

**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm  
Double acting with permanent magnet**

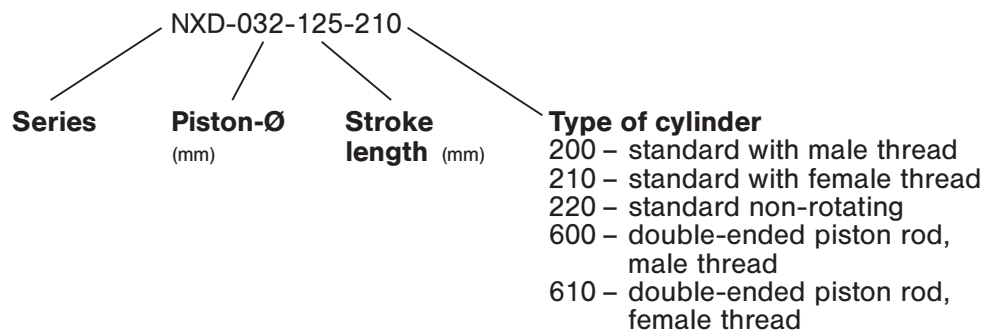


**Technical data for series**

**NXD**



**Order code**



**Design and function**

Double acting pneumatic cylinder with permanent magnet for proximity sensors and built-in cushioning rings. Cylinder end caps are connected with the Al-profile tube by mounting screws.

Order number Please complete according to order code.	NXD-012-...	NXD-016-...	NXD-020-...	NXD-025-...	NXD-032-...	NXD-040-...	NXD-050-...	NXD-063-...	NXD-080-...	NXD-100-...
<b>Piston-Ø mm*</b>	16	20	25	32	40	50	63	80	100	
<b>Connection</b>	M5 (10/32 UNF)				G 1/8	G 1/8	G 1/8	G 1/8	G 1/8	G 1/4
<b>Inside thread</b>	M3	M4	M5 (10/32 UNF)		M6	M6	M8	M8	M10	M12
<b>Outer thread</b>	M6	M8	M10x1.25	M10x1.25	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M20x1.5
<b>Operating pressure</b>	1.5 ... 10 bar (22 ... 145 psi)				1 ... 10 bar (14.5 ... 145 psi)					
<b>Temperature range</b>	- 30 °C ... + 80 °C (- 22 °F ... + 176 °F)									
<b>Medium</b>	filtered/lubricated or filtered/non-lubricated air									
<b>Standard stroke lengths mm</b>	5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100, 125, 160, 200, 250 ø 12 – 16 : The maximum stroke length for types 200, 210, 600 and 610 is 200 mm. The maximum stroke length for type 220 is 160 mm.									
<b>Materials</b>	Cylinder tube: Al (anodized) End caps: Al (anodized) Piston rod: stainless steel Seals: PU									

\* = The non rotating version is not available for piston-Ø 16.

Technical data for series

# NXD

## Force table (6 bar)

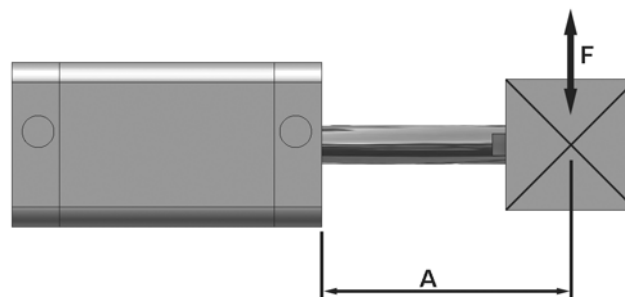
Retraction

Piston-Ø	F in N
12	81
16	81
20	127
25	223
32	373
40	617
50	952
63	1575
80	2545
100	3976

Extension

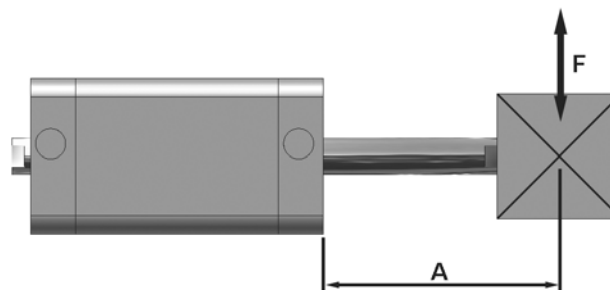
Piston-Ø	F in N
12	109
16	109
20	170
25	265
32	434
40	679
50	1060
63	1683
80	2714
100	4241

The internal friction is considered.



Permissible side load (N)

Piston-Ø	Distance A (mm)									
	≤ 25	30	40	50	60	70	80	90	100	125
12 + 16	8	7	6	6	5	5	4	3	2	–
20 + 25	12	11	9	7	6	5	4	3	3	–
32 + 40	23	20	16	12	10	8	7	7	6	4
50 + 63	38	34	28	22	18	15	13	12	11	3
80	49	43	35	28	24	20	18	17	16	12
100	93	82	67	55	46	40	37	34	31	23

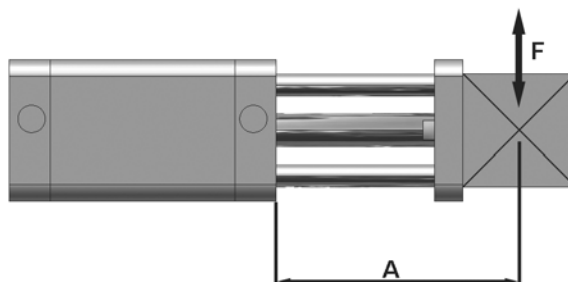


Permissible side load (N) with double-ended piston rod

Piston-Ø	Distance (mm)									
	≤ 25	30	40	50	60	70	80	90	100	125
12 + 16	22	20	18	15	13	11	10	10	9	6
20 + 25	32	30	26	21	19	16	14	13	12	9
32 + 40	47	43	38	32	28	26	22	20	18	13
50 + 63	83	78	68	59	51	46	41	38	36	27
80	112	108	93	83	74	67	60	57	54	40
100	194	181	160	144	130	118	108	101	96	72

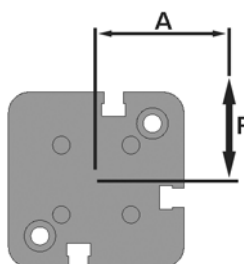
Technical data for series

# NXD



Permissible side load (N) NXD-Ø-stroke-220

Piston-Ø	Distance A (mm)									
	≤ 25	30	40	50	60	70	80	90	100	125
16 + 20	38	33	27	23	20	18	16	14	12	9
25	59	53	43	37	31	27	24	23	22	15
32	76	68	58	49	43	38	35	34	32	24
40	112	101	84	72	62	56	50	47	46	34
50 + 63	145	130	108	92	83	74	66	61	56	42
80 + 100	200	180	155	135	120	110	100	90	80	60



Permissible torque (F x A in Nm) NXD-Ø-stroke-220 at different stroke length

Piston-Ø	Stroke length (mm)											
	≤ 10	15	20	25	30	40	50	60	70	80	90	100
16	0.75	0.7	0.6	0.5	0.45	0.4	0.35	0.3	0.25	0.2	0.15	0.1
20	1.0	0.85	0.8	0.7	0.6	0.4	0.35	0.35	0.3	0.25	0.2	0.2
25	2.0	1.75	1.6	1.3	1.2	0.9	0.75	0.6	0.5	0.45	0.45	0.4
32	2.7	2.5	2.2	2.0	1.8	1.6	1.3	1.1	1.0	0.9	0.9	0.8
40	5.0	4.0	3.5	3.3	3.0	2.5	2.2	2.0	1.8	1.5	1.4	1.3
50	8.8	7.6	6.7	6.0	5.4	4.6	4.0	3.5	3.0	2.8	2.6	2.4
63	10.7	9.4	8.3	7.4	6.7	5.5	4.8	4.2	3.8	3.5	3.2	2.9
80	17.5	15.3	13.7	12.4	11.3	9.6	8.5	7.6	7.0	6.3	5.8	5.3
100	20.0	19.0	17.0	15.5	14.0	12.0	10.5	9.5	8.5	7.7	7.0	6.5

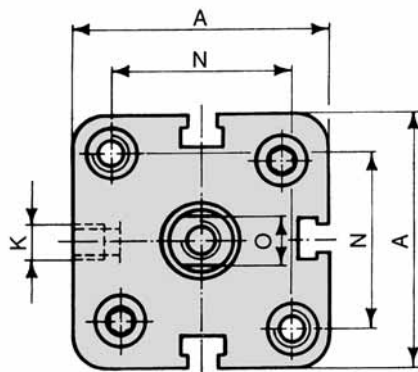
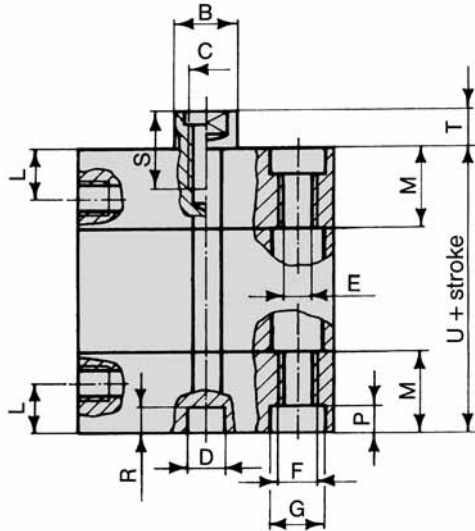
**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm  
Double acting with permanent magnet, female thread**



