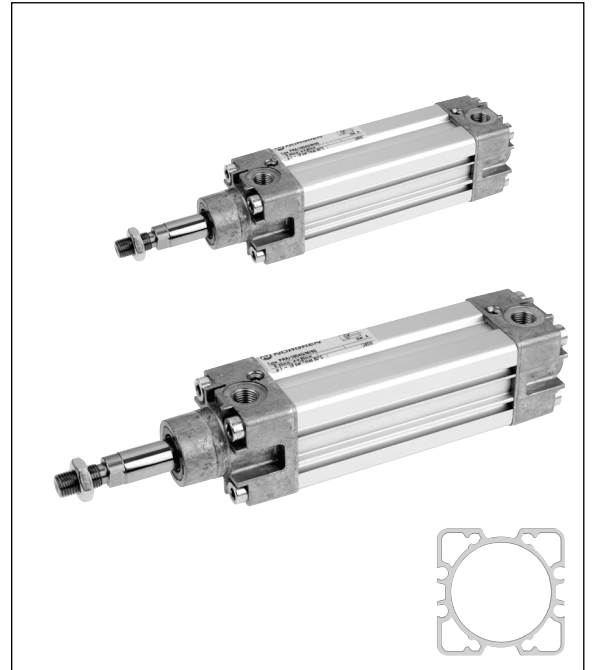


Pneumatic Cylinders
ISO 6431, VDMA 24562 and NFE 49-003-1
Non-magnetic and Magnetic Piston
Single Acting
Ø 32 to 100 mm

- Profile barrel with concealed tie rods
- M/50 – Switches can be mounted flush with the profile
- Conforms to ISO 6431, VDMA 24562 and NFE 49-003-1
- Polyurethane seals ensure efficient low friction operation and long life
- High performance, stability and reliability – ideal for the demands of today
- Supplied complete with piston rod locknut
- Comprehensive range of standard mountings



Technical Data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

ISO 6431, VDMA 24562 and NFE 49-003-1

Note: The basic length of the single acting version PRA/181000, PRA/183000 is slightly longer than its double acting equivalent PRA/182000.

Operation:

PRA/181000 Single acting, sprung in, adjustable cushioning

PRA/181000/M Single acting, sprung in, magnetic piston, adjustable cushioning

PRA/183000 Single acting, sprung out, adjustable cushioning

PRA/183000/M Single acting, sprung out, magnetic piston, adjustable cushioning

Operating Pressure:

2 to 10 bar

Operating Temperature:

-20°C* to +80°C max.

*Consult our Technical Service for use below +2°C

Cylinder Diameters:

32, 40, 50, 63, 80, 100 mm

Strokes:

Standard: 25, 50, 80, 100 mm

Non-standard strokes available (250 mm max.)

Materials:

Profile barrel: Anodised aluminium

End covers: Pressure diecast aluminium

Piston rod: Stainless steel (Martensitic)

Piston rod seals: Polyurethane

Piston seals: Polyurethane

'O'-rings: Nitrile rubber

Ordering Examples

See page N 1.4.121.03

Mountings and Switches

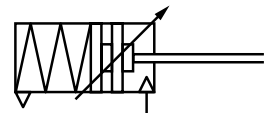
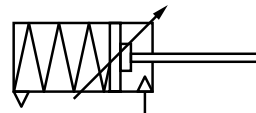
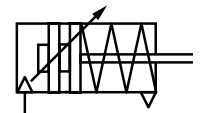
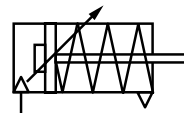
See page N 1.4.121.03

Alternative Models

Double acting cylinders

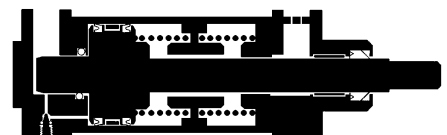
See page

N 1.5.135



Non-magnetic piston

Magnetic piston





Cylinder Variants

Symbol	Model Non-magnetic piston	Symbol	Model Magnetic piston	Description	Dimensions Page
	PRA/181000		PRA/181000/M	Standard cylinder	04
	PCA/181000		PCA/181000/M	Cylinder with hard chromium plated piston rod	04
	PSA/181000		PSA/181000/M	Cylinder with stainless steel piston rod (Austenitic)	04
	PRA/181000/W1		PRA/181000/W2	Cylinder with special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	04
	PRA/181000/IU		PRA/181000/MU	Cylinder with extended piston rod	04
	PRA/181000/W5		PRA/181000/W6	Cylinder with extended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	04
	PRA/181000/N1		PRA/181000/N2	Cylinder with non-rotating piston rod, Ø 32 to 100 mm	05
	PRA/183000		PRA/183000/M	Standard cylinder	04
	PCA/183000		PCA/183000/M	Cylinder with hard chromium plated piston rod	04
	PSA/183000		PSA/183000/M	Cylinder with stainless steel piston rod (Austenitic)	04
	PRA/183000/W1		PRA/183000/W2	Cylinder with special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	04
	PRA/183000/IU		PRA/183000/MU	Cylinder with extended piston rod	04
	PRA/183000/W5		PRA/183000/W6	Cylinder with extended piston rod and special wiper/seal (suitable for applications with cement, plaster (stucco), arizona sand, hoar-frost or ice)	04
	PRA/183000/N1		PRA/183000/N2	Cylinder with non-rotating piston rod, Ø 32 to 100 mm	05

For combinations of cylinder variants consult our Technical Service.

Model Codes

P*A/18****/**/***

Piston rod material	Substitute
Stainless steel (Martensitic)	R
Hard chromium plated	C
Stainless steel (Austenitic)	S
Operation	Substitute
Sprung in	1
Sprung out	3
Cylinder Diameters (mm)	Substitute
032, 040, 050, 063, 080, 100	

Strokes (mm)
250 max.

Variants (magnetic piston)	Substitute
Standard	M
Non-rotating piston rod	N2
Special wiper/seal	W2
Extended piston rod	MU
Extended piston rod, special wiper/seal	W6
P*A/18****/MU/**/***	
/W6/	→ Extension (mm)

Variants (non-magnetic piston)	Substitute
Standard	None
Non-rotating piston rod	N1
Special wiper/seal	W1
Extended piston rod	IU
Extended piston rod, special wiper/seal	W5
P*A/18****/IU/**/***	
/W5/	→ Extension (mm)

Note: If option is not required, disregard option position within part number eg. PRA/181100/100. For combinations of cylinder variants consult our Technical Service.

Ordering Examples

Cylinders

To order a standard 80 mm bore magnetic piston cylinder (sprung in) with a 50 mm stroke quote: **PRA/181080/M/50**

Mountings

To order a front flange mounting style 'G' for 80 mm bore cylinder quote: **QA/8080/22**

Switches

To order a reed switch with LED and 2 m cable length quote: **M/50/LSU/2V**



Standard Strokes

Cylinder ∅	Strokes (mm)			
	25	50	80	100
32	●	●	●	●
40	●	●	●	●
50	●	●	●	●
63	●	●	●	●
80	●	●	●	●
100	●	●	●	●

Non standard strokes available to 250 mm max.

