Filtering element 50 µm (blue) SY1
9210155	Filtering element 5 µm (yellow) SY2
9210156	Filtering element 20 µm (white) SY2
9210157	Filtering element 50 µm (blue) SY2

**TRANSPARENT LUBRICATOR COVER**


Code	Description
9210180	Transparent cover LUB SY1
9210185	Transparent cover LUB SY2

**LUBRICATOR OIL-FILLING CAP**


Code	Description
9210181	Oil-filling cap LUB SY1
9210186	Oil-filling cap LUB SY2

**SPRINGS FOR REGULATORS AND FR**


Code	Description
9210190	Spares MO 02 SY1
9210191	Spares MO 04 SY1
9210192	Spares MO 08 SY1
9210193	Spares MO 012 SY1
9210195	Spares MO 02 SY2
9210196	Spares MO 04 SY2
9210197	Spares MO 08 SY2
9210198	Spares MO 012 SY2
9210192X	Spares MO 08 SY1 anti-corrosion
9210193X	Spares MO 012 SY1 anti-corrosion
9210197X	Spares MO 08 SY2 anti-corrosion
9210198X	Spares MO 012 SY2 anti-corrosion

**BELL FOR REG AND FR**


Code	Description
9210200	Bell 02 SY1
9210201	Bell 04 SY1
9210202	Bell 08 SY1
9210203	Bell 012 SY1
9210220	Bell 02 SY2
9210221	Bell 04 SY2
9210222	Bell 08 SY2
9210223	Bell 012 SY2
9210202X	Bell 08 SY1 anti-corrosion
9210203X	Bell 012 SY1 anti-corrosion
9210222X	Bell 08 SY2 anti-corrosion
9210223X	Bell 012 SY2 anti-corrosion

**POPPET FOR REG**


Code	Description
9210210	Poppet REG SY1
9210230	Poppet REG SY2
9210210X	Poppet REG SY1 anti-corrosion
9210230X	Poppet REG SY2 anti-corrosion

**POPPET FOR FR**


Code	Description
9210211	Poppet FR 5 µm SY1
9210212	Poppet FR 20 µm SY1
9210213	Poppet FR 50 µm SY1
9210231	Poppet FR 5 µm SY2
9210232	Poppet FR 20 µm SY2
9210233	Poppet FR 50 µm SY2

**CNOMO CONTROL FOR V3V AND APR SY2**


Code	Description
9453922	Elpn Cnomo control kit, manual bistable



GENERAL TECHNICAL DATA	BIT 1/8"	BIT 1/4"
Threaded port	1/8"	1/4"
Degree of filtration	5 (yellow) - 20 (white) - 50 (blue)	
Degree of purification	99.97% @ 0.01 μm	
Setting range	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12	
Max. inlet pressure	1.3	
	13	
	188	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	350	
	12	
Max temperature at 1 MPa; 10 bar; 145 psi	- 10° to + 50°	
	14° to 122°	
Elements	Filter - Regulator - Lubricator - Filter-regulator - Depurator	
Mounting	Units: FRL, FR+L, F+L, F+D	
Fluid	By means of the bracket provided	
	Compressed air	

**FILTER**



TECHNICAL DATA	BIT 1/8"	BIT 1/4"
Threaded port	1/8"	1/4"
Degree of filtration	5 (yellow) - 20 (white) - 50 (blue)	
Max. inlet pressure	1.3	
	13	
	188	
Flow rate at 6.3 bar (0.6 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	860	
	30.5	
Flow rate at 6.3 bar (0.6 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	1200	
	42.5	
Max temperature at 1 MPa; 10 bar; 145 psi	50	
	122	
Weight	40	
Wall fixing screws	M4, by means of the bracket provided	
Bowl capacity	16	
Mounting position	Vertical	
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge	
Fluid	Operates by depression - requires variable air take-offs. Compressed air	

**ORDERING CODES**

Code	Description	Code	Description	Code	Description
5101001	FIL BIT 1/8 5 RMSA	5101003	FIL BIT 1/8 50 RMSA	5201002	FIL BIT 1/4 20 RMSA
5101004	FIL BIT 1/8 5 SAC	5101006	FIL BIT 1/8 50 SAC	5201005	FIL BIT 1/4 20 SAC
5101002	FIL BIT 1/8 20 RMSA	5201001	FIL BIT 1/4 5 RMSA	5201003	FIL BIT 1/4 50 RMSA
5101005	FIL BIT 1/8 20 SAC	5201004	FIL BIT 1/4 5 SAC	5201006	FIL BIT 1/4 50 SACC

## DEPURATOR



TECHNICAL DATA	DEP BIT 1/8"		DEP BIT 1/4"	
	1/8"		1/4"	
Threaded port				
Degree of purification	99.97% 0.01 μm			
Max. inlet pressure	MPa	1.3		
	bar	13		
	psi	188		
Suggested flow at 6 bar	NI/min	200		
	scfm	7		
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Weight	g	65		
Wall fixing screws	M4, by means of the bracket provided			
Bowl capacity	cm <sup>3</sup>	16		
Mounting position	Vertical			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.			
Fluid	Filtered 5 μm compressed air			
Notes	A It is advisable to mount a 5 m filter upstream the depurator acting as a rough filter.			

### ORDERING CODES

Code	Description			
5112001	DEP BIT 1/8 RMSA			
5212001	DEP BIT 1/4 RMSA			

## LUBRICATOR



TECHNICAL DATA	LUB BIT 1/8"		LUB BIT 1/4"	
	1/8"		1/4"	
Threaded port				
Type of lubrication	Oil mist			
Bowl capacity	cm <sup>3</sup>	26.5		
Lubricator version	Manual filling with the bowl disassembled			
Max. inlet pressure	MPa	1.3		
	bar	13		
	psi	188		
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NI/min	400		
	scfm	14		
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	NI/min	710		
	scfm	25		
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Weight	g	40		
Wall fixing screws	M4, by means of the bracket provided			
Mounting position	Vertical			
Fluid	Filtered compressed air			

### ORDERING CODES

Code	Description			
5103001	LUB BIT 1/8			
5203001	LUB BIT 1/4			

**MICRO-REGULATOR**



TECHNICAL DATA	MR BIT 1/8"		MR BIT 1/4"	
	1/8"		1/4"	
Threaded port	0 to 2 - 0 to 4		0 to 8 - 0 to 12	
Setting range	1.3		13	
Max. inlet pressure	bar		188	
	psi		340	
	MPa		12	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NI/min		600	
	scfm		21	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	NI/min		50	
	scfm		122	
Max temperature at 1 MPa; 10 bar; 145 psi	°C		80	
	°F		M4, by means of the bracket provided	
Weight	g		G 1/8"	
Wall fixing screws	In any position			
Gauge port	Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.			
Mounting position	The regulator pressure must always be set upwards.			
Fluid	For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.			
Notes	<b>Do not take air from pressure gauge ports.</b>			

**ORDERING CODES**

Code	Description	Code	Description	Code	Description	Code	Description
<b>MICROREGULATOR (MR)</b>		<b>MICROREGULATOR WITH CONTROLLED RELIEF</b>		<b>MICROREGULATOR WITH QUICK RELIEF</b>		<b>WATER MICROREGULATOR</b>	
5107004	MR BIT 1/8 012	5111001	MR BIT FC 1/8 02	5102001	MR BIT SR 1/8 02	5108001	MRA BIT 1/8 02
5107001	MR BIT 1/8 02	5111002	MR BIT FC 1/8 04	5102002	MR BIT SR 1/8 04	5108002	MRA BIT 1/8 04
5107002	MR BIT 1/8 04	5211001	MR BIT FC 1/4 02	5102003	MR BIT SR 1/8 08	5108003	MRA BIT 1/8 08
5107003	MR BIT 1/8 08	5211002	MR BIT FC 1/4 04	5102004	MR BIT SR 1/8 012	5108004	MRA BIT 1/8 012
5207004	MR BIT 1/4 012			5202001	MR BIT SR 1/4 02	5208001	MRA BIT 1/4 02
5207001	MR BIT 1/4 02			5202002	MR BIT SR 1/4 04	5208002	MRA BIT 1/4 04
5207002	MR BIT 1/4 04			5202003	MR BIT SR 1/4 08	5208003	MRA BIT 1/4 08
5207003	MR BIT 1/4 08			5202004	MR BIT SR 1/4 012	5208004	MRA BIT 1/4 012

FC: Controlled relief  
 SR: Quickly relieved  
 MRA: Without relief (for water)

**PADLOCKABLE MICROREGULATOR**



Look at microregulator for technical data

**ORDERING CODES**

Code	Description	Code	Description
5110001	MR BIT KEY 1/8 02	5210001	MR BIT KEY 1/4 02
5110002	MR BIT KEY 1/8 04	5210002	MR BIT KEY 1/4 04
5110003	MR BIT KEY 1/8 08	5210003	MR BIT KEY 1/4 08
5110004	MR BIT KEY 1/8 012	5210004	MR BIT KEY 1/4 012

## FILTER REGULATOR



TECHNICAL DATA	FR BIT 1/8"	FR BIT 1/4"
	1/8"	1/4"
Threaded port	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12	
Setting range	5 (yellow) - 20 (white) - 50 (blue)	
Degree of filtration	μm	
Max. inlet pressure	MPa	
	bar	
	psi	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NL/min	
	scfm	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	NL/min	
	scfm	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	
	°F	
Weight	g	
Wall fixing screws	M4, by means of the bracket provided	
Bowl capacity	cm <sup>3</sup>	
Mounting position	Vertical	
Gauge port	G 1/8"	
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge . Operates by depression – requires variable air take-offs. Compressed air	
Fluid	The regulator pressure must always be set upwards.	
Notes	For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. <b>Do not take air from pressure gauge ports.</b>	

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
5105001	FR BIT 1/8 5 02 RMSA	5105007	FR BIT 1/8 5 08 RMSA	5205001	FR BIT 1/4 5 02 RMSA	5205007	FR BIT 1/4 5 08 RMSA
5105013	FR BIT 1/8 5 02 SAC	5105019	FR BIT 1/8 5 08 SAC	5205013	FR BIT 1/4 5 02 SAC	5205019	FR BIT 1/4 5 08 SAC
5105002	FR BIT 1/8 20 02 RMSA	5105008	FR BIT 1/8 20 08 RMSA	5205002	FR BIT 1/4 20 02 RMSA	5205008	FR BIT 1/4 20 08 RMSA
5105014	FR BIT 1/8 20 02 SAC	5105020	FR BIT 1/8 20 08 SAC	5205014	FR BIT 1/4 20 02 SAC	5205020	FR BIT 1/4 20 08 SAC
5105003	FR BIT 1/8 50 02 RMSA	5105009	FR BIT 1/8 50 08 RMSA	5205003	FR BIT 1/4 50 02 RMSA	5205009	FR BIT 1/4 50 08 RMSA
5105015	FR BIT 1/8 50 02 SAC	5105021	FR BIT 1/8 50 08 SAC	5205015	FR BIT 1/4 50 02 SAC	5205021	FR BIT 1/4 50 08 SAC
5105004	FR BIT 1/8 5 04 RMSA	5105010	FR BIT 1/8 5 012 RMSA	5205004	FR BIT 1/4 5 04 RMSA	5205010	FR BIT 1/4 5 012 RMSA
5105016	FR BIT 1/8 5 04 SAC	5105022	FR BIT 1/8 5 012 SAC	5205016	FR BIT 1/4 5 04 SAC	5205022	FR BIT 1/4 5 012 SAC
5105005	FR BIT 1/8 20 04 RMSA	5105011	FR BIT 1/8 20 012 RMSA	5205005	FR BIT 1/4 20 04 RMSA	5205011	FR BIT 1/4 20 012 RMSA
5105017	FR BIT 1/8 20 04 SAC	5105023	FR BIT 1/8 20 012 SAC	5205017	FR BIT 1/4 20 04 SAC	5205023	FR BIT 1/4 20 012 SAC
5105006	FR BIT 1/8 50 04 RMSA	5105012	FR BIT 1/8 50 012 RMSA	5205006	FR BIT 1/4 50 04 RMSA	5205012	FR BIT 1/4 50 012 RMSA
5105018	FR BIT 1/8 50 04 SAC	5105024	FR BIT 1/8 50 012 SAC	5205018	FR BIT 1/4 50 04 SAC	5205024	FR BIT 1/4 50 012 SAC

## TAKE-OFF



TECHNICAL DATA	MPa	PA
Maximum operating pressure	bar	1.3
	psi	13
Maximum working temperature at 1 MPa; 10 bar; 145 psi	°C	188
	°F	50
		122

### ORDERING CODES

Code	Description
9100401	PAB 1/8 - 1/4 BIT

## FIL+REG+LUB



### ORDERING CODES

Code	Description
5104008	FRL BIT 1/8 20 08 RMSA
5104011	FRL BIT 1/8 20 012 RMSA
5204008	FRL BIT 1/4 20 08 RMSA
5204011	FRL BIT 1/4 20 012 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with 0-2 bar or 0-4 bar setting range  
 - with SAC condensate discharge

## FR+LUB



### ORDERING CODES

Code	Description
5106008	FR+L BIT 1/8 20 08 RMSA
5106011	FR+L BIT 1/8 20 012 RMSA
5206008	FR+L BIT 1/4 20 08 RMSA
5206011	FR+L BIT 1/4 20 012 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with 0-2 bar or 0-4 bar setting range  
 - with SAC condensate discharge

## FIL+DEP



### ORDERING CODES

Code	Description
5114001	F+D BIT 1/8 5 RMSA - RMSA
5114002	F+D BIT 1/8 5 SAC - RMSA
5214001	F+D BIT 1/4 5 RMSA - RMSA
5214002	F+D BIT 1/4 5 SAC - RMSA

## FIL+LUB



### ORDERING CODES

Code	Description
5113002	F+L BIT 1/8 20 RMSA
5213002	F+L BIT 1/4 20 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with SAC condensate discharge

## ACCESSORIES

### PRESSURE GAUGE



Code	Description
9700101	Acc. M 40 1/8 04
9700102	Acc. M 40 1/8 12
9700109	Acc. M 40x40 1/8 04
9700110	Acc. M 40x40 1/8 012

### DOME DISASSEMBLY SPANNER



Code	Description
9220701	Acc. cover LUB spanner

### R/FR FIXING BRACKET



Code	Description
9200701	Acc. SF100 - BIT - ND 1/4 - SY1

### COVER DISASSEMBLY SPANNER



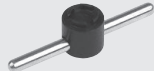
Code	Description
9170401	Acc. CS CS BIT

### WALL MOUNTING BRACKET (PAIR)



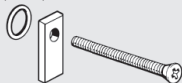
Code	Description
9170301	Acc. SFB 1/8 - 1/4 BIT

### REDUCER PLUG DISASSEMBLY SPANNER



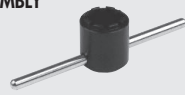
Code	Description
9170501	Acc. CS OTR BIT

### ASSEMBLY PLATE (PAIR)



Code	Description
9170201	Acc. PAB 1/8 - 1/4 BIT

### BOWL DISASSEMBLY SPANNER



Code	Description
9170601	Acc. CS TF - TL BIT - SY1

## SPARE PARTS

### UPPER COVER FOR MR



Code	Description
9250805	Spare CS 1/8 1/4 BIT 02
9250806	Spare CS 1/8 1/4 BIT 04
9250807	Spare CS 1/8 1/4 BIT 08
9250808	Spare CS 1/8 1/4 BIT 012

### COMPLETE POPPET FOR MR AND MRA



Code	Description
9250705	Spare poppet for MR
9250706	Spare poppet for MR-SR (rapid drain)
9250708	Spare poppet for MRA

### UPPER COVER FOR MR FC



Code	Description
9250817	Spare CS FC 1/8 1/4 BIT 02
9250818	Spare CS FC 1/8 1/4 BIT 04

### COMPLETE POPPET FOR FR



Code	Description
9250905	Spare OTFR 1/8 1/4 BIT 5
9250906	Spare OTFR 1/8 1/4 BIT 20
9250907	Spare OTFR 1/8 1/4 BIT 50

### UPPER COVER FOR MRA



Code	Description
9250809	Spare CSA 1/8 - 1/4 BIT 02
9250814	Spare CSA 1/8 - 1/4 BIT 04
9250815	Spare CSA 1/8 - 1/4 BIT 08
9250816	Spare CSA 1/8 - 1/4 BIT 012

### FILTER ELEMENT



Code	Description
9251708	Spare FP 1/8-1/4 BIT 5 (yellow)
9251709	Spare FP 1/8-1/4 BIT 20 (white)
9251710	Spare FP 1/8-1/4 BIT 50 (blue)

### FILTER AND FILTER-REGULATOR BOWL



Code	Description
9255001	Spare TF 1/8 1/4 BIT RMSA
9255101	Spare TF 1/8 1/4 BIT SAC

### DEPURATOR FILTER ELEMENT



Code	Description
9251712	Spare FP DEP. 1/8 1/4 BIT

### LUBRICATOR BOWL



Code	Description
9251402	Spare TL 1/8 1/4 BIT

### TRANSPARENT LUBRICATOR COVER



Code	Description
9251302	Spare CVL 100-200-300-400 BIT

### SPRING FOR MR AND FR



Code	Description
9250610	Spare MO 02 BIT
9250611	Spare MO 04 BIT
9250612	Spare MO 08 BIT
9250613	Spare MO 012 BIT

### AUTOMATIC DRAIN (SAC)



Code	Description
9000803	Spare SAC automatic drain





GENERAL TECHNICAL DATA	SK 100		SK 200			SK 300			SK 400			
Threaded port	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of filtration	5 - 20 - 50											
Degree of purification	99.97% at 0.01											
Setting range	0 to 2 0 to 4 0 to 8 0 to 12											
Max. input pressure	MPa		1.5			1.3			1.3			
	bar		15			13			13			
	psi		217			188			188			
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	NI/min											
ΔP 0.5 bar (0.05 MPa to 7 psi)	From 1100 to 20000											
Fluid	Lubricated or unlubricated compressed air											
Temperature range at 1 MPa; 10 bar; 145 psi	°C											
	-10 to +50											
	°F											
	14 to 122											
Elements comprising the range	Filter, Depurator, Regulator, Pilot operated regulator, In-series Regulator, Filter-regulator, Lubricator with various lubricant filling systems, Circuit Shut-off Valve, Progressive Actuator.											

## DEPURATOR



TECHNICAL DATA	DEP 100		DEP 200		DEP 300		DEP 400				
Threaded port	1/4"	3/8"	1/4"	3/8"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of purification	99.97% at 0.01 μm		99.97% at 0.01 μm		99.97% at 0.01 μm		99.97% at 0.01 μm				
Max. inlet pressure	MPa		1.5		1.3		1.3				
	bar		15		13		13				
	psi		217		188		188				
Suggested flow at 6 bar	NI/min		230		360		500				
Max temperature at: 1 MPa; 10 bar; 145 psi	°C		50		50		50				
	°F		122		122		122				
Weight	kg		0.4		0.9		1.4				
Wall fixing screws	M4 x 50		M5 x 60		M5 x 70		M6 x 110				
Bowl capacity	cm <sup>3</sup>		22		45		75				
Mounting position	Vertical		Vertical		Vertical		Vertical				
Drain	RMSA		RMSA		RMSA - RA		RMSA - RA				
Fluid	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate 5 μm filtered air										
Notes on use	It is advisable to mount a 5 μm pre-filter in order to separate the solid particles first. <b>The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar.</b>										

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 DEPURATOR</b>		<b>Skillair® 200 DEPURATOR</b>		<b>Skillair® 300 DEPURATOR</b>		<b>Skillair® 400 DEPURATOR</b>	
3288001A	D 100 RMSA without end plates	3488001A	D 200 RMSA without end plates	4488001A	D 300 RMSA without end plates	6188001A	D 400 RMSA without end plates
3288001	D 100 1/4 RMSA	3488001	D 200 1/4 RMSA	4488002A	D 300 RA without end plates	6188002A	D 400 RA without end plates
3388001	D 100 3/8 RMSA	3588001	D 200 3/8 RMSA	4488001	D 300 1/2 RMSA	6188001	D 400 1 RMSA
		3688001	D 200 1/2 RMSA	4488002	D 300 1/2 RA	6188002	D 400 1 RA
				4588001	D 300 3/4 RMSA	6288001	D 400 1 1/4 RMSA
				4588002	D 300 3/4 RA	6288002	D 400 1 1/4 RA
				4688001	D 300 1 RMSA	6388001	D 400 1 1/2 RMSA
				4688002	D 300 1 RA	6388002	D 400 1 1/2 RA
						6488001	D 400 2 RMSA
						6488002	D 400 2 RA

## FILTER



TECHNICAL DATA	FIL 100		FIL 200			FIL 300			FIL 400			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded port	1/4"   3/8"		1/4"   3/8"   1/2"			1/2"   3/4"   1"			1"   1 1/4"   1 1/2"   2"			
Degree of filtration	μm 5 - 20 - 50		μm 5 - 20 - 50			μm 5 - 20 - 50			μm 5 - 20 - 50			
Max. input pressure	MPa	1.5	1.3			1.3			1.3			
	bar	15	13			13			13			
	psi	217	188			188			188			
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1400	2400			3800			16500			
ΔP 0.5 bar (0.05 MPa to 7 psi)	scfm	50	85			135			590			
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	2000	3100			5300			-			
ΔP 1 bar (0.1 MPa to 14 psi)	scfm	71	110			188			-			
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	50			50			50			
	°F	122	122			122			122			
Weight	kg	0.4	0.7			1.4			5.2			
Wall fixing screws		M4 x 50	M5 x 60			M5 x 70			M6 x 110			
Bowl capacity	cm³	22	45			75			270			
Mounting position		Vertical	Vertical			Vertical			Vertical			
Drain		RMSA - SAC	RMSA - SAC - RA			RMSA - RA			RMSA - RA			

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure  
 RA: automatic drain with condensate discharge, independent of pressure and flow rate  
 SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs.  
 Compressed air.

The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar.

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 FILTER</b>							
3280001A	FIL 100 5 RMSA without end plates	3480001A	FIL 200 5 RMSA without end plates	4480001A	FIL 300 5 RMSA without end plates	6180001A	FIL 400 5 RMSA without end plates
3280007A	FIL 100 5 SAC without end plates	3480007A	FIL 200 5 SAC without end plates	4480002A	FIL 300 20 RMSA without end plates	6180002A	FIL 400 20 RMSA without end plates
3280002A	FIL 100 20 RMSA without end plates	3480002A	FIL 200 20 RMSA without end plates	4480003A	FIL 300 50 RMSA without end plates	6180003A	FIL 400 50 RMSA without end plates
3280008A	FIL 100 20 SAC without end plates	3480008A	FIL 200 20 SAC without end plates	4480004A	FIL 300 5 RA without end plates	6180004A	FIL 400 5 RA without end plates
3280003A	FIL 100 50 RMSA without end plates	3480003A	FIL 200 50 RMSA without end plates	4480005A	FIL 300 20 RA without end plates	6180005A	FIL 400 20 RA without end plates
3280009A	FIL 100 50 SAC without end plates	3480009A	FIL 200 50 SAC without end plates	4480006A	FIL 300 50 RA without end plates	6180006A	FIL 400 50 RA without end plates
3280001	FIL 100 1/4 5 RMSA	3480001	FIL 200 1/4 5 RMSA	4480001	FIL 300 1/2 5 RMSA	6180001	FIL 400 1 5 RMSA
3280007	FIL 100 1/4 5 SAC	3480007	FIL 200 1/4 5 SAC	4480002	FIL 300 1/2 20 RMSA	6180002	FIL 400 1 20 RMSA
3280002	FIL 100 1/4 20 RMSA	3480002	FIL 200 1/4 20 RMSA	4480003	FIL 300 1/2 50 RMSA	6180003	FIL 400 1 50 RMSA
3280008	FIL 100 1/4 20 SAC	3480008	FIL 200 1/4 20 SAC	4480004	FIL 300 1/2 5 RA	6180004	FIL 400 1 5 RA
3280003	FIL 100 1/4 50 RMSA	3480003	FIL 200 1/4 50 RMSA	4480005	FIL 300 1/2 20 RA	6180005	FIL 400 1 20 RA
3280009	FIL 100 1/4 50 SAC	3480009	FIL 200 1/4 50 SAC	4480006	FIL 300 1/2 50 RA	6180006	FIL 400 1 50 RA
3380001	FIL 100 3/8 5 RMSA	3580001	FIL 200 3/8 5 RMSA	4580001	FIL 300 3/4 5 RMSA	6280001	FIL 400 1 1/4 5 RMSA
3380007	FIL 100 3/8 5 SAC	3580007	FIL 200 3/8 5 SAC	4580002	FIL 300 3/4 20 RMSA	6280002	FIL 400 1 1/4 20 RMSA
3380002	FIL 100 3/8 20 RMSA	3580002	FIL 200 3/8 20 RMSA	4580003	FIL 300 3/4 50 RMSA	6280003	FIL 400 1 1/4 50 RMSA
3380008	FIL 100 3/8 20 SAC	3580008	FIL 200 3/8 20 SAC	4580004	FIL 300 3/4 5 RA	6280004	FIL 400 1 1/4 5 RA
3380003	FIL 100 3/8 50 RMSA	3580003	FIL 200 3/8 50 RMSA	4580005	FIL 300 3/4 20 RA	6280005	FIL 400 1 1/4 20 RA
3380009	FIL 100 3/8 50 SAC	3580009	FIL 200 3/8 50 SAC	4580006	FIL 300 3/4 50 RA	6280006	FIL 400 1 1/4 50 RA
		3680001	FIL 200 1/2 5 RMSA	4680001	FIL 300 1 5 RMSA	6380001	FIL 400 1 1/2 5 RMSA
		3680007	FIL 200 1/2 5 SAC	4680002	FIL 300 1 20 RMSA	6380002	FIL 400 1 1/2 20 RMSA
		3680002	FIL 200 1/2 20 RMSA	4680003	FIL 300 1 50 RMSA	6380003	FIL 400 1 1/2 50 RMSA
		3680008	FIL 200 1/2 20 SAC	4680004	FIL 300 1 5 RA	6380004	FIL 400 1 1/2 5 RA
		3680003	FIL 200 1/2 50 RMSA	4680005	FIL 300 1 20 RMSA	6380005	FIL 400 1 1/2 20 RA
		3680009	FIL 200 1/2 50 SAC	4680006	FIL 300 1 50 RA	6380006	FIL 400 1 1/2 50 RA
						6480001	FIL 400 2 5 RMSA
						6480002	FIL 400 2 20 RMSA
						6480003	FIL 400 2 50 RMSA
						6480004	FIL 400 2 5 RA
						6480005	FIL 400 2 20 RA
						6480006	FIL 400 2 50 RA

## ACTIVE CARBON FILTER



TECHNICAL DATA	AC 100		AC 200			AC 300			AC 400				
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"	
Threaded port													
Residual oil at 20°C *	mg/m <sup>3</sup>	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003				
Duration of cartridge *	hours	4000	4000	4000	4000	4000	4000	4000	1000				
Max. inlet pressure	MPa	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3				
	bar	15	13	13	13	13	13	13	13				
	psi	217	188	188	188	188	188	188	188				
Max temperature at: 1 MPa; 10 bar; 145 psi	°C	50	50	50	50	50	50	50	50				
	°F	122	122	122	122	122	122	122	122				
	kg	0.4	0.9	0.9	0.9	0.9	0.9	0.9	4.2	4.2		5	
Weight		M4 x 50	M5 x 60	M5 x 60	M5 x 60	M5 x 70	M5 x 70	M6 x 110	M6 x 110				
Wall fixing screws													
Mounting position									In any position.				
Fluid									0.01 μm filtered and deputed air.				
Notes on use									Upstream it's necessary to mount a coalescence filter deparator of 0.01 μm.				
* if the load loss of 75 mbar is not exceeded													

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>3288003A</b>	<b>Skillair® 100 ACTIVE CARBON FILTER</b>	<b>3488003A</b>	<b>Skillair® 200 ACTIVE CARBON FILTER</b>	<b>4488003A</b>	<b>Skillair® 300 ACTIVE CARBON FILTER</b>	<b>6188003A</b>	<b>Skillair® 400 ACTIVE CARBON FILTER</b>
3288003	FIL AC 100 RMSA without end plates	3488003	FIL AC 200 RMSA without end plates	4488003	FIL AC 300 RMSA without end plates	6188003	FIL AC 400 RMSA without end plates
3288003	FIL AC 100 1/4 RMSA	3488003	FIL AC 200 1/4 RMSA	4488003	FIL AC 300 1/2 RMSA	6188003	FIL AC 400 1 RMSA
3388003	FIL AC 100 3/8 RMSA	3588003	FIL AC 200 3/8 RMSA	4588003	FIL AC 300 3/4 RMSA	6288003	FIL AC 400 1 1/4 RMSA
		3688003	FIL AC 200 1/2 RMSA	4688003	FIL AC 300 1 RMSA	6388003	FIL AC 400 1 1/2 RMSA
						6488003	FIL AC 400 2 RMSA

## DIAPHRAGM DRIER SERIES DRY 100



TECHNICAL DATA	DRY 100		FIL + DEP + PA + DRY 100	
	1/4"	3/8"	1/4"	3/8"
Threaded port				
Max. inlet pressure	1.3 MPa / 13 bar / 188 psi			
Suggested flow rate at 6.3 bar (0.63 MPa, 91 psi)	Nl/min	230	8	20
	scfm	8	20	0.7
Consumption of compressed air for regeneration at 6.3 bar	Nl/min	20	0.7	20
	scfm	0.7	20	0.7
Minimum temperature	2°C / 35°F			
Maximum temperature at 1MPa; 10 bar; 145 psi	50°C / 122°F			
Noise level	dB(A) < 45			
Weight	0.84	1.24	0.84	1.24
Wall fixing screws	M4 x 50			
Mounting position	In any position		Vertical	
Drain	-		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure	
	-		SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs.	
Filter bowl and purification bowl capacity	-		22	
Fluid	Compressed air without condensate max solid particle size: 1 μm max oil residue: 0.01 mg/m <sup>3</sup>		Compressed air	
Important note	The drier must always be preceded by a 5 μm filter and a purifier			

### DRY 100

Code	Description
3290001A	DRY 100 without end plates
3290001	DRY 100 1/4"
3390001	DRY 100 3/8"

### FIL + DEP + PA + DRY 100

Code	Description
3291001	F + D + PA + DRY 100 1/4" RMSA-RMSA
3291005	F + D + PA + DRY 100 1/4" SAC-RMSA
3291006	F + D + PA + DRY 100 1/4" SAC-SAC
3391001	F + D + PA + DRY 100 3/8" RMSA-RMSA
3391005	F + D + PA + DRY 100 3/8" SAC-RMSA
3391006	F + D + PA + DRY 100 3/8" SAC-SAC

## REGULATORS



TECHNICAL DATA	REG 100		REG 200			REG 300			REG 400 PILOT OPERATOR*			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded port	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12											
Setting range	bar											
Max. input pressure	MPa		1.5			1.3			Depending on the pilot operated regulator			
	bar		15			13			1.3			
	psi		217			188			13			
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	NL/min		1100			3500			188			
ΔP 0.5 bar (0.05 MPa to 7 psi)	scfm		39			124			188			
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	NL/min		1600			7000			20000			
ΔP 1 bar (0.1 MPa to 14 psi)	scfm		57			247			707			
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50			50			-			
	°F		122			122			50			
Weight	kg		0.4			1.4			4.8			
Wall fixing screws	M4 x 50		M5 x 60			M5 x 70			M6 x 110			
Pressure gauge port	1/8"		1/8"			1/8"			1/4"			
Mounting position	In any position											
Fluid	Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.											
Notes on use	The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. <b>Do not take air from pressure gauge ports.</b> <b>*Supplied without a pilot regulator.</b>											

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 REGULATOR</b>		<b>Skillair® 200 REGULATOR</b>		<b>Skillair® 300 REGULATOR</b>		<b>Skillair® 400 REGULATOR</b>	
3202001A	REG 100 02 without end plates	3402001A	REG 200 02 without end plates	4402000A	REG 300 02 without end plates	6102001A	REG 400 without end plates
3202002A	REG 100 04 without end plates	3402002A	REG 200 04 without end plates	4402001A	REG 300 04 without end plates	6102001	REG 400 1
3202003A	REG 100 08 without end plates	3402003A	REG 200 08 without end plates	4402002A	REG 300 08 without end plates	6202001	REG 400 1 1/4
3202004A	REG 100 012 without end plates	3402004A	REG 200 012 without end plates	4402003A	REG 300 012 without end plates	6302001	REG 400 1 1/2
3202001	REG 100 1/4 02	3402001	REG 200 1/4 02	4402000	REG 300 1/2 02	6402001	REG 400 2
3202002	REG 100 1/4 04	3402002	REG 200 1/4 04	4402001	REG 300 1/2 04		
3202003	REG 100 1/4 08	3402003	REG 200 1/4 08	4402002	REG 300 1/2 08		
3202004	REG 100 1/4 012	3402004	REG 200 1/4 012	4402003	REG 300 1/2 012		
3302001	REG 100 3/8 02	3502001	REG 200 3/8 02	4502000	REG 300 3/4 02		
3302002	REG 100 3/8 04	3502002	REG 200 3/8 04	4502001	REG 300 3/4 04		
3302003	REG 100 3/8 08	3502003	REG 200 3/8 08	4502002	REG 300 3/4 08		
3302004	REG 100 3/8 012	3502004	REG 200 3/8 012	4502003	REG 300 3/4 012		
		3602001	REG 200 1/2 02	4602000	REG 300 1 02		
		3602002	REG 200 1/2 04	4602001	REG 300 1 04		
		3602003	REG 200 1/2 08	4602002	REG 300 1 08		
		3602004	REG 200 1/2 012	4602003	REG 300 1 012		

## PADLOCKABLE REGULATOR



Look at regulator for technical data

### ORDERING CODES

Code	Description	Code	Description	Code	Description
<b>Skillair® 100 PADLOCKABLE REGULATOR</b>		<b>Skillair® 200 PADLOCKABLE REGULATOR</b>		<b>Skillair® 300 PADLOCKABLE REGULATOR</b>	
3210001A	REG 100 KEY 02 without end plates	3410001A	REG 200 KEY 02 without end plates	4410000A	REG 300 KEY 02 without end plates
3210002A	REG 100 KEY 04 without end plates	3410002A	REG 200 KEY 04 without end plates	4410001A	REG 300 KEY 04 without end plates
3210003A	REG 100 KEY 08 without end plates	3410003A	REG 200 KEY 08 without end plates	4410002A	REG 300 KEY 08 without end plates
3210004A	REG 100 KEY 012 without end plates	3410004A	REG 200 KEY 012 without end plates	4410003A	REG 300 KEY 012 without end plates
3210001	REG 100 KEY 1/4 02	3410001	REG 200 KEY 1/4 02	4410000	REG 300 KEY 1/2 02
3210002	REG 100 KEY 1/4 04	3410002	REG 200 KEY 1/4 04	4410001	REG 300 KEY 1/2 04
3210003	REG 100 KEY 1/4 08	3410003	REG 200 KEY 1/4 08	4410002	REG 300 KEY 1/2 08
3210004	REG 100 KEY 1/4 012	3410004	REG 200 KEY 1/4 012	4410003	REG 300 KEY 1/2 012
3310001	REG 100 KEY 3/8 02	3510001	REG 200 KEY 3/8 02	4510000	REG 300 KEY 3/4 02
3310002	REG 100 KEY 3/8 04	3510002	REG 200 KEY 3/8 04	4510001	REG 300 KEY 3/4 04
3310003	REG 100 KEY 3/8 08	3510003	REG 200 KEY 3/8 08	4510002	REG 300 KEY 3/4 08
3310004	REG 100 KEY 3/8 012	3510004	REG 200 KEY 3/8 012	4510003	REG 300 KEY 3/4 012
		3610001	REG 200 KEY 1/2 02	4610000	REG 300 KEY 1 02
		3610002	REG 200 KEY 1/2 04	4610001	REG 300 KEY 1 04
		3610003	REG 200 KEY 1/2 08	4610002	REG 300 KEY 1 08
		3610004	REG 200 KEY 1/2 012	4610003	REG 300 KEY 1 012

## Skillair® 100 IN-SERIES REGULATOR



TECHNICAL DATA		
Threaded inlet port		1/4"
Threaded user port		G 1/8"
Degree of purification	bar	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12
Max. input pressure		1.5 MPa - 15 bar - 217 psi
Flow rate at 6.3 bar (0.63 MPa to 91 psi)		500 Nl/min
ΔP 0.5 bar (0.05 MPa to 7 psi)		18 scfm
Flow rate at 6.3 bar (0.63 MPa to 91 psi)		950 Nl/min
ΔP 1 bar (0.1 MPa to 14 psi)		34 scfm
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50
	°F	122
Weight	kg	0.4
Wall fixing screws		M4x50
Mounting position		In any position
Pressure gauge port		G 1/8"
Notes on use		The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.