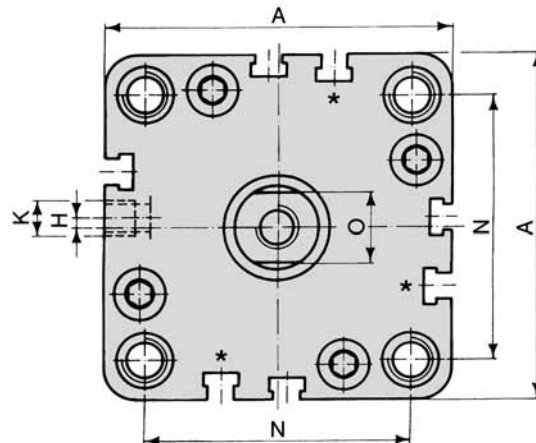
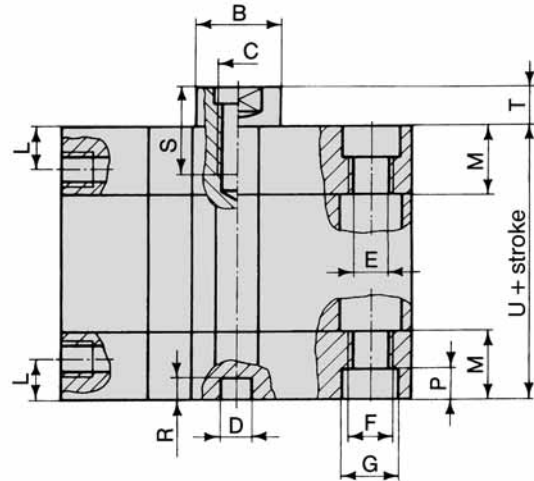
**Dimensions for series**

**NXD**

Ø 12 – 25



Ø 32 – 100



\* The cylinders of Ø 32 mm and Ø 40 mm have three sensor grooves.

Piston-Ø	A	Ø B	C	Ø D	Ø E	F	Ø G	H	K	L	M	N	O	P	R	S	T	U
12	29	8	M3	6	3.3	M4	6	0	M5	8	12.25	18	5	3.5	4	6	4.5	38
16	29	8	M4	6	3.3	M4	6	0	M5	8	12.25	18	6	3.5	4	8	4.5	38
20	36	10	M5	6	4.2	M5	7.5	0	M5	8	12.25	22	8	4.5	4	10	4.5	38
25	40	10	M5	6	4.2	M5	7.5	0	M5	8	12.75	26	8	4.5	4	10	5.5	39.5
32	50	12	M6	6	5.2	M6	9	4	G 1/8	8	14.5	32	10	5.5	4	12	6	44.5
40	58	12	M6	6	5.2	M6	9	3	G 1/8	8	14.75	42	10	5.5	4	12	6.5	45.5
50	67	16	M8	6	6.7	M8	10.5	0	G 1/8	8	14.75	50	13	6.5	4	12	7.5	45.5
63	80	16	M8	8	8.5	M10	13.5	0	G 1/8	8	14.25	62	13	8.5	4	14	7.5	50
80	100	20	M10	8	8.5	M10	13.5	0	G 1/8	8.5	16	82	17	8.5	4	15	8	56
100	124	25	M12	8	8.5	M10	13.5	0	G 1/4	10.5	19.25	103	22	8.5	4	20	10	66.5

Piston-Ø	12	16	20	25	32	40	50	63	80	100
Mass at 0 mm stroke in kg	0.074	0.074	0.121	0.139	0.261	0.362	0.481	0.755	1.402	2.560
lbs.	(0.163)	(0.163)	(0.267)	(0.306)	(0.575)	(0.798)	(1.060)	(1.664)	(3.091)	(5.644)
add-on per 100 mm stroke	0.170	0.170	0.270	0.310	0.410	0.500	0.630	0.780	1.180	1.600
	(0.375)	(0.375)	(0.595)	(0.683)	(0.904)	(1.102)	(1.389)	(1.719)	(2.601)	(3.527)

**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm  
Double acting with permanent magnet, male thread**

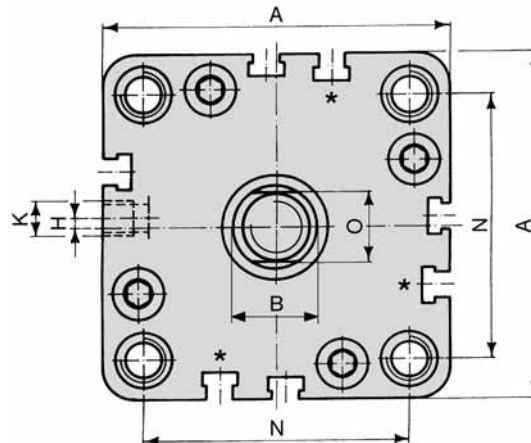
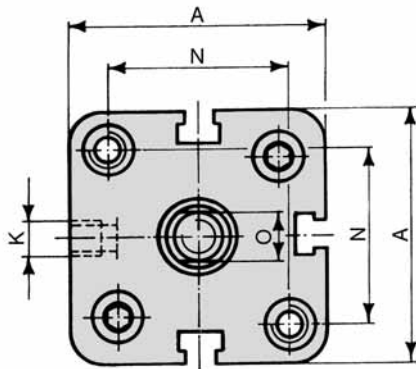
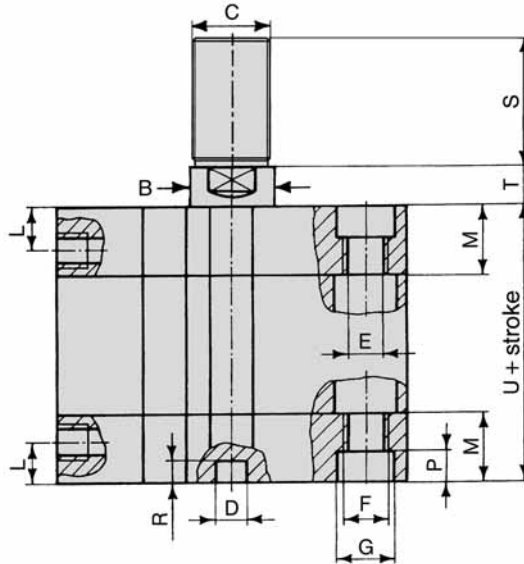
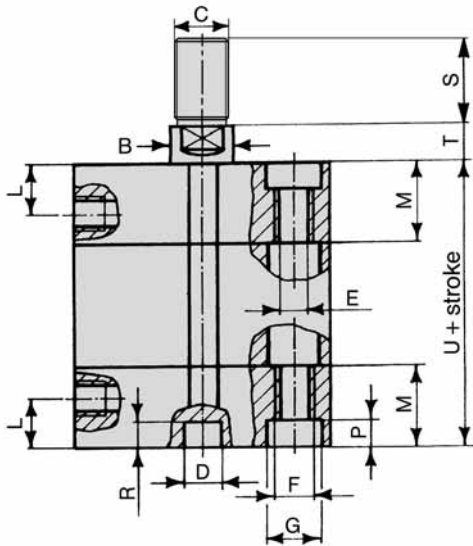


**Dimensions for series**

**NXD**

Ø 32 – 100

Ø 12 – 25



\* The cylinders of Ø 32 mm and Ø 40 mm have three sensor grooves.

Piston-Ø	A	Ø B	C	Ø D	Ø E	F	Ø G	H	K	L	M	N	O	P	R	S	T	U
12	29	8	M6	6	3.3	M4	6	0	M5	8	12.25	18	5	3.5	4	16	4.5	38
16	29	8	M8	6	3.3	M4	6	0	M5	8	12.25	18	6	3.5	4	20	4.5	38
20	36	10	M10 x 1.25	6	4.2	M5	7.5	0	M5	8	12.25	22	8	4.5	4	22	4.5	38
25	40	10	M10 x 1.25	6	4.2	M5	7.5	0	M5	8	12.75	26	8	4.5	4	22	5.5	39.5
32	50	12	M10 x 1.25	6	5.2	M6	9	4	G 1/8	8	14.5	32	10	5.5	4	22	6	44.5
40	58	12	M10 x 1.25	6	5.2	M6	9	3	G 1/8	8	14.75	42	10	5.5	4	22	6.5	45.5
50	67	16	M12 x 1.25	6	6.7	M8	10.5	0	G 1/8	8	14.75	50	13	6.5	4	24	7.5	45.5
63	80	16	M12 x 1.25	8	8.5	M10	13.5	0	G 1/8	8	14.25	62	13	8.5	4	24	7.5	50
80	100	20	M16 x 1.5	8	8.5	M10	13.5	0	G 1/8	8.5	16	82	17	8.5	4	32	8	56
100	124	25	M20 x 1.5	8	8.5	M10	13.5	0	G 1/4	10.5	19.25	103	22	8.5	4	40	10	66.5

Piston-Ø	12	16	20	25	32	40	50	63	80	100
Mass at 0 mm stroke in kg	0.078	0.082	0.135	0.153	0.275	0.376	0.502	0.776	1.453	2.659
lbs.	(0.172)	(0.181)	(0.298)	(0.337)	(0.606)	(0.829)	(1.107)	(1.711)	(3.203)	(5.862)
add-on per 100 mm stroke	0.170	0.170	0.270	0.310	0.410	0.500	0.630	0.780	1.180	1.600
	(0.375)	(0.375)	(0.595)	(0.683)	(0.904)	(1.102)	(1.389)	(1.719)	(2.601)	(3.527)

**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm, Double acting with permanent  
magnet and double-ended piston rod, female thread**