Mountings

	Style 'A' 	Style 'AK' 	Style 'B', 'G' 	Style 'C' 	Style 'D' 	Style 'D2' 	Style 'F' 	Style 'FH'
Cylinder ∅	Page 06	Page 12	Page 06	Page 06	Page 08	Page 09	Page 07	Page 11
32	QM/8032/35	QM/8025/38	QA/8032/22	QA/8032/21	QA/8032/23	QA/8032/42	QM/8025/25	QA/8032/34
40	QM/8032/35	QM/8040/38	QA/8040/22	QA/8040/21	QA/8040/23	QA/8040/42	QM/8040/25	QA/8040/34
50	QM/8050/35	QM/8050/38	QA/8050/22	QA/8050/21	QA/8050/23	QA/8050/42	QM/8050/25	QA/8050/34
63	QM/8050/35	QM/8050/38	QA/8063/22	QA/8063/21	QA/8063/23	QA/8063/42	QM/8050/25	QA/8063/34
80	QM/8080/35	QM/8080/38	QA/8080/22	QA/8080/21	QA/8080/23	QA/8080/42	QM/8080/25	QA/8080/34
100	QM/8080/35	QM/8080/38	QA/8100/22	QA/8100/21	QA/8100/23	QA/8100/42	QM/8080/25	QA/8100/34
	Style 'L' 	Style 'M' 	Style 'R' 	Style 'S' 	Style 'SS' 	Style 'SW' 	Style 'UF' 	Style 'UH'
Cylinder ∅	Page 08	Page 07	Page 10	Page 11	Page 07	Page 08	Page 12	Page 11
32	QA/8032/24	QM/8032/26	QA/8032/27	QA/8032/41	M/P19931	M/P19493	QM/8025/32	PQA/182032/40
40	QA/8040/24	QM/8040/26	QA/8040/27	QA/8040/41	M/P19932	M/P19494	QM/8040/32	PQA/182040/40
50	QA/8050/24	QM/8050/26	QA/8050/27	QA/8050/41	M/P19933	M/P19495	QM/8050/32	PQA/182050/40
63	QA/8063/24	QM/8063/26	QA/8063/27	QA/8063/41	M/P19934	M/P19496	QM/8050/32	PQA/182063/40
80	QA/8080/24	QM/8080/26	QA/8080/27	QA/8063/41	M/P19935	M/P19497	QM/8080/32	PQA/182080/40
100	QA/8100/24	QM/8100/26	QA/8100/27	QA/8100/41	M/P19936	M/P19498	QM/8080/32	PQA/182100/40
	Style 'UL' 	Style 'UR' 	Style 'US' 	Valve Mounting Kit 	Groove Key 	Groove Cover 		
Cylinder ∅	Page 09	Page 10	Page 09	Page 13	Page 13	Page 13		
32	QA/8032/43	QA/8032/33	M/P40310	—	M/P72816	M/K72725/1000		
40	QA/8040/43	QA/8040/33	M/P40311	—	M/P72816	M/K72725/1000		
50	QA/8050/43	QA/8050/33	M/P40312	QA/180050/22/54	M/P72816	M/K72725/1000		
63	QA/8063/43	QA/8063/33	M/P40313	QA/180050/22/54	M/P72816	M/K72725/1000		
80	QA/8080/43	QA/8080/33	M/P40314	QA/180080/22/54	M/P72816	M/K72725/1000		
100	QA/8100/43	QA/8100/33	M/P40315	QA/180080/22/54	M/P72816	M/K72725/1000		

Switches

	Cable 	Plug (M8x1)
Model		
Reed	M/50/LSU/..	M/50/LSU/CP
	M/50/RAC/5V	—
Solid state	M/50/EAP/..	M/50/EAP/CP
	M/50/EAN/..	M/50/EAN/CP

Reed	Model		Voltage V a.c.	V d.c.	Current Max.	Temperature °C	LED	Features	Cable/Plug	Cable Type	Plug-in Cable		Catalogue Page
	Solid State	Reed									Straight	90°	
	—	M/50/LSU/*V	10 to 240	10 to 170	180 mA	-20° to +80°	●	—	2, 5, 10 m	PVC 2 x 0,25	—	—	N 4.3.005
	—	M/50/LSU/5U	10 to 240	10 to 170	180 mA	-20° to +80°	●	—	5 m	PUR 2 x 0,25	—	—	N 4.3.005
	—	M/50/RAC/5V	10 to 240	10 to 170	180 mA	-20° to +80°	—	Changeover	5 m	PVC 3 x 0,25	—	—	N 4.3.005
	—	M/50/LSU/CP	10 to 60	10 to 75	180 mA	-20° to +80°	●	—	Plug M8x1	—	M/P73001/5	—	N 4.3.005
	—	M/50/EAP/*V	—	10 to 30	150 mA	-20° to +80°	●	PNP	2, 5, 10 m	PVC 3 x 0,25	—	—	N 4.3.007
	—	M/50/EAP/CP	—	10 to 30	150 mA	-20° to +80°	●	PNP	Plug M8x1	—	M/P73001/5	—	N 4.3.007
	—	M/50/EAN/*V	—	10 to 30	150 mA	-20° to +80°	●	NPN	2, 5, 10 m	PVC 3 x 0,25	—	—	N 4.3.007
	—	M/50/EAN/CP	—	10 to 30	150 mA	-20° to +80°	●	NPN	Plug M8x1	—	M/P73001/5	—	N 4.3.007

* Insert cable length

Full information on switches (technical data, cable materials, dimensions etc.) please refer to relevant catalogue pages

