

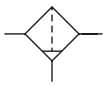
Filter FX

Technical details

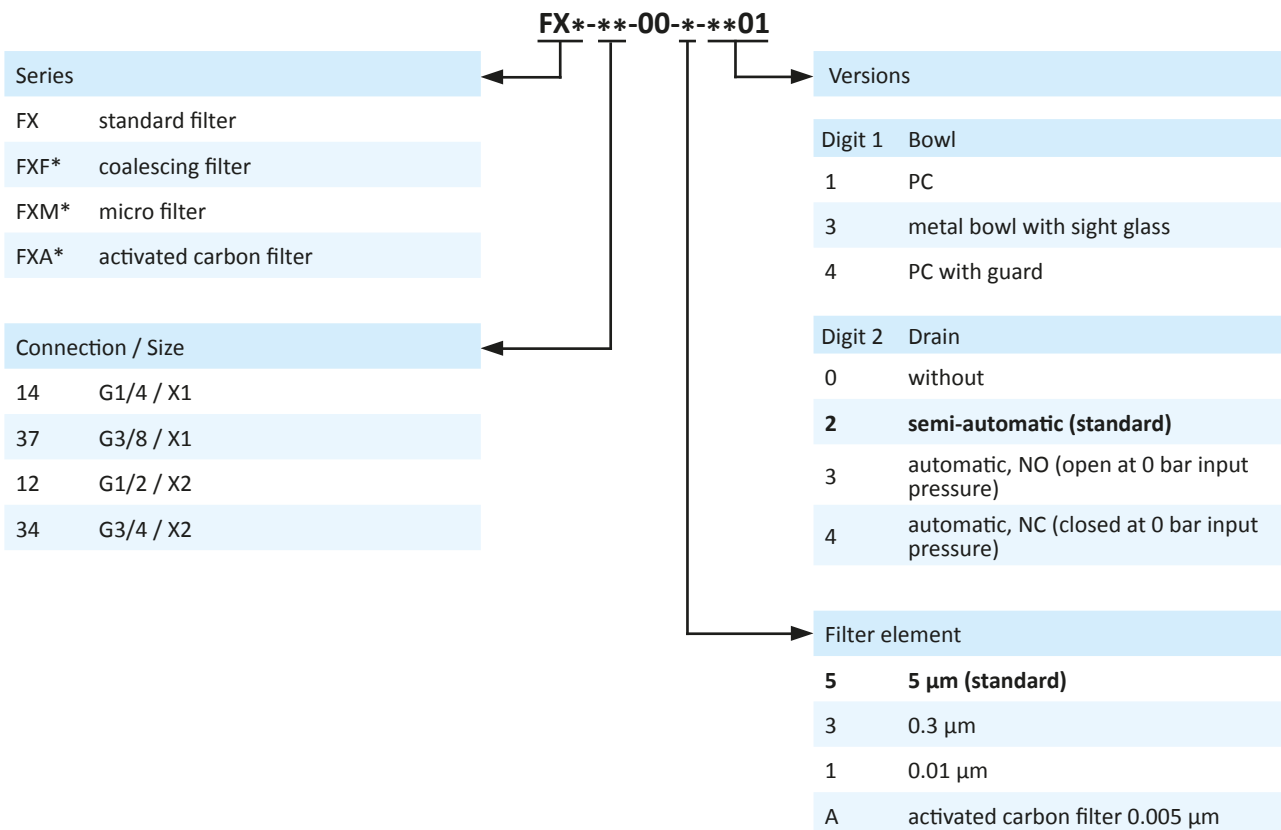
Temperature range	0°C ... +60°C
Input range	1.5 ... 16 bar
Mounting	vertically, drain at bottom
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: zinc diecasting, bowl: PC, seals: NBR, inner parts: POM



Sintered filter according to the centrifugal force principle.



Order code



* only for connections 14 and 12 available.

Coupling kits KPY-K

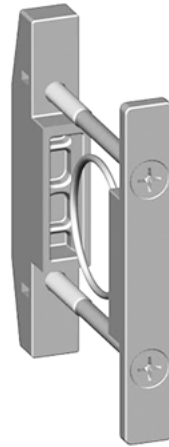
KPY-00-K, KPY-01-K



KPY-02-K

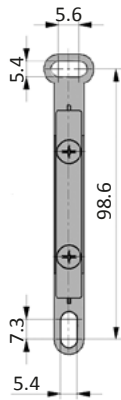
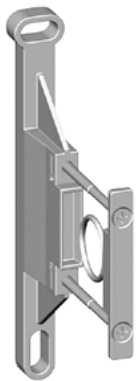


KPY-03-K

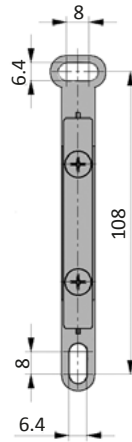
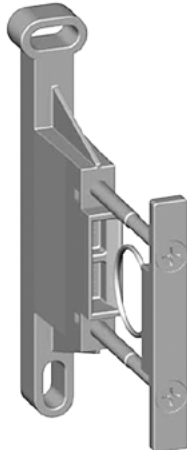


Coupling kits for wall mounting KPY-W

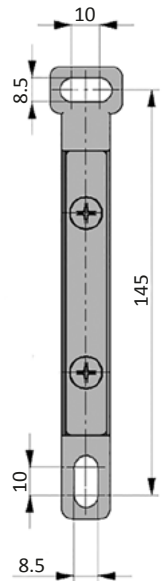
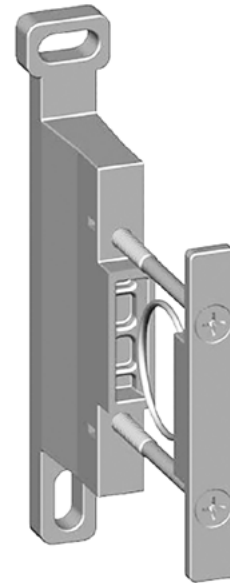
KPY-00-W, KPY-01-W



KPY-02-W



KPY-03-W

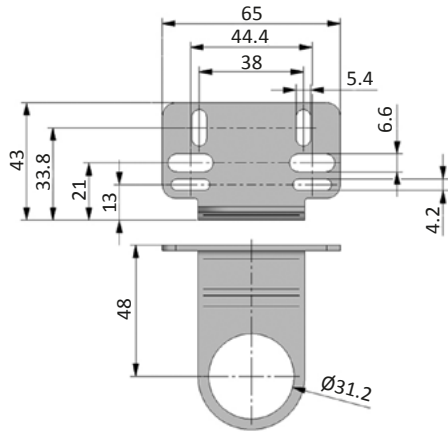


Fastening elements

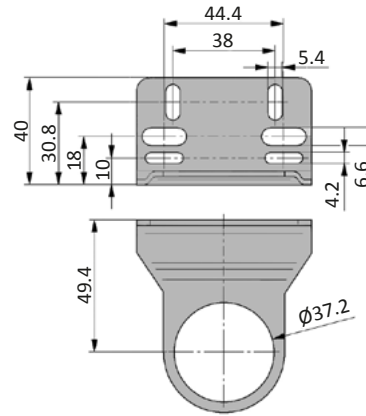
Mounting brackets WYL

Mounting brackets made of zinc coated steel. Assembling with mounting nut (not included).

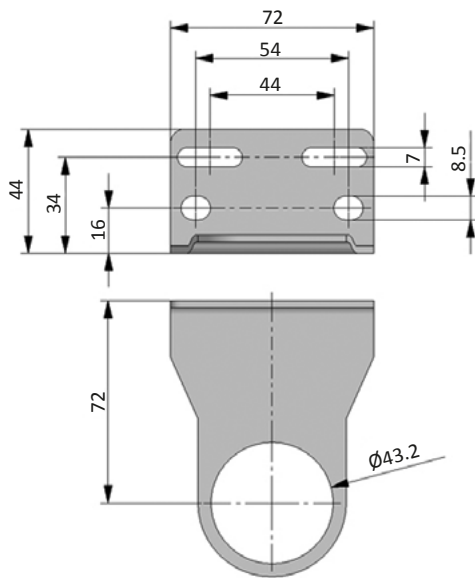
WYL-00



WYL-01



WYL-02

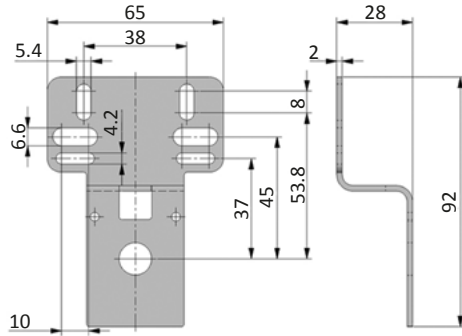


Bracket kit WYP

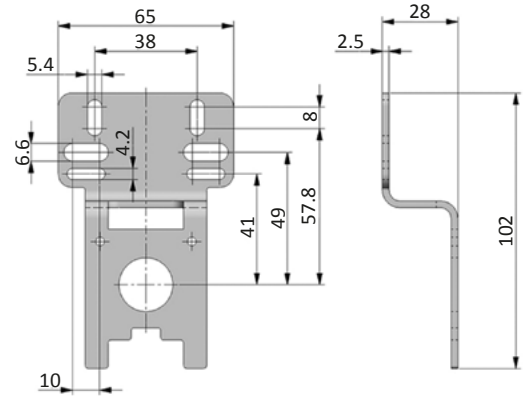
Bracket kit made of zinc coated steel.

The bracket can be mounted at the rear side after removing the rear cover of the unit. The 2 mounting screws are included.

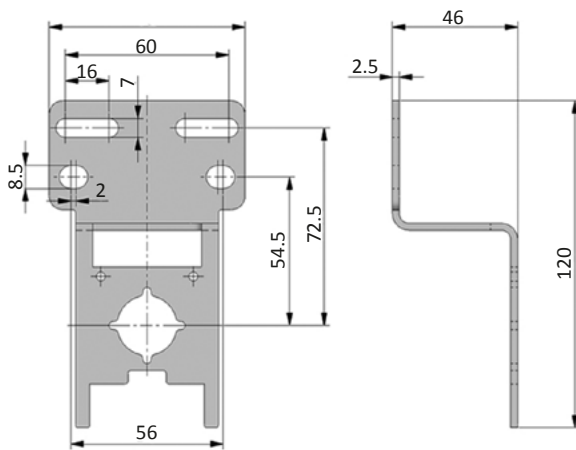
WYP-00



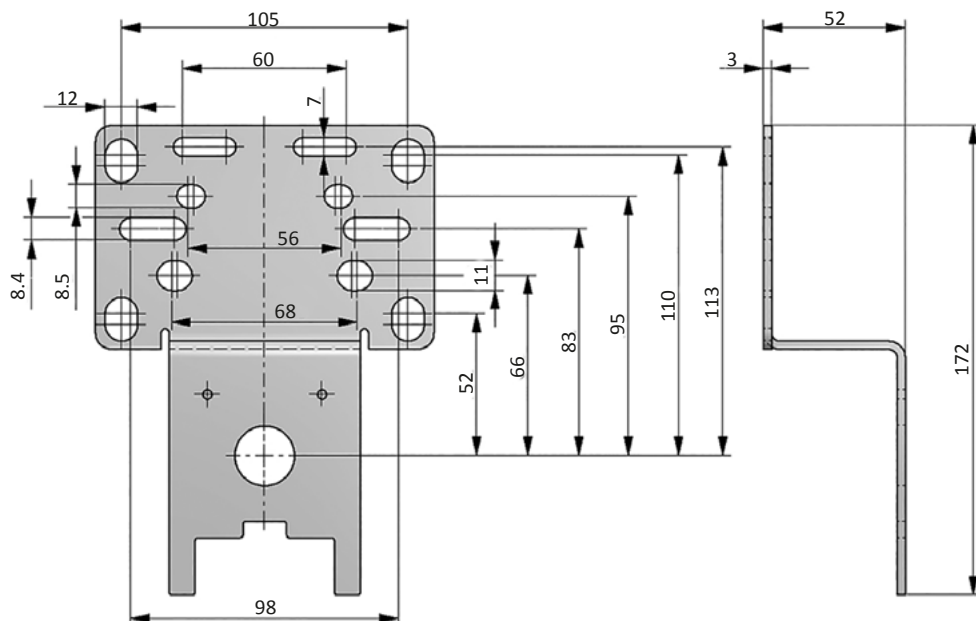
WYP-01



WYP-02



WYP-03



Distributor block TY

Technical data

Model-no.:	TY-04-...	TY-14-...	TY-37-...	TY-38-...	TY-12-...	TY-34-...	TY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Connection 2.1 (bottom)	G1/4	G1/4	G1/4	G3/8	G3/8	G3/4	G3/4
Connection 2.2 (top)	G1/4	G1/4	G1/4	G1/4	G1/4	G3/4	G3/4
Connection 2.3 (front)	-	G1/4	G1/4	G3/8	G3/8	-	-
Connection 2.4 (backward)	-	-	-	G3/8	G3/8	-	-
Flow (1-2 in NI/min)	2300	2700	2700	7250	7250	18000	18000
Flow (1-2.1 in NI/min)	950	2000	2000	5500	5500	12000	12000
Flow (1-2.2 in NI/min)	2000	2000	2000	22500	22500	8500	8500
Flow (1-2.3 in NI/min)	-	900	900	2300	2300	-	-
Flow (1-2.4 in NI/min)	-	-	-	2300	2300	-	-
Weight (kg)	0.10	0.19	0.17	0.35	0.33	0.88	0.82

Accessories

Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



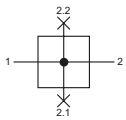
Mounting brackets WYP



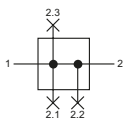
Details: see page 12-23

Technical details

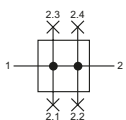
Temperature range	0°C ... +50°C
Input range	max. 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), seals: NBR, inner parts: plastic and brass



Distributor block, 2 outlets
Series KY-04, KY-34, KY-10



Distributor block, 3 outlets
Series KY-14, KY-37



Distributor block, 4 outlets
Series KY-38, KY-12

Order code

Series	TY-**-00-0-0001
Connection / Size	
04	G1/4 / Y0
14	G1/4 / Y1
37	G3/8 / Y1
38	G3/8 / Y2
12	G1/2 / Y2
34	G3/4 / Y3
10	G1 / Y3

Non-return valve NY

Technical details

Temperature range	0°C ... +50°C
Input range	2.5 ... 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), seals: NBR, inner parts: plastic, stainless steel and brass



Poppet valve, spring loaded.



Order code

		NY-**-00-0-0001	
Series		←	
Connection / Size		←	
04	G1/4 / Y0		
14	G1/4 / Y1		
37	G3/8 / Y1		
38	G3/8 / Y2		
12	G1/2 / Y2		
34	G3/4 / Y3		
10	G1 / Y3		

Technical data

Model-no.:	NY-04-...	NY-14-...	NY-37-...	NY-38-...	NY-12-...	NY-34-...	NY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (l/min)	2000	2000	2000	4500	4500	10000	10000
Weight (kg)	0.14	0.24	0.22	0.54	0.52	0.79	0.63

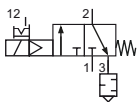
3/2-way inline valve VMY

Technical details

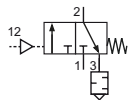
Temperature range	0°C ... +50°C
Input range	electrically operated: 2 ... 10 bar pneumatically operated: max. 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66) and POM, seals: NBR, inner parts: zinc coated steel, stainless steel and brass
Protection	IP 65 according to EN 60529



3/2-way poppet valve, electrically or pneumatically operated.
Silencer is mounted in exhaust.
Plug socket is included.



electrically operated
3/2-way, single solenoid, mechanical
spring return, NC



pneumatically operated
3/2-way, single pilot, mechanical
spring return, NC

Order code

Series		VMY-**-00-0-000*		Versions	
Connection / Size		Digit 4	Version		
04	G1/4 / Y0		A	24 V DC, 2.5 W	
14	G1/4 / Y1		D	115 V AC, 3 VA	
37	G3/8 / Y1		E	230 V AC, 3 VA	
38	G3/8 / Y2		F	pneumatically operated	
12	G1/2 / Y2				
34	G3/4 / Y3				
10	G1 / Y3				

Technical data

Model-no.:	VMY-04-...	VMY-14-...	VMY-37-...	VMY-38-...	VMY-12-...	VMY-34-...	VMY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (1-2 in NI/min)	2000	2000	2000	4300	4300	12500	12500
Weight(Version A-E) (kg)	0.22	0.28	0.27	0.59	0.58	0.78	0.71
Weight(Version F) (kg)	0.19	0.25	0.24	0.56	0.55	0.75	0.68

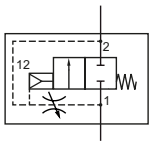
Soft start valve DAY

Technical details

Temperature range	0°C ... +50°C
Input range	2.5 ... 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), seals: NBR, inner parts: plastic, stainless steel and brass



Poppet valve, operated by secondary pressure
The filling time is adjustable.



Order code

		DAY-**-00-0-0001
Series		←
Connection / Size		←
04	G1/4 / Y0	
14	G1/4 / Y1	
37	G3/8 / Y1	
38	G3/8 / Y2	
12	G1/2 / Y2	
34	G3/4 / Y3	
10	G1 / Y3	

Technical data

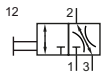
Model-no.:	DAY-04-...	DAY-14-...	DAY-37-...	DAY-38-...	DAY-12-...	DAY-34-...	DAY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)	2000	2000	2000	4500	4500	10000	10000
Weight (kg)	0.14	0.24	0.22	0.54	0.52	0.79	0.63

Technical details

Temperature range	0°C ... +50°C
Input range	max. 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), seals: NBR, inner parts: plastic and brass



3/2 directional control valve, operated by a knob, 3-fold.
 Locking: rotary lock and padlock possible.
 Silencer is mounted in exhaust.


Order code

		KY-**-00-0-0001
Series		←
Connection / Size		←
04	G1/4 / Y0	
14	G1/4 / Y1	
37	G3/8 / Y1	
38	G3/8 / Y2	
12	G1/2 / Y2	
34	G3/4 / Y3	
10	G1 / Y3	

Technical data

Model-no.:	KY-04-...	KY-14-...	KY-37-...	KY-38-...	KY-12-...	KY-34-...	KY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (1-2 in NI/min)	2300	1900	1900	11000	11000	25000	25000
Weight (kg)	0.10	0.27	0.26	0.54	0.52	1.19	1.15

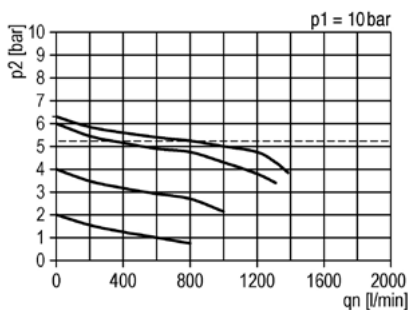
Two piece air service unit FROY

Technical data

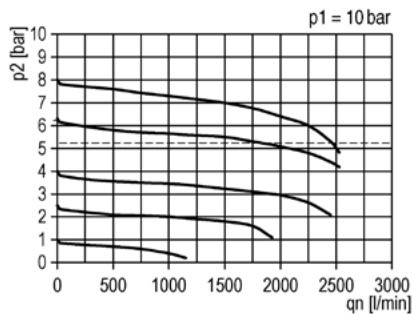
Model-no.:	FROY-04-...	FROY-14-...	FROY-37-...	FROY-38-...	FROY-12-...	FROY-34-...	FROY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)	600	1800	1800	3500	3500	12000	12000
Lubricator operating limit (NI/min)	30	100	100	70	70	115	115
Internal air consumption	-	-	-	-	-	max. 1.5 l/min	max. 1.5 l/min
Bowl volume (cm ³)	16	28	28	49	49	87	87
Bowl volume lubricator (cm ³)	35	40	40	80	80	181	181
Weight (kg)	0.39	0.67	0.65	1.09	1.06	2.27	2.13

Flow characteristic

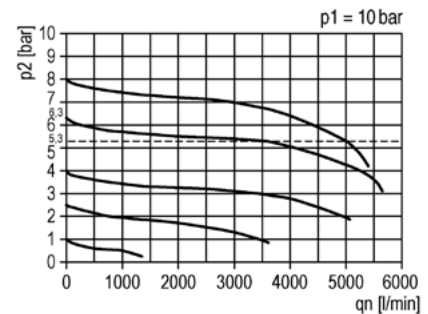
FROY-04



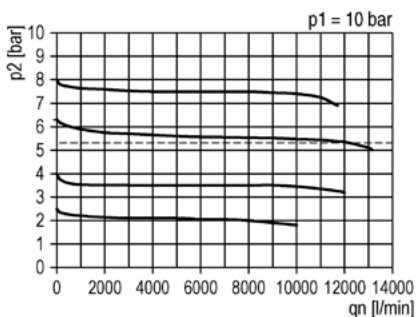
FROY-14, FROY-37



FROY-38, FROY-12



FROY-34, FROY-10

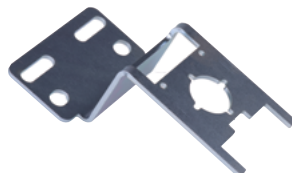


Accessories

Mounting brackets WYL



Mounting brackets WYP



Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting nut RMY



Details: see page 12-23

Two piece air service unit FROY

Technical details

Temperature range	0°C ... +50°C
Input range	1.5 ... 16 bar (size Y0 max. 12 bar)
Mounting	vertically, drain at bottom
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66) and POM, bowl: PC, seals: NBR, inner parts: zinc coated steel, stainless steel and brass

Combination of filter, regulator and lubricator.
 Locking: rotary lock and padlock possible.



Order code

FROY-***-**-5-***1																																									
Series	Versions																																								
<table border="1"> <tr> <th colspan="2">Connection / Size</th> </tr> <tr> <td>04 *</td> <td>G1/4 / Y0</td> </tr> <tr> <td>14</td> <td>G1/4 / Y1</td> </tr> <tr> <td>37</td> <td>G3/8 / Y1</td> </tr> <tr> <td>38</td> <td>G3/8 / Y2</td> </tr> <tr> <td>12</td> <td>G1/2 / Y2</td> </tr> <tr> <td>34</td> <td>G3/4 / Y3</td> </tr> <tr> <td>10</td> <td>G1 / Y3</td> </tr> </table>	Connection / Size		04 *	G1/4 / Y0	14	G1/4 / Y1	37	G3/8 / Y1	38	G3/8 / Y2	12	G1/2 / Y2	34	G3/4 / Y3	10	G1 / Y3	<table border="1"> <tr> <th colspan="2">Digit 1 Bowl</th> </tr> <tr> <td>1</td> <td>PC with PA-guard</td> </tr> <tr> <td>3</td> <td>metal bowl with sight glass</td> </tr> <tr> <th colspan="2">Digit 2 Drain</th> </tr> <tr> <td>2</td> <td>semi-automatic (standard)</td> </tr> <tr> <td>3</td> <td>automatic, NO (open at 0 bar input pressure)</td> </tr> <tr> <td>4</td> <td>automatic, NC (closed at 0 bar input pressure)</td> </tr> <tr> <th colspan="2">Digit 3 Gauge, flow direction</th> </tr> <tr> <td>0</td> <td>without gauge, flow from left to right</td> </tr> <tr> <td>1</td> <td>without gauge, flow from right to left</td> </tr> <tr> <td>2</td> <td>with gauge, flow from left to right (standard)</td> </tr> <tr> <td>3</td> <td>with gauge, flow from right to left</td> </tr> </table>	Digit 1 Bowl		1	PC with PA-guard	3	metal bowl with sight glass	Digit 2 Drain		2	semi-automatic (standard)	3	automatic, NO (open at 0 bar input pressure)	4	automatic, NC (closed at 0 bar input pressure)	Digit 3 Gauge, flow direction		0	without gauge, flow from left to right	1	without gauge, flow from right to left	2	with gauge, flow from left to right (standard)	3	with gauge, flow from right to left
Connection / Size																																									
04 *	G1/4 / Y0																																								
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3	automatic, NO (open at 0 bar input pressure)																																								
4	automatic, NC (closed at 0 bar input pressure)																																								
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3	with gauge, flow from right to left																																								
<table border="1"> <tr> <th colspan="2">Output range</th> </tr> <tr> <td>04</td> <td>0.2 ... 4 bar</td> </tr> <tr> <td>08</td> <td>0.5 ... 8 bar</td> </tr> <tr> <td>10</td> <td>0.5 ... 10 bar (standard)</td> </tr> </table>	Output range		04	0.2 ... 4 bar	08	0.5 ... 8 bar	10	0.5 ... 10 bar (standard)																																	
Output range																																									
04	0.2 ... 4 bar																																								
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10	0.5 ... 10 bar (standard)																																								
<table border="1"> <tr> <th colspan="2">Filter element</th> </tr> <tr> <td>5</td> <td>5 µm</td> </tr> </table>	Filter element		5	5 µm																																					
Filter element																																									
5	5 µm																																								

* FROY-04 only with integrated gauge and flow from left to right available.

Lubricator OY

Technical data

Model-no.:	OY-04-...	OY-14-...	OY-37-...	OY-38-...	OY-12-...	OY-34-...	OY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (l/min)	1400	2800	2800	8000	8000	16000	16000
Lubricator operating limit (l/min)	30	100	100	70	70	115	115
Bowl volume lubricator (cm ³)	35	40	40	80	80	181	181
Weight (kg)	0.15	0.27	0.26	0.43	0.41	0.95	0.89

Accessories

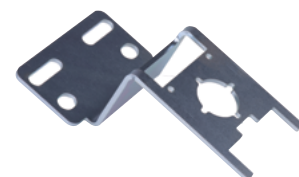
Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting brackets WYP



Details: Page 12-23

Technical details

Temperature range	0°C ... +50°C
Input range	max. 16 bar (size Y0 max. 12 bar)
Mounting	vertically
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), seals: NBR, inner parts: plastic and brass

Micro lubricator (size Y0)
Lubricator with automatic oil filling (scale Y1 to Y3)


Order code

Series		Versions	
		Digit 1	Bowl
04	G1/4 / Y0	1	PC with PA-guard
14	G1/4 / Y1	3	metal bowl with sight glass
37	G3/8 / Y1		
38	G3/8 / Y2		
12	G1/2 / Y2		
34	G3/4 / Y3		
10	G1 / Y3		

OY-**-00-0-*001

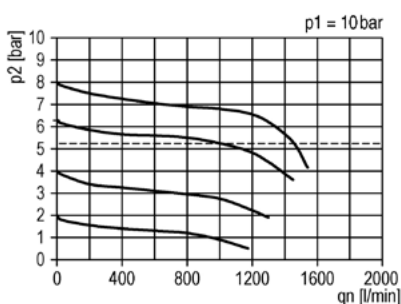
Filter regulator FRY

Technical data

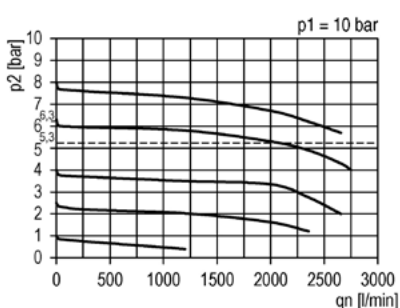
Model-no.:	FRY-04-...	FRY-14-...	FRY-37-...	FRY-38-...	FRY-12-...	FRY-34-...	FRY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (l/min)	1000	2200	2600	4300	5200	14000	14000
Internal air consumption	-	-	-	-	-	max. 1.5 l/min	max. 1.5 l/min
Bowl volume (cm ³)	16	28	28	49	49	87	87
Weight (kg)	0.23	0.36	0.36	0.85	0.85	0.99	0.99

Flow characteristic

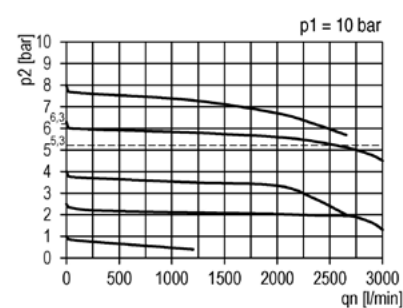
FRY-04



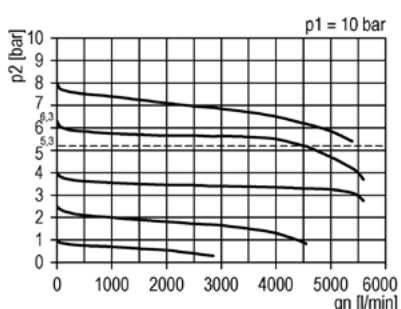
FRY-14



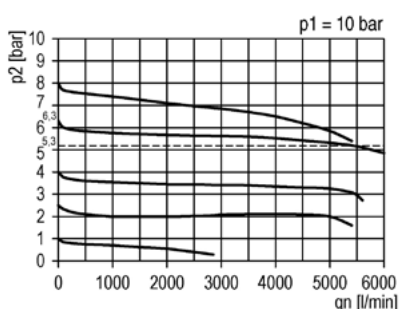
FRY-37



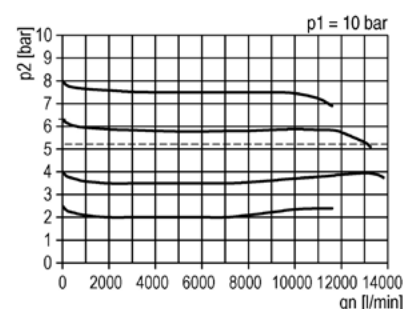
FRY-38



FRY-12



FRY-34, FRY-10



Accessories

Mounting brackets WYL



Mounting brackets WYP



Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting nut RMY



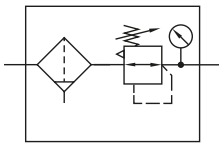
Details: see page 12-23

Filter regulator FRY

Technical details

Temperature range	0°C ... +50°C
Input range	1.5 ... 16 bar (size Y0 max. 12 bar)
Mounting	vertically, drain at bottom
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66) and POM, bowl: PC, seals: NBR, inner parts: zinc coated steel, stainless steel and brass

Combination of pressure regulator with diaphragm and relieving feature and sintered filter according to the centrifugal force principle.
Locking: rotary lock and padlock possible.



Order code

FRY-***-**-5-***1	
Series	Versions
Connection / Size	Digit 1 Bowl
04 * G1/4 / Y0	1 PC with PA-guard
14 G1/4 / Y1	3 metal bowl with sight glass
37 G3/8 / Y1	Digit 2 Drain
38 G3/8 / Y2	2 semi-automatic (standard)
12 G1/2 / Y2	3 automatic, NO (open at 0 bar input pressure)
34 G3/4 / Y3	4 automatic, NC (closed at 0 bar input pressure)
10 G1 / Y3	Digit 3 Gauge, flow direction
Output range	0 without gauge, flow from left to right
04 0.2 ... 4 bar	1 without gauge, flow from right to left
08 0.5 ... 8 bar	2 with gauge, flow from left to right (standard)
10 0.5 ... 10 bar (standard)	3 with gauge, flow from right to left
Filter element	
5 5 µm	

* FRY-04 only with integrated gauge and flow from left to right available.

