

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

- **Lightweight profile design with concealed tie rods**
- **Polyurethane seals ensure efficient low friction operation and long life**
- **Comprehensive range of standard mountings**
- **Magnet piston models provide a more compact installation and reduce costs**
- **Ideal for a wide range of industrial applications**



Technical Data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

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

Note: The basic length of the single acting version is slightly longer than its double acting equivalent.

Operation:

PRA/28000 Single acting, adjustable cushioning, sprung in

PRA/28000/M Single acting, magnetic piston, adjustable cushioning, sprung in

PRA/28300 Single acting, adjustable cushioning, sprung out

PRA/28300/M Single acting, magnetic piston, adjustable cushioning, sprung out

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

Standard Strokes:

25, 50, 80, 100 mm

Non-standard Strokes:

Non-standard strokes available (250 mm max.)

Materials:

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

Alternative Cylinders:

See page N/UK 1.4.111.02

Ordering Information

To order a basic 80 mm bore cylinder, sprung in with a 50 mm stroke quote: PRA/28080/50

To order a basic 100 mm bore cylinder, sprung out with a 100 mm stroke and magnetic piston quote: PRA/28310/M/100

To order mounting brackets refer to appropriate cylinder mounting table.

Order magnetically operated switches separately.

Accessories

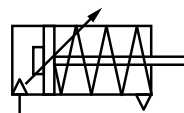
Switches QM/33, QM/34

See page

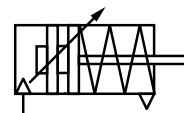
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Switches QM/134, QM/134/N

N 4.3.055.01



Non-magnetic piston



Magnetic piston





Alternative Cylinders

Symbol	Model (non-magnetic piston)	Symbol	Model (magnetic piston)	Description
	PCA/28000		PCA/28000/M	Hard chromium plated piston rod (∅ 40 to 100 mm)
	PSA/28000		PSA/28000/M	Stainless steel piston rod (Austenitic)
	P. A/28000/W1 (PRA/., PCA/., PSA/.)		P. A/28000/W2 (PRA/., PCA/., PSA/.)	Special wiper/seal for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice.
	PRA/28000/IU		PRA/28000/MU	Extended piston rod
	PRA/28000/W5		PRA/28000/W6	Extended piston rod and special wiper/seal for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice.
	PCA/28300		PCA/28300/M	Hard chromium plated piston rod (∅ 40 to 100 mm)
	PSA/28300		PSA/28300/M	Stainless steel piston rod (Austenitic)
	P. A/28300/W1 (PRA/., PCA/., PSA/.)		P. A/28300/W2 (PRA/., PCA/., PSA/.)	Special wiper/seal for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice.
	PRA/28300/IU		PRA/28300/MU	Extended piston rod
	PRA/28300/W5		PRA/28300/W6	Extended piston rod and special wiper/seal for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice.
	PRA/28000/N1		PRA/28000/N2	Non-rotating piston rod
	PRA/28300/N1		PRA/28300/N2	Non-rotating piston rod

For combinations of alternative cylinders consult our Technical Service.

Theoretical Forces • Cushioning • Air Consumption • Torque for Cylinders PRA/28000/N

∅	PRA/28000 Theoretical forces (N) at 6 bar		PRA/28300 Theoretical forces (N) at 6 bar		Cushion length (mm)	Initial cushion volume (cm ³)	Air consumption (l/cm stroke) at 6 bar		Model	Torque max. (Nm)
	Outstroke	F 1	Instroke	F 1			Outstroke	Instroke		
32	392	50	324	50	19	12,3	0,056	0,048	PRA/28032/N1, ..N2	0,5
40	648	60	528	60	22	20,7	0,088	0,074	PRA/28040/N1, ..N2	1,0
50	1043	75	854	75	24	36	0,137	0,114	PRA/28050/N1, ..N2	1,5
63	1735	75	1546	75	24	64	0,218	0,195	PRA/28063/N1, ..N2	1,5
80	2795	130	2501	130	27	116	0,35	0,32	PRA/28080/N1, ..N2	2,5
100	4492	130	4197	130	34	242	0,55	0,51	PRA/28100/N1, ..N2	2,5