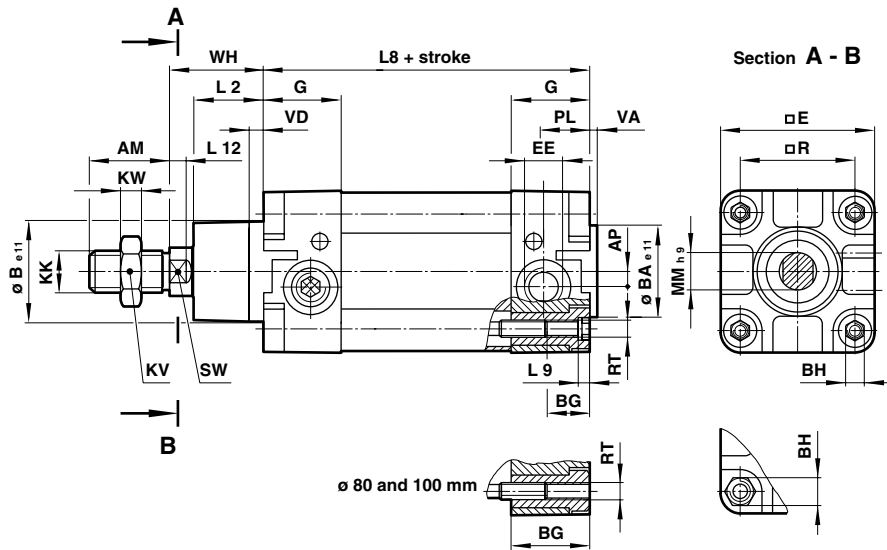


Theoretical Forces • Air Consumption

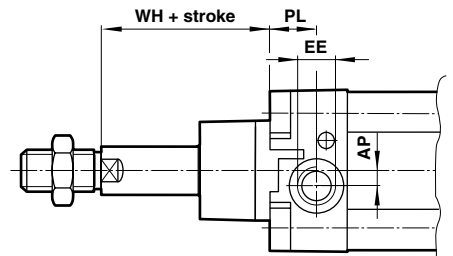
Cylinder Ø	PRA/181000.../M Theoretical forces (N) at 6 bar		PRA/183000.../M Theoretical forces (N) at 6 bar		Cushion length (mm)	Initial cushion volume (cm ³)	Air consumption (l/cm stroke) at 6 bar	
	Outstroke	F1	Instroke	F1			Outstroke	Instroke
32	392	50	324	50	19	12,3	0,056	0,048
40	648	60	528	60	22	20,7	0,088	0,074
50	1043	75	854	75	24	36	0,137	0,114
63	1735	75	1546	75	24	64	0,218	0,195
80	2795	130	2501	130	27	116	0,35	0,32
100	4492	130	4197	130	34	242	0,55	0,51

Basic Dimensions – Standard Cylinders

PRA/181000, PRA/181000/M Sprung in



PRA/183000, PRA/183000/M Sprung out



Cylinder Ø	AM	AP	Ø B e11	Ø BA e11	BG	BH (A/F)	□ E	EE	G	KK	KV (A/F)	KW	L2
32	22	3,5	30	30	18	6	47	G 1/8	27,5	M10x1,25	17	5	20
40	24	4,5	35	35	18	6	53	G 1/4	32	M12x1,25	19	6	22
50	32	6	40	40	18	8	65	G 1/4	31	M16x1,5	24	8	27
63	32	10	45	45	17,5	8	75	G 3/8	33	M16x1,5	24	8	29
80	40	8,5	45	45	21,5	19	95	G 3/8	33	M20x1,5	30	10	33
100	40	9	55	55	21,5	19	115	G 1/2	37	M20x1,5	30	10	36

Cylinder Ø	L9	L12	Ø MM h9	PL	□ R	RT	SW (A/F)	SW1 (A/F)	VA	VD	WH	at 0 mm	per 25 mm
32	4	6	12	13	32,5	M 6	10	10	3	6	26	0,51 kg	0,06 kg
40	4	6,5	16	15	38	M 6	13	13	3,5	6	30	0,80 kg	0,08 kg
50	5	8	20	18,5	46,5	M 8	17	16	3,5	6	37	1,33 kg	0,12 kg
63	5	8	20	19	56,5	M 8	17	16	4	6	37	1,80 kg	0,13 kg
80	-	10	25	19	72	M 10	22	21	4	6	46	3,25 kg	0,20 kg
100	-	10	25	18	89	M 10	22	21	4	6	51	4,81 kg	0,23 kg

Model	181032, 183032	181040, 183040	181050, 183050	181063, 183063	181080, 183080	181100, 183100
Standard strokes	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100
L8	119	147	130	158	131	159
Non-standard strokes	250 mm max.		250 mm max.		250 mm max.	
L8	119 + (N * x 28)		130 + (N * x 28)		131 + (N * x 28)	
	146 + (N * x 28)		153 + (N * x 28)		163 + (N * x 28)	

* Stroke ≤ 50 mm → N = 0

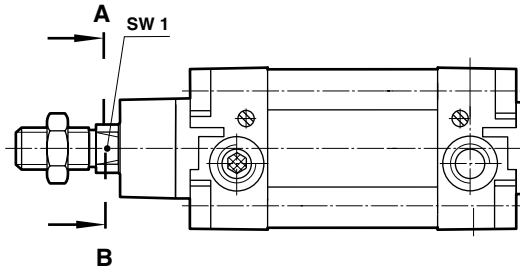
Stroke > 50 mm → N = $\frac{\text{Stroke}}{50} - 1$ (round up to integer)



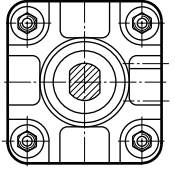
Cylinder Variants

PRA/181000/N1, PRA/181000/N2 – Cylinders with Non-rotating Piston Rod Sprung in

Cylinder Ø	SW1 (A/F)
32	10
40	13
50	16
63	16
80	21
100	21

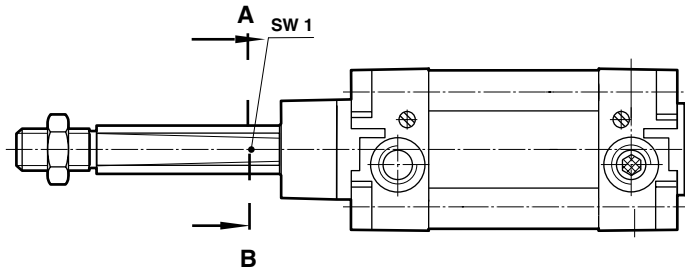


Section A - B

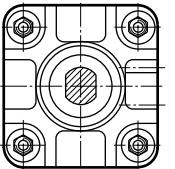


PRA/183000/N1, PRA/183000/N2 – Cylinders with Non-rotating Piston Rod Sprung out

Cylinder Ø	SW1 (A/F)
32	10
40	13
50	16
63	16
80	21
100	21



Section A - B



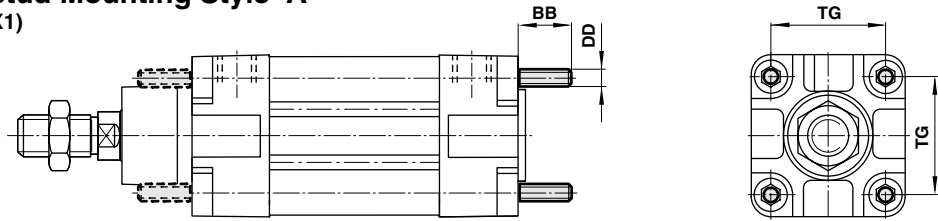
Torque

Cylinder Ø	Torque max. (Nm)
32	0,5
40	1,0
50	1,5
63	1,5
80	2,5
100	2,5



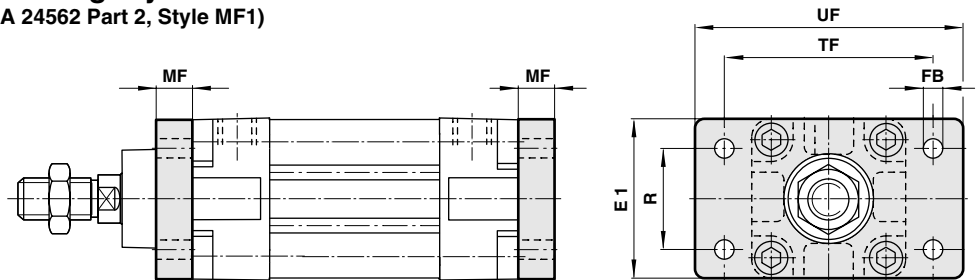
Mountings

QM/8000/35 – Front or Rear Stud Mounting Style ‘A’ (Corresponds to DIN ISO 6431, Style MX1)