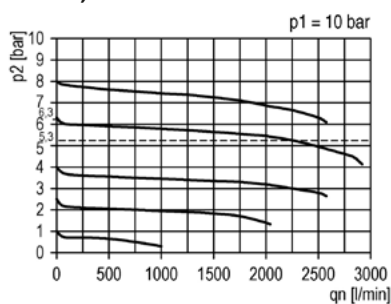
Precision pressure regulator RYP

Technical data

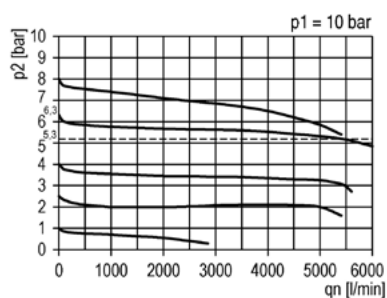
Model-no.:	RYP-14-...	RYP-37-...	RYP-38-...	RYP-12-...
Connection	G1/4	G3/8	G3/8	G1/2
Size	Y1	Y1	Y2	Y2
Flow (NI/min)	2200	2200	5000	5000
Internal air consumption	max. 2.6 l/min	max. 2.6 l/min	max. 2.6 l/min	max. 2.6 l/min
Weight (kg)	0.30	0.29	0.51	0.49

Flow characteristic

RYP-14, RYP-37

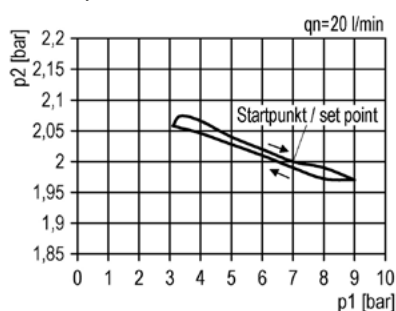


RYP-38, RYP-12

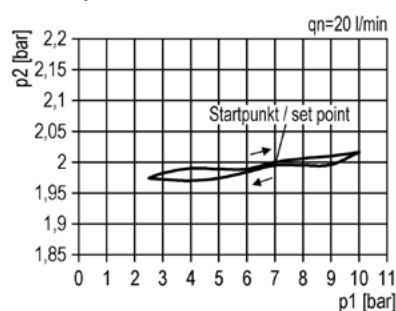


Hysterese

RYP-14, RYP-37



RYP-38, RYP-12

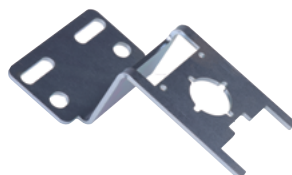


Accessories

Mounting brackets WYL



Mounting brackets WYP



Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting nut RMY



Details: see page 12-23

Precision pressure regulator RYP

Technical details

Temperature range	0°C ... +50°C
Input range	max. 16 bar
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66) and POM, seals: NBR, inner parts: zinc coated steel, stainless steel and brass

Precision pressure regulator with diaphragm and relieving feature.
 Locking: rotary lock and padlock possible.



Order code

RYP-***-**-0-00*1		Series	Versions
14	G1/4 / Y1	Series	Digit 3 Gauge, flow direction
37	G3/8 / Y1	Connection / Size	0 without gauge, flow from left to right (standard)
38	G3/8 / Y2	Output range	1 without gauge, flow from right to left
12	G1/2 / Y2	01 0.1 ... 1 bar	2 with gauge, flow from left to right
		02 0.1 ... 2 bar	3 with gauge, flow from right to left
		04 0.2 ... 4 bar	
		08 0.5 ... 8 bar	
		10 0.5 ... 10 bar (standard)	
		16 0.5 ... 16 bar	

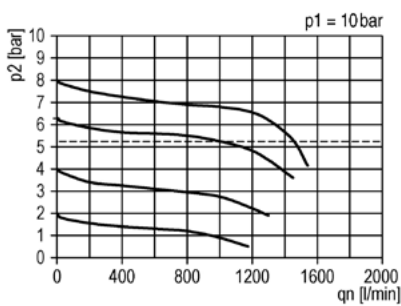
Pressure regulator RY

Technical data

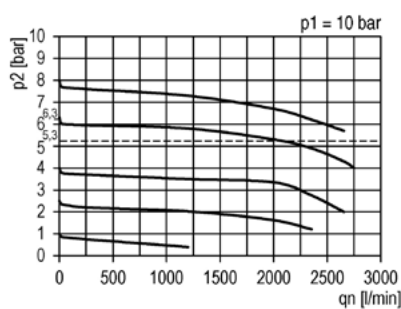
Model-no.:	RY-04-...	RY-14-...	RY-37-...	RY-38-...	RY-12-...	RY-34-...	RY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)	1000	2200	2600	4300	5100	14000	14000
Internal air consumption	-	-	-	-	-	max. 1.5 l/min	max. 1.5 l/min
Weight (kg)	0.17	0.30	0.29	0.52	0.50	1.02	0.95

Flow characteristic

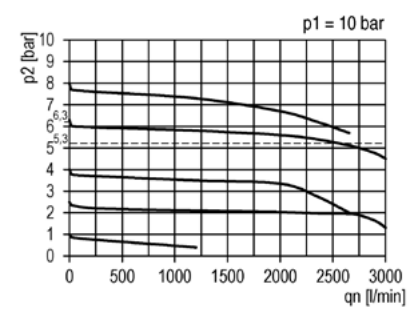
RY-04



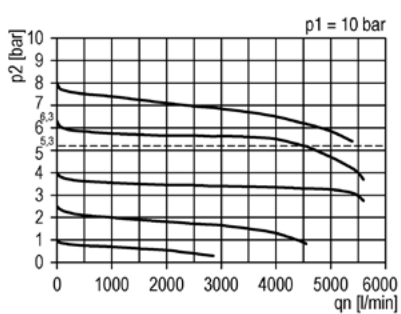
RY-14



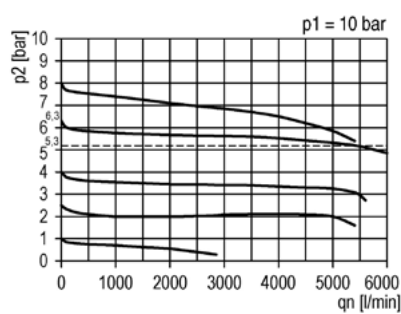
RY-37



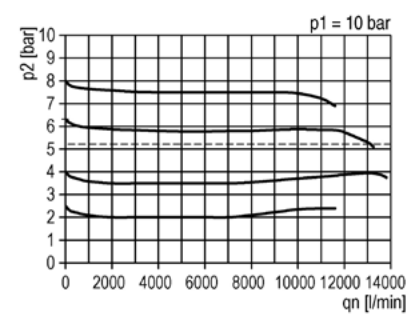
RY-38



RY-12



RY-34, RY-10

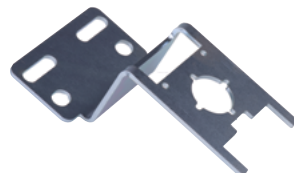


Accessories

Mounting brackets WYL



Mounting brackets WYP



Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting nut RMY



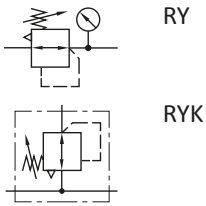
Details: see page 12-23

Pressure regulator RY

Technical details

Temperature range	0°C ... +50°C
Input range	max. 16 bar (size Y0 max. 12 bar)
Mounting	arbitrary
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66) and POM, seals: NBR, inner parts: zinc coated steel, stainless steel and brass

Pressure regulator with diaphragm and relieving feature.
 Locking: rotary lock and padlock possible.



Order code

RY-**-**-0-00*1		Series	Versions
RY	standard	Series	Digit 3 Gauge, flow direction
RYK	with continuous pressure supply	Connection / Size	0 without gauge, flow from left to right
		04 * G1/4 / Y0	1 without gauge, flow from right to left
		14 G1/4 / Y1	2 with gauge, flow from left to right (standard)
		37 G3/8 / Y1	3 with gauge, flow from right to left
		38 G3/8 / Y2	
		12 G1/2 / Y2	
		34 G3/4 / Y3	
		10 G1 / Y3	
		Output range	
		04 0.2 ... 4 bar	
		08 0.5 ... 8 bar	
		10 0.5 ... 10 bar (standard)	

* RY-04 only with integrated gauge and flow from left to right available.

Filter FY

Technical data

Model-no.:	FY-04-...	FY-14-...	FY-37-...	FY-38-...	FY-12-...	FY-34-...	FY-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)*	1000	2000	2000	3500	5100	8000	8000
Bowl volume (cm ³)	16	28	28	49	49	87	87
Weight (kg)	0.13	0.25	0.24	0.42	0.40	0.89	0.86

* Measured at p1 = 6 bar and Δp = 1 bar.

Model-no.:	FYF-04-...	FYF-14-...	FYF-37-...	FYF-38-...	FYF-12-...	FYF-34-...	FYF-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)*	450	500	500	750	750	2000	2000
Bowl volume (cm ³)	16	28	28	49	49	87	87
Weight (kg)	0.13	0.28	0.27	0.46	0.44	1.02	0.95

* Measured at p1 = 6 bar and Δp = 0.2 bar.

Model-no.:	FYM-04-...	FYM-14-...	FYM-37-...	FYM-38-...	FYM-12-...	FYM-34-...	FYM-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)*	350	350	350	450	450	1500	1500
Bowl volume (cm ³)	16	28	28	49	49	87	87
Weight (kg)	0.13	0.28	0.27	0.46	0.44	1.02	0.95

* Measured at p1 = 6 bar and Δp = 0.1 bar.

Model-no.:	FYA-04-...	FYA-14-...	FYA-37-...	FYA-38-...	FYA-12-...	FYA-34-...	FYA-10-...
Connection	G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G1
Size	Y0	Y1	Y1	Y2	Y2	Y3	Y3
Flow (NI/min)*	500	500	500	1600	1600	3000	3000
Weight (kg)	0.14	0.26	0.25	0.44	0.42	0.97	0.91

* Measured at p1 = 6 bar and Δp = 0.2 bar.

Accessories

Coupling kits for wall mounting KPY-W



Coupling kits KPY-K



Mounting brackets WYP



Details: Page 12-23

Technical details

Temperature range	0°C ... +50°C
Input range	1.5 ... 16 bar (size Y0 max. 12 bar)
Mounting	vertically, drain at bottom
Medium	compressed air according to ISO 8573-1:2010, neutral gases
Materials	Body: Grivory (PA66), bowl: PC, seals: NBR, inner parts: POM

Sintered filter according to the centrifugal force principle.

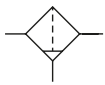
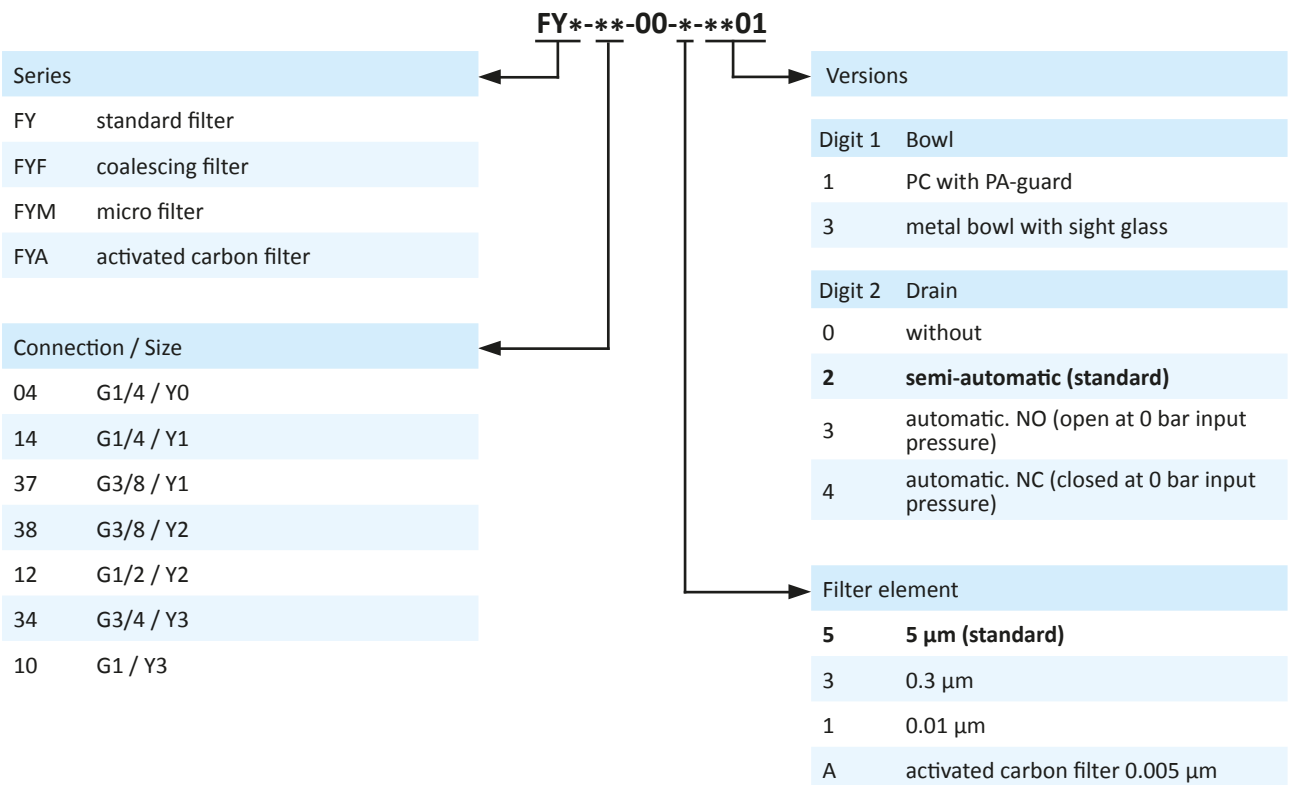
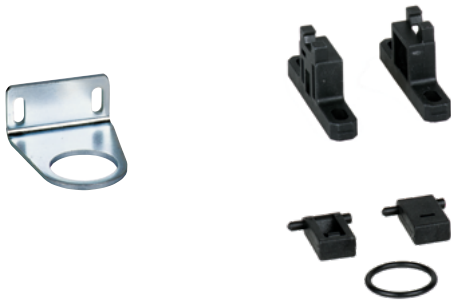

Order code


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Series K, accessories Page 12-53



Pressure regulator RD Page 12-54



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Gauge MXA Page 12-57



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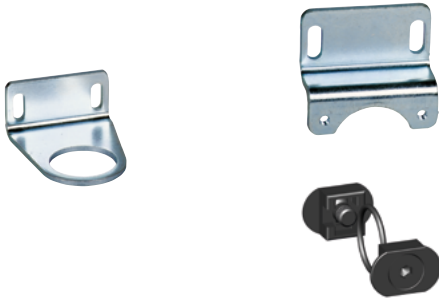
Distributor block TX Page 12-38



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Two piece air service unit FROK Page 12-47



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Soft start valve DAK Page 12-50



Filter regulator FRK Page 12-44



3/2-way inline valve VMK Page 12-51



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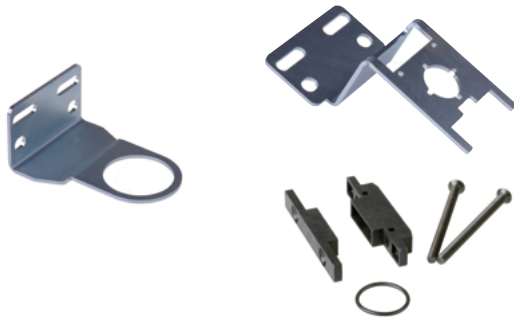
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Soft start valve DAX Page 12-36



Filter regulator FRX Page 12-30



3/2-way inline valve VMX Page 12-37



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Two piece air service unit FROY
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Pressure regulator RY
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Ball valve KY
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Precision pressure regulator RYP
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Soft start valve DAY
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Filter regulator FRY
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3/2-way inline valve VMY
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Lubricator OY
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Non-return valve NY
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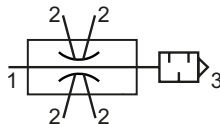



Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), silencer: plastic



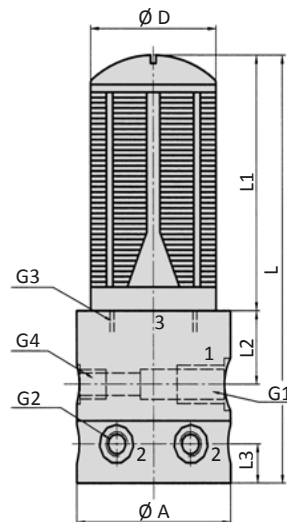
The MI series is based on the Venturi principle. The unit is available with 4, 6 or 8 vacuum ports. The vacuum is maintained on all ports, even in cases where one or several cups draw atmospheric pressure. The granulate silencer is part of delivery. The MIF series is developed for high flow rates.


Technical data

Model-no.:	MIF-4/25	MIF-4/60	MIF-4/80	MIF-6/40	MIF-6/55	MIF-8/30	MIF-8/40
Max. vacuum level (%)	70	73	70	73	67	70	70
Number of vacuum ports	4	4	4	6	6	8	8
Flow rate (l/min)**	8	16	25	9	17	11	16
Air consumption (l/min)*	112 (4x28)	240 (4x60)	376 (4x94)	240 (6x40)	366 (6x61)	240 (8x30)	400 (8x50)
Time to evacuate (s/l)**	1.1	0.6	0.4	0.8	0.6	0.8	0.6
Operating pressure (bar)	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6
Weight (kg)	0.240	0.370	0.370	0.370	0.370	0.370	0.370

* at 5 bar operating pressure

** at 40% vacuum level and 5 bar operating pressure

Dimensions


- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

Model-no.:	Ø A	Ø D	G1	G2	G3	G4	L	L1	L2	L3
MIF-4/25	48	24.5	G1/4	G1/8	G1/2	G1/8	109	47	25	15
MIF-4/60	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MIF-4/80	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MIF-6/40	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MIF-6/55	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MIF-8/30	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MIF-8/40	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15

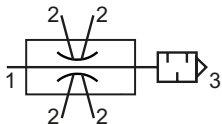
Series MI

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), silencer: plastic



The MI series is based on the Venturi principle. The unit is available with 4, 6 or 8 vacuum ports. The vacuum is maintained on all ports, even in cases where one or several cups draw atmospheric pressure. The granulate silencer is part of delivery. The MI series is developed for high vacuum level.



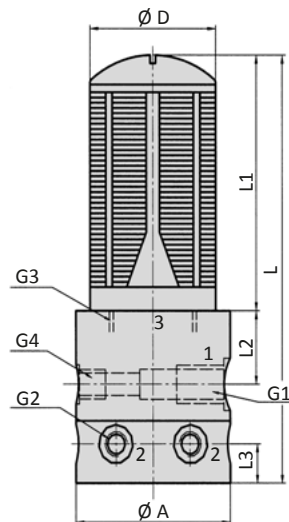
Technical data

Model-no.:	MI-4/20	MI-4/40	MI-6/30	MI-6/55	MI-8/40
Max. vacuum level (%)	78	82	80	82	82
Number of vacuum ports	4	4	6	6	8
Flow rate (l/min)**	2	6	3	8	6
Air consumption (l/min)*	100 (4 x 25)	168 (4 x 42)	198 (6 x 33)	390 (6 x 65)	384 (8x48)
Time to evacuate (s/l)**	6.7	2.4	3.7	1.7	2.2
Operating pressure (bar)	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6	4.5 ... 6
Weight (kg)	0.300	0.300	0.300	0.400	0.400

* at 5 bar operating pressure

** at 60% vacuum level and 5 bar operating pressure

Dimensions



- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

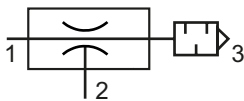
Model-no.:	Ø A	Ø D	G1	G2	G3	G4	L	L1	L2	L3
MI-4/20	48	24.5	G1/4	G1/8	G1/2	G1/8	109	47	25	15
MI-4/40	48	24.5	G1/4	G1/8	G1/2	G1/8	109	47	25	15
MI-6/30	48	24.5	G1/4	G1/8	G1/2	G1/8	109	47	25	15
MI-6/55	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15
MI-8/40	59	48	G1/4	G1/8	G1	G1/8	163	97	28	15

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), silencer: plastic



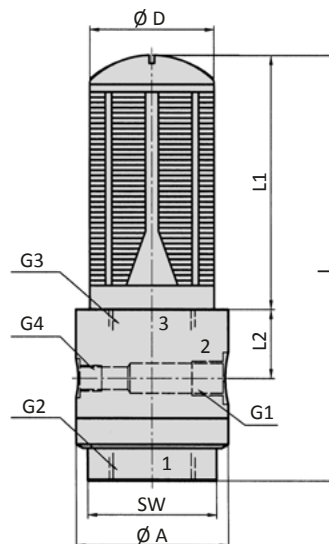
Vacuum ejectors work according to the Venturi principle. The granulate silencer is part of delivery. The HF series is developed for high flow rates.


Technical data

Model-no.:	HF-100	HF-200	HF-300	HF-450	HF-600	HF-1150	HF-1500
Max. vacuum level (%)	75	74	80	78	78	80	68
Flow rate (l/min)**	40	95	135	130	200	407	436
Air consumption (l/min)*	108	220	320	480	650	1250	1600
Time to evacuate (s/l)**	0.180	0.100	0.060	0.016	0.011	0.021	0.021
Operating pressure (bar)	3 ... 7	3 ... 7	3 ... 7	3 ... 7	3 ... 7	3 ... 7	3 ... 7
Weight (kg)	0.240	0.400	0.400	0.400	0.400	0.900	0.900

* at 5 bar operating pressure

** at 40% vacuum level and 5 bar operating pressure

Dimensions


- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

Model-no.:	Ø A	Ø D	G1	G2	G3	G4	L	L1	L2	SW
HF-100	48	24.5	G1/4	G1/2	G1/2	G1/8	109	47	25	40
HF-200	59	48	G1/4	G1	G1	G1/8	163	97	28	50
HF-300	59	48	G1/4	G1	G1	G1/8	163	97	28	50
HF-450	59	48	G1/4	G1	G1	G1/8	163	97	28	50
HF-600	59	48	G1/4	G1	G1	G1/8	163	97	28	50
HF-1150	88	64	G3/8	G1½	G2	G1/8	180	90	38	69
HF-1500	88	64	G3/8	G1½	G2	G1/8	180	90	38	69

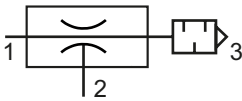
Series HV

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), silencer: plastic



Vacuum ejectors work according to the Venturi principle. The granulate silencer is part of delivery. The HV series is developed for high vacuum level.



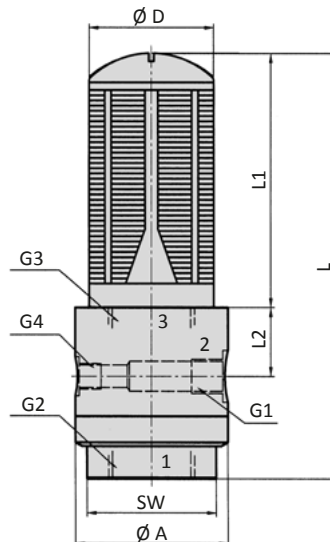
Technical data

Model-no.:	HV-80	HV-150	HV-300	HV-600
Max. vacuum level (%)	80	85	85	85
Flow rate (l/min)**	10	33	57	77
Air consumption (l/min)*	88	170	350	630
Time to evacuate (s/l)**	1.22	0.42	0.25	0.19
Operating pressure (bar)	3 ... 7	3 ... 7	3 ... 7	3 ... 7
Weight (kg)	0.300	0.300	0.400	0.400

* at 5 bar operating pressure

** at 60% vacuum level and 5 bar operating pressure

Dimensions



- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

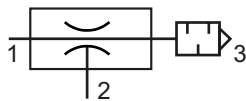
Model-no.:	Ø A	Ø D	G1	G2	G3	G4	L	L1	L2	SW
HV-80	48	24.5	G1/4	G1/2	G1/2	G1/8	109	47	25	40
HV-150	48	24.5	G1/4	G1/2	G1/2	G1/8	109	47	25	40
HV-300	59	48	G1/4	G1	G1	G1/8	163	97	28	50
HV-600	59	48	G1/4	G1	G1	G1/8	163	97	28	50

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), fittings: brass, nickel plated, silencer: plastic



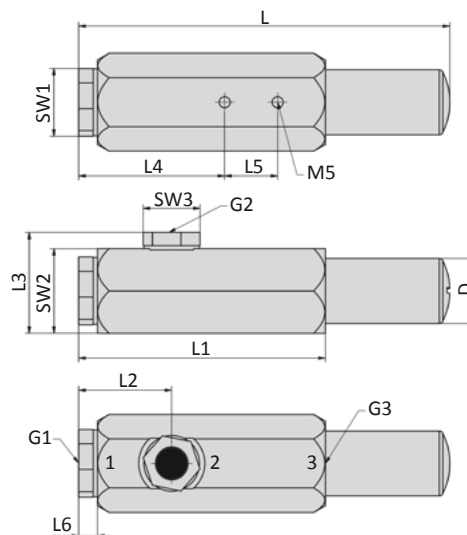
Vacuum ejectors work according to the Venturi principle. The pressure and vacuum connection have an integrated filter which protects against large dirt particles. The granulate silencer is part of delivery. The HF series is developed for high flow rates.


Technical data

Model-no.:	HF-133	HF-333	HF-533
Max. vacuum level (%)	60	65	80
Flow rate (l/min)**	80	190	215
Air consumption (l/min)*	110	300	480
Time to evacuate (s/l)**	0.22	0.12	0.09
Nozzle-Ø (mm)	1.7	2.5	3.0
Operating pressure (bar)	4 ... 6	4 ... 6	4 ... 6
Weight (kg)	0.242	0.368	0.385

* at 5 bar operating pressure

** at 40% vacuum level and 5 bar operating pressure

Dimensions


- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

Model-no.:	L	L1	L2	L3	L4	L5	L6	SW1	SW2	SW3	G1	G2	G3	Ø D
HF-133	140	93	35	38	55	20	7	32	24	19	G1/4	G1/4	G1/2	24.5
HF-333	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48
HF-533	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48

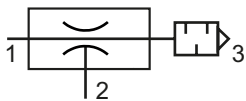
Series HV

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), fittings: brass, nickel plated, silencer: plastic



Vacuum ejectors work according to the Venturi principle. The pressure and vacuum connection have an integrated filter which protects against large dirt particles. The granulate silencer is part of delivery. The HV series is developed for high vacuum level.



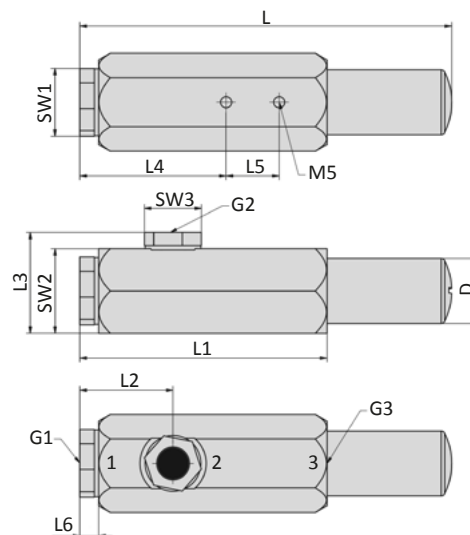
Technical data

Model-no.:	HV-33	HV-63	HV-93	HV-133	HV-333	HV-533
Max. vacuum level (%)	95	95	95	95	95	95
Flow rate (l/min)**	4	10	15	30	40	45
Air consumption (l/min)*	25	45	70	120	300	480
Time to evacuate (s/l)**	7.50	3.20	2.00	0.95	0.53	0.42
Nozzle-Ø (mm)	0.7	1.1	1.3	1.7	2.5	3.0
Operating pressure (bar)	4 ... 6	4 ... 6	4 ... 6	4 ... 6	4 ... 6	4 ... 6
Weight (kg)	0.052	0.131	0.131	0.242	0.368	0.385

* at 5 bar operating pressure

** at 70% vacuum level and 5 bar operating pressure

Dimensions



- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

Model-no.:	L	L1	L2	L3	L4	L5	L6	SW1	SW2	SW3	G1	G2	G3	Ø D
HV-33	76	49.5	23.5	27.8	-	-	6.5	17	17	13	G1/8	G1/8	G1/8	15
HV-63	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G1/4	G1/8	G3/8	24.5
HV-93	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G1/4	G1/8	G3/8	24.5
HV-133	140	93	35	38	55	20	7	32	24	19	G1/4	G1/4	G1/2	24.5
HV-333	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48
HV-533	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48

Classic ejectors series HV Page 11-02



Multi-inlet ejectors series MIF Page 11-07



Classic ejectors series HF Page 11-03



Column ejectors series HV Page 11-04



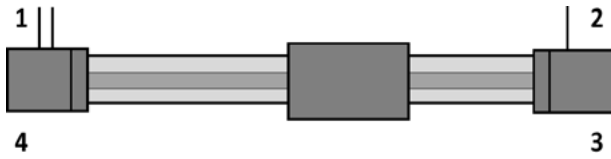
Column ejectors series HF Page 11-05



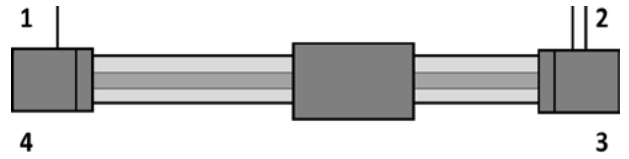
Multi-inlet ejectors series MI Page 11-06



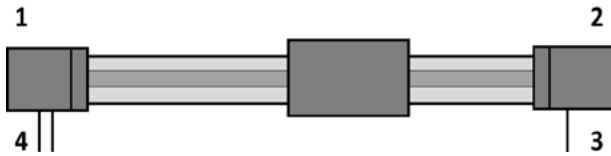
Option 1



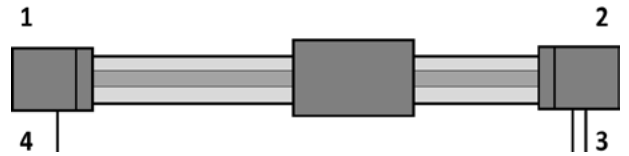
Option 2



Option 4



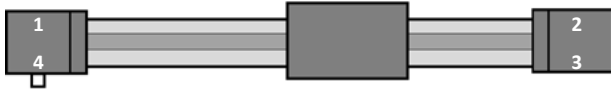
Option 3



The cylinder is supplied with three air connections. Two connections are necessary for operation, while the third is closed by a plug (included in the scope of delivery). The desired position of the double connection has to be specified in the order code after the stroke length by choosing the adequate number.

