

- **Cylinders to VDMA Standard 24562, ISO 6431 and NFE 49-003-1**
- **New polyurethane seals ensure efficient low friction operation and long life**
- **New lightweight, clean line design with built-in mounting for magnetically operated switches**
- **Comprehensive range of standard mountings**

Technical Data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

ISO 6431, VDMA 24562, NFE 49-003-1 and corresponding BS and CETOP

Operation:

PRA/8000 Double acting with adjustable cushioning

PRA/8000/M Double acting with magnetic piston and adjustable cushioning

PVA/8000/M Double acting with magnetic piston and adjustable cushioning (corrosion resistant construction)

Operating Pressure:

1 to 16 bar

Operating Temperature:

-20°C* to +80°C max.

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

Cylinder Diameters:

PRA/8000 32, 40, 50, 63, 80, 100, 125 mm

PVA/8000 32, 40, 50, 63, 80, 100 mm

Standard Strokes:

25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500 mm

Non-standard Strokes:

Non-standard strokes available

Materials:

PRA/8000 and PRA/8000/M

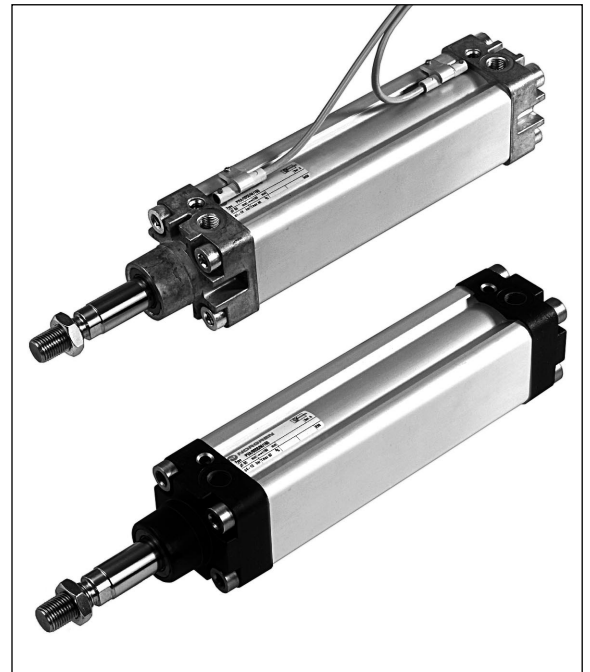
Stainless steel (Martensitic) piston rod, anodised aluminium profile barrel, diecast aluminium end covers, nitrile 'O'-rings, polyurethane piston and piston rod seals.

PVA/8000/M

Stainless steel (Austenitic) piston rod, anodised aluminium profile barrel, anodised cast aluminium end covers, nitrile 'O'-rings, polyurethane piston and piston rod seals.

Alternative Cylinders:

See page N/UK 1.5.128.02



Ordering Information

To order a basic 80 mm bore cylinder with a 50 mm stroke and magnetic piston quote: PRA/8080/M/50

To order a basic 100 mm bore cylinder with a 100 mm stroke and non-rotation piston rod quote: PRA/8100/N1/100

To order mounting brackets refer to appropriate cylinder mounting table.

Order magnetically operated switches separately.

Accessories

See page

Switches QM/33, QM/34

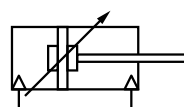
N 4.3.051.01

Switches QM/134, QM/134/N

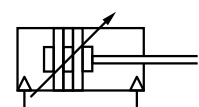
N 4.3.055.01

Guide Blocks

N 1.10.021.01



Non-magnetic piston



Magnetic piston





Alternative Cylinders

Symbol	Model (non-magnetic piston)	Symbol	Model (magnetic piston)	Description
	PCA/8000		PCA/8000/M	Hard chromium plated piston rod
	PSA/8000		PSA/8000/M	Stainless steel piston rod (Austenitic)
	PRA/8000/W1		PRA/8000/W2	Special wiper/seal for applications by arizona sand, cement, plaster (stucco) hoar-frost or ice.
	PRA/8000/X1		PVA/8000/W2	Low friction cylinders Medium: Compressed air, filtered and non-lubricated recommended
			TPRA/8000/M	Heat resistant seal (150° C max.)
	PRA/8000/IU		PRA/8000/MU	Extended piston rod
	PRA/8000/W5		PRA/8000/W6	Extended piston rod and special wiper/seal for applications by arizona sand, cement, plaster (stucco) hoar-frost or ice.
	PRA/8000/G		PRA/8000/MG	Piston rod bellows (Dimensions, page N/UK 1.5.128.12)
	PRA/8000/W		PRA/8000/MW	Without cushioning
	PRA/8000/X3		PRA/8000/X4	Low friction cylinders without cushioning Medium: Compressed air, filtered and non-lubricated recommended
			HPRA/8000/M	Hydraulic (∅ 32 to 100 mm)
	PRA/8000/J		PRA/8000/JM, PVA/8000/JM	Double ended piston rod
	PRA/8000/W3		PRA/8000/W4, PVA/8000/W4	Double ended piston rod and special wiper/seal for applications by arizona sand, cement, plaster (stucco) hoar-frost or ice.
	PRA/8000/IT		PRA/8000/MT	Four position cylinders
	PRA/8000/N1		PRA/8000/N2	Non-rotating piston rod (∅ 32 to 100 mm)
	PRA/8000/L2		PRA/8000/L4	Cylinders with locking unit (PASSIVE). Locking is achieved by spring force on removal of the signal to the unit. Operating Pressure for locking unit: 4 to 10 bar (Dimensions, page N/UK 1.5.128.11)

For combinations of alternative cylinders consult our Technical Service.

Theoretical Forces • Cushioning • Air Consumption




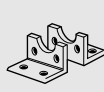




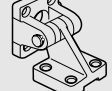







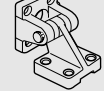


Model	Theoretical forces (N) at 6 bar		Cushion length (mm)	Initial cushion volume (cm ³)	Air consumption (l/cm stroke) at 6 bar	
	Outstroke	Instroke			Outstroke	Instroke
8032	482	414	19	12,3	0,056	0,048
8040	754	633	22	20,7	0,088	0,074
8050	1178	990	24	36	0,137	0,114
8063	1870	1680	24	64	0,218	0,195
8080	3016	2722	27	116	0,35	0,32
8100	4710	4416	34	242	0,55	0,51
8125	7363	6882	41	451	0,86	0,79

Spring Forces for Cylinder with Locking Unit • Stroke and Torque for Cylinders PRA/8000/N

Model	Spring forces (N)	Model	Stroke max. (mm)	Torque max. (Nm)
PRA/8032/L2 and ../L4	600	PRA/8032/N1 and ../N2	300	0,5
PRA/8040/L2 and ../L4	1000	PRA/8040/N1 and ../N2	400	1,0
PRA/8050/L2 and ../L4	1400	PRA/8050/N1 and ../N2	500	1,5
PRA/8063/L2 and ../L4	2000	PRA/8063/N1 and ../N2	500	1,5
PRA/8080/L2 and ../L4	5000	PRA/8080/N1 and ../N2	600	2,5
PRA/8100/L2 and ../L4	5000	PRA/8100/N1 and ../N2	600	2,5
PRA/8125/L2 and ../L4	7000			