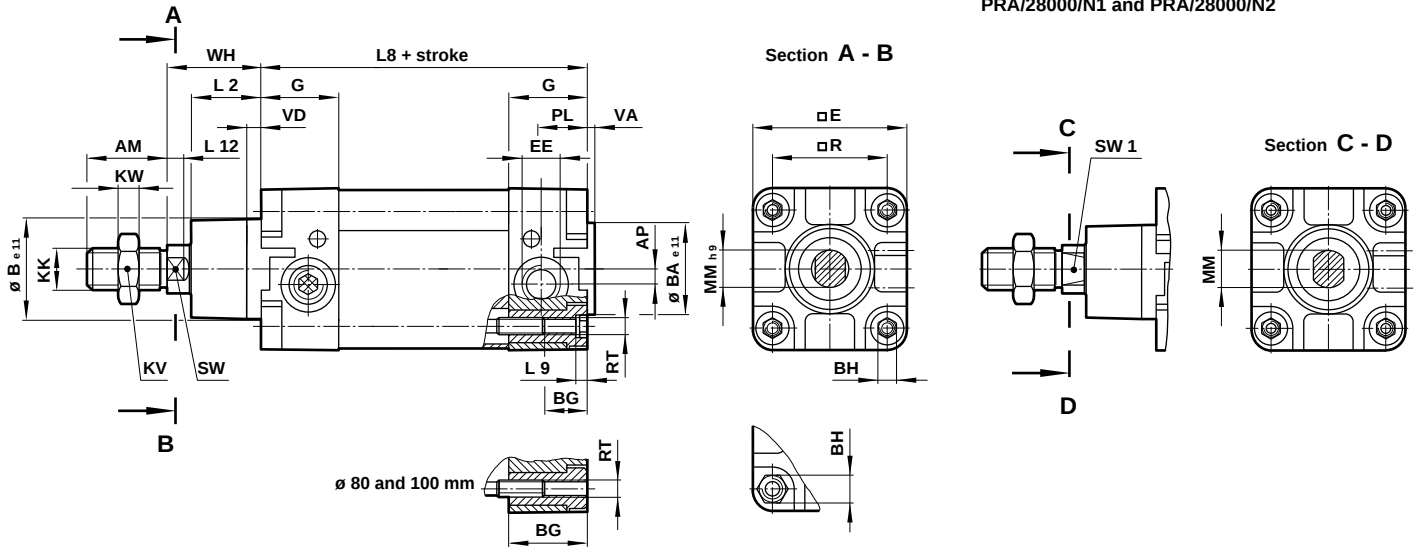
F1 = Return force of spring (N)

Weights of Cylinders and Mountings (kg)

Model	PRA/28000 Weight at 0 mm	PRA/28000 Weight per 25 mm	PRA/28300 Weight at 0 mm	PRA/28300 Weight per 25 mm	 Style 'A'	 Style 'AK'	 Style 'B', 'G'	 Style 'C'
28032, 28332	0,710	0,090	0,660	0,080	0,020	0,200	0,250	0,150
28040, 28340	1,090	0,110	0,990	0,100	0,020	0,200	0,350	0,180
28050, 28350	1,770	0,190	1,610	0,170	0,050	0,650	0,700	0,300
28063, 28363	2,340	0,220	2,210	0,200	0,050	0,650	0,800	0,390
28080, 28380	3,930	0,310	3,750	0,280	0,080	0,720	1,350	0,800
28100, 28310	5,630	0,350	5,420	0,320	0,080	0,720	2,200	0,950
Model	 Style 'D'	 Style 'D2'	 Style 'F'	 Style 'FH'	 Style 'L'	 Style 'M'	 Style 'R'	 Style 'S'
28032, 28332	0,110	0,200	0,090	0,200	0,160	0,240	0,090	0,100
28040, 28340	0,160	0,230	0,130	0,380	0,230	0,380	0,110	0,140
28050, 28350	0,220	0,360	0,330	0,600	0,360	0,730	0,170	0,140
28063, 28363	0,340	0,550	0,330	1,100	0,520	0,880	0,240	0,190
28080, 28380	0,540	0,900	0,670	1,900	0,820	1,550	0,370	0,190
28100, 28310	0,900	1,450	0,670	3,500	1,320	2,150	0,590	0,340
Model	 Style 'SS'	 Style 'SW'	 Style 'UF'	 Style 'UH'	 Style 'UL'	 Style 'UR'	 Style 'US'	 Bracket for Switches
28032, 28332	0,050	0,050	0,080	0,100	0,370	0,170	0,190	0,003
28040, 28340	0,070	0,070	0,120	0,150	0,520	0,250	0,240	0,003
28050, 28350	0,140	0,140	0,150	0,200	0,900	0,400	0,460	0,003
28063, 28363	0,180	0,180	0,230	0,280	1,250	0,550	0,590	0,003
28080, 28380	0,280	0,280	0,330	0,550	2,300	0,900	1,030	0,003
28100, 28310	0,420	0,420	0,420	0,880	3,200	1,500	1,400	0,003