### ORDERING CODES

Code	Description	Code	Description	Code	Description
<b>100 IN-SERIES REGULATOR</b>		<b>100 IN-SERIES REGULATOR</b>		<b>100 IN-SERIES REGULATOR</b>	
3202101A	100 IN-SERIES REG. 0-2 without end plates	3202101	100 IN-SERIES REG. 1/4 0-2	3302101	100 IN-SERIES REG. 3/8 0-2
3202102A	100 IN-SERIES REG. 0-4 without end plates	3202102	100 IN-SERIES REG. 1/4 0-4	3302102	100 IN-SERIES REG. 3/8 0-4
3202103A	100 IN-SERIES REG. 0-8 without end plates	3202103	100 IN-SERIES REG. 1/4 0-8	3302103	100 IN-SERIES REG. 3/8 0-8
3202104A	100 IN-SERIES REG. 0-12 without end plates	3202104	100 IN-SERIES REG. 1/4 0-12	3302104	100 IN-SERIES REG. 3/8 0-12

## PILOT REGULATOR



TECHNICAL DATA		PILOT REGULATOR
Threaded port		1/4"
Setting range	bar	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12
Max. input pressure	MPa	1.3
	bar	13
	psi	188
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)		120 Nl/min - 4.3 scfm
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)		140 Nl/min - 5 scfm
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50
	°F	122
Weight	kg	0.6
Mounting position		In any position
Pressure gauge port		G 1/8"
Notes on use		The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. <b>Do not take air from the pressure gauge ports. Mount directly on REG 400.</b>

### ORDERING CODES

Code	Description	Code	Description
3206001	REG. P 1/4" 02	3206003	REG. P 1/4" 08
3206002	REG. P 1/4" 04	3206004	REG. P 1/4" 012

## PILOT PADLOCKABLE REGULATOR



Look at regulator for technical data

### ORDERING CODES

Code	Description	Code	Description
3208001	REG. P KEY 1/4" 02	3208003	REG. P KEY 1/4" 08
3208002	REG. P KEY 1/4" 04	3208004	REG. P KEY 1/4" 012

## FILTER REGULATOR



TECHNICAL DATA	FR 100		FR 200			FR 300		
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Threaded port	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Setting range	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12 bar		0 to 2 - 0 to 4 - 0 to 8 - 0 to 12 bar			0 to 2 - 0 to 4 - 0 to 8 - 0 to 12 bar		
Degree of filtration	5 - 20 - 50 µm		5 - 20 - 50 µm			5 - 20 - 50 µm		
Max. input pressure	1.5 MPa - 15 bar - 217 psi		1.3 MPa - 13 bar - 188 psi			1.3 MPa - 13 bar - 188 psi		
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1100	1600			3500		
ΔP 0.5 bar (0.05 MPa to 7psi)	scfm	39	57			125		
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1600	3000			5600		
ΔP 1 bar (0.1 MPa to 14 psi)	scfm	57	71			200		
Max temperature at: 1 MPa; 10 bar; 145 psi	°C	50	50			50		
	°F	122	122			122		
Weight	kg	0.5	1			1.8		
Wall fixing screws		M4 x 50	M5 x 60			M5 x 70		
Mounting position		Vertical	Vertical			Vertical		
Pressure gauge port		1/8"	1/8"			1/8"		
Bowl capacity	cm³	22	45			75		
Drain		RMSA - SAC	RMSA - SAC - RA			RMSA - RA		

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure  
 RA: automatic drain with condensate discharge, independent of pressure and flow rate  
 SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs.  
 Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.  
 The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. **Do not take air from pressure gauge ports.**  
**The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar.**

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 FILTER REGULATOR</b>							
3283007A	FR 100 5 08 RMSA without end plates	3383034	FR 100 3/8 5 012 SAC	3583031	FR 200 3/8 5 08 SAC	4483007	FR 300 1/2 5 012 RMSA
3283008A	FR 100 20 08 RMSA without end plates	3383035	FR 100 3/8 20 012 SAC	3583032	FR 200 3/8 20 08 SAC	4483008	FR 300 1/2 20 012 RMSA
3283009A	FR 100 50 08 RMSA without end plates	3383036	FR 100 3/8 50 012 SAC	3583033	FR 200 3/8 50 08 SAC	4483009	FR 300 1/2 50 012 RMSA
3283010A	FR 100 5 012 RMSA without end plates	<b>Skillair® 200 FILTER REGULATOR</b>					
3283011A	FR 100 20 012 RMSA without end plates	3483007A	FR 200 5 08 RMSA without end plates	3583034	FR 200 3/8 5 012 SAC	4483013	FR 300 1/2 5 08 RA
3283012A	FR 100 50 012 RMSA without end plates	3483008A	FR 200 20 08 RMSA without end plates	3583035	FR 200 3/8 20 012 SAC	4483014	FR 300 1/2 20 08 RA
3283031A	FR 100 5 08 SAC without end plates	3483009A	FR 200 50 08 RMSA without end plates	3683007	FR 200 1/2 5 08 RMSA	4483015	FR 300 1/2 50 08 RA
3283032A	FR 100 20 08 SAC without end plates	3483010A	FR 200 5 012 RMSA without end plates	3683008	FR 200 1/2 20 08 RMSA	4483016	FR 300 1/2 5 012 RA
3283033A	FR 100 50 08 SAC without end plates	3483011A	FR 200 20 012 RMSA without end plates	3683009	FR 200 1/2 50 08 RMSA	4483017	FR 300 1/2 20 012 RA
3283034A	FR 100 5 012 SAC without end plates	3483012A	FR 200 50 012 RMSA without end plates	3683010	FR 200 1/2 5 012 RMSA	4483018	FR 300 1/2 50 012 RA
3283035A	FR 100 20 012 SAC without end plates	3483031A	FR 200 5 08 SAC without end plates	3683011	FR 200 1/2 20 012 RMSA	4583004	FR 300 3/4 5 08 RMSA
3283036A	FR 100 50 012 SAC without end plates	3483032A	FR 200 20 08 SAC without end plates	3683012	FR 200 1/2 50 012 RMSA	4583005	FR 300 3/4 20 08 RMSA
3283007	FR 100 1/4 5 08 RMSA	3483033A	FR 200 50 08 SAC without end plates	3683013	FR 200 1/2 5 08 SAC	4583006	FR 300 3/4 50 08 RMSA
3283008	FR 100 1/4 20 08 RMSA	3483034A	FR 200 5 012 SAC without end plates	3683032	FR 200 1/2 20 08 SAC	4583007	FR 300 3/4 5 012 RMSA
3283009	FR 100 1/4 50 08 RMSA	3483035A	FR 200 20 012 SAC without end plates	3683033	FR 200 1/2 50 08 SAC	4583008	FR 300 3/4 20 012 RMSA
3283010	FR 100 1/4 5 012 RMSA	3483036A	FR 200 50 012 SAC without end plates	3683034	FR 200 1/2 5 012 SAC	4583009	FR 300 3/4 50 012 RMSA
3283011	FR 100 1/4 20 012 RMSA	3483007	FR 200 1/4 5 08 RMSA	3683035	FR 200 1/2 20 012 SAC	4583013	FR 300 3/4 5 08 RA
3283012	FR 100 1/4 50 012 RMSA	3483008	FR 200 1/4 20 08 RMSA	3683036	FR 200 1/2 50 012 SAC	4583014	FR 300 3/4 20 08 RA
3283031	FR 100 1/4 5 08 SAC	3483009	FR 200 1/4 50 08 RMSA	<b>Skillair® 300 FILTER REGULATOR</b>			
3283032	FR 100 1/4 20 08 SAC	3483010	FR 200 1/4 5 012 RMSA	4483004A	FR 300 5 08 RMSA without end plates	4583017	FR 300 3/4 20 012 RA
3283033	FR 100 1/4 50 08 SAC	3483011	FR 200 1/4 20 012 RMSA	4483005A	FR 300 20 08 RMSA without end plates	4583018	FR 300 3/4 50 012 RA
3283034	FR 100 1/4 5 012 SAC	3483012	FR 200 1/4 50 012 RMSA	4483006A	FR 300 50 08 RMSA without end plates	4683004	FR 300 1 5 08 RMSA
3283035	FR 100 1/4 20 012 SAC	3483031	FR 200 1/4 5 08 SAC	4483007A	FR 300 5 012 RMSA without end plates	4683005	FR 300 1 20 08 RMSA
3283036	FR 100 1/4 50 012 SAC	3483032	FR 200 1/4 20 08 SAC	4483008A	FR 300 20 012 RMSA without end plates	4683006	FR 300 1 50 08 RMSA
3383007	FR 100 3/8 5 08 RMSA	3483033	FR 200 1/4 50 08 SAC	4483009A	FR 300 50 012 RMSA without end plates	4683007	FR 300 1 5 012 RMSA
3383008	FR 100 3/8 20 08 RMSA	3483034	FR 200 1/4 5 012 SAC	4483013A	FR 300 5 08 RA without end plates	4683008	FR 300 1 20 012 RMSA
3383009	FR 100 3/8 50 08 RMSA	3483035	FR 200 1/4 20 012 SAC	4483014A	FR 300 20 08 RA without end plates	4683009	FR 300 1 50 012 RMSA
3383010	FR 100 3/8 5 012 RMSA	3483036	FR 200 1/4 50 012 SAC	4483015A	FR 300 50 08 RA without end plates	4683013	FR 300 1 5 08 RA
3383011	FR 100 3/8 20 012 RMSA	3583007	FR 200 3/8 5 08 RMSA	4483016A	FR 300 5 012 RA without end plates	4683014	FR 300 1 20 08 RA
3383012	FR 100 3/8 50 012 RMSA	3583008	FR 200 3/8 20 08 RMSA	4483017A	FR 300 20 012 RA without end plates	4683015	FR 300 1 50 08 RA
3383031	FR 100 3/8 5 08 SAC	3583009	FR 200 3/8 50 08 RMSA	4483018A	FR 300 50 012 RA without end plates	4683016	FR 300 1 5 012 RA
3383032	FR 100 3/8 20 08 SAC	3583010	FR 200 3/8 5 012 RMSA	4483004	FR 300 1/2 5 08 RMSA	4683017	FR 300 1 20 012 RA
3383033	FR 100 3/8 50 08 SAC	3583011	FR 200 3/8 20 012 RMSA	4483005	FR 300 1/2 20 08 RMSA	4683018	FR 300 1 50 012 RA
		3583012	FR 200 3/8 50 012 RMSA	4483006	FR 300 1/2 50 08 RMSA		

## Skillair® 300 PILOT OPERATED REGULATOR



TECHNICAL DATA		300 PILOT OPERATED REG		
		1/2"	3/4"	1"
Threaded port			Depending on the pilot regulator	
Setting range				
Max. input pressure	MPa		1.3	
	bar		13	
	psi		188	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min		4500	
	scfm		160	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 1.4 psi)	Nl/min		7000	
	scfm		247	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.		
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50	
	°F		122	
Weight	kg		1.3	
Wall fixing screws			M5 x 70	
Mounting position			In any position	
Pressure gauge port			1/8"	
Notes on use		The regulator pressure must always be set upwards. <b>Do not take air from the pressure gauge ports.</b>		

### ORDERING CODES

Code	Description	Code	Description
4403003A	300 PILOT OPERATED REG without end plates	4503003	300 3/4" PILOT OPERATED REG
4403003	300 1/2" PILOT OPERATED REG	4603003	300 1" PILOT OPERATED REG

## LUBRICATOR



TECHNICAL DATA	LUB 100		LUB 200			LUB 300			LUB 400			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded port												
Type of lubrication	Mist		Mist			Mist			Mist			
Bowl capacity	50		95			160			800			
Versions	Standard - CD		Standard - CD			Standard - CD - ML CD			Standard - CD - ML CD			
Max. inlet pressure	Mpa	1.5	1.3			1.3			1.3			1.3
	bar	15	13			13			13			13
	psi	217	188			188			188			188
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1100	2200			3500			18000			21000
ΔP 0.5 bar (0.05 MPa to 7 psi)	scfm	39	71			125			640			750
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1500	3700			5500			-			-
ΔP 1 bar (0.1 MPa to 1.4 psi)	scfm	53	131			196			-			-
Max temperature at: 1 MPa; 10 bar; 145 psi	°C	50	50			50			50			50
	°F	122	122			122			122			122
Weight	kg	0.4	0.7			1.4			4.9			5.7
Wall fixing screws		M4 x 50	M5 x 60			M5 x 70			M6 x 110			M6 x 110
Mounting position		Vertical										
Fluid		Filtered compressed air										
Recommended oils		ISO and UNI FD22 (Energol HPL to Spinesso to Mobil DTE to Tellus Oil).										
Notes on use		Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. <b>Do not use cleaning oils, brake fluid oils or solvents in general.</b> For the best lubrication results, set the drip rate to one drop per 300-600 Nl.										

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 LUBRICATOR</b>		<b>Skillair® 200 LUBRICATOR</b>		<b>Skillair® 300 LUBRICATOR</b>		<b>Skillair® 400 LUBRICATOR</b>	
3281001A	LUB 100 without end plates	3481001A	LUB 200 without end plates	4481001A	LUB 300 without end plates	6181001A	LUB 400 without end plates
3281005A	LUB 100 CD manual without end plates	3481005A	LUB 200 CD manual without end plates	4481005A	LUB 300 CD manual without end plates	6181005A	LUB 400 CD manual without end plates
3281001	LUB 100 1/4	3481001	LUB 200 1/4	4481006A	LUB 300 ML-CD autom. without end plates	6181006A	LUB 400 ML-CD autom. without end plates
3281005	LUB 100 1/4 CD manual	3481005	LUB 200 1/4 CD manual	4481001	LUB 300 1/2	6181001	LUB 400 1
3381001	LUB 100 3/8	3581001	LUB 200 3/8	4481005	LUB 300 1/2 CD manual	6181004	LUB 400 1 CD manual
3381005	LUB 100 3/8 CD manual	3581005	LUB 200 3/8 CD manual	4481006	LUB 300 1/2 ML-CD automatic	6181006	LUB 400 1 ML-CD automatic
		3681001	LUB 200 1/2	4581001	LUB 300 3/4	6281001	LUB 400 1 1/4
		3681005	LUB 200 1/2 CD manual	4581005	LUB 300 3/4 CD manual	6281004	LUB 400 1 1/4 CD manual
				4581006	LUB 300 3/4 ML-CD automatic	6281006	LUB 400 1 1/4 ML-CD automatic
				4681001	LUB 300 1	6381001	LUB 400 1 1/2
				4681005	LUB 300 1 CD manual	6381004	LUB 400 1 1/2 CD manual
				4681006	LUB 300 1 ML-CD automatic	6381006	LUB 400 1 1/2 ML-CD automatic
						6481001	LUB 400 2
						6481004	LUB 400 2 CD manual
						6481006	LUB 400 2 ML-CD automatic

STD: Standard version filled with oil by removing the bowl or through the top cap. Requires circuit relieving.  
ML CD: Depression filling with minimum leveland valve  
CD MANUAL: Filling by depression.



## SHUT-OFF VALVE



TECHNICAL DATA		V3V 100		V3V 200			V3V 300			V3V 400			
Threaded port		1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Min. inlet pressure for solenoid version **	MPa	0.3		0.3			0.2			0.3			0.3
	bar	3		3			2			3			3
	psi	43.5		43.5			29			43.5			43.5
Max. input pressure*	MPa	1.5		1.3			1.3			1.3			1.3
	bar	15		13			13			13			13
	psi	217		188			188			188			188
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1300		2400			3200			13000			14000
ΔP 0.5 bar (0.05 MPa to 7 psi)	scfm	46		85			113			460			494
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1650		3000			4700			-			-
ΔP 1 bar (0.1 MPa to 14 psi)	scfm	58		106			166			-			-
Max temperature	°C	50		50			50			50			50
	°F	122		122			122			122			122
Weight	kg	~ 0.5		~ 0.8			~ 1.2			4.8			5.6
Wall fixing screws		M4 x 50		M5 x 60			M5 x 70			M6 x 110			M6 x 110
Type of control		Manual - Pneumatic - Solenoid						Manual - Pneumatic - Solenoid					
		Solenoid pilot-assisted						Solenoid pilot-assisted - Key-operated					
Mounting position		In any position.											
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.											
Note		* 1 MPa - 10 bar - 145 psi for solenoid version											
		** 0.01 MPa - 0.1 bar - 1.45 psi for manual, pneumatic and pilot-assisted versions with controls min. 0.3 MPa 3 bar 43.5 psi.											

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 3-WAY VALVE</b>		<b>Skillair® 200 3-WAY VALVE</b>		<b>Skillair® 300 3-WAY VALVE</b>		<b>Skillair® 400 3-WAY VALVE</b>	
3270001A	V3V 100 lockable without end plates	3470001A	V3V 200 lockable without end plates	4470001A	V3V 300 lockable without end plates	6169010A	V3V 400 key-operated without end plates
3269000A	V3V 100 pneumatic without end plates	3469000A	V3V 200 pneumatic without end plates	4469000A	V3V 300 pneumatic without end plates	6169000A	V3V 400 pneumatic without end plates
3269001A	V3V 100 solenoid without end plates	3469001A	V3V 200 solenoid without end plates	4469004A	V3V 300 solenoid cno without end plates	6169004A	V3V 400 solenoid cno without end plates
3269002A	V3V 100 sol. pilot assisted without end plates	3469002A	V3V 200 sol. pilot assisted without end plates	4469005A	V3V 300 sol. cno pilot-assisted w/end plates	6169005A	V3V 400 sol. cno pilot-assisted w/end plates
3270001	V3V 100 1/4 lockable	3469004A	V3V 200 solenoid cno comm. w/end plate	4470001	V3V 300 1/2 lockable	6170002A	V3V 400 lockable without end plates
3269000	V3V 100 1/4 pneumatic	3469005A	V3V 200 sol. cno ass. comm. w/end plate	4469000	V3V 300 1/2 pneumatic	6169010	V3V 400 1 key-operated
3269001	V3V 100 1/4 solenoid	3470001	V3V 200 1/4 lockable	4469004	V3V 300 1/2 solenoid cno	6169000	V3V 400 1 pneumatic
3269002	V3V 100 1/4 solenoid pilot assisted	3469000	V3V 200 1/4 pneumatic	4469005	V3V 300 1/2 solenoid cno assisted	6169004	V3V 400 1 solenoid cno
3370001	V3V 100 3/8 lockable	3469001	V3V 200 1/4 solenoid	4570001	V3V 300 3/4 lockable	6169005	V3V 400 1 solenoid cno assisted
3369000	V3V 100 3/8 pneumatic	3469002	V3V 200 1/4 solenoid pilot assisted	4569000	V3V 300 3/4 pneumatic	6269010	V3V 400 1 1/4 key-operated
3369001	V3V 100 3/8 solenoid	3469004	V3V 200 1/4 solenoid cno comm.	4569004	V3V 300 3/4 solenoid cno	6269000	V3V 400 1 1/4 pneumatic
3369002	V3V 100 3/8 solenoid pilot assisted	3469005	V3V 200 1/4 solenoid cno pilot-assisted	4569005	V3V 300 3/4 solenoid cno assisted	6269004	V3V 400 1 1/4 solenoid cno
		3570001	V3V 200 3/8 lockable	4669000	V3V 300 1 pneumatic	6269005	V3V 400 1 1/4 solenoid cno assisted
		3569000	V3V 200 3/8 pneumatic	4669004	V3V 300 1 solenoid cno	6369010	V3V 400 1 1/2 key-operated
		3569001	V3V 200 3/8 solenoid	4669005	V3V 300 1 solenoid cno assisted	6369000	V3V 400 1 1/2 pneumatic
		3569002	V3V 200 3/8 solenoid pilot assisted	4670001	V3V 300 1 lockable	6369004	V3V 400 1 1/2 solenoid cno
		3569004	V3V 200 3/8 solenoid cno comm.			6369005	V3V 400 1 1/2 solenoid cno assisted
		3569005	V3V 200 3/8 solenoid cno pilot-assisted			6469010	V3V 400 2 key-operated
		3670001	V3V 200 1/2 lockable			6469000	V3V 400 2 pneumatic
		3669000	V3V 200 1/2 pneumatic			6469004	V3V 400 2 solenoid cno
		3669001	V3V 200 1/2 solenoid			6469005	V3V 400 2 solenoid cno assisted
		3669002	V3V 200 1/2 solenoid pilot assisted			6170002	V3V 400 1 lockable
		3669004	V3V 200 1/2 solenoid cno comm.			6270002	V3V 400 1 1/4 lockable
		3669005	V3V 200 1/2 solenoid cno pilot-assisted			6370002	V3V 400 1 1/2 lockable
						6470002	V3V 400 2 lockable

## SUB-BASE AND ADAPTER BASE



### ORDERING CODES

Code	Description	Code	Description	Code	Description
<b>MULTIPLE SUB-BASES FOR REGULATORS</b>		<b>ADAPTER BASE</b>		<b>SIZE ADAPTER</b>	
9200202	ACC. SB 2 100	9201801	BA 100	9301801	BA 100 - 200
9300202	ACC. SB 2 200	9321801	BA 200	9301802	BA 100 - 300
9400202	ACC. SB 2 300	9401801	BA 300	9301803	BA 200 - 300
9200302	ACC. SB 3 100				
9300302	ACC. SB 3 200				
9400302	ACC. SB 3 300				

## PROGRESSIVE START VALVE

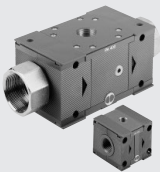


TECHNICAL DATA		VAP 100	
		1/4"	3/8"
Threaded port			
Min. inlet pressure **	MPa	0.3	
	bar	3	
	psi	43.5	
Max. inlet pressure*	MPa	1.5	
	bar	15	
	psi	217	
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	1300	
	scfm	46	
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min	2000	
	scfm	71	
Max temperature	°C	50	
	°F	122	
Weight	kg	0.5 ~	
Wall fixing screws		M4 x 50	
Mounting position		In any position	
Type of control		Automatic - Pneumatic - Solenoid - Solenoid pilot-assisted	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous	
** 0.01 MPa - 0.1 bar - 1.45 psi for pneumatic and pilot-assisted versions with controls at min. 0.3 MPa 3 bar 43.5 psi.			
* 1 MPa - 10 bar - 145 psi			

### ORDERING CODES

Code	Description	Code	Description
3271000A	VAP 100 without end plates	3271600	VAP 100 1/4 solenoid
3271500A	VAP 100 pneumatic without end plates	3271700	VAP 100 1/4 solenoid pilot-assisted
3271600A	VAP 100 solenoid without end plates	3371000	VAP 100 3/8
3271700A	VAP 100 solenoid pilot-assisted without end plates	3371500	VAP 100 3/8 pneumatic
3271000	VAP 100 1/4	3371600	VAP 100 3/8 solenoid
3271500	VAP 100 1/4 pneumatic	3371700	VAP 100 3/8 solenoid pilot-assisted

## AIR TAKE-OFF



TECHNICAL DATA	PA 100		PA 200			PA 300			PA 400			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded port												
Max. working temperature	°C	50	50	50	50	50	50	50	50	50	50	50
at: 1 MPa; 10 bar; 145 psi	°F	122	122	122	122	122	122	122	122	122	122	122
Max. operating pressure	MPa	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	bar	15	13	13	13	13	13	13	13	13	13	13
	psi	217	188	188	188	188	188	188	188	188	188	188
Wall fixing screws		M4 x 50	M5 x 60	M5 x 60	M5 x 60	M5 x 70	M5 x 70	M5 x 70	M6 x 110	M6 x 110	M6 x 110	M6 x 110
Threaded port		1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	1"	1"	1"	1"
Weight	kg	0.3	0.5	0.5	0.5	0.8	0.8	0.8	4.3	4.3	4.3	5.1

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description						
<b>Skillair® 100 AIR TAKE-OFF</b>													
9200402A	PA 100 without end plates	<b>Skillair® 200 AIR TAKE-OFF</b>											
9200402	PA 100 1/4	9300402A	PA 200 without end plates	<b>Skillair® 300 AIR TAKE-OFF</b>									
9300401	PA 100 3/8	9300404	PA 200 1/2	9400402A	PA 300 without end plates	<b>Skillair® 400 AIR TAKE-OFF</b>							
		9300402	PA 200 1/4	9500402	PA 300 1	9700401A	PA 400 without end plates						
		9300403	PA 200 3/8	9400402	PA 300 1/2	9700401	PA 400 1						
				9500401	PA 300 3/4	9700403	PA 400 1 1/2						
						9700402	PA 400 1 1/4						
						9700404	PA 400 2						

## PROGRESSIVE STARTER

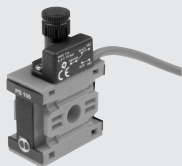


TECHNICAL DATA	APR 100		APR 200		APR 300		APR 400		
	1/4"	3/8"	1/4"	3/8"   1/2"	1/2"	3/4"   1"	1"	1 1/4"   1 1/2"	2"
Threaded port									
Min. inlet pressure	MPa	0.3		0.3		0.4		0.3	0.3
	bar	3		3		4		3	3
	psi	43.5		43.5		58		43.5	43.5
Max. inlet pressure*	MPa	1.5		1.3		1.3		1.3	1.3
	bar	15		13		13		13	13
	psi	217		188.5		188.5		188.5	188.5
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	1300		2000		2400		13000	14000
ΔP 0.5 bar (0.05 MPa to 7 psi)	scfm	46		71		85		460	494
Flow rate at 6.3 bar (0.63 MPa to 91 psi)	Nl/min	2000		3200		3600		-	-
ΔP 1 bar (0.1 MPa to 14 psi)	scfm	71		113		127		-	-
Max temperature	°C	50		50		50		50	50
	°F	122		122		122		122	122
Weight	kg	~ 0.8		~ 0.9		~ 1.5		5.6	6.4
Wall fixing screws		M4 x 50		M5 x 60		M5 x 70		M6 x 110	M6 x 110
Type of control		Pneumatic Solenoid		Pneumatic Solenoid		Pneumatic CNOMO Solenoid		Pneumatic - Solenoid	
Mounting position		In any position							
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.							
Notes on use		For the pneumatic version 200 the pilot pressure must range between the inlet P and the inlet P + 2 bar. For pneumatic version 300, the pilot pressure must be greater or equal to the input pressure. * 1 MPa - 10 bar - 145 psi for solenoid version							

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>Skillair® 100 PROGRESSIVE STARTER</b>		<b>Skillair® 200 PROGRESSIVE STARTER</b>		<b>Skillair® 300 PROGRESSIVE STARTER</b>		<b>Skillair® 400 PROGRESSIVE STARTER</b>	
3267001A	APR 100 pneumatic without end plates	3471000A	APR 200 pneumatic without end plates	4471900A	APR 300 pneumatic without end plates	6171002A	APR 400 pneumatic without end plates
3267051A	APR 100 solenoid without end plates	3471001A	APR 200 solenoid without end plates	4471901A	APR 300 solen. cnomo without end plates	6171003A	APR 400 solenoid without end plates
3267001	APR 100 1/4 pneumatic	3471004A	APR 200 solen. cnomo without end plates	4471900	APR 300 1/2 pneumatic	6171002	APR 400 1 pneumatic
3267051	APR 100 1/4 solenoid	3471000	APR 200 1/4 pneumatic	4471901	APR 300 1/2 solenoid cnomo control	6171003	APR 400 1 solenoid
3367001	APR 100 3/8 pneumatic	3471001	APR 200 1/4 solenoid	4571900	APR 300 3/4 pneumatic	6271002	APR 400 1 1/4 pneumatic
3367051	APR 100 3/8 solenoid	3471004	APR 200 1/4 solenoid cnomo control	4571901	APR 300 3/4 solenoid cnomo control	6271003	APR 400 1 1/4 solenoid
		3571000	APR 200 3/8 pneumatic	4671900	APR 300 1 pneumatic	6371002	APR 400 1 1/2 pneumatic
		3571001	APR 200 3/8 solenoid	4671901	APR 300 1 solenoid cnomo control	6371003	APR 400 1 1/2 solenoid
		3571004	APR 200 3/8 solenoid cnomo control			6471002	APR 400 2 pneumatic
		3671000	APR 200 1/2 pneumatic			6471003	APR 400 2 solenoid
		3671001	APR 200 1/2 solenoid				
		3671004	APR 200 1/2 solenoid cnomo control				

## PRESSURE SWITCHES



TECHNICAL DATA		PS 100	PS 200	PS 300
		Adjustable pressure interval		0.5 to 10
Hysteresis (not adjustable)	bar		from 0.4 to 0.8	
Maximum pressure	bar	15	13	13
	MPa	1.5	1.3	1.3
	psi	217	188	188
Operating temperature range at: 1 MPa; 10 bar; 145 psi	°C		-10 to 50	
	°F		14 to 122	
Lower threaded port		1/4"	1/4"	3/8"
Maximum current	A		2	
Maximum voltage	V		250	
Outside diameter of cable	mm		4.9	
Number of wires and cross section			3 x 0.5 mm <sup>2</sup>	
Contacts			Normally-Open (NO) and Normally-Closed (NC)	
Protection			IP65	
Number of switchings			5 x 10 <sup>6</sup>	
Fluid		Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.		
Mounting position		In any position.		
Weight	kg	0.160	0.185	0.250

### ORDERING CODES

Code	Description	Code	Description	Code	Description
<b>Skillair® 100 PRESSURE SWITCHES</b>		<b>Skillair® 200 PRESSURE SWITCHES</b>		<b>Skillair® 300 PRESSURE SWITCHES</b>	
3240000A	PS 100 2A NO/NC 2 m cable without end plates	3440000A	PS 200 2A NO/NC 2 m cable without end plates	4440000A	PS 300 2A NO/NC 2 m cable without end plates
3240001A	PS 100 2A NO/NC M8 connector without end plates	3440001A	PS 200 2A NO/NC M8 connector without end plates	4440001A	PS 300 2A NO/NC M8 connector without end plates

## FIL+REG+LUB



### ORDERING CODES

Code	Description
<b>FIL+REG+LUB Skillair® 100</b>	
3282008	FRL 100 1/4 20 08 RMSA
3282011	FRL 100 1/4 20 012 RMSA
3382008	FRL 100 3/8 20 08 RMSA
3382011	FRL 100 3/8 20 012 RMSA
<b>FIL+REG+LUB Skillair® 200</b>	
3482008	FRL 200 1/4 20 08 RMSA
3482011	FRL 200 1/4 20 012 RMSA
3582008	FRL 200 3/8 20 08 RMSA
3582011	FRL 200 3/8 20 012 RMSA
3682008	FRL 200 1/2 20 08 RMSA
3682011	FRL 200 1/2 20 012 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## FIL+LUB