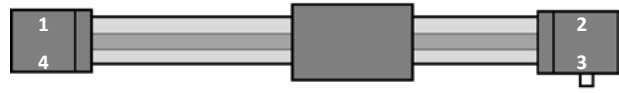
Series ZR Accessories

Option G4



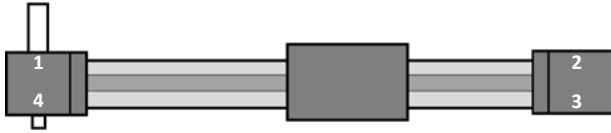
Shaft for encoder connection at 4

Option G3



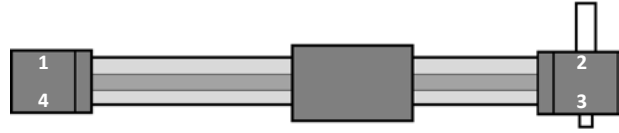
Shaft for encoder connection at 3

Option H1



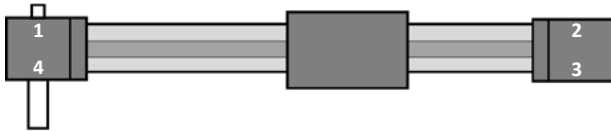
Shaft for encoder connection at 4 and synchronisation at 1

Option H2



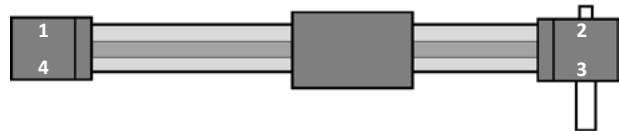
Shaft for encoder connection at 3 and synchronisation at 2

Option H4



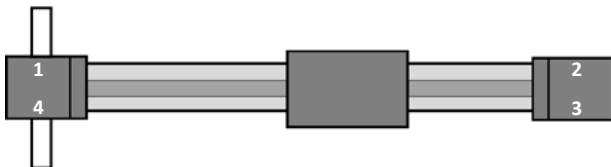
Shaft for encoder connection at 1 and synchronisation at 4

Option H3



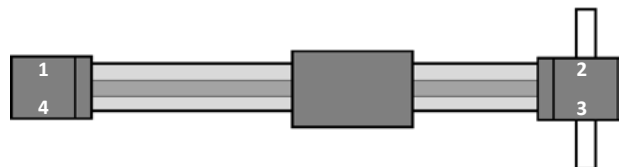
Shaft for encoder connection at 2 and synchronisation at 3

Option J1



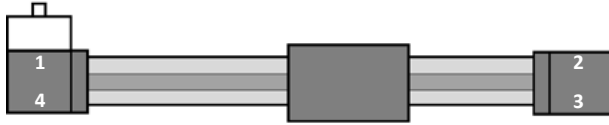
Shaft for synchronisation at 1 and 4

Option J3



Shaft for synchronisation at 2 and 3

Option A1



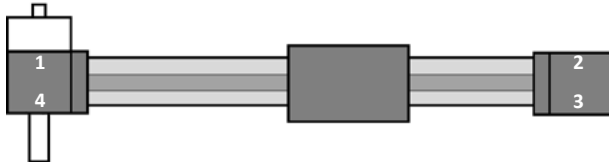
Brake with encoder connection mounted at 1

Option A3



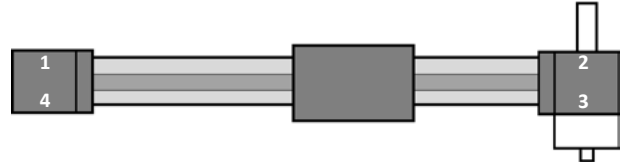
Brake with encoder connection mounted at 3

Option B1



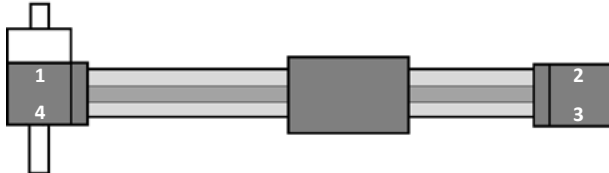
Brake at 1 with extended shaft for synchronisation at 4

Option B3



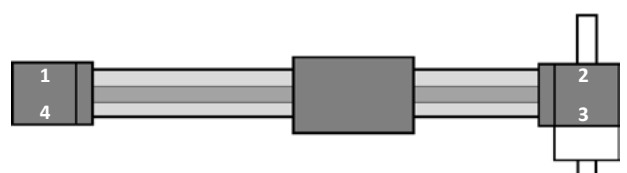
Brake at 3 with extended shaft for synchronisation at 2

Option C1



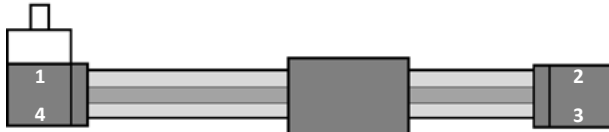
Brake at 1 with shaft for synchronisation at 1 and 4

Option C3



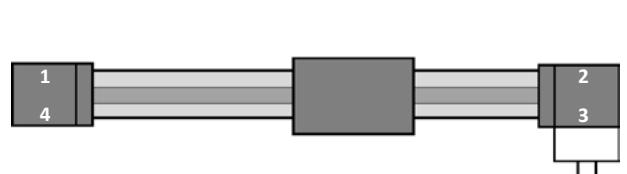
Brake at 3 with shaft for synchronisation at 2 and 3

Option D1



Brake at 1 with extended shaft for synchronisation at 1

Option D3



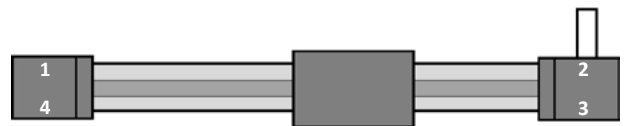
Brake at 3 with extended shaft for synchronisation at 3

Option F1



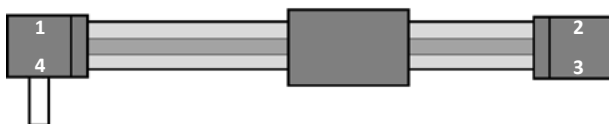
Shaft for synchronisation at 1

Option F2



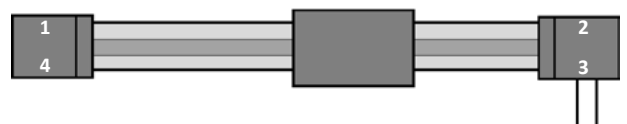
Shaft for synchronisation at 2

Option F4



Shaft for synchronisation at 4

Option F3



Shaft for synchronisation at 3

Option G1



Shaft for encoder connection at 1

Option G2

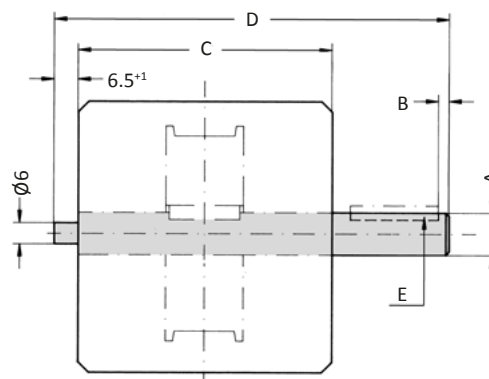


Shaft for encoder connection at 2

Series ZR

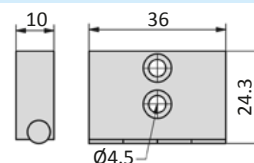
Accessories

Extended shaft



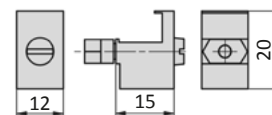
Piston Ø	A	B	C	D	E (key)	slide travel (mm) per one rotation
25	10 _{h7}	2	60	93	3 x 3 x 20 DIN 6885	135
40	12 _{h7}	3	72	112	4 x 4 x 25 DIN 6885	185

ZR-4006 Magnet



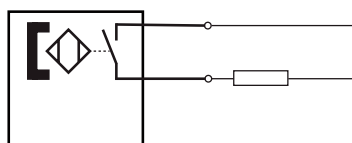
For use with our proximity sensor ZS-100.1. The magnet is mounted at the slide. Mounting screws are included. The model ZE-40L has the magnet already included.

ZR-4007 Mounting bracket for proximity sensors

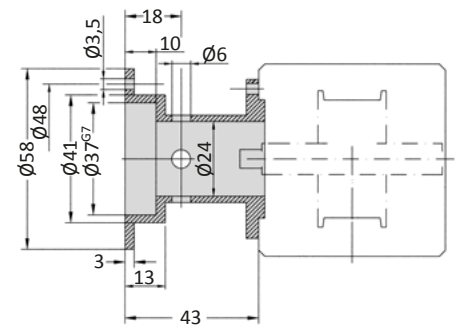


For direct mounting at the cylinder groove.

ZS-100.1 Proximity sensor

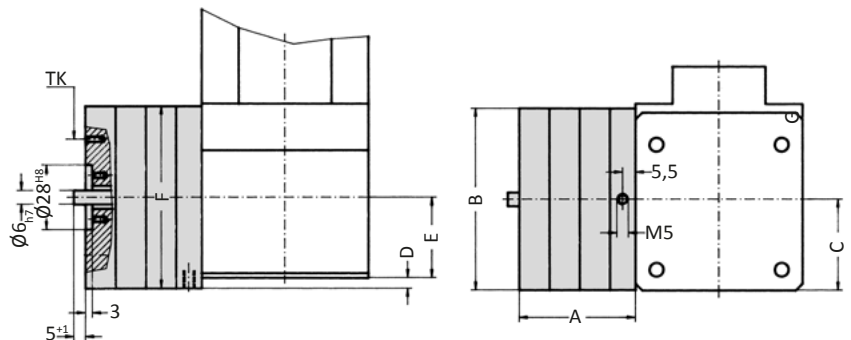


Model-no.:	ZS-100.1
Design	2-pole Reed sensor
Contact function	NO
Rated operational voltage	3 ... 250 V AC / DC
Rated operational current I _e	1 A
Breaking capacity	50 W bzw. 50 VA
Cable	2 x 0.25 mm ² , 3 m length
Temperature range	-30 ... +80°C
Protection	IP 67
Switching status indication	LED red
Switching time	< 2 ms
Response time	< 0.1 ms

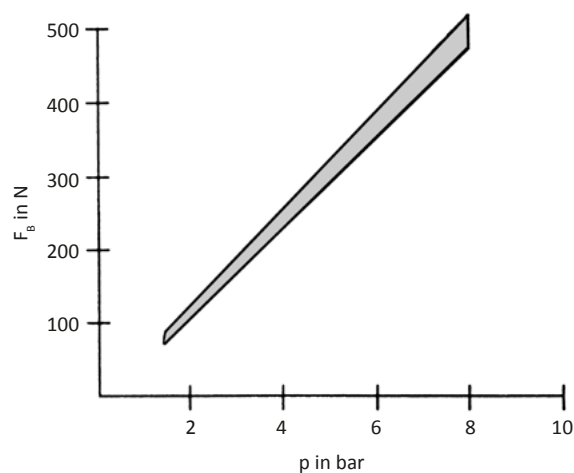
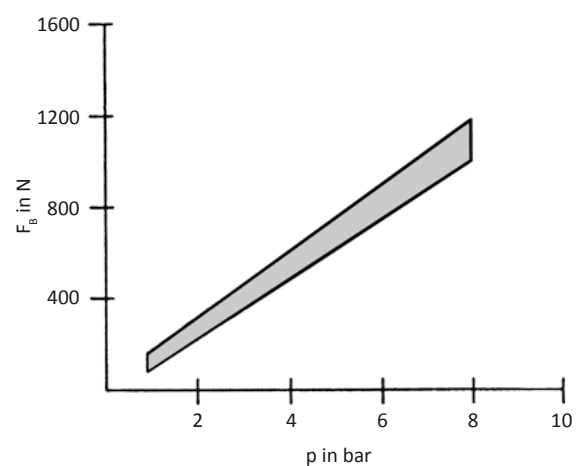
ZA-3x Adapter for encoder mounting


Model-no.:	Mounting
ZA-36	mounted on brake
ZA-37	mounted on head

The adapters can be mounted on all cylinders of series ZR and will fit to all encoders with a 36 mm centering collar.

BR-xx Brake


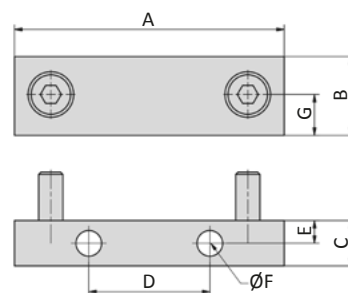
Model-no.:	A	B	C	D	E	F	TK
BR-25	43	61	31.2	2	27.5	51	45 (3 x M3 x 6 deep drawn offset)
BR-40	50	78.5	39.4	4.5	34.7	78.5	50 (3 x M3 x 7 deep drawn offset)

BR-25 Braking force static

BR-40 Braking force static


The brake is designed to hold the position. Do not use to stop the cylinder.

Series ZR Mounting parts

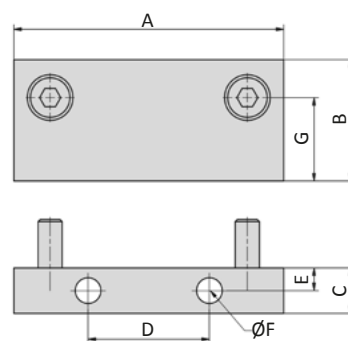
ZK-xx2 Head mount



Model-no.:	A	B	C	D	E	Ø F	G
ZK-252	60	20	20	30	10	9	11
ZK-402	71	20	20	30	10	9	11

Screws to mount the head mount to the cylinder are included.

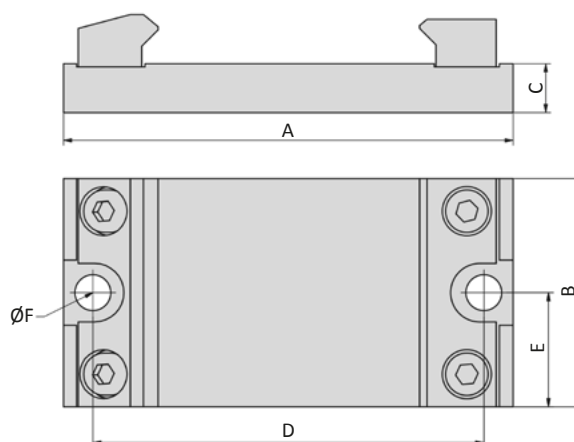
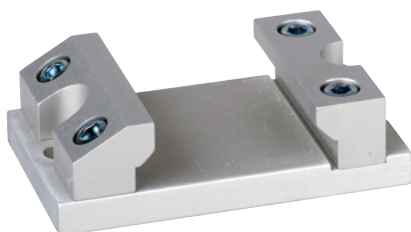
ZK-xx3 Head mount, tall (for use in combination with center mount)



Model-no.:	A	B	C	D	E	Ø F	G
ZK-253	60	30	20	30	10	9	17
ZK-403	71	30	20	30	10	9	18

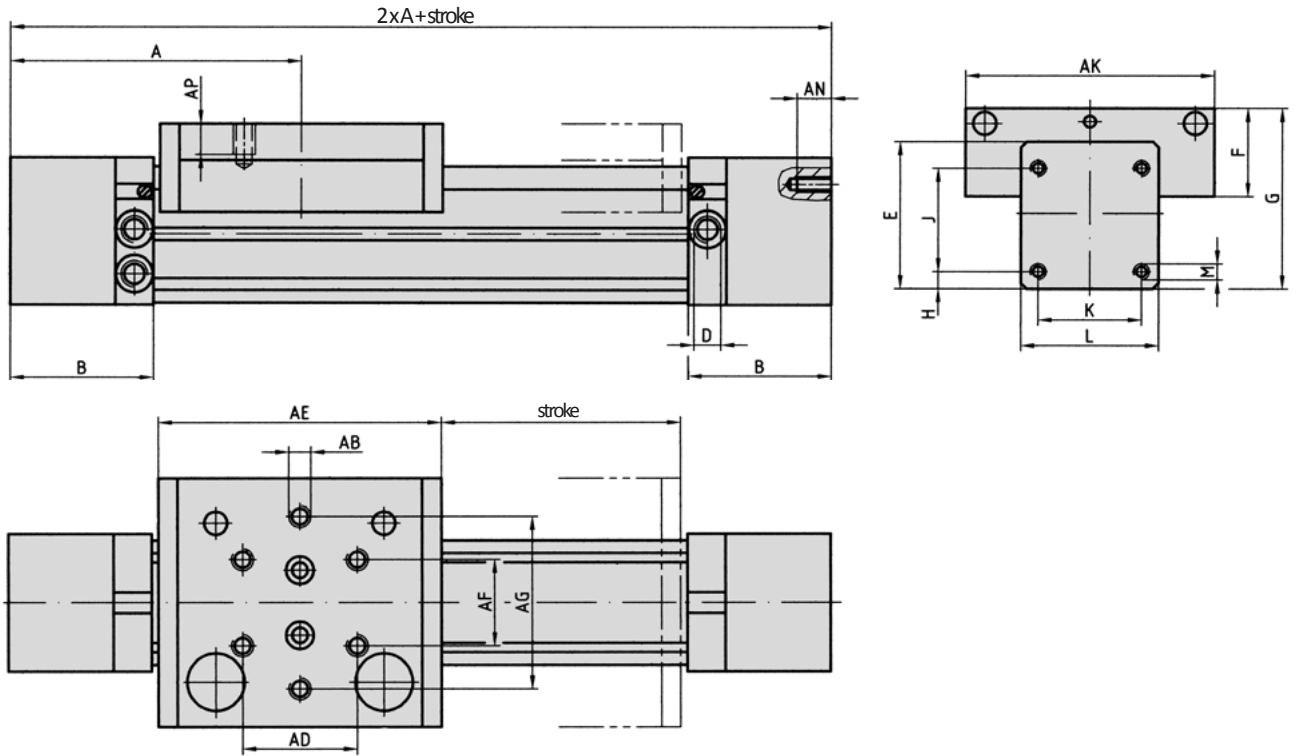
Screws to mount the head mount to the cylinder are included.

ZK-xx1 Center mount



Model-no.:	A	B	C	D	E	Ø F
ZK-251	90	60	10	75	37.5	9
ZK-401	100	60	10	84	42	9

Dimensions series ZR-L

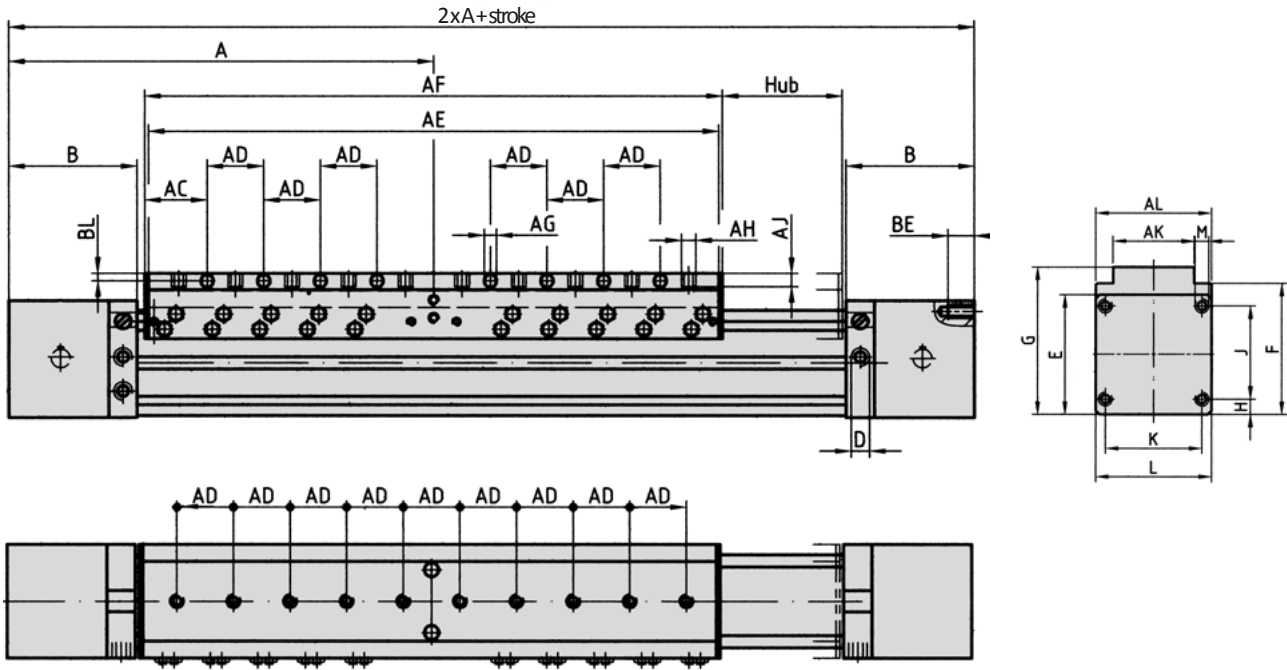


Cylinder	A	B	D	E	F	G	H	J	K	L
ZR-40L	150	75	G1/4	76.8	46.1	94.4	9	54	54	72

Cylinder	M	AB	AD	AE	AF	AG	AK	AN	AP
ZR-40L	M6	M8	60	148	45	90	130	12	15

Series ZR

Dimensions series ZR-S

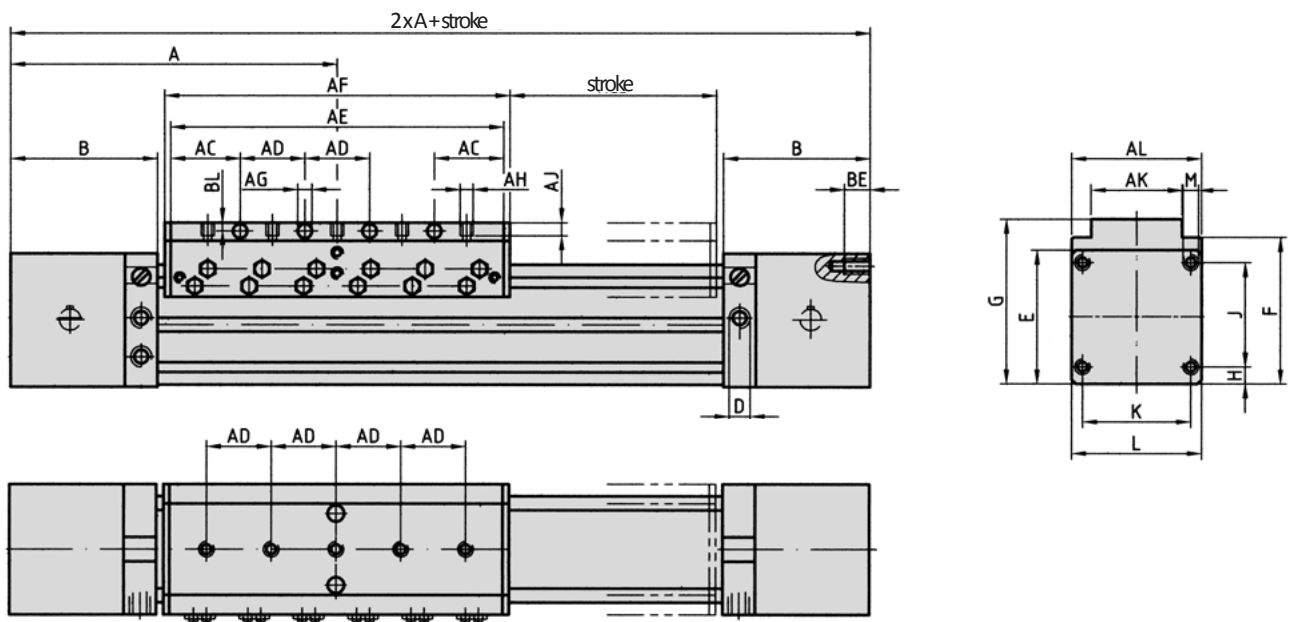


Cylinder	A	B	D	E	F	G	H	J	K	L	M
ZR-25S	225	68	G1/8	62	67.5	76	8	48	50	60	M5
ZR-40S	225	75	G1/4	76.8	80.5	97.5	9	54	54	72	M6

Cylinder	AC	AD	AE	AF	AG	AH	AJ	AK	AL	BE	BL
ZR-25S	35	30	306	310	5.5	M5	7	42	60	10	4
ZR-40S	29	30	290	298	5.5	M5	8.5	40	72	12	6

Technical data

Model-no.:	ZR-25	ZR-40	ZR-25S	ZR-40S	ZR-40L
Piston Ø (mm)	25	40	25	40	40
Connection	G1/8	G1/4	G1/8	G1/4	G1/4
Cushioning length (mm)	25	32	25	32	32
Weight 0 mm stroke	2.18	3.19	2.58	3.59	4.84
(kg) each 100 mm stroke	0.40	0.50	0.40	0.50	0.70

Dimensions series ZR


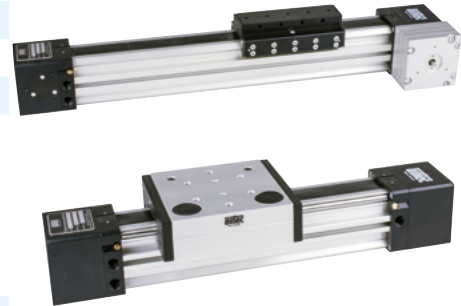
Cylinder	A	B	D	E	F	G	H	J	K	L	M
ZR-25	150	68	G1/8	62	67.5	76	8	48	50	60	M5
ZR-40	150	75	G1/4	76.8	80.5	97.5	9	54	54	72	M6

Cylinder	AC	AD	AE	AF	AG	AH	AJ	AK	AL	BE	BL
ZR-25	33	30	156	160	5.5	M5	7	42	60	10	4
ZR-40	25	30	140	148	5.5	M5	8.5	40	72	12	6

Series ZR

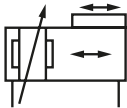
Technical details

Operating pressure	1 ... 8 bar
Temperature range	-15°C ... +70°C
max. Stroke	4500 mm (4300 mm for ZR-**S)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature. If speeds exceed 1 m/s lubricated air is recommended.
Materials	Cylinder tube: Al (anodized) End caps: Al (anodized) Seals: PA, NBR, PDF



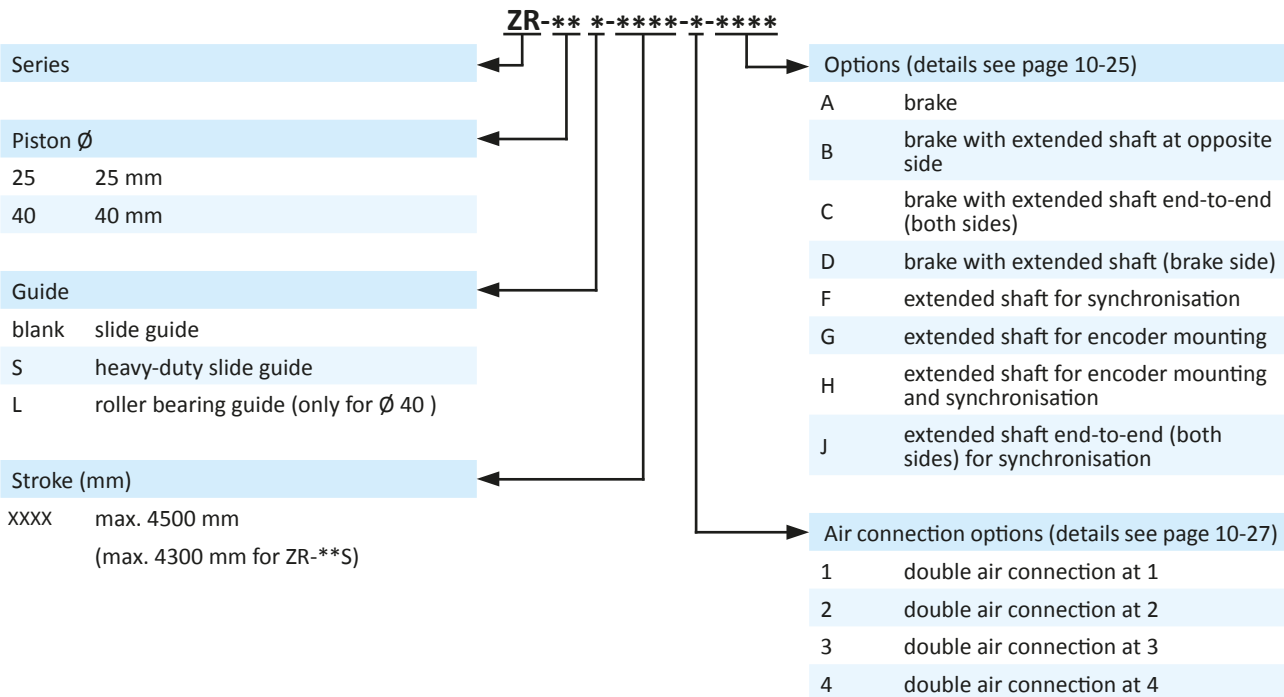
Double acting rodless toothed belt cylinder with adjustable cushions. The toothed belt is driven by the piston in a closed profile tube. The piston actuates a slide with an adjustable slide guideway.
Note: Slide guide and piston are working in opposite direction.

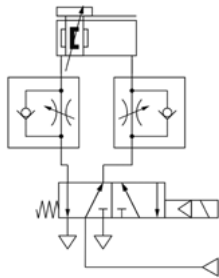
Versions



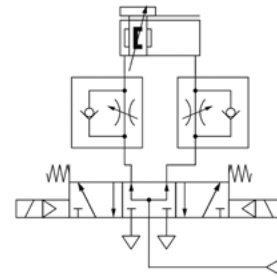
ZR-***
double acting, adjustable cushioning,
with magnetic piston

Order code

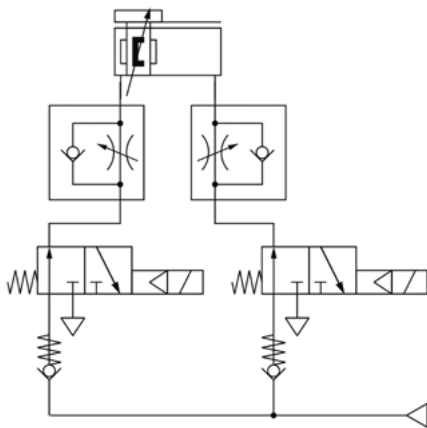


Circuit examples
Control 1


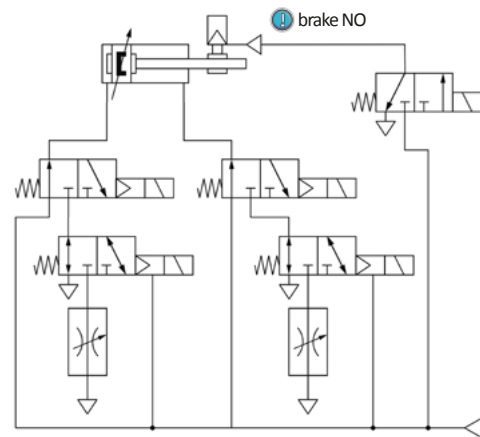
Simple system for controlling the slide from end to end. A flow control valve can be used to adjust the cylinder speed.