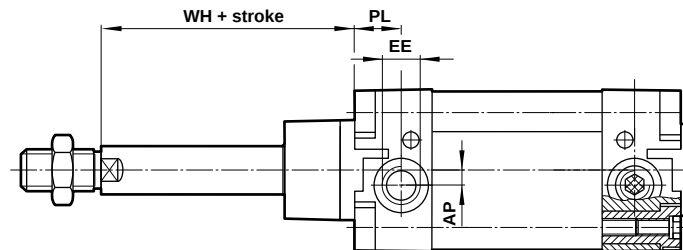
Basic Dimensions, PRA/28000



Non rotating piston rod

PRA/28000/N1 and PRA/28000/N2

Basic Dimensions, PRA/28300



Model	28032, 28332	28040, 28340	28050, 28350	28063, 28363	28080, 28380	28100, 28310
Ø	32	40	50	63	80	100
AM	22	24	32	32	40	40
AP	3,5	4,5	6	10	8,5	9
Ø B e11	30	35	40	45	45	55
Ø BA e11	30	35	40	45	45	55
BG	18	18	18	17,5	21,5	21,5
BH (A/F)	6	6	8	8	19	19
□ E	47	53	65	75	95	115
EE	G 1/8	G 1/4	G 1/4	G 3/8	G 3/8	G 1/2
G	27,5	32	31	33	33	37
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
KV (A/F)	17	19	24	24	30	30
KW	5	6	8	8	10	10
L2	20	22	27	29	33	36
L9	4	4	5	5		
L12	6	6,5	8	8	10	10
Ø MM h9	12	16	20	20	25	25
PL	13	15	18,5	19	19	18
□ R	32,5	38	46,5	56,5	72	89
RT	M 6	M 6	M 8	M 8	M 10	M 10
SW (A/F)	10	13	17	17	22	22
SW 1 (A/F)	10	13	16	16	21	21
VA	3	3,5	3,5	4	4	4
VD	6	6	6	6	6	6
WH	26	30	37	37	46	51
Standard strokes	25, 50	25, 50	25, 50	25, 50	25, 50	25, 50
L8	119	147	131	146	153	163
Non-standard strokes	250 mm max.	250 mm max.	250 mm max.	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)

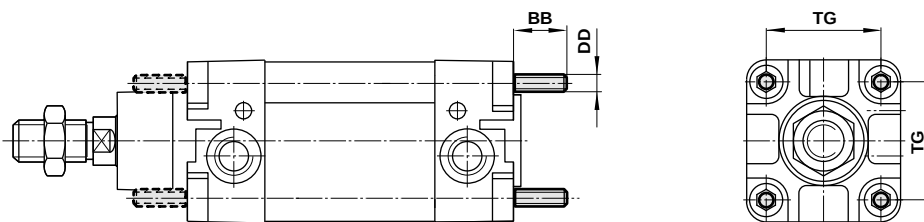
* Stroke ≤ 50 mm → N = 0

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



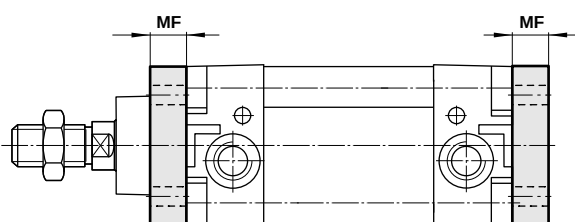
Front or Rear Stud Mounting Style 'A'

(Corresponds to DIN ISO 6431, Style MX1)



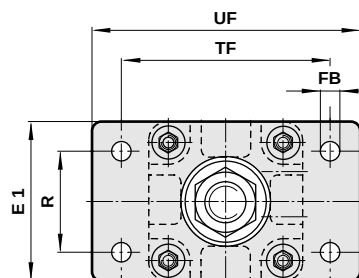
Rear Flange Mounting Style 'B'

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



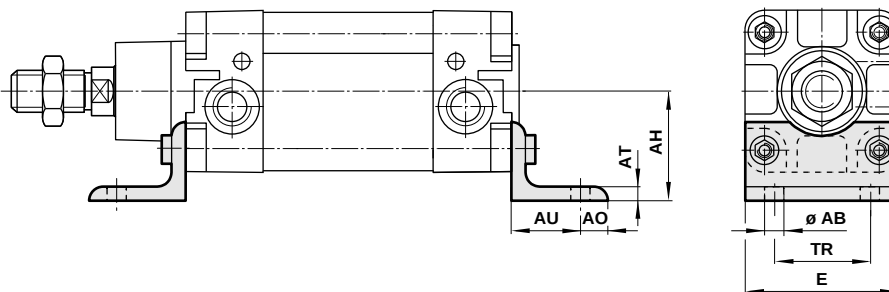
Front Flange Mounting Style 'G'

(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)



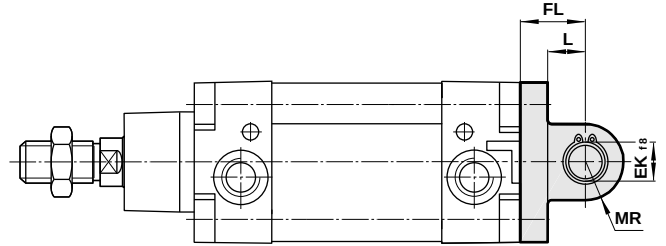
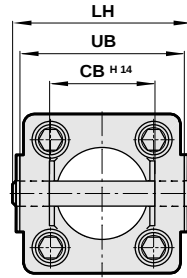
Model 'A'	QM/8032/35	QM/8032/35	QM/8050/35	QM/8050/35	QM/8080/35	QM/8080/35
Model 'B', 'G'	QA/8032/22	QA/8040/22	QA/8050/22	QA/8063/22	QA/8080/22	QA/8100/22
Model 'C'	QA/8032/21	QA/8040/21	QA/8050/21	QA/8063/21	QA/8080/21	QA/8100/21
Ø	32	40	50	63	80	100
Ø AB	7	9	9	9	12	14
AH	32	36	45	50	63	71
AO	8	9	10	12	19	19
AT	4	4	5	5	5	5
AU	24	28	32	32	41	41
BB	17	17	23	23	28	28
DD	M 6	M 6	M 8	M 8	M 10	M 10
E	48	53	64	74	98	115
E1	50	55	65	75	100	120
Ø FB	7	9	9	9	12	14
MF	10	10	12	12	16	16
R	32	36	45	50	63	75
TF	64	72	90	100	126	150
□ TG	32,5	38	46,5	56,5	72	89
TR	32	36	45	50	63	75
UF	80	90	110	125	154	186