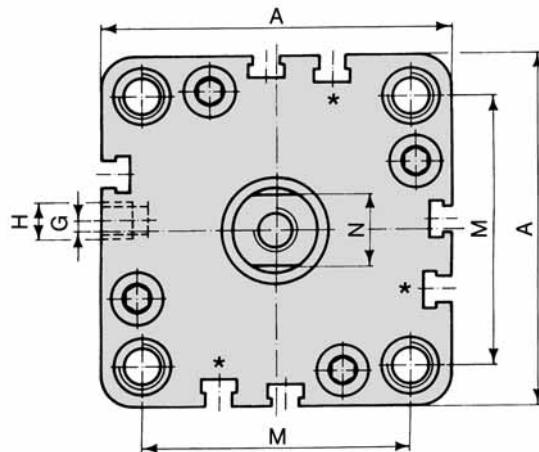
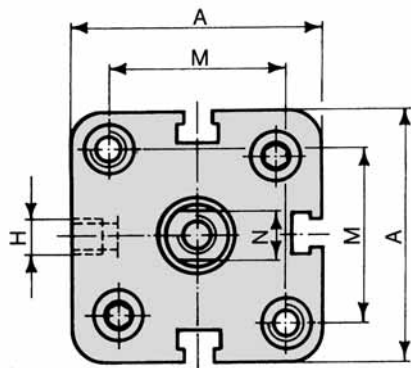
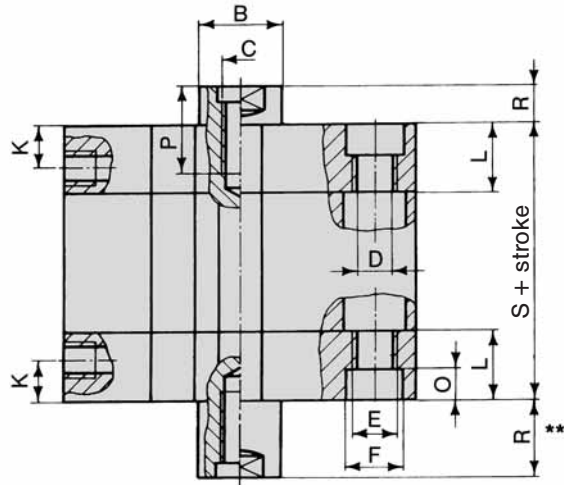
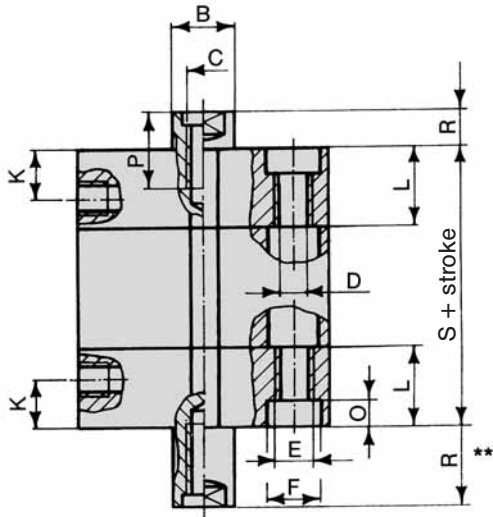


**Dimensions for series**

**NXD**

Ø 12 – 25

Ø 32 – 100



\* The cylinders of Ø 32 mm and Ø 40 mm have three sensor grooves.

\*\* Dimension R plus stroke length in extended position.

Piston-Ø	A	Ø B	C	Ø D	E	Ø F	G	H	K	L	M	N	O	P	R**	S
12	29	8	M3	3.3	M4	6	0	M5	8	12.25	18	5	3.5	6	4.5	38
16	29	8	M4	3.3	M4	6	0	M5	8	12.25	18	6	3.5	8	4.5	38
20	36	10	M5	4.2	M5	7.5	0	M5	8	12.25	22	8	4.5	10	4.5	38
25	40	10	M5	4.2	M5	7.5	0	M5	8	12.75	26	8	4.5	10	5.5	39.5
32	50	12	M6	5.2	M6	9	4	G 1/8	8	14.5	32	10	5.5	12	6	44.5
40	58	12	M6	5.2	M6	9	3	G 1/8	8	14.75	42	10	5.5	12	6.5	45.5
50	67	16	M8	6.7	M8	10.5	0	G 1/8	8	14.75	50	13	6.5	12	7.5	45.5
63	80	16	M8	8.5	M10	13.5	0	G 1/8	8	14.25	62	13	8.5	14	7.5	50
80	100	20	M10	8.5	M10	13.5	0	G 1/8	8.5	16	82	17	8.5	15	8	56
100	124	25	M12	8.5	M10	13.5	0	G 1/4	10.5	19.25	103	22	8.5	20	10	66.5

Piston-Ø	12	16	20	25	32	40	50	63	80	100
Mass at 0 mm stroke in kg	0.092	0.092	0.143	0.161	0.298	0.399	0.548	0.822	1.516	2.760
lbs.	(0.203)	(0.203)	(0.315)	(0.355)	(0.657)	(0.880)	(1.208)	(1.812)	(3.342)	(6.085)
add-on per 100 mm stroke	0.210	0.210	0.330	0.370	0.500	0.590	0.790	0.940	1.430	1.980
	(0.463)	(0.463)	(0.727)	(0.816)	(1.102)	(1.301)	(1.742)	(2.072)	(3.152)	(4.365)

**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm, Double acting with permanent  
magnet and double-ended piston rod, male thread**

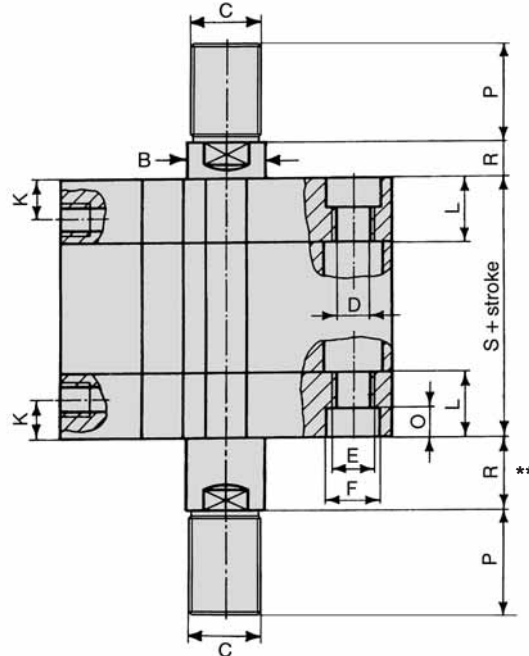
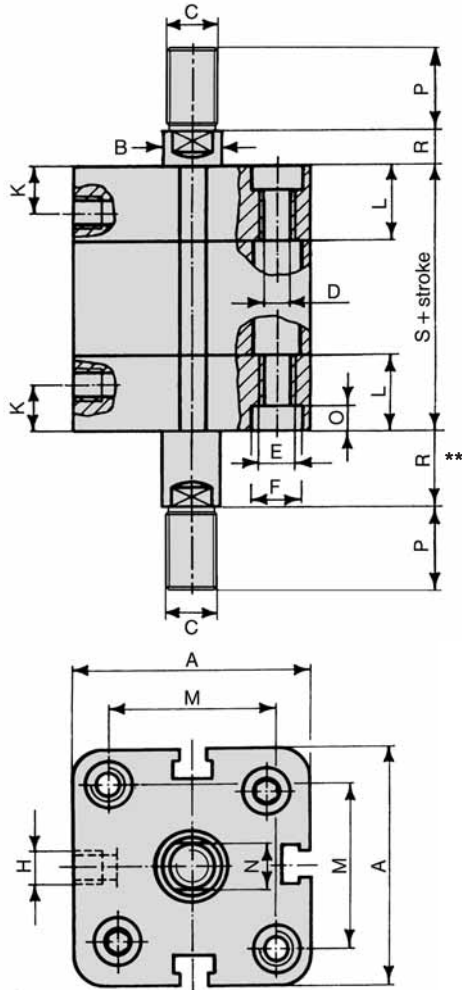


**Dimensions for series**

**NXD**

**Ø 32 – 100**

**Ø 12 – 25**



\* The cylinders of Ø 32 mm and Ø 40 mm have three sensor grooves.

\*\* Dimension R plus stroke length in extended position.