Weights of Cylinders and Mountings (kg)

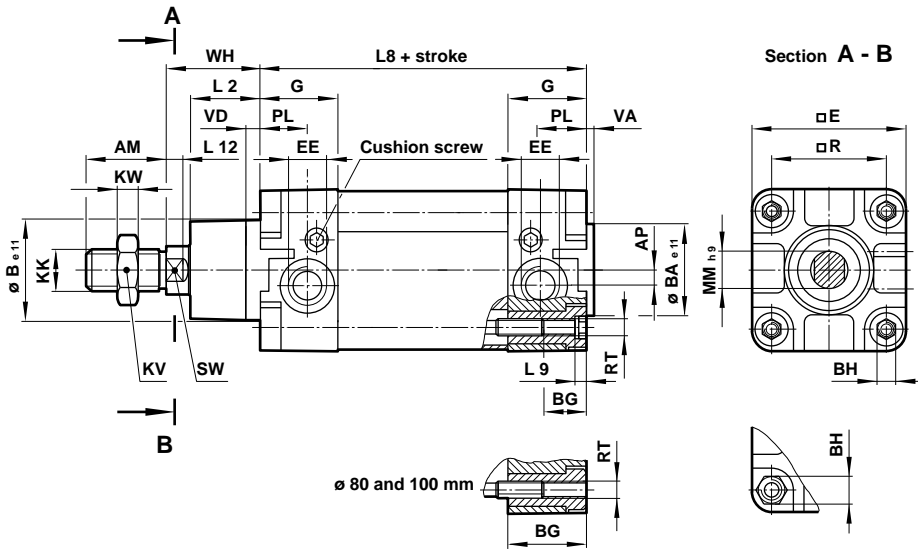
Model	PRA/8000 Weight at 0 mm	PVA/8000/M Weight at 0 mm	Weight per 25 mm	 Style 'A'	 Style 'AK'	 Style 'B', 'G'	 Style 'C'	 Style 'D'
8032	0,51	0,64	0,06	0,02	0,20	0,25	0,15	0,11
8040	0,80	0,95	0,08	0,02	0,20	0,35	0,18	0,16
8050	1,33	1,51	0,12	0,05	0,65	0,70	0,30	0,22
8063	1,80	2,10	0,13	0,05	0,65	0,80	0,39	0,34
8080	3,25	3,75	0,20	0,08	0,72	1,35	0,80	0,54
8100	4,81	5,61	0,23	0,08	0,72	2,20	0,95	0,90
8125	8,00		0,33	0,14	1,70	1,70	2,40	2,70
Model	 Style 'D2'	 Style 'F'	 Style 'FH'	 Style 'L'	 Style 'M'	 Style 'R'	 Style 'S'	 Style 'SS'
8032	0,20	0,09	0,20	0,16	0,24	0,09	0,10	0,15
8040	0,23	0,13	0,38	0,23	0,38	0,11	0,14	0,20
8050	0,36	0,33	0,60	0,36	0,73	0,17	0,14	0,48
8063	0,55	0,33	1,10	0,52	0,88	0,24	0,19	0,50
8080	0,90	0,67	1,90	0,82	1,55	0,37	0,19	0,75
8100	1,45	0,67	3,50	1,32	2,15	0,59	0,34	1,20
8125	2,70	1,35	6,50	5,40	4,05	3,20	0,34	2,50
Model	 Style 'SW'	 Style 'UF'	 Style 'UH'	 Style 'UL'	 Style 'UR'	 Style 'US'	8000/L1 to 8000/L4	Switch bracket
8032	0,05	0,08	0,10	0,37	0,17	0,19	0,25	0,003
8040	0,07	0,12	0,15	0,52	0,25	0,24	0,40	0,003
8050	0,14	0,15	0,20	0,90	0,40	0,46	0,70	0,003
8063	0,18	0,23	0,28	1,25	0,55	0,59	1,00	0,003
8080	0,28	0,33	0,55	2,30	0,90	1,03	2,12	0,003
8100	0,42	0,42	0,88	3,20	1,50	1,40	2,94	0,003
8125	2,70	0,75	-	5,80	2,70	3,10	6,05	0,003

Materials and Surface Treatment of Mountings

	Standard	Corrosion resistant construction
Style 'A'	Zinc plated steel	
Style 'AK'	Zinc plated steel	
Style 'B', 'G'	Clear anodised aluminium	Black anodised aluminium
Style 'C'	Painted steel (zinc plated steel 32 to 63 mm bore)	Black nickel-chromium plated steel
Style 'D'	Diecast aluminium mounting, stainless steel (Martensitic) bolt.	Black nickel-chromium plated diecast aluminium mounting, stainless steel (Austenitic) bolt.
Style 'D 2'	Painted cast iron, stainless steel (Martensitic) bolt.	
Style 'F'	Zinc plated steel	Nickel plated steel mounting, stainless steel (Austenitic) bolt.
Style 'FH'	Painted cast iron	
Style 'L'	Diecast aluminium mounting, stainless steel (Martensitic) bolt.	Black nickel-chromium plated diecast aluminium mounting, stainless steel (Austenitic) bolt.
Style 'M'	Zinc plated steel clevis mounting, diecast aluminium hinge.	Black nickel-chromium plated diecast aluminium mounting, stainless steel (Austenitic) bolt.
Style 'R'	Diecast aluminium	Black nickel-chromium plated diecast aluminium
Style 'S'	Zinc plated steel, sintered bronze bearing bush	
Style 'SS'	Painted cast iron	Black nickel-chromium cast iron
Style 'SW'	Diecast aluminium	Black nickel-chromium diecast aluminium
Style 'UF'	Zinc plated steel, mounting hardened steelball and roller-bearing elements	Nickel plated steel mounting, stainless steel (Austenitic) ball, nickel plated hardened steel roller-bearing
Style 'UH'	Clear anodised aluminium	
Style 'UL'	Painted cast iron clevis mounting, stainless (Martensitic) bolt, diecast aluminium hinge, hardened steel ball and roller-bearing elements.	
Style 'UR'	Painted diecast aluminium mounting, hardened steel ball and roller-bearing elements	Black nickel-chromium plated diecast aluminium mounting, stainless steel (Austenitic) ball, nickel plated hardened steel roller-bearing
Style 'US'	Diecast aluminium (125 mm bore painted cast iron) mounting, hardened steel ball and roller-bearing elements	