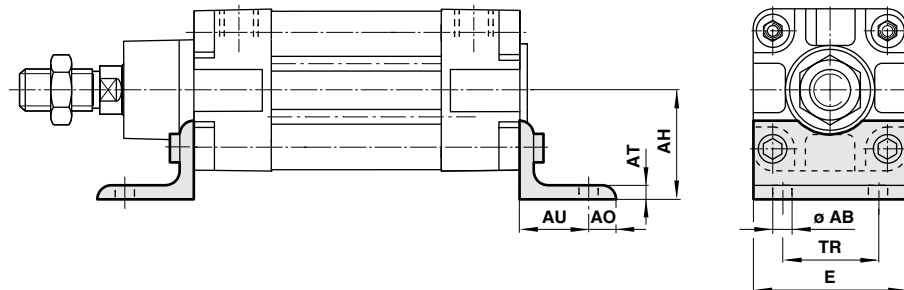


QA/8000/22 – Rear Flange Mounting Style ‘B’ (Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MF2)

QA/8000/22 – Front Flange Mounting Style ‘G’ (Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MF1)



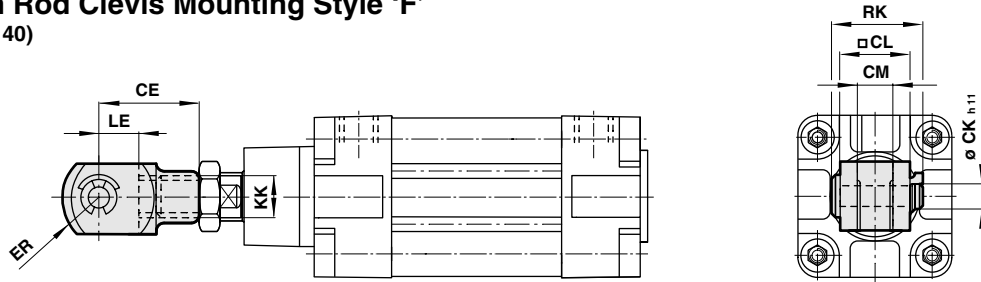
QA/8000/21 – Foot Mounting Style ‘C’ (Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MS1)



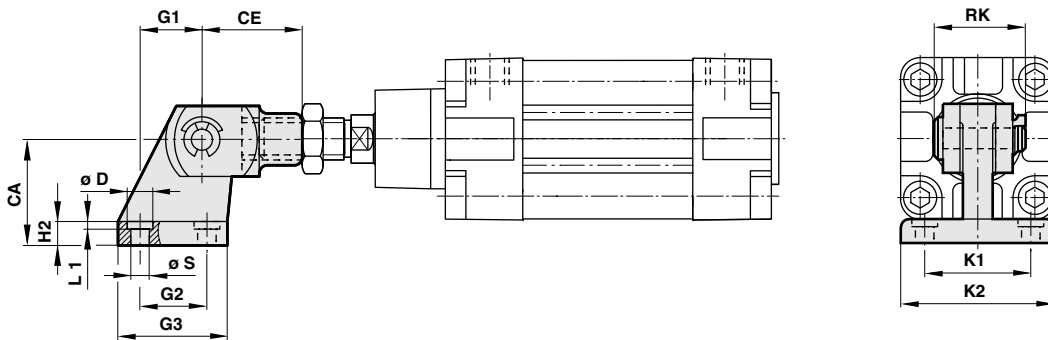
Cylinder \varnothing	\varnothing AB	AH	AO	AT	AU	BB	DD	E	E1	\varnothing FB
32	7	32	8	4	24	17	M 6	48	50	7
40	9	36	9	4	28	17	M 6	53	55	9
50	9	45	10	5	32	23	M 8	64	65	9
63	9	50	12	5	32	23	M 8	74	75	9
80	12	63	19	5	41	28	M 10	98	100	12
100	14	71	19	5	41	28	M 10	115	120	14
Cylinder \varnothing	MF	R	TF	\square TG	TR	UF	Style 'A'	Style 'B', 'G'	Style 'C'	
32	10	32	64	32,5	32	80	0,02 kg	0,25 kg	0,15 kg	
40	10	36	72	38	36	90	0,02 kg	0,35 kg	0,18 kg	
50	12	45	90	46,5	45	110	0,05 kg	0,70 kg	0,30 kg	
63	12	50	100	56,5	50	125	0,05 kg	0,80 kg	0,39 kg	
80	16	63	126	72	63	154	0,08 kg	1,35 kg	0,80 kg	
100	16	75	150	89	75	186	0,08 kg	2,20 kg	0,95 kg	



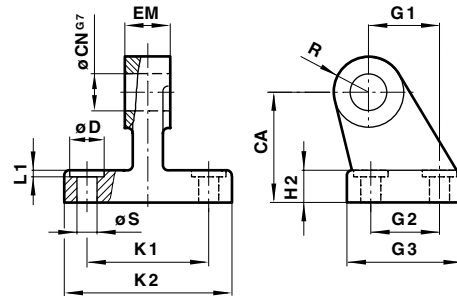
QM/8000/25 – Piston Rod Clevis Mounting Style ‘F’
(Corresponds to DIN ISO 8140)



QM/8000/26 – Front Hinge Mounting Style ‘M’



M/P199 . . – Bracket for Clevis Mounting Style ‘SS’

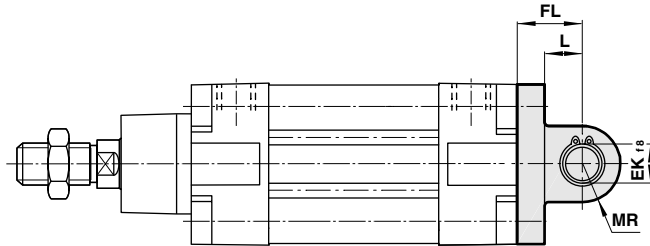
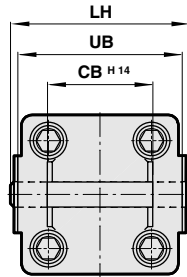