Piston-Ø	A	Ø B	C	Ø D	E	Ø F	G	H	K	L	M	N	O	P	R**	S
12	29	8	M6	3.3	M4	6	0	M5	8	12.25	18	5	3.5	16	4.5	38
16	29	8	M8	3.3	M8	6	0	M5	8	12.25	18	6	3.5	20	4.5	38
20	36	10	M 10 x 1.25	4.2	M5	7.5	0	M5	8	12.25	22	8	4.5	22	4.5	38
25	40	10	M 10 x 1.25	4.2	M5	7.5	0	M5	8	12.75	26	8	4.5	22	5.5	39.5
32	50	12	M 10 x 1.25	5.2	M6	9	4	G 1/8	8	14.5	32	10	5.5	22	6	44.5
40	58	12	M 10 x 1.25	5.2	M6	9	3	G 1/8	8	14.75	42	10	5.5	22	6.5	45.5
50	67	16	M 12 x 1.25	6.7	M8	10.5	0	G 1/8	8	14.75	50	13	6.5	24	7.5	45.5
63	80	16	M 12 x 1.25	8.5	M10	13.5	0	G 1/8	8	14.25	62	13	8.5	24	7.5	50
80	100	20	M 16 x 1.5	8.5	M10	13.5	0	G 1/8	8.5	16	82	17	8.5	32	8	56
100	124	25	M 20 x 1.5	8.5	M10	13.5	0	G 1/4	10.5	19.25	103	22	8.5	40	10	66.5

Piston-Ø	12	16	20	25	32	40	50	63	80	100
Mass at 0 mm stroke in kg	0.097	0.108	0.170	0.188	0.325	0.426	0.591	0.865	1.617	2.958
lbs.	(0.214)	(0.238)	(0.375)	(0.414)	(0.716)	(0.939)	(1.303)	(1.907)	(3.565)	(6.521)
add-on per 100 mm stroke	0.210	0.210	0.330	0.370	0.500	0.590	0.790	0.940	1.430	1.980
	(0.463)	(0.463)	(0.727)	(0.816)	(1.102)	(1.301)	(1.742)	(2.072)	(3.152)	(4.365)

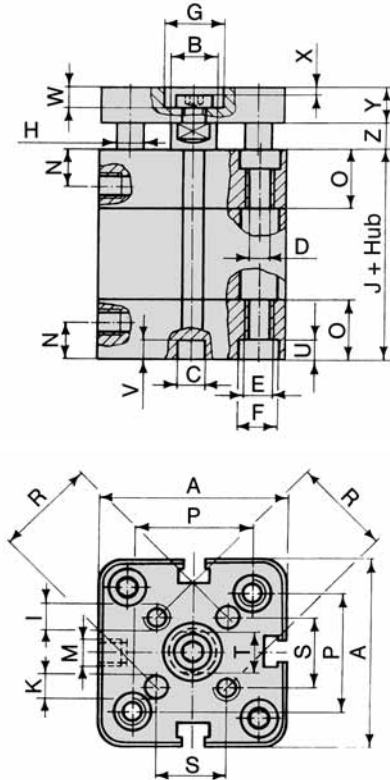
**Pneumatic compact cylinders,  
piston-Ø 12 – 100 mm  
Double acting non-rotating**



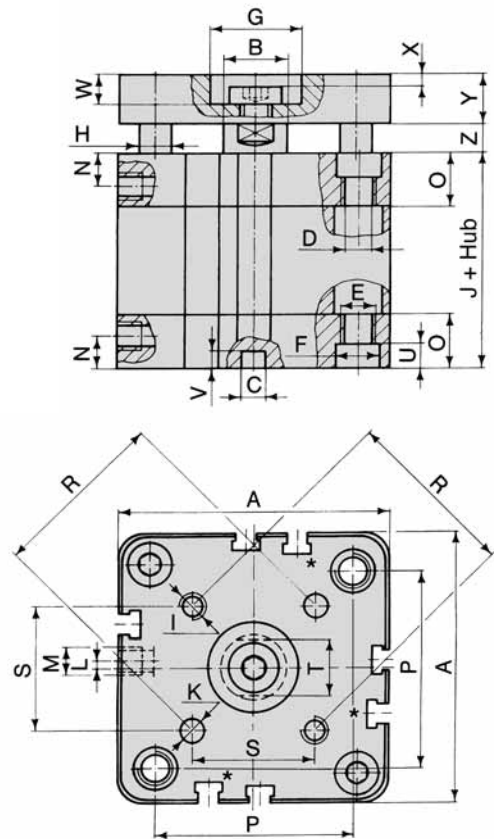
**Dimensions for series**

**NXD**

Ø 16 – 25



Ø 32 – 100



\* The cylinders of Ø 32 mm and Ø 40 mm have three sensor grooves.

Piston-Ø	A	Ø B	Ø C	Ø D	E	Ø F	Ø G	H	I	J	Ø K	L	M
16	29	8	6	3.3	M4	6	9	5	M3	38	3	0	M5
20	36	10	6	4.2	M5	7.5	11	5	M4	38	4	0	M5
25	40	10	6	4.2	M5	7.5	14	6	M5	39.5	5	0	M5
32	50	12	6	5.2	M6	9	17	8	M5	44.5	5	4	G 1/8
40	58	12	6	5.2	M6	9	17	10	M5	45.5	5	3	G 1/8
50	67	16	6	6.7	M8	10.5	22	10	M6	45.5	6	0	G 1/8
63	80	16	8	8.5	M10	13.5	22	10	M6	50	6	0	G 1/8
80	100	20	8	8.5	M10	13.5	28	14	M8	56	8	0	G 1/8
100	124	25	8	8.5	M10	13.5	30	14	M10	66.5	10	0	G 1/4

Piston-Ø	N	O	P	R	S	T	U	V	W	X	Y	Z
16	8	12.25	18	14	9.9	6	3.5	4	3.8	1	6	4.5
20	8	12.25	22	17	12.0	8	4.5	4	5	1.5	8	4.5
25	8	12.75	26	22	15.6	8	4.5	4	5	1.5	8	5.5
32	8	14.5	32	28	19.8	10	5.5	4	6.5	2.5	10	6
40	8	14.75	42	33	23.3	10	5.5	4	6.5	2.5	10	6.5
50	8	14.75	50	42	29.7	13	6.5	4	7.5	2.5	12	7.5
63	8	14.25	62	50	35.4	13	8.5	4	7.5	2.5	12	7.5
80	8.5	16	82	65	46.0	17	8.5	4	9	3	14	8
100	10.5	19.25	103	80	56.6	22	8.5	4	10	3	14	10

Piston-Ø	16	20	25	32	40	50	63	80	100
<b>Mass at 0 mm stroke in kg</b>	0.097	0.150	0.195	0.335	0.461	0.636	0.976	1.845	3.190
<b>lbs.</b>	(0.214)	(0.331)	(0.430)	(0.738)	(1.016)	(1.402)	(2.152)	(4.067)	(7.033)
<b>add-on per 100 mm stroke</b>	0.200	0.300	0.350	0.530	0.620	0.750	0.900	1.420	1.840
	(0.441)	(0.661)	(0.772)	(1.168)	(1.367)	(1.653)	(1.984)	(3.130)	(4.056)



## Accessories

### Accessories for series

# NXD

#### Mounting accessories



Foot mount  
**NXB-Ø-01**  
Page 8.129



Flange mount  
**NXB-Ø-02**  
Page 8.129



Swivel mount 90°  
**XLB-Ø-06**  
Page 8.018



Clevis pin  
**XLB-Ø-08**  
Page 8.019



Swivel mount  
**NXB-Ø-04**  
Page 8.130

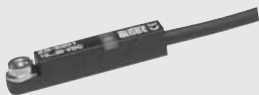


Clevis mount  
**NXB-Ø-03**  
Page 8.130



Clevis mount  
**RC-Ø**  
Page 8.087

#### Proximity sensors



Sensors  
**ZS-**  
Page 8.220



Connecting cable  
**KA-**  
Page 8.221

Seal kits see page 8.131.

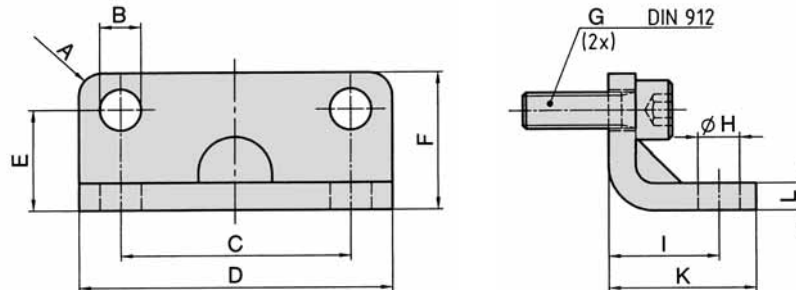
Piston-Ø	Foot mount	Flange mount	Clevis mount	Swivel mount	Clevis mount	Swivel mount 90°	Clevis pin	Sensors	Cable
<b>NX-12</b>	-	NXB-16-02	-	NXB-16-04	RC-16	-	-	ZS-5200	KA-30 KA-50 KA-51 KA-100 KA-101
<b>NX-16</b>	-	NXB-16-02	-	NXB-16-04	RC-16	-	-	ZS-5201	
<b>NX-20</b>	-	NXB-20-02	-	NXB-20-04	RC-30	-	-	ZS-5300	
<b>NX-25</b>	-	NXB-25-02	-	NXB-25-04	RC-30	-	-	ZS-5300-05	
<b>NX-32</b>	NXB-32-01	NXB-32-02	NXB-32-03	-	-	XLB-32-06	XLB-32-08	ZS-5301	
<b>NX-40</b>	NXB-40-01	NXB-40-02	NXB-40-03	-	-	XLB-40-06	XLB-40-08	ZS-6300	
<b>NX-50</b>	NXB-50-01	NXB-50-02	NXB-50-03	-	-	XLB-50-06	XLB-50-08	ZS-6301	
<b>NX-63</b>	NXB-63-01	NXB-63-02	NXB-63-03	-	-	XLB-63-06	XLB-63-08	ZS-7300	
<b>NX-80</b>	NXB-80-01	NXB-80-02	NXB-80-03	-	-	XLB-80-06	XLB-80-08	ZS-7301	
<b>NX-100</b>	NXB-100-01	NXB-100-02	NXB-100-03	-	-	XLB-100-06	XLB-100-08		