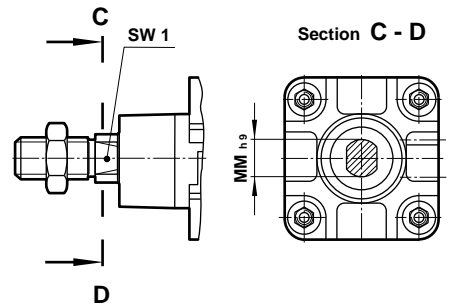


Basic Dimensions

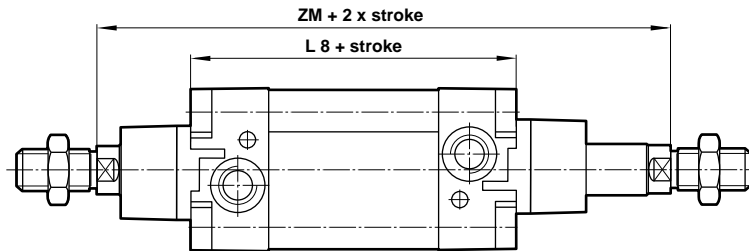


Non rotating piston rod

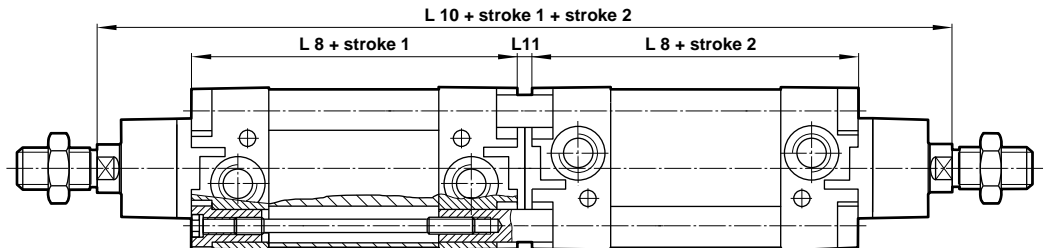
PRA/8000/N1 and PRA/8000/N2



Double ended piston rod



Four-position cylinders

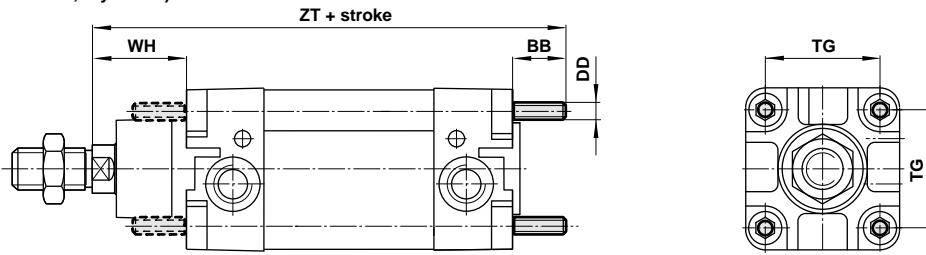


Model	8032	8040	8050	8063	8080	8100	8125
∅	32	40	50	63	80	100	125
AM	22	24	32	32	40	40	54
AP	3,5	4,5	6	10	8,5	9	10
∅ B e11	30	35	40	45	45	55	60
∅ BA e11	30	35	40	45	45	55	60
BG	18	18	18	17,5	21,5	21,5	32
BH (A/F)	6	6	8	8	19	19	24
□ E	47	53	65	75	95	115	140
EE	G 1/8	G 1/4	G 1/4	G 3/8	G 3/8	G 1/2	G 1/2
G	27,5	32	31	33	33	37	46
KK	M 10 x 1,25	M 12 x 1,25	M 16 x 1,5	M 16 x 1,5	M 20 x 1,5	M 20 x 1,5	M 27 x 2
KV (A/F)	17	19	24	24	30	30	41
KW	5	6	8	8	10	10	13,5
L2	20	22	27	29	33	36	45
L8	94	105	106	121	128	138	160
L9	4	4	5	5			
L10	247	278	294	325	357	387	462
L11	7	8	8	9	9	9	12
L12	6	6,5	8	8	10	10	13
∅ MM h9	12	16	20	20	25	25	32
PL	13	15	18,5	19	19	18	20
□ R	32,5	38	46,5	56,5	72	89	110
RT	M 6	M 6	M 8	M 8	M 10	M 10	M 12
SW (A/F)	10	13	17	17	22	22	27
SW 1 (A/F)	10	13	16	16	21	21	
VA	3	3,5	3,5	4	4	4	6
VD	6	6	6	6	6	6	15,5
WH	26	30	37	37	46	51	65
ZM	146	165	180	195	220	240	290



Front or Rear Stud Mounting Style 'A'

(Corresponds to DIN ISO 6431, Style MX1)

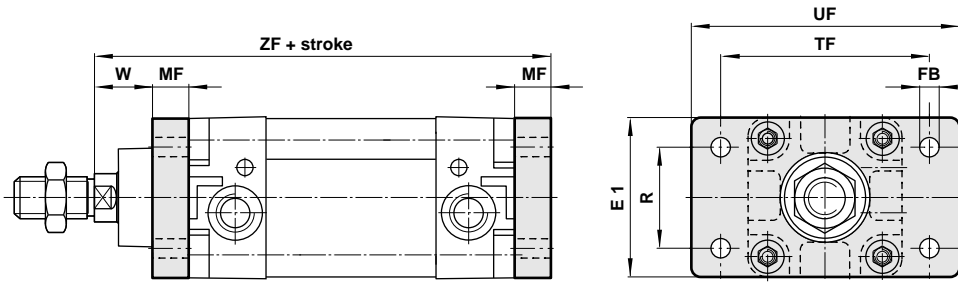


Rear Flange Mounting Style 'B'

(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MF2)

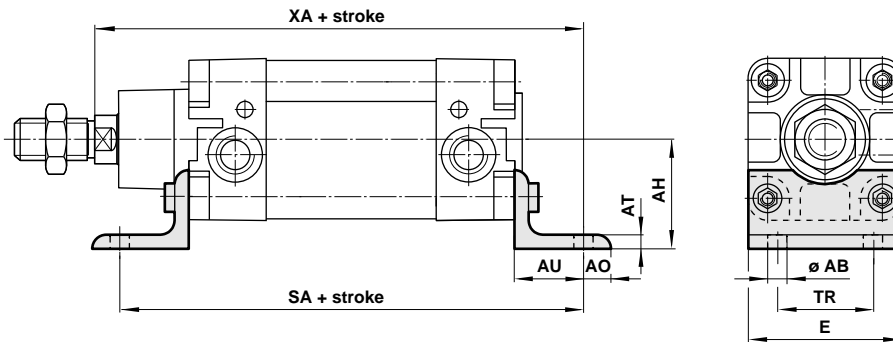
Front Flange Mounting Style 'G'

(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MF1)



Foot Mounting Style 'C'

(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MS1)