### ORDERING CODES

Code	Description
<b>F+L Skillair® 100</b>	
3285002	F+L 100 1/4 20 RMSA
3385002	F+L 100 3/8 20 RMSA
<b>F+L Skillair® 200</b>	
3485002	F+L 200 1/4 20 RMSA
3585002	F+L 200 3/8 20 RMSA
3685002	F+L 200 1/2 20 RMSA

Code	Description
<b>F+L Skillair® 300</b>	
4485002	F+L 300 1/2 20 RMSA
4585002	F+L 300 3/4 20 RMSA
4585005	F+L 300 3/4 20 RA
4685002	F+L 300 1 20 RMSA
<b>F+L Skillair® 400</b>	
6185002	F+L 400 1 20 RMSA
6185005	F+L 400 1 20 RA
6285002	F+L 400 1 1/4 20 RMSA
6385002	F+L 400 1 1/2 20 RMSA
6485002	F+L 400 2 20 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## FR+LUB



### ORDERING CODES

Code	Description
<b>FR+L Skillair® 100</b>	
3284008	FR+L 100 1/4 20 08 RMSA
3284011	FR+L 100 1/4 20 012 RMSA
3384008	FR+L 100 3/8 20 08 RMSA
3384011	FR+L 100 3/8 20 012 RMSA
<b>FR+L Skillair® 200</b>	
3484008	FR+L 200 1/4 20 08 RMSA
3484011	FR+L 200 1/4 20 012 RMSA
3584008	FR+L 200 3/8 20 08 RMSA
3584011	FR+L 200 3/8 20 012 RMSA
3684008	FR+L 200 1/2 20 08 RMSA
3684011	FR+L 200 1/2 20 012 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## FIL+DEP



### ORDERING CODES

Code	Description
<b>F+D Skillair® 100</b>	
3289001	F+D 100 1/4 5 RMSA-RMSA
3289005	F+D 100 1/4 5 SAC-RMSA
3289006	F+D 100 1/4 5 SAC-SAC
3389001	F+D 100 3/8 5 RMSA-RMSA
3389005	F+D 100 3/8 5 SAC-RMSA
3389006	F+D 100 3/8 5 SAC-SAC
<b>F+D Skillair® 200</b>	
3489001	F+D 200 1/4 5 RMSA-RMSA
3489005	F+D 200 1/4 5 SAC-RMSA
3489006	F+D 200 1/4 5 SAC-SAC
3589001	F+D 200 3/8 5 RMSA-RMSA
3589005	F+D 200 3/8 5 SAC-RMSA
3589006	F+D 200 3/8 5 SAC-SAC
3689001	F+D 200 1/2 5 RMSA-RMSA
3689005	F+D 200 1/2 5 SAC-RMSA
3689006	F+D 200 1/2 5 SAC-SAC

Code	Description
<b>F+D Skillair® 300</b>	
4489001	F+D 300 1/2 5 RMSA-RMSA
4489002	F+D 300 1/2 5 RA-RA
4589001	F+D 300 3/4 5 RMSA-RMSA
4589002	F+D 300 3/4 5 RA-RA
4689001	F+D 300 1 5 RMSA-RMSA
4689002	F+D 300 1 5 RA-RA
<b>F+D Skillair® 400</b>	
6189001	F+D 400 1 5 RMSA-RMSA
6189002	F+D 400 1 5 RA-RA
6289001	F+D 400 1 1/4 5 RMSA-RMSA
6289002	F+D 400 1 1/4 5 RA-RA
6389001	F+D 400 1 1/2 5 RMSA-RMSA
6389002	F+D 400 1 1/2 5 RA-RA
6489001	F+D 400 2 5 RMSA-RMSA
6489002	F+D 400 2 5 RA-RA

## V3V+FR+LUB



### ORDERING CODES

Code	Description
<b>VFR+L Skillair® 100</b>	
3272008	VFR+L 100 1/4 20 08 RMSA
3272011	VFR+L 100 1/4 20 012 RMSA
3372008	VFR+L 100 3/8 20 08 RMSA
3372011	VFR+L 100 3/8 20 012 RMSA
<b>VFR+L Skillair® 200</b>	
3472008	VFR+L 200 1/4 20 08 RMSA
3472011	VFR+L 200 1/4 20 012 RMSA
3572008	VFR+L 200 3/8 20 08 RMSA
3572011	VFR+L 200 3/8 20 012 RMSA
3672008	VFR+L 200 1/2 20 08 RMSA
3672011	VFR+L 200 1/2 20 012 RMSA

The following versions are available on request:  
 - with 5 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## ACCESSORIES

### MOUNTING BRACKET FOR REG.



Code	Description
9200701	Acc. SF100- BIT-ND1/4
9400701	Acc. SF200-ND-3/8 1/2
9400702	Acc. SF300

### PRESSURE GAUGES



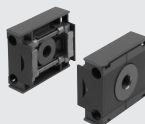
Code	Description
9700101	Acc. M 40 1/8 012
9700102	Acc. M 40 1/8 04
9700109	Acc. M 40x40 1/8 04
9700110	Acc. M 40x40 1/8 012
9800101	Acc. M 50 1/8 12
9800102	Acc. M 50 1/8 04
9900101	Acc. M 63 1/4 012

### PRESSURE SECURITY KNOB



Code	Description
9200703	Acc. security knob

### INPUT/OUTPUT END PLATE KIT



Indeks	Opis
9230401	IN/OUT end plate kit 100 1/4
9330501	IN/OUT end plate kit 100 3/8
9330601	IN/OUT end plate kit 200 1/4
9330701	IN/OUT end plate kit 200 3/8
9330801	IN/OUT end plate kit 200 1/2
9430701	IN/OUT end plate kit 300 1/2
9530901	IN/OUT end plate kit 300 3/4
9531001	IN/OUT end plate kit 300 1
9631001	IN/OUT end plate kit 400 1
9631101	IN/OUT end plate kit 400 1 1/4
9631201	IN/OUT end plate kit 400 1 1/2
9631301	IN/OUT end plate kit 400 2

### CONNECTOR KIT FOR SKILLAIR CODE A



Code	Description
9230301	Acc. connector kit 100
9330301	Acc. connector kit 200
9430301	Acc. connector kit 300
9630301	Acc. connector kit 400

### COIL SIDE 22



Code	Description
W0215000151	Acc. coil 22 Ø 8 BA 2W-12VDC
W0215000101	Acc. coil 22 Ø 8 BA 2W-24VDC
W0215000111	Acc. coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Acc. coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Acc. coil 22 Ø 8 BA 3VA-220VAC 50/60 HZ

### "UL" AND "CSA" COIL 22 mm



Code	Description
W0215000251	Acc. coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Acc. coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Acc. coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Acc. coil 22 Ø 8 BA 3.5VA-110 VAC UR
W0215000231	Acc. coil 22 Ø 8 BA 3.5VA-220VAC UR

### KIT COIL SIDE 22 IP65 (FOR V3V-APR-LUB)



Code	Description
0222100100	Kit for coils 22 - IP65

Improved IP65 protection, even after prolonged exposure to atmospheric agents.  
Applicable to valves with a technopolimer control.

### KIT FOR COIL EEXM (FOR V3V-APR-LUB)



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 3 m
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 5 m
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 3 m
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 5 m
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 3 m
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 5 m
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 3 m
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 5 m

According to ATEX 94/9 CE rule  
 ⓧ II 2G Ex mb IIC T4/T5 Gb  
 ⓧ II 2D Ex tb IIIC T130/T95 °C IP66 Db

### COIL FOR CDV CDML LUBRICATOR



Code	Description
W0216001001	Acc. coil 24 V CC
W0216001011	Acc. coil 24V 50/60HZ
W0216001021	Acc. coil 110V 50/60HZ
W0216001031	Acc. coil 220V 50/60HZ

### COIL SIDE 30



Code	Description
W0210010100	Acc. coil 30 Ø 8 4W-24VDC
W0210011100	Acc. coil 30 Ø 8 4VA-24VAC 50/60 HZ
W0210012100	Acc. coil 30 Ø 8 4VA-110VAC 50/60 HZ
W0210013100	Acc. coil 30 Ø 8 4VA-220VAC 50/60 HZ

### ELECTRIC CONNECTOR SIDE 22



Code	Description
W0970510011	Acc. connector 22 standard
W0970510012	Acc. connector 22 LED 24V
W0970510013	Acc. connector 22 LED 110V
W0970510014	Acc. connector 22 LED 220V
W0970510015	Acc. connector 22 LED VDR 24V
W0970510016	Acc. connector 22 LED VDR 110V
W0970510017	Acc. connector 22 LED VDR 220V
W0970510070	Acc. connector 22 ATEX II 2 GD

### ELECTRIC CONNECTOR SIDE 30



Code	Description
W0970520033	Acc. connector 30 STD
W0970520034	Acc. connector 30 LED 24V
W0970520035	Acc. connector 30 LED 110V
W0970520036	Acc. connector 30 LED 220V
W0970520037	Acc. connector 30 LED VDR 24V
W0970520038	Acc. connector 30 LED VDR 110V
W0970520039	Acc. connector 30 LED VDR 220V



## SPARE PARTS

### FILTER BOWL



Code	Description
9253301	Spare TF 100 RMSA
9255301	Spare TF 100 SAC
9353301	Spare TF 200 RMSA
9355301	Spare TF 200 SAC
9453301	Spare TF 300 RA
9453401	Spare TF 300 RMSA
9653301	Spare TF 400 RA
9653401	Spare TF 400 RMSA

### LUBRICATOR BOWL



Code	Description
9253501	Spare TL 100
9202503	Spare TL 100 CA
9202502	Spare TL 100 CD
9202501	Spare TL 100 ML
9353501	Spare TL 200
9302501	Spare TL 200 CA
9302503	Spare TL 200 CD
9302502	Spare TL 200 ML
9453501	Spare TL 300
9202403	Spare TL 300 CA
9202401	Spare TL 300 CD
9202402	Spare TL 300 ML
9653501	Spare TL 400
9653502	Spare TL 400 CA
9653503	Spare TL 400 CD
9653504	Spare TL 400 ML

### FILTERING ELEMENTS



Code	Description
9251705	Spare FP 100 5
9251706	Spare FP 100 20
9251707	Spare FP 100 50
9351705	Spare FP 200 5
9351706	Spare FP 200 20
9351707	Spare FP 200 50
9451705	Spare FP 300 5
9451706	Spare FP 300 20
9451707	Spare FP 300 50
9651705	Spare FP 400 5
9651706	Spare FP 400 20
9651707	Spare FP 400 50

### FILTERING/PURIFICATION ELEMENTS



Code	Description
9251711	Spare FP DEP. 100
9351711	Spare FP DEP. 200
9451711	Spare FP DEP. 300
9651711	Spare FP DEP. 400

### CARTRIDGE AC



Code	Description
9251713	Spare cartridge 100 AC
9351713	Spare cartridge 200 AC
9451713	Spare cartridge 300 AC
9651712	Spare cartridge 400 AC

### VENTURI LUBRICATOR DIAPHRAGM



Code	Description
9252001	Spare MB 100 ND 1/4
9352001	Spare MB 200 ND 3/8-1/2
9452001	Spare MB 300
9652601	Spare MB 400

### UPPER COVER FOR REGULATOR AND FR



Code	Description
9250800	Spare CS 100 02
9250810	Spare CS 100 04
9250811	Spare CS 100 08
9250812	Spare CS 100 012
9350800	Spare CS 200 02
9350810	Spare CS 200 04
9350811	Spare CS 200 08
9350812	Spare CS 200 012
9450805	Spare CS 300 04
9450806	Spare CS 300 08
9450807	Spare CS 300 012
9450808	Spare CS 300 02

### COMPLETE POPPET FOR REGULATORS



Code	Description
9250704	Spare OTR 100
9350704	Spare OTR 200
9450704	Spare OTR 300
9650704	Spare OTR 400

### COMPLETE POPPET FOR FR



Code	Description
9250902	Spare OTFR 100 5
9250903	Spare OTFR 100 20
9250904	Spare OTFR 100 50
9350902	Spare OTFR 200 5
9350903	Spare OTFR 200 20
9350904	Spare OTFR 200 50
9450902	Spare OTFR 300 5
9450903	Spare OTFR 300 20
9450904	Spare OTFR 300 50

### UPPER COVER DISASSEMBLY SPANNER



Code	Description
9220701	Spare cover spanner

### REG AND FR VISUAL DOME DISASSEMBLY SPANNER



Code	Description
9220401	Spare dome dis. spanner 100
9323401	Spare dome dis. spanner 200
9420401	Spare dome dis. spanner 300

### POPPET DISASSEMBLY SPANNER (FOR REG.)



Code	Description
9220501	Spare R cap disass. WR. 100
9323501	Spare R cap disass. WR. 200
9420501	Spare R cap disass. WR. 300

### CAP DISASSEMBLY SPANNER



Code	Description
9220601	Spare cap disass. 100
9323601	Spare cap disass. 200
9420601	Spare cap disass. 300

### POPPET DISASSEMBLY SPANNER (FOR FR)



Code	Description
9220801	Spare FR cap disass. WR. 100
9320801	Spare FR cap disass. WR. 200
9420801	Spare FR cap disass. WR. 300

### PROVISION FOR MICRO SOLENOID CONTROL FOR APR-300



Code	Description
9453601	Spare PCE micro

### PROVISION FOR SOLENOID CONTROL TO CNOMO FOR APR-300



Code	Description
9454001	Spare PCE to Cnomo

### PROVISION FOR PNEUMATIC CONTROL FOR APR-300



Code	Description
9453701	Spare PCP pneumatic

### CNOMO SOLENOID CONTROL FOR APR-300 and V3V 300 (COIL SIDE)



Code	Description
9453901	Spare CEC Cnomo 24CC
9453902	Spare CEC Cnomo 24V
9453903	Spare CEC Cnomo 110V
9453904	Spare CEC Cnomo 220V

### MICRO SOLENOID CONTROL FOR APR-300 and V3V 300 (no more in the catalogue)



Code	Description
9453801	Spare CEM micro 24CC
9453802	Spare CEM micro 24V
9453803	Spare CEM micro 110V
9453804	Spare CEM micro 220V

### KEY-OPERATED V3V 400



Code	Description
9455401	Spare kit C.C. 400
9455601	Spare kit lockable 400

### INPUT/OUTPUT COVER PLATE



Code	Description
9152103	Spare OUTPUT cover plate 100
9152105	Spare INPUT cover plate 100
9152115	Spare OUTPUT cover plate 200
9152116	Spare INPUT cover plate 200
9152104	Spare OUTPUT cover plate 300
9152106	Spare INPUT cover plate 300
9152118	Spare OUTPUT cover plate 400
9152119	Spare INPUT cover plate 400

### INTERMEDIATE COVER PLATE



Code	Description
9152107	Spare intermediate cover plate 100
9152114	Spare intermediate cover plate 200
9152108	Spare intermediate cover plate 300
9152117	Spare intermediate cover plate 400

### TRANSPARENT LUBRICATOR COVER



Code	Description
9251302	Spare CVL 100-200-300-400 BIT

### AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spare RA automatic drain

### AUTOMATIC DRAIN (SAC)



Code	Description
9000803	Spare SAC automatic drain

### SPRINGS FOR REDUCERS AND FRs



Code	Description
9250605	Spare MO 100 02
9250606	Spare MO 100 04
9250607	Spare MO 100 08
9250608	Spare MO 100 012
9350605	Spare MO 200 02
9350606	Spare MO 200 04
9350607	Spare MO 200 08
9350608	Spare MO 200 012
9450605	Spare MO 300 04
9450606	Spare MO 300 08
9450607	Spare MO 300 012
9450608	Spare MO 300 02



GENERAL TECHNICAL DATA		ND 1/4"	ND 3/8"	ND 1/2"	ND 3/4"	ND 1"
Threaded port		1/4"	3/8"	1/2"	3/4"	1"
Degree of filtration	μm	4 - 20 - 50				
Degree of purification	μm	99.97% at 0.01				
Setting range	bar	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12				
Max. input pressure	MPa	1.8				
	bar	18				
	psi	261				
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NI/min	from 200 at 12000				
Fluid		Lubricated or unlubricated compressed air				
Temperature range at 1 MPa; 10 bar; 145 psi	°C	-10 to +50				
	°F	14 to 122				
Elements comprising the range		Filter, Depurator, Regulator, Pilot operated Regulator, In-series Regulator, Filter-regulator, Lubricator, Circuit Shut-off Valve				

## FILTER



TECHNICAL DATA		FIL ND 1/4"	FIL ND 3/8"	FIL ND 1/2"	FIL ND 3/4"	FIL ND 1"
Threaded port		1/4"	3/8"	1/2"	3/4"	1"
Degree of filtration	μm	4 - 20 - 50		4 - 20 - 50		4 - 20 - 50
Max. inlet pressure	MPa	1.8		1.8		1.8
	bar	18		18		18
	psi	261		261		261
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NI/min	1300	3100		9100	
	scfm	46	110		324	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	NI/min	1720	4100		11000	
	scfm	61	146		391	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50°	50°		50°	
	°F	122°	122°		122°	
Weight	kg	0.4	0.9		1.2	
Wall fixing screws		M4 x 40	M4 x 55		M6 x 75	
Bowl capacity	cm <sup>3</sup>	10	45		170	
Mounting position		Vertical	Vertical		Vertical	
Drain		RMSA - SAC	RMSA - SAC - RA		RMSA - RA	
		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure. RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs. Compressed air				
Fluid		<b>The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar.</b>				
Note on use						

## ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
<b>NEW DEAL FILTER 1/4"</b>		<b>NEW DEAL FILTER 3/8"</b>		<b>NEW DEAL FILTER 1/2"</b>		<b>NEW DEAL FILTER 3/4"</b>		<b>NEW DEAL FILTER 1"</b>	
1221005	FIL 1/4 4 RMSA	1321005	FIL 3/8 4 RMSA	1421005	FIL 1/2 4 RMSA	1521005	FIL 3/4 4 RMSA	1621005	FIL 1 4 RMSA
1221013	FIL 1/4 4 SAC	1321009	FIL 3/8 4 RA	1421009	FIL 1/2 4 RA	1521009	FIL 3/4 4 RA	1621009	FIL 1 4 RA
1221006	FIL 1/4 20 RMSA	1321013	FIL 3/8 4 SAC	1421013	FIL 1/2 4 SAC	1521006	FIL 3/4 20 RMSA	1621006	FIL 1 20 RMSA
1221014	FIL 1/4 20 SAC	1321006	FIL 3/8 20 RMSA	1421006	FIL 1/2 20 RMSA	1521010	FIL 3/4 20 RA	1621010	FIL 1 20 RA
1221008	FIL 1/4 50 RMSA	1321010	FIL 3/8 20 RA	1421010	FIL 1/2 20 RA	1521008	FIL 3/4 50 RMSA	1621008	FIL 1 50 RMSA
1221016	FIL 1/4 50 SAC	1321014	FIL 3/8 20 SAC	1421014	FIL 1/2 20 SAC	1521012	FIL 3/4 50 RA	1621012	FIL 1 50 RA
		1321008	FIL 3/8 50 RMSA	1421008	FIL 1/2 50 RMSA				
		1321012	FIL 3/8 50 RA	1421012	FIL 1/2 50 RA				
		1321016	FIL 3/8 50 SAC	1421016	FIL 1/2 50 SAC				



## DEPURATOR



TECHNICAL DATA	DEP ND 3/8"		DEP ND 1/2"	
	3/8"		1/2"	
Threaded port				
Degree of depuration	μm		99.97% α 0.01	
Max. inlet pressure	MPa		1.8	
	bar		18	
	psi		261	
Suggested flow rate at 6 bar	NI/min		230	
	scfm		8	
	Filtered air 4 μm			
Fluid	°C		50	
	°F		122	
	kg		0.9	
Weight				
Wall fixing screws	M4 x 55			
Bowl capacity	45			
Mounting position	Vertical			
Drain	RMSA - SAC - RA			
	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.			
	RA: automatic drain with condensate discharge, independent of pressure and flow rate.			
	SAC: automatic drain with condensate discharge.			
	Operates by depression - requires variable air take-offs.			
	It is advisable to mount a 4 μm filter upstream the depurator acting as a rough filter.			
	<b>The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar.</b>			
Note on use				

### ORDERING CODES

Code	Description	Code	Description
<b>DEPURATOR NEW DEAL 3/8"</b>			
1322002	DEP 3/8 RMSA	1422002	DEP 1/2 RMSA
1322003	DEP 3/8 RA	1422003	DEP 1/2 RA
1322004	DEP 3/8 SAC	1422004	DEP 1/2 SAC

## REGULATOR

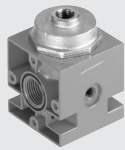


TECHNICAL DATA	REG ND 1/4"	REG ND 3/8"	REG ND 1/2"	REG ND 3/4"	REG ND 1"
	Threaded port	1/4"	3/8"	1/2"	3/4"
Setting range	0 to 4 - 0 to 8 - 0 to 12	0 to 4 - 0 to 8 - 0 to 12	0 to 4 - 0 to 8 - 0 to 12	0 to 4 - 0 to 8 - 0 to 12	0 to 4 - 0 to 8 - 0 to 12
Max. inlet pressure	bar				
	MPa				
	psi				
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	NI/min				
	scfm				
	Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)				
Max temperature at 1 MPa; 10 bar; 145 psi	°C				
	°F				
	kg				
Weight					
Wall fixing screws	M4 x 40				
Gauge port	1/8"				
Mounting position	In any position				
Fluid	Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.				
Note on use	The regulator pressure must always be set upwards.				
	For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.				
	<b>Do not take off air from gauge ports.</b>				

### ORDERING CODES

Code	Description	Code	Description	Code	Description
<b>NEW DEAL REGULATOR 1/4"</b>					
1202001	REG 1/4 04	<b>NEW DEAL REGULATOR 3/8"</b>		<b>NEW DEAL REGULATOR 3/4"</b>	
1202002	REG 1/4 08	1302001	REG 3/8 04	1502001	REG 3/4 04
1202003	REG 1/4 012	1302002	REG 3/8 08	1502002	REG 3/4 08
1202004	REG 1/4 02	1302003	REG 3/8 012	1502003	REG 3/4 012
		<b>NEW DEAL REGULATOR 1/2"</b>		<b>NEW DEAL REGULATOR 1"</b>	
		1402001	REG 1/2 04	1602001	REG 1 04
		1402002	REG 1/2 08	1602002	REG 1 08
		1402003	REG 1/2 012	1602003	REG 1 012

## PILOT-ASSISTED REGULATOR



TECHNICAL DATA	REG PIL 3/8"		REG PIL 1/2"	
	3/8"		1/2"	
Threaded port	Depending on pilot			
Setting range	bar			
Max. inlet pressure	MPa			
	bar			
	psi			
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	3500		
	scfm	124		
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min	4500		
	scfm	160		
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Weight	kg	0.8		
Wall fixing screws	M4 x 55			
Gauge port	1/8"			
Mounting position	In any position			
Fluid	Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.			
Note on use	The regulator pressure must always be set upwards. Overpressure relieving from the pilot. <b>Do not take air from pressure gauge ports.</b>			

### ORDERING CODES

Code	Description			
1302004	RP 3/8 pilot-assisted regulator			
1402004	RP 1/2 pilot-assisted regulator			

## REGULATOR-REGULATOR WITH V3V 3/4"-1"



TECHNICAL DATA	3/4"		1"	
	Threaded port	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12		
Setting range	bar			
*Max. inlet pressure	MPa			
	bar			
	psi			
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	12000		
	scfm	423		
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min	13000		
	scfm	460		
Fluid	Lubricated or unlubricated filtered air. If lubrication is used, it must be continuous.			
Drain flow rate at 6 bar (0.6 MPa to 87 psi)	Nl/min	1800		
	scfm	64		
Max temperature at 10 bar (1 MPa to 145 psi)	°C	50		
	°F	122		
Weight	kg	1.7		
Wall fixing screws	M6 x 75			
Mounting position	In any position			
Note on use	<b>Do not take air from pressure gauge ports.</b>			
* Version Reg + V3V Nomo (1 Mpa - 10 bar - 145 psi)				
* Version Reg with solenoid (0.8 Mpa - 8 bar - 116 psi)				

### ORDERING CODES

Code	Description	Code	Description	Code	Description	Code	Description
<b>PILOTTED REGULATOR NEW DEAL P 3/4"</b>		<b>REGULATOR WITH BUILT-IN SHUT-OFF VALVE NEW DEAL 3/4"</b>		<b>PILOTTED REGULATOR NEW DEAL 1"</b>		<b>REGULATOR WITH BUILT-IN SHUT-OFF VALVE NEW DEAL 1"</b>	
1519001	REGP 3/4 00	1517001	RV3V 3/4 02 ELPN	1619001	REGP 1 00	1617001	RV3V 1 02 ELPN
1518001	REGP 3/4 02	1517002	RV3V 3/4 04 ELPN	1618001	REGP 1 02	1617002	RV3V 1 04 ELPN
1518002	REGP 3/4 04	1517003	RV3V 3/4 08 ELPN	1618002	REGP 1 04	1617003	RV3V 1 08 ELPN
1518003	REGP 3/4 08	1516101	RV3V 3/4 02 key	1618003	REGP 1 08	1616101	RV3V 1 02 key
1518004	REGP 3/4 012	1516102	RV3V 3/4 04 key	1618004	REGP 1 012	1616102	RV3V 1 04 key
		1516103	RV3V 3/4 08 key			1616103	RV3V 1 08 key
		1516104	RV3V 3/4 012 key			1616104	RV3V 1 012 key
		1516001	RV3V 3/4 02 manual			1616001	RV3V 1 02 manual
		1516002	RV3V 3/4 04 manual			1616002	RV3V 1 04 manual
		1516003	RV3V 3/4 08 manual			1616003	RV3V 1 08 manual
		1516004	RV3V 3/4 012 manual			1616004	RV3V 1 012 manual

## PADLOCKABLE REGULATOR



Look at regulator for technical data

### ORDERING CODES

Code	Description	Code	Description	Code	Description		
<b>NEW DEAL PADLOCKABLE REGULATOR 1/4"</b>							
1210011	REG KEY 1/4 02	<b>NEW DEAL PADLOCKABLE REGULATOR 3/8"</b>					
1210012	REG KEY 1/4 04	1310012	REG KEY 3/8 04	1410012	REG KEY 1/2 04		
1210013	REG KEY 1/4 08	1310013	REG KEY 3/8 08	1410013	REG KEY 1/2 08		
1210014	REG KEY 1/4 012	1310014	REG KEY 3/8 012	1410014	REG KEY 1/2 012		

## FILTER REGULATOR



TECHNICAL DATA		FR ND 1/4"	FR ND 3/8"	FR ND 1/2"
Threaded port		1/4"	3/8"	1/2"
Setting range	bar	0 to 8 - 0 to 12		0 to 8 - 0 to 12
Degree of filtration	µm	4 - 20 - 50		4 - 20 - 50
Max. inlet pressure	MPa	1.8		1.8
	bar	18		18
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	psi	261		261
	NI/min	260		1000
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	scfm	9.2		35.5
	NI/min	700		2500
Max temperature at 1 MPa; 10 bar; 145 psi	scfm	25		88.5
	°C	50		50
Weight	°F	122		122
	kg	0.5		1
Wall fixing screws		M4 x 40		M4 x 55
Gauge port		1/8"		1/8"
Bowl capacity	cm <sup>3</sup>	10		45
Mounting position		Vertical		Vertical
Drain		RMSA		SAC - RA
RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Compressed air				
Fluid		The regulator pressure must always be set upwards. <b>The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 10 bar. Do not take air from pressure gauge ports.</b>		
Note on use				

### ORDERING CODES

Code	Description	Code	Description	Code	Description		
<b>NEW DEAL FILTER REGULATOR 1/4"</b>							
1225029	FR 1/4 4 08 RMSA	<b>NEW DEAL FILTER REGULATOR 3/8"</b>					
1225053	FR 1/4 4 012 RMSA	1325029	FR 3/8 4 08 RMSA	1425029	FR 1/2 4 08 RMSA		
1225509	FR 1/4 4 08 SAC	1325509	FR 3/8 4 08 SAC	1425509	FR 1/2 4 08 SAC		
1225513	FR 1/4 4 012 SAC	1325053	FR 3/8 4 012 RMSA	1425053	FR 1/2 4 012 RMSA		
1225030	FR 1/4 20 08 RMSA	1325513	FR 3/8 4 012 SAC	1425513	FR 1/2 4 012 SAC		
1225510	FR 1/4 20 08 SAC	1325030	FR 3/8 20 08 RMSA	1425030	FR 1/2 20 08 RMSA		
1225054	FR 1/4 20 012 RMSA	1325510	FR 3/8 20 08 SAC	1425510	FR 1/2 20 08 SAC		
1225514	FR 1/4 20 012 SAC	1325054	FR 3/8 20 012 RMSA	1425054	FR 1/2 20 012 RMSA		
1225032	FR 1/4 50 08 RMSA	1325514	FR 3/8 20 012 SAC	1425514	FR 1/2 20 012 SAC		
1225511	FR 1/4 50 08 SAC	1325032	FR 3/8 50 08 RMSA	1425032	FR 1/2 50 08 RMSA		
1225056	FR 1/4 50 012 RMSA	1325512	FR 3/8 50 08 SAC	1425512	FR 1/2 50 08 SAC		
1225516	FR 1/4 50 012 SAC	1325056	FR 3/8 50 012 RMSA	1425056	FR 1/2 50 012 RMSA		
		1325516	FR 3/8 50 012 SAC	1425516	FR 1/2 50 012 SAC		

For ND 3/8 and 1/2 with RA, please contact our sales assistance department

## SUB-BASE



### ORDERING CODES

Code	Description	Code	Description
9200201	SB 1/4 sub-base 2 pos.	9200301	SB 1/4 sub-base 3 pos.
9400201	SB 1/2 sub-base 2 pos.	9400301	SB 1/2 sub-base 3 pos.
9600201	SB 3/4 sub-base 2 pos.	9600301	SB 3/4 sub-base 3 pos.