Control 2


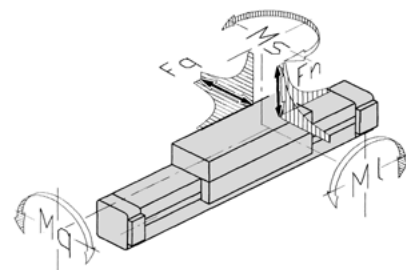
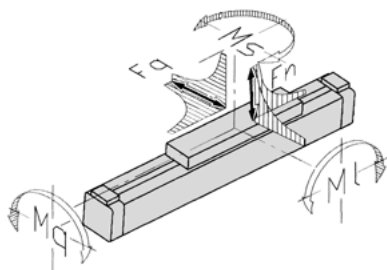
System to stop the cylinder on intermediate position with higher tolerances.

Control 3


This control circuit improves the positioning accuracy. The use of check valves reduces the stopping distance and also increases the load stiffness.

Control 4


This circuit example permits the selection of different speeds (rapid or inching) for either forward or reverse motion. The brake is activated by a 3/2 solenoid valve.

Loads, forces and torques


Cylinder	Operating force *	Braking force**	F_n	F_q	M_l	M_q	M_s
ZR-25	250 N	380 N	400 N	400 N	40 Nm	20 Nm	30 Nm
ZR-25S	250 N	380 N	400 N	400 N	80 Nm	40 Nm	60 Nm
ZR-40	640 N	750 N	800 N	800 N	75 Nm	30 Nm	50 Nm
ZR-40S	640 N	750 N	800 N	800 N	150 Nm	60 Nm	100 Nm
ZR-40L	640 N	750 N	1200 N	1200 N	95 Nm	45 Nm	95 Nm

v in m/s	0.2	0.3	0.4	0.5	0.75	1
Factor***	1	0.75	0.5	0.4	0.27	0.2

* at 6 bar

** only at versions with brake, braking force at 6 bar, static

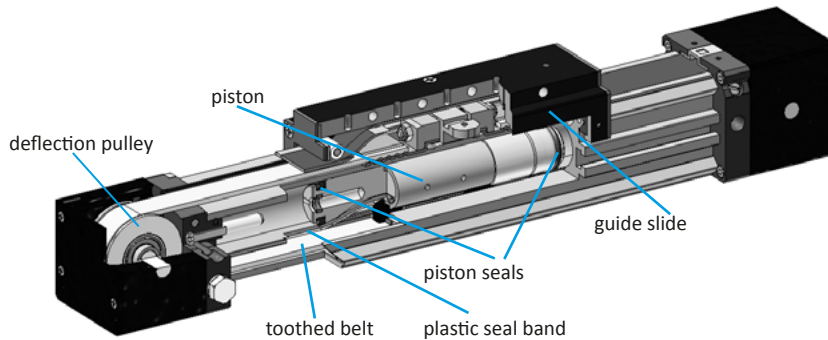
*** Force and torque data are based on the speed of the slide guideways of ≤ 0.2 m/s, in case of roller guides of ≤ 2 m/s.

If speed exceeds 0.2 m/s, the permissible values of the slide guideways must be multiplied by the factors from the table. For roller or ball guide types is no factor required.

Series ZR

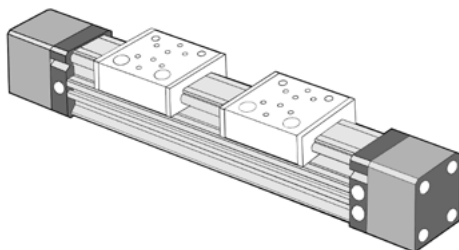
Design and function

The toothed belt cylinder consists of an extruded cylinder tube with two chambers. They are connected to each other over the entire length of the cylinder. The pressure chamber is sealed by a PU seal strip. Between the two piston seals a pressure-free space is created. In this space the seal band is lifted to the inside and is passed through the piston. Simultaneously, a driver (piston bracket) grasps through the slot into the outer chamber. Since the outer chamber encloses the longitudinal slot, it does not expand under pressure. This results in minimal leakage and better flexural and torsional stiffness.



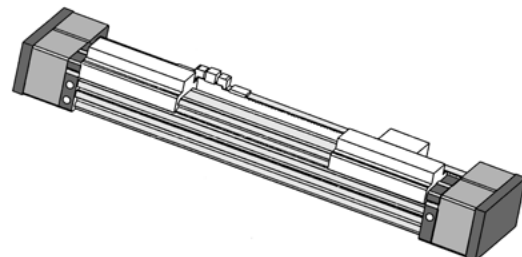
In the outer chamber, the piston bracket grips the toothed belt, which leads to a tension lock at the opposite side via the deflection pulley. Inside the slide, the cover belt is lifted from the slot, and the slide is connected to the tension lock. By this principle, dirt is kept away from the sealing strip enabling use under rough operating conditions. The force is transmitted, free of slip, to a shaft via the toothed belt pulley. As a result, several cylinders can be linked and operated synchronously, enabling torques from the off-center application forces. The cylinder can also be supplied with a brake mounted on the driven shaft without the use of an additional energy transmission chain. A cylinder supplied with a brake and encoder results in an inexpensive positioning system. Since the slide or roller guide is already integrated into the slide, a complete linear drive is available with this cylinder.

With 2 slides



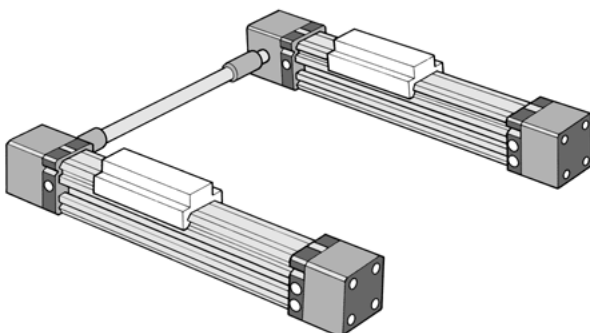
For higher loads.

As a gripping cylinder



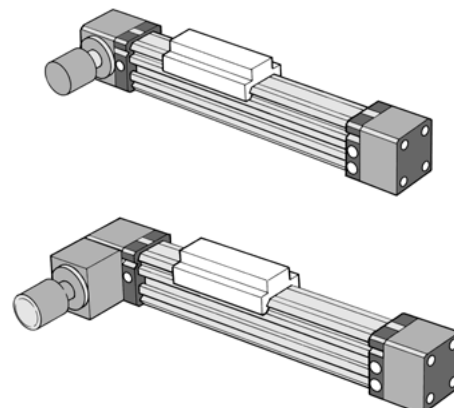
By mounting a second toothed belt and using a slide in tangential feed.

Synchronous running



The system is suitable for synchronisation of 2 or more cylinders. (see options)

With brake / with encoder mount

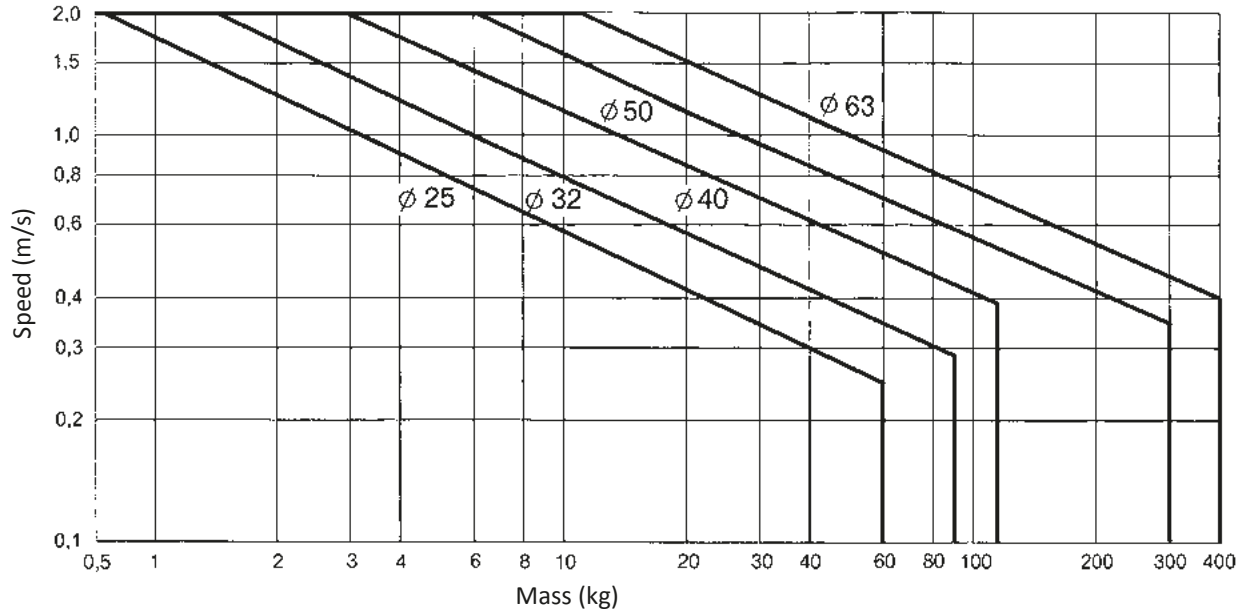
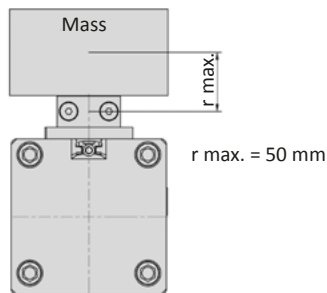
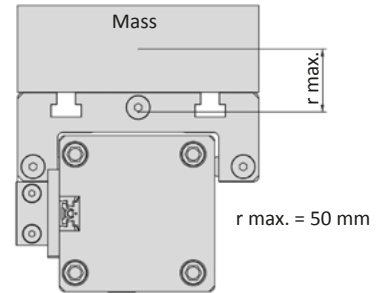
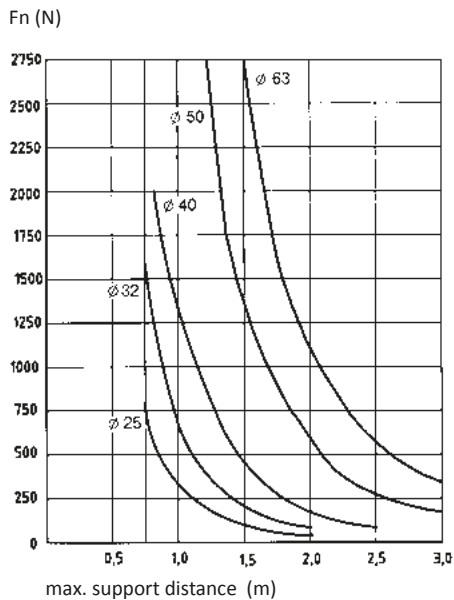
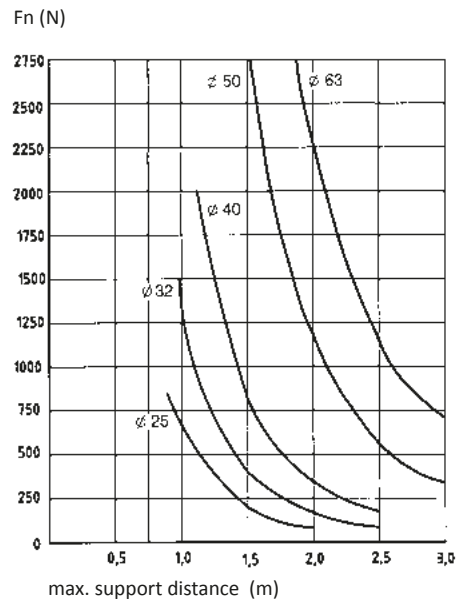


Since the running performance is stick slip free, an encoder mount is possible. A holding brake keeps the position. (see options)

Cushioning diagram

If the application is out of the diagram range, an external shock absorber is required. The mounting position of shock absorbers must be close to the center of the mass.

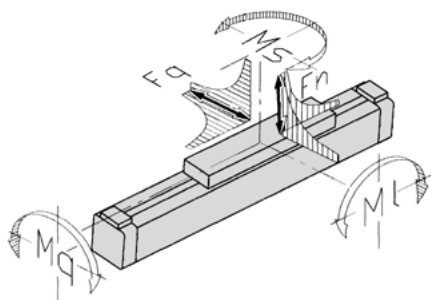
The data applies to a horizontal mounting position.


ZX-xx-K, ZX-xx-S

ZX-xx-KG, ZX-xx-SG, ZX-xx-KR, ZX-xx-SR

Deflection
Deflection 0,5 mm

Deflection 1 mm


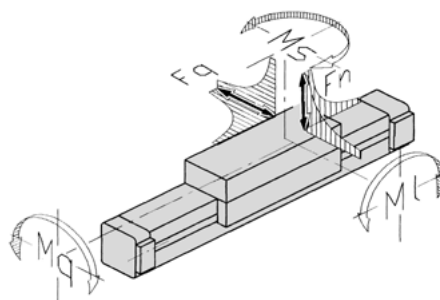
Series ZX

Forces and torques

ZX-xx-K, ZX-xx-S



ZX-xx-KG, ZX-xx-SG, ZX-xx-KR, ZX-xx-SR



Model-no.:	Force (N) at 6 bar	$F_{n_{max}}$ (N)	$F_{q_{max}}$ (N)	$M_{l_{max}}$ (Nm)	$M_{q_{max}}$ (Nm)	$M_{s_{max}}$ (Nm)
ZX-25-S	255	270	-	13	2.5	11
ZX-25-K	255	270	-	8	2.0	7
ZX-25-SG	250	580	580	23	10.0	23
ZX-25-KG	250	340	340	9	5.0	9
ZX-25-SR	250	850	1300	65	35.0	105
ZX-25-KR	250	850	1300	29	35.0	64
ZX-32-S	420	300	-	30	3.0	24
ZX-32-K	420	300	-	15	3.0	12
ZX-32-SG	410	850	850	33	15.0	33
ZX-32-KG	410	460	460	14	6.5	14
ZX-32-SR	410	900	1500	79	40.0	125
ZX-32-KR	410	900	1500	36	40.0	76
ZX-40-S	655	650	-	60	4.0	54
ZX-40-K	655	650	-	30	4.0	27
ZX-40-SG	640	1120	1120	60	25.0	60
ZX-40-KG	640	600	600	25	11.0	25
ZX-40-SR	640	1200	2000	190	45.0	118
ZX-40-KR	640	1200	2000	85	45.0	72
ZX-50-S	1000	800	-	80	17.0	74
ZX-50-K	1000	800	-	38	17.0	32
ZX-50-SG	1000	1550	1500	200	70.0	200
ZX-50-KG	1000	820	800	60	40.0	60
ZX-50-SR	1000	4100	2000	157	50.0	170
ZX-50-KR	1000	1800	2000	67	50.0	106
ZX-63-S	1600	1400	-	110	17.0	100
ZX-63-K	1600	1400	-	50	17.0	48
ZX-63-SG	1600	2000	2000	300	102.0	300
ZX-63-KG	1600	1100	1100	105	56.0	105
ZX-63-SR	1600	5000	2000	196	55.0	208
ZX-63-KR	1600	2500	2000	99	55.0	134

The mounting surface of the assembled mass should not exceed a straightness tolerance of 0.1 mm to avoid additional tension or clearance in the guiding system.

Complex loads

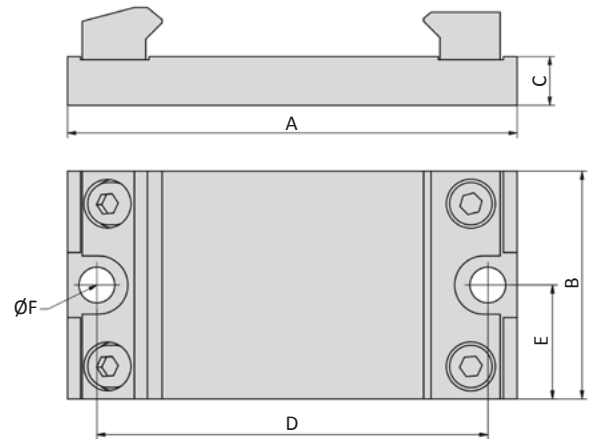
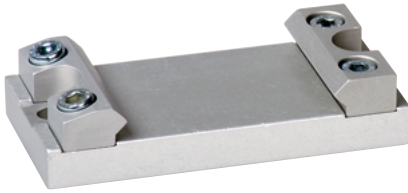
If more than one force and torque appear simultaneously, they have to be calculated by the formula:

$$\frac{F_n}{F_{n_{max}}} + \frac{F_q}{F_{q_{max}}} + \frac{M_l}{M_{l_{max}}} + \frac{M_q}{M_{q_{max}}} + \frac{M_s}{M_{s_{max}}} \leq 1$$

Information on forces and torques refers to speeds for slide guides (series S, K, SG and KG) of ≤ 0.2 m/s and speeds for roller guides (series SR and KR) of ≤ 2 m/s. Where speeds exceed 0.2 m/s the permissible values of the slide guides are to be multiplied by the loading coefficient (see table below).

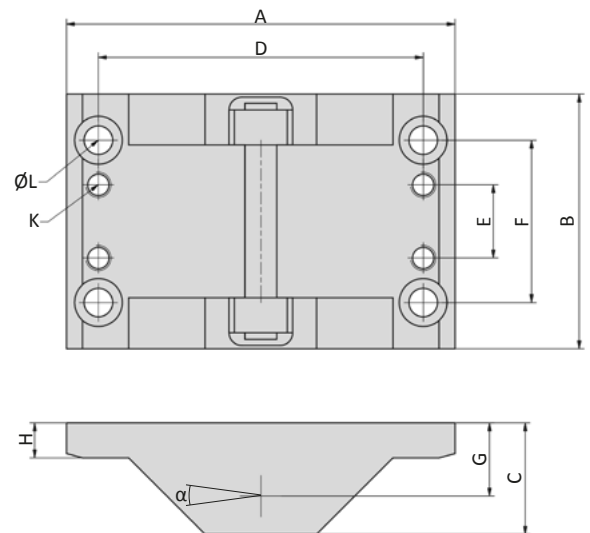
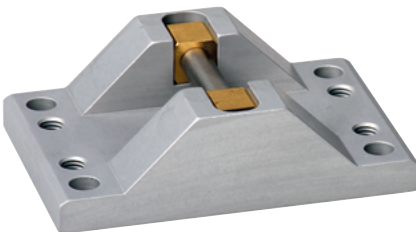
The information on torques refers to the center point of the slide which, in the case of the ZX-S and ZX-K cylinders, is the center of the tube. In versions with slide guides, the center point of the guide is in the slide.

v (m/s)	0.2	0.3	0.4	0.5	0.75	1
Factor	1	0.75	0.5	0.4	0.27	0.2

ZXB-xx-10 Center mount


Model-no.:	A	B	C	D	E	ØF
ZXB-25-10	70	35	8	60	30	5.5
ZXB-32-10*	85	40	10	73	36.5	6.6
ZXB-32-11*						
ZXB-40-10	105	40	10	90.5	45.25	9
ZXB-50-10	138	70	15	120	60	11
ZXB-63-10	154	70	15	136	68	11

*The model ZXB-32-10 is only suitable for bottom mount. For side mounting and versions SG, KG, SR and KR please use center mount ZXB-32-11.

ZXB-xx-20 Alignment coupler


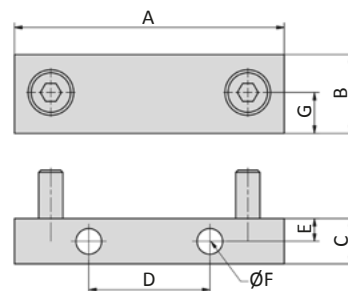
Model-no.:	Cylinder Ø	A	B	C	D	E	F	G	H	K	ØL	α
ZXB-25-20	25	80	54	24	66	20	40	18 ... 20	8	M6	6.5	16°
ZXB-25-20	32	80	54	24	66	20	40	17.9 ... 18.9	8	M6	6.5	12°
ZXB-40-20	40	80	54	24	66	20	40	18 ... 20	8	M6	6.5	9°-12°
ZXB-50-20	50	122	80	35	102	23	51	23 ... 25	11	M8	9	7°-10°
ZXB-50-20	63	122	80	35	102	23	51	23 ... 25	11	M8	9	5°-9°

The alignment coupler is designed to be used with external guide systems. This coupler compensates for the mis-alignment between the rodless cylinder and the external guide system (supplied by customer). For use with cylinder series ZX-K and ZX-S.

Series ZX

Mounting parts

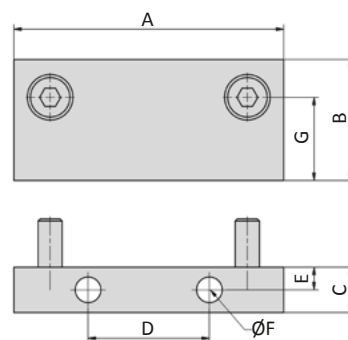
ZXB-xx-01 Head mount



Model-no.:	A	B	C	D	E	Ø F	G
ZXB-25-01	45	10	10	22	5	5.5	4.5
ZXB-32-01	51	16	15	25	7.5	7	7.5
ZXB-40-01	64	16	15	25	7.5	9	7.5
ZXB-50-01	89	26	15	40	7.5	8.5	12.5
ZXB-63-01	105	29	15	50	7.5	8.5	14

Screws to mount the head mount to the cylinder are included.
The face ports must be plugged when using a head mount.

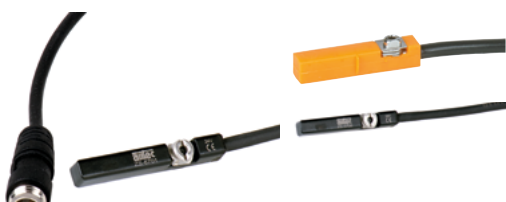
ZXB-xx-02 Head mount, tall



Model-no.:	A	B	C	D	E	Ø F	G
ZXB-25-02	45	18	10	22	5	5.5	12.5
ZXB-32-02	51	34	15	25	7.5	7	16.5
ZXB-40-02	64	26	15	25	7.5	9	17.5
ZXB-50-02	89	40	15	40	7.5	8.5	27.5
ZXB-63-02	105	40	15	50	7.5	8.5	29

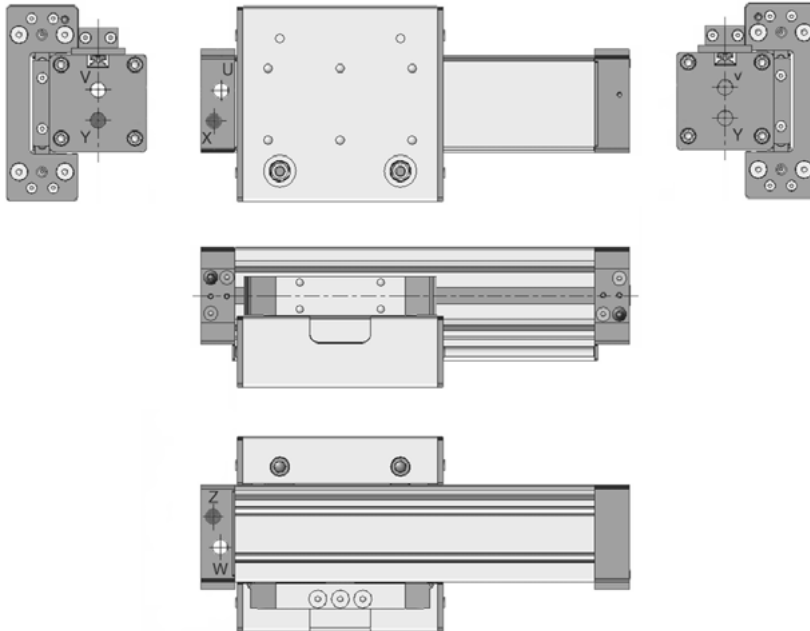
Screws to mount the head mount to the cylinder are included.
The face ports must be plugged when using a head mount.

Proximity sensors



Option -04 Air connection on both face ends

with guide



Option -04 enables to connect pressure at both face ends or one face and one side port.

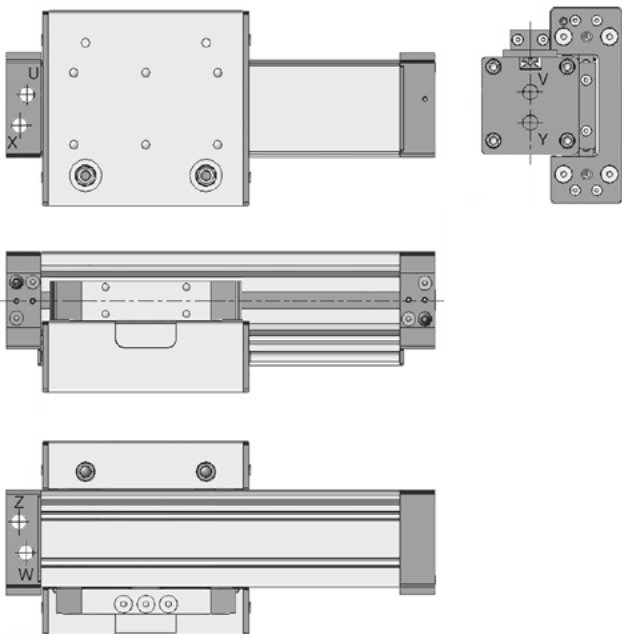
Therefore the head with 6 ports from option -02 is used at both ends. Now it is possible to use the upper ports (U-V-W). The lower ports (X-Y-Z) are plugged.

This option is for using ports at both cylinder heads only.

Series ZX

Option -03 Air connection on one end

with guide



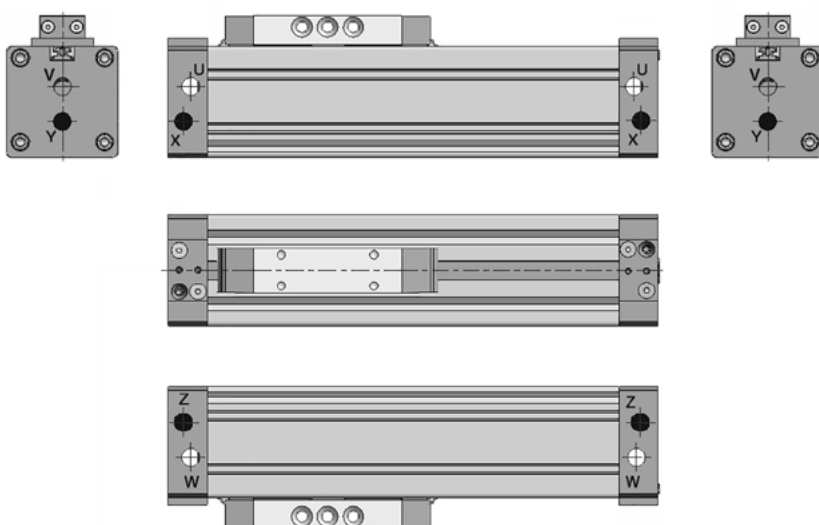
One cylinder head is supplied with 6 ports (3 for each direction, ports U-V-W air travels in one direction and ports X-Y-Z air travels in the opposite direction). User is required to select one of three pressure connections for each direction. The second and third ports will require the installation of a sealing plug (4 plugs are supplied).

With this option the slide guide is mounted on the right side of the piston driver.

Ports V and Y must be plugged when using a head mount.

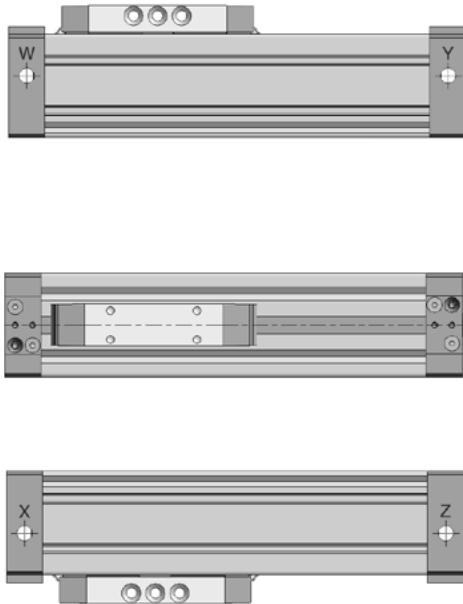
Option -04 Air connection on both face ends

without guide

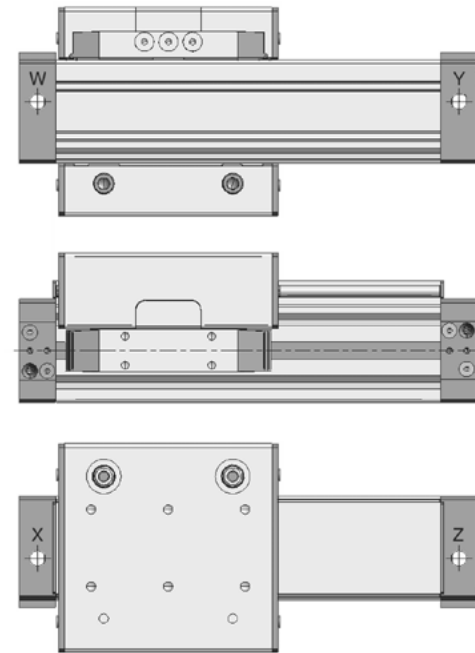


Option -01 Air connection on each end

without guide



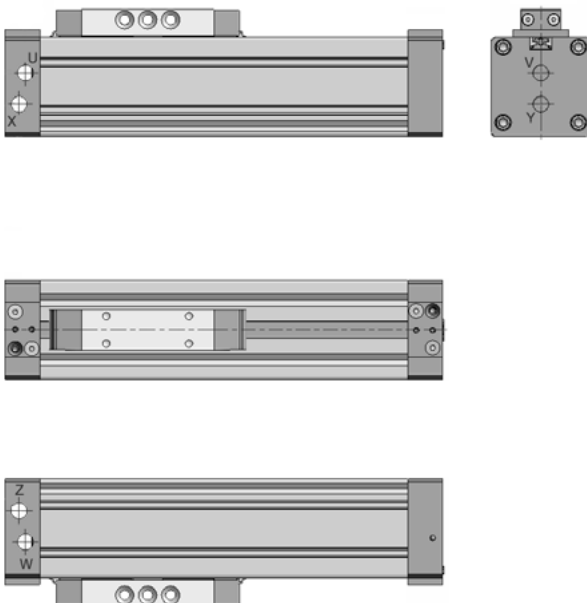
with guide



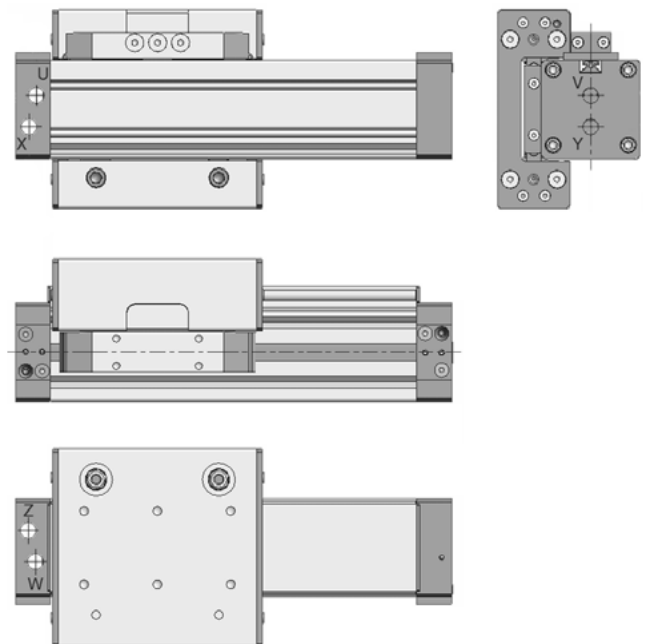
Option -01 cylinder comes with two pressure connections (ports W-X and ports Y-Z respectively) on each end. User is required to select one of two pressure connections on each end. Second port will require the installation of a sealing plug (2 plugs are supplied).