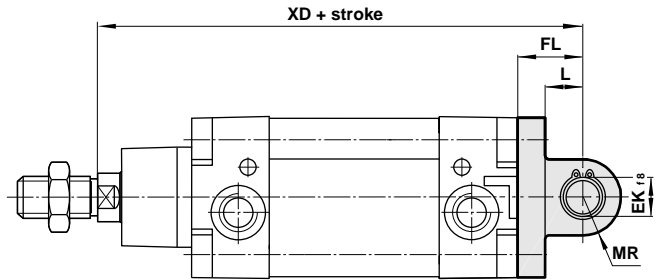
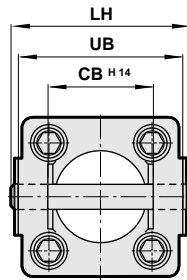
Model 'A'	QM/8032/35	QM/8032/35	QM/8050/35	QM/8050/35	QM/8080/35	QM/8080/35	QM/8125/35
Model 'B', 'G'	QA/8032/22	QA/8040/22	QA/8050/22	QA/8063/22	QA/8080/22	QA/8100/22	QM/8125/22
	PVQA/8032/22	PVQA/8040/22	PVQA/8050/22	PVQA/8063/22	PVQA/8080/22	PVQA/8100/22	-
Model 'C'	QA/8032/21	QA/8040/21	QA/8050/21	QA/8063/21	QA/8080/21	QA/8100/21	QM/8125/21
	PVQA/8032/21	PVQA/8040/21	PVQA/8050/21	PVQA/8063/21	PVQA/8080/21	PVQA/8100/21	-
∅	32	40	50	63	80	100	125
∅ AB	7	9	9	9	12	14	16
AH	32	36	45	50	63	71	90
AO	8	9	10	12	19	19	20
AT	4	4	5	5	5	5	9
AU	24	28	32	32	41	41	45
BB	17	17	23	23	28	28	34
DD	M 6	M 6	M 8	M 8	M 10	M 10	M 12
E	48	53	64	74	98	115	140
E1	50	55	65	75	100	120	140
∅ FB	7	9	9	9	12	14	16
MF	10	10	12	12	16	16	20
R	32	36	45	50	63	75	90
SA	142	161	170	185	210	220	250
TF	64	72	90	100	126	150	180
□ TG	32,5	38	46,5	56,5	72	89	110
TR	32	36	45	50	63	75	90
UF	80	90	110	125	154	186	224
W	16	20	25	25	30	35	45
WH	26	30	37	37	46	51	65
XA	144	163	175	190	215	230	270
ZF	130	145	155	170	190	205	245
ZT	137	152	166	181	202	217	259

Note: Mounting brackets PVQA/8000/21 and PVQA/8000/22 are for use with PVA/8000/M cylinders.



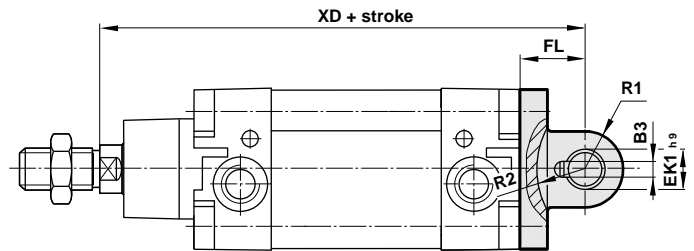
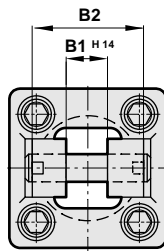
Rear Clevis Mounting Style 'D'

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



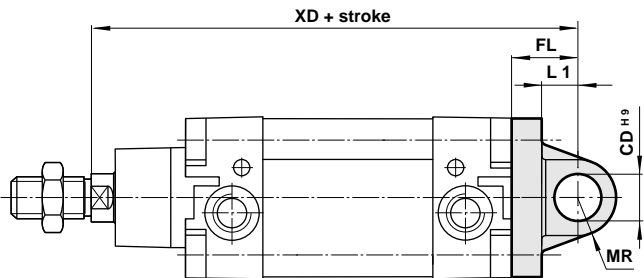
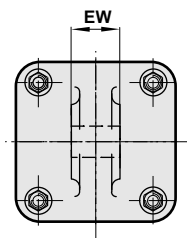
Rear Clevis Mounting Style 'D2'

(Corresponds to VDMA 24562 Part 2)



Rear Eye Mounting Style 'R'

(Corresponds to DIN ISO 6431 and VDMA 24562 Part 2, Style MP4)



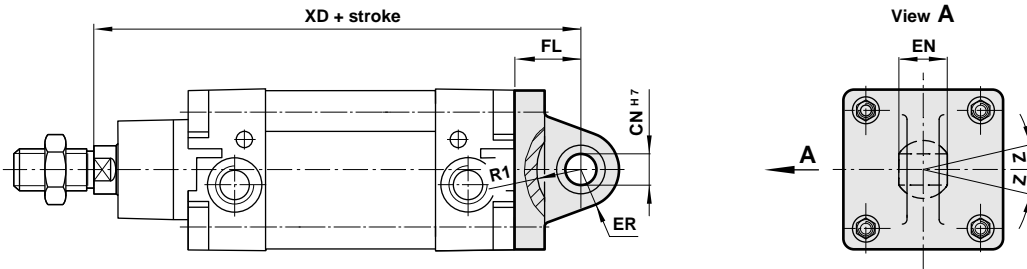
Model 'D'	QA/8032/23	QA/8040/23	QA/8050/23	QA/8063/23	QA/8080/23	QA/8100/23	QM/8125/23
	PVQA/8032/23	PVQA/8040/23	PVQA/8050/23	PVQA/8063/23	PVQA/8080/23	PVQA/8100/23	-
Model 'D2'	QA/8032/42	QA/8040/42	QA/8050/42	QA/8063/42	QA/8080/42	QA/8100/42	QA/8125/42
Model 'R'	QA/8032/27	QA/8040/27	QA/8050/27	QA/8063/27	QA/8080/27	QA/8100/27	QM/8125/27
	PVQA/8032/27	PVQA/8040/27	PVQA/8050/27	PVQA/8063/27	PVQA/8080/27	PVQA/8100/27	-
∅	32	40	50	63	80	100	125
B 1 H14	14	16	21	21	25	25	37
B 2	34	40	45	51	65	75	97
B 3	3,3	4,3	4,3	4,3	4,3	4,3	6,3
CB H14	26	28	32	40	50	60	70
∅ CD H9	10	12	12	16	16	20	25
∅ EK f8	10	12	12	16	16	20	25
∅ EK 1 h9	10	12	16	16	20	20	30
EW	25,8	27,8	31,7	39,7	49,7	59,7	69,7
FL	22	25	27	32	36	41	50
L	13	16	17	22	22	27	31
L1	13	16	17	22	22	27	33
LH	52	60	68	79	99	119	139
MR	9	12	12	15	15	20	25
R 1	11	12	14,5	18	22	22	30
R 2	17	20	22	25	30	32	42
UB	45	52	60	70	90	110	130
XD	142	160	170	190	210	230	275

Note: Mounting brackets PVQA/8000/23 and PVQA/8000/27 are for use with PVA/8000/M cylinders.