Cylinder Ø	CA	CE	Ø CK h11	CL	CM	Ø CN G7	Ø D	EM	ER	G 1	G 2	G 3
32	32	40	10	20	10	10	11	10	16	21	18	31
40	36	48	12	24	12	12	11	12	19	24	22	35
50	45	64	16	32	16	16	15	16	25	33	30	45
63	50	64	16	32	16	16	15	16	25	37	35	50
80	63	80	20	40	20	20	18	20	32	47	40	60
100	71	80	20	40	20	20	18	20	32	55	50	70
Cylinder Ø	H 2	KK	K 1	K 2	L1	LE	R	RK	Ø S	Style 'F'	Style 'M'	Style 'SS'
32	8	M10x1,25	38	51	1,6	20	10	28	6,6	0,09 kg	0,24 kg	0,15 kg
40	10	M12x1,25	41	54	1,6	24	11	32	6,6	0,13 kg	0,33 kg	0,20 kg
50	12	M16x1,5	50	65	1,6	32	13	41,5	9	0,33 kg	0,81 kg	0,48 kg
63	12	M16x1,5	52	67	1,6	32	15	41,5	9	0,33 kg	0,83 kg	0,50 kg
80	14	M20x1,5	66	86	2,5	40	15	50	11	0,67 kg	1,42 kg	0,75 kg
100	15	M20x1,5	76	96	2,5	40	19	50	11	0,67 kg	1,87 kg	1,20 kg



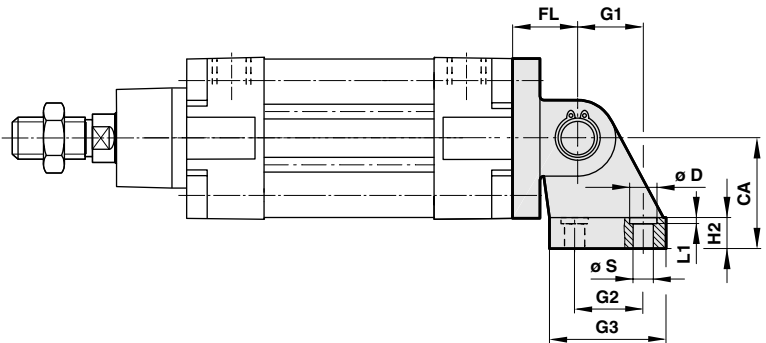
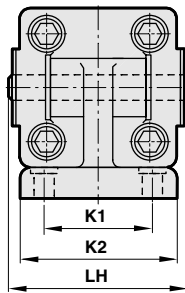
QA/8000/23 – Rear Clevis Mounting Style ‘D’

(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MP2)



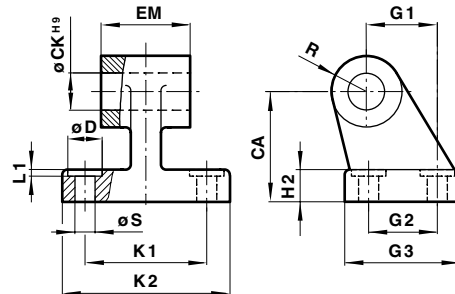
QA/8000/24 – Rear Hinge Mounting Style ‘L’

(Corresponds to VDMA 24562 Part 2)



M/P194 . . – Bracket for Clevis Mounting (wide clevis) Style ‘SW’

(Corresponds to VDMA 24562, Part 2)

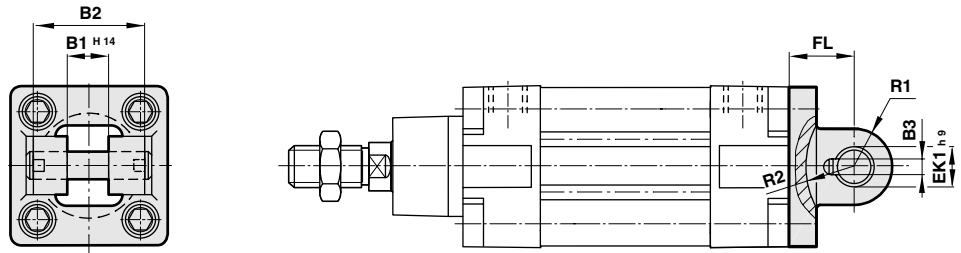


Cylinder Ø	CA	CB H14	Ø CK H9	Ø D	Ø EK H8	EM	FL	G 1	G 2	G 3	H 2	K 1
32	32	26	10	11	10	26	22	21	18	31	8	38
40	36	28	12	11	12	28	25	24	22	35	10	41
50	45	32	12	15	12	32	27	33	30	45	12	50
63	50	40	16	15	16	40	32	37	35	50	12	52
80	63	50	16	18	16	50	36	47	40	60	14	66
100	71	60	20	18	20	60	41	55	50	70	15	76

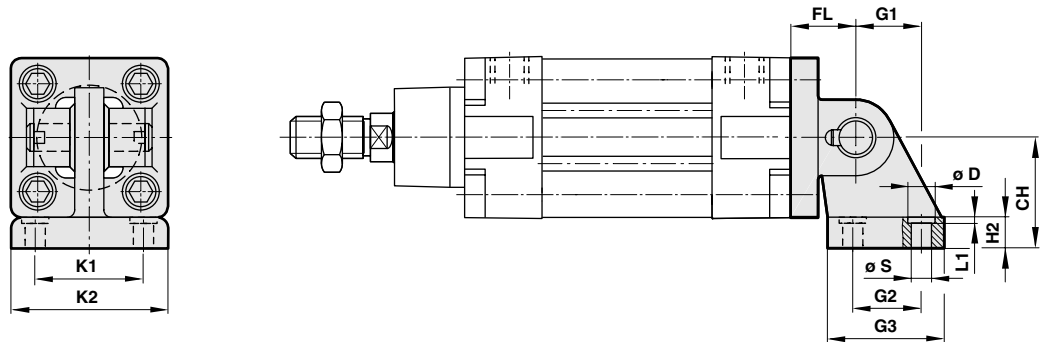
Cylinder Ø	K 2	L	L 1	LH	MR	R	Ø S	UB	Style ‘D’	Style ‘L’	Style ‘SW’
32	51	13	1,6	52	9	10	6,6	45	0,11 kg	0,16 kg	0,05 kg
40	54	16	1,6	60	12	11	6,6	52	0,16 kg	0,23 kg	0,07 kg
50	65	17	1,6	68	12	13	9	60	0,22 kg	0,36 kg	0,14 kg
63	67	22	1,6	79	15	15	9	70	0,34 kg	0,52 kg	0,18 kg
80	86	22	2,5	99	15	15	11	90	0,54 kg	0,82 kg	0,28 kg
100	96	27	2,5	119	20	19	11	110	0,90 kg	1,32 kg	0,42 kg