## LUBRICATOR



TECHNICAL DATA		LUB ND 1/4"	LUB ND 3/8"	LUB ND 1/2"	LUB ND 3/4"	LUB ND 1"
Threaded port		1/4"	3/8"	1/2"	3/4"	1"
Type of lubrication		Mist		Mist		Mist
Bowl capacity	cm <sup>3</sup>	50		150		380
Max. inlet pressure	MPa	1.8		1.8		1.8
	bar	18		18		18
	psi	261		261		261
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	700		3000		12800
	scfm	25		107		452
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min	1100		4300		16000
	scfm	39		153		565
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50		50
	°F	122		122		122
Weight	kg	0.4		0.9		1.3
Wall fixing screws		M4 x 40		M4 x 55		M6 x 75
Mounting position		Vertical				
Fluid		Filtered compressed air				
Note on use:		<ul style="list-style-type: none"> <li>• Use the screw provided to set the drip rate to drop every 300-600 Nl.</li> <li>• Fit the lubricator as close as possible to the point of use</li> <li>• Fill the bowl with oil before pressurizing the system</li> <li>• Do not use cleaning oil, brake fluid or solvents in general</li> <li>• Recommended lubricants: ISO and UNI FD22 - E.g. Energol HLP 22 (BP) - Spinesso 22 (Esso) - Mobil DTE 22 (Mobil) - Tellus Oil 22 (Shell)</li> </ul>				

### ORDERING CODES

Code	Description
1223001	LUB 1/4
1323001	LUB 3/8
1423001	LUB 1/2
1523001	LUB 3/4
1623001	LUB 1

## SHUT-OFF VALVE



TECHNICAL DATA		V3V ND 1/4"	V3V ND 3/8"	V3V ND 1/2"
Threaded port		1/4"	3/8"	1/2"
Max. inlet pressure	MPa	1.8		1.8
	bar	18		18
	psi	261		261
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	1100		2200
	scfm	38.8		78
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min	1500		2900
	scfm	53		103
Flow rate on relieving at 6 bar (0.6 MPa to 87 psi) with direct relieving into the atmosphere	Nl/min	1600		2900
	scfm	56.5		103
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50
	°F	122		122
Weight	kg	0.35		0.8
Wall fixing screws		M4 x 40		M4 x 55
Mounting position		In any position		
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.		
Type of control		Manual		

### ORDERING CODES

Code	Description
1270001	V3V ND 1/4
1370001	V3V ND 3/8
1470001	V3V ND 1/2

## 3/4" AND 1" SHUT-OFF VALVE



TECHNICAL DATA		V3V ND 3/4"	V3V ND 1"
Threaded port		3/4"	1"
Max. inlet pressure*	MPa		1.3
	bar		13
	psi		188
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min		7600
	scfm		268
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min		10200
	scfm		360
Flow rate on relief at 6 bar (0.6 MPa; 87 psi)	Nl/min		1800
	scfm		64
Weight	kg		2.2
Wall fixing screws			M6 x 75
Mounting position			In any position
Fluid			Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.
*V3V CNOMO -10 bar - 1 MPa - 145 psi			

### ORDERING CODES

Code	Description
<b>SHUT-OFF VALVE NEW DEAL 3/4"</b>	
1575001	V3V 3/4 ELPN Cnomo
1574101	V3V 3/4 key
1574001	V3V 3/4 manual
1576001	V3V 3/4 pneumatic

Code	Description
<b>SHUT-OFF VALVE NEW DEAL 1"</b>	
1675001	V3V 1 ELPN Cnomo
1674101	V3V 1 key
1674001	V3V 1 manual
1676001	V3V 1 pneumatic

## AIR TAKE-OFF



TECHNICAL DATA		PA ND 1/4"	PA ND 3/8"	PA ND 1/2"	PA ND 3/4"	PA ND 1"
Threaded port		1/8"		1/4"		1/2"
Maximum working temperature at: 1 MPa; 10 bar; 145 psi	°C	50		50		50
	°F	122		122		122
Maximum admissible pressure	MPa	1.8		1.8		1.8
	bar	18		18		18
	psi	261		261		261
Weight	kg	0.06		0.18		0.41

### ORDERING CODES

Code	Description
9200401	PA 1/4 take-off
9400401	PA 1/2 take-off
9600401	PA 3/4 take-off

Comes with 2 screws for F/L and R/FR fixing

## AUTOMATIC CONDENSATE DRAIN



TECHNICAL DATA		SCAL ND 1/2"
Threaded port		1/2"
Maximum working temperature at: 1 MPa; 10 bar; 145 psi	°C	50
	°F	122
Maximum admissible pressure	MPa	1
	bar	10
	psi	188
Weight	kg	145

### ORDERING CODES

Code	Description
4589003	Autom. cond. drain 1/2 in line

## FIL+REG+LUB



### ORDERING CODES

Code	Description
<b>FRL 1/4"</b>	
1224029	FRL 1/4 4 08 RMSA
1224409	FRL 1/4 4 08 SAC
1224030	FRL 1/4 20 08 RMSA
1224410	FRL 1/4 20 08 SAC
1224032	FRL 1/4 50 08 RMSA
1224412	FRL 1/4 50 08 SAC
1224053	FRL 1/4 4 012 RMSA
1224413	FRL 1/4 4 012 SAC
1224054	FRL 1/4 20 012 RMSA
1224414	FRL 1/4 20 012 SAC
1224056	FRL 1/4 50 012 RMSA
1224416	FRL 1/4 50 012 SAC

<b>FRL 3/8"</b>	
1324029	FRL 3/8 4 08 RMSA
1324033	FRL 3/8 4 08 RA
1324409	FRL 3/8 4 08 SAC
1324030	FRL 3/8 20 08 RMSA
1324034	FRL 3/8 20 08 RA
1324410	FRL 3/8 20 08 SAC
1324032	FRL 3/8 50 08 RMSA
1324036	FRL 3/8 50 08 RA
1324412	FRL 3/8 50 08 SAC
1324053	FRL 3/8 4 012 RMSA
1324057	FRL 3/8 4 012 RA
1324413	FRL 3/8 4 012 SAC
1324054	FRL 3/8 20 012 RMSA
1324058	FRL 3/8 20 012 RA
1324414	FRL 3/8 20 012 SAC
1324056	FRL 3/8 50 012 RMSA
1324060	FRL 3/8 50 012 RA
1324416	FRL 3/8 50 012 SAC

Code	Description
<b>FRL 1/2"</b>	
1424029	FRL 1/2 4 08 RMSA
1424033	FRL 1/2 4 08 RA
1424409	FRL 1/2 4 08 SAC
1424030	FRL 1/2 20 08 RMSA
1424034	FRL 1/2 20 08 RA
1424410	FRL 1/2 20 08 SAC
1424032	FRL 1/2 50 08 RMSA
1424036	FRL 1/2 50 08 RA
1424412	FRL 1/2 50 08 SAC
1424053	FRL 1/2 4 012 RMSA
1424057	FRL 1/2 4 012 RA
1424413	FRL 1/2 4 012 SAC
1424054	FRL 1/2 20 012 RMSA
1424058	FRL 1/2 20 012 RA
1424414	FRL 1/2 20 012 SAC
1424056	FRL 1/2 50 012 RMSA
1424060	FRL 1/2 50 012 RA
1424416	FRL 1/2 50 012 SAC

<b>FRL 3/4"</b>	
1524017	FRL 3/4 4 08 RMSA
1524021	FRL 3/4 4 08 RA
1524018	FRL 3/4 20 08 RMSA
1524022	FRL 3/4 20 08 RA
1524020	FRL 3/4 50 08 RMSA
1524024	FRL 3/4 50 08 RA
1524029	FRL 3/4 4 012 RMSA
1524033	FRL 3/4 4 012 RA
1524030	FRL 3/4 20 012 RMSA
1524034	FRL 3/4 20 012 RA
1524032	FRL 3/4 50 012 RMSA
1524036	FRL 3/4 50 012 RA
<b>FRL 1"</b>	
1624017	FRL 1 4 08 RMSA
1624021	FRL 1 4 08 RA
1624018	FRL 1 20 08 RMSA
1624022	FRL 1 20 08 RA
1624020	FRL 1 50 08 RMSA
1624024	FRL 1 50 08 RA
1624029	FRL 1 4 012 RMSA
1624033	FRL 1 4 012 RA
1624030	FRL 1 20 012 RMSA
1624034	FRL 1 20 012 RA
1624032	FRL 1 50 012 RMSA
1624036	FRL 1 50 012 RA

## FRPL 3/4"-1"



### ORDERING CODES

Code	Description
<b>FRPL 3/4"</b>	
1528007	FRPL 3/4 4 08 RMSA
1528019	FRPL 3/4 4 08 RA
1528010	FRPL 3/4 4 012 RMSA
1528022	FRPL 3/4 4 012 RA
1528008	FRPL 3/4 20 08 RMSA
1528020	FRPL 3/4 20 08 RA
1528011	FRPL 3/4 20 012 RMSA
1528023	FRPL 3/4 20 012 RA
1528009	FRPL 3/4 50 08 RMSA
1528021	FRPL 3/4 50 08 RA
1528012	FRPL 3/4 50 012 RMSA
1528024	FRPL 3/4 50 012 RA

<b>FRPL 1"</b>	
1628007	FRPL 1 4 08 RMSA
1628019	FRPL 1 4 08 RA
1628010	FRPL 1 4 012 RMSA
1628022	FRPL 1 4 012 RA
1628008	FRPL 1 20 08 RMSA
1628020	FRPL 1 20 08 RA
1628011	FRPL 1 20 012 RMSA
1628023	FRPL 1 20 012 RA
1628009	FRPL 1 50 08 RMSA
1628021	FRPL 1 50 08 RA
1628012	FRPL 1 50 012 RMSA
1628024	FRPL 1 50 012 RA

## FR+LUB



### ORDERING CODES

Code	Description
<b>FR+L 1/4"</b>	
1226029	FR+L 1/4 4 08 RMSA
1226409	FR+L 1/4 4 08 SAC
1226053	FR+L 1/4 4 012 RMSA
1226413	FR+L 1/4 4 012 SAC
1226030	FR+L 1/4 20 08 RMSA
1226410	FR+L 1/4 20 08 SAC
1226054	FR+L 1/4 20 012 RMSA
1226414	FR+L 1/4 20 012 SAC
1226032	FR+L 1/4 50 08 RMSA
1226412	FR+L 1/4 50 08 SAC
1226056	FR+L 1/4 50 012 RMSA
1226416	FR+L 1/4 50 012 SAC

<b>FR+L 3/8"</b>	
1326029	FR+L 3/8 4 08 RMSA
1326409	FR+L 3/8 4 08 SAC
1326053	FR+L 3/8 4 012 RMSA
1326413	FR+L 3/8 4 012 SAC
1326030	FR+L 3/8 20 08 RMSA
1326034	FR+L 3/8 20 08 RA
1326410	FR+L 3/8 20 08 SAC
1326054	FR+L 3/8 20 012 RMSA
1326058	FR+L 3/8 20 012 RA
1326414	FR+L 3/8 20 012 SAC
1326032	FR+L 3/8 50 08 RMSA
1326412	FR+L 3/8 50 08 SAC
1326056	FR+L 3/8 50 012 RMSA
1326416	FR+L 3/8 50 012 SAC

<b>FR+L 1/2"</b>	
1426029	FR+L 1/2 4 08 RMSA
1426409	FR+L 1/2 4 08 SAC
1426053	FR+L 1/2 4 012 RMSA
1426413	FR+L 1/2 4 012 SAC
1426030	FR+L 1/2 20 08 RMSA
1426034	FR+L 1/2 20 08 RA
1426410	FR+L 1/2 20 08 SAC
1426054	FR+L 1/2 20 012 RMSA
1426058	FR+L 1/2 20 012 RA
1426414	FR+L 1/2 20 012 SAC
1426032	FR+L 1/2 50 08 RMSA
1426412	FR+L 1/2 50 08 SAC
1426056	FR+L 1/2 50 012 RMSA
1426416	FR+L 1/2 50 012 SAC

For ND 3/8 and 1/2 with RA, please contact our sales assistance department.

## V3V+FR+LUB



### ORDERING CODES

Code	Description
1272030	VFR+L 1/4 20 RMSA 08
1272054	VFR+L 1/4 20 RMSA 012
1372030	VFR+L 3/8 20 RMSA 08
1372054	VFR+L 3/8 20 RMSA 012
1472030	VFR+L 1/2 20 RMSA 08
1472054	VFR+L 1/2 20 RMSA 012
1472032	VFR+L 1/2 50 RMSA 08
1472056	VFR+L 1/2 50 RMSA 012

The following versions are available on request:  
 - with 4 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## FIL+DEP



### ORDERING CODES

Code	Description
1327004	F+D 3/8 4 RMSA-RMSA
1327007	F+D 3/8 4 RA-RA
1327104	F+D 3/8 4 SAC-RMSA
1427004	F+D 1/2 4 RMSA-RMSA
1427007	F+D 1/2 4 RA-RA
1427104	F+D 1/2 4 SAC-RMSA

## FIL+LUB



### ORDERING CODES

Code	Description
1233006	F+L 1/4 20 RMSA
1333006	F+L 3/8 20 RMSA
1433006	F+L 1/2 20 RMSA
1533006	F+L 3/4 20 RMSA
1633006	F+L 1 20 RMSA

The following versions are available on request:  
 - with 4 µm or 50 µm degree of filtration  
 - with SAC or RA condensate discharge

## ACCESSORIES

### MOUNTING BRACKET FOR REG.



Code	Description
9200701	Acc. SF 1/4
9400701	Acc. SF 1/2

### PRESSURE GAUGE



Code	Description
9700101	Acc. M 40 1/8 04
9700102	Acc. M 40 1/8 12
9800101	Acc. M 50 1/8 04
9800102	Acc. M 50 1/8 12
9900101	Acc. M 63 1/4 12
9700109	Acc. M 40x40 1/8 04
9700110	Acc. M 40x40 1/8 012

### TIE RODS



Code	Description
9200901	Acc. T 1/4 F+L tie rods
9400901	Acc. T 1/2 F+L tie rods
9600901	Acc. T 3/4 F+L tie rods
9604402	Acc. V3V+F+R 3/4-1 tie rods

### ADAPTER FOR V3V



Code	Description
9201001	Acc. adapt. X V3V+FR/D 1/4
9401001	Acc. adapt. X V3V+D 3/8
9401002	Acc. adapt. X V3V+D 1/2
9601001	Acc. adapt. X V3V+F 1

### REGULATOR CONNECTION BLOCK



Code	Description
9200501	Acc. BC 1/4 block
9400501	Acc. BC 1/2 block
9600501	Acc. BC 3/4 block

### DISASSEMBLY TOOL FOR BOWL



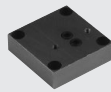
Code	Description
9601501	Disassembly key

### ASSEMBLY SCREWS (2 PIECES)



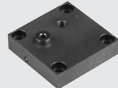
Code	Description
9250001	Acc. CVA 1/4 screw M4x40
9250002	Acc. CVA 1/4 screw M4x82 V3V+F+R
9450001	Acc. CVA 1/2 screw M5x55
9450002	Acc. CVA 3/8 1/2 screw M5x60 V3V+R
9450003	Acc. CVA 3/8 1/2 screw M5x120 V3V+F+R
9650001	Acc. CVA 3/4 screw M6x70

### REVERSE PLATE CNOMO CONTROL FOR V3V 3/4"-1"



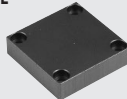
Code	Description
9640201	Reverse plate kit V3V cnomo control

### PLATE FOR REMOTE CONTROL FOR V3V 3/4"-1"



Code	Description
9640001	Remote control plate kit

### REG OR V3V END PLATE



Code	Description
9640101	End plate kit for regulator or V3V

### SPACERS FOR FRL WALL MOUNTING



Code	Description
9200601	Acc. DF 1/4 spacer
9400601	Acc. DF 1/2 spacer
9600601	Acc. DF 3/4 spacer

### MANUAL CONTROL FOR V3V 3/4"-1"



Code	Description
9640401	Manual control kit for V3V

### KEY CONTROL FOR V3V 3/4"-1"



Code	Description
9640301	Key control kit for V3V

### PILOT REGULATOR FOR ND 3/4-1"



Code	Description
9640501	02 pilot regulator kit
9640502	04 pilot regulator kit
9640503	08 pilot regulator kit
9640504	012 pilot regulator kit

### KIT COIL EEXM



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 3 m
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 5 m
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 3 m
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 5 m
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 3 m
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 5 m
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 3 m
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 5 m

According to ATEX 94/9 CE rule  
 Ex II 2G Ex mb IIC T4/T5 Gb  
 Ex II 2D Ex Ib IIIC T130/T95 °C IP66 Db

### COIL SIDE 22



Code	Description
W0215000151	Acc. coil 22 Ø 8 BA 2W-12VDC
W0215000101	Acc. coil 22 Ø 8 BA 2W-24VDC
W0215000111	Acc. coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Acc. coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Acc. coil 22 Ø 8 BA 3VA-220VAC 50/60 HZ

### "UL" AND "CSA" COIL 22 mm



### CUL US

Code	Description
W0215000251	Acc. coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Acc. coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Acc. coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Acc. coil 22 Ø 8 BA 3.5VA-110 VAC UR
W0215000231	Acc. coil 22 Ø 8 BA 3.5VA-220VAC UR

### ELECTRIC CONNECTOR SIDE 22



Code	Description
W0970510011	Acc. connector 22 standard
W0970510012	Acc. connector 22 LED 24V
W0970510013	Acc. connector 22 LED 110V
W0970510014	Acc. connector 22 LED 220V
W0970510015	Acc. connector 22 LED VDR 24V
W0970510016	Acc. connector 22 LED VDR 110V
W0970510017	Acc. connector 22 LED VDR 220V
W0970510070	Acc. connector 22 ATEX II 2 GD

### COIL SIDE 30



Code	Description
W0210010100	Acc. coil 30 Ø 8 4W 24VDC
W0210011100	Acc. coil 30 Ø 8 4VA 24VAC 50/60HZ
W0210012100	Acc. coil 30 Ø 8 4VA 110VAC 50/60HZ
W0210013100	Acc. coil 30 Ø 8 4VA 220VAC 50/60HZ

### ELECTRIC CONNECTOR SIDE 30



Code	Description
W0970520034	Acc. connector 30 LED 24V
W0970520035	Acc. connector 30 LED 110V
W0970520036	Acc. connector 30 LED 220V
W0970520037	Acc. connector 30 VDR 24V
W0970520038	Acc. connector 30 VDR 110V
W0970520039	Acc. connector 30 VDR 220V

### CNOMO CONTROL FOR V3V 3/4"-1"



Code	Description
9453920	Acc. elpn cnomo control kit, manual monostable
9453922	Acc. elpn cnomo control kit, manual bistable

### KIT FOR COIL SIDE 22 IP65



Code	Description
0222100100	Kit for coil 22 - IP65

Improved IP65 protection, even after prolonged exposure to atmospheric agents. Applicable to valves with a technopolymer control.



## SPARE PARTS

### FILTER AND FILTER REGULATOR FILTERING ELEMENT



Code	Description
9250101	Spare FP 1/4 50
9250102	Spare FP 1/4 20
9250103	Spare FP 1/4 4
9450101	Spare FP 1/2 50
9450102	Spare FP 1/2 20
9450103	Spare FP 1/2 4
9650101	Spare FP 3/4 50
9650102	Spare FP 3/4 20
9650103	Spare FP 3/4 4

### AUTOMATIC DRAIN (SAC)



Code	Description
9000803	Spare SAC automatic drain

### COMPLETE POPPET FOR FILTER REGULATOR



Code	Description
9250901	Spare OTFR 1/4
9450901	Spare OTFR 1/2

### FILTERING ELEMENT FOR DEPURATOR



Code	Description
9450105	Spare kit FP DEP. 3/8 1/2

### SPRINGS FOR REGULATORS AND FILTER REGULATOR



Code	Description
9250601	Spare MO 02 1/4
9250602	Spare MO 04 1/4
9250603	Spare MO 08 1/4
9250604	Spare MO 12 1/4
9450601	Spare MO 04 1/2
9450602	Spare MO 08 1/2
9450603	Spare MO 12 1/2
9650601	Spare MO 04 3/4
9650602	Spare MO 08 3/4
9650603	Spare MO 12 3/4

### COMPLETE POPPER FOR REGULATOR



Code	Description
9250701	Spare OTR 1/4
9450701	Spare OTR 1/2
9650701	Spare OTR 3/4

### VENTURI LUBRICATOR DIAPHRAGM



Code	Description
9252001	Spare MB 100 1/4
9352001	Spare MB 200 1/4 3/8 1/2
9652002	Spare MB 3/4-1

### METAL LUBRICATOR BOWL



Code	Description
9251201	Spare TMVL 1/4
9451201	Spare TMVL 1/2
9651201	Spare TMVL 3/4

### DOME DISASSEMBLY SPANNER



Code	Description
9220701	Acc cover LUB spanner

### METAL FILTER BOWL



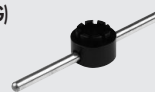
Code	Description
9250301	Spare TMVF 1/2 RMSA
9255201	Spare TMVF 1/2 SAC
9450301	Spare TMVF 1/4 RMSA
9455201	Spare TMVF 1/4 SAC
9650301	Spare TMVF 3/4 1 RMSA

### TRANSPARENT LUBRICATOR COVER



Code	Description
9251302	Spare CVL 100-200-300-400 BIT

### POPETT DISASSEMBLY SPANNER (FOR REG)



Code	Description
9220501	R cap disass. wr. 100

### AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spare RA automatic drain

### UPPER COVER FOR REGULATOR AND FILTER REGULATOR



Code	Description
9250801	Spare CS 1/4 02
9250802	Spare CS 1/4 04
9250803	Spare CS 1/4 08
9250804	Spare CS 1/4 012
9450801	Spare CS 1/2 04
9450802	Spare CS 1/2 08
9450803	Spare CS 1/2 12
9650801	Spare CS 3/4 04
9650802	Spare CS 3/4 08
9650803	Spare CS 3/4 12



TECHNICAL DATA		1/4"	3/8"	1/2"	3/4"	1"
Flow rate at 6.3 bar (0.6 MPa; 91 psi) $\Delta P$ 0.5 bar (0.05 MPa; 7 psi)	Nl/min scfm	2200 78	2900 102		3600 127	
Flow rate at 6.3 bar (0.6 MPa; 91 psi) $\Delta P$ 1 bar (0.1 MPa; 14 psi)	Nl/min scfm	2400 85	3300 116		4000 141	
Flow rate on discharge at 6 bar (0.1 MPa; 14 psi)	Nl/min scfm			1600 56		
1/4" port flow rate of non-regulated filtered air at 6.3 bar (0.6 MPa; 91 psi) $\Delta p$ 1 bar	Nl/min scfm			1800 64		
* Flow rate of each supplementary 1/4" filtered and regulated air port at 6.3 bar (0.6 MPa; 91 psi) $\Delta P$ 1 bar	Nl/min scfm			2400 85		
Fluid				Compressed air		
Setting range	bar			0.5 to 2 - 0.5 to 4 + 0.5 to 8		
Degree of filtration	$\mu m$			5 (yellow) or 20 (white)		
Operating temperature range	bar			10		
	MPa			1		
	psi			145		
Operating temperature range	$^{\circ}C$			-10 to 50		
	$^{\circ}F$			-14 to 122		
Class of protection				IP 65 with connector		
Insulation class of the solenoid valve				F155		
Switching time				100% ED		
Electrical connector				M12 x 1.5-pin to CEI IEC 60947-5-2		
Solenoid valve power	W			3/0.3		
Solenoid valve voltage	V			24 VDC $\pm$ 10%		
Pressure interval settable on the pressure switch	bar			0.5 to 10		
Pressure switch hysteresis (not adjustable)	bar			0.4 to 0.8		
Maximum pressure switch current	A			0.5		
Maximum pressure switch voltage	V			3 to 30 AC/DC		
Pressure switch contacts				Normally open (NO) and normally closed (NC)		
Number of switching				5 x 10 <sup>6</sup>		
Weight	kg			From 1.15 to 1.25 according to configurations		
Wall fixing (max. panel thickness 10 mm)				Front, with M5 x 75 screws or back, with M6 x 70 screws The screws are included in the supply		
Mounting position				Vertical		
Direction of flow				From left to right		
* Total flow rate from two supplementary outlets and the main one cannot exceed 4000 Nl/min at 6.3 bar with $\Delta P=1$						

## HOW TO ORDER

### ORDERING CODES

You can choose among numerous variants and options. The product code so personalised is made up by compiling the diagram below. The code so compiled must be specified on the order. A label showing the code and its pneumatic diagram is affixed onto the product.

	A	B	C	D	E	F	G	H	I	L
	ONE electrical or ONE non-electrical	Air intake	Degree of filtration	Clogged filter signal	Condensate drain	Pressure regulation	Valves	Pressure switch	Air outlet	Miscellaneous, special version
EXAMPLE	54	3	2	1	1	2	7	1	3	0 0
	53 ONE non-electric	1 1/4"	2 20µm	0 NO	0 RMSA	2 0,5 to 2 bar	0 None	0 NO	1 1/4"	00 Standard
	54 ONE electric*	2 3/8"	5 5µm	1 YES	1 automatic (RA)	4 0,5 to 4 bar	1 V3V manual	1 YES	2 3/8"	
		3 1/2"				8 0,5 to 8 bar	2 V3V manual with padlock		3 1/2"	
		4 3/4"					3 V3V manual and soft start valve		4 3/4"	
		5 1"					4 V3V manual with padlock and soft start valve		5 1"	
							5 V3V manual and V3V electric			
							6 V3V manual with padlock and V3V electric			
							7 V3V manual and APR electric			
							8 V3V manual with padlock and APR electric			
						9 only V3V electric				
						A only APR electric				

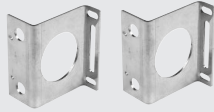
\* a pressure switch version and/or electric V3V and/or electric progressive actuator.

● NB: versions valid only for the electric ONE (code 54...)

- A ONE electric or non-electric**  
**ONE non-electric:** there is no component actuated electrically: select code 53. In this case, the unit comes without any M12x1 connector, LED, pressure switch, or electric V3V.  
**ONE electric:** there is at least one component actuated electrically, and thus the pressure switch and/or electric V3V (and/or the electrical soft start valve) select code 54. In this case, the unit comes with the M12x1 connector and 3 LEDs. Only the LEDs associated with the functions installed will be active.
- B Air intake**  
 There are 5 different gas cylindrical threads: 1/4", 3/8", 1/2", 3/4" and 1".
- C Degree of filtration**  
 A cartridge with a degree of filtering of 5 µm (yellow) or 20 µm (white) is available. This value is marked on the plug.
- D Clogged filter signal**  
 If the filter gets so clogged up that it causes an excessive drop in pressure as the air passes through, the orange indicator will project from the body by a few millimetres.
- E Condensate drain**  
**RMSA:** the condensate is drained out automatically only by relieving the air pull the knurled knob for having the same result.  
**Automatic (RA):** a floating system that automatically drains the condensate out whenever the level of water in the bowl reaches the set value.
- F Pressure regulation**  
 There are three possible regulation fields.  
 The value is marked on the regulation knob.
- G Valves**  
 There are 11 different combinations. The electric valves are clearly selectable only if the initial code is 54, i.e. ONE electric.
- 0 - No valves present
  - 1 - V3V manual: is a 3/2 valve that in a set position allows the air to flow and in the other it closes the passage and discharges the pressure downstream.
  - 2 - V3V manual with padlock: like the previous one, with the possibility of inserting a padlock (included in the supply with 2 keys) in the valve closed position.
  - 3 - V3V manual and soft start valve: when the manual V3V valve is operated, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
  - 4 - V3V manual with padlock and soft start valve: like the previous, with the padlock device on the manual V3V in "OFF" position.
  - 5 - V3V manual and V3V electric: two V3V in series are present, one is manual the other electrical. By operating both the valve the air flow is allowed. If one or two are switched OFF, the air downstream is relieved. The electrical one can also be operated manually by reefing pushed the "TEST" button
  - 6 - V3V manual with padlock and V3V electric: like the previous, with the padlock device in "OFF" position.
  - 7 - V3V manual and APR electric: One manual V3V and one soft start valve are present. When both are operated, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
  - 8 - V3V manual with padlock and APR electric: like the previous, with the padlock device on the manual V3V in "OFF" position.
  - 9 - V3V electric: It's present only the electrical V3V. The valve will open if it is powered on. When the power supply is switched off, the valve closes and air downstream is relieved. The valve can also be operated manually by keeping pushed the test button.
  - A - APR electric: It's present only the electric soft start valve. When it is powered ON, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
- H Pressure switch**  
 The pressure switch has a switching contact, which means you can have a normally-open signal or a normally-close signal. It is also connected to the NC and NO LEDs which come on if the actual pressure is less or greater than the set pressure, respectively. The LEDs only come on if an electric charge is connected to them.
- I Air outlet**  
 Five different gas cylindrical threads are available: 1/4", 3/8", 1/2", 3/4" and 1". It is possible to choose a thread other than the one on the inlet port.
- L Free positions for special executions.**

## ACCESSORIES

### PANEL MOUNTING BRACKETS



Code	Description
9200702	Kit – panel mounting brackets NB: fixing screws included

### COVER DISASSEMBLY WRENCH



Code	Description
9170401	Cover disassembly wrench

### STRAIGHT CONNECTOR WITH WIRE



Code	Description
W0970513002	Acc. 5-PIN M12X1 straight connector with wire L = 5 m

### STRAIGHT CONNECTOR



Code	Description
W0970513001	Acc. 5-PIN M12X1 straight connector

### 90° CONNECTOR WITH WIRE



Code	Description
W0970513004	Acc. M12X1 5-PIN 90° connector with wire L = 5 m

### 90° CONNECTOR



Code	Description
W0970513003	Acc. M12X1 5-PIN 90° connector

### SECURITY KNOB



Code	Description
9200703	Acc. security knob apr/pressure switch

## SPARE PARTS

### PRESSURE GAUGE



Code	Description
9700106	M 39 1/8 0-4
9700107	M 39 1/8 0-12

### FILTER PLUG WITH FILTER ELEMENT



Code	Description
9251723	Spare plug + filter element 5 µm ONE
9251724	Spare plug + filter element 20 µm ONE

### PRESSURE SWITCH



Code	Description
9000500	Spare press. switch for ONE

### FILTER ELEMENT



Code	Description
9251720	Spare filter element 5 µm for ONE
9251721	Spare filter element 20 µm for ONE

### POPPE



Code	Description
9250707	Spare poppet for ONE

### ELECTRIC BOARD



Code	Description
9232010	Spare electric board for ONE

### PILOT REGULATOR



Code	Description
9250820	Spare pilot reg. 0.5 to 2 bar for ONE
9250821	Spare pilot reg. 0.5 to 4 bar for ONE
9250822	Spare pilot reg. 0.5 to 8 bar for ONE

### SOLENOID VALVE



OLD

Code	Description
W4005001150	Spare sol. valv. for ONE

### AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spare RA automatic drain

### THREADED PORT



Code	Description
9232001	Spare 1/4" thr. port for ONE
9232002	Spare 3/8" thr. port for ONE
9232003	Spare 1/2" thr. port for ONE
9232004	Spare 3/4" thr. port for ONE
9232005	Spare 1" thr. port for ONE



NEW

Code	Description
722123840101	PLT-10 722123840101

To order the correct spare part of the solenoid valve, we beg you to compare the pictures appearing above with the one you have and then order the related code.

## PROPORTIONAL PRECISION PRESSURE REGULATOR "REGTRONIC" SERIES

REGTRONIC M5



REGTRONIC 1/8"-1/4"



REGTRONIC New deal



REGTRONIC 300



REGTRONIC 400

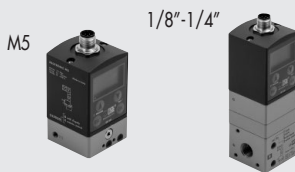


TECHNICAL DATA	REGTRONIC			REGTRONIC NEW DEAL		REGTRONIC 300			REGTRONIC 400			
	M5	1/8"	1/4"	3/4"	1"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded ports	Filtered, unlubricated air. The air must be filtered at least 10 µm Regulation pressure +1 bar											
Fluid	-10 to 50											
MIN inlet pressure bar	0.05 to 10 (settable full scale and minimum pressure)											
MAX inlet pressure bar	11											
Temperature range °C	-10 to 50											
Pressure regulation range bar	0.05 to 10 (settable full scale and minimum pressure)											
Flow rate at 6.3 bar ΔP 0.5 bar NI/min	10	770	1490	10000		4500			18.000		20.000	
Flow rate at 6.3 bar ΔP 1 bar NI/min	10	1050	1700	13000		7000			-		-	
Exhaust flow rate at 6.3 bar with 0.1 bar overpressure NI/min	2	320	500	1800		250			400		400	
Exhaust flow rate at 6.3 bar with 0.5 bar overpressure NI/min	9	650	1200	2000		500			850		850	
Weight kg	0.2	0.38	0.38	1.3		1.5			5		5.8	
Class of protection	IP 65											
Power supply	24 Vcc +10% -5% I max 110 mA											
Input signal (input impedance)	0 to 5 Vcc, 0 to 10 Vcc (approx. 168 KΩ)											
	4 to 20 mA (approx. 100 KΩ)											
	RS 232											
	Keypad											
Output signal	0 to 10 Vcc (1 V=1bar) - 1 mA max											
	PNP open collector output: max 24V 60 mA											
	NPN open collector output: max 24V 60 mA											
Linearity	≤ ± 0.5% (Full scale)											
Hysteresis	≤ ± 0.2% (Full scale)											
Repeatability	≤ ± 0.2% (Full scale)											
Sensitivity/Dead-band	setting range 10 to 100 mbar											
Output pressure display	Accuracy ≤ ± 0.3% (Full scale)											
	Unit of measurement bar, MPa, psi											
	0.01 bar - 0.001 MPa - 0.01 psi											
	≤ ± 0.4% (Full scale)											
	max 2 mbar / °C											
Analog output accuracy												
Temperature characteristics												
Response time with ΔP = 1 bar	volume 100 cc						volume 1000 cc					
from 6 to 7 bar s	0.5	0.2		0.3		0.45			0.35			
from 7 to 6 bar s	0.55	0.3		0.3		0.45			0.7			
Installation position	in any position											
Note	The features shown refer to the static condition only. With air consumption on the output side, the pressure may vary.											