Full dimensions see page N/UK 1.4.111.03



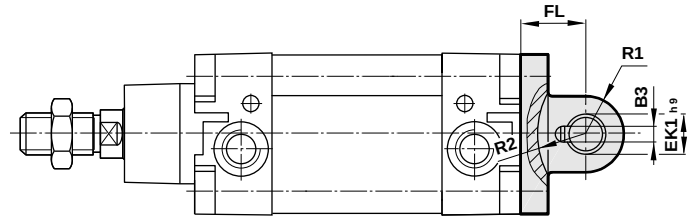
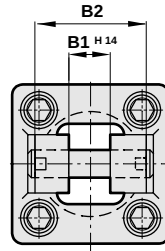
Rear Clevis Mounting Style 'D'

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



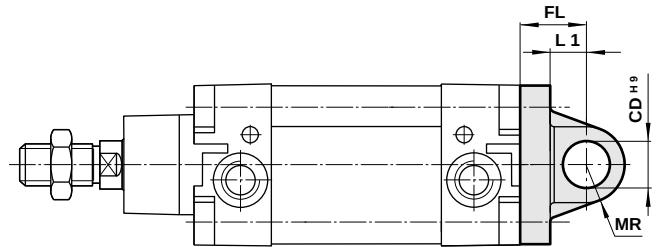
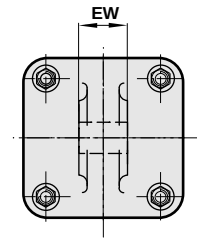
Rear Clevis Mounting Style 'D2'

(Corresponds to VDMA 24562 Part 2)



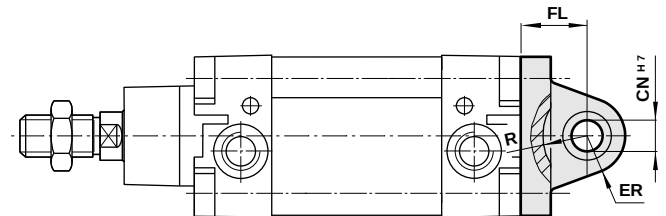
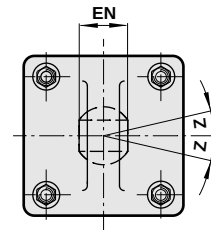
Rear Eye Mounting Style 'R'

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



Universal Rear Eye Mounting Style 'UR'

(Corresponds to VDMA 24562 Part 2)



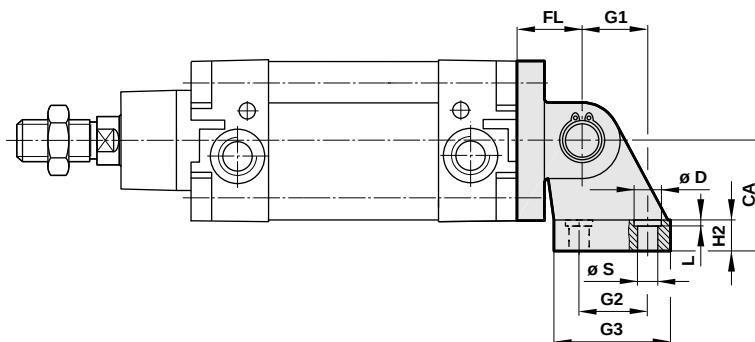
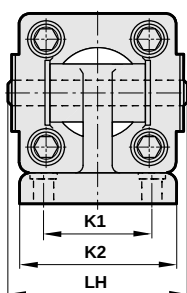
Model 'D'	QA/8032/23	QA/8040/23	QA/8050/23	QA/8063/23	QA/8080/23	QA/8100/23
Model 'D2'	QA/8032/42	QA/8040/42	QA/8050/42	QA/8063/42	QA/8080/42	QA/8100/42
Model 'R'	QA/8032/27	QA/8040/27	QA/8050/27	QA/8063/27	QA/8080/27	QA/8100/27
Model 'UR'	QA/8032/33	QA/8040/33	QA/8050/33	QA/8063/33	QA/8080/33	QA/8100/33
Ø	32	40	50	63	80	100
B 1 H 14	14	16	21	21	25	25
B 2	34	40	45	51	65	75
B 3	3,3	4,3	4,3	4,3	4,3	4,3
CB H 14	26	28	32	40	50	60
Ø CD H 9	10	12	12	16	16	20
Ø CN H 7	10	12	16	16	20	20
Ø EK f 8	10	12	12	16	16	20
Ø EK 1 h 9	10	12	16	16	20	20
EN	14	16	21	21	25	25
ER	16	19	21	24	28	30
EW	25,8	27,8	31,7	39,7	49,7	59,7
FL	22	25	27	32	36	41
L	13	16	17	22	22	27
L 1	13	16	17	22	22	27
LH	52	60	68	79	99	119
MR	9	12	12	15	15	20
R	14,5	18	19	24	24	29
R 1	11	12	14,5	18	22	22
R 2	17	20	22	25	30	32
UB	45	52	60	70	90	110
Z	13°	13°	13°	15°	15°	15°