## Accessories

### Mounting accessories for series

# NXD, NXE

#### Foot mount 1 pair



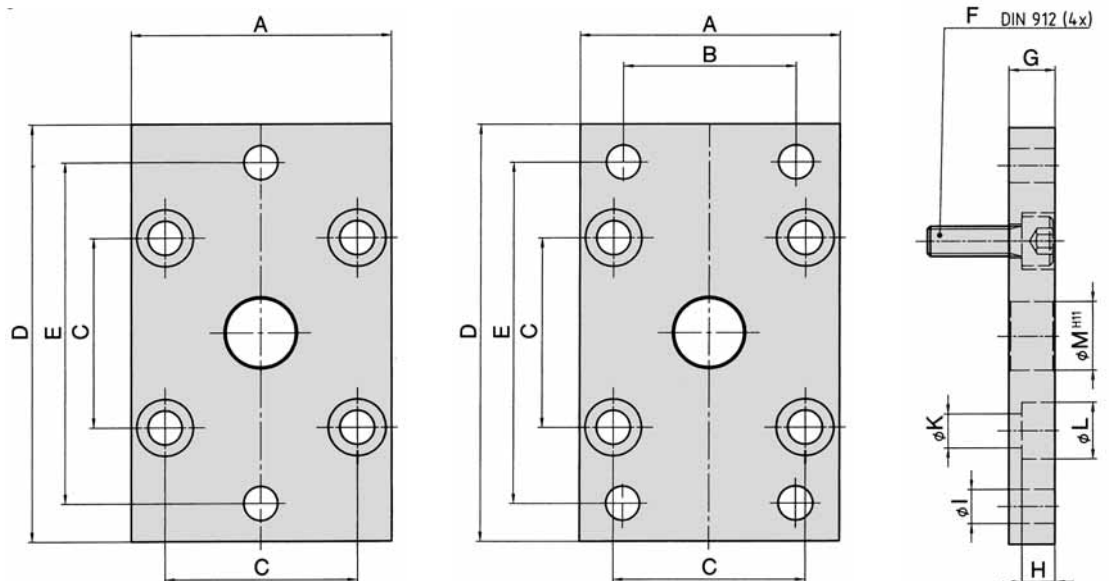
Material: steel (zinc-plated)

Order number	A	B	C	D	E	F	G	H	I	K	L
NXB-032-01	R 2	6.6	32	50	16	24	M6 x 20	6.6	18	26	5
NXB-040-01	R 5	6.6	42	60	21.5	29.5	M6 x 20	9	20	28	5
NXB-050-01	R 5	9	50	68	22	30	M8 x 25	9	24	32	6
NXB-063-01	R 5	11	62	84	28.5	39	M10 x 25	11	27	39	6
NXB-080-01	R 5	11	82	102	24.5	36.5	M10 x 25	11	30	42	8
NXB-100-01	R 5	11	103	123	26.5	38.5	M10 x 30	13.5	33	45	8

#### Flange mount

for cyl.-Ø 12 – 25

for cyl.-Ø 32 – 100



Material: steel (zinc-plated)

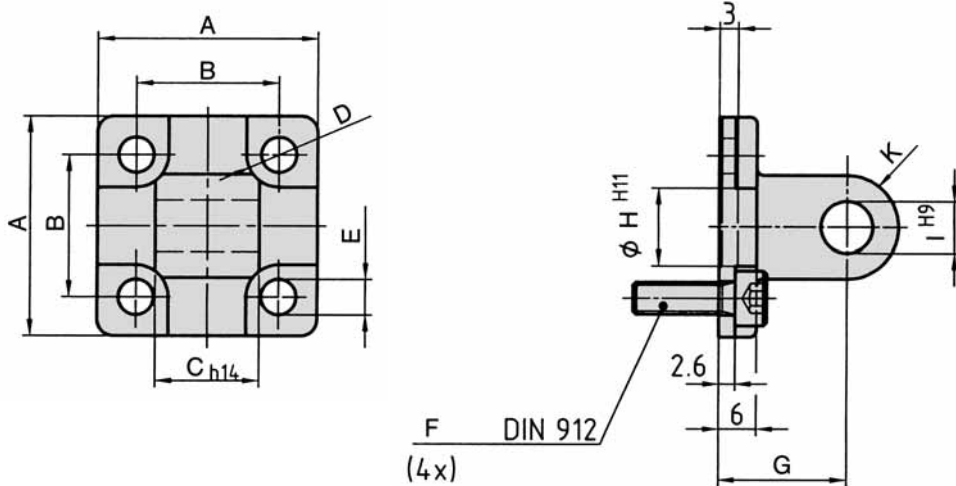
Order number	A	B	C	D	E	F	G	H	I	K	L	M
NXB-016-02	29	-	18	55	43	M4 x 16	10	5.4	5.5	4.5	9	10
NXB-020-02	36	-	22	70	55	M5 x 20	10	5.4	6.6	5.5	10	12
NXB-025-02	40	-	26	76	60	M5 x 20	10	5.4	6.6	5.5	10	12
NXB-032-02	50	32	32	80	65	M6 x 20	10	6.4	7	6.6	11	14
NXB-040-02	60	36	42	102	82	M6 x 20	10	6.4	9	6.6	11	14
NXB-050-02	68	45	50	110	90	M8 x 25	12	8.6	9	9	15	18
NXB-063-02	87	50	62	130	110	M10 x 25	15	10.6	9	11	18	18
NXB-080-02	107	63	82	160	135	M10 x 25	15	10.6	12	11	18	23
NXB-100-02	128	75	103	190	163	M10 x 30	15	10.6	14	11	18	28

## Accessories

### Mounting accessories for series

# NXD, NXE

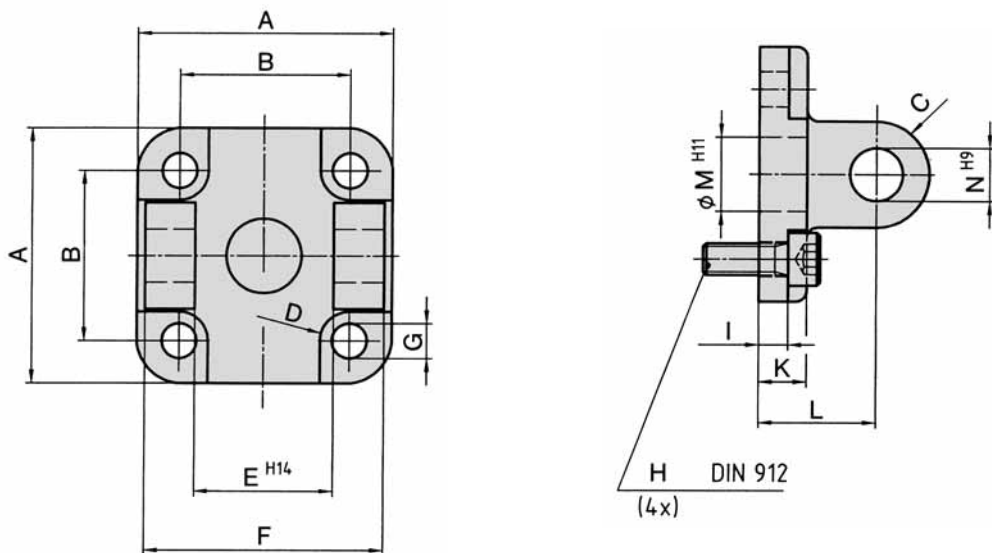
#### Swivel mount



Material: Al (anodized)

Order number	A	B	C	D	E	F	G	H	I	K
NXB-016-04	27	18	12	R 4.5	4.5	M4 x 12	16	10	6	6
NXB-020-04	34	22	16	R 5	5.5	M5 x 16	20	12	8	8
NXB-025-04	38	26	16	R 5	5.5	M5 x 16	20	12	8	8

#### Clevis mount



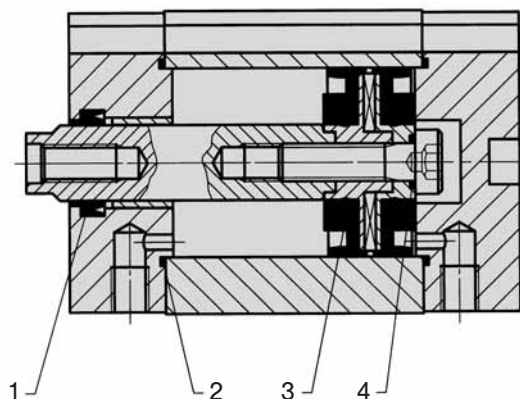
Material: Al (anodized)

Order number	A	B	C	D	E	F	G	H	I	K	L	M	N
NXB-032-03	48	32	10	R 5.5	26	45	6.6	M6 x 16	5.5	9	22	14	10
NXB-040-03	58	42	12.5	R 5.5	28	52	6.6	M6 x 16	5.5	9	25	14	12
NXB-050-03	66	50	12.5	R 7.5	32	60	9	M8 x 20	6.5	11	27	18	12
NXB-063-03	83	62	15	R 9	40	70	11	M10 x 25	6.5	11	32	18	16
NXB-080-03	102	82	15	R 9	50	90	11	M10 x 30	10	13	36	23	16
NXB-100-03	123	103	20	R 9	60	110	11	M10 x 30	10	15	41	28	20

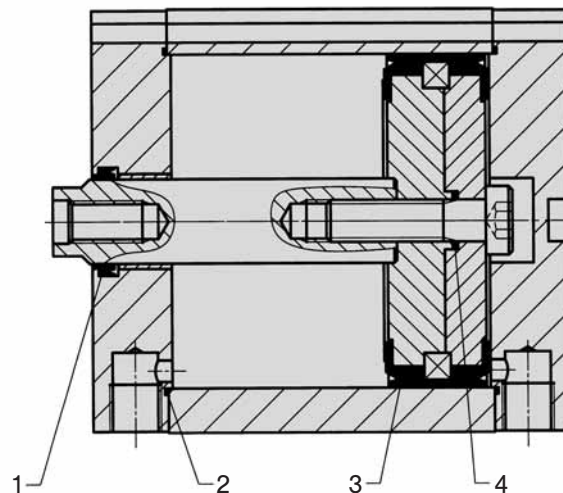
# Seal kits for series NXD, NXE



For cylinders-Ø 12 – 25 mm



For cylinders-Ø 32 – 100 mm



For NXD cylinder types 200, 210 and 220 and all NXE types

## Seal kit

Order number	Piston-Ø
VS-NXD-012-01	12 mm
VS-NXD-016-01	16 mm
VS-NXD-020-01	20 mm
VS-NXD-025-01	25 mm
VS-NXD-032-01	32 mm
VS-NXD-040-01	40 mm
VS-NXD-050-01	50 mm
VS-NXD-063-01	63 mm
VS-NXD-080-01	80 mm
VS-NXD-100-01	100 mm