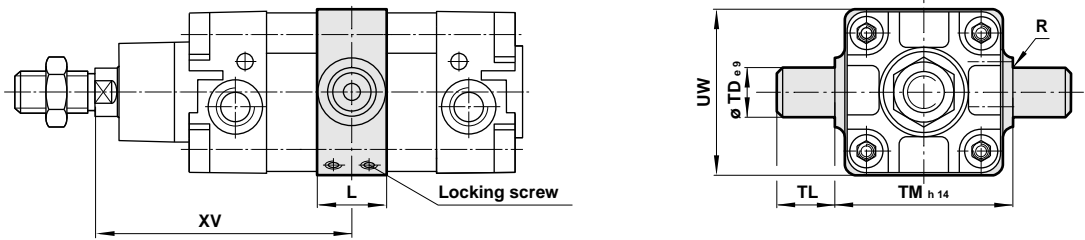
Universal Rear Eye Mounting Style 'UR'

(Corresponds to VDMA 24562 Part 2)



Adjustable Intermediate Trunnion Mounting Style 'UH'

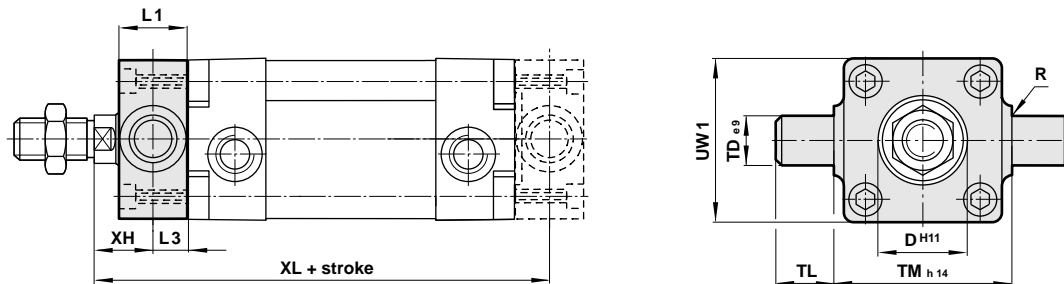
(Corresponds to DIN ISO 6431 VDMA 24562 Part 2, Style MT4)



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

Head (Cap) Detachable Trunnion Mounting Style 'FH'

(Corresponds to VDMA 24562 Part 2, Style MT 5/6)



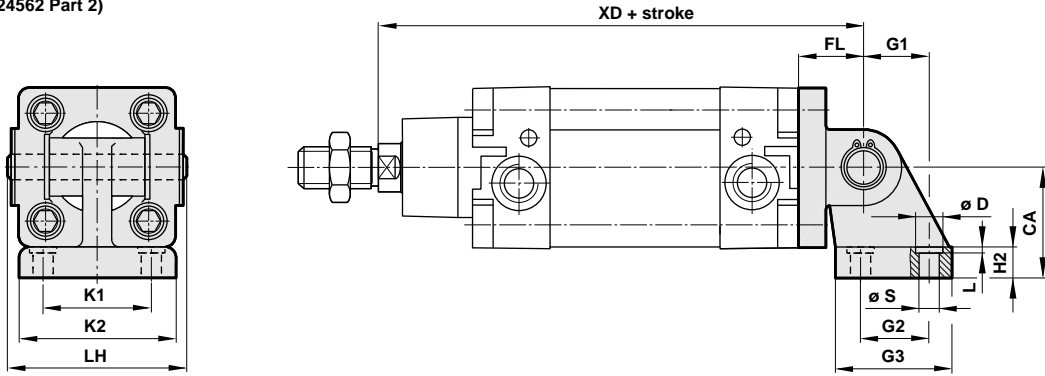
Model 'FH'	QA/8032/34	QA/8040/34	QA/8050/34	QA/8063/34	QA/8080/34	QA/810034	QA/8125/34
Model 'UH'	PQA/8032/40	PQA/8040/40	PQA/8050/40	PQA/8063/40	PQA/8080/40	PQA/8100/40	-
Model 'UR'	QA/8032/33	QA/8040/33	QA/8050/33	QA/8063/33	QA/8080/33	QA/8100/33	QA/8125/33
	PVQA/8032/33	PVQA/8040/33	PVQA/8050/33	PVQA/8063/33	PVQA/8080/33	PVQA/8100/33	-
∅	32	40	50	63	80	100	125
∅ CN H7	10	12	16	16	20	20	30
∅ D H11	30	35	40	45	45	55	60
EN	14	16	21	21	25	25	37
ER	16	19	21	24	28	30	40
L	20	24	28	28	28	38	50
L 1	16	20	24	24	28	38	50
L 3	8	10	12	12	14	19	25
R	1	1,6	1,6	1,6	1,6	2	2
R 1	14,5	18	19	24	24	29	36
∅ TD e9	12	16	16	20	20	25	25
TL	12	16	16	20	20	25	25
TM h14	50	63	75	90	110	132	160
UW	50	58	70	80	100	126	152
UW 1	50	55	65	75	100	120	145
XH	18	20	25	25	32	32	40
XL	128	145	155	170	188	208	250
XV min.	63,5	74	82	84	93	107	136
XV max.	82,5	91	98	111	127	133	154
Torque Nm	6	6	10	10	15	15	25
Z	13°	13°	13°	15°	15°	15°	15°

Note: Mounting bracket PVQA/8000/33 is for use with PVA/8000/M cylinders.



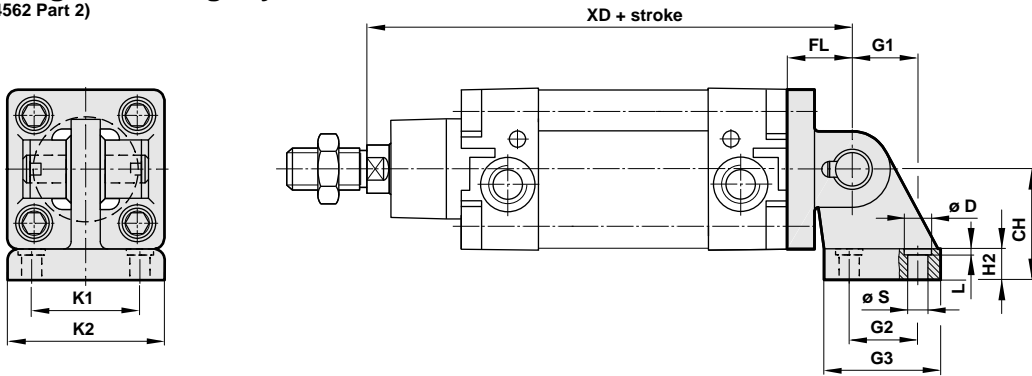
Rear Hinge Mounting Style 'L'

(Corresponds to VDMA 24562 Part 2)