UNITS

PROPORTIONAL PRECISION PRESSURE REGULATOR "REGTRONIC" SERIES

### REGTRONIC M5; 1/8"; 1/4"



Code	Description
5520500	REGTRONIC M5 with display
5520502	REGTRONIC M5 remote control
5521500	REGTRONIC 1/8" with display
5521502	REGTRONIC 1/8" remote control
5522500	REGTRONIC 1/4" with display
5522502	REGTRONIC 1/4" remote control

### REGTRONIC 300



Code	Description
4402012A	REGTRONIC 300 with display without end plates
4402013A	REGTRONIC 300 remote control without end plates
4402012	REGTRONIC 300 1/2" with display
4402013	REGTRONIC 300 1/2" remote control
4502012	REGTRONIC 300 3/4" with display
4502013	REGTRONIC 300 3/4" remote control
4602012	REGTRONIC 300 1" with display
4602013	REGTRONIC 300 1" remote control

### REGTRONIC New deal



Code	Description
1520003	REGTRONIC 3/4" with display
1520004	REGTRONIC 3/4" remote control
1620003	REGTRONIC 1" with display
1620004	REGTRONIC 1" remote control

### REGTRONIC 400



Code	Description
6102012A	REGTRONIC 400 with display without end plates
6102013A	REGTRONIC 400 remote control without end plates
6102012	REGTRONIC 400 1" with display
6102013	REGTRONIC 400 1" remote control
6202012	REGTRONIC 400 1" 1/4 with display
6202013	REGTRONIC 400 1" 1/4 remote control
6302012	REGTRONIC 400 1" 1/2 with display
6302013	REGTRONIC 400 1" 1/2 remote control
6402012	REGTRONIC 400 2" with display
6402013	REGTRONIC 400 2" remote control

### ACCESSORIES

#### M12x1 PRE-WIRED 8-PIN FEMALE STRAIGHT CONNECTOR

Code	Description
W0970513010	Acc. M12X1 pre-wired 8-PIN straight connector, cable L= 5 m

#### M12x1 PRE-WIRED 8-PIN FEMALE 90° CONNECTOR

Code	Description
W0970513011	Acc. M12X1 pre-wired 8-PIN 90° connector, cable L= 5 m

#### CONFIGURATION CABLE

Code	Description
W097053019	Cable configuration Regtronic

#### FIXING BRACKET KIT FOR REGTRONIC

Code	Description
9200710	Acc. fixing bracket kit for 1/8" - 1/4"
9200711	Acc. fixing bracket kit for M5

## PRECISION PRESSURE REGULATOR WITH HIGH EXHAUST FLOW, SERIE GS



TECHNICAL DATA	1/8"	1/4"
Threaded port	1/8"	1/4"
Setting range	0 to 2 - 0 to 4 - 0 to 8	
Max. input pressure	10	
Flow rate at 6.3 bar ΔP 0.5 bar	900	1170
Flow rate at 6.3 bar ΔP 1 bar	1200	1380
Fluid	Unlubricated filtered air	
Temperature range	The air must be at least 10 μm pre-filtered	
Mounting position	From -10 to +50	
Pressure gauge port	In any position	
Weight	G 1/8"	
Exhaust flow rate at 4 bar (regulated pressure)	600	
ΔP 0.1 bar	450	810
ΔP 0.5 bar	900	1190
Variation in regulated pressure (2 bar) with changes in upstream pressure (4-10 bar)	± 20	
Relieving sensitivity	30	
Air consumption – continuous escape	< 0.1	
Notes	The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. <b>Do not take air from pressure gauge ports.</b>	

### ORDERING CODES

Code	Description	Code	Description	Code	Description
5511200	REG. GS 1/8 02	5511400	REG. GS 1/8 08	5512300	REG. GS 1/4 04
5511300	REG. GS 1/8 04	5512200	REG. GS 1/4 02	5512400	REG. GS 1/4 08

### ACCESSORIES

#### PRESSURE GAUGE



Code	Description
9700101	Acc. M 40 1/8 04
9700102	Acc. M 40 1/8 12
9700109	Acc. M 40x40 1/8 04
9700110	Acc. M 40x40 1/8 012

#### R/FR FIXING BRACKET



Code	Description
9200701	Acc. SF100 - BIT - ND 1/4 - SY1

#### FIXING BRACKET KIT



Code	Description
9200710	Acc. fixing bracket kit

### SPARE PARTS

#### UPPER COVER FOR REG GS



Code	Description
9250835	Spares CS REG GS 02
9250836	Spares CS REG GS 04
9250837	Spares CS REG GS 04

## PRESSURE SWITCHES



TECHNICAL DATA		
Adjustable pressure interval	bar	0.5 to 10
Hysteresis (not adjustable)	bar	from 0.4 to 0.8
Maximum pressure	bar	15
	MPa	1.5
	psi	217
Operating temperature range at: 1 MPa; 10 bar; 145 psi	°C	50
	°F	122
Lower threaded port		R 1/8"
Maximum current	A	2
Maximum voltage	V	250
Outside diameter of cable	mm	4.9
Number of wires and cross section		3 x 0.5 mm <sup>2</sup>
Contacts		Normally-Open (NO) and Normally-Closed (NC)
Protection		IP65
Number of switchings		5 x 10 <sup>6</sup>
Fluid		Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous
Mounting position		In any position.
Weight	kg	0.121

### ORDERING CODES

Code	Description	Code	Description	Code	Description
9000401	1/8 2A NO/NC pressure switch, 2-metre cable	9000402	1/8 2A NO/NC pressure switch, M8 connector	9200703	Acc. security knob

### ACCESSORIES



## DIGITAL PRESSURE SWITCH



TECHNICAL DATA	
Working pressure range	bar -1 to 10 MPa -0.1 to 1
Maximum admissible pressure	bar 15 MPa 1.5
Readable resolution:	bar 0.01 MPa 0.001 kg/cm <sup>2</sup> 0.01 psi 0.1
Power supply	VDC 12 to 24 ± 10%, max ripple 10%
Current consumption	mA ≤ 55
Digital outputs	2 type PNP, with max current 80 mA, max voltage 30 VDC; residual voltage ≤ 1V (at 80 mA) ≤ ±0.2 % full scale ±2 digits
Digital output repeatability	Adjustable or fixed at 3 digits for operation within a pressure range
Hysteresis	≤ 2.5
Actuation response time	ms 24 ms, 192 ms, 768 ms
Interference suppression selectable at	Yes
Short-circuit protection at the outputs	3 1/2 digit display (image update 5 times/ s)
LED 7 segment display	±2% full scale ±1 digit, ambient temperature 25° ±3°C
Display accuracy	green LED (output 1), red LED (output 2)
Indicators	1-5 V ±2.5 % (0 bar - 1V; 10 bar - 5V; it doesn't read the vacuum)
Analogue output	Linearity ≤ 1% full scale
Thermal characteristic	≤ ±2% full scale of the calibration pressure (at 25°C), in the temperature range 0 - 50°C
Compressed air ports	Two 1/8"
Power cable	2 m, with five 0.15 mm <sup>2</sup> wires, oil-resistant
Weight	g 135, including 2 m cable
AMBIENT CONDITIONS	
Fluid	Filtered and unlubricated air, inert non-corrosive and non-explosive gas
Degree of protection	IP 40
Temperature range	°C 0 to 50
Storage temperature	°C -20 to +60, but without condensate or ice
Ambient humidity	35 to 85% relative humidity; no condensate
Insulation voltage	1000 VAC for one minute between casing and cable
Resistance of Insulation	Min. 50 M Ohm minimo (at 500 VDC between casing and cable)
Vibration admitted	1.5 mm amplitude with scanning every minute from 10 to 55 Hz at 10 Hz, for 2 hours in each direction x, y and z
Impact	980 m/s <sup>2</sup> (100 g), 3 times in each direction x, y and z

### ORDERING CODES

Code	Description
9000600	Digital pressure switch

### ACCESSORIES

#### FIXING BRACKET KIT



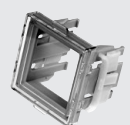
Code	Description
9000601	Kit of fixing brackets for digital pressure switches

#### PANEL FIXING KIT



Code	Description
9000602	Kit for panel fixing for the digital pressure switch

#### PANEL FIXING KIT WITH VIDEO SCREEN



Code	Description
9000603	Kit for panel fixing with screen for the digital pressure switch

NB: Each kit contains a bracket for fixing on the back and one for fixing at the bottom.

## PUSH-IN FITTINGS

### GENERAL TECHNICAL DATA

Threaded coupling		M3 - M5 - M7 - 1/8" - 1/4" - 3/8" - 1/2"
Diameter	mm	Ø 3 - Ø 3.17 - Ø 4 - Ø 5 - Ø 6 - Ø 8 - Ø 10 - Ø 12 - Ø 14
Temperature range for brass fittings	°C	- 20 to + 80
	°F	- 4 to 176
Temperature range for technopolymer fittings	°C	- 20 to + 60
	°F	- 4 to 140
Pressure range for brass fittings		- 0.99 bar ... 1.6 bar / - 0.099 MPa ... 1.6 MPa
Pressure range for technopolymer fittings		- 0.99 bar ... 1.2 bar / - 0.099 MPa ... 1.2 MPa
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene
Fluid		Vacuum - Compressed air

## BRASS FITTINGS

### STRAIGHT, CYLINDRICAL, MALE (R1)



Code	Ref.	Ø	Thread	Quantity
2001B01	R1	3	M3	50
2001B02	R1	3	M5	50
2001A01	R1	3.17	M3	25
2001A02	R1	3.17	M5	25
2L01001	RL1	4	M5	50
2L01020	RL1	4	M7	50
2L01002	RL1	4	1/8	50
2L01003	RL1	4	1/4	50
2001004	R1	5	M5	50
2001005	R1	5	1/8	50
2001006	R1	5	1/4	50
2L01000	RL1	6	M5	50
2L01021	RL1	6	M7	50
2L01101	RL1	6	M12x1.5	50
2L01007	RL1	6	1/8	50
2L01008	RL1	6	1/4	50
2L01102	RL1	8	M12x1.5	50
2L01009	RL1	8	1/8	50
2L01010	RL1	8	1/4	50
2L01011	RL1	8	3/8	50
2L01012	RL1	10	1/4	50
2L01013	RL1	10	3/8	50
2L01018	RL1	10	1/2	25
2001019	RL1	12	1/4	25
2001014	RL1	12	3/8	25
2001015	RL1	12	1/2	25
2001016	RL1	14	3/8	25
2001017	RL1	14	1/2	25

### STRAIGHT, FEMALE (R2)



Code	Ref.	Ø	Thread	Quantity
2002B02	R2	3	M5	50
2002A02	R2	3.17	M5	50
2L02001	RL2	4	1/8	50
2L02002	RL2	4	1/4	50
2002003	R2	5	1/8	50
2002004	R2	5	1/4	50
2L02005	RL2	6	1/8	50
2L02006	RL2	6	1/4	50
2L02007	RL2	8	1/8	50
2L02008	RL2	8	1/4	50
2L02009	RL2	10	1/4	50
2L02010	RL2	10	3/8	50
2L02011	RL2	12	3/8	25
2L02012	RL2	12	1/2	25

### ELBOW, INTERMEDIATE (R4)



Code	Ref.	Ø	Quantity
2004A02	4	3	50
2004A01	R4	3.17	50
2L04001	RL4	4	50
2004002	R4	5	50
2L04003	RL4	6	50
2L04004	RL4	8	50
2L04005	RL4	10	50
2004006	RL4	12	25
2004007	RL4	14	20

### THREADED ADAPTER (R6)



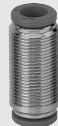
Code	Ref.	Ø	Thread	Quantity
2006A02	R6	3	M5	100
2006A01	R6	3.17	M5	25
2006001	R6	4	M5	50
2006020	R6	4	M7	50
2006002	R6	4	1/8	50
2006003	R6	4	1/4	50
2006004	R6	5	M5	50
2006005	R6	5	1/8	50
2006006	R6	5	1/4	50
2006000	R6	6	M5	50
2006021	R6	6	M7	50
2006007	R6	6	1/8	50
2006008	R6	6	1/4	50
2006009	R6	8	1/8	50
2006010	R6	8	1/4	50
2006011	R6	8	3/8	50
2006012	R6	10	1/4	50
2006013	R6	10	3/8	50
2006022	R6	10	1/2	25
2006019	R6	12	1/4	25
2006014	R6	12	3/8	25
2006015	R6	12	1/2	25
2006016	R6	14	3/8	25
2006017	R6	14	1/2	25
2006101	R6	6	M12X1.5	50
2006102	R6	8	M12X1.5	50

### STRAIGHT, CONICAL, MALE (R1C)



Code	Ref.	Ø	Thread	Quantity
2L01C02	RL1C	4	1/8	50
2L01C07	RL1C	6	1/8	50
2L01C08	RL1C	6	1/4	50
2001Z07	RL1Z	6	12x1 conical	50
2001Z08	RL1Z	6	12x1.25 conical	50
2L01C09	RL1C	8	1/8	50
2L01C10	RL1C	8	1/4	50
2L01C11	RL1C	8	3/8	50
2L01C13	RL1C	10	1/4	50
2L01C14	RL1C	10	3/8	50
2001C15	RL1C	12	3/8	25
2001C16	RL1C	12	1/2	25

### STRAIGHT, INTERMEDIATE (R3)



Code	Ref.	Ø 1	Ø 2	Quantity
2003A02	R3	3	3	50
2003A01	R3	3.17	3.17	50
2L03001	RL3	4	4	50
2003002	R3	5	5	50
2L03003	RL3	6	6	50
2L03004	RL3	8	8	50
2L03005	RL3	10	10	50
2003006	RL3	12	12	25
2003007	RL3	14	14	25
2L03301	RL3	4	6	50
2L03302	RL3	4	8	50
2L03303	RL3	6	8	50
2L03304	RL3	6	10	50
2L03306	RL3	6	12	50
2L03305	RL3	8	10	25
2L03307	RL3	8	12	25
2L03308	RL3	10	12	25

### TEE, INTERMEDIATE (R5)



Code	Ref.	Ø	Quantity
2005A02	R5	3	50
2005A01	R5	3.17	50
2L05001	RL5	4	50
2005002	R5	5	50
2L05003	RL5	6	50
2L05004	RL5	8	50
2L05005	RL5	10	20
2005006	RL5	12	20
2005007	RL5	14	10

### EXTENDED THREADED ADAPTER (R18)



Code	Ref.	Ø	Thread	Quantity
2018002	R18	4	1/8	50
2018007	R18	6	1/8	50
2018008	R18	6	1/4	50
2018009	R18	8	1/8	50
2018010	R18	8	1/4	50
2018011	R18	8	3/8	25
2018012	R18	10	1/4	50
2018013	R18	10	3/8	25

**EXTENSION (R7)**


Code	Ref.	Ø	Quantity
2007001	R7	4	100
2007002	R7	5	50
2007003	R7	6	50
2107004	RL7	8	50
2007005	R7	10	25
2007006	R7	12	20
2007007	R7	14	50

**STRAIGHT, INTERMEDIATE, BULKMTAD (R10)**


Code	Ref.	Ø 1	Ø 2	Thread	Quantity
2011A02	R10	3	3	M8x0.75	50
2011A01	R10	3.17	3.17	M8x0.75	50
2111001	RL10	4	4	M11x1	50
2011002	R10	5	5	M14x1	50
2111003	RL10	6	6	M13x1	50
2111004	RL10	8	8	M15x1	50
2111005	RL10	10	10	M17x1	25
2011006	RL10	12	12	M20x1	25
2011007	RL10	14	14	M24x1	25

2111301	RL10	4	6	M13x1	50
2111302	RL10	4	8	M15x1	50
2111303	RL10	6	8	M15x1	50
2111304	RL10	6	10	M17x1	50
2111306	RL10	6	12	M20x1	25
2111305	RL10	8	10	M17x1	25
2111307	RL10	8	12	M20x1	25
2111308	RL10	10	12	M20x1	25

**ROD, MALE SINGLE ROTARY RING (R15)**


Code	Ref.	Ø	Thread	Quantity
2014101	R15	3	M3	100
2014102	R15	3.17	M3	25
2014103	R15	3	M5	25
2014104	R15	3.17	M5	25
2114001	RL15	4	M5	50
2114020	RL15	4	M7	50
2114002	RL15	4	1/8	50
2014003	R15	5	M5	50
2014004	R15	5	1/8	50
2114106	RL15	6	M5	50
2114021	RL15	6	M7	50
2114005	RL15	6	1/8	50
2114007	RL15	6	1/4	50
2114006	RL15	8	1/8	50
2114008	RL15	8	1/4	50
2114013	RL15	8	3/8	50
2114009	RL15	10	1/4	25
2114014	RL15	10	3/8	25
2014010	RL15	12	1/4	20
2014011	RL15	12	3/8	50
2014012	RL15	12	1/2	25

**ROTARY ELBOW, MALE, CYLINDRICAL (R31)**


Code	Ref.	Ø	Thread	Quantity
2131001	RL31	4	M5	50
2131002	RL31	4	1/8	50
2131003	RL31	4	1/4	50
2031004	R31	5	M5	50
2031005	R31	5	1/8	50
2031006	R31	5	1/4	50
2131007	RL31	6	M5	50
2131008	RL31	6	1/8	50
2131009	RL31	6	1/4	50
2131010	RL31	8	1/8	50
2131011	RL31	8	1/4	50
2131012	RL31	8	3/8	50
2131013	RL31	10	1/4	50
2131014	RL31	10	3/8	25
2031015	RL31	10	1/2	25
2031016	RL31	12	1/4	25
2031017	RL31	12	3/8	25
2031018	RL31	12	1/2	25
2031019	RL31	14	1/2	20

**REDUCER (R8)**


Code	Ref.	Ø 1	Ø 2	Quantity
2008A01	R8	4	3	50
2008A02	R8	4	3.17	50
2008001	RL8	5	4	50
2108002	RL8	6	4	50
2008003	R8	6	5	50
2108004	RL8	8	4	50
2008005	R8	8	5	50
2108006	RL8	8	6	50
2108007	RL8	10	6	50
2108008	RL8	10	8	50
2008009	RL8	12	4	25
2008010	RL8	12	6	25
2008011	RL8	12	8	25
2008015	RL8	12	10	25
2008014	RL8	14	8	25
2008017	RL8	14	10	25
2008018	RL8	14	12	25

ADDITION				
2009001	RL8/M	4	6	50

**SINGLE RING (R13)**


Code	Ref.	Ø	Ø FOR:	Quantity
2012A02	RT3	3	M5	25
2012A01	RT3	3.17	M5	50
2012001	RL13	4	M5	50
2012002	RL13	4	1/8	50
2012003	RL13	5	M5	50
2012004	RL13	5	1/8	50
2012005	RL13	6	1/8	50
2012006	RL13	6	1/4	50
2012007	RL13	8	1/8	50
2012008	RL13	8	1/4	50
2012009	RL13	8	3/8	50
2012010	RL13	10	1/4	50
2012011	RL13	10	3/8	50
2012013	RL13	12	1/4	25
2012012	RL13	12	3/8	25
2012014	RL13	12	1/2	25

For the rods series D

**ROD, MALE DUAL ROTARY RING (R16)**


Code	Ref.	Ø	Thread	Quantity
2115001	RL16	4	M5	50
2115020	RL16	4	M7	50
2115002	RL16	4	1/8	50
2015003	R16	5	M5	50
2015004	R16	5	1/8	50
2115106	RL16	6	M5	50
2115021	RL16	6	M7	50
2115005	RL16	6	1/8	50
2115007	RL16	6	1/4	25
2115006	RL16	8	1/8	50
2115008	RL16	8	1/4	25
2115013	RL16	8	3/8	25
2115009	RL16	10	1/4	25
2115014	RL16	10	3/8	25
2015010	RL16	12	1/4	25
2015011	RL16	12	3/8	20
2015012	RL16	12	1/2	10

**ROTARY ELBOW, MALE, CONICAL (R31C)**


Code	Ref.	Ø	Thread	Quantity
2131C02	RL31/C	4	1/8	50
2131C03	RL31/C	4	1/4	50
2131C08	RL31/C	6	1/8	50
2131C09	RL31/C	6	1/4	50
2131C10	RL31/C	8	1/8	50
2131C11	RL31/C	8	1/4	50
2131C12	RL31/C	8	3/8	50
2131C13	RL31/C	10	1/4	25
2131C14	RL31/C	10	3/8	25
2031C15	RL31/C	12	3/8	25
2031C16	RL31/C	12	1/2	25

**PLUG (R9)**


Code	Ref.	Ø	Material	Quantity
2010A02	R9	3	Brass	100
2110A01	RL9T	3.17	Technopol.	50
2110001	RL9T	4	Technopol.	50
2010002	R9	5	Brass	50
2110003	RL9T	6	Technopol.	50
2110004	RL9T	8	Technopol.	50
2110005	RL9T	10	Technopol.	50
2110006	RL9T	12	Technopol.	50
2010007	R9	14	Brass	25

**DUAL RING (R14)**


Code	Ref.	Ø	Ø FOR:	Quantity
2013001	RL14	4	M5	25
2013002	RL14	4	1/8	25
2013003	RL14	5	M5	25
2013004	RL14	5	1/8	50
2013005	RL14	6	1/8	50
2013006	RL14	6	1/4	50
2013007	RL14	8	1/8	50
2013008	RL14	8	1/4	50
2013009	RL14	8	3/8	25
2013010	RL14	10	1/4	25
2013011	RL14	10	3/8	20

For the rods series D

**CENTRAL TEE, MALE, CYLINDRICAL, ROTARY (R32)**


Code	Ref.	Ø	Thread	Quantity
2132001	RL32	4	M5	50
2132002	RL32	4	1/8	50
2132003	RL32	4	1/4	50
2032005	R32	5	1/8	50
2132004	RL32	6	M5	50
2132008	RL32	6	1/8	50
2132009	RL32	6	1/4	50
2132010	RL32	8	1/8	50
2132011	RL32	8	1/4	50
2132012	RL32	8	3/8	50
2132013	RL32	10	1/4	25
2132014	RL32	10	3/8	25
2032017	RL32	12	3/8	20
2032018	RL32	12	1/2	20
2032019	RL32	14	1/2	10

**CENTRAL TEE, MALE, CONICAL, ROTARY (RL32C)**



Code	Ref.	Ø	Thread	Quantity
2L32C02	RL32/C	4	1/8	50
2L32C03	RL32/C	4	1/4	50
2L32C08	RL32/C	6	1/8	50
2L32C09	RL32/C	6	1/4	50
2L32C10	RL32/C	8	1/8	50
2L32C11	RL32/C	8	1/4	50
2L32C12	RL32/C	8	3/8	50
2L32C13	RL32/C	10	1/4	25
2L32C14	RL32/C	10	3/8	25

**CROSS FITTING (RL40)**



Code	Ref.	Ø	Quantity
2L40001	RL40	4	10
2L40003	RL40	6	10
2L40004	RL40	8	10

**TRIPLE ROD SINGLE ROTARY RINGS (RL52)**



Code	Ref.	Ø	Thread	Quantity
2L52002	RL52	4	1/8	25
2L52008	RL52	6	1/8	25
2L52009	RL52	6	1/4	25
2L52010	RL52	8	1/8	25
2L52011	RL52	8	1/4	25
2L52013	RL52	10	1/4	10

**MALE ROD, DUAL SWIVEL RING (RL55)**



Code	Ref.	Ø	Thread	Quantity
2L55001	RL55	4	M5	25
2L55002	RL55	4	1/8	25
2L55007	RL55	6	M5	25
2L55008	RL55	6	1/8	25
2L55009	RL55	6	1/4	25
2L55010	RL55	8	1/8	25
2L55011	RL55	8	1/4	25
2L55012	RL55	8	3/8	25
2L55013	RL55	10	1/4	25
2L55014	RL55	10	3/8	25
2L55018	RL55	12	1/4	25
2L55016	RL55	12	3/8	25
2L55017	RL55	12	1/2	25

**LATERAL TEE, MALE, CYLINDRICAL, ROTARY (R38)**



Code	Ref.	Ø	Thread	Quantity
2L38002	RL38	4	1/8	50
2038005	R38	5	1/8	50
2L38008	RL38	6	1/8	50
2L38009	RL38	6	1/4	50
2L38010	RL38	8	1/8	50
2L38011	RL38	8	1/4	25
2L38013	RL38	10	1/4	25
2L38014	RL38	10	3/8	50
2038015	RL38	12	3/8	50
2038016	RL38	12	1/2	50

**DUAL ROD SINGLE ROTARY RINGS (R50)**



Code	Ref.	Ø	Thread	Quantity
2L50001	RL50	4	M5	25
2L50002	RL50	4	1/8	25
2033002	R33	5	1/8	25
2L50007	RL50	6	M5	25
2L50008	RL50	6	1/8	25
2L50009	RL50	6	1/4	25
2L50010	RL50	8	1/8	25
2L50011	RL50	8	1/4	25
2L50013	RL50	10	1/4	25

**TRIPLE ROD DUAL ROTARY RINGS (RL53)**



Code	Ref.	Ø	Thread	Quantity
2L53002	RL53	4	1/8	20
2L53008	RL53	6	1/8	20
2L53009	RL53	6	1/4	10
2L53010	RL53	8	1/8	10
2L53011	RL53	8	1/4	10
2L53013	RL53	10	1/4	10

**DUAL ROD, MALE SINGLE SWIVEL RINGS (RL56)**



Code	Ref.	Ø	Thread	Quantity
2L56001	RL56	4	M5	25
2L56002	RL56	4	1/8	25
2L56007	RL56	6	M5	25
2L56008	RL56	6	1/8	25
2L56009	RL56	6	1/4	25
2L56010	RL56	8	1/8	25
2L56011	RL56	8	1/4	25
2L56012	RL56	8	3/8	25
2L56013	RL56	10	1/4	25
2L56014	RL56	10	3/8	10
2L56016	RL56	12	3/8	10
2L56017	RL56	12	1/2	10

**ELBOW, MALE, CONICAL (R39C)**



Code	Ref.	Ø	Thread	Quantity
2L39C02	RL39/C	4	1/8	50
2L39C08	RL39/C	6	1/8	50
2L39C09	RL39/C	6	1/4	50
2039Z07	RL39/Z	6	12x1 conical	50
2039Z08	RL39/Z	6	12x1.25 conical	50
2L39C10	RL39/C	8	1/8	50
2L39C11	RL39/C	8	1/4	50
2L39C13	RL39/C	10	1/4	25

**DUAL ROD DUAL ROTARY RINGS (RL51)**



Code	Ref.	Ø	Thread	Quantity
2L51001	RL51	4	M5	25
2L51002	RL51	4	1/8	25
2L51007	RL51	6	M5	25
2L51008	RL51	6	1/8	25
2L51009	RL51	6	1/4	25
2L51010	RL51	8	1/8	25
2L51011	RL51	8	1/4	25
2L51013	RL51	10	1/4	10

**MALE ROD, SINGLE SWIVEL RING (RL54)**



Code	Ref.	Ø	Thread	Quantity
2L54001	RL54	4	M5	50
2L54002	RL54	4	1/8	50
2L54007	RL54	6	M5	50
2L54008	RL54	6	1/8	50
2L54009	RL54	6	1/4	50
2L54010	RL54	8	1/8	50
2L54011	RL54	8	1/4	50
2L54012	RL54	8	3/8	25
2L54013	RL54	10	1/4	50
2L54014	RL54	10	3/8	25
2L54018	RL54	12	1/4	25
2L54016	RL54	12	3/8	25
2L54017	RL54	12	1/2	25

**DUAL ROD, MALE DUAL SWIVEL RINGS (RL57)**



Code	Ref.	Ø	Thread	Quantity
2L57001	RL57	4	M5	25
2L57002	RL57	4	1/8	25
2L57007	RL57	6	M5	25
2L57008	RL57	6	1/8	25
2L57009	RL57	6	1/4	25
2L57010	RL57	8	1/8	25
2L57011	RL57	8	1/4	25
2L57012	RL57	8	3/8	10
2L57013	RL57	10	1/4	10
2L57014	RL57	10	3/8	10
2L57016	RL57	12	3/8	10
2L57017	RL57	12	1/2	5

## TECHNOPOLYMER FITTINGS

### STRAIGHT, INTERMEDIATE, TECHNOPOLYMER (R19)



Code	Ref.	Ø	Quantity
2019001	RL19	4	50
2019002	R19	5	50
2019003	RL19	6	50
2019004	RL19	8	50
2019005	RL19	10	50
2019006	RL19	12	25

### ELBOW, INTERMEDIATE, TECHNOPOLYMER (R21)



Code	Ref.	Ø	Quantity
2L21001	RL21	4	50
2021002	R21	5	50
2L21003	RL21	6	50
2L21004	RL21	8	50
2021005	RL21	10	50
2021006	RL21	12	25

### Y TECHNOPOLYMER, THREADED INPUT (RL23/M)



Code	Ref.	Ø	Thread	Quantity
2L23401	RL23/M	4	M5	25
2L23402	RL23/M	4	1/8	25
2L23403	RL23/M	4	1/4	25
2L23406	RL23/M	6	1/8	25
2L23407	RL23/M	6	1/4	25
2L23409	RL23/M	8	1/8	25
2L23410	RL23/M	8	1/4	25
2L23412	RL23/M	8	3/8	25
2L23413	RL23/M	10	1/4	10
2L23415	RL23/M	10	3/8	10
2L23419	RL23/M	12	3/8	10
2L23420	RL23/M	12	1/2	10

### SINGLE RING, TECHNOPOLYMER (R28)



Code	Ref.	Ø	Ø FOR:	Quantity
2012102	R28	4	1/8	50
2012104	R28	5	1/8	50
2012106	R28	6	1/8	50
2012107	R28	6	1/4	50
2012108	R28	8	1/8	50
2012109	R28	8	1/4	50
2012110	R28	8	3/8	50
2012111	R28	10	1/4	50
2012112	R28	10	3/8	50
2012113	R28	12	1/4	50
2012114	R28	12	3/8	50
2012115	R28	12	1/2	50

For the rods series D

### MALE ROD, SINGLE ROTARY RING, TECHNOPOLYMER (R20)



Code	Ref.	Ø	Thread	Quantity
2020001	RL20	4	M5	50
2020002	RL20	4	1/8	50
2020003	R20	5	M5	50
2020004	R20	5	1/8	50
2020016	RL20	6	M5	50
2020005	RL20	6	1/8	50
2020007	RL20	6	1/4	50
2020006	RL20	8	1/8	50
2020008	RL20	8	1/4	50
2020009	RL20	10	1/4	50
2L20017	RL20	10	3/8	25
2020010	RL20	12	1/4	25
2020011	RL20	12	3/8	20
2020012	RL20	12	1/2	25

### INTERMEDIATE TEE, TECHNOPOLYMER (R22)



Code	Ref.	Ø	Quantity
2L22001	RL22	4	50
2022002	R22	5	50
2L22003	RL22	6	50
2L22004	RL22	8	50
2022005	RL22	10	25
2022006	RL22	12	20

### Y BRANCH WITH ADAPTER, TECHNOPOLYMER (R24)



Code	Ref.	Ø1	Ø2 X 2	Quantity
2024001	RL24	4	4	50
2024003	RL24	6	6	50
2L24004	RL24	8	8	50
2L24005	RL24	10	10	25
2L24006	RL24	12	12	25
2L24301	RL24	6	4	50
2L24303	RL24	8	6	50
2L24306	RL24	10	8	25
2L24309	RL24	12	10	25

### DUAL RING, TECHNOPOLYMER (R29)



Code	Ref.	Ø	Ø FOR:	Quantity
2013102	R29	4	1/8	50
2013104	R29	5	1/8	50
2013106	R29	6	1/8	50
2013107	R29	6	1/4	50
2013108	R29	8	1/8	50
2013109	R29	8	1/4	50
2013110	R29	8	3/8	50
2013111	R29	10	1/4	50
2013112	R29	10	3/8	50
2013113	R29	12	1/4	50
2013114	R29	12	3/8	50
2013115	R29	12	1/2	50

For the rods series D

### MALE ROD, DUAL ROTARY RING, TECHNOPOLYMER (R20/A)



Code	Ref.	Ø	Thread	Quantity
2020A01	R20/A	4	M5	50
2020A02	R20/A	4	1/8	50
2020A03	R20/A	5	M5	50
2020A04	R20/A	5	1/8	50
2020A05	R20/A	6	1/8	50
2020A07	R20/A	6	1/4	50
2020A06	R20/A	8	1/8	50
2020A08	R20/A	8	1/4	25
2020A09	R20/A	10	1/4	25
2020A10	R20/A	12	1/4	25
2020A11	R20/A	12	3/8	20
2020A12	R20/A	12	1/2	25

### WYE (R23)



Code	Ref.	Ø1	Ø2 X 2	Quantity
2023001	RL23	4	4	50
2023002	R23	5	5	50
2023003	RL23	6	6	50
2023004	RL23	8	8	50
2L23005	RL23	10	10	25
2L23006	RL23	12	12	25
2L23301	RL23	6	4	50
2L23303	RL23	8	6	50
2L23306	RL23	10	8	25
2L23309	RL23	12	10	25

### TECHNOPOLYMER PARALLEL Y, THREADED INPUT (RL25)



Code	Ref.	Ø	Thread	Quantity
2L25001	RL25	4	M5	10
2L25002	RL25	4	M7	10
2L25003	RL25	4	1/8	10
2L25004	RL25	6	1/8	10
2L25005	RL25	6	1/4	10
2L25008	RL25	8	1/4	10
2L25009	RL25	8	3/8	10

### ROTARY ELBOW, MALE, TECHNOPOLYMER (RL 34)



Code	Ref.	Ø	Thread	Quantity
2L34001	RL34	4	M5	50
2L34020	RL34	4	M7	50
2L34002	RL34	4	1/8	50
2L34003	RL34	4	1/4	50
2L34006	RL34	6	M5	50
2L34021	RL34	6	M7	50
2L34007	RL34	6	1/8	50
2L34008	RL34	6	1/4	50
2L34009	RL34	8	1/8	50
2L34010	RL34	8	1/4	50
2L34011	RL34	8	3/8	50
2L34013	RL34	10	1/4	50
2L34014	RL34	10	3/8	25
2L34016	RL34	12	3/8	25
2L34017	RL34	12	1/2	25

**ELBOW, FEMALE, ROTARY, TECHNOPOLYMER (RL34/F)**


Code	Ref.	Ø	Thread	Quantity
2L34F01	RL34/F	4	M5	50
2L34F05	RL34/F	4	1/8	50
2L34F06	RL34/F	6	M5	50
2L34F07	RL34/F	6	1/8	50
2L34F08	RL34/F	6	1/4	50
2L34F09	RL34/F	8	1/8	50
2L34F10	RL34/F	8	1/4	50
2L34F13	RL34/F	10	1/4	25
2L34F14	RL34/F	10	3/8	25
2L34F16	RL34/F	12	3/8	25
2L34F17	RL34/F	12	1/2	25

**ROTARY ELBOW, MALE, EXTENDED, TECHNOPOLYMER (RL 36)**


Code	Ref.	Ø	Thread	Quantity
2L36001	RL36	4	M5	50
2L36020	RL36	4	M7	50
2L36002	RL36	4	1/8	50
2L36006	RL36	6	M5	50
2L36021	RL36	6	M7	50
2L36007	RL36	6	1/8	50
2L36008	RL36	6	1/4	50
2L36009	RL36	8	1/8	50
2L36010	RL36	8	1/4	50
2L36012	RL36	10	1/4	25

**DUAL Y BRANCH TECHNOPOLYMER, THREADED INPUT (RL43)**


Code	Ref.	Ø1	Thread	Quantity
2L43001	RL43	4	M5	10
2L43002	RL43	4	1/8	10
2L43003	RL43	4	1/4	10
2L43008	RL43	6	1/8	10
2L43009	RL43	6	1/4	10

**PLUG-IN ELBOWS (RL46)**


Code	Ref.	Ø	Quantity
2L46001	RL46	4	50
2L46002	RL46	6	50
2L46003	RL46	8	50
2L46004	RL46	10	25

**CENTRAL TEE, MALE, TECHNOPOLYMER (RL35)**


Code	Ref.	Ø	Thread	Quantity
2L35001	RL35	4	M5	50
2L35020	RL35	4	M7	50
2L35002	RL35	4	1/8	50
2L35003	RL35	4	1/4	50
2L35006	RL35	6	M5	50
2L35007	RL35	6	1/8	50
2L35008	RL35	6	1/4	50
2L35009	RL35	8	1/8	50
2L35010	RL35	8	1/4	50
2L35011	RL35	8	3/8	50
2L35013	RL35	10	1/4	25
2L35014	RL35	10	3/8	25
2L35016	RL35	12	3/8	25
2L35017	RL35	12	1/2	20