## Content

Pos.	Part	Quantity
1	Wiper and seal element	1
2	O-ring	2
3	Piston	2
4	O-ring	1
	Grease	1

For NXD cylinder types 600 and 610

## Seal kit

Order number	Piston-Ø
VS-NXD-012-02	12 mm
VS-NXD-016-02	16 mm
VS-NXD-020-02	20 mm
VS-NXD-025-02	25 mm
VS-NXD-032-02	32 mm
VS-NXD-040-02	40 mm
VS-NXD-050-02	50 mm
VS-NXD-063-02	63 mm
VS-NXD-080-02	80 mm
VS-NXD-100-02	100 mm

## Content

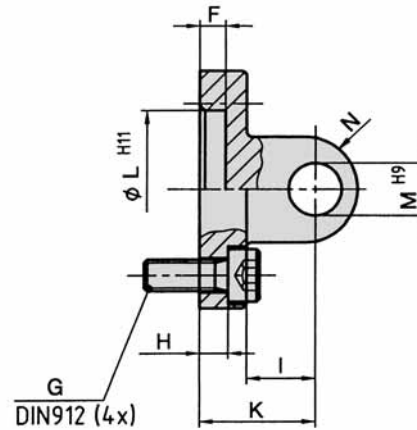
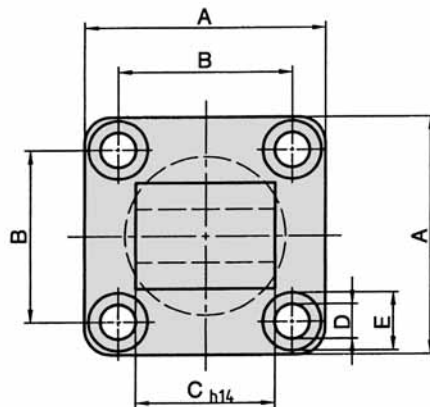
Pos.	Part	Quantity
1	Wiper and seal element	2
2	O-ring	2
3	Piston	2
4	O-ring	1
	Grease	1

## Accessories

### Mounting accessories for series

# XL

#### Swivel mount



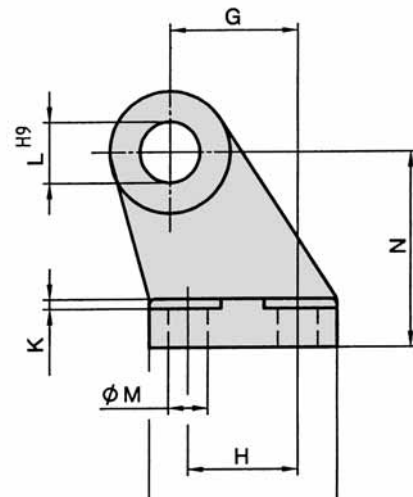
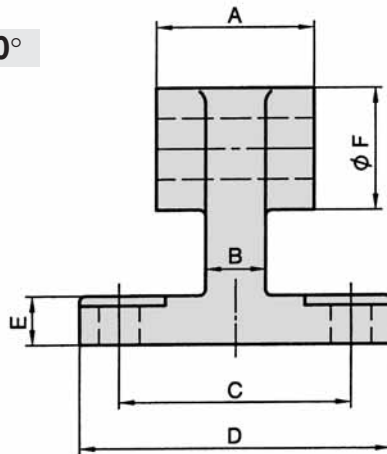
Material: Al

Order number	A	B	C	D	E	F	G	H	I	K	L	M	N
XLB-032-05	45	32.5	26	6.6	11	5	M 6 x 20	5.5	13	22	30	10	10
XLB-040-05	52	38	28	6.6	11	5	M 6 x 20	5.5	16	25	35	12	12
XLB-050-05	65	46.5	32	9	15	5	M 8 x 20	6.5	16	27	40	12	12
XLB-063-05	75	56.5	40	9	15	5	M 8 x 20	6.5	21	32	45	16	16
XLB-080-05	95	72	50	11	18	5	M 10 x 25	10	22	36	45	16	16
XLB-100-05	115	89	60	11	18	5	M 10 x 25	10	27	41	55	20	20
XLB-125-05	140	110	70*	14	20	7	M 12 x 25	10	30	50	60	25	25

- 0.2  
- 0.6

\* tolerance -0.5 ... -1.2

#### Swivel mount 90°



Material: Al

Order number	A	B	C	D	E	F	G	H	I	K	L	M	N
XLB-032-06	26	10	38	51	8	20	21	18	31	1.6	10	6.6	32
XLB-040-06	28	15	41	54	10	22	24	22	35	1.6	12	6.6	36
XLB-050-06	32	16	50	65	12	26	33	30	45	1.6	12	9	45
XLB-063-06	40	16	52	67	14	30	37	35	50	1.6	16	9	50
XLB-080-06	50	20	66	86	14	30	47	40	60	2.5	16	11	63
XLB-100-06	60	20	76	96	17	38	55	50	70	2.5	20	11	71
XLB-125-06	70*	30	94	124	20	45	70	60	90	3.2	25	14	90

- 0.2  
- 0.6

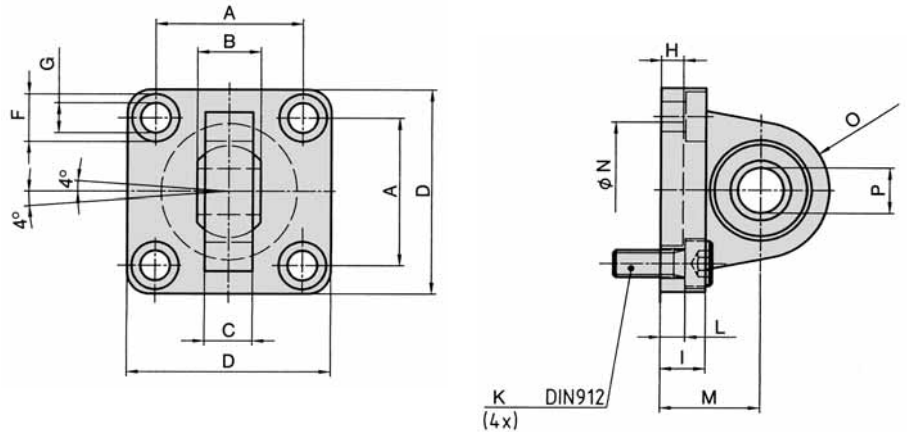
\* tolerance -0.5 ... -1.2

## Accessories

### Mounting accessories for series

# XL

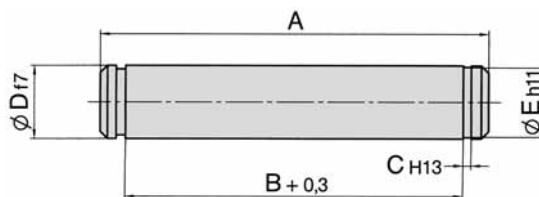
#### Swivel mount with spherical bearing



Material: Al

Order number	A	B	C	D	F	G	H	I	K	L	M	N	O	P
XLB-032-12	32.5	14	10.5	45	11	6.6	5	9	M 6 x 20	4.5	22	30	R 16	10
XLB-040-12	38.0	16	12	52	11	6.6	5	9	M 6 x 20	4.5	25	35	R 19	12
XLB-050-12	46.5	21	15	65	15	9	5	11	M 8 x 20	4.5	27	40	R 21	16
XLB-063-12	56.5	21	15	75	15	9	5	11	M 8 x 20	4.5	32	45	R 24	16
XLB-080-12	72.0	25	18	95	18	11	5	14	M 10 x 25	4	36	45	R 28.5	20
XLB-100-12	89.0	25	18	115	18	11	5	13	M 10 x 25	4	41	55	R 30	20
XLB-125-12	110	37	25	140	20	13.5	7	20	M 12 x 25	10	50	60	R 40	30
	± 0.2	- 0.1					H13	H13			JS15	H11	max.	H7

#### Clevis pin



Material: steel (zinc-plated)  
Snap rings are included.