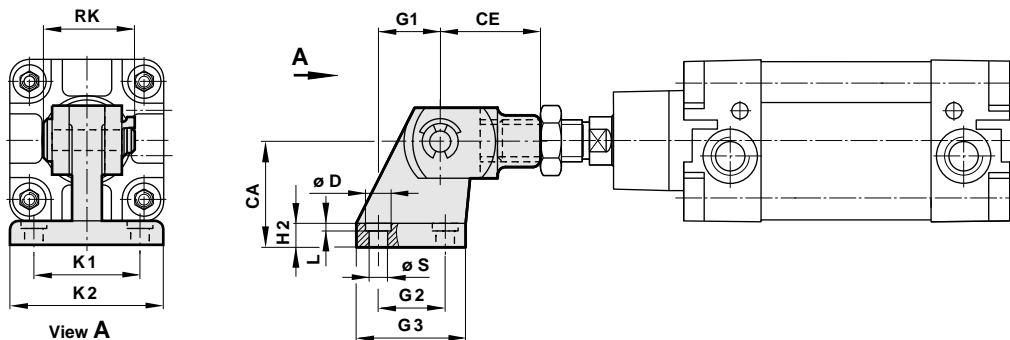


Universal Rear Hinge Mounting Style 'UL'

(Corresponds to VDMA 24562 Part 2)



Front Hinge Mounting Style 'M'

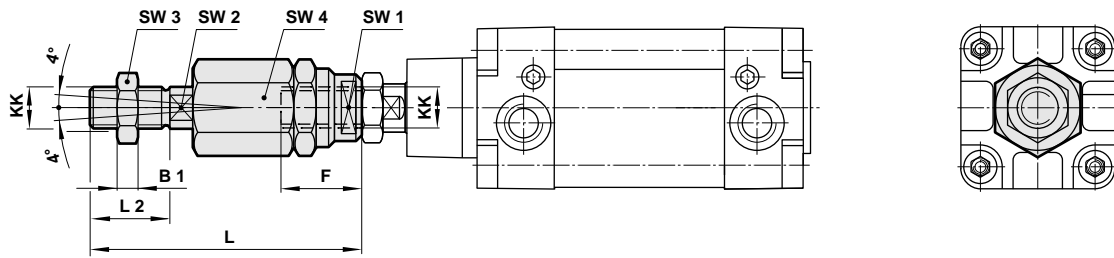


Model 'L'	QA/8032/24	QA/8040/24	QA/8050/24	QA/8063/24	QA/8080/24	QA/8100/24	QM/8125/24
	PVQA/8032/24	PVQA/8040/24	PVQA/8050/24	PVQA/8063/24	PVQA/8080/24	PVQA/8100/24	-
Model 'M'	QM/8032/26	QM/8040/26	QM/8050/26	QM/8063/26	QM/8080/26	QM/8100/26	QM/8125/26
	PVQM/8032/26	PVQM/8040/26	PVQM/8050/26	PVQM/8063/26	PVQM/8080/26	PVQM/8100/26	-
Model 'UL'	QA/8032/43	QA/8040/43	QA/8050/43	QA/8063/43	QA/8080/43	QA/8100/43	QA/8125/43
∅	32	40	50	63	80	100	125
CA/CH	32	36	45	50	63	71	90
CE	40	48	64	64	80	80	110
∅ D	11	11	15	15	18	18	20
FL	22	25	27	32	36	41	50
G 1	21	24	33	37	47	55	70
G 2	18	22	30	35	40	50	60
G 3	31	35	45	50	60	70	90
H 2	8	10	12	12	14	15	20
K 1	38	41	50	52	66	76	94
K 2	51	54	65	67	86	96	124
LH	52	60	68	79	99	119	139
L	1,6	1,6	1,6	1,6	2,5	2,5	3,2
∅ S	6,6	6,6	9	9	11	11	14
RK	28	32	41,5	41,5	50	50	62
XD	142	160	170	190	210	230	275

Note: Mounting brackets PVQA/8000/24 and PVQA/8000/26 are for use with PVA/8000/M cylinders.

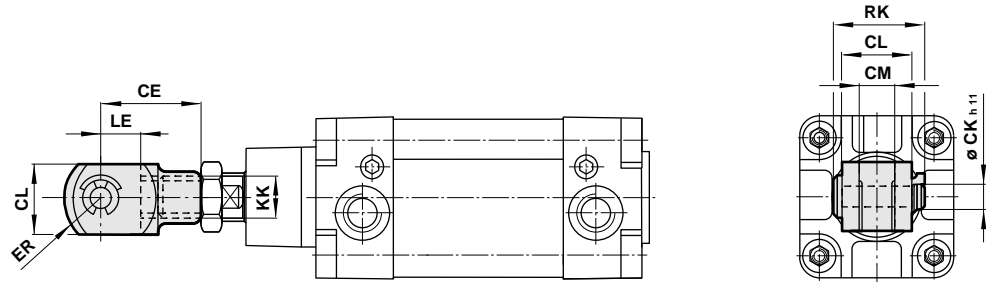


Piston Rod Swivel Mounting Style 'AK'



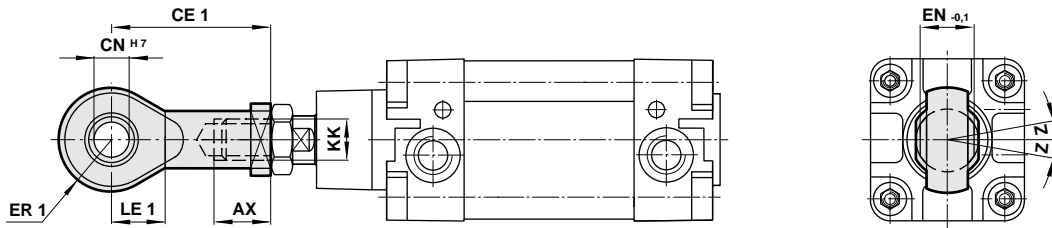
Piston Rod Clevis Mounting Style 'F'

(Corresponds to DIN ISO 8140)



Universal Piston Rod Eye Mounting Style 'UF'

(Corresponds to DIN ISO 8139)



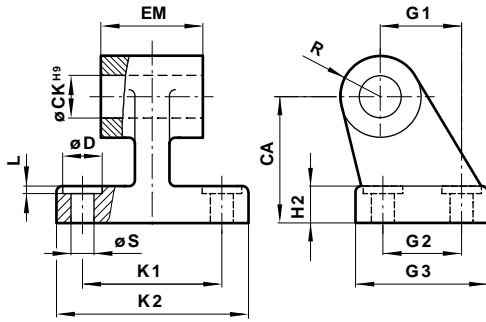
Model 'AK'	QM/8025/38	QM/8040/38	QM/8050/38	QM/8050/38	QM/8080/38	QM/8080/38	QM/8125/38
Model 'F'	QM/8025/25	QM/8040/25	QM/8050/25	QM/8050/25	QM/8080/25	QM/8080/25	QM/8125/25
	PVQM/8032/25	PVQM/8040/25	PVQM/8050/25	PVQM/8050/25	PVQM/8080/25	PVQM/8080/25	-
Model 'UF'	QM/8025/32	QM/8040/32	QM/8050/32	QM/8050/32	QM/8080/32	QM/8080/32	QM/8125/32
	PVQM/8032/32	PVQM/8040/32	PVQM/8050/32	PVQM/8050/32	PVQM/8080/32	PVQM/8080/32	-
∅	32	40	50	63	80	100	125
AX	20	22	28	28	33	33	51
B 1	5	6	8	8	10	10	13,5
CE	40	48	64	64	80	80	110
CE 1	43	50	64	64	77	77	110
∅ CK h11	10	12	16	16	20	20	30
CL	20	24	32	32	40	40	55
CM	10	12	16	16	20	20	30
∅ CN H7	10	12	16	16	20	20	30
EN -0,1	14	16	21	21	25	25	37
ER	16	19	25	25	32	32	45
ER 1	14	16	21	21	25	25	35
F	26	26	34	34	42	42	40
KK	M 10 x 1,25	M 12 x 1,25	M 16 x 1,5	M 16 x 1,5	M 20 x 1,5	M 20 x 1,5	M 27 x 2
L	73	77	106	106	122	122	147
L 2	20	24	32	32	40	40	54
LE	20	24	32	32	40	40	54
LE 1	15	17	22	22	26	26	36
RK	28	32	41,5	41,5	50	50	62
SW 1 (A/F)	19	19	30	30	30	30	40
SW 2 (A/F)	12	12	19	19	19	19	24
SW 3 (A/F)	17	19	24	24	30	30	41
SW 4 (A/F)	30	30	42	42	42	42	55
Z	13°	13°	15°	15°	15°	15°	15°