Option -02 Air connection on one end

without guide



with guide



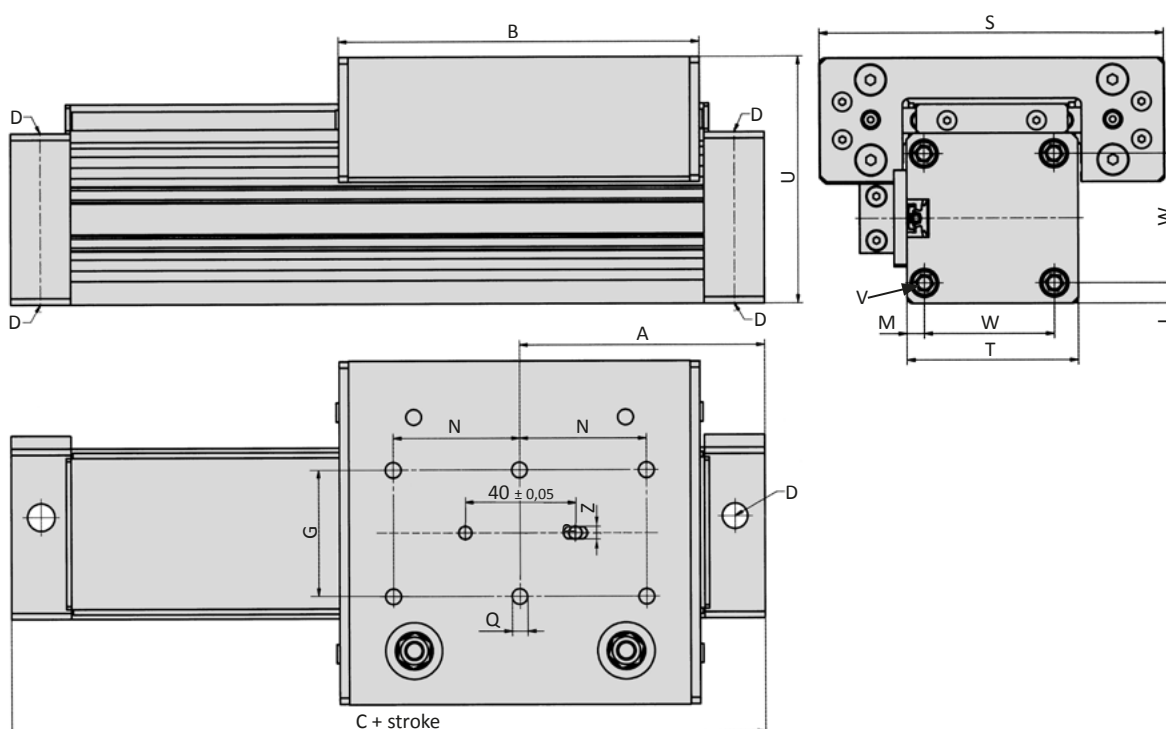
One cylinder head is supplied with 6 ports (3 for each direction, ports U-V-W air travels in one direction and ports X-Y-Z air travels in the opposite direction). User is required to select one of three pressure connections for each direction. The second and third ports will require the installation of a sealing plug (4 plugs are supplied).
 With this option the slide guide is mounted on the left side of the piston driver.
 Ports V and Y must be plugged when using a head mount.

Series ZX-KR

Technical data

Model-no.:	ZX-25-KR-...	ZX-32-KR-...	ZX-40-KR-...	ZX-50-KR-...	ZX-63-KR-...
Piston Ø (mm)	25	32	40	50	63
Connection	G1/8	G1/8	G1/4	G3/8	G3/8
Cushioning length (mm)	24	28	36	45	59
Weight 0 mm stroke (kg)	1.33	1.91	3.84	5.82	8.66
each 100 mm stroke	0.42	0.48	0.74	1.08	1.42
max. stroke (mm)	6000	6000	6000	6000	6000

Dimensions

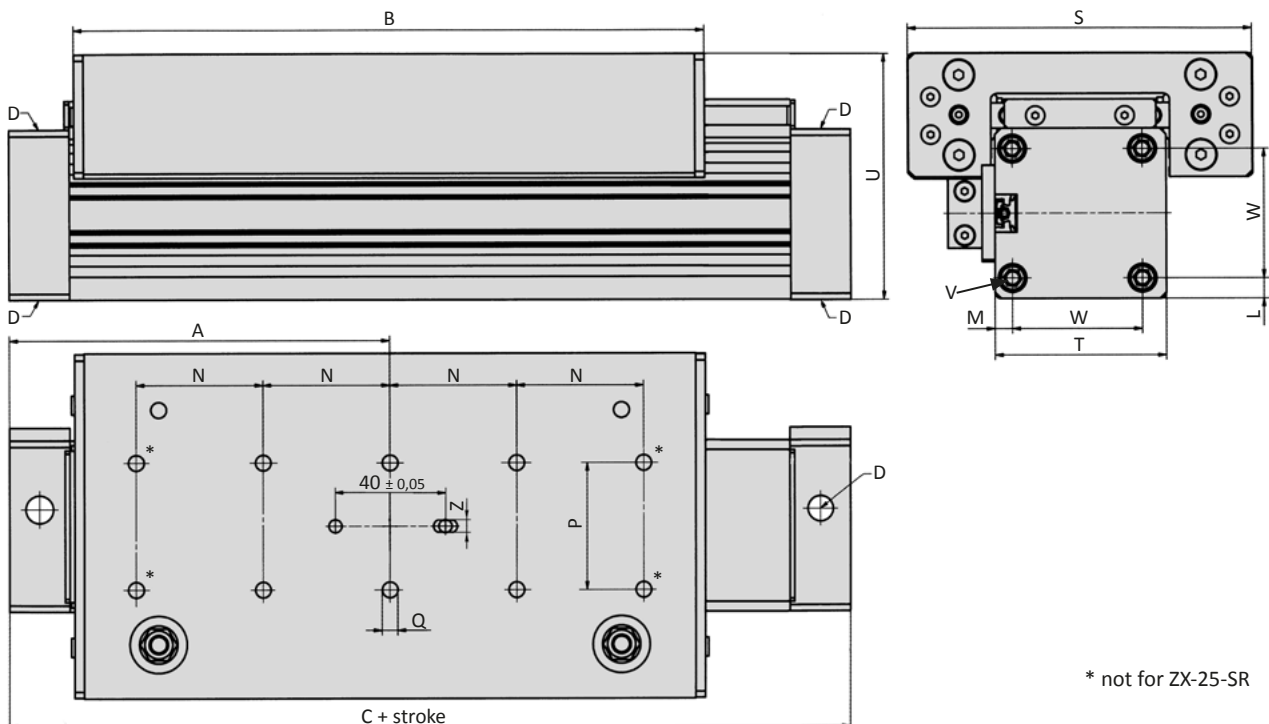


Piston Ø	A	B	C	D	L	M	N	P
25	67,5	95	135	G1/8	4.5	4.5	20	40
32	77,5	115	155	G1/8	6.5	5.5	40	40
40	95	143,5	190	G1/4	7.5	7.5	55	55
50	105	148	210	G3/8	12.5	12.5	55	55
63	125	188	250	G3/8	14	14	70	70

Piston Ø	Q	S	T	U	V	W	Z
25	M5 x 7.5	97	45	68.2	M4 x 11	36	4 x 4.4
32	M6 x 9	108.8	54	78	M5 x 11	41	4 x 4.4
40	M6 x 12	145	64	90.5	M6 x 12	49	4 x 4.4
50	M8 x 15	164	90	120	M8 x 17	65	4 x 4.4
63	M8 x 17	180	106	137	M8 x 17	78	4 x 4.4

Technical data

Model-no.:	ZX-25-SR-...	ZX-32-SR-...	ZX-40-SR-...	ZX-50-SR-...	ZX-63-SR-...	
Piston Ø (mm)	25	32	40	50	63	
Connection	G1/8	G1/8	G1/4	G3/8	G3/8	
Cushioning length (mm)	24	28	36	45	59	
Weight (kg)	0 mm stroke	1.97	2.96	5.89	9.10	13.17
	each 100 mm stroke	0.42	0.48	0.74	1.08	1.42
max. stroke (mm)	6000	6000	5950	5910	5860	

Dimensions


* not for ZX-25-SR

Piston Ø	A	B	C	D	L	M	N	P
25	100	160	200	G1/8	4.5	4.5	40	40
32	120	201	240	G1/8	6.5	5.5	40	40
40	150	252	300	G1/4	7.5	7.5	55	55
50	175	270	350	G3/8	12.5	12.5	55	55
63	200	320	400	G3/8	14	14	70	70

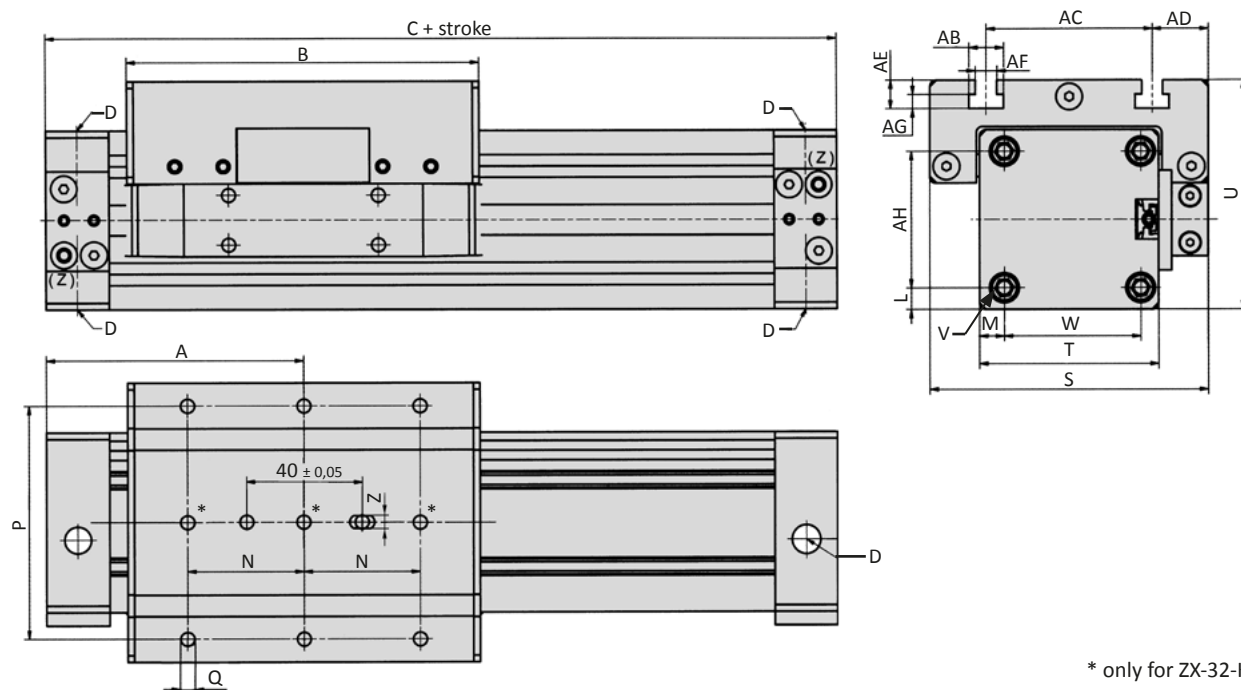
Piston Ø	Q	S	T	U	V	W	Z
25	M5 x 7.5	97	45	68.2	M4 x 11	36	4 x 4.4
32	M6 x 9	108.8	54	78	M5 x 11	41	4 x 4.4
40	M6 x 12	145	64	90.5	M6 x 12	49	4 x 4.4
50	M8 x 15	164	90	120	M8 x 17	65	4 x 4.4
63	M8 x 17	180	106	137	M8 x 17	78	4 x 4.4

Series ZX-KG

Technical data

Model-no.:	ZX-25-KG-...	ZX-32-KG-...	ZX-40-KG-...	ZX-50-KG-...	ZX-63-KG-...
Piston Ø (mm)	25	32	40	50	63
Connection	G1/8	G1/8	G1/4	G3/8	G3/8
Cushioning length (mm)	24	28	36	45	59
Weight 0 mm stroke	0.88	1.35	2.30	4.63	7.10
(kg) each 100 mm stroke	0.30	0.39	0.52	0.96	1.32
max. stroke (mm)	6000	6000	6000	6000	6000

Dimensions



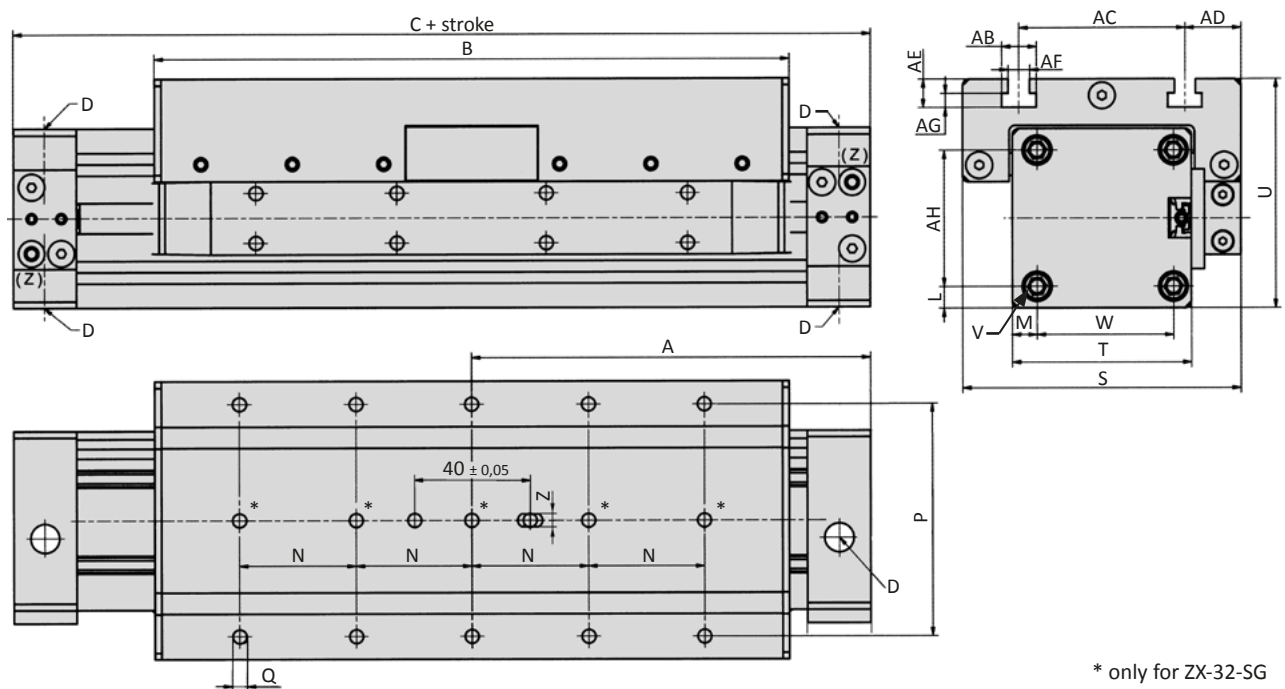
* only for ZX-32-KG

Piston Ø	A	B	C	D	L	M	N	P	Q	S	T
25	67.5	94	135	G1/8	4.5	4.5	30	30	M5 x 8	75	45
32	77.5	106	155	G1/8	6.5	7.5	35	70	M5 x 11	83.8	54
40	95	136	190	G1/4	7.5	7.5	55	55	M6 x 12	100	64
50	105	148	210	G3/8	12.5	12.5	50	42	M8 x 16	133	90
63	125	180	250	G3/8	14	14	60	60	M8 x 16	150	106

Piston Ø	U	V	W	Z	AB	AC	AD	AE	AF	AG	AH
25	59	M4 x 11	36	4 x 4.4	10.4	50	12.5	8.6	6.4	4.3	36
32	69	M5 x 11	41	4 x 4.4	10.4	50	16.9	8.6	6.4	4.3	41
40	79	M6 x 12	49	4 x 4.4	10.4	80	10	8.6	6.4	4.3	49
50	112.5	M8 x 17	65	4 x 4.4	10.4	94	23	8.6	6.4	4.3	65
63	134.5	M8 x 17	78	4 x 4.4	10.4	110	24	8.6	6.4	4.3	78

Technical data

Model-no.:	ZX-25-SG-...	ZX-32-SG-...	ZX-40-SG-...	ZX-50-SG-...	ZX-63-SG-...
Piston Ø (mm)	25	32	40	50	63
Connection	G1/8	G1/8	G1/4	G3/8	G3/8
Cushioning length (mm)	24	28	36	45	59
Weight (kg)					
0 mm stroke	1.31	2.09	3.58	7.28	11.02
each 100 mm stroke	0.30	0.39	0.52	0.96	1.32
max. stroke (mm)	6000	6000	5950	5910	5860

Dimensions


* only for ZX-32-SG

Piston Ø	A	B	C	D	L	M	N	P	Q	S	T
25	100	159	200	G1/8	4.5	4.5	30	30	M5 x 8	75	45
32	120	191	240	G1/8	6.5	7.5	35	70	M5 x 11	83.8	54
40	150	246	300	G1/4	7.5	7.5	55	55	M6 x 12	100	64
50	175	270	350	G3/8	12.5	12.5	50	42	M8 x 16	133	90
63	200	320	400	G3/8	14	14	60	60	M8 x 16	150	106

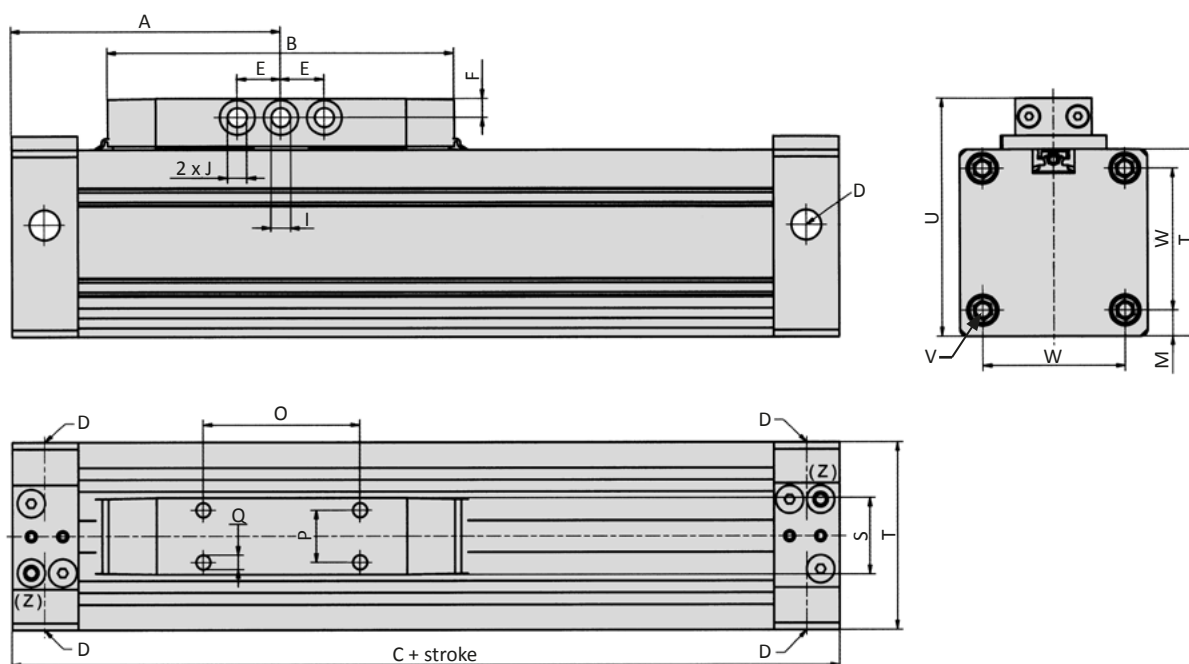
Piston Ø	U	V	W	Z	AB	AC	AD	AE	AF	AG	AH
25	59	M4 x 11	36	4 x 4.4	10.4	50	12.5	8.6	6.4	4.3	36
32	69	M5 x 11	41	4 x 4.4	10.4	50	16.9	8.6	6.4	4.3	41
40	79	M6 x 12	49	4 x 4.4	10.4	80	10	8.6	6.4	4.3	49
50	112.5	M8 x 17	65	4 x 4.4	10.4	94	23	8.6	6.4	4.3	65
63	134.5	M8 x 17	78	4 x 4.4	10.4	110	24	8.6	6.4	4.3	78

Series ZX-K

Technical data

Model-no.:	ZX-25-K-...	ZX-32-K-...	ZX-40-K-...	ZX-50-K-...	ZX-63-K-...
Piston Ø (mm)	25	32	40	50	63
Connection	G1/8	G1/8	G1/4	G3/8	G3/8
Cushioning length (mm)	24	28	36	45	59
Weight 0 mm stroke	0.62	0.96	1.65	3.50	5.40
(kg) each 100 mm stroke	0.30	0.39	0.52	0.96	1.32
max. stroke (mm)	6000	6000	6000	6000	6000

Dimensions

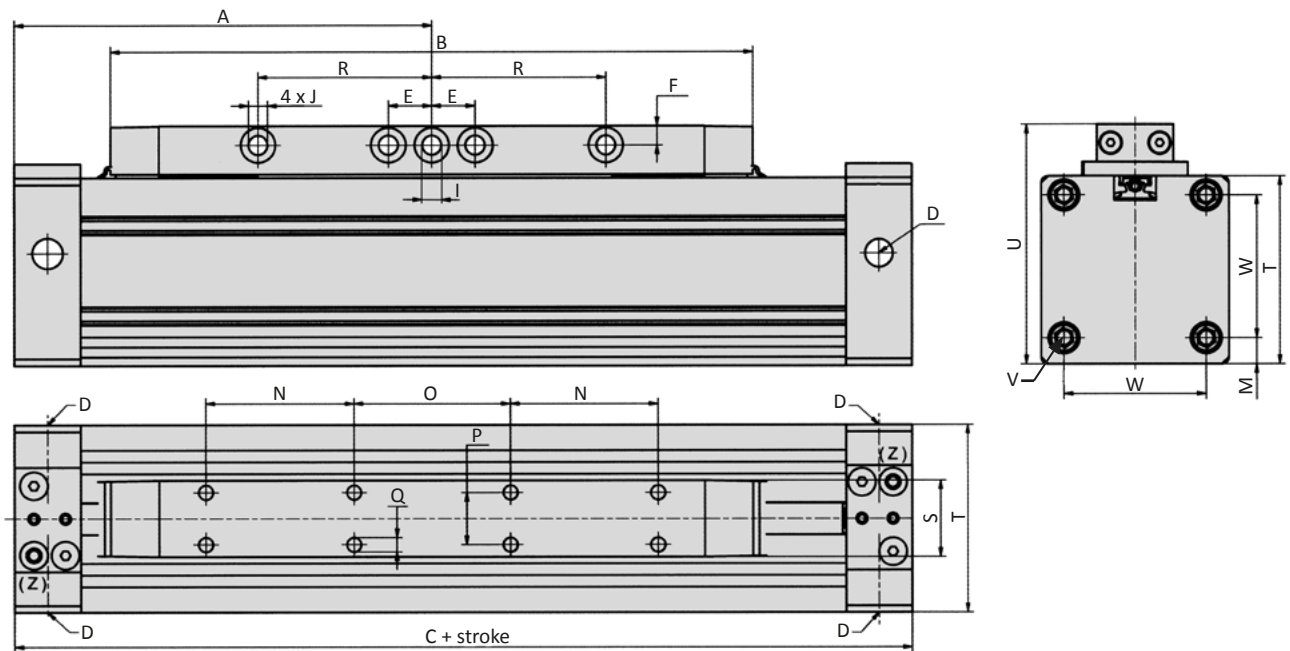


Piston Ø	A	B	C	D	E	F	I	J	M
25	67.5	84.6	135	G1/8	12.5	5	6	4.5	4.5
32	77.5	99.6	155	G1/8	12.5	5.5	6	5.5	7.5
40	95	112.6	190	G1/4	12.5	7	7	6.5	7.5
50	105	122	210	G3/8	17.5	9	10	8.5	12.5
63	125	150	250	G3/8	25	9.5	10	8.5	14

Piston Ø	O	P	Q	S	T	U	V	W
25	35	15	M5 x 7	22	45	60	M4 x 11	36
32	45	15	M5 x 7	22	54	69	M5 x 11	41
40	50	15	M5 x 9	22	64	82	M6 x 12	49
50	64	34	M8 x 16	46	90	115	M8 x 17	65
63	80	34	M8 x 16	46	106	131	M8 x 17	78

Technical data

Model-no.:	ZX-25-S-...	ZX-32-S-...	ZX-40-S-...	ZX-50-S-...	ZX-63-S-...
Piston Ø (mm)	25	32	40	50	63
Connection	G1/8	G1/8	G1/4	G3/8	G3/8
Cushioning length (mm)	24	28	36	45	59
Weight (kg)					
0 mm stroke	0.88	1.40	2.41	5.30	8.10
each 100 mm stroke	0.30	0.39	0.52	0.96	1.32
max. stroke (mm)	6000	6000	5950	5910	5860

Dimensions


Piston Ø	A	B	C	D	E	F	I	J	M	N
25	100	149.6	200	G1/8	12.5	5	6	4.5	4.5	20
32	120	184.5	240	G1/8	12.5	5.5	6	5.5	7.5	42.5
40	150	222.6	300	G1/4	12.5	7	7	6.5	7.5	35
50	175	262	350	G3/8	17.5	9	10	8.5	12.5	45
63	200	300	400	G3/8	25	9.5	10	8.5	14	80

Piston Ø	O	P	Q	R	S	T	U	V	W
25	50	15	M5 x 7	35	22	45	60	M4 x 11	36
32	45	15	M5 x 7	50	22	54	69	M5 x 11	41
40	90	15	M5 x 9	65	22	64	82	M6 x 12	49
50	60	34	M8 x 16	90	46	90	115	M8 x 17	65
63	80	34	M8 x 16	90	46	106	131	M8 x 17	78

Series ZX

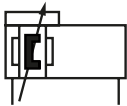
Technical details

Operating pressure	1 ... 8 bar
Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature. If speeds exceed 1 m/s lubricated air is recommended.
Materials	Cylinder tube: Al (anodized) Outer parts: Al (anodized), Plastics Seals: NBR, PU
	Cylinders in accordance with 2014/34/EU (ATEX) available. (Chapter 13)



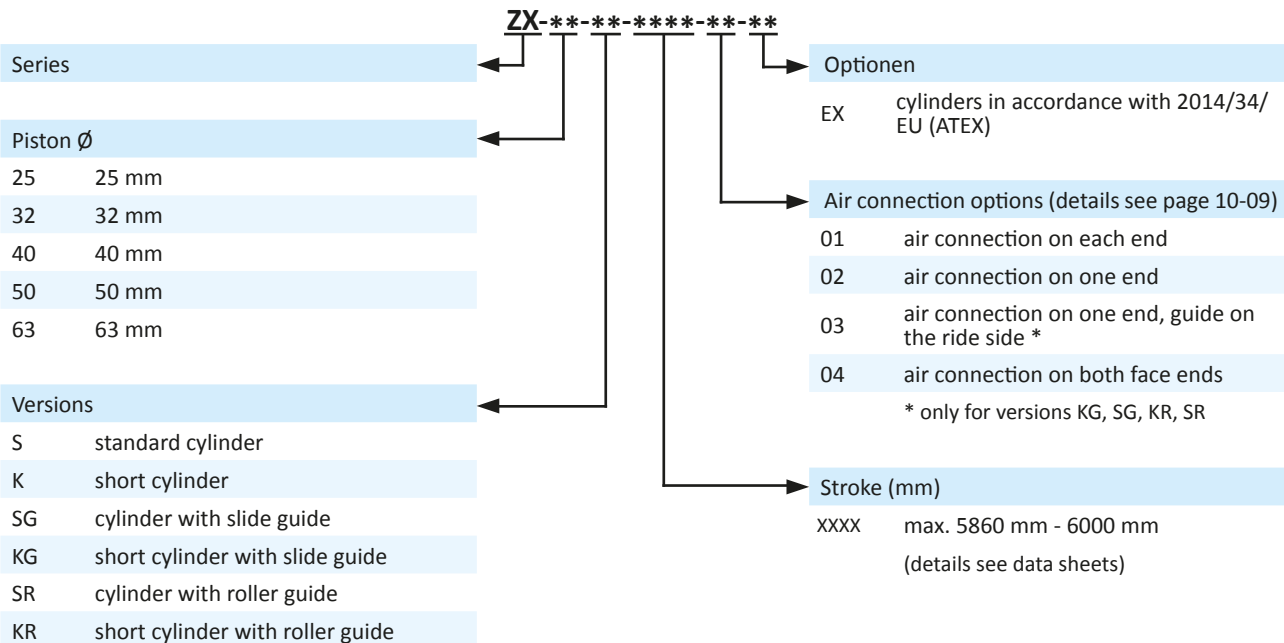
Double acting Al-profile rodless cylinder with integrated sensor grooves, adjustable cushions and permanent magnet for proximity sensors.
The sensors can be installed directly into the sensor grooves of the Al-profile.