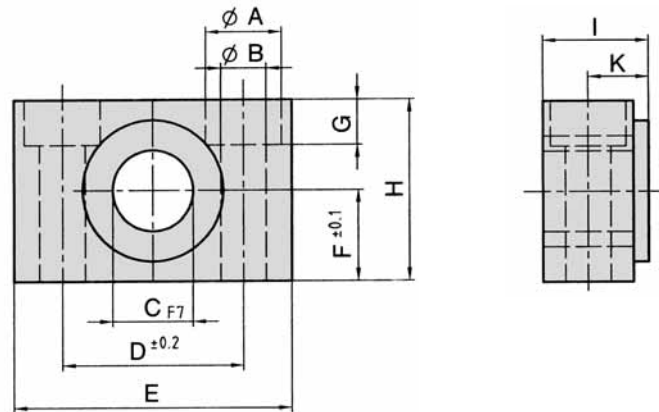
Order number	A	B	C	D	E
XLB-032-08	53	46	1.1	10	9.6
XLB-040-08	60	53	1.1	12	11.5
XLB-050-08	68	61	1.1	12	11.5
XLB-063-08	78	71	1.1	16	15.2
XLB-080-08	98	91	1.1	16	15.2
XLB-100-08	118	111	1.3	20	19.0
XLB-125-08	139	132	1.3	25	23.9

## Accessories

### Mounting accessories for series

# XL

#### Bearing block (1 pair)

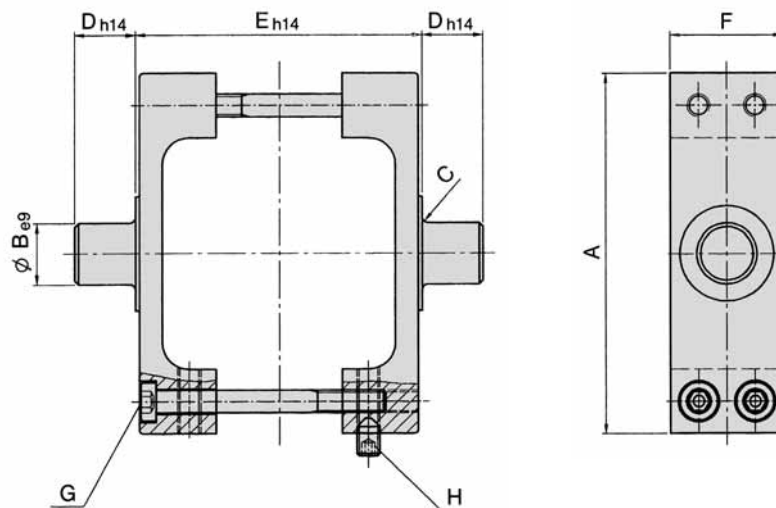
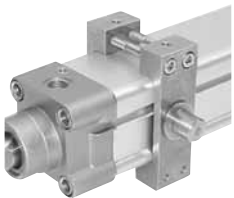


Order number = 1 pair

Material: steel (zinc-plated), bronze

Order number	A	B	C	D	E	F	G	H	I	K
XLB-032-09	11	6.6	12	32	46	15	7	30	18	10.5
XLB-040-09	15	9	16	36	55	18	9	36	21	12
XLB-063-09	18	11	20	42	65	20	11	40	23	13
XLB-100-09	20	14	25	50	75	25	13	50	28.5	16

#### Trunnion mount



Material: steel (zinc-plated)

Order number	A	B	C	D	E	F	G DIN 7984	H
XLB-032-10	65	12	1	12	50	25	SW 4	SW 3
XLB-040-10	75	16	1.5	16	63	25	SW 4	SW 3
XLB-050-10	95	16	1.6	16	75	30	SW 4	SW 3
XLB-063-10	105	20	1.6	20	90	30	SW 4	SW 3
XLB-080-10	130	20	1.6	20	110	30	SW 4	SW 3
XLB-100-10	145	25	2	25	132	40	SW 5	SW 3
XLB-125-10	175	25	2	25	160	40	SW 6 DIN 912	SW 4

## Accessories

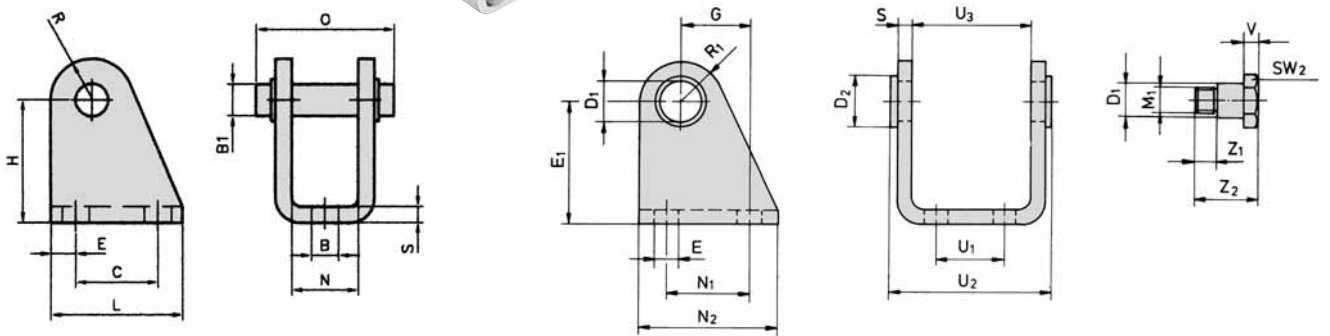
### Mounting accessories for series

# HE, HM

**Clevis mount  
for Ø 8 – 25**



**Ø 32 – 63**

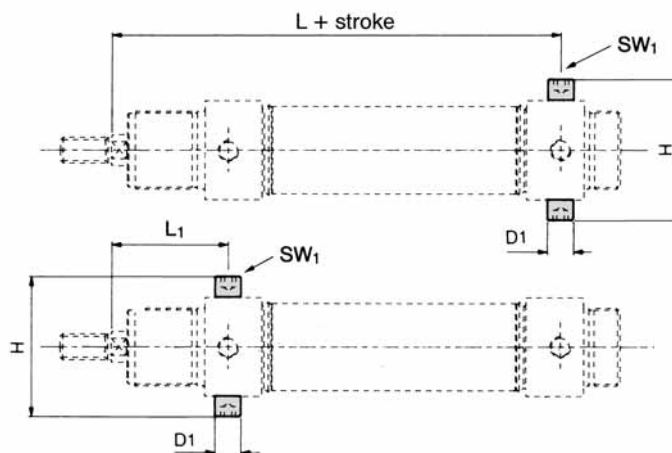


Material: steel (zinc-plated)

Order number	B	B <sub>1</sub>	C	H	L	N	O	R	S	E
RC-10	4.5	4	12.5	24	20	8.1	17	5	2.5	5
RC-16	5.5	6	15	27	25	12.1	23	7	3	5
RC-30	6.6	8	20	30	32	16.1	30	10	4	6

Order number	D <sub>1</sub>	D <sub>2</sub>	E	E <sub>1</sub>	G	M <sub>1</sub>	N <sub>1</sub>	N <sub>2</sub>	R <sub>1</sub>	S	U <sub>1</sub>	U <sub>2</sub>	U <sub>3</sub>	V	Z <sub>1</sub>	Z <sub>2</sub>	SW <sub>2</sub>
RC-32	10	15	7	35	20	M8 x 1	24	40	12	4	20	50.1	38.1	4	6	18	13
RC-40	12	20	9	40	27	M10 x 1	30	50	13	5	28	60.1	46.1	5	7	21.6	17
RC-50	14	23	9	45	30	M12 x 1.5	34	54	14	6	36	74.1	57.1	6	9	26.4	19
RC-63	16	23	9	50	34	M14 x 1.5	35	65	16	6	42	88.1	70.1	6	16	35	19

### Threaded bolts



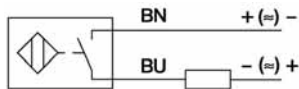
Material: steel (zinc-plated)

Order number	D <sub>1</sub>	H	L	L <sub>1</sub>	SW <sub>1</sub>
RG-32	10	51	125	47	5
RG-40	12	61	146	57	6
RG-50	14	75	158	62	6
RG-63	16	90	162	64	8

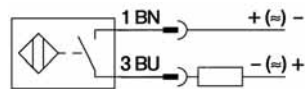


# Proximity sensors

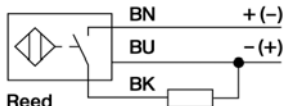
## Wiring diagram



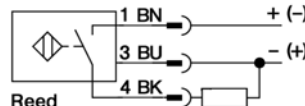
Reed  
**ZS-5200**



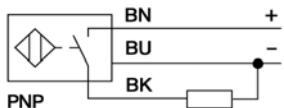
Reed  
**ZS-5201**



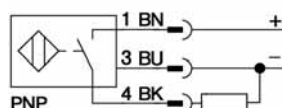
Reed  
**ZS-5300, ZS-5300-05**



Reed  
**ZS-5301**

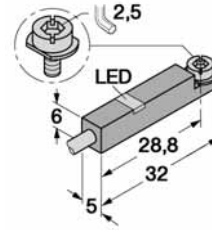


PNP  
**ZS-6300, ZS-7300**

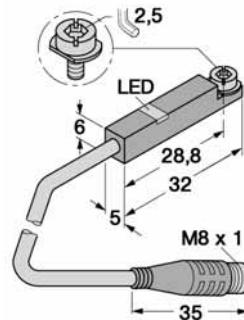


PNP  
**ZS-6301, ZS-7301**

## Dimensions



**ZS-5200, ZS-5300,  
ZS-5300-05,  
ZS-6300, ZS-7300**



**ZS-5201, ZS-5301,  
ZS-6301, ZS-7301**



## Function principles

Magnetic field sensors are actuated by magnetic fields and are especially suited for piston position detection in pneumatic cylinders. Based on the fact that magnetic fields can permeate non-magnetizable metals, it is possible to detect a permanent magnet attached to the piston through the aluminum wall of the cylinder.

## Mounting tip

The sensor is firmly fixed in the groove by clockwise rotation of the screw.