**CENTRAL TEE, MALE, ROTARY, EXTENDED, TECHNOPOLYMER (RL37)**


Code	Ref.	Ø	Thread	Quantity
2L37001	RL37	4	M5	50
2L37020	RL37	4	M7	50
2L37002	RL37	4	1/8	50
2L37006	RL37	6	M5	50
2L37007	RL37	6	1/8	50
2L37008	RL37	6	1/4	50
2L37009	RL37	8	1/8	50
2L37010	RL37	8	1/4	50
2L37012	RL37	10	1/4	25

**MULTIPLE MANIFOLD, TECHNOPOLYMER (RL44)**


Code	Ref.	Ø1 X 2	Ø2 X 3	Quantity
2L44001	RL44	6	4	10
2L44003	RL44	8	6	10

**EXTENDED PLUG-IN ELBOWS (RL47)**


Code	Ref.	Ø	Quantity
2L47001	RL47	4	50
2L47002	RL47	6	50
2L47003	RL47	8	50

**CENTRAL TEE, FEMALE, ROTARY, TECHNOPOLYMER (RL35/F)**


Code	Ref.	Ø	Thread	Quantity
2L35F01	RL35/F	4	M5	50
2L35F06	RL35/F	6	M5	50
2L35F07	RL35/F	6	1/8	50
2L35F08	RL35/F	6	1/4	25
2L35F09	RL35/F	8	1/8	50
2L35F10	RL35/F	8	1/4	25
2L35F13	RL35/F	10	1/4	25
2L35F14	RL35/F	10	3/8	25
2L35F16	RL35/F	12	3/8	25
2L35F17	RL35/F	12	1/2	20

**DUAL Y BRANCH TECHNOPOLYMER (RL42)**


Code	Ref.	Ø1 X 4	Ø2	Quantity
2L42001	RL42	4	4	10
2L42002	RL42	4	6	10
2L42004	RL42	6	6	10
2L42005	RL42	6	8	10

**MULTIPLE MANIFOLD, INPUT, THREADED, TECHNOPOLYMER (RL45)**


Code	Ref.	Thread	Ø1	Ø2 X 3	Quantity
2L45001	RL45	1/8	6	4	10
2L45002	RL45	1/4	6	4	10
2L45007	RL45	1/8	8	6	10
2L45008	RL45	1/4	8	6	10
2L45009	RL45	3/8	8	6	10

**DOUBLE ELBOW (RL48)**


Code	Ref.	Ø	Quantity
2L48001	RL48	4	10
2L48002	RL48	6	10
2L48003	RL48	8	10
2L48004	RL48	10	10

**DOUBLE LATERAL ELBOW (RL49)**


Code	Ref.	Ø	Quantity
2L49001	RL49	4	10
2L49003	RL49	6	10
2L49004	RL49	8	10
2L49005	RL49	10	10
2L49006	RL49	12	10



## CARTRIDGES AND ACCESSORIES

### BRASS CARTRIDGE WITH THREAD (R26)



Code	Ref.	Ø	Brace of serration on centers in plastic material [Nm]	Brace of serration on metallic centers [Nm]	Quantity
<b>SERIES R</b>					
2026A02	R26	3	0.6	0.8	50
2026A01	R26	3.17	0.6	0.8	50
2026001	R26	4	0.8	1	50
2026002	R26	5	0.8	1.5	50
2026003	R26	6	0.8	1.2	50
2026004	R26	8	1	1.8	50
2026005	R26	10	0.8	2	50
2026006	R26	12	0.8	2	50

### MALE FOR CARTRIDGE SLOT R26



Code	Ref.
2025020	MA R26 3-3.17
2025021	MA R26 4
2025022	MA R26 5
2025023	MA R26 6
2025024	MA R26 8
2025025	MA R26 10
2025026	MA R26 12

### TOOL FOR SLOT R26



Code	Ref.
2025010	UT.SE. R26 3-3.17
2025011	UT.SE. R26 4
2025012	UT.SE. R26 5
2025013	UT.SE. R26 6
2025014	UT.SE. R26 8
2025015	UT.SE. R26 10
2025016	UT.SE. R26 12

### R41 – CARTRIDGE KEY R26



Code	Ref.	Ø
2041001	R41	4
2041002	R41	5
2041003	R41	6
2041004	R41	8
2041005	R41	10
2041006	R41	12

### TOOL FOR SLOT R27



Code	Ref.
<b>FOR ALUMINIUM</b>	
2027021	UT.SE. R27 AL. 4
2027022	UT.SE. R27 AL. 5
2027023	UT.SE. R27 AL. 6
2027024	UT.SE. R27 AL. 8
2027025	UT.SE. R27 AL. 10
2027026	UT.SE. R27 AL. 12

Code	Ref.
<b>FOR TECHNOPOLYMER</b>	
2027011	UT.SE. R27 P. 4
2027012	UT.SE. R27 P. 5
2027013	UT.SE. R27 P. 6
2027014	UT.SE. R27 P. 8
2027015	UT.SE. R27 P. 10
2027016	UT.SE. R27 P. 12

### BRASS COMPRESSION CARTRIDGE (R27)



Code	Ref.	Ø	Quantity
<b>SERIES R</b>			
2027001	R27	4	50
2027002	R27	5	50
2027003	R27	6	50
2027004	R27	8	50
2027005	R27	10	50
2027006	R27	12	50

### R17 – DISASSEMBLY KEY



Code	Ref.	Ø Tube	Quantity
2L17001	RL17	from 3 to 10	50
2017001	R17	from 4 to 14	50



# SERIES F PUSH-IN FITTINGS FOR USE IN THE FOOD INDUSTRY



NSF/ANSI 51  
NSF/ANSI 61



## SERIES F PUSH-IN FITTINGS FOR USE IN THE FOOD INDUSTRY

TECHNICAL FEATURES		
Threaded port		M5 - G1/8" - G1/4" - G3/8" - G1/2"
Pipe diameter	mm	Ø 4 - Ø 6 - Ø 8 - Ø 10
Temperature range	°C	- 20 to + 150
	°F	- 4 to 302
Pressure range		- 0.99 bar - 16 bar / - 0.099 MPa - 1.6 MPa
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene

### STRAIGHT, CYLINDRICAL, MALE R1 NSF



Code	Ref.	Ø	Thread	Quantity
2F01001	R1 NSF	4	M5	50
2F01002	R1 NSF	4	1/8	50
2F01003	R1 NSF	4	1/4	50
2F01000	R1 NSF	6	M5	50
2F01007	R1 NSF	6	1/8	50
2F01008	R1 NSF	6	1/4	50
2F01009	R1 NSF	8	1/8	50
2F01010	R1 NSF	8	1/4	50
2F01011	R1 NSF	8	3/8	50
2F01012	R1 NSF	10	1/4	50
2F01013	R1 NSF	10	3/8	50
2F01022	R1 NSF	10	1/2	50

### ELBOW, INTERMEDIATE R4 NSF



Code	Ref.	Ø	Quantity
2F04001	R4 NSF	4	50
2F04003	R4 NSF	6	50
2F04004	R4 NSF	8	50
2F04005	R4 NSF	10	50

### STRAIGHT, INTERMEDIATE, BULKHEAD UNIONS R10 NSF



Code	Ref.	Ø	Thread	Quantity
2F11001	R10 NSF	4	M13x1	50
2F11003	R10 NSF	6	M15x1	50
2F11004	R10 NSF	8	M17x1	50
2F11005	R10 NSF	10	M20x1	25

### CENTRAL TEE, MALE, CYLINDRICAL, ROTARY R32 NSF



Code	Ref.	Ø	Thread	Quantity
2F32002	R32 NSF	4	1/8	50
2F32008	R32 NSF	6	1/8	50
2F32009	R32 NSF	6	1/4	50
2F32010	R32 NSF	8	1/8	50
2F32011	R32 NSF	8	1/4	50
2F32012	R32 NSF	8	3/8	50
2F32013	R32 NSF	10	1/4	25
2F32014	R32 NSF	10	3/8	25

### STRAIGHT, CONICAL, MALE RL1C NSF



Code	Ref.	Ø	Thread	Quantity
2F01C02	RL1C NSF	4	1/8	50
2F01C07	RL1C NSF	6	1/8	50
2F01C08	RL1C NSF	6	1/4	50
2F01C09	RL1C NSF	8	1/8	50
2F01C10	RL1C NSF	8	1/4	50
2F01C11	RL1C NSF	8	3/8	50
2F01C13	RL1C NSF	10	1/4	50
2F01C14	RL1C NSF	10	3/8	25

### TEE, INTERMEDIATE R5 NSF



Code	Ref.	Ø	Quantity
2F05001	R5 NSF	4	50
2F05003	R5 NSF	6	50
2F05004	R5 NSF	8	50
2F05005	R5 NSF	10	20

### ROTARY ELBOW, MALE, CYLINDRICAL R31 NSF



Code	Ref.	Ø	Thread	Quantity
2F31001	R31 NSF	4	M5	50
2F31002	R31 NSF	4	1/8	50
2F31003	R31 NSF	4	1/4	50
2F31007	R31 NSF	6	M5	50
2F31008	R31 NSF	6	1/8	50
2F31009	R31 NSF	6	1/4	50
2F31010	R31 NSF	8	1/8	50
2F31011	R31 NSF	8	1/4	50
2F31012	R31 NSF	8	3/8	50
2F31013	R31 NSF	10	1/4	50
2F31014	R31 NSF	10	3/8	25
2F31015	R31 NSF	10	1/2	25

### LATERAL TEE, MALE, CYLINDRICAL, ROTARY R38 NSF



Code	Ref.	Ø	Thread	Quantity
2F38002	R38 NSF	4	1/8	50
2F38008	R38 NSF	6	1/8	50
2F38009	R38 NSF	6	1/4	50
2F38010	R38 NSF	8	1/8	50
2F38011	R38 NSF	8	1/4	50
2F38013	R38 NSF	10	1/4	25
2F38014	R38 NSF	10	3/8	25

### STRAIGHT, FEMALE R2 NSF



Code	Ref.	Ø	Thread	Quantity
2F02001	R2 NSF	4	1/8	50
2F02005	R2 NSF	6	1/8	50
2F02006	R2 NSF	6	1/4	50
2F02007	R2 NSF	8	1/8	50
2F02008	R2 NSF	8	1/4	50
2F02011	R2 NSF	10	1/4	50

### THREADED ADAPTER R6 NSF



Code	Ref.	Ø	Thread	Quantity
2F06001	R6 NSF	4	M5	50
2F06002	R6 NSF	4	1/8	50
2F06003	R6 NSF	4	1/4	50
2F06000	R6 NSF	6	M5	50
2F06007	R6 NSF	6	1/8	50
2F06008	R6 NSF	6	1/4	50
2F06009	R6 NSF	8	1/8	50
2F06010	R6 NSF	8	1/4	50
2F06011	R6 NSF	8	3/8	50
2F06012	R6 NSF	10	1/4	50
2F06013	R6 NSF	10	3/8	50

### ROTARY ELBOW, MALE, CONICAL R31C NSF



Code	Ref.	Ø	Thread	Quantity
2F31C02	R31C NSF	4	1/8	50
2F31C03	R31C NSF	4	1/4	50
2F31C08	R31C NSF	6	1/8	50
2F31C09	R31C NSF	6	1/4	50
2F31C10	R31C NSF	8	1/8	50
2F31C11	R31C NSF	8	1/4	50
2F31C12	R31C NSF	8	3/8	50
2F31C13	R31C NSF	10	1/4	25
2F31C14	R31C NSF	10	3/8	25

### ELBOW, MALE, CONICAL R39 NSF



Code	Ref.	Ø	Thread	Quantity
2F39C02	R39 NSF	4	1/8	50
2F39C08	R39 NSF	6	1/8	50
2F39C09	R39 NSF	6	1/4	50
2F39C10	R39 NSF	8	1/8	50
2F39C11	R39 NSF	8	1/4	50
2F39C12	R39 NSF	8	3/8	50
2F39C13	R39 NSF	10	1/4	25

### STRAIGHT, INTERMEDIATE R3 NSF



Code	Ref.	Ø	Thread	Quantity
2F03001	R3 NSF	4	M13X1	50
2F03003	R3 NSF	6	M15X1	50
2F03004	R3 NSF	8	M17X1	50
2F03005	R3 NSF	10	M20X1	50

## STANDARD FITTING SERIES A

### NIPPLE, PARALLEL (A1)



Code	Ref.	Thread 1	Thread 2	Quantity
2101A00	A1	M5	M5	100
2101000	A1	M5	1/8	100
2101001	A1	1/8	1/8	100
2101002	A1	1/8	1/4	100
2101003	A1	1/8	3/8	50
2101004	A1	1/4	1/4	100
2101005	A1	1/4	3/8	50
2101006	A1	1/4	1/2	50
2101007	A1	3/8	3/8	50
2101008	A1	3/8	1/2	50
2101009	A1	1/2	1/2	50
2101010	A1	1/2	3/4	20
2101011	A1	3/4	3/4	25

Washer D11 can be used

### REDUCER, CONICAL (A4)



Code	Ref.	Thread 1	Thread 2	Quantity
2104001	A4	1/4	1/8	100
2104002	A4	3/8	1/8	100
2104003	A4	3/8	1/4	100
2104004	A4	1/2	1/4	50
2104005	A4	1/2	3/8	50
2104006	A4	3/4	1/2	50

### REDUCER, PARALLEL (A5/Z)



Code	Ref.	Thread 1	Thread 2	Quantity
2152001	A5/Z	M5	1/8	100
2152002	A5/Z	1/8	1/8	100
2152003	A5/Z	1/8	1/4	100
2152004	A5/Z	1/4	1/4	100
2152005	A5/Z	1/4	3/8	50
2152006	A5/Z	3/8	3/8	25
2152007	A5/Z	3/8	1/2	50
2152008	A5/Z	1/2	1/2	50

Washer D11 can be used

### NUB (A8)



Code	Ref.	Thread	Quantity
2108001	A8	1/8	100
2108002	A8	1/4	100
2108003	A8	3/8	50
2108004	A8	1/2	50

### NIPPLE, CONICAL (A2)



Code	Ref.	Thread 1	Thread 2	Quantity
2102001	A2	1/8	1/8	100
2102002	A2	1/8	1/4	100
2102003	A2	1/8	3/8	50
2102004	A2	1/4	1/4	100
2102005	A2	1/4	3/8	50
2102006	A2	1/4	1/2	25
2102007	A2	3/8	3/8	50
2102008	A2	3/8	1/2	50
2102009	A2	1/2	1/2	50
2102010	A2	1/2	3/4	25
2102011	A2	3/4	3/4	25

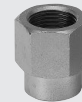
### REDUCER, PARALLEL (A4/Z)



Code	Ref.	Thread 1	Thread 2	Quantity
2151000	A4/Z	1/8	M5	100
2151001	A4/Z	1/4	1/8	100
2151002	A4/Z	3/8	1/8	100
2151003	A4/Z	3/8	1/4	100
2151004	A4/Z	1/2	1/4	50
2151005	A4/Z	1/2	3/8	50

Washer D11 can be used

### REDUCER A6



Code	Ref.	Thread 1	Thread 2	Quantity
2106001	A6	1/8	1/4	50
2106002	A6	1/8	3/8	50
2106003	A6	1/4	3/8	25
2106004	A6	1/4	1/2	50
2106005	A6	3/8	1/2	50

### ELBOW, FEMALE (A9)



Code	Ref.	Thread	Quantity
2109001	A9	1/8	50
2109002	A9	1/4	50
2109003	A9	3/8	20
2109004	A9	1/2	20

### SLEEVE (A3)



Code	Ref.	Thread	Quantity
2103000	A3	M5	50
2103001	A3	1/8	100
2103002	A3	1/4	50
2103003	A3	3/8	25
2103004	A3	1/2	20

### REDUCER, CONICAL (A5)



Code	Ref.	Thread 1	Thread 2	Quantity
2105001	A5	1/8	1/8	100
2105002	A5	1/8	1/4	100
2105003	A5	1/4	1/4	50
2105004	A5	1/4	3/8	25
2105005	A5	3/8	3/8	25
2105006	A5	3/8	1/2	50
2105007	A5	1/2	1/2	25

### PLUG WITH EXAGON EMBEDDED (A7)



Code	Ref.	Thread	Quantity
2107000	A7	M5	100
2107005	A7	M7	100
2107001	A7	1/8	100
2107002	A7	1/4	50
2107003	A7	3/8	50
2107004	A7	1/2	100

### ELBOW, MALE-FEMALE (A10)



Code	Ref.	Thread	Quantity
2110001	A10	1/8	100
2110002	A10	1/4	50
2110003	A10	3/8	25
2110004	A10	1/2	25

**TEE, FEMALE (A11)**


Code	Ref.	Thread	Quantity
2111001	A11	1/8	50
2111002	A11	1/4	20
2111003	A11	3/8	20
2111004	A11	1/2	10

**ELBOW, MALE (A15)**


Code	Ref.	Thread	Quantity
2115001	A15	1/8	100
2115002	A15	1/4	100
2115003	A15	3/8	25
2115004	A15	1/2	25

**HOSE ADAPTER, PARALLEL (A19)**


Code	Ref.	Ø	Thread	Quantity
2119001	A19	7	1/8	100
2119002	A19	7	1/4	100
2119003	A19	8	1/8	100
2119004	A19	9	1/8	50
2119005	A19	9	1/4	50
2119006	A19	9	3/8	100
2119007	A19	12	1/4	50
2119008	A19	12	3/8	50
2119009	A19	12	1/2	50
2119010	A19	17	3/8	25
2119011	A19	17	1/2	50

**Y, MALE 90° (A24)**


Code	Ref.	Thread	Quantity
2124001	A24	1/8	50
2124002	A24	1/4	50
2124003	A24	3/8	25
2124004	A24	1/2	10

**TEE, CENTRAL MALE (A12)**


Code	Ref.	Thread	Quantity
2112001	A12	1/8	100
2112002	A12	1/4	20
2112003	A12	3/8	25
2112004	A12	1/2	10

**TEE, MALE (A16)**


Code	Ref.	Thread	Quantity
2116001	A16	1/8	100
2116002	A16	1/4	50
2116003	A16	3/8	20
2116004	A16	1/2	10

**MALE-FEMALE EQUAL CROSS (A20)**


Code	Ref.	Thread	Quantity
2120001	A20	1/8	50
2120002	A20	1/4	25

**EXTENSION (A25)**


Code	Ref.	Thread	Quantity
2150003	A25	1/8	50
2150004	A25	1/8	50
2150005	A25	1/8	50
2150006	A25	1/4	50
2150007	A25	1/4	50

**TEE, LATERAL MALE (A13)**


Code	Ref.	Thread	Quantity
2113001	A13	1/8	100
2113002	A13	1/4	20
2113003	A13	3/8	25
2113004	A13	1/2	10

**TEE, CENTRAL FEMALE (A17)**


Code	Ref.	Thread	Quantity
2117001	A17	1/4	50
2117002	A17	1/8	50
2117003	A17	3/8	20
2117004	A17	1/2	10

**TEE CROSS (A21)**


Code	Ref.	Thread	Quantity
2121001	A21	1/8	25
2121002	A21	1/4	25
2121003	A21	3/8	10
2121004	A21	1/2	10

Maximum operating conditions for the A21s are different from other A-series fittings, namely max P13 bar, max T 50°C

**EQUAL FEMALE CROSS (A14)**


Code	Ref.	Thread	Quantity
2114001	A14	1/8	50
2114002	A14	1/4	25
2114003	A14	3/8	10

**TEE, LATERAL FEMALE (A18)**


Code	Ref.	Thread	Quantity
2118000	A18	1/8	100
2118001	A18	1/4	50
2118002	A18	3/8	20
2118003	A18	1/2	10

**Y, FEMALE 90° (A23)**


Code	Ref.	Thread	Quantity
2123001	A23	1/8	50
2123002	A23	1/4	50
2123003	A23	3/8	25
2123004	A23	1/2	20

## COMPRESSION FITTINGS SERIES B

### STRAIGHT, MALE CONICAL (B1)



Code	Ref.	Ø	Thread	Quantity
2201001	B1	4/2	1/8	100
2201002	B1	6/4	1/8	100
2201003	B1	6/4	1/4	100
2201004	B1	8/6	1/8	100
2201005	B1	8/6	1/4	50
2201006	B1	8/6	3/8	100
2201007	B1	10/8	1/4	50
2201008	B1	10/8	3/8	50
2201009	B1	10/8	1/2	25
2201010	B1	12/10	3/8	50
2201011	B1	12/10	1/2	20
2201012	B1	15/12	1/2	25

### BULKHEAD CONNECTOR (B4)



Code	Ref.	Ø	Quantity
2204001	B4	6/4	50
2204002	B4	8/6	50
2204003	B4	10/8	25
2204004	B4	12/10	25
2204005	B4	15/12	10

### TEE, CENTRAL MALE (B7)



Code	Ref.	Ø	Thread	Quantity
2207001	B7	4/2	1/8	100
2207002	B7	6/4	1/8	100
2207003	B7	6/4	1/4	50
2207004	B7	8/6	1/8	50
2207005	B7	8/6	1/4	50
2207006	B7	8/6	3/8	20
2207007	B7	10/8	1/4	25
2207008	B7	10/8	3/8	25
2207010	B7	12/10	3/8	10
2207011	B7	12/10	1/2	10
2207012	B7	15/12	1/2	10

### NUT (B10)



Code	Ref.	Ø	Quantity
2210001	B10	4/2	100
2210002	B10	6/4	100
2210003	B10	8/6	100
2210004	B10	10/8	50
2210005	B10	12/10	50
2210006	B10	15/12	25

### STRAIGHT, FEMALE (B2)



Code	Ref.	Ø	Thread	Quantity
2202001	B2	6/4	1/8	100
2202002	B2	6/4	1/4	100
2202003	B2	8/6	1/8	50
2202004	B2	8/6	1/4	100
2202005	B2	8/6	3/8	50
2202006	B2	10/8	1/4	25
2202007	B2	10/8	3/8	25

### ELBOW, MALE (B5)



Code	Ref.	Ø	Thread	Quantity
2205001	B5	4/2	1/8	100
2205002	B5	6/4	1/8	100
2205003	B5	6/4	1/4	50
2205004	B5	8/6	1/8	50
2205005	B5	8/6	1/4	100
2205006	B5	8/6	3/8	50
2205007	B5	10/8	1/4	50
2205008	B5	10/8	3/8	50
2205009	B5	10/8	1/2	25
2205010	B5	12/10	3/8	25
2205011	B5	12/10	1/2	25
2205012	B5	15/12	1/2	10

### TEE, LATERAL MALE (B8)



Code	Ref.	Ø	Thread	Quantity
2208000	B8	4/2	1/8	100
2208001	B8	6/4	1/8	100
2208002	B8	6/4	1/4	50
2208003	B8	8/6	1/8	50
2208004	B8	8/6	1/4	50
2208005	B8	8/6	3/8	25
2208006	B8	10/8	1/4	25
2208007	B8	10/8	3/8	25
2208009	B8	12/10	3/8	10
2208010	B8	12/10	1/2	10
2208011	B8	15/12	1/2	10

### OLIVE (B11)



Code	Ref.	Ø	Quantity
2211001	B11	4/2	100
2211002	B11	6/4	100
2211003	B11	8/6	100
2211004	B11	10/8	100
2211005	B11	12/10	100
2211006	B11	15/12	100

### STRAIGHT, CONNECTOR (B3)



Code	Ref.	Ø	Quantity
2203001	B3	4/2	50
2203002	B3	6/4	50
2203003	B3	8/6	50
2203004	B3	10/8	50
2203005	B3	12/10	25
2203006	B3	15/12	20

### ELBOW, FEMALE (B6)



Code	Ref.	Ø	Quantity
2206001	B6	4/2	100
2206002	B6	6/4	50
2206003	B6	8/6	50
2206004	B6	10/8	25
2206005	B6	12/10	25
2206006	B6	15/12	10

### TEE, MALE (B9)



Code	Ref.	Ø	Quantity
2209001	B9	4/2	100
2209002	B9	6/4	50
2209003	B9	8/6	50
2209004	B9	10/8	50
2209005	B9	12/10	10
2209006	B9	15/12	10

### INTERNAL BUSH (B12)



Code	Ref.	Ø	Quantity
2212001	B12	6/4	100
2212002	B12	8/6	100
2212003	B12	10/8	100
2212004	B12	12/10	100
2212005	B12	15/12	100

# QUICK FITTINGS SERIES C

## QUICK FITTINGS SERIES C

STRAIGHT, MALE CONICAL (C1)



Code	Ref.	Ø	Thread	Quantity
2301017	C1	5/3	1/8	100
2301001	C1	6/4	1/8	100
2301002	C1	6/4	1/4	50
2301003	C1	8/6	1/8	100
2301004	C1	8/6	1/4	100
2301005	C1	8/6	3/8	50
2301020	C1	10/8	1/8	50
2301006	C1	10/8	1/4	50
2301007	C1	10/8	3/8	50
2301008	C1	10/8	1/2	25
2301009	C1	12/10	3/8	50
2301010	C1	12/10	1/2	25
2301015	C1	15/12.5	1/2	50

STRAIGHT, CONNECTOR (C3)



Code	Ref.	Ø	Quantity
2303001	C3	6/4	100
2303002	C3	8/6	50
2303003	C3	10/8	100
2303004	C3	12/10	50

ELBOW, MALE METRIC THREAD (C5/C)



Code	Ref.	Ø	Thread	Quantity
2357001	C5/C	6/4	M12x1.5	50
2357002	C5/C	8/6	M12x1.5	50

TEE, LATERAL MALE (C8)



Code	Ref.	Ø	Thread	Quantity
2308012	C8	5/3	1/8	100
2308001	C8	6/4	1/8	100
2308002	C8	6/4	1/4	50
2308003	C8	8/6	1/8	50
2308004	C8	8/6	1/4	50
2308005	C8	8/6	3/8	50
2308006	C8	10/8	1/4	50
2308007	C8	10/8	3/8	25
2308008	C8	10/8	1/2	25
2308009	C8	12/10	3/8	25
2308010	C8	12/10	1/2	25

STRAIGHT, MALE PARALLEL WITH O-RING (C1/Z)



Code	Ref.	Ø	Thread	Quantity
2351001	C1/Z	4/2	M5	100
2351002	C1/Z	6/4	M5	100
2351003	C1/Z	6/4	1/8	50
2351004	C1/Z	6/4	1/4	50
2351005	C1/Z	8/6	1/8	100
2351006	C1/Z	8/6	1/4	50
2351007	C1/Z	8/6	3/8	100
2351008	C1/Z	10/8	1/4	100
2351009	C1/Z	10/8	3/8	50
2351010	C1/Z	10/8	1/2	50
2351011	C1/Z	12/10	3/8	25
2351012	C1/Z	12/10	1/2	50

BULKHEAD CONNECTOR (C4)



Code	Ref.	Ø	Quantity
2304001	C4	6/4	100
2304002	C4	8/6	50
2304003	C4	10/8	50
2304004	C4	12/10	50

ELBOW CONNECTOR (C6)



Code	Ref.	Ø	Quantity
2306001	C6	6/4	50
2306002	C6	8/6	100
2306003	C6	10/8	50
2306004	C6	12/10	25
2306006	C6	15/12.5	25

TEE CONNECTOR (C9)



Code	Ref.	Ø	Quantity
2309001	C9	6/4	100
2309002	C9	8/6	50
2309003	C9	10/8	50
2309004	C9	12/10	25
2309007	C9	15/12.5	25

STRAIGHT, MALE METRIC THREAD (C1/C)



Code	Ref.	Ø	Thread	Quantity
2356001	C1/C	5/3	M5	50
2356002	C1/C	6/4	M6	50
2356003	C1/C	6/4	M12x1.5	50
2356004	C1/C	6/4	3/8	50
2356005	C1/C	8/6	M12x1.5	50

ELBOW, MALE CONICAL (C5)



Code	Ref.	Ø	Thread	Quantity
2305016	C5	5/3	1/8	100
2305001	C5	6/4	1/8	50
2305002	C5	6/4	1/4	50
2305003	C5	8/6	1/8	50
2305004	C5	8/6	1/4	100
2305005	C5	8/6	3/8	100
2305006	C5	10/8	1/4	25
2305007	C5	10/8	3/8	50
2305008	C5	10/8	1/2	50
2305009	C5	12/10	3/8	50
2305010	C5	12/10	1/2	50
2305017	C5	15/12.5	1/2	25

TEE, CENTRAL MALE (C7)



Code	Ref.	Ø	Thread	Quantity
2307015	C7	5/3	1/8	100
2307001	C7	6/4	1/8	100
2307002	C7	6/4	1/4	50
2307003	C7	8/6	1/8	50
2307004	C7	8/6	1/4	50
2307005	C7	8/6	3/8	50
2307006	C7	10/8	1/4	50
2307007	C7	10/8	3/8	25
2307008	C7	10/8	1/2	25
2307009	C7	12/10	3/8	25
2307010	C7	12/10	1/2	50
2307016	C7	15/12.5	1/2	25

NUT (C10)



Code	Ref.	Ø	Thread	Quantity
2310001	C10	4/2	M7x0.5	100
2310009	C10	5/3	M7x0.5	100
2310002	C10	6/4-M5	M8x0.5	100
2310003	C10	6/4	M10x1	100
2310004	C10	8/6	M12x1	100
2310005	C10	10/8	M14x1	100
2310006	C10	12/10	M16x1	50
2310011	C10	15/12.5	M20x1	50

STRAIGHT, FEMALE (C2)



Code	Ref.	Ø	Thread	Quantity
2302001	C2	6/4	1/8	100
2302002	C2	6/4	1/4	50
2302003	C2	8/6	1/8	100
2302004	C2	8/6	1/4	50
2302005	C2	8/6	3/8	50
2302006	C2	10/8	1/4	100
2302007	C2	10/8	3/8	50
2302008	C2	10/8	1/2	25

ELBOW FEMALE (C5/F)



Code	Ref.	Ø	Thread	Quantity
2352001	C5/F	6/4	1/8	50
2352002	C5/F	8/6	1/4	50

EQUAL CROSS CONNECTOR (C11)



Code	Ref.	Ø	Quantity
2311001	C11	6/4	50
2311002	C11	8/6	50
2311003	C11	10/8	25



## BANJO FITTINGS SERIES D

### SINGLE BANJO BODY (D5)



Code	Ref.	Ø	Ø FOR:	Quantity
2405000	D5	4/2	M5	100
2405013	D5	5/3	1/8	100
2405018	D5	5/3	M5	100
2405001	D5	6/4	M5	100
2405002	D5	6/4	1/8	100
2405003	D5	6/4	1/4	100
2405005	D5	8/6	1/8	100
2405006	D5	8/6	1/4	100
2405007	D5	8/6	3/8	25
2405009	D5	10/8	1/4	50
2405010	D5	10/8	3/8	50
2405011	D5	10/8	1/2	20
2405012	D5	12/10	1/2	50
2405017	D5	12/10	3/8	20

### BANJO STEM SINGLE (D7)



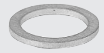
Code	Ref.	Thread	Quantity
Version with washer D11 for models R13-R14-D12-D17-D5-D6			
2407001	D7	M5	100
2407002	D7	1/8	100
2407003	D7	1/4	50
2407004	D7	3/8	50
2407005	D7	1/2	25
2407006	D7	M12x1.5	50
Version with O-ring for models R28-R29			
2407102	D7 with OR	1/8	100
2407103	D7 with OR	1/4	100
2407104	D7 with OR	3/8	100

### BANJO PASSING TROUGH SINGLE (D9)



Code	Ref.	Thread	Quantity
Version with washer D11 for models R13-R14-D5-D6-D12-D17			
2409001	D9	1/8	100
2409002	D9	1/4	50
2409003	D9	3/8	20
2409004	D9	1/2	25
Versione con OR per mod. R28-R29			
2409102	D9	1/8	100
2409103	D9	1/4	50
2409104	D9	3/8	20

### WASHER (D11)



Code	Ref.	Ø FOR:	Quantity
2411001	D11	M5 (nylon)	100
2411002	D11	1/8	200
2411003	D11	1/4	100
2411004	D11	3/8	100
2411005	D11	1/2	100

### DOUBLE BANJO BODY (D6)



Code	Ref.	Ø	Ø FOR:	Quantity
2406001	D6	6/4	1/8	100
2406002	D6	6/4	1/4	50
2406004	D6	8/6	1/8	50
2406005	D6	8/6	1/4	50
2406006	D6	8/6	3/8	50
2406008	D6	10/8	1/4	50
2406009	D6	10/8	3/8	25
2406010	D6	10/8	1/2	25
2406011	D6	12/10	1/2	25

### BANJO STEM DOUBLE (D8)



Code	Ref.	Thread	Quantity
Version with washer D11 for models R13-R14-D5-D6-D12-D17			
2408001	D8	1/8	100
2408002	D8	1/4	50
2408003	D8	3/8	20
2408004	D8	1/2	25
Version with O-ring for models R28-R29			
2408102	D8 with OR	1/8	100
2408103	D8 with OR	1/4	100
2408104	D8 with OR	3/8	100

### BANJO PASSING TROUGH STEM DOUBLE (D10)



Code	Ref.	Thread	Quantity
Version with washer D11 for models R13-R14-D5-D6-D12-D17			
2410001	D10	1/8	100
2410002	D10	1/4	50
2410003	D10	3/8	25
2410004	D10	1/2	10
Version with O-ring for models R28-R29			
2410102	D10 with OR	1/8	100
2410103	D10 with OR	1/4	100
2410104	D10 with OR	3/8	100

### SINGLE BANJO PASSING TROUGH BODY (D12)



Code	Ref.	Thread	Ø FOR:	Quantity
2412001	D12	1/8	1/8	50
2412002	D12	1/4	1/4	50
2412003	D12	3/8	3/8	50

### SINGLE BANJO WITH "B" INTERFACE (D17)



Code	Ref.	Ø	Ø FOR:	Quantity
2417006	D17	4/2	1/8	50
2417002	D17	6/4	1/8	50
2417003	D17	6/4	1/4	50
2417004	D17	8/6	1/8	50
2417005	D17	8/6	1/4	50

## TAPERED THREAD FITTINGS WITH PTFE

Metal Work can supply fittings with a tapered thread coated in polytetrafluorethylene. This coating can be used with all Metal Work products that have a 1/8" to 1/2" gas taper thread, particularly the following:

- push-in fittings type R1C, R31C, R32C and R39C
- series A fittings types A2, A4, A5, A10, A12, A13, A15, A16, A17, A18 and A25
- series B bicone fittings, types B1, B5, B7 and B8
- series C push-in fittings, types C1, C5, C7, C8.