Versions



ZX-***
double acting, adjustable cushioning,
with magnetic piston

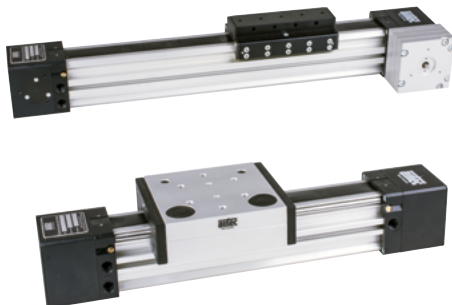
Order code



Series ZX	Page 10-02
Version S	Page 10-03
Version K	Page 10-04
Version SG	Page 10-05
Version KG	Page 10-06
Version SR	Page 10-07
Version KR	Page 10-08
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Series ZR	Page 10-16
Technical details	Page 10-16
Version S	Page 10-20
Version L	Page 10-21
Mounting parts	Page 10-22
Accessories	Page 10-23
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Cable with bushing for proximity sensors

Model-no.:	KA-30	KA-50	KA-51	KA-100	KA-101
Connection	M8, snap-in	M8, snap-in	M8, snap-in	M8, snap-in	M8, snap-in
Version	straight	straight	elbow 90°	straight	elbow 90°
Cable length	3 m	5 m	5 m	10 m	10 m

Mounting

The sensors are mounted at the groove of the cylinder profile. It is fixed by turning the fixing screw at the sensor clockwise. The cover stripe XLB-011 (see below) can be used for protecting the sensor cable. A direct sensor mounting is possible for following series:

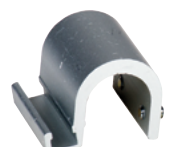
- Series XL**
- Series NXD, Series NXE**
- Series NYD, Series NYE, Series NYSE**
- Series LX**
- Series ZX**

For this cylinder series separate mounting brackets are necessary for the sensor mounting:

- Series XG, Series XM**
- Series HM, Series HE, Series HMU**
- Series CM**

Mounting brackets for proximity sensors

Model-no.:	NT-250	NT-500	HTM-080/100-1
Design	sensor mounting	sensor mounting	mounting bracket for tie rod design
For series	HM, HE, CM, XG, XM	HMU	XG-160, XG-200



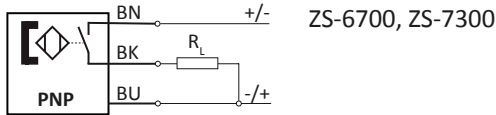
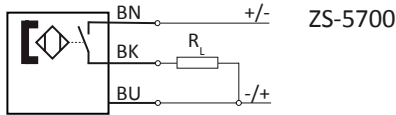
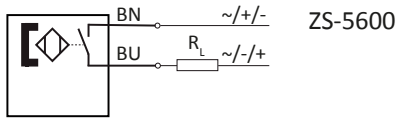
Cover for sensor groove

Model-no.:	XLB-011
Design	plastic profile, 50 cm length, blue
For series	XL, NXD, NXE, NYD, NYE, NYSE, LX

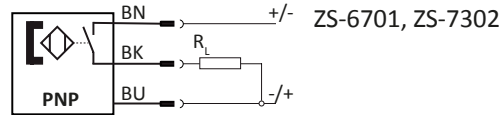
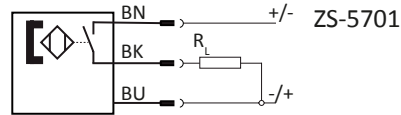
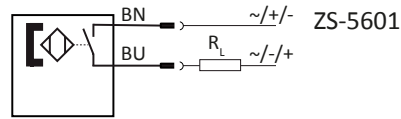


Series ZS Proximity sensors

Proximity sensors with cable



Proximity sensors with plug



Technical data

Model-no.:	ZS-5600	ZS-5601	ZS-5700	ZS-5701
Design	2-pole Reed sensor	2-pole Reed sensor	3-pole Reed sensor	3-pole Reed sensor
Contact function	NO	NO	NO	NO
Rated operational voltage	5 ... 240 V AC / DC	5 ... 60 V AC / DC	5 ... 30 V DC	5 ... 30 V DC
Rated operational current I_e	3 ... 100 mA	3 ... 100 mA	≤ 500 mA	≤ 500 mA
Max. voltage drop at I_e	≤ 2.5	≤ 2.5	≤ 0.1	≤ 0.1
Breaking capacity	10 W	10 W	10 W	10 W
Cable length	3 m	0.3 m with M8 connection	5 m	0.3 m with M8 connection
Temperature range	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C
Protection	IP 67	IP 67	IP 67	IP 67
Switching status indication	LED red	LED red	LED yellow	LED yellow

Model-no.:	ZS-6700	ZS-6701	ZS-7300	ZS-7302
Design	3-pole inductive	3-pole inductive	3-pole inductive	3-pole inductive
Contact function	NO	NO	NO	NO
Output	PNP	PNP	PNP	PNP
Rated operational voltage	5 ... 30 V DC	5 ... 30 V DC	10 ... 30 V DC	10 ... 30 V DC
Rated operational current I_e	≤ 200 mA	≤ 200 mA	≤ 100 mA	≤ 100 mA
Max. voltage drop at I_e	≤ 1.0	≤ 1.0	≤ 2.5	≤ 2.5
Breaking capacity	6 W	6 W	3 W	3 W
Cable length	3 m	0.3 m with M8 connection	6 m	0.3 m with M12 connection
Temperature range	-10 ... +70°C	-10 ... +70°C	-20 ... +60°C	-20 ... +60°C
Protection	IP 67	IP 67	IP 67	IP 67
Switching status indication	LED green	LED green	LED yellow	LED yellow
	-	-	II 3G Ex nA T4 II 3D Ex tD A22 IP67 T 125°C	II 3D Ex tc IIIC T125°C Dc X

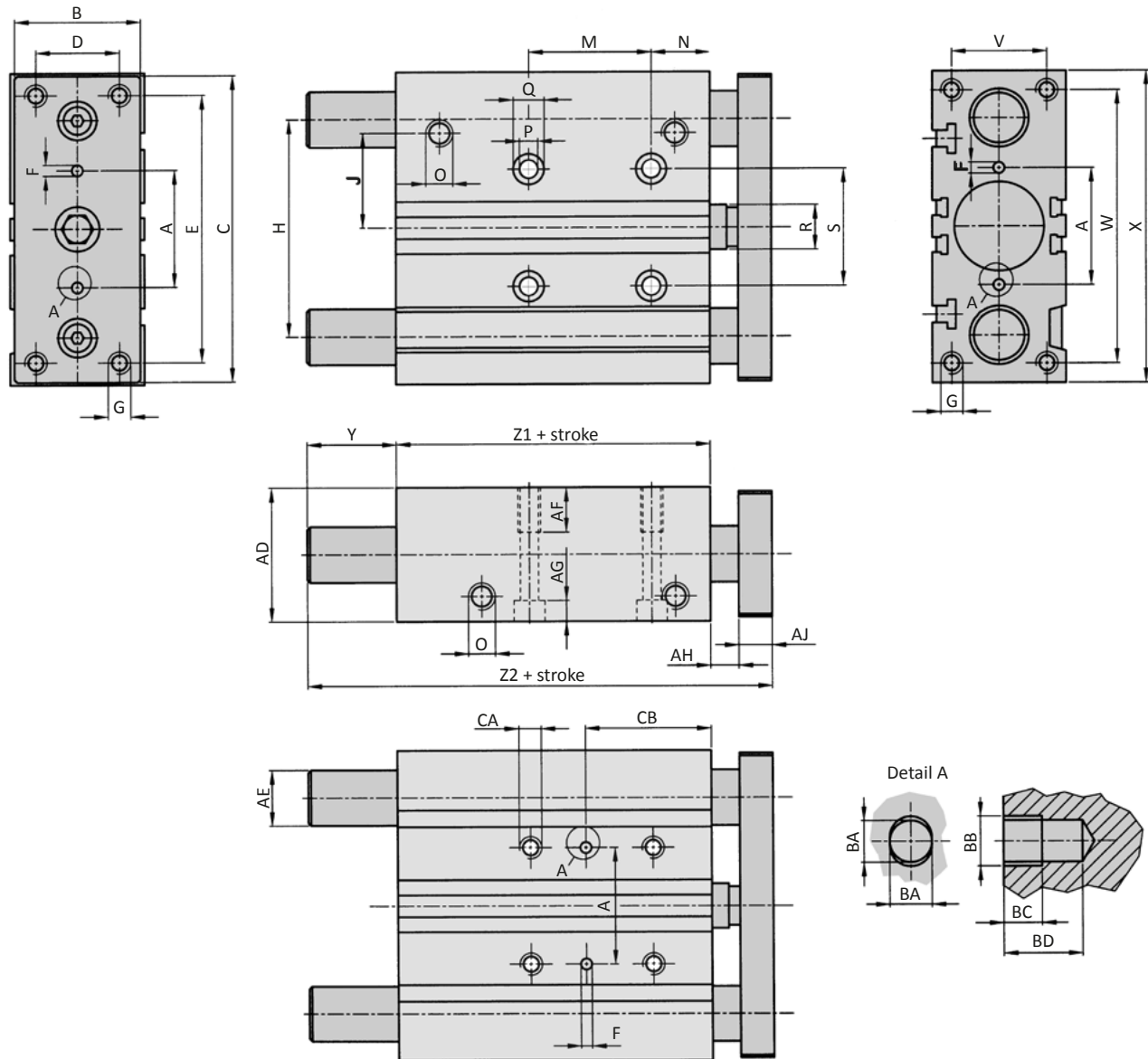
Dimensions

Piston Ø	Stroke	Version	Y	Z2	Ø AE	M	CB
20	20 - 30	000	21.5	74.5	12	24	29
20	20 - 30	100	19	72	10	24	29
20	40 - 50	000	21.5	74.5	12	44	39
20	75 - 100	000	26.5	79.5	12	44	39
20	40 - 100	100	22	75	10	44	39
20	125 - 200	000	26.5	79.5	12	120	77
20	125 - 200	100	32	85	10	120	77
25	20	000	21	74.5	16	24	29
25	30	000	27	80.5	16	24	29
25	20 - 30	100	21	74.5	12	24	29
25	40 - 50	000	27	80.5	16	44	39
25	75 - 100	000	31.5	85	16	44	39
25	40 - 100	100	32	85.5	12	44	39
25	125 - 200	000	31.5	85	16	120	77
25	125 - 200	100	44.5	98	12	120	77
32	25	000	14	73.5	20	24	33
32	25	100	26.5	86	16	24	33
32	50	000	32	91.5	20	48	45
32	50	100	26.5	86	16	48	45
32	75 - 100	000	32	91.5	20	48	45
32	75 - 100	100	35.5	95	16	48	45
32	125 - 200	000	32	91.5	20	124	83
32	125 - 200	100	50.5	110	16	124	83
40	25	000	7.5	73.5	20	24	34
40	25	100	20	86	16	24	34
40	50 - 100	000	25.5	91.5	20	48	46
40	50	100	20	86	16	48	46
40	75 - 100	100	29	95	16	48	46
40	125 - 200	000	25.5	91.5	20	124	84
40	125 - 200	100	44	110	16	124	84
50	25	000	26.5	98.5	25	24	36
50	25	100	21	93	20	24	36
50	50 - 100	000	26.5	98.5	25	48	48
50	50 - 75	100	21	93	20	48	48
50	100	100	40	112	20	48	48
50	125 - 200	000	26.5	98.5	25	124	86
50	125 - 200	100	40	112	20	124	86
63	25	000	21.5	98.5	25	28	38
63	25	100	16	93	20	28	38
63	50 - 100	000	21.5	98.5	25	52	50
63	50 - 75	100	16	93	20	52	50
63	100	100	35	112	20	52	50
63	125 - 200	000	21.5	98.5	25	128	88
63	125 - 200	100	35	112	20	128	88

Series LX

Guide units, double acting

Dimensions



Piston Ø	A	B	C	D	E	Ø F	G	H	J	N	O	Ø P	Ø Q	Ø R	S
20	28	30	81	18	70	3 x 6	M5 x 13	54	25	17	G1/8	5.5	9.5	10	28
25	34	40	91	26	78	4 x 6	M6 x 15	64	28.5	17	G1/8	5.5	9.5	12	34
32	42	45	110	30	96	4 x 6	M8 x 20	78	34	21	G1/8	6.5	11	16	42
40	50	45	118	30	104	4 x 6	M8 x 20	86	38	22	G1/8	6.5	11	16	50
50	66	60	146	40	130	5 x 8	M10 x 22	110	47	24	G1/4	8.5	14	20	66
63	80	70	158	50	130	5 x 8	M10 x 22	124	55	24	G1/4	8.5	14	20	80

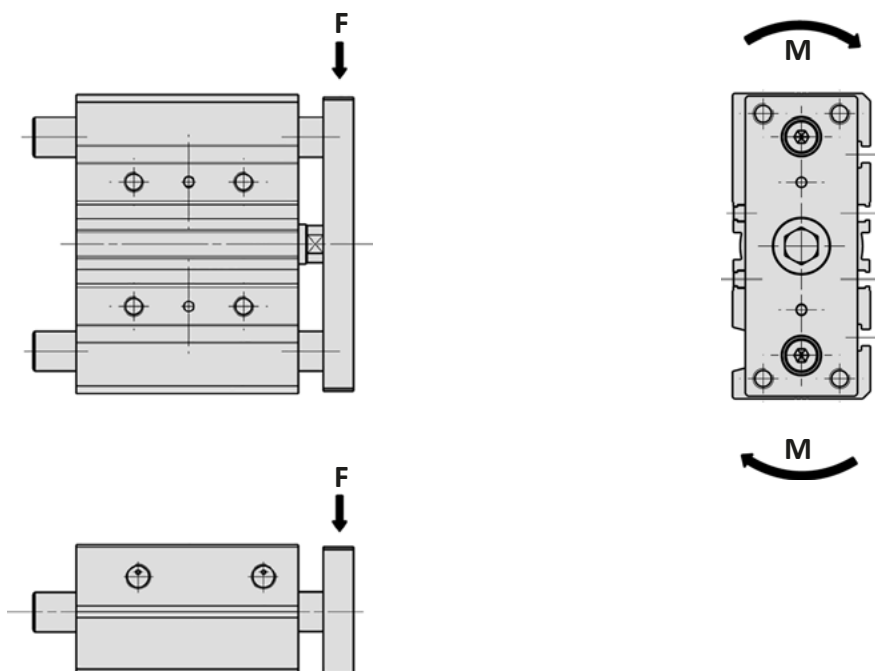
Piston Ø	V	W	X	Z1	AD	AF	AG	AH	AJ	AK	Ø BA	BB	BC	BD	CA
20	24	72	83	37	36	12	5.5	6	10	11.5	3	3.5	3	6	M6
25	30	82	93	37.5	42	12	5.5	6	10	13.5	4	4.5	3	6	M6
32	34	98	112	37.5	48	16	7.5	10	12	15	4	4.5	3	6	M8
40	40	106	120	44	54	16	7.5	10	12	18	4	4.5	3	6	M8
50	46	130	148	44	64	20	9	13	15	21.5	5	6	4	8	M10
63	58	142	162	49	78	20	9	13	15	28	5	6	4	8	M10

Technical information
Maximum force (N)

Piston Ø (mm)	Stroke length (mm)	20	25	30	40	50	75	100	125	150	175	200
20	Version 000	100	-	93	81	73	114	93	98	85	75	67
	Version 100	110	-	100	125	121	90	86	69	58	49	43
25	Version 000	140	-	120	115	103	165	135	150	131	116	104
	Version 100	142	-	85	154	148	106	82	97	81	70	61
32	Version 000	-	253	-	-	214	225	208	225	198	176	159
	Version 100	-	222	-	-	91	167	129	145	122	104	90
40	Version 000	-	251	-	-	197	215	206	224	196	175	157
	Version 100	-	221	-	-	93	167	128	145	121	104	90
50	Version 000	-	317	-	-	273	267	299	257	225	200	179
	Version 100	-	203	-	-	152	161	193	156	130	110	95
63	Version 000	-	316	-	-	273	267	299	257	225	200	179
	Version 100	-	201	-	-	151	158	195	157	130	110	94

Maximum torque (Nm)

Piston Ø (mm)	Stroke length (mm)	20	25	30	40	50	75	100	125	150	175	200
20	Version 000	1.7	-	1.5	1.2	1.0	2.9	2.8	2.6	2.3	2.0	1.8
	Version 100	3.0	-	2.7	3.4	3.3	2.4	2.3	1.9	1.6	1.3	1.2
25	Version 000	3.4	-	2.9	3.6	3.3	4.2	4.3	3.8	3.2	2.7	2.3
	Version 100	3.5	-	2.7	4.9	4.7	3.4	2.6	3.1	2.6	2.2	2.0
32	Version 000	-	6.7	-	-	6.5	7.2	7.0	6.6	5.6	4.8	4.1
	Version 100	-	6.3	-	-	3.6	6.5	5.1	5.7	4.8	4.1	3.5
40	Version 000	-	8.7	-	-	7.3	9.2	8.8	9.6	8.4	7.5	6.7
	Version 100	-	8.5	-	-	4.0	7.2	5.5	6.2	5.2	4.5	3.9
50	Version 000	-	15.4	-	-	12.9	12.6	13.4	12.1	11.3	10.1	9.8
	Version 100	-	11.1	-	-	8.3	8.8	10.6	8.6	7.1	6.0	5.2
63	Version 000	-	15.1	-	-	14.3	16.6	17	14	11.3	9.7	9.1
	Version 100	-	8.3	-	-	7.2	9.8	12.1	9.7	8.1	6.8	5.8



Series LX

Guide units, double acting

Technical details

Operating pressure	1 ... 10 bar
Temperature range	-20°C ... +80°C
Operating speed	50 ... 500 mm/s
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Profile: Al (anodized) Flange plate: steel (zinc plated) Piston rod: stainless steel Guide rod: stainless steel (-000), hardened steel (-100) Seals: PU

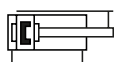


Double acting pneumatic cylinder with magnetic piston and built-in cushioning rings. The sensors can be installed directly into the sensor grooves of the Al-profile.

The integrated cylinder and guide unit ensures precise and accurate movement.

Standard stroke lengths in table below, additional lengths on request.

Versions



000, 100
double acting, built-in cushioning rings,
with magnetic piston,
guide unit

Order code

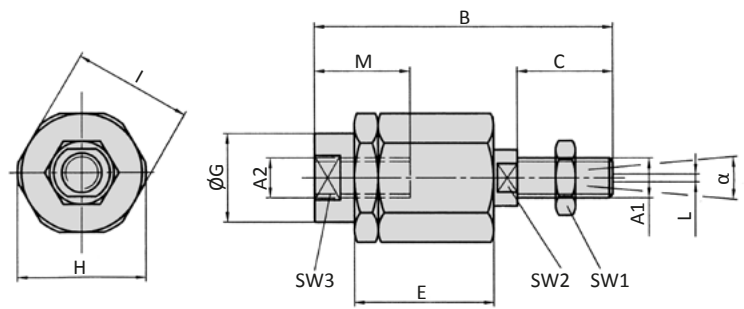
Series		LX-***-***-***		Versions	
LX	standard			000	standard version, bronze bearing
				100	standard version, ball bearings
Piston Ø		LX-***-***-***		Stroke (mm)	
020	20 mm			XXX	max. 200 mm
025	25 mm			Standard	20*, 25**, 30*, 40*, 50, 75, 100, 125, 150, 175, 200
032	32 mm				
040	40 mm				
050	50 mm				
063	63 mm				

* only for Ø 20 and 25 mm, ** only for Ø 32 - 63 mm

Technical data

Model-no.:	LX-020-...	LX-025-...	LX-032-...	LX-040-...	LX-050-...	LX-063-...
Piston Ø (mm)	20	25	32	40	50	63
Force at 6 bar (N)	Extension	170	265	434	678	1060
	Retraction	127	204	326	570	890
Connection	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4

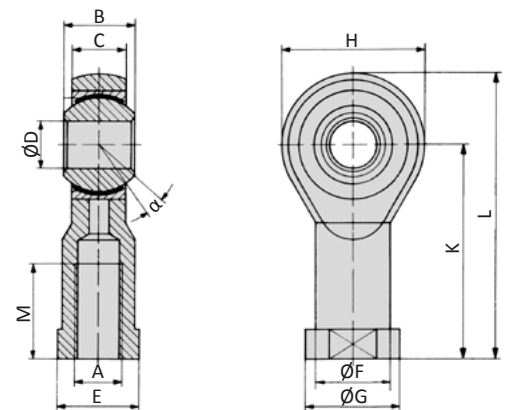
FK-xx Flexible coupling



Model-no.:	for cylinder	A1, A2	B	C	D	E	ØG	H	I	L	M	SW1	SW2	SW3	α
FK-16	12	M6	35	11	2.5	17.5	8.5	14.5	13	1	12.5	10	5	7	6°
FK-20	16	M8	57	21	5	26	12.5	19	17	2	16	13	7	11	8°
FK-32	20 - 40	M10 x 1.25	71.5	20	7.5	35	22	32	30	2	22	17	12	19	8°
FK-40	50, 63	M12 x 1.25	71.5	20	7.5	35	22	32	30	2	22	19	12	19	8°
FK-63	80	M16 x 1.5	104	32	10	53	32	45	41	2	30	24	20	27	6°
FK-80	100	M20 x 1.5	119	40	10	53	32	45	41	2	37	30	20	27	6°

Material: steel, zinc plated

RO-xx, FO-xx Rod eye

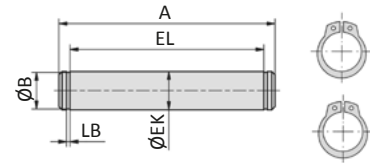


Model-no.:	for cylinder	A	B	C	ØD	E	ØF	ØG	H	K	L	M	α
RO-16	12	M6	9	6.75	6	11	10	13	20	30	40	12	13°
RO-20	16	M8	12	9	8	14	12.5	16	24	36	48	16	14°
RO-25	20 - 40	M10 x 1.25	14	10.5	10	17	15	19	28	43	57	20	13°
FO-40	50, 63	M12 x 1.25	16	12	12	19	17.5	22	32	50	66	22	13°
FO-63	80	M16 x 1.5	21	15	16	22	22	27	42	64	85	28	15°
FO-80	100	M20 x 1.5	25	18	20	30	27.5	34	50	77	102	33	14°

Materials: steel, zinc plated, bearing steel, bronze bushing

Series NXD Mounting accessories

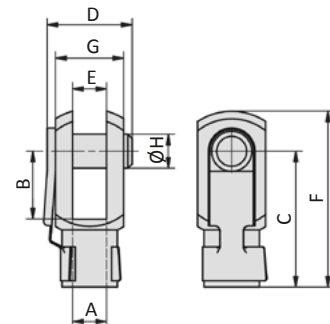
XLB-xxx-08 Clevis pin



Model-no.:	A	Ø B	Ø EK	EL	LB
XLB-032-08	53	9.6	10	46	1.1
XLB-040-08	60	11.5	12	53	1.1
XLB-050-08	68	11.5	12	61	1.1
XLB-063-08	78	15.2	16	71	1.1
XLB-080-08	98	15.2	16	91	1.1
XLB-100-08	118	19	20	111	1.3

Material: steel, zinc plated; 2 snap rings are included.

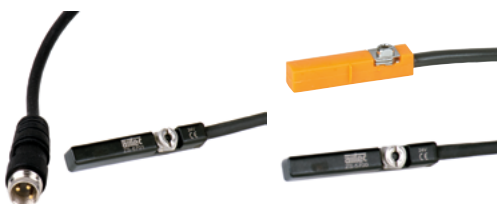
RD-xx, FD-xx Rod clevis



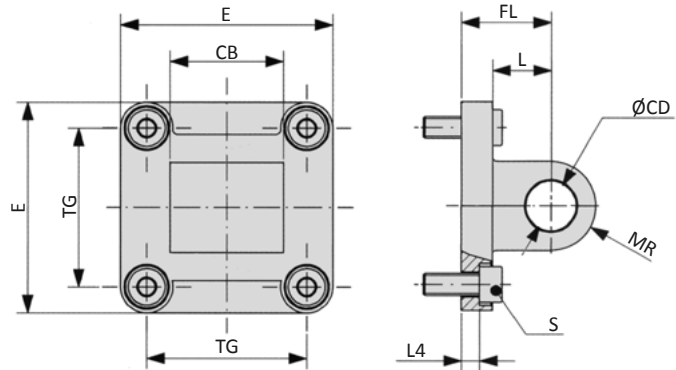
Model-no.:	for cylinder Ø	A	B	C	D	E	F	G	Ø H
RD-16	12	M6	12	24	16	6	31	12	6
RD-20	16	M8	16	32	22	8	42	16	8
RD-25	20 - 40	M10 x 1.25	20	40	26	10	52	20	10
FD-40	50, 63	M12 x 1.25	24	48	32	12	62	24	12
FD-63	80	M16 x 1.5	32	64	40	16	83	32	16
FD-80	100	M20 x 1.5	40	80	50	20	105	40	20

Material: steel, zinc plated

Proximity sensors



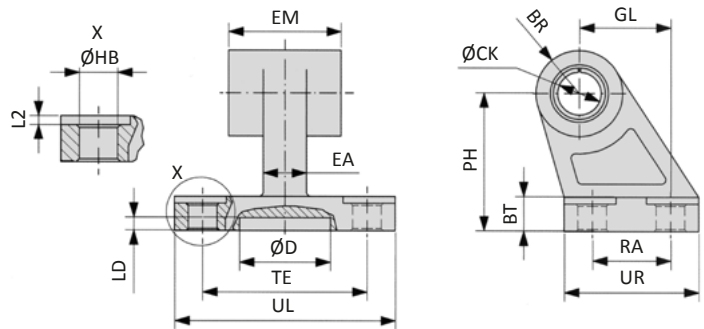
NXB-xxx-04 Swivel mount



Model-no.:	CB	Ø CD	E	FL	L	L4	MR	S	TG
NXB-016-04	12	6	27	16	10	2.6	6	M4 x 12	18
NXB-020-04	16	8	34	20	14	2.6	8	M5 x 16	22
NXB-025-04	16	8	38	20	14	2.6	8	M5 x 16	26

Material: Al, 4 screws in accordance with EN ISO 4762 are included.

XLB-xxx-06 Swivel mount 90°

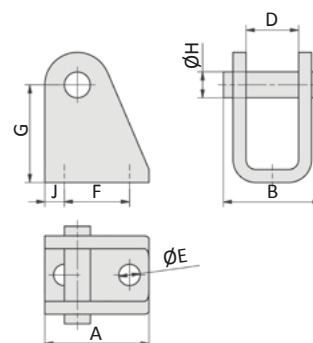


Model-no.:	BR	BT	ØCK	Ø D	EA	EM	GL	ØHB	L2	LD	PH	RA	TE	UL	UR
XLB-032-06	10	8	10	21	10	26	21	6.6	1.6	3	32	18	38	51	31
XLB-040-06	11	10	12	21	15	28	24	6.6	1.6	3	36	22	41	54	35
XLB-050-06	13	12	12	21	16	32	33	9	1.6	3	45	30	50	65	45
XLB-063-06	15	14	16	21	16	40	37	9	1.6	3	50	35	52	67	50
XLB-080-06	15	14	16	21	20	50	47	11	2.5	3	63	40	66	86	60
XLB-100-06	19	17	20	11	20	60	55	11	2.5	3	71	50	76	96	70

Materials: Al, bushing steel and PTFE

Series NXD Mounting accessories

RC-xx Clevis mount



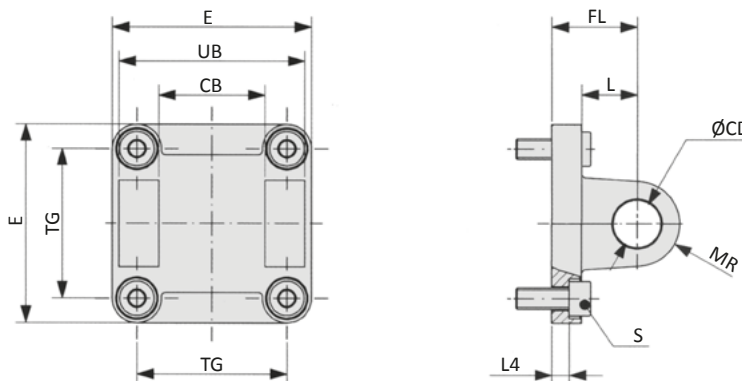
Model-no.:	A	B	D	Ø E	F	G	Ø H	J
RC-16	25	23	12.1	5.5	15	27	6	5
RC-30	32	30	16.1	6.6	20	30	8	6

Material: steel, zinc plated, 2 snap rings are included.

NXB-xxx-03 Clevis mount



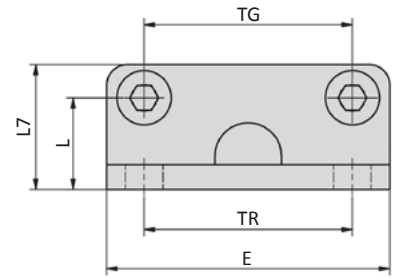
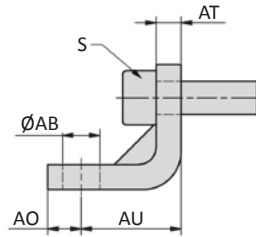
Inclusive clevis pin
order no: **NXB-xxx-38**



Model-no.:	CB	Ø CD	E	FL	L	L4	MR	S	TG	UB
NXB-032-03	26	10	48	22	13	5.5	10	M6 x 16	32	45
NXB-040-03	28	12	58	25	16	5.5	12.5	M6 x 16	42	52
NXB-050-03	32	12	66	27	16	6.5	12.5	M8 x 20	50	60
NXB-063-03	40	16	83	32	21	6.5	15	M10 x 25	62	70
NXB-080-03	50	16	102	36	23	10	15	M10 x 30	82	90
NXB-100-03	60	20	123	41	26	10	20	M10 x 30	103	110

Material: Al, 4 screws in accordance with EN ISO 4762 are included.

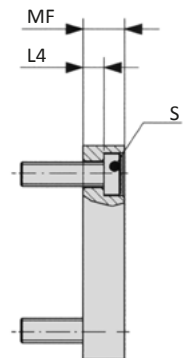
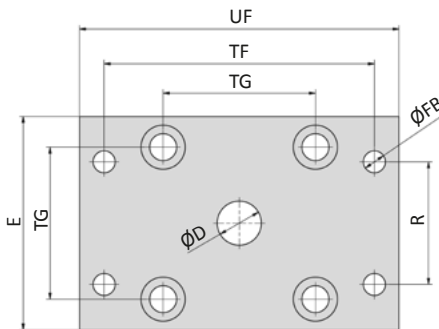
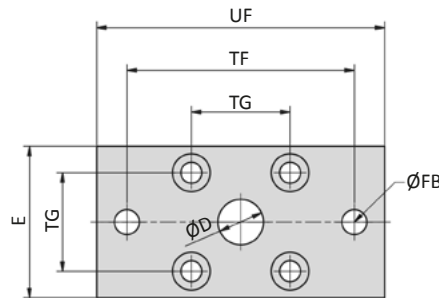
NXB-xxx-01 Foot mount



Model-no.:	∅ AB	AO	AU	AT	E	L	L7	S	TG	TR
NXB-032-01	6.6	8	18	5	50	16	24	M6 x 20	32	32
NXB-040-01	9	8	20	5	60	21.5	29.5	M6 x 20	42	42
NXB-050-01	9	8	24	6	68	22	30	M8 x 20	50	50
NXB-063-01	11	12	27	6	84	28.5	39	M8 x 20	62	62
NXB-080-01	11	12	30	8	102	24.5	36.5	M10 x 20	82	82
NXB-100-01	13.5	12	33	8	123	26.5	38.5	M10 x 20	103	103

Material: steel, zinc plated; 2 x 2 screws in accordance with EN ISO 4762 are included.