Order number	ZS-5200	ZS-5201	ZS-5300	ZS-5300-05	ZS-5301
<b>Design</b>	2-pole Reed sensor (non-polarized) normally open		3-pole Reed sensor* normally open		
<b>Cable</b>	∅ 3, Lif9Y-11Y, PUR		∅ 3, LifYY-11Y, PUR		
<b>Cable cross section</b>	2 x 0.14 mm <sup>2</sup>		3 x 0.14 mm <sup>2</sup>		
<b>Cable length</b>	3 m	0,3 m	3 m	5 m	0,3 m
<b>Cable plug</b>	-	M8	-	-	M8
<b>Overtravel speed</b>	≤ 10 m/s				
<b>Max. absolute hysteresis</b>	≤ 1 mm				
<b>Temperature drift</b>	≤ 0.1 mm				
<b>Min. absolute repeat accuracy</b>	≤ ± 0.1 mm				
<b>Operating temperature</b>	- 25 °C ... + 70 °C				
<b>Degree of protection</b>	IP 67				
<b>Housing material</b>	Plastic PA 12				
<b>Switching status indication</b>	LED yellow				
<b>Rated operational voltage</b>	3 ... 140 VAC / 4 ... 200 VDC		10 ... 30 V DC*		
<b>Rated operational current I<sub>E</sub></b>	DC ≤ 100 mA AC ≤ 100 mA		≤ 500 mA ≤ 500 mA		
<b>Breaking capacity</b>	10 W				
<b>No-load current</b>	0 mA				
<b>Max. OFF-state current</b>	0 mA				
<b>Max. switching frequency</b>	≤ 0.5 kHz				
<b>Rated insulation voltage</b>	≤ 0.5 kV				
<b>Short-circuit protection</b>	no				
<b>Max. voltage drop at I<sub>E</sub></b>	≤ 3 V		≤ 0.5 V		
<b>Wire breakage</b>	no				
<b>Reverse polarity protection</b>	yes				
<b>Vibration resistance</b>	55 Hz (1 mm)				
<b>Shock resistance</b>	30 g (11 ms)				
<b>Explosion proof</b>	-				

\* Useable as 2-wire contact, voltage 0 ... 30 V AC / 0 ... 30 V DC, LED has no function.

## Proximity sensors

### Mounting bracket for round cylinder Ø 8 – 63 mm

Material: PA, steel zinc plated

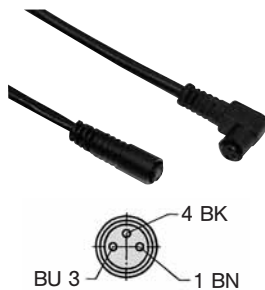


Order number	Piston-Ø
NT-0810	8 and 10 mm
NT-1216	12 and 16 mm (Series XG Ø 160 and 200 mm)
NT-2025	20 and 25 mm (Series XG Ø 250 and 320 mm)
NT-0032	32 mm
NT-0040	40 mm
NT-0050	50 mm
NT-0063	63 mm

### Connecting cable for ZS-5201, ZS-5301, ZS-6301 and ZS-7301

Cable: PUR, black, 3 x 0,25 mm<sup>2</sup>, Ø 3.9, high flexible

Operating voltage 0 ... 48 V AC/DC



Order number	Length of cable	Connection
KA-30	3 m	8 mm sensor snap-in, straight
KA-50	5 m	8 mm sensor snap-in, straight
KA-51	5 m	8 mm sensor snap-in, 90°
KA-100	10 m	8 mm sensor snap-in, straight
KA-101	10 m	8 mm sensor snap-in, 90°

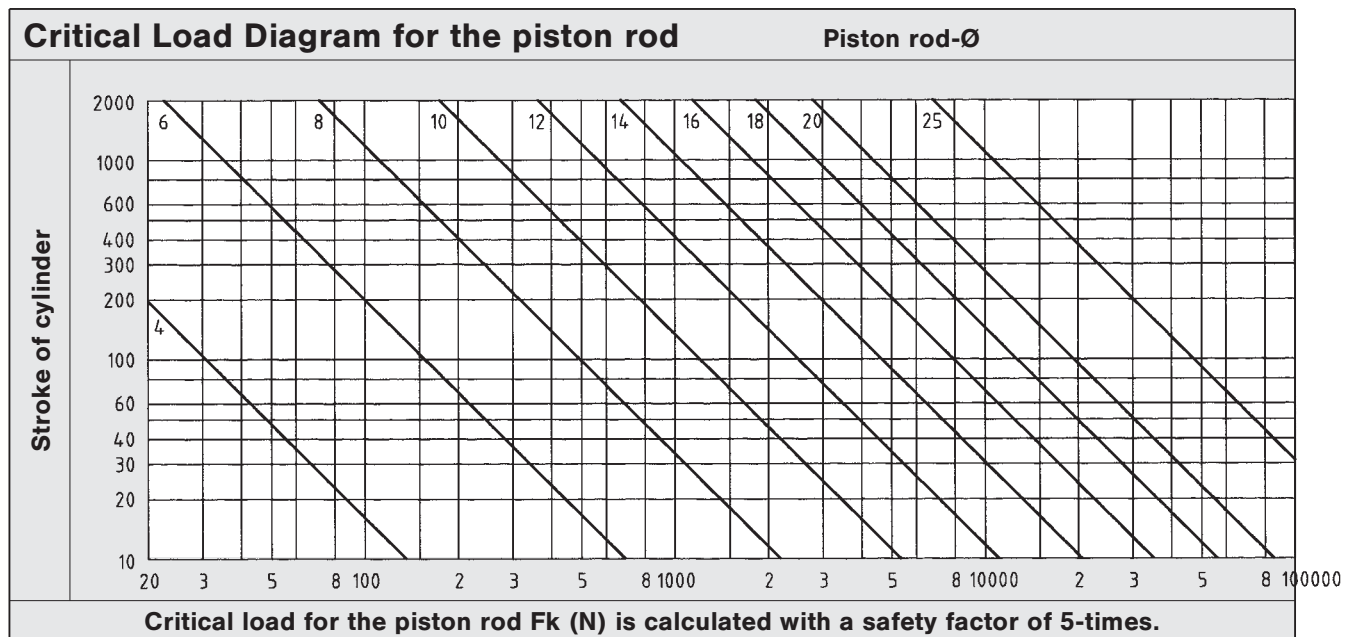
### Proximity sensors electronic

Order number	ZS-6300	ZS-6301	ZS-7300	ZS-7301
<b>Design</b>	electronic, magnet-inductive sensor, normally open PNP output			
<b>Cable</b>	Ø 3, LifYY-11Y, PUR			
<b>Cable cross section</b>	3 x 0.14 mm <sup>2</sup>			
<b>Cable lengths</b>	3 m	0.3 m	3 m	0.3 m
<b>Cable plug</b>	-	M8	-	M8
<b>Overtravel speed</b>	≤ 10 m/s			
<b>Max. absolute hysteresis</b>	≤ 1 mm			
<b>Temperature drift</b>	≤ 0.1 mm			
<b>Min. absolute repeat accuracy</b>	≤ ± 0.1 mm			
<b>Operating temperature</b>	- 25 °C ... + 70 °C			
<b>Degree of protection</b>	IP 67			
<b>Housing material</b>	Plastic, PA 12			
<b>Switching status indication</b>	LED yellow			
<b>Rated operational voltage</b>	10 ... 30 V DC, max. ripple ≤ 10 % U <sub>pp</sub>			
<b>Rated operational current I<sub>E</sub></b>	DC ≤ 200 mA AC -			
<b>Breaking capacity</b>	6 W			
<b>No-load current</b>	≤ 15 mA			
<b>Max. OFF-state current</b>	≤ 0.1 mA			
<b>Max. switching frequency</b>	≤ 1 kHz			
<b>Rated insulation voltage</b>	≤ 0.5 kV			
<b>Short-circuit protection</b>	yes, cyclic			
<b>Max. voltage drop at I<sub>E</sub></b>	≤ 1.8 V			
<b>Wire breakage</b>	yes			
<b>Reverse polarity protection</b>	yes/complete			
<b>Vibration resistance</b>	55 Hz (1 mm)			
<b>Shock resistance</b>	30 g (11 ms)			
<b>Explosion proof</b>	-		II 3 GD EEx nA II T4 X IP 67 T 110 °C	

## Technical charts

This table shows the air consumption for a single stroke of 100 mm. These statements are based upon extension and are in NI.

Piston-Ø mm	Air pressure in bar/psi						
	2 (29 psi)	3 (43.4 psi)	4 (58 psi)	5 (72.5 psi)	6 (87 psi)	7 (101.5 psi)	8 (116 psi)
8	0.02	0.02	0.03	0.03	0.04	0.04	0.05
10	0.02	0.03	0.04	0.05	0.05	0.06	0.07
12	0.03	0.05	0.06	0.07	0.08	0.09	0.10
16	0.06	0.08	0.10	0.12	0.14	0.16	0.18
20	0.09	0.13	0.16	0.19	0.22	0.25	0.28
25	0.15	0.20	0.25	0.29	0.34	0.39	0.44
32	0.24	0.32	0.40	0.48	0.56	0.64	0.72
40	0.38	0.50	0.63	0.75	0.88	1.01	1.13
50	0.59	0.79	0.98	1.18	1.37	1.57	1.77
63	0.94	1.25	1.56	1.87	2.18	2.49	2.81
80	1.51	2.01	2.51	3.02	3.52	4.02	4.52
100	2.36	3.14	3.93	4.71	5.50	6.28	7.07



$$F_k = \frac{\pi^2 EI}{L_k^2 S}$$

$F_k$  = permitted critical force (N)  
 $E$  = elasticity module (N/mm<sup>2</sup>)  
 $I$  = moment of inertia (mm<sup>4</sup>)  
 $L_k$  = effective length of critical load  
 $S$  = security

Elastic cases of buckling according to „Euler“