TECHNICAL FEATURES	
Threaded coupling covered by PTFE	1/8" - 1/4" - 3/8" - 1/2"
Temperature range for PTFE	°C: - 45 to + 80 °F: - 49 to + 176
Pressure range	Except for limitations established for the fitting on which PTFE is applied.
Fluid	The same as for the fitting on which PTFE is applied. Vacuum, compressed air.

### KEY TO CODES

Fittings with a PTFE thread have the same code as the standard fitting, with the addition of the suffix T.

### Example

The 1/8" 1/8" A2 fitting has code 2102001, so the PTFE version has code 2102001T.

**IN-LINE PNEUMATIC VALVE SERIES PNV L**



TECHNICAL DATA		Ø 6	Ø 8
Max. operating pressure	MPa		1
	bar		10
	psi		145
Temperature range	°C		- 20 to + 60
	°F		- 4 to + 140
Recommended pipe Fluid		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene Lubricated or unlubricated filtered air	

**PNV L 3/2 NC PIPE - PIPE**



Code	Ref.
9067616	PNV L 3/2 NC 6 - 6
9067624	PNV L 3/2 NC 8 - 8

**PNV L 3/2 NC PIPE (1) - THREAD (2)**



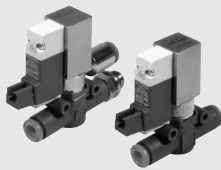
Code	Ref.
9067808	PNV L 3/2 NC 6 - 1/8
9067809	PNV L 3/2 NC 6 - 1/4
9067810	PNV L 3/2 NC 8 - 1/8
9067811	PNV L 3/2 NC 8 - 1/4
9067812	PNV L 3/2 NC 8 - 3/8

**PNV L 3/2 NC THREAD (1) - PIPE (2)**



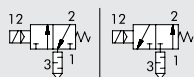
Code	Ref.
9067708	PNV L 3/2 NC 1/8 - 6
9067709	PNV L 3/2 NC 1/4 - 6
9067710	PNV L 3/2 NC 1/8 - 8
9067711	PNV L 3/2 NC 1/4 - 8
9067712	PNV L 3/2 NC 3/8 - 8

**IN-LINE SOLENOID VALVE SERIES SOV L**



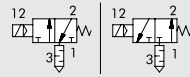
TECHNICAL DATA		Ø 6	Ø 8
Operating pressure	MPa		0.25 - 0.7
	bar		2.5 - 7
	psi		36 - 101
Temperature range	°C		-10 to +60
	°F		+14 to +140
Flow rate at 6.3 bar ΔP 0.5bar	Nl/min	270	500
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	380	700
Conductance C	Nl/min·bar	95.8	178.1
Coefficient b	bar/bar	0.145	0.129
Voltage	VDC		24
Power	W		0.9
Recommended pipe Fluid		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene Lubricated or unlubricated filtered compressed air	

**SOV L 3/2 NC-NO PIPE (1) -PIPE (2) SILENCED EXHAUST (3)**



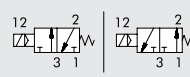
Code	Ref.
9069016	SOV L 3/2 NC 6-6
9069116	SOV L 3/2 NO 6-6
9069024	SOV L 3/2 NC 8-8
9069124	SOV L 3/2 NO 8-8

**SOV L 3/2 NC-NO PIPE (1) - THREAD (2) SILENCED EXHAUST (3)**



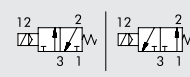
Code	Ref.
9069408	SOV L 3/2 NC 6-1/8
9069508	SOV L 3/2 NO 6-1/8
9069409	SOV L 3/2 NC 6-1/4
9069509	SOV L 3/2 NO 6-1/4
9069410	SOV L 3/2 NC 8-1/8
9069510	SOV L 3/2 NO 8-1/8
9069411	SOV L 3/2 NC 8-1/4
9069511	SOV L 3/2 NO 8-1/4
9069412	SOV L 3/2 NC 8-3/8
9069512	SOV L 3/2 NO 8-3/8

**SOV L 3/2 NC-NO PIPE (1) -PIPE (2) CONVEYED EXHAUST (3)**



Code	Ref.
9069216	SOV L 3/2 NC 6-6-6
9069316	SOV L 3/2 NO 6-6-6
9069224	SOV L 3/2 NC 8-8-8
9069324	SOV L 3/2 NO 8-8-8

**SOV L 3/2 NC-NO PIPE (1) - THREAD (2) CONVEYED EXHAUST (3)**



Code	Ref.
9069608	SOV L 3/2 NC 6-1/8-6
9069708	SOV L 3/2 NO 6-1/8-6
9069609	SOV L 3/2 NC 6-1/4-6
9069709	SOV L 3/2 NO 6-1/4-6
9069610	SOV L 3/2 NC 8-1/8-8
9069710	SOV L 3/2 NO 8-1/8-8
9069611	SOV L 3/2 NC 8-1/4-8
9069711	SOV L 3/2 NO 8-1/4-8
9069612	SOV L 3/2 NC 8-3/8-8
9069712	SOV L 3/2 NO 8-3/8-8



## MINIATURE REDUCER/ECONOMIZER, SERIES RML, RMC AND RMS



TECHNICAL DATA	RML Ø 6	RMC 1/8	RMS 1/8	RML Ø 8	RMC 1/4	RMS 1/4
Threaded ports	1/8"-1/4"	1/8"	1/8"	1/8"-1/4"-3/8"	1/4"	1/4"
Pipe coupling	Ø 6	Ø 4 - 6 - 8	-	Ø 8	Ø 6 - 8 - 10	-
Regulation range	1 to 8 bar - 0.1 to 0.8 MPa - 14.5 to 116 psi					
Inlet pressure	MPa: 0.2 - 1 bar: 2 - 10 psi: 29 - 145					
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar	NI/min					
Flow rate on exhaust at 6.3 bar (0.63 MPa - 91 psi)	150 400					
Fluid	Lubricated or unlubricated filtered air					
Max. temperature at 1 MPa; 10 bar; 145 psi	°C: -20 to +60 °F: -4 to +140					
Assembly position	Available					
Notes	In the miniature regulator the pressure must always be set upwards.					

### LINE-MOUNTED MINIATURE REDUCER, SERIES RML



Code	Ref.
9061316	RML 6-6
9061324	RML 8-8

### LINE-MOUNTED MINIATURE PIPE (IN) - THREAD (OUT) SERIES RML



Code	Ref.
9061508	RML 6-1/8
9061509	RML 6-1/4
9061510	RML 8-1/8
9061511	RML 8-1/4
9061512	RML 8-3/8

### MINIATURE REDUCER, SERIES RMC



Code	Ref.
9061102	RMC 1/8-4
9061108	RMC 1/8-6
9061110	RMC 1/8-8
9061109	RMC 1/4-6
9061111	RMC 1/4-8
9061112	RMC 1/4-10

### CARTRIDGE REDUCER, SERIES RMS



Code	Ref.
9061001	RMS 1/8
9061002	RMS 1/4

### LINE-MOUNTED MINIATURE THREAD (IN) - PIPE (OUT) SERIES RML



Code	Ref.
9061408	RML 1/8-6
9061409	RML 1/4-6
9061410	RML 1/8-8
9061411	RML 1/4-8
9061412	RML 3/8-8

### TOOL FOR RMS SEAT



Code	Ref.
9062001	UT.SE 1/8
9062002	UT.SE 1/4

## IN-LINE PRESSURE GAUGE SERIES MAN L



TECHNICAL DATA	Ø 4	Ø 6	Ø 8
Operating pressure		1.2	
		12	
		174	
Temperature range		-20 to +60	
		-4 to +140	
Precision		± 4% full scale	
Recommended pipe	Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid	Lubricated or unlubricated filtered compressed air		

### MAN L PIPE-PIPE



Code	Ref.
9067001	MAN L 4-4
9067016	MAN L 6-6
9067024	MAN L 8-8

### MAN L THREAD-PIPE



Code	Ref.
9067101	MAN L M5-4
9067102	MAN L 1/8-4
9067108	MAN L 1/8-6
9067109	MAN L 1/4-6
9067110	MAN L 1/8-8
9067111	MAN L 1/4-8
9067112	MAN L 3/8-8

## IN-LINE PRESSURE INDICATOR SERIES LAM L



TECHNICAL DATA		Ø 6	Ø 8
Operating pressure	MPa		0.2 - 1
	bar		2 - 10
	psi		29 - 145
Temperature range	°C		- 20 to + 60
	°F		- 4 to + 140
Flow rate at 6.3 bar ΔP 1 bar	NI/min	420	800
Colour with pressure		Orange - Green	
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous	

### LAM L PIPE-PIPE



Code	Ref.
9068016	LAM L 6-6-A
9068216	LAM L 6-6-V
9068024	LAM L 8-8-A
9068224	LAM L 8-8-V

A = Orange  
V = Green

### LAM L THREAD-PIPE



Code	Ref.
9068108	LAM L 1/8-6-A
9068308	LAM L 1/8-6-V
9068109	LAM L 1/4-6-A
9068309	LAM L 1/4-6-V
9068110	LAM L 1/8-8-A
9068310	LAM L 1/8-8-V
9068111	LAM L 1/4-8-A
9068311	LAM L 1/4-8-V
9068112	LAM L 3/8-8-A
9068312	LAM L 3/8-8-V

A = Orange  
V = Green

## IN-LINE SHUTOFF VALVE SERIES V2V L AND V3V L



TECHNICAL DATA		Ø 6	Ø 8
Operating pressure	MPa		1
	bar		10
	psi		145
Temperature range	°C		- 20 to + 60
	°F		- 4 to + 140
Flow rate at 6.3 bar ΔP 1 bar	NI/min	280	470
Exhaust flow rate at 6.3 bar	NI/min	110	110
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous	

### V2V/V3V L PIPE-PIPE

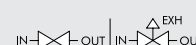
### V2V/V3V L PIPE-PIPE PADLOCKED

### V2V/V3V L PIPE (IN) - THREAD (OUT)

### V2V/V3V L PIPE (IN) - THREAD (OUT) PADLOCKED

### V2V/V3V L THREAD (IN) - PIPE (OUT)

### V2V/V3V L THREAD (IN) - PIPE (OUT) PADLOCKED



Code	Ref.
9065016	V2V L 6-6
9066016	V3V L 6-6
9065024	V2V L 8-8
9066024	V3V L 8-8

Code	Ref.
9065116	V2V L 6-6 KEY
9066116	V3V L 6-6 KEY
9065124	V2V L 8-8 KEY
9066124	V3V L 8-8 KEY

Code	Ref.
9065208	V2V L 6-1/8
9066208	V3V L 6-1/8
9065209	V2V L 6-1/4
9066209	V3V L 6-1/4
9065210	V2V L 8-1/8
9066210	V3V L 8-1/8
9065211	V2V L 8-1/4
9066211	V3V L 8-1/4
9065212	V2V L 8-3/8
9066212	V3V L 8-3/8

Code	Ref.
9065308	V2V L 6-1/8 KEY
9066308	V3V L 6-1/8 KEY
9065309	V2V L 6-1/4 KEY
9066309	V3V L 6-1/4 KEY
9065310	V2V L 8-1/8 KEY
9066310	V3V L 8-1/8 KEY
9065311	V2V L 8-1/4 KEY
9066311	V3V L 8-1/4 KEY
9065312	V2V L 8-3/8 KEY
9066312	V3V L 8-3/8 KEY

Code	Ref.
9065408	V2V L 1/8-6
9066408	V3V L 1/8-6
9065409	V2V L 1/4-6
9066409	V3V L 1/4-6
9065410	V2V L 1/8-8
9066410	V3V L 1/8-8
9065411	V2V L 1/4-8
9066411	V3V L 1/4-8
9065412	V2V L 3/8-8
9066412	V3V L 3/8-8

Code	Ref.
9065508	V2V L 1/8-6 KEY
9066508	V3V L 1/8-6 KEY
9065509	V2V L 1/4-6 KEY
9066509	V3V L 1/4-6 KEY
9065510	V2V L 1/8-8 KEY
9066510	V3V L 1/8-8 KEY
9065511	V2V L 1/4-8 KEY
9066511	V3V L 1/4-8 KEY
9065512	V2V L 3/8-8 KEY
9066512	V3V L 3/8-8 KEY

## IN-LINE FLOW MICRO-REGULATOR SERIE RFL L



TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Max. operating pressure	MPa		1	
	bar		10	
	psi		145	
Temperature range	°C		- 20 to + 60	
	°F		- 4 to + 140	
Max flow rate on regulation at 6.3 bar	NI/min	155	450	850
Flow rate on exhaust at 6.3 bar	NI/min	160	550	950
Adjustment		Manual or using a screwdriver		
Internal system		Tapered needle		
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered air		

### RFL L PIPE-PIPE UNIDIRECTIONAL



Code	Ref.
9041301	RFL LU 4-4
9041316	RFL LU 6-6
9041324	RFL LU 8-8

### RFL L THREAD-PIPE UNIDIRECTIONAL CYLINDER VERSION



Code	Ref.
9041401	RFL LU M5-4
9041402	RFL LU 1/8-4
9041408	RFL LU 1/8-6
9041409	RFL LU 1/4-6
9041410	RFL LU 1/8-8
9041411	RFL LU 1/4-8
9041412	RFL LU 3/8-8

### RFL L PIPE-THREAD UNIDIRECTIONAL VALVE VERSION



Code	Ref.
9041501	RFL LU 4-M5
9041502	RFL LU 4-1/8
9041508	RFL LU 6-1/8
9041509	RFL LU 6-1/4
9041510	RFL LU 8-1/8
9041511	RFL LU 8-1/4
9041512	RFL LU 8-3/8

### RFL L PIPE-PIPE BIDIRECTIONAL



Code	Ref.
9041601	RFL LB 4-4
9041616	RFL LB 6-6
9041624	RFL LB 8-8

### RFL L THREAD-PIPE BIDIRECTIONAL



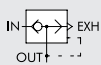
Code	Ref.
9041701	RFL LB M5-4
9041702	RFL LB 1/8-4
9041708	RFL LB 1/8-6
9041709	RFL LB 1/4-6
9041710	RFL LB 1/8-8
9041711	RFL LB 1/4-8
9041712	RFL LB 3/8-8

## IN-LINE QUICK-EXHAUST VALVES SERIES VSR L



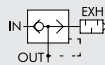
TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Inlet pressure	MPa		0.1 - 1	
	bar		1 - 10	
	psi		14.5 - 145	
Temperature range	°C		-20 to +60	
	°F		-4 to +140	
Inlet flow rate at 6.3 bar ΔP 1 bar	NI/min	50	270	400
Exhaust flow rate at 6.3 bar	NI/min	100	700	1000
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous		

### VSR L PIPE-PIPE CONVEYED EXHAUST



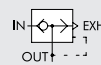
Code	Ref.
9063001	VSR L 4-4-4
9063016	VSR L 6-6-6
9063024	VSR L 8-8-8

### VSR L PIPE-PIPE SILENCED EXHAUST



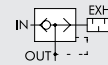
Code	Ref.
9063101	VSR L 4-4-SIL
9063116	VSR L 6-6-SIL
9063124	VSR L 8-8-SIL

### VSR L PIPE (IN) - THREAD (OUT) CONVEYED EXHAUST



Code	Ref.
9063201	VSR L 4-M5-4
9063202	VSR L 4-1/8-4
9063208	VSR L 6-1/8-6
9063209	VSR L 6-1/4-6
9063210	VSR L 8-1/8-8
9063211	VSR L 8-1/4-8
9063212	VSR L 8-3/8-8

### VSR L PIPE (IN) -THREAD (OUT) SILENCED EXHAUST



Code	Ref.
9063301	VSR L 4-M5-SIL
9063302	VSR L 4-1/8-SIL
9063308	VSR L 6-1/8-SIL
9063309	VSR L 6-1/4-SIL
9063310	VSR L 8-1/8-SIL
9063311	VSR L 8-1/4-SIL
9063312	VSR L 8-3/8-SIL

## IN-LINE FIXED-REGULATION FLOW REGULATOR SERIE RFF L



TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Max. operating pressure	MPa bar psi		1 10 145	
Temperature range	°C °F		-20 to +60 -4 to +140	
Choke flow rate	NI/min		See table below	
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered air		

### KEY TO CODES

9 0 7 0 TYPE	B FUNCTION	11 Ø IN - Ø OUT	02 Ø CHOKE
9070 RFF L	B Bidirectional C For cylinder U Unidirectional V For valve	■ 11 = Ø 4 - Ø 4 * 15 = Ø 4 - M5 * 16 = Ø 4 - 1/8" ■ 22 = Ø 6 - Ø 6 * 26 = Ø 6 - 1/8" * 27 = Ø 6 - 1/4" ■ 33 = Ø 8 - Ø 8 * 36 = Ø 8 - 1/8" * 37 = Ø 8 - 1/4" * 38 = Ø 8 - 3/8" ● 51 = M5 - Ø 4 ● 61 = 1/8" - Ø 4 ● 62 = 1/8" - Ø 6 ● 63 = 1/8" - Ø 8 ● 72 = 1/4" - Ø 6 ● 73 = 1/4" - Ø 8 ● 83 = 3/8" - Ø 8	02 = Ø 0.2 03 = Ø 0.3 04 = Ø 0.4 05 = Ø 0.5 06 = Ø 0.6 08 = Ø 0.8 10 = Ø 1.0 13 = Ø 1.3 15 = Ø 1.5

- Only for B (bidirectional) and U (unidirectional) versions
- \* Only for V (valve) versions
- Only for C (cylinder) and B (bidirectional) versions

### EXHAUST FLOW RATE AT 6.3 bar FOR VERSIONS C-U-V (NI/min)

Choke (mm)	Ø 4	Ø 6	Ø 8
Ø 0.2	142	552	912
Ø 0.3	144	554	914
Ø 0.4	147	557	917
Ø 0.5	153	563	923
Ø 0.6	155	565	925
Ø 0.8	172	582	942
Ø 1.0	190	600	960
Ø 1.3	225	635	995
Ø 1.5	250	660	1020

### CHOKE FLOW-RATE AT 6 bar WITH RELIEF VALVE OPEN

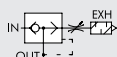
Choke (mm)	Flow rate (NI/min)
Ø 0.2	2
Ø 0.3	4
Ø 0.4	7
Ø 0.5	13
Ø 0.6	15
Ø 0.8	32
Ø 1.0	50
Ø 1.3	85
Ø 1.5	110

## IN-LINE QUICK-EXHAUST VALVE WITH REGULATED EXHAUST SERIES VSRR L



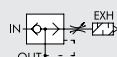
TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Max. operating pressure	MPa bar psi		1 10 145	
Temperature range	°C °F		-20 to +60 -4 to +140	
Max flow rate on regulation at 6.3 bar ΔP 1 bar	NI/min	50	270	400
Flow rate on exhaust at 6.3 bar	NI/min	170	460	960
Adjustment		Manual or using a screwdriver		
Internal system		Tapered needle		
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered air		

### VSRR L PIPE-PIPE



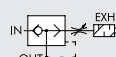
Code	Ref.
9063501	VSRR L 4-4
9063516	VSRR L 6-6
9063524	VSRR L 8-8

### VSRR L THREAD (IN) - PIPE (OUT)



Code	Ref.
9063601	VSRR L M5-4
9063602	VSRR L 1/8-4
9063608	VSRR L 1/8-6
9063609	VSRR L 1/4-6
9063610	VSRR L 1/8-8
9063611	VSRR L 1/4-8
9063612	VSRR L 3/8-8

### VSRR L PIPE (IN) - THREAD (OUT)



Code	Ref.
9063701	VSRR L 4-M5
9063702	VSRR L 4-1/8
9063708	VSRR L 6-1/8
9063709	VSRR L 6-1/4
9063710	VSRR L 8-1/8
9063711	VSRR L 8-1/4
9063712	VSRR L 8-3/8

## IN-LINE STOP VALVE SERIES STP L



TECHNICAL DATA		Ø 6	Ø 8
Max. operating pressure	MPa bar psi	1 10 145	
Temperature range	°C °F	-20 to +60 -4 to +140	
Recommended pipe Fluid		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene Lubricated or unlubricated filtered air	

### STP L 2/2 PIPE - PIPE



Code	Ref.
9065616	STP L 2/2 6 - 6
9065624	STP L 2/2 8 - 8

### STP L 2/2 PIPE (1) - THREAD (2)



Code	Ref.
9065808	STP L 2/2 6 - 1/8
9065809	STP L 2/2 6 - 1/4
9065810	STP L 2/2 8 - 1/8
9065811	STP L 2/2 8 - 1/4
9065812	STP L 2/2 8 - 3/8

### STP L 2/2 THREAD (1) - PIPE (2)



Code	Ref.
9065708	STP L 2/2 1/8 - 6
9065709	STP L 2/2 1/4 - 6
9065710	STP L 2/2 1/8 - 8
9065711	STP L 2/2 1/4 - 8
9065712	STP L 2/2 3/8 - 8

## IN-LINE CHECK VALVE SERIES VNR L



TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Operating pressure	MPa bar psi		0.05 - 1.2 0.5 - 12 7.2 - 174	
Temperature range	°C °F		-20 to +60 -4 to +140	
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	80	320	480
Recommended pipe Fluid		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene Lubricated or unlubricated filtered compressed air		

### VNR L PIPE-PIPE



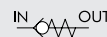
Code	Ref.
9064001	VNR L 4-4
9064016	VNR L 6-6
9064024	VNR L 8-8

### VNR L THREAD (IN) - PIPE (OUT)



Code	Ref.
9064101	VNR L M5-4
9064102	VNR L 1/8-4
9064108	VNR L 1/8-6
9064109	VNR L 1/4-6
9064110	VNR L 1/8-8
9064111	VNR L 1/4-8
9064112	VNR L 3/8-8

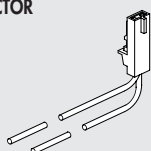
### VNR L PIPE (IN) - THREAD (OUT)



Code	Ref.
9064201	VNR L 4-M5
9064202	VNR L 4-1/8
9064208	VNR L 6-1/8
9064209	VNR L 6-1/4
9064210	VNR L 8-1/8
9064211	VNR L 8-1/4
9064212	VNR L 8-3/8

## ACCESSORIES

### PLUG-IN CONNECTOR



Code	Description
W0970512000	Plug-in connector Mach 11 L = 300

### FIXING SQUARE KIT



Code	Description
9062110	Square L

### U-BOLT



Code	Description
9062216	TUB L 6-6
9062224	TUB L 8-8

## SPARE PARTS

### PLUG-IN PILOT



Code	Description
722213541100	PLT 10 24 VDC 0.9W with LED man

## COMPRESSED AIR QUICK-FIT COUPLINGS SERIES IAC

TECHNICAL DATA		MINI		100	200	300
Threaded coupling		1/8"	1/4"	1/4"	3/8"	1/2"
Maximum inlet pressure	MPa	3		3		3
	bar	30		30		30
	psi	435		435		435
Flow rate at 6 bar (0.6 MPa - 87 psi) ΔP 1 bar (0.1 MPa - 14 psi)	NI/min	480		750	1450	1750
Maximum temperature	°C	80		80		80
	°F	176		176		176

### QUICK-FIT PORT, MALE



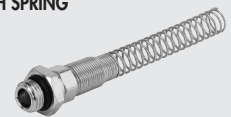
Code	Ref.	Mod.	Thread	Quantity
0101001	01	mini	1/8	50
0101002	02	mini	1/4	50
0201101	101	100	1/4	25
0301201	201	200	3/8	25
0300202	201/A	200	1/4	25
0401301	301	300	1/2	10

### QUICK-FIT COUPLING, MALE



Code	Ref.	Mod.	Thread	Quantity
0102011	11	mini	1/8	50
0102012	12	mini	1/4	50
0202111	111	100	1/4	25
0302211	211	200	3/8	25
0303205	211/A	200	1/4	25
0402311	311	300	1/2	20

### NYLON PIPE FITTING WITH SPRING



Code	Ref.	Thread	Ø FOR:	Quantity
0010001	C1/Z	1/4	8/6	25
0010002	C1/Z	3/8	8/6	25
0010003	C1/Z	1/4	10/8	25
0010004	C1/Z	3/8	10/8	25
0010005	C1/Z	3/8	12/10	20

### QUICK-FIT PORT, FEMALE



Code	Ref.	Mod.	Thread	Quantity
0101003	03	mini	1/8	50
0101004	04	mini	1/4	50
0201102	102	100	1/4	25
0301202	202	200	3/8	25
0401302	302	300	1/2	10

### QUICK-FIT COUPLING, FEMALE



Code	Ref.	Mod.	Thread	Quantity
0102013	13	mini	1/8	50
0102014	14	mini	1/4	50
0202112	112	100	1/4	25
0302212	212	200	3/8	25
0402312	312	300	1/2	20

### HOSE FITTING



Code	Ref.	Thread	Ø FOR:	Quantity
2601001	40	1/4	6X14	25
2601002	41	1/4	8X17	25
2601003	42	1/4	10X19	25
2601004	43	1/2	13X23	25

### QUICK-FIT PORT, NYLON PIPE



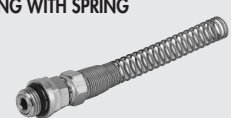
Code	Ref.	Mod.	Ø FOR:	Quantity
0101005	05	mini	6/4	50
0101006	06	mini	8/6	50

### QUICK-FIT COUPLING, NYLON PIPE



Code	Ref.	Mod.	Ø FOR:	Quantity
0102015	15	mini	6/4	50
0102016	16	mini	8/6	50

### SWIVEL NYLON PIPE FITTING WITH SPRING



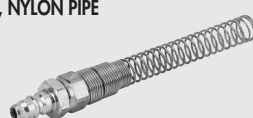
Code	Ref.	Thread	Ø FOR:	Quantity
2501010	50	1/4	6/4	50
2501011	51	1/4	8/6	50
2501012	52	3/8	10/8	25
2501013	53	3/8	12/10	20

### QUICK-FIT PORT, NYLON PIPE WITH SPRING



Code	Ref.	Mod.	Ø FOR:	Quantity
0101007	07	mini	6/4	20
0101008	08	mini	8/6	20

### QUICK-FIT COUPLING, NYLON PIPE WITH SPRING



Code	Ref.	Mod.	Ø FOR:	Quantity
0102017	17	mini	6/4	50
0102018	18	mini	8/6	50

## QUICK-FIT COUPLINGS FOR MOULD CONDITIONING SERIES ICS

TECHNICAL DATA		501 V with valve	401 V with valve	503 V without valve	403 V without valve
Threaded coupling		1/8"	1/4"	1/8"	1/4"
Maximum temperature at: 1.8 MPa; 18 bar; 261 psi	°F			+248	
	°C			+120	
Minimum temperature at: 1.8 MPa; 18 bar; 261 psi	°F			-68	
	°C			-20	
Maximum pressure	MPa			1.8	
	bar			18	
	psi			261	
Type of gasket				FKM/FPM	

### FEMALE PORT



Code	Ref.	Thread	Safety valve	Quantity
0601040	501V	1/8	yes	10
0501040	401V	1/4	yes	25
0600040	503V	1/8	no	10
0500040	403V	1/4	no	25

### MALE COUPLING



Code	Ref.	Thread	Quantity
0602001	511	1/8	50
0502001	411	1/4	100

### FEMALE COUPLING



Code	Ref.	Thread	Quantity
0602002	512	1/8	50
0502002	412	1/4	100

## FLOW MICROREGULATOR SERIES MRF COMPACT N and O

TECHNICAL DATA		M5			1/8"				1/4"			3/8"			1/2"	
Pipe		Ø 4	Ø 5*	Ø 6	Ø 4	Ø 5*	Ø 6	Ø 8	Ø 6	Ø 8	Ø 10	Ø 12	Ø 8	Ø 10	Ø 12	Ø 12
Max input pressure	MPa	1														
	bar	10														
	psi	145														
Temperature range: Technopolymer ring	°C	- 10 to + 50														
	°F	+ 14 to + 122														
Brass ring	°C	- 10 to + 70														
	°F	+ 14 to + 158														
Max flow rate on regulation at 6.3 bar	Nl/min	150	155	155	350	360	380	400	750	850	950	1000	1250	1300	1400	2000
Max flow rate on exhaust at 6.3 bar with closed pin	Nl/min	140	145	150	300	320	350	390	450	500	550	1030	1050	1250	1750	
Max flow rate on exhaust at 6.3 bar with open pin	Nl/min	240	245	245	450	510	600	650	850	1050	1150	1250	1700	1700	2100	2700
Regulation		Manual (COMPACT N only) or using a screwdriver														
Internal system		Tapered pin														
Fluid		Filtered, lubricated or unlubricated compressed air														

\* Pipe Ø 5 is only available with a brass ring

### SYNOPTIC, SIZES AND VERSIONS

M R F ELEMENT	N TYPE	M RING	C FUNCTION	4 Ø PIPE	M5 Ø THREAD
	N Con manopola e ghiera	M Nickel-plated brass with push-in fitting	C For cylinder	4: Ø 4	M5: M5
	O Spillo incassato	T Technopolymer with push-in fitting	V For valve	1/8: 1/8" F	1/8: 1/8"
		F Nickel-plated brass with female thread	B Bidirectional	1/4: 1/4" F	1/4: 1/4"
				3/8: 3/8" F	3/8: 3/8"
				8: Ø 8	1/2: 1/2"
				10: Ø 10	
				12: Ø 12	

MRF COMPACT "O" BRASS RING



MRF COMPACT "O" TECHNOPOLYMER RING



MRF COMPACT "O" THREADED BRASS RING



Code	Description	Quantity	Code	Description	Quantity	Code	Description	Quantity
9001001C	MRF O M C 4 M5	10	9011001C	MRF O T C 4 M5	10	9001020C	MRF O F C 1/8 1/8	10
9001110V	MRF O M V 4 M5	10	9011110V	MRF O T V 4 M5	10	9001120V	MRF O F V 1/8 1/8	10
9001601B	MRF O M B 4 M5	10	9011601B	MRF O T B 4 M5	10	9001620B	MRF O F B 1/8 1/8	10
9001002C	MRF O M C 5 M5	10	9011007C	MRF O T C 6 M5	10	9001021C	MRF O F C 1/4 1/4	10
9001113V	MRF O M V 5 M5	10	9011105V	MRF O T V 6 M5	10	9001121V	MRF O F V 1/4 1/4	10
9001603B	MRF O M B 5 M5	10	9011612B	MRF O T B 6 M5	10	9001621B	MRF O F B 1/4 1/4	10
9001007C	MRF O M C 6 M5	10	9011011C	MRF O T C 4 1/8	10	9001022C	MRF O F C 3/8 3/8	10
9001105V	MRF O M V 6 M5	10	9011111V	MRF O T V 4 1/8	10	9001122V	MRF O F V 3/8 3/8	10
9001612B	MRF O M B 6 M5	10	9011602B	MRF O T B 4 1/8	10	9001622B	MRF O F B 3/8 3/8	10
9001011C	MRF O M C 4 1/8	10	9011003C	MRF O T C 6 1/8	10			
9001111V	MRF O M V 4 1/8	10	9011101V	MRF O T V 6 1/8	10			
9001602B	MRF O M B 4 1/8	10	9011605B	MRF O T B 6 1/8	10			
9001012C	MRF O M C 5 1/8	10	9011005C	MRF O T C 8 1/8	10			
9001112V	MRF O M V 5 1/8	10	9011103V	MRF O T V 8 1/8	10			
9001604B	MRF O M B 5 1/8	10	9011607B	MRF O T B 8 1/8	10			
9001003C	MRF O M C 6 1/8	10	9011004C	MRF O T C 6 1/4	10			
9001101V	MRF O M V 6 1/8	10	9011102V	MRF O T V 6 1/4	10			
9001605B	MRF O M B 6 1/8	10	9011606B	MRF O T B 6 1/4	10			
9001005C	MRF O M C 8 1/8	10	9011006C	MRF O T C 8 1/4	10			
9001103V	MRF O M V 8 1/8	10	9011104V	MRF O T V 8 1/4	10			
9001607B	MRF O M B 8 1/8	10	9011608B	MRF O T B 8 1/4	10			
9001004C	MRF O M C 6 1/4	10	9011008C	MRF O T C 10 1/4	10			
9001102V	MRF O M V 6 1/4	10	9011106V	MRF O T V 10 1/4	10			
9001606B	MRF O M B 6 1/4	10	9011609B	MRF O T B 10 1/4	10			
9001006C	MRF O M C 8 1/4	10	9011014C	MRF O T C 12 1/4	10			
9001104V	MRF O M V 8 1/4	10	9011123V	MRF O T V 12 1/4	10			
9001608B	MRF O M B 8 1/4	10	9011623B	MRF O T B 12 1/4	10			
9001008C	MRF O M C 10 1/4	10	9011009C	MRF O T C 10 3/8	10			
9001106V	MRF O M V 10 1/4	10	9011114V	MRF O T V 10 3/8	10			
9001609B	MRF O M B 10 1/4	10	9011610B	MRF O T B 10 3/8	10			
9001014C	MRF O M C 12 1/4	10	9011015C	MRF O T C 12 3/8	10			
9001123V	MRF O M V 12 1/4	10	9011124V	MRF O T V 12 3/8	10			
9001623B	MRF O M B 12 1/4	10	9011624B	MRF O T B 12 3/8	10			
9001010C	MRF O M C 8 3/8	10	9011016C	MRF O T C 12 1/2	10			
9001115V	MRF O M V 8 3/8	10	9011125V	MRF O T V 12 1/2	10			
9001611B	MRF O M B 8 3/8	10	9011625B	MRF O T B 12 1/2	10			
9001009C	MRF O M C 10 3/8	10						
9001114V	MRF O M V 10 3/8	10						
9001610B	MRF O M B 10 3/8	10						
9001015C	MRF O M C 12 3/8	10						
9001124V	MRF O M V 12 3/8	10						
9001624B	MRF O M B 12 3/8	10						
9001016C	MRF O M C 12 1/2	10						
9001125V	MRF O M V 12 1/2	10						
9001625B	MRF O M B 12 1/2	10						