Full dimensions see page N/UK 1.4.111.03



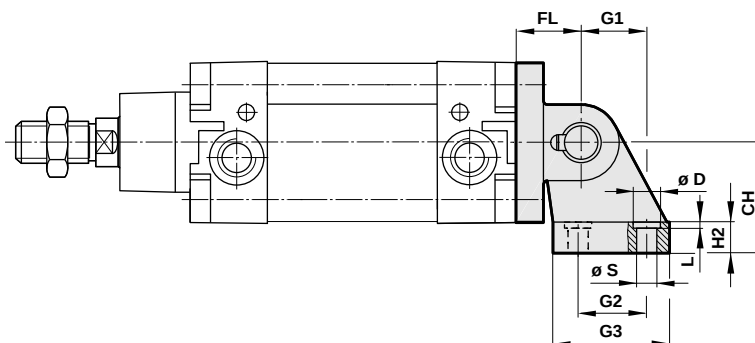
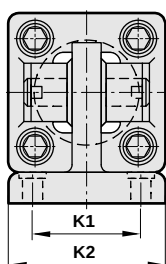
Rear Hinge Mounting Style 'L'

(Corresponds to VDMA 24562 Part 2)

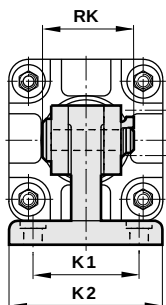


Universal Rear Hinge Mounting Style 'UL'

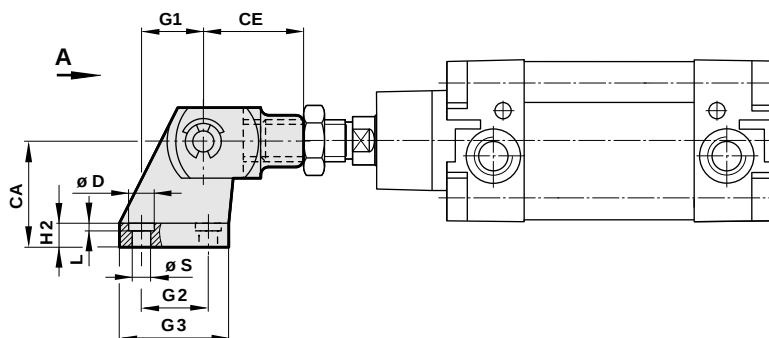
(Corresponds to VDMA 24562 Part 2)



Front Hinge Mounting Style 'M'



View A



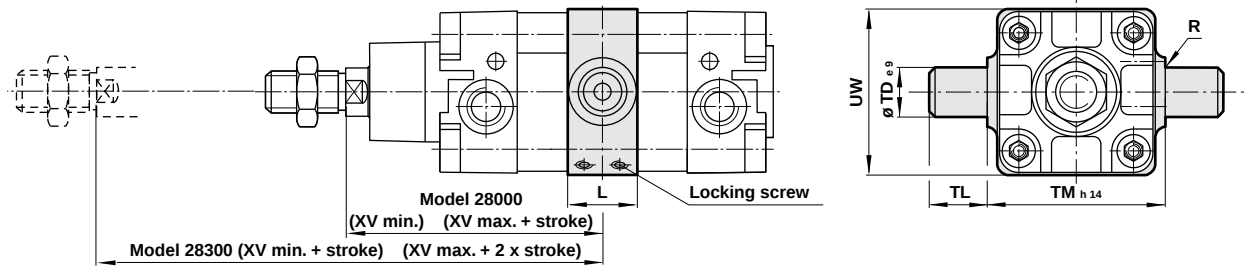
Model 'L'	QA/8032/24	QA/8040/24	QA/8050/24	QA/8063/24	QA/8080/24	QA/8100/24
Model 'M'	QM/8032/26	QM/8040/26	QM/8050/26	QM/8063/26	QM/8080/26	QM/8100/26
Model 'UL'	QA/8032/43	QA/8040/43	QA/8050/43	QA/8063/43	QA/8080/43	QA/8100/43
Ø	32	40	50	63	80	100
CA/CH	32	36	45	50	63	71
CE	40	48	64	64	80	80
Ø D	11	11	15	15	18	18
FL	22	25	27	32	36	41
G 1	21	24	33	37	47	55
G 2	18	22	30	35	40	50
G 3	31	35	45	50	60	70
H 2	8	10	12	12	14	15
K 1	38	41	50	52	66	76
K 2	51	54	65	67	86	96
LH	52	60	68	79	99	119
L	1,6	1,6	1,6	1,6	2,5	2,5
Ø S	6,6	6,6	9	9	11	11
RK	28	32	41,5	41,5	50	50

Full dimensions see page N/UK 1.4.111.03



Adjustable Intermediate Trunnion Mounting Style 'UH'

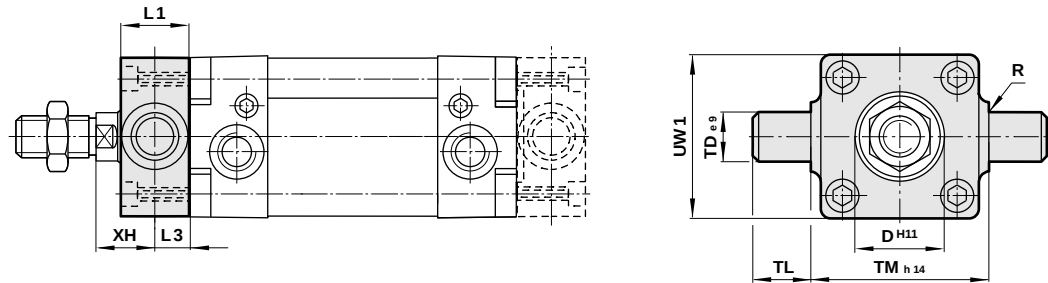
(Corresponds to DIN ISO 6431 VDMA 24562 Part 2, Style MT4)