Note: Mounting brackets PVQA/8000/25 and PVQA/8000/32 are for use with PVA/8000/M cylinders.



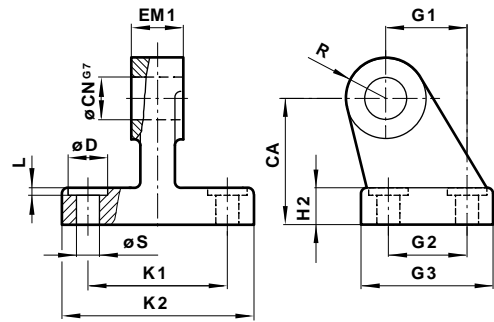
Bracket for Clevis Mounting (wide clevis) Style 'SW'

(Corresponds to VDMA 24562, Part 2)
For Rear Clevis Mounting Style 'D'



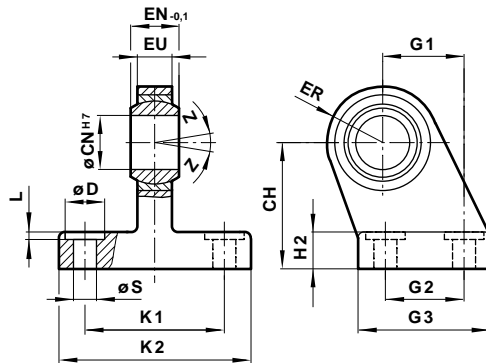
Bracket for Clevis Mounting (narrow clevis) Style 'SS'

For Piston Rod Clevis Mounting Style 'F'



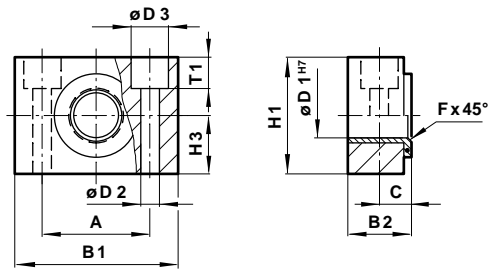
Bracket Hinge for Clevis Mounting Style 'US'

(Corresponds to VDMA 24562 Part 2)
For Rear Clevis Mounting Style 'D2'



Swivel Bearing for Trunnion Mounting Style 'S'

For Trunnion Mountings Style 'H', 'FH', 'UH'

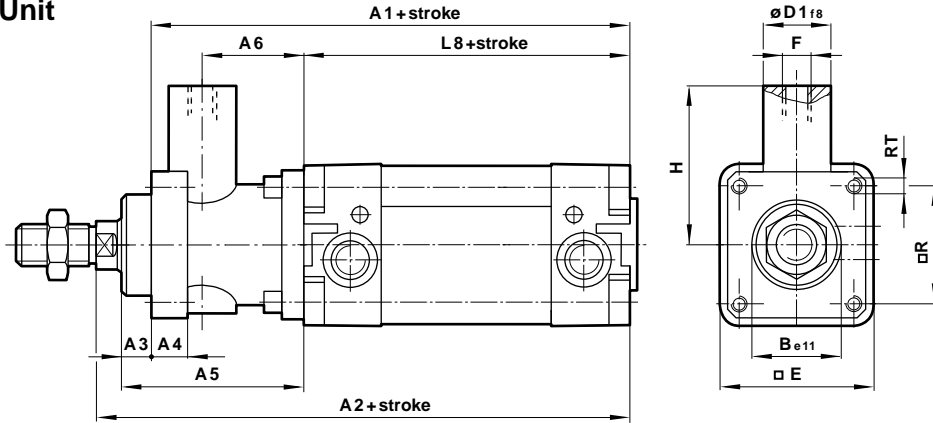


Model 'S'	QA/8032/41	QA/8040/41	QA/8040/41	QA/8063/41	QA/8063/41	QA/8100/41	QA/8100/41
Model 'SW'	M/P19493	M/P19494	M/P19495	M/P19496	M/P19497	M/P19498	M/P19499
	M/P40459 *	M/P40460 *	M/P40461 *	M/P40462 *	M/P40463 *	M/P40464 *	-
Model 'SS'	M/P19931	M/P19932	M/P19933	M/P19934	M/P19935	M/P19936	M/P19937
	M/P40465 *	M/P40466 *	M/P40467 *	M/P40468 *	M/P40469 *	M/P40470 *	-
Model 'US'	M/P40310	M/P40311	M/P40312	M/P40313	M/P40314	M/P40315	M/P71355
∅	32	40	50	63	80	100	125
A	32	36	36	42	42	50	50
B 1	46	55	55	65	65	75	75
B 2	18	21	21	23	23	28,5	28,5
C	10,5	12	12	13	13	16	16
CA/CH	32	36	45	50	63	71	90
∅ CN ^{H7/G7}	10	12	16	16	20	20	30
∅ CK ^{H9}	10	12	12	16	16	20	25
∅ D	11	11	15	15	18	18	20
∅ D 1	12	16	16	20	20	25	25
∅ D 2	6,6	9	9	11	11	14	14
∅ D 3	11	15	15	18	18	20	20
EM	26	28	32	40	50	60	70
EM 1	10	12	16	16	20	20	30
EN ^{-0.1}	14	16	21	21	25	25	37
ER	16	18	21	23	28	30	40
EU	10,5	12	15	15	18	18	25
F x 45°	1	1,6	1,6	1,6	1,6	2	2
G 1	21	24	33	37	47	55	70
G 2	18	22	30	35	40	50	60
G 3	31	35	45	50	60	70	90
H 1	30	36	36	40	40	50	50
H 2	8	10	12	12	14	15	20
H 3	15	18	18	20	20	25	25
K 1	38	41	50	52	66	76	94
K 2	51	54	65	67	86	96	124
L	1,6	1,6	1,6	1,6	2,5	2,5	3,2
R	10	11	13	15	15	19	22
∅ S	6,6	6,6	9	9	11	11	14
T 1	6,8	9	9	11	11	13	13
Z	13°	13°	13°	15°	15°	15°	15°

* For use with PVA/8000/M cylinders.