### SPARE PARTS

#### ANTI-TAMPERING CAP



Code	Description
9090001	Cap MRF O M5
9090002	Cap MRF O 1/8-1/4
9090003	Cap MRF O 3/8-1/2



**MRF COMPACT "N" BRASS RING**


Code	Description	Quantity
9031001C	MRF N M C 4 M5	10
9031101V	MRF N M V 4 M5	10
9031201B	MRF N M B 4 M5	10
9031003C	MRF N M C 5 M5	10
9031103V	MRF N M V 5 M5	10
9031203B	MRF N M B 5 M5	10
9031005C	MRF N M C 6 M5	10
9031105V	MRF N M V 6 M5	10
9031205B	MRF N M B 6 M5	10
9031002C	MRF N M C 4 1/8	10
9031102V	MRF N M V 4 1/8	10
9031202B	MRF N M B 4 1/8	10
9031004C	MRF N M C 5 1/8	10
9031104V	MRF N M V 5 1/8	10
9031204B	MRF N M B 5 1/8	10
9031006C	MRF N M C 6 1/8	10
9031106V	MRF N M V 6 1/8	10
9031206B	MRF N M B 6 1/8	10
9031008C	MRF N M C 8 1/8	10
9031108V	MRF N M V 8 1/8	10
9031208B	MRF N M B 8 1/8	10
9031007C	MRF N M C 6 1/4	10
9031107V	MRF N M V 6 1/4	10
9031207B	MRF N M B 6 1/4	10
9031009C	MRF N M C 8 1/4	10
9031109V	MRF N M V 8 1/4	10
9031209B	MRF N M B 8 1/4	10
9031010C	MRF N M C 8 3/8	10
9031110V	MRF N M V 8 3/8	10
9031210B	MRF N M B 8 3/8	10
9031011C	MRF N M C 10 1/4	10
9031111V	MRF N M V 10 1/4	10
9031211B	MRF N M B 10 1/4	10
9031012C	MRF N M C 10 3/8	10
9031112V	MRF N M V 10 3/8	10
9031212B	MRF N M B 10 3/8	10

9031014C	MRF N M C 12 1/4	10
9031114V	MRF N M V 12 1/4	10
9031214B	MRF N M B 12 1/4	10
9031015C	MRF N M C 12 3/8	10
9031115V	MRF N M V 12 3/8	10
9031215B	MRF N M B 12 3/8	10
9031016C	MRF N M C 12 1/2	10
9031116V	MRF N M V 12 1/2	10
9031216B	MRF N M B 12 1/2	10

**MRF COMPACT "N" TECHNOPOLYMER RING**


Code	Description	Quantity
9021001C	MRF N T C 4 M5	10
9021101V	MRF N T V 4 M5	10
9021201B	MRF N T B 4 M5	10
9021005C	MRF N T C 6 M5	10
9021105V	MRF N T V 6 M5	10
9021205B	MRF N T B 6 M5	10
9021002C	MRF N T C 4 1/8	10
9021102V	MRF N T V 4 1/8	10
9021202B	MRF N T B 4 1/8	10
9021006C	MRF N T C 6 1/8	10
9021106V	MRF N T V 6 1/8	10
9021206B	MRF N T B 6 1/8	10
9021007C	MRF N T C 6 1/4	10
9021107V	MRF N T V 6 1/4	10
9021207B	MRF N T B 6 1/4	10
9021008C	MRF N T C 8 1/8	10
9021108V	MRF N T V 8 1/8	10
9021208B	MRF N T B 8 1/8	10
9021009C	MRF N T C 8 1/4	10
9021109V	MRF N T V 8 1/4	10
9021209B	MRF N T B 8 1/4	10
9021011C	MRF N T C 10 1/4	10
9021111V	MRF N T V 10 1/4	10
9021211B	MRF N T B 10 1/4	10
9021012C	MRF N T C 10 3/8	10
9021112V	MRF N T V 10 3/8	10
9021212B	MRF N T B 10 3/8	10
9021014C	MRF N T C 12 1/4	10
9021114V	MRF N T V 12 1/4	10
9021214B	MRF N T B 12 1/4	10
9021015C	MRF N T C 12 3/8	10
9021115V	MRF N T V 12 3/8	10
9021215B	MRF N T B 12 3/8	10
9021016C	MRF N T C 12 1/2	10
9021116V	MRF N T V 12 1/2	10
9021216B	MRF N T B 12 1/2	10

**MRF COMPACT "N" THREADED BRASS RING**


Code	Description	Quantity
9031301C	MRF N F C 1/8 1/8	10
9031401V	MRF N F V 1/8 1/8	10
9031501B	MRF N F B 1/8 1/8	10
9031302C	MRF N F C 1/4 1/4	10
9031402V	MRF N F V 1/4 1/4	10
9031502B	MRF N F B 1/4 1/4	10
9031303C	MRF N F C 3/8 3/8	10
9031403V	MRF N F V 3/8 3/8	10
9031503B	MRF N F B 3/8 3/8	10

**FLOW MICRO-REGULATOR SERIES MRF HIGH-FLOW**


TECHNICAL DATA	1/8"			1/4"			
	Ø 4	Ø 6	Ø 8	Ø 6	Ø 8	Ø 10	Ø 12
Pipe							
Max input pressure	MPa			1			
	bar			10			
	psi			145			
Temperature range: technopolymer ring	°C			- 10 to + 50			
	°F			+ 14 to + 122			
Max flow rate on regulation at 6.3 bar	500	600	650	850	900	1150	1200
Max flow rate on exhaust at 6.3 bar with closed pin	400	500	600	700	850	875	950
Max flow rate on exhaust at 6.3 bar with open pin	500	750	900	1000	1250	1350	1450
Regulation	Manual or via screwdriver						
Internal system	Tapered pin						
Fluid	Filtered, lubricated or unlubricated compressed air						

**SYNOPTIC, SIZES AND VERSIONS**

M R F ELEMENT	N TYPE	T RING	C FUNCTION	4 Ø PIPE	M5 Ø THREAD
	H High flo	T Technopolymer with push-in fitting	C For cylinder V For valve B Bidirectional	4: Ø 4 6: Ø 6 8: Ø 8 10: Ø 10 12: Ø 12	1/8: 1/8" 1/4: 1/4"

Code	Description	Quantity	Code	Description	Quantity	Code	Description	Quantity
9025002C	MRF H T C 4 1/8	10	9025107V	MRF H T V 6 1/4	10	9025609B	MRF H T B 8 1/4	10
9025102V	MRF H T V 4 1/8	10	9025607B	MRF H T B 6 1/4	10	9025011C	MRF H T C 10 1/4	10
9025602B	MRF H T B 4 1/8	10	9025008C	MRF H T C 8 1/8	10	9025111V	MRF H T V 10 1/4	10
9025006C	MRF H T C 6 1/8	10	9025108V	MRF H T V 8 1/8	10	9025611B	MRF H T B 10 1/4	10
9025106V	MRF H T V 6 1/8	10	9025608B	MRF H T B 8 1/8	10	9025014C	MRF H T C 12 1/4	10
9025606B	MRF H T B 6 1/8	10	9025009C	MRF H T C 8 1/4	10	9025114V	MRF H T V 12 1/4	10
9025007C	MRF H T C 6 1/4	10	9025109V	MRF H T V 8 1/4	10	9025614B	MRF H T B 12 1/4	10

## FLOW MICRO-REGULATOR SERIE MRF PUSH-LOCK



TECHNICAL DATA	1/8"			1/4"			
	Ø 4	Ø 6	Ø 8	Ø 6	Ø 8	Ø 10	Ø 12
Pipe							
Max. input pressure				1	10		
				145			
Temperature range: technopolymer ring				- 10 to + 50			
				+ 14 to + 122			
Max. flow rate on regulation at 6.3 bar	350	380	400	750	850	950	1000
Max. flow rate on exhaust at 6.3 with closed pin	300	350	390	450	475	500	550
Max. flow rate on exhaust at 6.3 with open pin	450	600	650	850	1050	1150	1250
Regulation	Manual with Push-Lock knob						
Internal system	Tapered pin						
Fluid	Filtered, lubricated or unlubricated compressed air						

### SYNOPTIC, SIZES AND VERSIONS

M R F ELEMENT	P TYPE	T RING	C RING	4 Ø PIPE	1/8 Ø THREAD
	P Push-lock	T Technopolymer with push-in fitting	C For cylinder V For valve B Bidirectional	4: Ø 4 6: Ø 6 8: Ø 8 10: Ø 10 12: Ø 12	1/8: 1/8" 1/4: 1/4"

Code	Description	Quantity	Code	Description	Quantity	Code	Description	Quantity
9026002C	MRF P T C 4 1/8	10	9026108V	MRF P T V 8 1/8	10	9026609B	MRF P T B 8 1/4	10
9026102V	MRF P T V 4 1/8	10	9026608B	MRF P T B 8 1/8	10	9026011C	MRF P T C 10 1/4	10
9026602B	MRF P T B 4 1/8	10	9026007C	MRF P T C 6 1/4	10	9026111V	MRF P T V 10 1/4	10
9026006C	MRF P T C 6 1/8	10	9026107V	MRF P T V 6 1/4	10	9026611B	MRF P T B 10 1/4	10
9026106V	MRF P T V 6 1/8	10	9026607B	MRF P T B 6 1/4	10	9026014C	MRF P T C 12 1/4	10
9026606B	MRF P T B 6 1/8	10	9026009C	MRF P T C 8 1/4	10	9026114V	MRF P T V 12 1/4	10
9026008C	MRF P T C 8 1/8	10	9026109V	MRF P T V 8 1/4	10	9026614B	MRF P T B 12 1/4	10

## SPARE PARTS

### ANTI-TAMPERING KNOB



Code	Description	Quantity
9200703	Anti-tampering knob	

## IN-LINE FLOW MICRO-REGULATOR SERIES RFL



### RFL U (UNIDIRECTIONAL)



Code	Ref.	Quantity
9041001	RFL U M5	10
9041002	RFL U 1/8	10
9041003	RFL U 1/4	10
9041004	RFL U 3/8	5
9041005	RFL U 1/2	5

### RFL B (BIDIRECTIONAL)



Code	Ref.	Quantity
9041201	RFL B M5	10
9041202	RFL B 1/8	10
9041203	RFL B 1/4	10
9041204	RFL B 3/8	5
9041205	RFL B 1/2	5

# AUXILIARITY VALVES

## QUICK EXHAUST VALVES SERIES VSR



New, more compact and lighter version. Used to evacuate air in the cylinder quickly, which increases cylinder speed.

- Temperature 0-80°C (32°-176°F)
- Max. pressure 12 bar (1200 kPa)
- Min. pressure 0.5 bar (50 kPa)

### Nominal flow rate (P → A) ΔP = 1 bar [NI/min]:

Pm [bar]	1/8	1/4	1/2
2.5	550	800	2400
4	700	1200	2800
6.3	900	1400	3600

### ORDERING CODES

Code	Ref.	Quantity
9101201	VSR 1/8	20
9201201	VSR 1/4	10
9401201	VSR 1/2	5



### Empty flow rate (A → R) [NI/min]:

Pm [bar]	1/8	1/4	1/2
2.5	800	1500	4400
4	1200	2450	6300
6.3	1800	3500	8000

### SPARE GASKETS

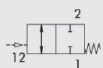
Code	Ref.	Quantity
9151501	Spare gaskets VSR 1/8	10
9251501	Spare gaskets VSR 1/4	10
9451501	Spare gaskets VSR 1/2	10

## STOP VALVES SERIES STP



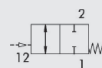
TECHNICAL DATA	UNIDIRECTIONAL				BIDIRECTIONAL			
	1/8"	1/4"	3/8"	1/2"	1/8"	1/4"	3/8"	1/2"
Operating pressure	bar				0.5 - 10			
	MPa				0.05 - 1			
Operating temperature	°C				-10 to 60			
	°F				14 to 148			
Fluid	Lubricated or unlubricated filtered air							
Flow rate (6 bar)	250	350	950	1450	320	700	1060	1700
Type	Female threaded ports - R automatic cartridge							
Installation	In any position							

### BIDIRECTIONAL THREADED STOP VALVE



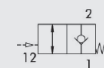
Code	Description	Quantity
W6001101001	STP-B 1/8 108	10
W6001111011	STP-B 1/4 104	10
W6001121021	STP-B 3/8 138	10

### PIPE BIDIRECTIONAL STOP VALVE



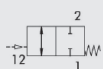
Code	Description	Quantity
W6001101106	STP-B 1/8 006	10
W6001111106	STP-B 1/4 006	10
W6001111108	STP-B 1/4 008	10
W6001121108	STP-B 3/8 008	10
W6001121110	STP-B 3/8 010	10
W6001131112	STP-B 1/2 012	10

### UNIDIRECTIONAL PIPE STOP VALVE



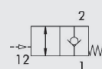
Code	Description	Quantity
W6001001106	STP-U 1/8 006	10
W6001011106	STP-U 1/4 006	10
W6001011108	STP-U 1/4 008	10
W6001021108	STP-U 3/8 008	10
W6001021110	STP-U 3/8 010	10
W6001031112	STP-U 1/2 012	10

### THREAD + PIPE BIDIRECTIONAL STOP VALVE



Code	Description	Quantity
W6001101002	STP-BX 1/8-1/8 04	10
W6001111012	STP-BX 1/4-1/4 04	10
W6001121022	STP-BX 3/8-3/8 04	10

### UNIDIRECTIONAL THREADED STOP VALVE



Code	Description	Quantity
W6001001001	STP-U 1/8 108	10
W6001011011	STP-U 1/4 114	10
W6001021021	STP-U 3/8 138	10

## SLIDE VALVES SERIES VCS



TECHNICAL DATA		1/8"	1/4"	3/8"	1/2"
Operating pressure		0 - 10 bar (0 - 1 MPa)			
Operating temperature range	°C	-10 to + 80			
Fluid		Lubricated or unlubricated filtered air			
Flow rate at 6.3 bar (0.63 Mpa - 91 psi) ΔP 0.5 bar	Nl/min	430	680	1400	2200
Flow rate at 6.3 bar (0.63 Mpa - 91 psi) ΔP 1 bar	Nl/min	630	1040	2070	3330
Conductance C	Nl/min · bar	170	247	537	833
Critical ratio b	bar/bar	0.2	0.3	0.1	0.2

### ORDERING CODES

Code	Description	Quantity		
W0970050001	Slide valves 3/2 1/8"	10		
W0970050002	Slide valves 3/2 1/4"	10		
W0970050003	Slide valves 3/2 3/8"	10		
W0970050004	Slide valves 3/2 1/2"	10		

## CIRCUIT SELECTOR VALVES SERIES VOR



TECHNICAL DATA		1/8"	1/4"
Nominal flow rate at 6.3 bar ΔP 1 bar	Nl/min	500	1300
Operating temperature range	°C	-10 to + 80	
	°F	14 to 176	
Operating pressure	bar	2 - 10	
	MPa	0.2 - 1	
Fluid		Lubricated or unlubricated filtered air	

### ORDERING CODES

Code	Description	Quantity		
W3603000001	VOR 1/8	10		
W3603000002	VOR 1/4	5		

## CHECK VALVE SERIES VNR



TECHNICAL DATA		1/8"	1/4"
Ports		1/8"	1/4"
Nominal diameter	mm	5.2	7
Nominal flow rate	Nl/min	900	1100
Operating temperature range	°C	-10 to + 70	
	°F	14 to 158	
Operating pressure	bar	2 - 10	
	MPa	0.2 - 1	
Opening pressure	bar	0.05 (5 KPa)	
Fluid		Lubricated or unlubricated filtered air	

### ORDERING CODES



Code	Description	Quantity		
W3601000001	VNR 1/8	10		
W3601000002	VNR 1/4	10		

## PNEUMATIC LOGIC

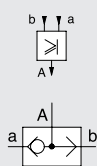


TECHNICAL DATA	
Operating temperature	°C
Valve fitting	
Pressure range	bar
Nominal diameter	mm
Flow rate at 6 bar (0.6 MPa-87 psi) ΔP 1 bar (0.1 Mpa-14.5 psi)	Nl/min
Fluid	
Recommended lubricant	
Actionament	
Reset	
Installation	
Mounted	
MATERIALS	
Body	
Spool	
Seal	

- 10 to + 60  
 Push-in fitting for Ø 4 pipe  
 OR - AND: from 1.5 to 8 bar  
 YES-NOT -MEMORY: from 0 to 8 bar, pilot pressure from 1.5 to 8 bar  
 NOT: 6 bar switching threshold = 0.4  
 2.7  
 100  
 Lubricated or unlubricated filtered compressed air; must be uninterrupted when lubricated  
 ISO e UNI FD22  
 Via compressed air  
 AND-OR: via compressed air  
 YES-NOT via mechanical spring  
 MEMORY: via compressed air  
 In any position  
 On Omega bar (DIN EN 50022) size 35 x 7 or 35 x 15  
 Wall-mounted with Ø 4.2 holes

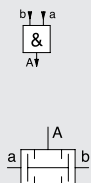
Technopolymer  
 Aluminium  
 NBR (FKM/FPM on request)

### LOGIC ELEMENT: OR



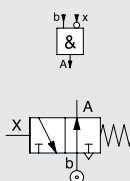
Code W360400001 Descr. OR Quantity 10

### LOGIC ELEMENT: AND



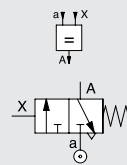
Code W360400002 Descr. AND Quantity 10

### LOGIC ELEMENT: NOT



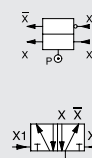
Code W360400003 Descr. NOT Quantity 10

### LOGIC ELEMENT: YES



Code W360400004 Descr. YES Quantity 10

### LOGIC ELEMENT: MEMORY



Code W360400005 Descr. Memory Quantity 10

## TIMER

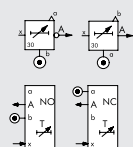


TECHNICAL DATA	
Temperature range	°C
Valve coupling	mm
Pressure range	bar
Nominal diameter	mm
Flow rate at 6 bar (0.6 MPa, 87 psi) ΔP 1 bar (0.1 Mpa, 14.5 psi)	Nl/min
Delay setting range	s
Signal shutoff time	s
Repeatability	s
Fluid	
Operating	
Repositioning	
Installation	
Assembly	
MATERIALS	
Body	
Internal parts	
Gaskets	
Spring	

- 10 to + 60  
 Push-in fitting for Ø 4 pipe  
 From 2.5 to 8  
 2.7  
 100  
 From 0 to 30, at 6 bar  
 < 0.1  
 ± 0.4  
 Filtered, lubricated or unlubricated compressed air. If used, must be continuous  
 By compressed air  
 By mechanical spring  
 In any direction  
 On Ω bar (DIN EN 50022) size 35 x 7 or 35 x 15 - Wall mounting using Ø 4.2 holes

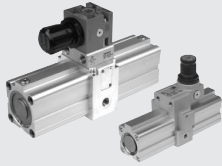
Anodised aluminium / Technopolymer  
 Brass / Technopolymer  
 NBR  
 Spring steel

### ORDERING CODES



Code W360400006 Description Timer

## AIR-AIR PRESSURE MULTIPLIER (BOOSTER)



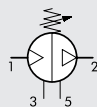
TECHNICAL DATA	Booster Ø 40	Booster Ø 40 with regulator	Booster Ø 63	Booster Ø 63 with regulator
Bore	Ø 40		Ø 63	
Fluid	Filtered unlubricated compressed air, Lubrication, if used, must be continuous.			
Threaded port	1/8"		3/8"	
Inlet pressure	MPa		0.2 - 1	
	bar		2 - 10	
	psi		29 - 145	
Outlet pressure	max 2	max 1.6 (regulated)	max 2	max 1.6 (regulated)
	max 20	max 16 (regulated)	max 20	max 16 (regulated)
	max 290	max 232 (regulated)	max 290	max 232 (regulated)
Operating temperature	-10 to +60	-10 to +60	-10 to +60	-10 to +60
	°C	°C	°C	°C
	14 to 140	14 to 122	14 to 140	14 to 140
	°F	°F	°F	°F
Weight	1.380	1.600	4.240	5.350
Mounting	Wall or panel			
Installation	In any position			

### PRESSURE MULTIPLIER (BOOSTER)



Code	Description
9002100	Booster Ø 40
9002300	Booster Ø 63

### PRESSURE MULTIPLIER (BOOSTER WITH REGULATOR)



Code	Description
9002200	Booster Ø 40 with regulator
9002600	Booster Ø 63 with regulator

### ACCESSORIES

#### REGULATOR UNIT

Code	Description
9002380	Ø 63 regulator unit
9002180	Ø 40 regulator unit

#### PRESSURE GAUGE

Code	Description
9700101	M 40 1/8 012
9700110	M 40x40 1/8 012

#### SILENCER

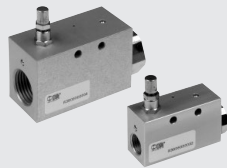
Code	Thread	
W0970530072	G1/8	For Ø 40
W0970530014	G3/8	For Ø 63

### SPARE PARTS

#### SET OF GASKETS

Code	Description
9002190	Set of gaskets for Ø 40 Booster
9002390	Set of gaskets for Ø 63 Booster

## IN-LINE PROGRESSIVE STARTER VAP 1/4" AND 1/2"



TECHNICAL DATA	VAP 1/4"	VAP 1/2"
Threaded ports	1/4"	1/2"
Type of valve	2/2 NC	
Minimum operating pressure	bar	
	psi	
	Mpa	
Maximum operating pressure	bar	
	psi	
	Mpa	
Switching pressure	About 60% of inlet pressure	
Operating frequency	max 5	
Flow rate at 6.3 bar, ΔP=0.5 bar	Nl/min	2350
	scfm	83
Flow rate at 6.3 bar, ΔP=1 bar	Nl/min	3100
	scfm	110
Maximum flow rate through flow regulator at 6.3 bar	Nl/min	300
	scfm	11
Operating temperature	°C	
	°F	
Fluid	Filtered, lubricated or unlubricated, compressed air. Lubrication, if used, must be continuous.	
Weight	90	220
Wall fixing screws	Min. M4x25	Min. M4x35
Mounting	In any position	

### ORDERING CODES

Code	Description
W3606000002	VAP 1/4
W3606000004	VAP 1/2

## DISTRIBUTION FRAMES AND ROTARY JOINTS



TECHNICAL DATA		1/8"	1/4"	3/8"	1/2"
Threaded ports					
Max pressure	bar			0 - 12	
	MPa			0 - 1.2	
Operating temperature	°C			- 10 to + 80	
Fluid				Lubricated or unlubricated filtered air	
Body				Rotary joints: Nickel-plated brass	
Gaskets				Distribution frame: Anodised aluminium	
				NBR	

### 4-WAY DISTRIBUTION FRAME



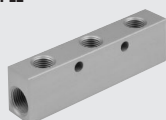
Code	Thread
W0501101001	1/8
W0501111002	1/4
W0501121003	3/8
W0501131004	1/2

### DISTRIBUTION FRAME WITH 2 STRAIGHT 1/8" OUTLETS



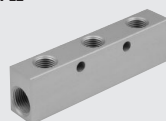
Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0502111001	2	1/4	2	1/8
W0502121002	2	3/8	2	1/4
W0502131002	2	1/2	2	1/4

### DISTRIBUTION FRAME WITH MULTIPLE STRAIGHT 1/4" OUTLETS



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0502121006	2	3/8	3	1/4
W0502121008	2	3/8	4	1/4
W0502121010	2	3/8	5	1/4
W0502121012	2	3/8	6	1/4
W0502131006	2	1/2	3	1/4
W0502131008	2	1/2	4	1/4
W0502131010	2	1/2	5	1/4
W0502131012	2	1/2	6	1/4

### DISTRIBUTION FRAME WITH MULTIPLE STRAIGHT 1/8" OUTLETS



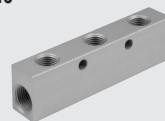
Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0502111005	2	1/4	3	1/8
W0502111007	2	1/4	4	1/8
W0502111009	2	1/4	5	1/8
W0502111011	2	1/4	6	1/8

### DISTRIBUTION FRAME WITH 2 OPPOSED OUTLETS



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0503111013	2	1/4	2+2	1/8
W0503121014	2	3/8	2+2	1/4
W0503131014	2	1/2	2+2	1/4

### DISTRIBUTION FRAME WITH 1/8"-1/4" OPPOSED OUTLETS



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0503111015	2	1/4	3+3	1/8
W0503111017	2	1/4	4+4	1/8
W0503111019	2	1/4	5+5	1/8
W0503121016	2	3/8	3+3	1/4
W0503121018	2	3/8	4+4	1/4
W0503121020	2	3/8	5+5	1/4
W0503131016	2	1/2	3+3	1/4
W0503131018	2	1/2	4+4	1/4
W0503131020	2	1/2	5+5	1/4

### DISTRIBUTOR, Ø 4-6-8 mm



Code	N. positions	OUTLETS
7304106	6 X Ø 4	2 X 1/8
7304112	12 X Ø 4	2 X 1/8
7306206	6 X Ø 6	2 X 1/4
7306212	12 X Ø 6	2 X 1/4
7308306	6 X Ø 8	2 X 3/8
7308312	12 X Ø 8	2 X 3/8

### SINGLE ROTARY JOINT



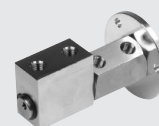
Code	Thread
W0511101101	1/8
W0511121121	1/4
W0511131131	3/8
W0511141141	1/2
W0511151151	3/4
W0511161161	1

### MULTIPLE ROTARY JOINT



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0513131101	1	3/8	6	1/8
W0512131121	1	3/8	3	1/4

### 2 INDEPENDENT WAY ROTARY JOINTS



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0514101101	2	1/8	2	1/8
W0514121121	2	1/4	2	1/4

### 3 INDEPENDENT WAY ROTARY JOINTS



Code	INLETS		OUTLETS	
	N°	Thread	N°	Thread
W0515121121	3	1/4	3	1/4



## SILENCERS



### SILENCER MW SC



	Code	Thread	Quantity
Materials:	W0970530001	M5	50
Nickel-plated brass	W0970530002	1/8	50
Sintered nickel-plated bronze	W0970530003	1/4	50
	W0970530004	3/8	20
	W0970530005	1/2	20
Features:	W0970530006	3/4	10
Pmax: 12 bar	W0970530007	1	10
Temp.: -10°C ÷ +80°C			

### SILENCER MW STT



	Code	Thread	Quantity
Materials:	W0970530042	1/8	50
Nickel-plated brass	W0970530043	1/4	50
Sintered nickel-plated bronze	W0970530044	3/8	20
	W0970530045	1/2	20
	W0970530046	3/4	10
Features:	W0970530047	1	10
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			

### SILENCED EXHAUST REGULATOR MW SVE



	Code	Thread	Quantity
Materials:	W0970520001	1/8	50
Nickel-plated brass	W0970520002	1/4	50
Sintered nickel-plated bronze	W0970520003	3/8	20
Stainless steel spring	W0970520004	1/2	20
	W0970520005	3/4	10
Features:	W0970520006	1	10
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			

### SILENCER MW SCQ



	Code	Thread	Quantity
Materials:	W0970530012	1/8	50
Nickel-plated brass	W0970530013	1/4	50
Sintered nickel-plated bronze	W0970530014	3/8	20
	W0970530015	1/2	20
	W0970530016	3/4	10
Features:	W0970530017	1	10
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			

### SILENCER MW SFE



	Code	Thread	Quantity
Materials:	W0970530051	M5	50
Nickel-plated brass	W0970530052	1/8	50
Stainless steel wire	W0970530053	1/4	50
	W0970530054	3/8	20
	W0970530055	1/2	20
Features:	W0970530056	3/4	10
Pmax: 12 bar	W0970530057	1	10
Temp.: -10°C ÷ +80°C			

### SILENCED EXHAUST REGULATOR MW SVL



	Code	Thread	Quantity
Materials:	W0970520010	M5	50
Nickel-plated brass	W0970520011	1/8	50
Sintered nickel-plated bronze	W0970520012	1/4	50
	W0970520013	3/8	20
	W0970520014	1/2	20
Features:	W0970520015	3/4	10
Pmax: 12 bar	W0970520016	1	10
Temp.: -10°C ÷ +80°C			

### SILENCER MW SE



	Code	Thread	Quantity
Materials:	W0970530021	M5	50
Nickel-plated brass	W0970530020	M7	50
Sintered nickel-plated bronze	W0970530022	1/8	50
	W0970530023	1/4	50
	W0970530024	3/8	20
Features:	W0970530025	1/2	20
Pmax: 12 bar	W0970530026	3/4	10
Temp.: -10°C ÷ +80°C	W0970530027	1	10

### SILENCER MW SPL



	Code	Thread	Quantity
Materials:	W0970530062	1/8	50
Black acetal resin	W0970530063	1/4	50
Acoustic insulation	W0970530064	3/8	20
	W0970530065	1/2	20
	W0970530066	3/4	10
Features:	W0970530067	1	10
Pmax: 6 bar			
Temp.: -10°C ÷ +60°C			

### EXHAUST REGULATOR MW DSN



	Code	Thread	Quantity
Materials:	W0970520021	1/8	50
Nickel-plated brass	W0970520022	1/4	50
	W0970520023	3/8	20
	W0970520024	1/2	20
Features:			
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			

### HIGH-CAPACITY SILENCER MW SL



	Code	Thread	Quantity
Materials:	W0970530036	3/4	10
Nickel-plated brass	W0970530037	1	10
Sintered nickel-plated bronze	W0970530038	1 1/4	5
	W0970530039	1 1/2	5
	W0970530040	2	5
Features:			
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			

### SILENCER MW SPL-F



	Code	Thread	Quantity
Materials:	W0970530072	1/8	50
Black acetal resin	W0970530073	1/4	50
Felt	W0970530074	3/8	20
	W0970530075	1/2	20
Features:			
Pmax: 12 bar			
Temp.: -10°C ÷ +60°C			

### EXHAUST REGULATOR MW DSE



	Code	Thread	Quantity
Materials:	W0970520031	1/8	50
Nickel-plated brass	W0970520032	1/4	50
Features:			
Pmax: 12 bar			
Temp.: -10°C ÷ +80°C			



TECHNICAL DATA		50-1	50-2	50-3
Maximum power at 7 bar	W	3	7.5	12
Nominal voltage supplied			24 VDC	
Voltage tolerance			±3%	
Ripple and Noise		Including line regulation, load regulation and factory setup mMax 250 mV p-p o 79 mV rms		
Rise time at 7 bar at max. load	sec	2.5	1.5	1
Hold time at 7 bar at 50% of load	sec	1.3	0.9	0.8
Electrical connector		See graph page 5-105 of the general catalogue M8 - 3 poles		
Overload protection e cortocircuito		"Hiccup mode" with automatic recovery upon cessation of overload		
Overvoltage protection		Intervention if output voltage > 120% than nominal value		
Electromagnetic compatibility		In compliance with the following standards: EN 61000-2: Part 6-2: Generic standards - Immunity for industrial environments EN 61000-2: Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments		
Life at 6.3 bar	h	20.000		
Signals		LED diagnostics. Visual signals are flanked by a diagnostic pin on the M8 connector, which closes a GND contact when the voltage is 24 VDC ±3%		
Index of protection for electronic devices		IP 65		
Input fluid		Filter unlubricated air		
Minimum input pressure	bar	4	3	3
Maximum input pressure	bar	7	7	7
Max air consumption at 7 bar (Leq)	NI/min	32	50	75
Air ports		Input: G1/8" Exhaust: G1/8"		
Temperature range	°C	0 - 50		
Max noise level at 7 bar		75 dB		
Casing material		Painted aluminium		
Assembly position		Any		
Fixing		Using 3 M4x10 screws		
Weight	g	The device can be stabilised using rubber vibration dampers forniti in dotazione 330		

**LED DIAGNOSTICS OVERVIEW**

LED off or red LED flashing	Temporarily on start-up: the output voltage has not yet reached 24V If this condition persists, the applied load is probably excessive with respect to the input pressure.
Green LED fixed	Normal operation: the output voltage has reached 24V Optimal use of the compressed air supply.
Green LED flashing	Normal operation: the output voltage has reached 24V but the generator is used below capacity (can supply more power at the same compressed air supply)
Red and Green LED flashing	Charge short-circuited: output voltage is automatically cut off. It will return within the tolerance range upon elimination of overload.
Red LED fixed	The maximum supply pressure has been exceeded and the device risks getting damaged.

**ORDERING CODES**

Code	Description
0251530000	PNEUMO POWER 50-1 3 W 24 VDC
0251550000	PNEUMO POWER 50-2 7,5 W 24 VDC
0251570000	PNEUMO POWER 50-3 12 W 24 VDC

**ACCESSORIES**

**M8 CONNECTOR WITH CABLE**

Code	Description
02240009053	M8 male 3-pin connector with 2.5 metres of cable