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)



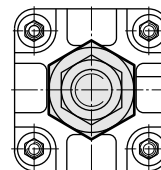
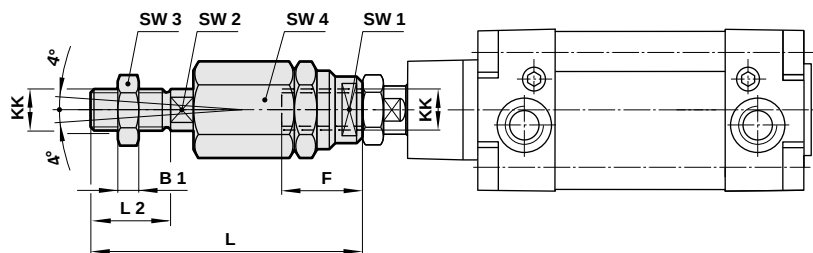
Model 'FH'	QA/8032/34		QA/8040/34		QA/8050/34		QA/8063/34		QA/8080/34		QA/8100/34	
Model 'UH'	PQA/8032/40		PQA/8040/40		PQA/8050/40		PQA/8063/40		PQA/8080/40		PQA/8100/40	
Ø	32		40		50		63		80		100	
L	25		28		28		32		36		48	
L1	16		20		24		24		28		38	
L3	8		10		12		12		14		19	
Ø D H11	30		35		40		45		45		55	
R	1		1,6		1,6		1,6		1,6		2	
Ø TD e9	12		16		16		20		20		25	
TL	12		16		16		20		20		25	
TM h14	50		63		75		90		110		132	
UW	57		65		79		93		115		139	
UW1	50		55		65		75		100		120	
Standard strokes	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100	25, 50	80, 100
XH	18		20		25		25		32		32	
XV min.	66		76		82		86		97		112	
XV max.	105	133	114	142	123	151	134	162	148	176	153	181
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)	
Torque Nm	6		6		10		10		15		15	

* Stroke ≤ 50 mm → N = 0

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

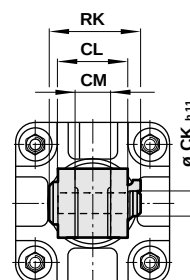
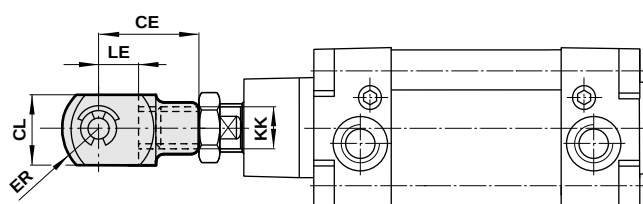


Piston Rod Swivel Mounting Style 'AK'



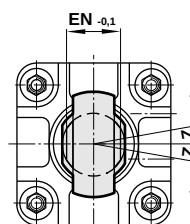
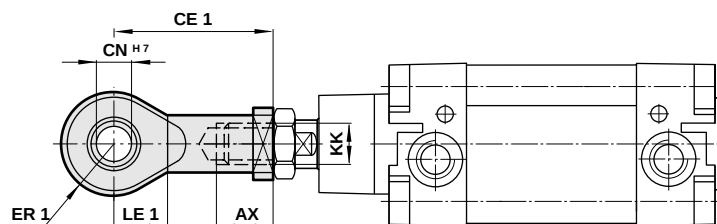
Piston Rod Clevis Mounting Style 'F'

(Corresponds to DIN ISO 8140)



Universal Piston Rod Eye Mounting Style 'UF'

(Corresponds to DIN ISO 8139)



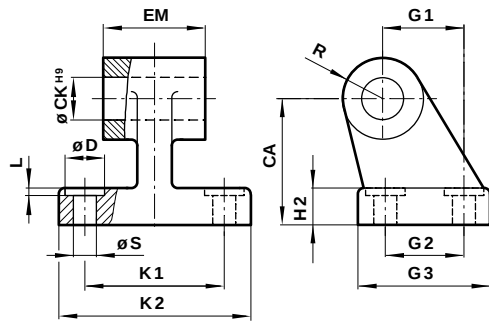
Model 'AK'	QM/8025/38	QM/8040/38	QM/8050/38	QM/8050/38	QM/8080/38	QM/8080/38
Model 'F'	QM/8025/25	QM/8040/25	QM/8050/25	QM/8050/25	QM/8080/25	QM/8080/25
Model 'UF'	QM/8025/32	QM/8040/32	QM/8050/32	QM/8050/32	QM/8080/32	QM/8080/32
Ø	32	40	50	63	80	100
AX	20	22	28	28	33	33
B 1	5	6	8	8	10	10
CE	40	48	64	64	80	80
CE 1	43	50	64	64	77	77
Ø CK h11	10	12	16	16	20	20
CL	20	24	32	32	40	40
CM	10	12	16	16	20	20
Ø CN H7	10	12	16	16	20	20
EN -0,1	14	16	21	21	25	25
ER	16	19	25	25	32	32
ER 1	14	16	21	21	25	25
F	26	26	34	34	42	42
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
L	73	77	106	106	122	122
L 2	20	24	32	32	40	40
LE	20	24	32	32	40	40
LE 1	15	17	22	22	26	26
RK	28	32	41,5	41,5	50	50
SW 1 (A/F)	19	19	30	30	30	30
SW 2 (A/F)	12	12	19	19	19	19
SW 3 (A/F)	17	19	24	24	30	30
SW 4 (A/F)	30	30	42	42	42	42
Z	13°	13°	15°	15°	15°	15°