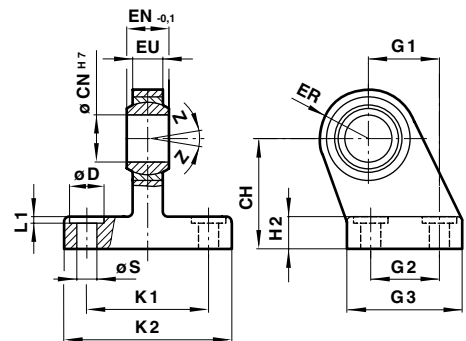
QA/8000/42 – Rear Clevis Mounting Style ‘D2’
(Corresponds to VDMA 24562 Part 2)



QA/8000/43 – Universal Rear Hinge Mounting Style ‘UL’
(Corresponds to VDMA 24562 Part 2)



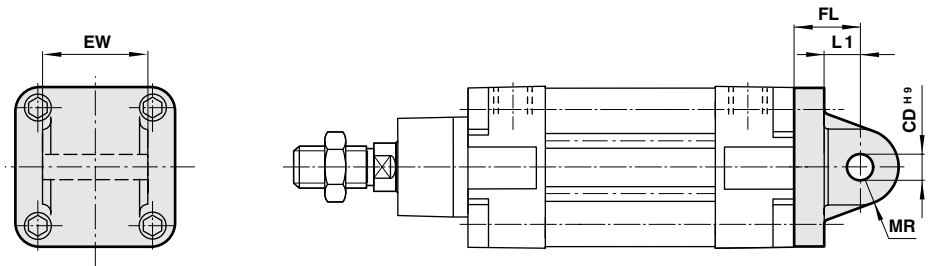
M/P403 . . – Bracket Hinge for Clevis Mounting Style ‘US’
(Corresponds to VDMA 24562 Part 2)



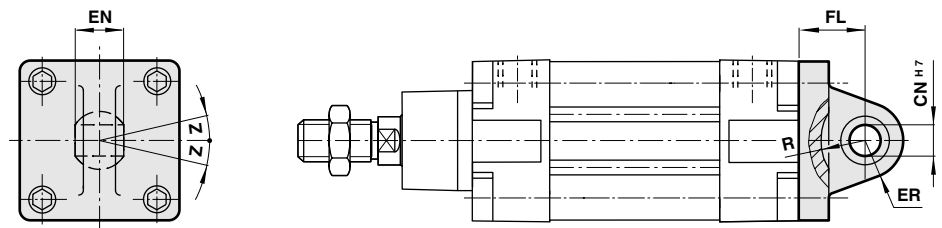
Cylinder \varnothing	B1 H14	B2	B3	CH	\varnothing CN H7	\varnothing D	\varnothing EK h9	EN -0,1	ER	EU	FL	G 1	G 2
32	14	34	3,3	32	10	11	10	14	16	10,5	22	21	18
40	16	40	4,3	36	12	11	12	16	19	12	25	24	22
50	21	45	4,3	45	16	15	16	21	21	15	27	33	30
63	21	51	4,3	50	16	15	16	21	24	15	32	37	35
80	25	65	4,3	63	20	18	20	25	28	18	36	47	40
100	25	75	4,3	71	20	18	20	25	30	18	41	55	50
Cylinder \varnothing	G 3	H 2	K1	K 2	L1	R1	R2	\varnothing S	Z	Style ‘D2’	Style ‘UL’	Style ‘US’	
32	31	8	38	51	1,6	11	17	6,6	13°	0,20 kg	0,39 kg	0,19 kg	
40	35	10	41	54	1,6	12	20	6,6	13°	0,23 kg	0,47 kg	0,24 kg	
50	45	12	50	65	1,6	14,5	22	9	13°	0,36 kg	0,82 kg	0,46 kg	
63	50	12	52	67	1,6	18	25	9	15°	0,55 kg	1,14 kg	0,59 kg	
80	60	14	66	86	2,5	22	30	11	15°	0,90 kg	1,93 kg	1,03 kg	
100	70	15	76	96	2,5	22	32	11	15°	1,45 kg	2,85 kg	1,40 kg	



QA/8000/27 – Rear Eye Mounting Style ‘R’
 (Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MP4)



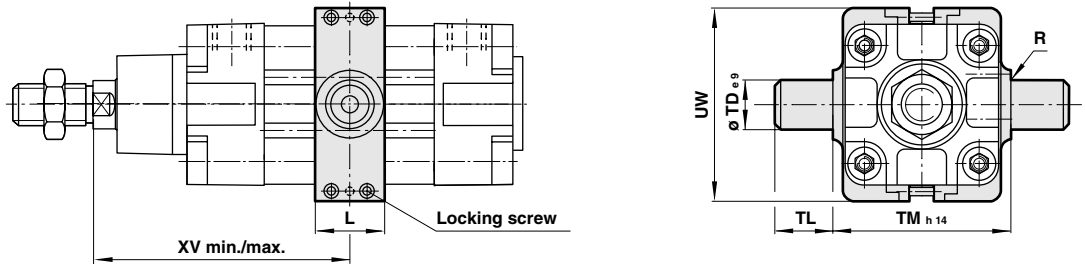
QA/8000/33 – Universal Rear Eye Mounting Style ‘UR’
 (Corresponds to VDMA 24562 Part 2)



Cylinder Ø	Ø CD H9	Ø CN H7	EN	ER	EW	FL	L1	MR	R	Z	Style 'R'	Style 'UR'
32	10	10	14	16	25,8	22	13	9	14,5	13°	0,09 kg	0,17 kg
40	12	12	16	19	27,8	25	16	12	18	13°	0,11 kg	0,25 kg
50	12	16	21	21	31,7	27	17	12	19	13°	0,17 kg	0,40 kg
63	16	16	21	24	39,7	32	22	15	24	15°	0,24 kg	0,55 kg
80	16	20	25	28	49,7	36	22	15	24	15°	0,37 kg	0,90 kg
100	20	20	25	30	59,7	41	27	20	29	15°	0,59 kg	1,50 kg

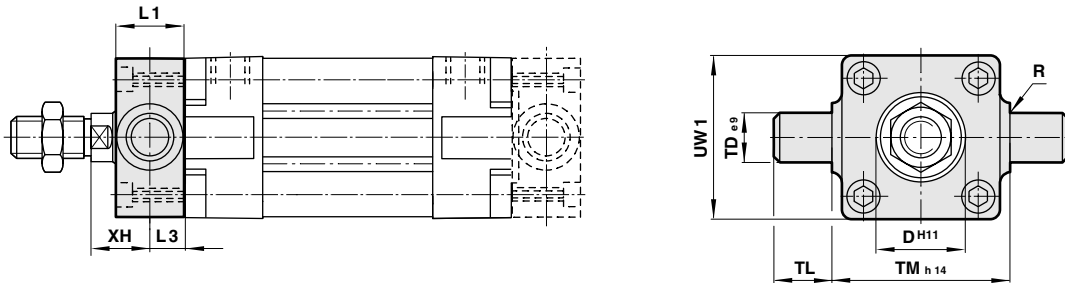


PQA/182000/40 – Adjustable Trunnion Mounting Style ‘UH’
(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MT4)