NXB-xxx-02 Flange mount



Model-no.:	∅ D	E	∅ FB	L4	MF	R	S	TF	TG	UF
NXB-016-02	10	29	5.5	4.6	10	-	M4 x 16	43	18	55
NXB-020-02	12	36	6.6	4.6	10	-	M5 x 20	55	22	70
NXB-025-02	12	40	6.6	4.6	10	-	M5 x 20	60	26	76
NXB-032-02	14	50	7	3.6	10	32	M6 x 20	65	32	80
NXB-040-02	14	60	9	3.6	10	36	M6 x 20	82	42	102
NXB-050-02	18	68	9	3.4	12	45	M8 x 25	90	50	110
NXB-063-02	18	87	9	4.4	15	50	M10 x 25	110	62	130
NXB-080-02	23	107	12	4.4	15	63	M10 x 25	135	82	160
NXB-100-02	28	128	14	4.4	15	75	M10 x 30	163	103	190

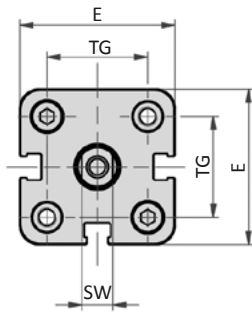
Material: steel, zinc plated; 4 screws in accordance with DIN 7984 are included.

Series NXE

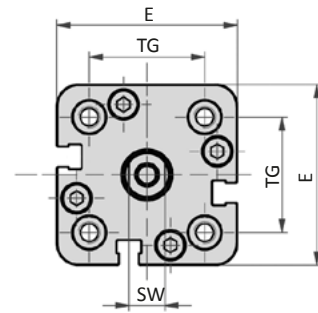
Single acting

Dimensions series NXE

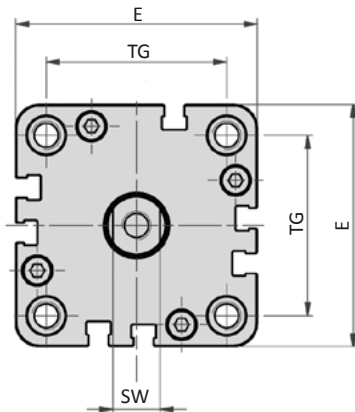
Ø 12 - 25



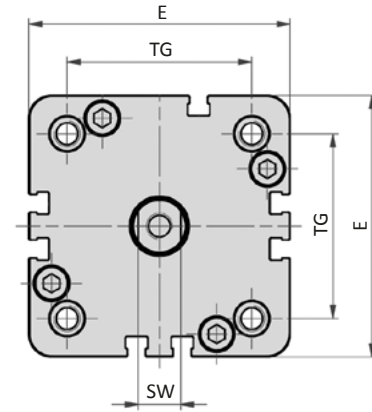
Ø 32-40



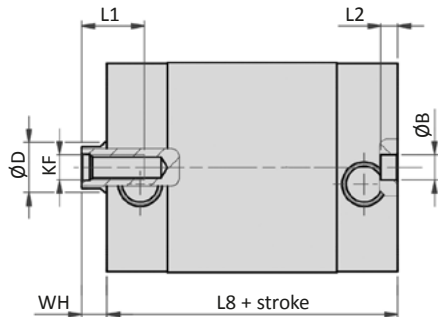
Ø 50



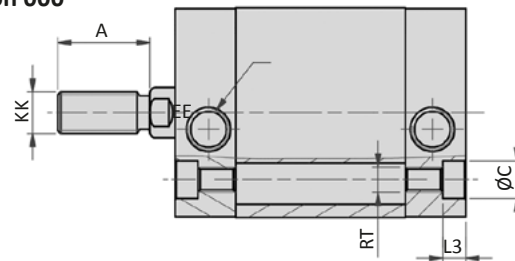
Ø 63 - 100



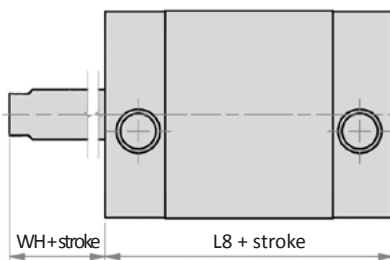
Version 010



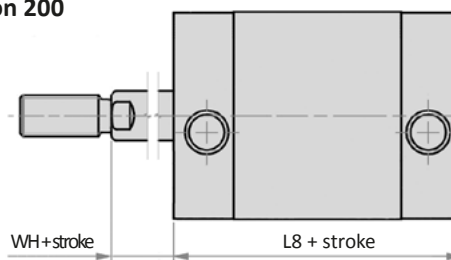
Version 000



Version 210



Version 200



Piston Ø	A	Ø B	Ø C	Ø D	E	EE	KF	KK	L1	L2	L3	L8*	L8**	RT	SW	TG	WH
12	16	6	6	8	29	M5	M3	M6	6	4	3.5	38	48	M4	5	18	4.5
16	20	6	6	8	29	M5	M4	M8	8	4	3.5	38	48	M4	6	18	4.5
20	22	6	7.5	10	36	M5	M5	M10 x 1.25	10	4	4.5	38	48	M5	8	22	4.5
25	22	6	7.5	10	40	M5	M5	M10 x 1.25	10	4	4.5	39.5	59.5	M5	8	26	5.5
32	22	6	9	12	50	G1/8	M6	M10 x 1.25	12	4	5.5	44.5	64.5	M6	10	32	6
40	22	6	9	12	58	G1/8	M6	M10 x 1.25	12	4	5.5	45.5	65.5	M6	10	42	6.5
50	24	6	10.5	16	67	G1/8	M8	M12 x 1.25	12	4	6.5	45.5	65.5	M8	13	50	7.5
63	24	8	13.5	16	80	G1/8	M8	M12 x 1.25	14	4	8.5	50	70	M10	13	62	7.5
80	32	8	13.5	20	100	G1/8	M10	M16 x 1.5	15	4	8.5	56	86	M10	17	82	8
100	40	8	13.5	25	124	G1/4	M12	M20 x 1.5	20	4	8.5	66.5	96.5	M10	22	103	10

* up to 30 mm stroke, ** from 35 mm stroke

Technical data

Model-no.:	NXE-	012-...	016-...	020-...	025-...	032-...	040-...	050-...	063-...	080-...	100-...
0 mm stroke (-x00)*		0.078	0.082	0.135	0.153	0.275	0.376	0.502	0.776	1.453	2.659
0 mm stroke (-x10)*		0.074	0.074	0.121	0.139	0.261	0.362	0.481	0.755	1.402	2.560
0 mm stroke (-x00)**		0.095	0.099	0.162	0.215	0.357	0.476	0.628	0.932	1.807	3.139
0 mm stroke (-x10)**		0.091	0.091	0.148	0.201	0.343	0.462	0.607	0.911	1.756	3.040
each 100 mm stroke		0.170	0.170	0.270	0.310	0.410	0.500	0.630	0.780	1.180	1.600

* up to 30 mm stroke, ** from 35 mm stroke

Model-no.:		NXE-012-xxx-0x0	NXE-016-xxx-0x0	NXE-020-xxx-0x0	NXE-025-xxx-0x0	NXE-032-xxx-0x0
Force at 6 bar and 5 mm stroke (N)	Extension	81 ... 83	81 ... 83	133 ... 136	224 ... 227	382 ... 386
	Retraction	26 ... 28	26 ... 28	34 ... 37	38 ... 41	48 ... 52
Force at 6 bar and 10 mm stroke (N)	Extension	81 ... 86	81 ... 86	133 ... 139	224 ... 230	382 ... 389
	Retraction	23 ... 28	23 ... 28	31 ... 37	35 ... 41	45 ... 52
Force at 6 bar and 15 mm stroke (N)	Extension	81 ... 88	81 ... 88	133 ... 142	224 ... 233	382 ... 393
	Retraction	21 ... 28	21 ... 28	28 ... 37	32 ... 41	41 ... 52
Force at 6 bar and 20 mm stroke (N)	Extension	81 ... 90	81 ... 90	133 ... 145	224 ... 236	382 ... 397
	Retraction	19 ... 28	19 ... 28	25 ... 37	29 ... 41	38 ... 52
Force at 6 bar and 25 mm stroke (N)	Extension	81 ... 92	81 ... 92	133 ... 148	224 ... 239	382 ... 400
	Retraction	17 ... 28	17 ... 28	22 ... 37	26 ... 41	34 ... 52

Model-no.:		NXE-040-xxx-0x0	NXE-050-xxx-0x0	NXE-063-xxx-0x0	NXE-080-xxx-0x0	NXE-100-xxx-0x0
Force at 6 bar and 5 mm stroke (N)	Extension	611 ... 616	992 ... 997	1588 ... 1594	2568 ... 2574	4031 ... 4041
	Retraction	63 ... 68	67 ... 75	89 ... 95	140 ... 147	200 ... 210
Force at 6 bar and 10 mm stroke (N)	Extension	611 ... 621	992 ... 1003	1588 ... 1600	2568 ... 2580	4031 ... 4051
	Retraction	58 ... 68	61 ... 75	83 ... 95	134 ... 147	190 ... 210
Force at 6 bar and 15 mm stroke (N)	Extension	611 ... 626	992 ... 1008	1588 ... 1606	2568 ... 2586	4031 ... 4061
	Retraction	53 ... 68	56 ... 75	77 ... 95	128 ... 147	180 ... 210
Force at 6 bar and 20 mm stroke (N)	Extension	611 ... 631	992 ... 1013	1588 ... 1612	2568 ... 2593	4031 ... 4071
	Retraction	48 ... 68	51 ... 75	71 ... 95	121 ... 147	170 ... 210
Force at 6 bar and 25 mm stroke (N)	Extension	611 ... 636	992 ... 1018	1588 ... 1618	2568 ... 2599	4031 ... 4081
	Retraction	43 ... 68	45 ... 75	65 ... 95	115 ... 147	160 ... 210

Model-no.:		NXE-012-xxx-2x0	NXE-016-xxx-2x0	NXE-020-xxx-2x0	NXE-025-xxx-2x0	NXE-032-xxx-2x0
Force at 6 bar and 5 mm stroke (N)	Extension	26 ... 28	26 ... 28	34 ... 37	38 ... 41	48 ... 52
	Retraction	53 ... 55	53 ... 55	133 ... 136	224 ... 227	382 ... 386
Force at 6 bar and 10 mm stroke (N)	Extension	23 ... 28	23 ... 28	31 ... 37	35 ... 41	45 ... 52
	Retraction	53 ... 58	53 ... 58	133 ... 139	224 ... 230	382 ... 389
Force at 6 bar and 15 mm stroke (N)	Extension	21 ... 28	21 ... 28	28 ... 37	32 ... 41	41 ... 52
	Retraction	53 ... 60	53 ... 60	133 ... 142	224 ... 233	382 ... 393
Force at 6 bar and 20 mm stroke (N)	Extension	19 ... 28	19 ... 28	25 ... 37	29 ... 41	38 ... 52
	Retraction	53 ... 62	53 ... 62	133 ... 145	224 ... 236	382 ... 397
Force at 6 bar and 25 mm stroke (N)	Extension	17 ... 28	17 ... 28	22 ... 37	26 ... 41	34 ... 52
	Retraction	53 ... 64	53 ... 64	133 ... 148	224 ... 239	382 ... 400

Model-no.:		NXE-040-xxx-2x0	NXE-050-xxx-2x0	NXE-063-xxx-2x0	NXE-080-xxx-2x0	NXE-100-xxx-2x0
Force at 6 bar and 5 mm stroke (N)	Extension	63 ... 68	67 ... 75	89 ... 95	140 ... 147	200 ... 210
	Retraction	611 ... 616	992 ... 997	1588 ... 1594	2568 ... 2574	4031 ... 4041
Force at 6 bar and 10 mm stroke (N)	Extension	58 ... 68	61 ... 75	83 ... 95	134 ... 147	190 ... 210
	Retraction	611 ... 621	992 ... 1003	1588 ... 1600	2568 ... 2580	4031 ... 4051
Force at 6 bar and 15 mm stroke (N)	Extension	53 ... 68	56 ... 75	77 ... 95	128 ... 147	180 ... 210
	Retraction	611 ... 626	992 ... 1008	1588 ... 1606	2568 ... 2586	4031 ... 4061
Force at 6 bar and 20 mm stroke (N)	Extension	48 ... 68	51 ... 75	71 ... 95	121 ... 147	170 ... 210
	Retraction	611 ... 631	992 ... 1013	1588 ... 1612	2568 ... 2593	4031 ... 4071
Force at 6 bar and 25 mm stroke (N)	Extension	43 ... 68	45 ... 75	65 ... 95	115 ... 147	160 ... 210
	Retraction	611 ... 636	992 ... 1018	1588 ... 1618	2568 ... 2599	4031 ... 4081

Series NXE

Single acting

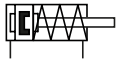
Technical details

Operating pressure	1 ... 10 bar
Temperature range	-10°C ... +80°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Cylinder tube: Al (anodized) End caps: Al (anodized) Piston rod: stainless steel Seals: PU, NBR (optional FKM)



Single acting pneumatic cylinder with magnetic piston for proximity sensors and built-in cushioning rings. Standard stroke lengths in table below, additional lengths on request.

Versions

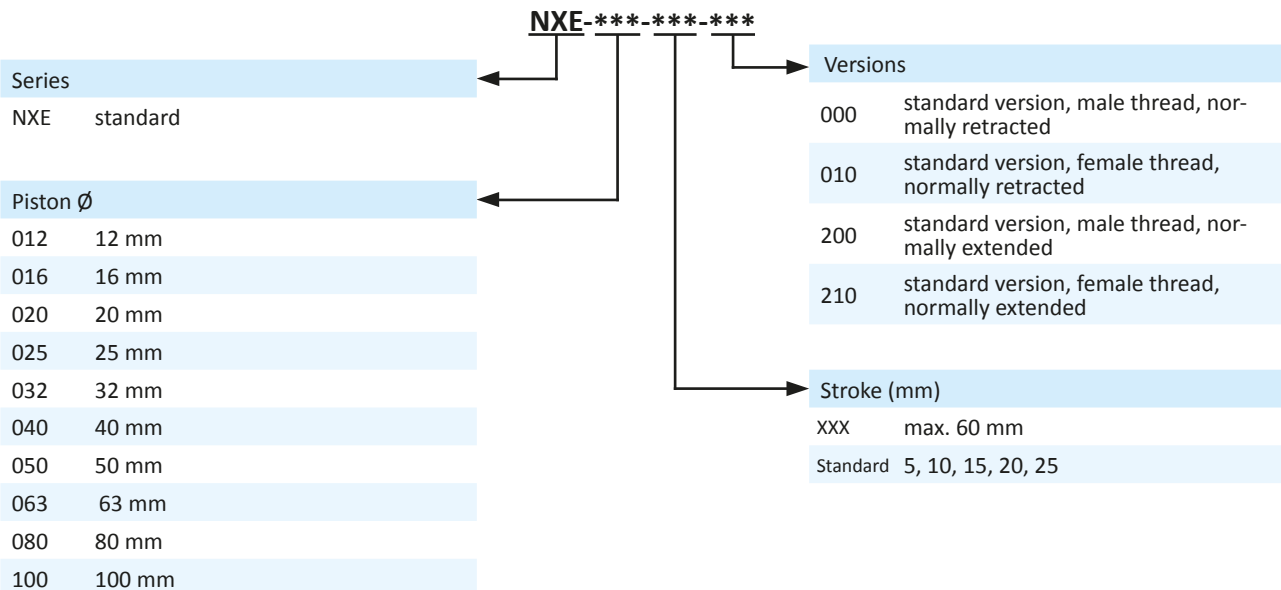


000, 010
single acting, built-in cushioning rings,
with magnetic piston,
normally retracted



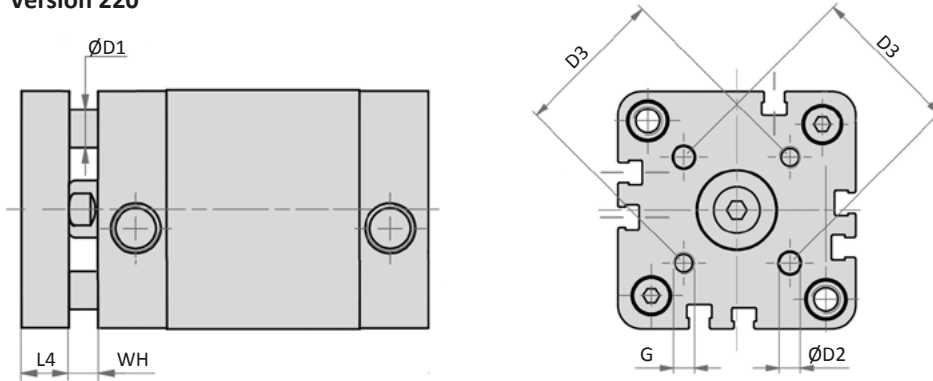
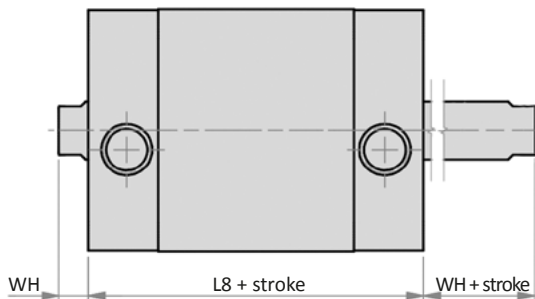
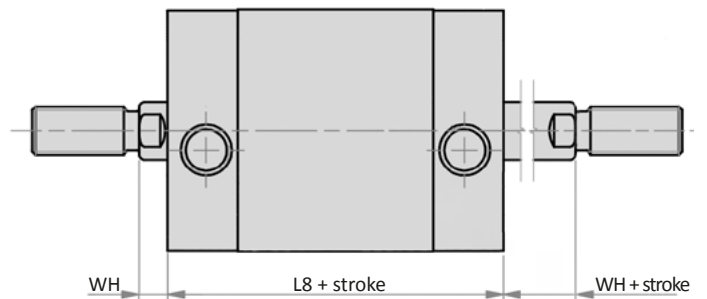
200, 210
single acting, built-in cushioning rings,
with magnetic piston,
normally extended

Order code



Model-no.:	NXE-012-...	NXE-016-...	NXE-020-...	NXE-025-...	NXE-032-...
Piston Ø (mm)	12	16	20	25	32
Connection	M5	M5	M5	M5	G1/8
Piston rod thread	male M6 female M3	M8 M4	M10 x 1.25 M5	M10 x 1.25 M5	M10 x 1.25 M6

Model-no.:	NXE-040-...	NXE-050-...	NXE-063-...	NXE-080-...	NXE-100-...
Piston Ø (mm)	40	50	63	80	100
Connection	G1/8	G1/8	G1/8	G1/8	G1/4
Piston rod thread	male M10 x 1.25 female M6	M12 x 1.25 M8	M12 x 1.25 M8	M16 x 1.5 M10	M20 x 1.5 M12

Dimensions series NXD (Versions 220, 600 and 610)
Version 220

Version 610

Version 600


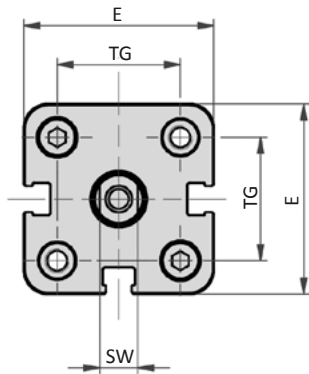
Piston Ø	Ø D1	Ø D2	D3	G	L4	L8	WH
12	-	-	-	-	-	38	4.5
16	5	3	14	M3	6	38	4.5
20	5	4	17	M4	8	38	4.5
25	6	5	22	M5	8	39.5	5.5
32	8	5	28	M5	10	44.5	6
40	10	5	33	M5	10	45.5	6.5
50	10	6	42	M6	12	45.5	7.5
63	10	6	50	M6	12	50	7.5
80	14	8	65	M8	14	56	8
100	14	10	80	M10	14	66.5	10

Series NXD

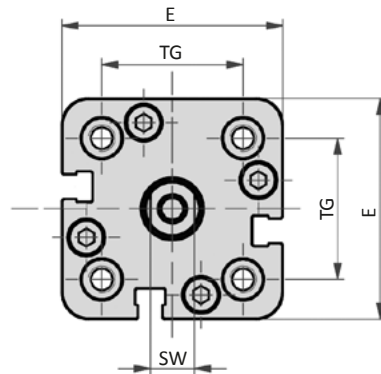
Double acting

Dimensions series NXD (versions 200 and 210)

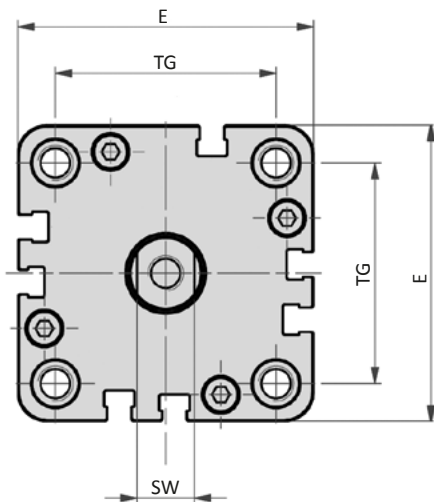
∅ 12 - 25



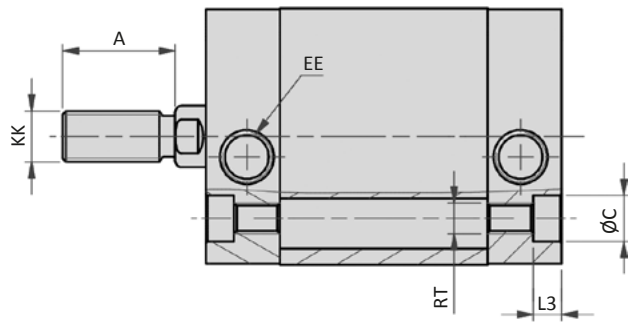
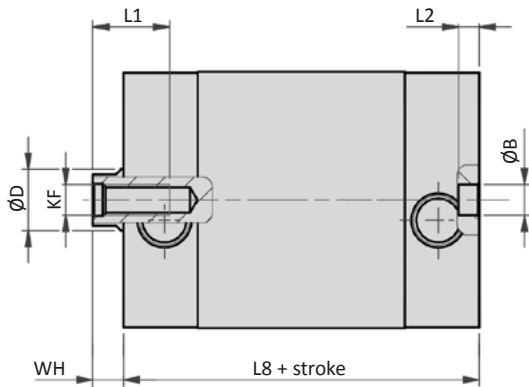
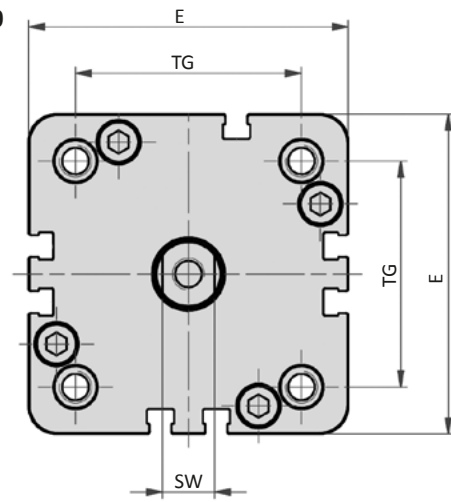
∅ 32 - 40



∅ 50



∅ 63 - 100



Piston ∅	A	∅ B	∅ C	∅ D	E	EE	KF	KK	L1	L2	L3	L8	RT	SW	TG	WH
12	16	6	6	8	29	M5	M3	M6	6	4	3.5	38	M4	5	18	4.5
16	20	6	6	8	29	M5	M4	M8	8	4	3.5	38	M4	6	18	4.5
20	22	6	7.5	10	36	M5	M5	M10 x 1.25	10	4	4.5	38	M5	8	22	4.5
25	22	6	7.5	10	40	M5	M5	M10 x 1.25	10	4	4.5	39.5	M5	8	26	5.5
32	22	6	9	12	50	G1/8	M6	M10 x 1.25	12	4	5.5	44.5	M6	10	32	6
40	22	6	9	12	58	G1/8	M6	M10 x 1.25	12	4	5.5	45.5	M6	10	42	6.5
50	24	6	10.5	16	67	G1/8	M8	M12 x 1.25	12	4	6.5	45.5	M8	13	50	7.5
63	24	8	13.5	16	80	G1/8	M8	M12 x 1.25	14	4	8.5	50	M10	13	62	7.5
80	32	8	13.5	20	100	G1/8	M10	M16 x 1.5	15	4	8.5	56	M10	17	82	8
100	40	8	13.5	25	124	G1/4	M12	M20 x 1.5	20	4	8.5	66.5	M10	22	103	10

Technical data

Model-no.:	NXD-012-...	NXD-016-...	NXD-020-...	NXD-025-...	NXD-032-...	
Piston Ø (mm)	12	16	20	25	32	
Force at 6 bar (N)	Extension	109	109	170	265	434
	Retraction	81	81	127	223	373
Connection	M5	M5	M5	M5	G1/8	
Piston rod thread	male	M6	M8	M10 x 1.25	M10 x 1.25	M10 x 1.25
	female	M3	M4	M5	M5	M6

Model-no.:	NXD-040-...	NXD-050-...	NXD-063-...	NXD-080-...	NXD-100-...	
Piston Ø (mm)	40	50	63	80	100	
Force at 6 bar (N)	Extension	678	1060	1682	2713	4239
	Retraction	617	951	1574	2543	3974
Connection	G1/8	G1/8	G1/8	G1/8	G1/4	
Piston rod thread	male	M10 x 1.25	M12 x 1.25	M12 x 1.25	M16 x 1.5	M20 x 1.5
	female	M6	M8	M8	M10	M12

Piston Ø (mm)	12	16	20	25	32	40	50	63	80	100	
Weight (kg)	0 mm stroke (-200)	0.078	0.082	0.135	0.153	0.275	0.376	0.502	0.776	1.453	2.659
	0 mm stroke (-210)	0.074	0.074	0.121	0.139	0.261	0.362	0.481	0.755	1.402	2.560
	each 100 mm stroke	0.170	0.170	0.270	0.310	0.410	0.500	0.630	0.780	1.180	1.600

Piston Ø (mm)	16	20	25	32	40	50	63	80	100	
Weight (kg)	0 mm stroke (-220)	0.097	0.150	0.195	0.335	0.461	0.636	0.976	1.845	3.190
	each 100 mm stroke	0.200	0.300	0.350	0.530	0.620	0.750	0.900	1.420	1.840

Piston Ø (mm)	12	16	20	25	32	40	50	63	80	100	
Weight (kg)	0 mm stroke (-600)	0.097	0.108	0.170	0.188	0.325	0.426	0.591	0.865	1.617	2.958
	0 mm stroke (-610)	0.092	0.092	0.143	0.161	0.298	0.399	0.548	0.822	1.516	2.760
	each 100 mm stroke	0.210	0.210	0.330	0.370	0.500	0.590	0.790	0.940	1.430	1.980

Series NXD

Double acting

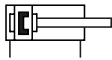
Technical details

Operating pressure	1 ... 10 bar
Temperature range	-10°C ... +80°C (NXDH: 0°C ... +150°C)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Cylinder tube: Al (anodized) End caps: Al (anodized) Piston rod: stainless steel Seals: PU, NBR (optional FKM)

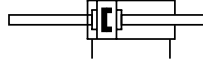


Double acting pneumatic cylinder with magnetic piston for proximity sensors and built-in cushioning rings. Standard stroke lengths in table below, additional lengths on request.

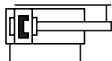
Versions



200, 210
double acting, built-in cushioning rings, with magnetic piston

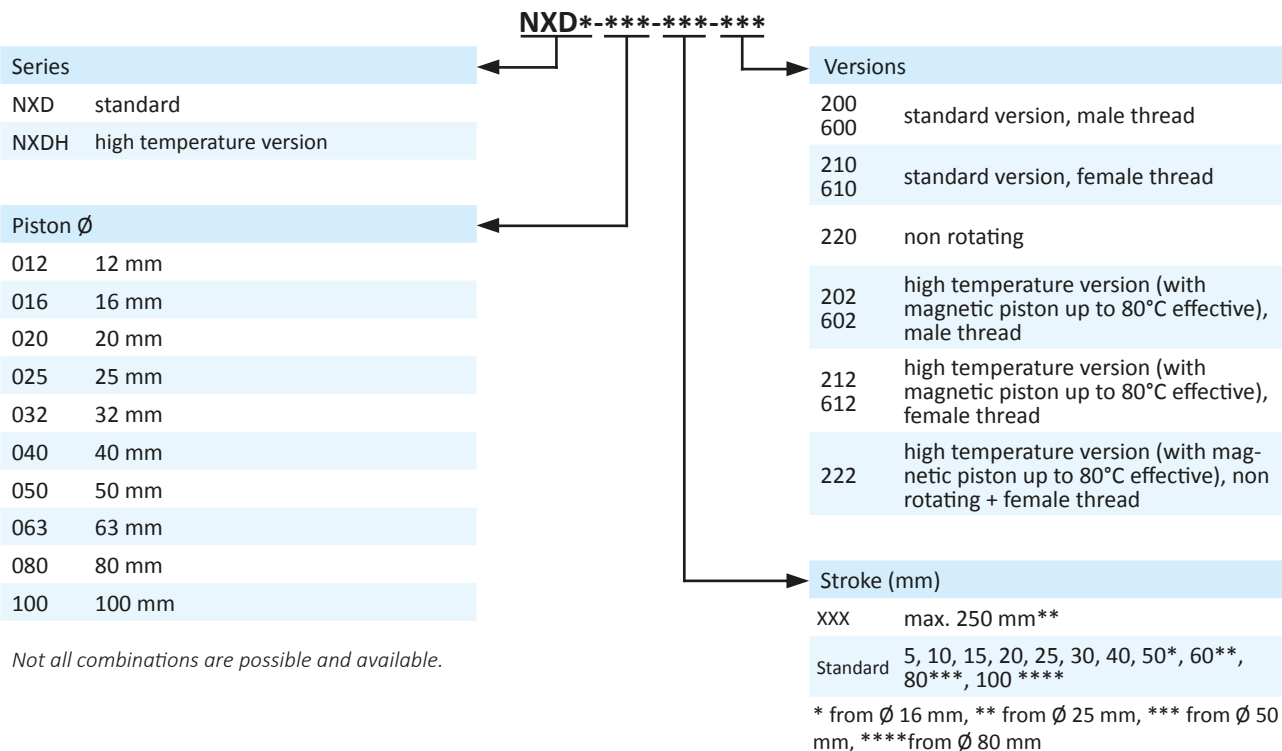


600, 610
double acting, double end piston rod, built-in cushioning rings, with magnetic piston



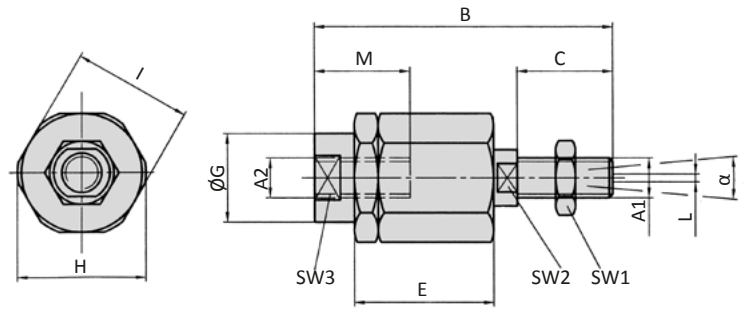
220
double acting, non rotating, built-in cushioning rings, with magnetic piston

Order code



Not all combinations are possible and available.