Full dimensions see page N/UK 1.4.111.03



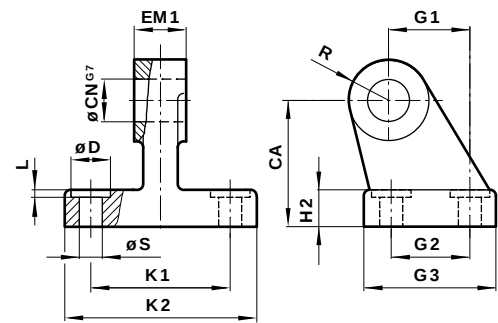
Bracket for Clevis Mounting (wide clevis) Style 'SW'

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



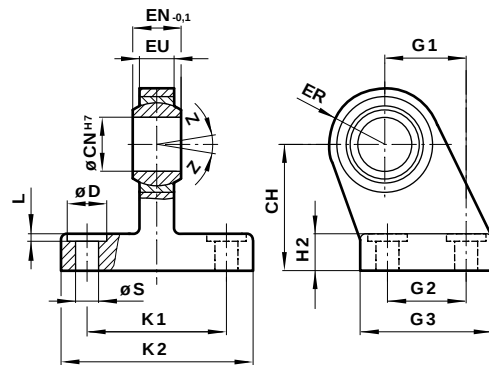
Bracket for Clevis Mounting Style 'SS'

For Piston Rod Clevis Mounting Style 'F'



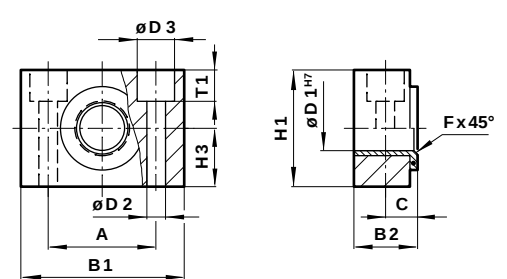
Bracket Hinge for Clevis Mounting Style 'US'

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



Swivel Bearing Mounting Style 'S'

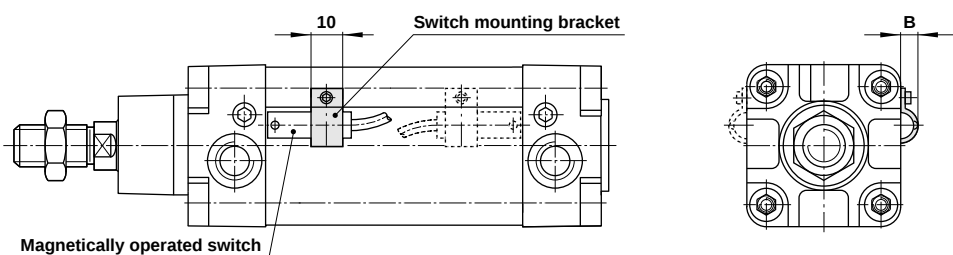
For Trunnion Mountings Style 'H', 'FH', 'UH'



Model 'S'	QA/8032/41	QA/8040/41	QA/8040/41	QA/8063/41	QA/8063/41	QA/8100/41
Model 'SW'	M/P19493	M/P19494	M/P19495	M/P19496	M/P19497	M/P19498
Model 'SS'	M/P19931	M/P19932	M/P19933	M/P19934	M/P19935	M/P19936
Model 'US'	M/P40310	M/P40311	M/P40312	M/P40313	M/P40314	M/P40315
Ø	32	40	50	63	80	100
A	32	36	36	42	42	50
B 1	46	55	55	65	65	75
B 2	18	21	21	23	23	28,5
C	10,5	12	12	13	13	16
CA/CH	32	36	45	50	63	71
Ø CN H7/67	10	12	16	16	20	20
Ø CK H9	10	12	12	16	16	20
Ø D	11	11	15	15	18	18
Ø D 1	12	16	16	20	20	25
Ø D 2	6,6	9	9	11	11	14
Ø D 3	11	15	15	18	18	20
EM	26	28	32	40	50	60
EM 1	10	12	16	16	20	20
EN -0,1	14	16	21	21	25	25
ER	16	18	21	23	28	30
EU	10,5	12	15	15	18	18
F x 45°	1	1,6	1,6	1,6	1,6	2
G 1	21	24	33	37	47	55
G 2	18	22	30	35	40	50
G 3	31	35	45	50	60	70
H 1	30	36	36	40	40	50
H 2	8	10	12	12	14	15
H 3	15	18	18	20	20	25
K 1	38	41	50	52	66	76
K 2	51	54	65	67	86	96
L	1,6	1,6	1,6	1,6	2,5	2,5
R	10	11	13	15	15	19
Ø S	6,6	6,6	9	9	11	11
T 1	6,8	9	9	11	11	13
Z	13°	13°	13°	15°	15°	15°