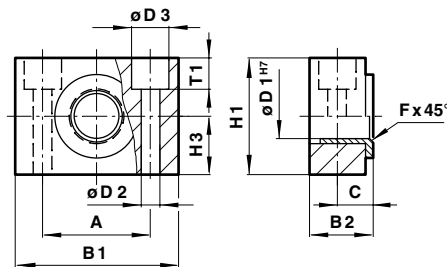


Note:
Style ‘UH’: It is most important that the locking screws which secure the mounting to the cylinder barrel are tightened to the torque figures shown in the table below. For maximum energy input, consult our Technical Service.

QA/8000/34 – Front or Rear Detachable Trunnion Mounting Style ‘FH’
(Corresponds to VDMA 24562 Part 2, Style MT 5/6)



QA/8000/41 – Swivel Bearing Style ‘S’
For Trunnion Mountings Style ‘FH’, ‘UH’



Cylinder Ø	A	B 1	B 2	C	Ø D ^{H11}	Ø D 1 ^{H7}	Ø D 2	Ø D 3	F x 45°	H 1	H 3	L	L 1	L 3
32	32	46	18	10,5	30	12	6,6	11	1	30	15	25	16	8
40	36	55	21	12	35	16	9	15	1,6	36	18	28	20	10
50	36	55	21	12	40	16	9	15	1,6	36	18	28	24	12
63	42	65	23	13	45	20	11	18	1,6	40	20	36	24	12
80	42	65	23	13	45	20	11	18	1,6	40	20	36	28	14
100	50	75	28,5	16	55	25	14	20	2	50	25	50	38	19

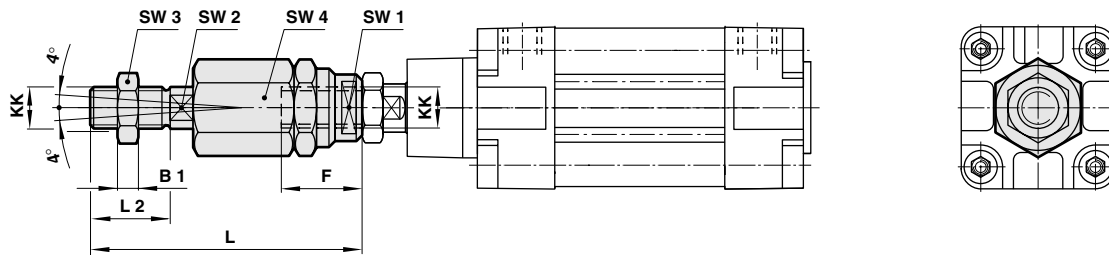
Cylinder Ø	R	Ø TD e9	TL	TM ^{h14}	T 1	UW	UW 1	XH	XL	Torque Nm	Style ‘FH’	Style ‘S’	Style ‘UH’
32	1	12	12	50	6,8	58	50	18	128	2	0,20 kg	0,11 kg	0,16 kg
40	1,6	16	16	63	9	65	55	20	145	3,5	0,38 kg	0,16 kg	0,35 kg
50	1,6	16	16	75	9	80	65	25	155	3,5	0,60 kg	0,16 kg	0,65 kg
63	1,6	20	20	90	11	96	75	25	170	5	1,10 kg	0,23 kg	0,85 kg
80	1,6	20	20	110	11	116	100	32	188	6	1,90 kg	0,23 kg	1,20 kg
100	2	25	25	132	13	140	120	32	208	6	3,50 kg	0,42 kg	2,30 kg

Model	181032, 183032	181040, 183040	181050, 183050	181063, 183063	181080, 183080	181100, 183100
Standard strokes	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100
XV min.	66	20	25	25	32	32
XV max.	105	133	114	142	123	151
Non-standard strokes	250 max.	250 max.	250 max.	250 max.	250 max.	250 max.
XV max.	105 + (N * x 28)	114 + (N * x 28)	123 + (N * x 28)	134 + (N * x 28)	148 + (N * x 28)	153 + (N * x 28)

* Stroke ≤ 50 mm → N = 0
Stroke > 50 mm → N = $\frac{\text{Stroke}}{50} - 1$ (round up to integer)

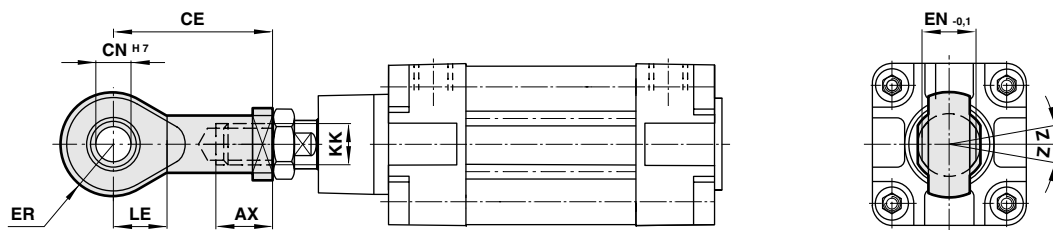


QM/8000/38 – Piston Rod Swivel Mounting Style ‘AK’



QM/8000/32 – Universal Piston Rod Eye Mounting Style ‘UF’

(Corresponds to DIN ISO 8139)

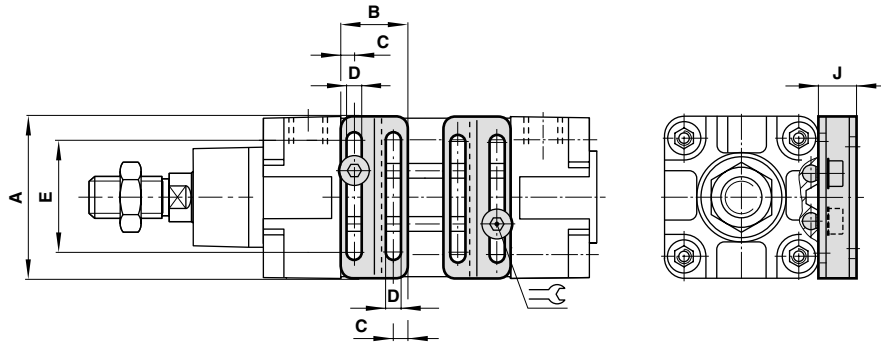


Cylinder \varnothing	AX	B1	CE	\varnothing CN H7	EN -0,1	ER	F	KK	L
32	20	5	43	10	14	14	26	M 10 x 1,25	73
40	22	6	50	12	16	16	26	M 12 x 1,25	77
50	28	8	64	16	21	21	34	M 16 x 1,5	106
63	28	8	64	16	21	21	34	M 16 x 1,5	106
80	33	10	77	20	25	25	42	M 20 x 1,5	122
100	33	10	77	20	25	25	42	M 20 x 1,5	122