Cylinders with Locking Unit



Model 'PASSIVE'	PRA/8032/L2	PRA/8040/L2	PRA/8050/L2	PRA/8063/L2	PRA/8080/L2	PRA/8100/L2	PRA/8125/L2
Model 'PASSIVE'	PRA/8032/L4	PRA/8040/L4	PRA/8050/L4	PRA/8063/L4	PRA/8080/L4	PRA/8100/L4	PRA/8125/L4
∅	32	40	50	63	80	100	125
∅ B e 11	30	35	40	45	45	55	60
∅ D 1 f 8	20	24	30	38	48	48	65
□ E	47	50	60	70	90	110	140
F	M 5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
H	45	62	75	85,5	117	117	140
L 8	94	105	106	121	128	138	160
A 1	142	160	176	191	218	230	282
A 2	158	178	198	211	251	268	347
A 3	10	10	12	12	20	23	45
A 4	13	13	16	16	20	20	30
A 5	58	65	82	82	110	115	167
A 6	31,5	36	45,5	49,5	61	65	86,5
□ R	32,5	38	46,5	56,5	72	89	110
RT	M 6	M 6	M 8	M 8	M 10	M 10	M 12

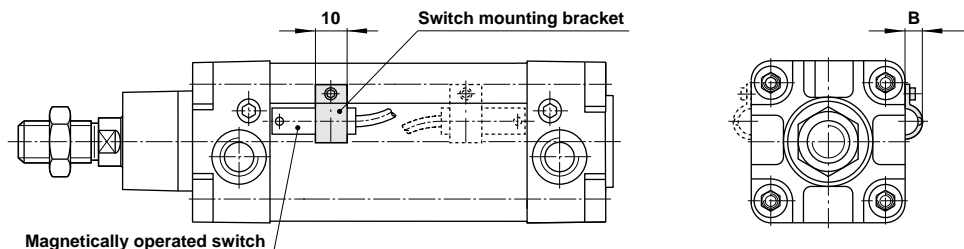
Note: Retention forces, see page N/UK 1.5.128.02

Separate Locking Units and Cartridge

For cylinders with extended piston rod	Locking unit * 'Passive'	Locking cartridge 'Passive'
8032	QA/8032/59	QA/8032/63
8040	QA/8040/59	QA/8040/63
8050	QA/8050/59	QA/8050/63
8063	QA/8063/59	QA/8063/63
8080	QA/8080/59	QA/8100/63
8100	QA/8100/59	QA/8100/63
8125	QA/8125/59	QA/8125/63

* These units are supplied with 4 screws

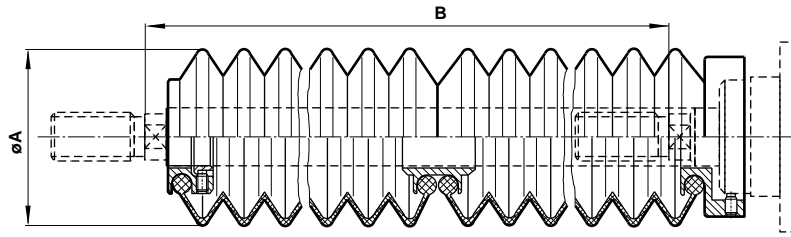
Switch mounting bracket



Model	QM/33/P32/22	QM/33/P32/22	QM/33/P32/22	QM/33/P32/22	QM/33/P32/22	QM/33/P32/22	QM/33/P32/22
∅	32	40	50	63	80	100	125
B	5,5	6,5	5,5	6,5	3,5	1,5	2

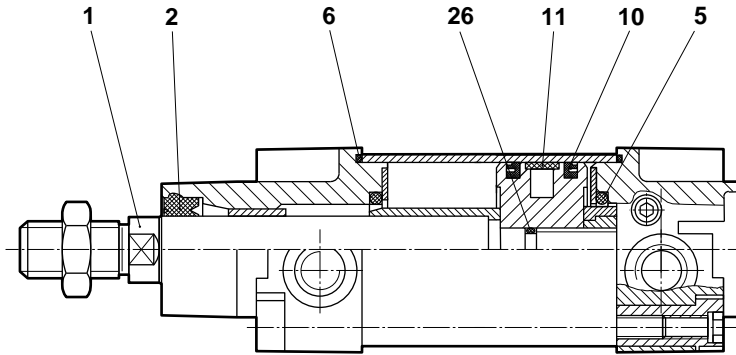


Piston Rod Bellows



Model	∅ A	Maximum stroke per bellows	Piston rod extension B first bellows	further bellows
PRA/8032/G, PRA/8032/MG	40	60	30	25
PRA/8040/G, PRA/8040/MG	63	145	50	32
PRA/8050/G, PRA/8050/MG	63	145	40	32
PRA/8063/G, PRA/8063/MG	63	145	40	32
PRA/8080/G, PRA/8080/MG	80	250	50	45
PRA/8100/G, PRA/8100/MG	80	250	50	45
PRA/8125/G, PRA/8125/MG	80	250	50	45

Spares



Model	Spares kit	Comprising			Piston rod Item 1	
		Item	Description	Quantity	PRA/8000, PRA/8000/M	PVA/8000/M
PRA/8032, PRA/8032/M, PVA/8032/M	QA/8032/00	2	Piston rod seal	1	RM/P19966/*	SM/P19966/*
PRA/8040, PRA/8040/M, PVA/8040/M	QA/8040/00	5	Cushion seal	2	RM/P19967/*	SM/P19967/*
PRA/8050, PRA/8050/M, PVA/8050/M	QA/8050/00	6	Sealing ring	2	RM/P19968/*	SM/P19968/*
PRA/8063, PRA/8063/M, PVA/8063/M	QA/8063/00	10	Piston seal	2	RM/P19969/*	SM/P19969/*
PRA/8080, PRA/8080/M, PVA/8080/M	QA/8080/00	11	Wear ring	1	RM/P19970/*	SM/P19970/*
PRA/8100, PRA/8100/M, PVA/8100/M	QA/8100/00	26	'O'-ring (∅ 32 to 100 mm)	1	RM/P19971/*	SM/P19971/*
PRA/8125, PRA/8125/M,	QA/8125/00				RM/P30988/*	
PRA/8032/N1, PRA/8032/N2	QA/8032/N1/00				RM/P71084/*	
PRA/8040/N1, PRA/8040/N2	QA/8040/N1/00				RM/P71085/*	
PRA/8050/N1, PRA/8050/N2	QA/8050/N1/00				RM/P71086/*	
PRA/8063/N1, PRA/8063/N2	QA/8063/N1/00				RM/P71087/*	
PRA/8080/N1, PRA/8080/N2	QA/8080/N1/00				RM/P71088/*	
PRA/8100/N1, PRA/8100/N2	QA/8100/N1/00				RM/P71089/*	

* Insert stroke length
 Note: Please quote the cylinder type number when ordering spare parts

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.