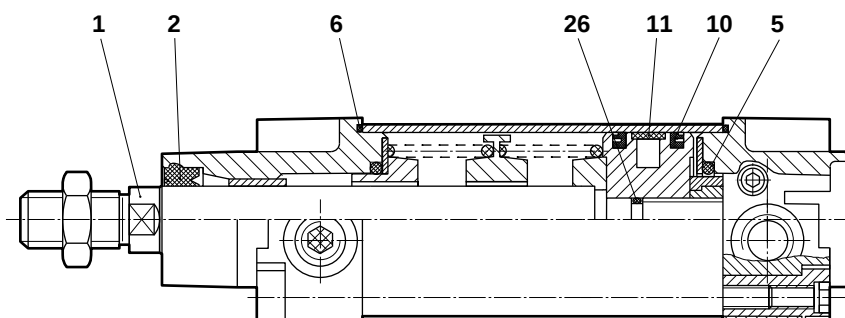


Switch mounting bracket



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
Ø	32	40	50	63	80	100
B	5,5	6,5	5,5	6,5	3,5	1,5

Spares PRA/28000



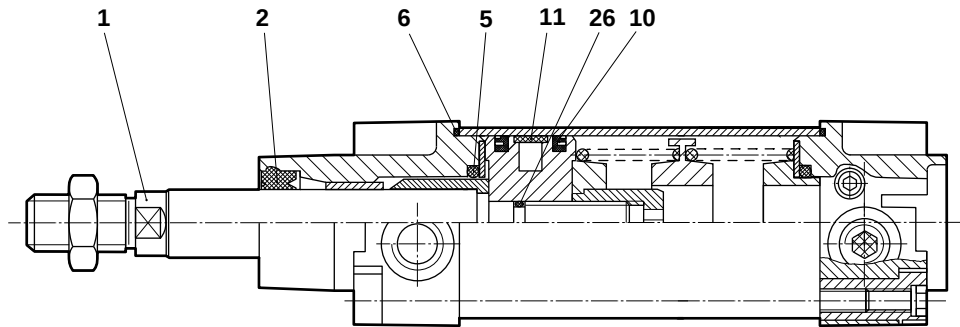
Model	Spares kit	Comprising			Piston rod Item 1
		Item	Description	Quantity	
PRA/28032, PRA/28032/M	QA/8032/00	2	Piston rod seal	1	RM/P40725/IU/*/\$
PRA/28040, PRA/28040/M	QA/8040/00	5	Cushion seal	2	RM/P40726/IU/*/\$
PRA/28050, PRA/28050/M	QA/8050/00	6	'O'-ring	2	RM/P40727/IU/*/\$
PRA/28063, PRA/28063/M	QA/8063/00	10	Piston seal	2	RM/P40728/IU/*/\$
PRA/28080, PRA/28080/M	QA/8080/00	11	Wear ring	1	RM/P40729/IU/*/\$
PRA/28100, PRA/28100/M	QA/8100/00	26	'O'-ring	1	RM/P40730/IU/*/\$
PRA/28032/N1, PRA/28032/N2	QA/8032/N1/00				RM/P71426/IU/*/\$
PRA/28040/N1, PRA/28040/N2	QA/8040/N1/00				RM/P71427/IU/*/\$
PRA/28050/N1, PRA/28050/N2	QA/8050/N1/00				RM/P71428/IU/*/\$
PRA/28063/N1, PRA/28063/N2	QA/8063/N1/00				RM/P71429/IU/*/\$
PRA/28080/N1, PRA/28080/N2	QA/8080/N1/00				RM/P71430/IU/*/\$
PRA/28100/N1, PRA/28100/N2	QA/8100/N1/00				RM/P71431/IU/*/\$

* Insert stroke length

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



Spares PRA/28300



Model	Spares kit	Comprising Item	Description	Quantity	Piston rod Item 1
PRA/28332, PRA/28332/M	QA/8032/00	2	Piston rod seal	1	RM/P19966/*
PRA/28340, PRA/28340/M	QA/8040/00	5	Cushion seal	2	RM/P19967/*
PRA/28350, PRA/28350/M	QA/8050/00	6	'O'-ring	2	RM/P19968/*
PRA/28363, PRA/28363/M	QA/8063/00	10	Piston seal	2	RM/P19969/*
PRA/28380, PRA/28380/M	QA/8080/00	11	Wear ring	1	RM/P19970/*
PRA/28310, PRA/28310/M	QA/8100/00	26	'O'-ring	1	RM/P19971/*
PRA/28332/N1, PRA/28332/N2	QA/8032/N1/00				RM/P71084/*
PRA/28340/N1, PRA/28340/N2	QA/8040/N1/00				RM/P71085/*
PRA/28350/N1, PRA/28332/N2	QA/8050/N1/00				RM/P71086/*
PRA/28363/N1, PRA/28332/N2	QA/8063/N1/00				RM/P71087/*
PRA/28380/N1, PRA/28332/N2	QA/8080/N1/00				RM/P71088/*
PRA/28100/N1, PRA/28100/N2	QA/8100/N1/00				RM/P71089/*

* 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.