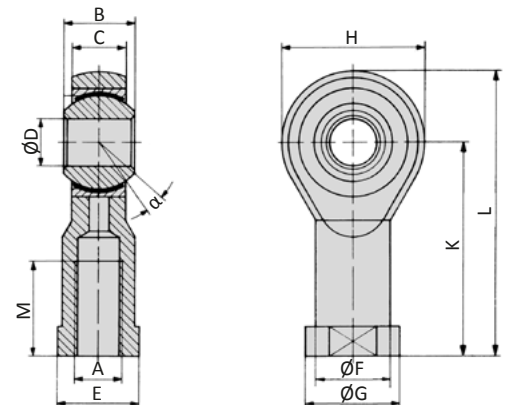
FK-xx Flexible coupling



Model-no.:	for cylinder	A1, A2	B	C	D	E	ØG	H	I	L	M	SW1	SW2	SW3	α
FK-20	20. 25	M8	57	21	5	26	12.5	19	17	2	16	13	7	11	8°
FK-32	32. 40	M10 x 1.25	71.5	20	7.5	35	22	32	30	2	22	17	12	19	8°
FK-40	50. 63	M12 x 1.25	71.5	20	7.5	35	22	32	30	2	22	19	12	19	8°
FK-63	80. 100	M16 x 1.5	104	32	10	53	32	45	41	2	30	24	20	27	6°
FK-80	125	M20 x 1.5	119	40	10	53	32	45	41	2	37	30	20	27	6°

Material: steel, zinc plated

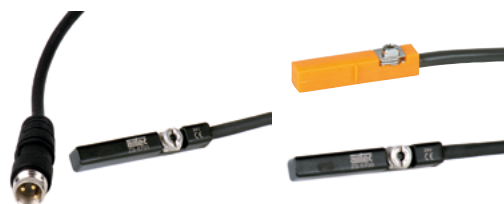
RO-xx, FO-xx Rod eye



Model-no.:	for cylinder	A	B	C	ØD	E	ØF	ØG	H	K	L	M	α
RO-20	20. 25	M8	12	9	8	14	12.5	16	24	36	48	16	14°
RO-25	32. 40	M10 x 1.25	14	10.5	10	17	15	19	28	43	57	20	13°
FO-40	50. 63	M12 x 1.25	16	12	12	19	17.5	22	32	50	66	22	13°
FO-63	80. 100	M16 x 1.5	21	15	16	22	22	27	42	64	85	28	15°
FO-80	125	M20 x 1.5	25	18	20	30	27.5	34	50	77	102	33	14°

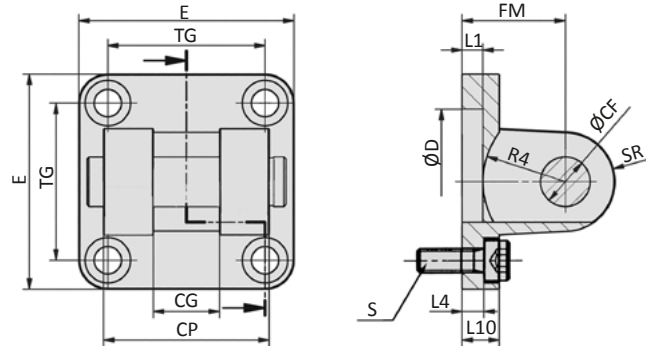
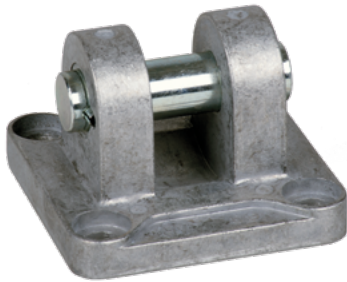
Materials: steel, zinc plated, bearing steel, bronze bushing

Proximity sensors



Series NYD Mounting accessories

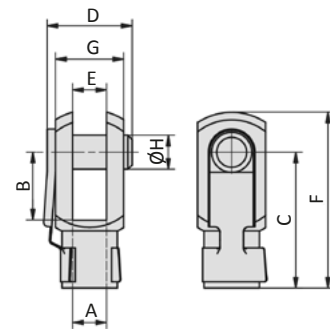
XLB-xxx-14 Clevis mount small with pin



Model-no.:	Ø CF	CG	CP	Ø D	E	FM	L1	L4	L10	R4	S	SR	TG
XLB-032-14	10	14	34	30	45	22	5	5.5	9	17	M6 x 20	10	32.5
XLB-040-14	12	16	40	35	52	25	5	5.5	9	20	M6 x 20	12	38
XLB-050-14	16	21	45	40	65	27	5	6.5	11	22	M8 x 20	14	46.5
XLB-063-14	16	21	51	45	75	32	5	6.5	11	25	M8 x 20	18	56.5
XLB-080-14	20	25	65	45	95	36	5	10	14	30	M10 x 25	20	72
XLB-100-14	20	25	75	55	115	41	5	10	14	32	M10 x 25	22	89
XLB-125-14	30	37	97	60	140	50	7	10	20	42	M12 x 25	25	110*
<i>tolerances and adjustments</i>	F7	D10	d12	H11		± 0.2		± 0.5					± 0.2 *± 0.3

Materials: Al, bushing steel and PTFE, Clevis pin aus steel, zinc plated; 4 screws in accordance with EN ISO 4762 are included.

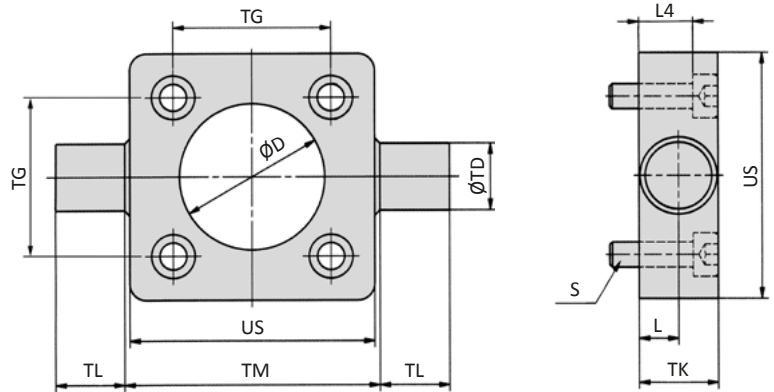
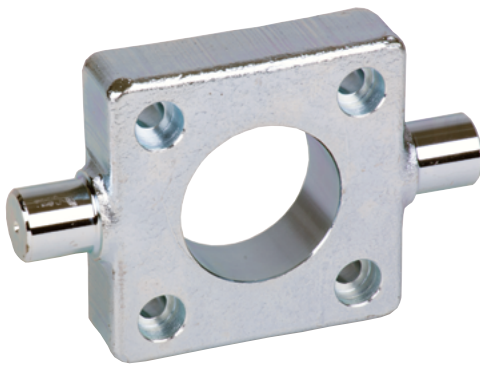
RD-xx, FD-xx Rod clevis



Model-no.:	for cylinder Ø	A	B	C	D	E	F	G	Ø H
RD-20	20. 25	M8	16	32	22	8	42	16	8
RD-25	32. 40	M10 x 1.25	20	40	26	10	52	20	10
FD-40	50. 63	M12 x 1.25	24	48	32	12	62	24	12
FD-63	80. 100	M16 x 1.5	32	64	40	16	83	32	16
FD-80	125	M20 x 1.5	40	80	50	20	105	40	20

Material: steel, zinc plated

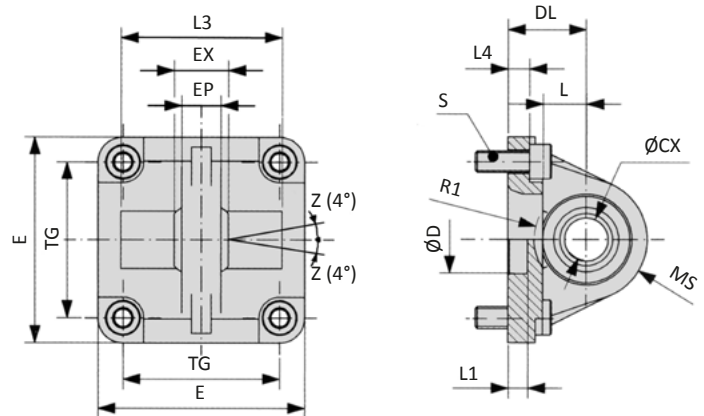
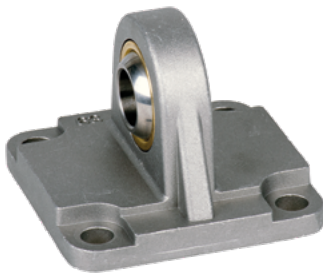
XLB-xxx-11 Trunnion mount



Model-no.:	Ø D	L	L4	S	Ø TD	TG	TK	TL	Ø TM	US
XLB-032-11	30	6.5	8	M6 x 20	12	32.5	14	12	50	46
XLB-040-11	35	9	13	M6 x 25	16	38	19	16	63	59
XLB-050-11	40	9	11	M8 x 25	16	46.5	19	16	75	69
XLB-063-11	45	11.5	16	M8 x 30	20	56.5	24	20	90	84
XLB-080-11	45	11.5	14	M10 x 30	20	72	24	20	110	102
XLB-100-11	55	14	19	M10 x 35	25	89	29	25	132	125
XLB-125-11	60	15	18	M12 x 35	25	110*	30	25	160	150
<i>tolerances and adjustments</i>	H 11	+ 0.2			e9	± 0.2 *± 0.3		h14	h14	

Material: steel, zinc plated; 4 screws in accordance with EN ISO 4762 are included.

XLB-xxx-12 Swivel mount with spherical bearing

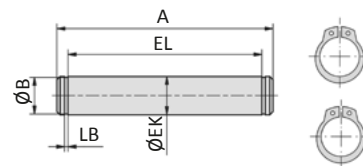


Model-no.:	Ø CX	Ø D	DL	E	EP	EX	L	L1	L3	L4	MS	R1	S	TG	
XLB-032-12	10	30	22	45	10.5	14	12	7	-	5.5	16	-	M6 x 20	32.5	
XLB-040-12	12	35	25	52	12	16	15	7	-	5.5	18	-	M6 x 20	38	
XLB-050-12	16	40	27	65	15	21	15	7	51	6.5	21	19	M8 x 20	46.5	
XLB-063-12	16	45	32	75	15	21	20	7	-	6.5	23	-	M8 x 20	56.5	
XLB-080-12	20	45	36	95	18	25	20	9	74	10	28	24	M10 x 25	72	
XLB-100-12	20	55	41	115	18	25	25	9	-	10	30	-	M10 x 25	89	
XLB-125-12	30	60	50	140	25	37	30	9	-	10	40	-	M12 x 25	110*	
<i>tolerances and adjustments</i>	H7	H11	± 0.2												± 0.2 *± 0.3

Materials: Al, bearing steel, bronze bushing; 4 screws in accordance with EN ISO 4762 are included.

Series NYD Mounting accessories

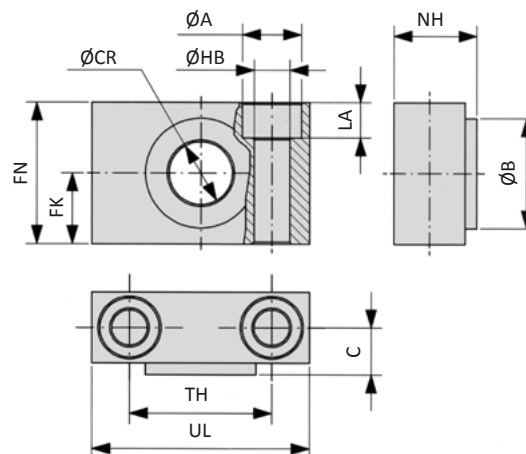
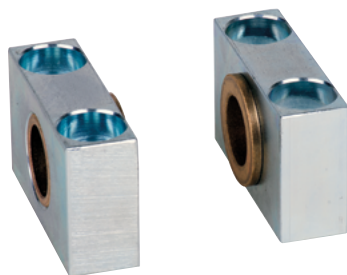
XLB-xxx-08 Clevis pin



Model-no.:	A	Ø B	Ø EK	EL	LB
XLB-032-08	53	9.6	10	46	1.1
XLB-040-08	60	11.5	12	53	1.1
XLB-050-08	68	11.5	12	61	1.1
XLB-063-08	78	15.2	16	71	1.1
XLB-080-08	98	15.2	16	91	1.1
XLB-100-08	118	19	20	111	1.3
XLB-125-08	139	23.9	25	132*	1.3
<i>tolerances and adjustments</i>			e8	+2 *+3	

Material: steel, zinc plated; 2 snap rings are included.

XLB-xxx-09 Bearing block

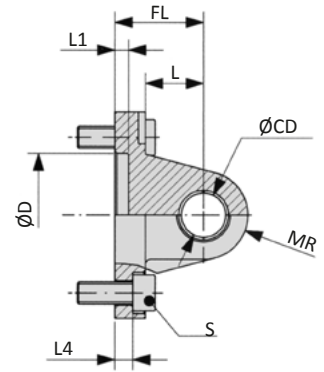
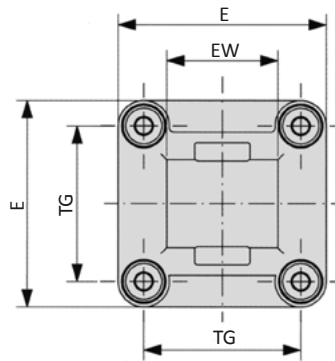


Model-no.:	Ø A	Ø B	C	Ø CR	FK	FN	Ø HB	LA	NH	TH	UL
XLB-032-09	11	22	10.5	12	15	30	6.6	7	18	32	46
XLB-040-09	15	28	12	16	18	36	9	9	21	36	55
XLB-063-09	18	32	13	20	20	40	11	11	23	42	65
XLB-100-09	20	39	16	25	25	50	14	13	28.5	50	75
<i>tolerances and adjustments</i>				H9	± 0.1		H13			± 0.2	

Materials: Al, bronze bushing

Series NYD Mounting accessories

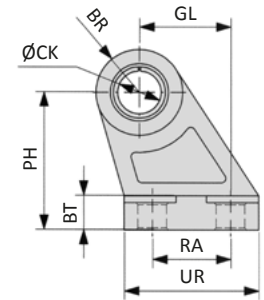
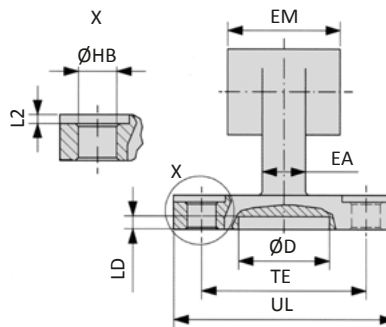
NXB-xxx-04, XLB-xxx-05 Swivel mount



Model-no.:	Ø CD	Ø D	E	EW	FL	L	L1	L4	MR	S	TG	
NXB-020-04	8	12	34	16	20	14	3	2.6	8	M5 x 16	22	
NXB-025-04	8	12	38	16	20	14	3	2.6	8	M5 x 16	26	
XLB-032-05	10	30	45	26	22	13	5	5.5	10	M6 x 20	32.5	
XLB-040-05	12	35	52	28	25	16	5	5.5	12	M6 x 20	38	
XLB-050-05	12	40	65	32	27	16	5	6.5	12	M8 x 20	46.5	
XLB-063-05	16	45	75	40	32	21	5	6.5	16	M8 x 20	56.5	
XLB-080-05	16	45	95	50	36	22	5	10	16	M10 x 25	72	
XLB-100-05	20	55	115	60	41	27	5	10	20	M10 x 25	89	
XLB-125-05	25	60	140	70	50	30	7	10	25	M12 x 25	110*	
<i>tolerances and adjustments</i>	H9	H11				± 0.2			± 0.5			± 0.2 *± 0.3

Materials: Al, bushing steel and PTFE (only XLB); 4 screws in accordance with EN ISO 4762 are included.

XLB-xxx-06 Swivel mount 90°

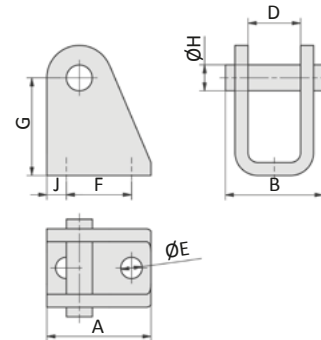


Model-no.:	BR	BT	ØCK	Ø D	EA	EM	GL	ØHB	L2	LD	PH	RA	TE	UL	UR
XLB-032-06	10	8	10	21	10	26	21	6.6	1.6	3	32	18	38	51	31
XLB-040-06	11	10	12	21	15	28	24	6.6	1.6	3	36	22	41	54	35
XLB-050-06	13	12	12	21	16	32	33	9	1.6	3	45	30	50	65	45
XLB-063-06	15	14	16	21	16	40	37	9	1.6	3	50	35	52	67	50
XLB-080-06	15	14	16	21	20	50	47	11	2.5	3	63	40	66	86	60
XLB-100-06	19	17	20	21	20	60	55	11	2.5	3	71	50	76	96	70
XLB-125-06	22.5	20	25	21	30	70	70	14	3.2	3	90	60	94	124	90
<i>tolerances and adjustments</i>			H9				JS14	H13			JS15	JS14	JS14		

Material: Al, bushing steel and PTFE

Series NYD Mounting accessories

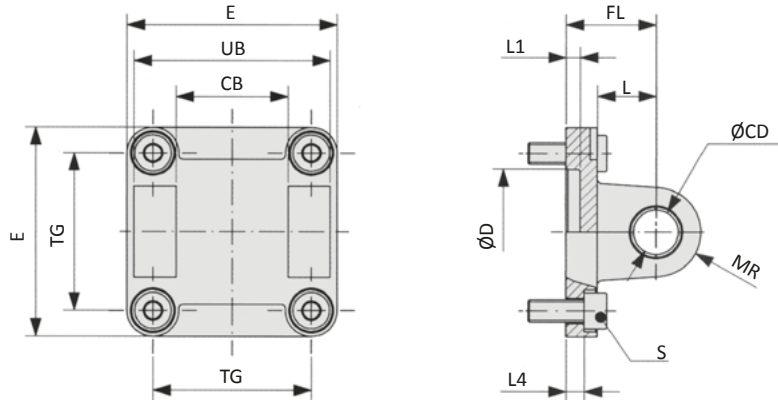
RC-xx Clevis mount



Model-no.:	A	B	D	ØE	F	G	ØH	J
RC-30	32	30	16.1	6.6	20	30	8	6

Material: steel, zinc plated, 2 snap rings are included.

XLB-xxx-04 Clevis mount with bushing

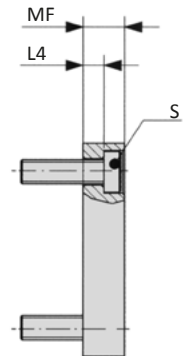
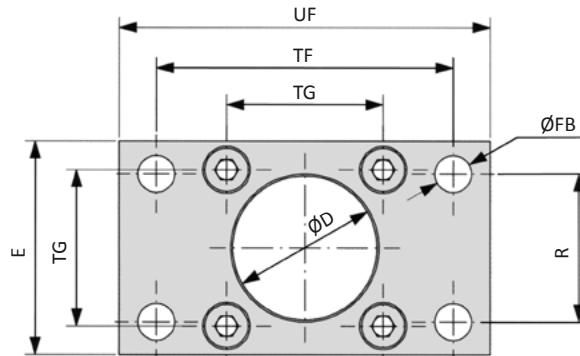
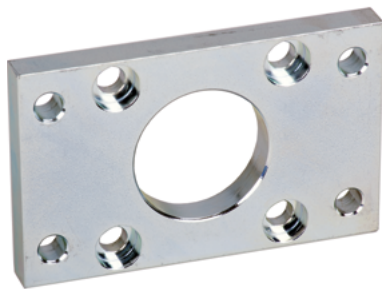
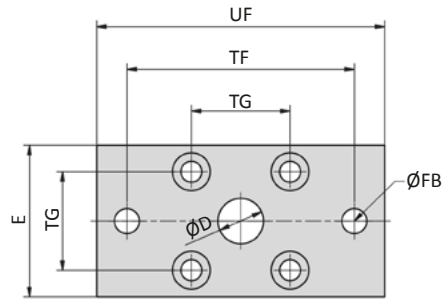


Inclusive clevis pin
order no: **XLB-xxx-48**

Model-no.:	CB	ØCD	ØD	E	FL	L	L1	L4	MR	S	TG	UB
XLB-032-04	26	10	30	45	22	13	5	5.5	10	M6 x 20	32.5	45
XLB-040-04	28	12	35	52	25	16	5	5.5	12	M6 x 20	38	52
XLB-050-04	32	12	40	65	27	16	5	6.5	12	M8 x 20	46.5	60
XLB-063-04	40	16	45	75	32	21	5	6.5	16	M8 x 20	56.5	70
XLB-080-04	50	16	45	95	36	22	5	10	16	M10 x 25	72	90
XLB-100-04	60	20	55	115	41	27	5	10	20	M10 x 25	89	110
XLB-125-04	70	25	60	140	50	30	7	10	25	M12 x 25	110*	130
<i>tolerances and adjustments</i>	H14	H9	H11		± 0.2			± 0.5			± 0.2 * ± 0.3	h13

Materials: Al, bushing steel and PTFE; 4 screws in accordance with EN ISO 4762 are included.

NXB-xxx-02, XLB-xxx-02 Flange mount



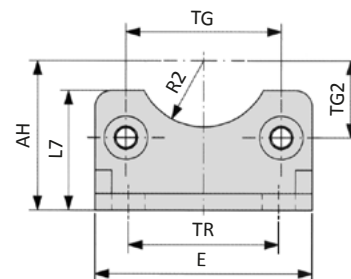
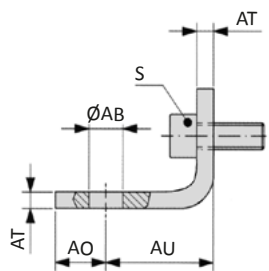
Model-no.:	Ø D	E	Ø FB	L4	MF	R	S	TF	TG	UF
NXB-020-02	12	36	6.6	4.6	10	-	M5 x 20	55*	22	70
NXB-025-02	12	40	6.6	4.6	10	-	M5 x 20	60*	26	76
XLB-032-02	30	45	7	5	10	32	M6 x 20	64	32.5	80
XLB-040-02	35	52	9	5	10	36	M6 x 20	72	38	90
XLB-050-02	40	65	9	6.5	12	45	M8 x 20	90	46.5	110
XLB-063-02	45	75	9	6.5	12	50	M8 x 20	100	56.5	120
XLB-080-02	45	95	12	9	16	63	M10 x 25	126	72	150
XLB-100-02	55	115	14	9	16	75	M10 x 25	150	89	170
XLB-125-02	60	140	16	10.5	20	90	M12 x 25	180	110*	205
<i>tolerances and adjustments</i>	H11		H13	-0.5	JS14	JS14		*JS13 JS14	± 0.2 *± 0.3	

Material: steel, zinc plated; 4 screws in accordance with DIN 7984 are included.

Series NYD

Mounting accessories

XLB-xxx-01 Foot mount



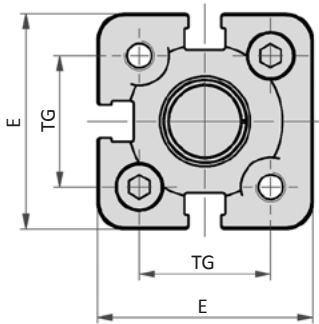
Model-no.:	Ø AB	AH	AO	AU	AT	E	L7	R2	S	TG	TG2	TR
XLB-032-01	7	32	11	24	4	45	30	15	M6 x 16	32.5	16.25	32
XLB-040-01	10	36	8	28	4	52	30	17.5	M6 x 16	38	19	36
XLB-050-01	10	45	15	32	5	65	36	20	M8 x 20	46.5	23.25	45
XLB-063-01	10	50	13	32	5	75	35	22.5	M8 x 20	56.5	28.25	50
XLB-080-01	12	63	14	41	6	95	47	22.5	M10 x 20	72	36	63
XLB-100-01	14.5	71	16	41	6	115	53	27.5	M10 x 20	89	44.5	75
XLB-125-01	16.5	90	25	45	8	140	70	30	M12 x 25	110*	55	90
<i>tolerances and adjustments</i>	H14	JS16		± 0.2				H15		± 0.2 *± 0.3		JS14

Material: steel, zinc plated; 2 x 2 screws in accordance with EN ISO 4762 are included.

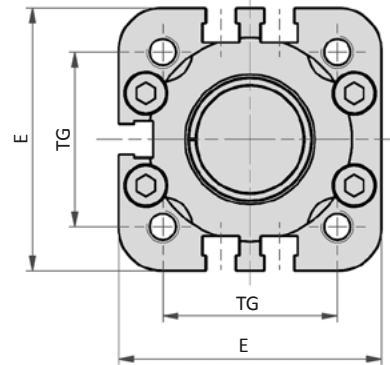
Series NYSE Stopper cylinders, single acting

Dimensions series NYSE and NYSER

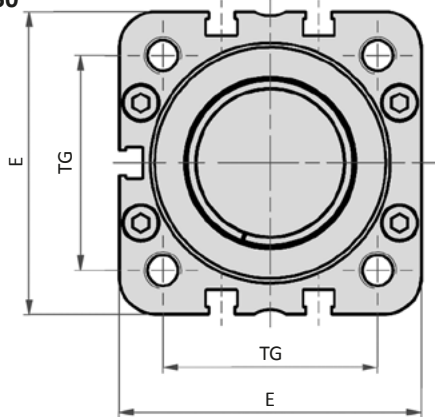
Ø 20



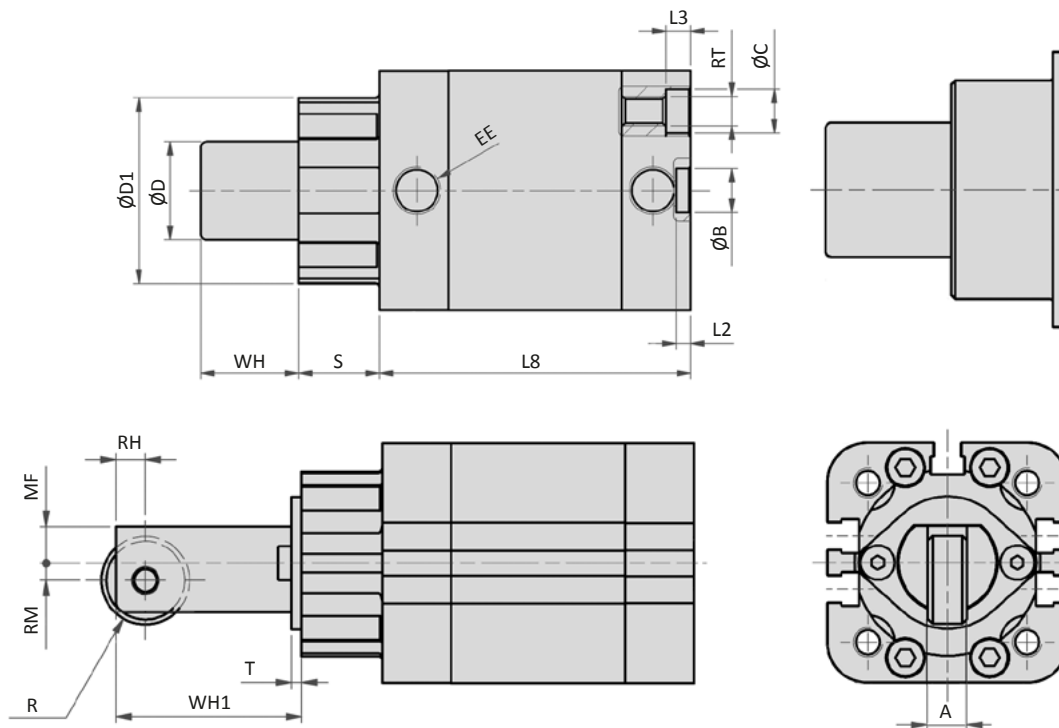
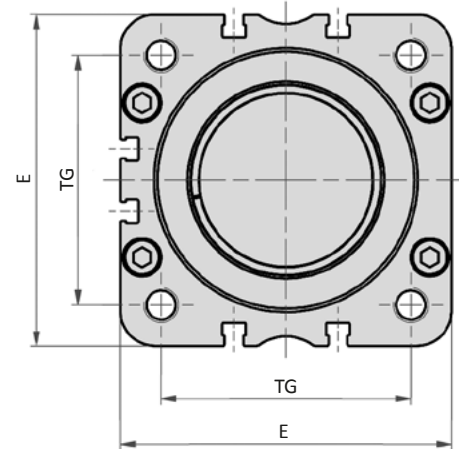
Ø 32



Ø 50



Ø 80



Piston Ø	A	Ø B	Ø C	Ø D	Ø D1	E	EE	L2	L3	L8	MF	R	RH	RM	RT	S	T	TG	WH	WH1
20	4	9	7.5	12	26	36	M5	3	4.5	53	4.5	5	3	2	M5	11.5	2	22	15	24
32	8	9	9	20	38	49	G1/8	3	5	64	7.5	9	6	3.5	M6	16.5	2	32.5	20	38
50	10	12	10.5	32	52	65.5	G1/8	4	5	75	12	12.5	6	7	M8	24.5	2	46.5	30	50.5
80	18	12	13.5	50	76	95.5	G1/8	4	4	126	18	18	10	11	M10	15	3	72	30	63

Series NYSE

Stopper cylinders, single acting

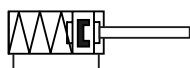
Technical details

Operating pressure	2 ... 10 bar
Temperature range	-20°C ... +80°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Cylinder tube: Al (anodized) End caps: Al (anodized) Piston rod: stainless steel Seals: PU, NBR (optional FKM)



Single acting compact cylinders with magnetic piston, built-in cushioning rings and return spring.

Versions



280
single acting, built-in cushioning rings,
with magnetic piston,
normally extended



The cylinders are suitable as double acting as well.

Order code

Series		Versions	
NYSE	standard	280	standard version, without thread, normally extended
NYSER	with roller		
Piston Ø		Stroke (mm)	
020	20 mm	XXX	standard stroke length
032	32 mm	015	15 mm, for Ø 20 mm
050	50 mm	020	20 mm, for Ø 32 mm
080	80 mm	030	30 mm, for Ø 50 and 80 mm

NYSE*-*-***-*****

Technical data

Model-no.:	NYSE*-020-...	NYSE*-032-...	NYSE*-050-...	NYSE*-080-...
Piston Ø (mm)	20	32	50	80
Stroke (mm)	15	20	30	30
Connection	M5	G1/8	G1/8	G1/8
Spring force (N)	min.	28	36	49
	max	36	51	78
Weight (kg)	NYSE	0.20	0.40	1.04
	NYSER	0.24	0.46	1.30