Cylinder \varnothing	L 2	LE	SW 1 (A/F)	SW 2 (A/F)	SW 3 (A/F)	SW 4 (A/F)	Z	Style 'AK'	Style 'F'
32	20	15	19	12	17	30	13°	0,20 kg	0,09 kg
40	24	17	19	12	19	30	13°	0,20 kg	0,13 kg
50	32	22	30	19	24	42	15°	0,65 kg	0,33 kg
63	32	22	30	19	24	42	15°	0,65 kg	0,33 kg
80	40	26	30	19	30	42	15°	0,72 kg	0,67 kg
100	40	26	30	19	30	42	15°	0,72 kg	0,67 kg



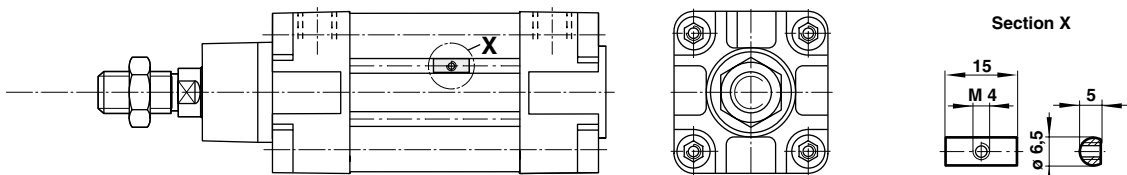
QA/1800.0/22/54 – Valve Mounting Kit



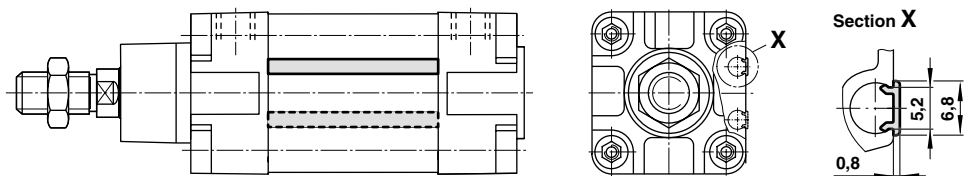
Cylinder Ø	A	B	C	D	E	F	G	H	J	SW	Kit kg
50 + 63	60	37	7	4,5	46	8,5	5,5	2	12	3	0,02
80 – 125	90	37	7	4,5	76	8,5	6,5	2	12	3	0,02

M/P72816 – Groove Cover

Weight: 0,010 kg



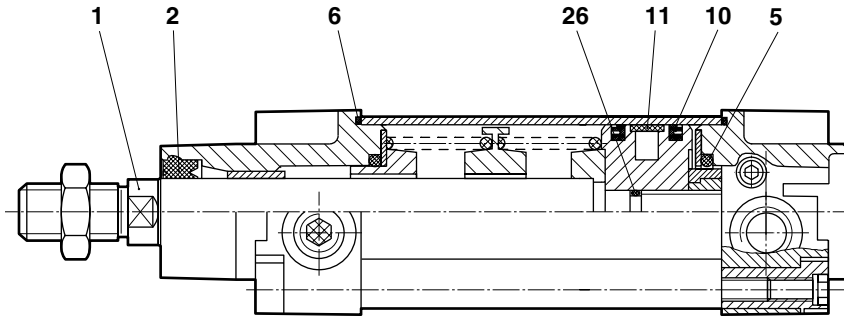
M/K72725/1000 – Groove Key





Spares

Sprung in



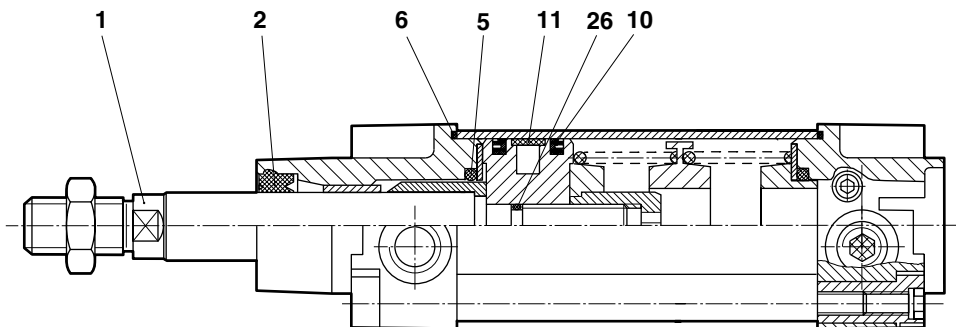
Cylinder Ø	Model	Spares kit	Comprising item	Description	Quantity	Piston rod Item 1
32	PRA/181032, PRA/181032/M	QA/8032/00	2	Piston rod seal	1	RM/P40725/IU/*/\$
40	PRA/181040, PRA/181040/M	QA/8040/00	5	Cushion seal	2	SM/P40726/IU/*/\$
50	PRA/181050, PRA/181050/M	QA/8050/00	6	'O'-ring	2	RM/P40727/IU/*/\$
63	PRA/181063, PRA/181063/M	QA/8063/00	10	Piston seal	2	RM/P40728/IU/*/\$
80	PRA/181080, PRA/181080/M	QA/8080/00	11	Wear ring	1	RM/P40729/IU/*/\$
100	PRA/181100, PRA/181100/M	QA/8100/00	26	'O'-ring	1	RM/P40730/IU/*/\$

* Insert stroke length

Note: Please quote the cylinder type number when ordering spares kits and piston rods.

Spares

Sprung out



Cylinder Ø	Model	Spares kit	Comprising item	Description	Quantity	Piston rod Item 1
32	PRA/183032, PRA/183032/M	QA/8032/00	2	Piston rod seal	1	RM/P19966/*
40	PRA/183040, PRA/183040/M	QA/8040/00	5	Cushion seal	2	RM/P19967/*
50	PRA/183050, PRA/183050/M	QA/8050/00	6	'O'-ring	2	RM/P19968/*
63	PRA/183063, PRA/183063/M	QA/8063/00	10	Piston seal	2	RM/P19969/*
80	PRA/183080, PRA/183080/M	QA/8080/00	11	Wear ring	1	RM/P19970/*
100	PRA/183100, PRA/183100/M	QA/8100/00	26	'O'-ring	1	RM/P19971/*

* Insert stroke length

Note: Please quote the cylinder type number when ordering spares kits and piston rods.

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.