

**Stainless steel ISO/VDMA cylinders
Magnetic and non-magnetic piston
Double acting
Ø 32 to 200 mm**

High corrosion and acid resistant

**Conforming to Standards ISO 6431,
VDMA 24562 and NFE 49-003-1**

Ideal for applications in the food industry



Technical data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

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

Operation:

KA/8000: double acting, adjustable cushioning

KA/8000/M: double acting, adjustable cushioning
and magnetic piston

Operating pressure:

1 to 16 bar

Operating temperature:

80°C max.

Cylinder diameter:

32, 40, 50, 63, 80, 100, 125, 160, 200 mm

Strokes:

Standard see page 2

Non-standard strokes 2500 mm max. on request

Materials:

Barrel: X5 Cr Ni 18 10 (1.4301; AISI 304)

End covers: X10 Cr Ni S 18 9 (1.4305; AISI 303)

Piston rod: X10 Cr Ni S 18 9 (1.4305; AISI 303)

Nuts and screws: X10 Cr Ni S 18 9
(1.4305; AISI 303)

Tie rods: X5 Cr Ni Mo 17 12 2 (1.4401; AISI 316)

Piston rod seals: FPM

Piston seals: polyurethane Ø 32 to 100 mm,
nitrile rubber Ø 125 to 200 mm

Cushion seals: nitrile rubber

O-rings: FPM

Ordering information

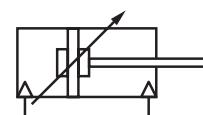
See page 2

Mountings and switches

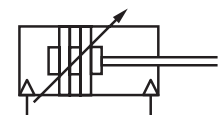
See page 3

Alternative variants

See page 2



Non-magnetic piston



Magnetic piston



Alternative variants

Symbol	Type non-magnetic piston	Symbol	Type magnetic piston	Description	Abmessungen siehe Seite
	KA/8000		KA/8000/M	Standard	4
	TKA/8000		TKA/8000/M	Cylinder with heat resistant seal (150°C max.)	4
	KA/8000/W1		KA/8000/W2	Cylinder with special wiper/seal (polyurethane) for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice (Ø 32 to 125 mm)	4
	KA/8000/W		KA/8000/MW	Cylinder without cushion	4
	KA/8000/J		KA/8000/JM	Cylinder with double ended piston rod	4
	KA/8000/W3		KA/8000/W4	Cylinder with double ended piston rod and special wiper/seal (polyurethane) for applications with arizona sand, cement, plaster (stucco), hoar-frost or ice (Ø 32 to 125 mm)	4

For combinations of alternative cylinders consult our technical service.

Options selector

★ KA/8 ★ ★ ★ / ★ ★ / ★ ★

Special variants High temperature version: 150°C max.	Substitute T
Cylinder diameter (mm) 032, 040, 050, 063, 080, 100, 125, 160, 200	Substitute

Note: If option is not required, disregard option position within part number eg. KA/8100/100. For combinations of cylinder variants consult our Technical Service. This options selector explains only the cylinder variants. Additional variants/options can not be derived from.

Strokes (mm) 2500 max.	
Variants (non-magnetic piston)	Substitute
Standard	
Special wiper/seal	W1
Without cushion	W
Double ended piston rod	J
Special wiper/seal, double ended piston rod	W3
Variants (magnetic piston)	Substitute
Standard	M
Special wiper/seal	W2
Without cushion	MW
Double ended piston rod	JM
Special wiper/seal, double ended piston rod	W4

Ordering examples

Cylinders

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

Mountings

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

Switches

To order a reed switch with LED and 2 m cable length quote: **QM/34/2**

Brackets for switches

To order a bracket for magnetically operated switches QM/34; 80 mm bore cylinder quote: **QM/27/2/1**

Standard strokes

Cyl. Ø	Strokes (mm)										
	25	50	80	100	125	160	200	250	320	400	500
32	•	•	•	•	•	•	•	•	•	•	•
40	•	•	•	•	•	•	•	•	•	•	•
50	•	•	•	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•	•	•	•
160	•	•	•	•	•	•	•	•	•	•	•
200	•	•	•	•	•	•	•	•	•	•	•

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.

Mountings

	Style B, G	Style C	Style D	Style F	Style S	Style SW	Style UF	Style UH	Bracket for switch
Cylinder Ø	Page 6	Page 6	Page 6	Page 6	Page 6	Page 6	Page 6	Page 6	
32	KQA/8032/22	KQA/8032/21	KQA/8032/23	KQM/55433/25	KQA/8032/41	M/P72288	KQM/8032/32	KQA/8032/40	QM/27/2/1
40	KQA/8040/22	KQA/8040/21	KQA/8040/23	KQM/55441/25	KQA/8040/41	M/P72289	KQM/8040/32	KQA/8040/40	QM/27/2/1
50	KQA/8050/22	KQA/8050/21	KQA/8050/23	KQM/55451/25	KQA/8040/41	M/P72290	KQM/8050/32	KQA/8050/40	QM/27/2/1
63	KQA/8063/22	KQA/8063/21	KQA/8063/23	KQM/55451/25	KQA/8063/41	M/P72291	KQM/8050/32	KQA/8063/40	QM/27/2/1
80	KQA/8080/22	KQA/8080/21	KQA/8080/23	KQA/8080/25	KQA/8063/41	M/P72292	KQM/8080/32	KQA/8080/40	QM/27/2/1
100	KQA/8100/22	KQA/8100/21	KQA/8100/23	KQA/8080/25	KQA/8100/41	M/P72293	KQM/8080/32	KQA/8100/40	QM/27/2/1
125	KQA/8125/22	KQA/8125/21	KQA/8125/23	KQA/8125/25	KQA/8100/41	-	KQM/8125/32	KQA/8125/40	QM/27/2/1
160	-	-	-	-	-	-	-	-	QM/27/2/1
200	-	-	-	-	-	-	-	-	QM/27/2/1

Materials of mountings

Style B, G	Flange mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304), screws: A2
Style C	Foot mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304), screws: A2
Style D	Clevis mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304), screws: A2, bolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303)
Style F	Piston rod clevis mounting: X 10 Cr Ni S 18 9 (1.4305; AISI 303), bolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303), eyebolt: X 10 Cr Ni S 18 9 (1.4305; AISI 303)
Style S	Swivel bearing: X 5 Cr Ni 18 10 (1.4301; AISI 304), bearing: PA
Style SW	Bracket for clevis mounting: G-X 6 Cr Ni 18 9 (1.4308; AISI 304)
Style UF	Universal piston rod eye 1.4305, inner ring 1.4528, outer ring 1.4301
Style UH	Adjustable intermediate mounting: X 10 Cr Ni S 18 9 (1.4305; AISI 303), bolts: X 10 Cr Ni S 18 9 (1.4305; AISI 303), screws: A2
Bracket for switches:	Body PA/PP, screw and holding strap A2

Switches

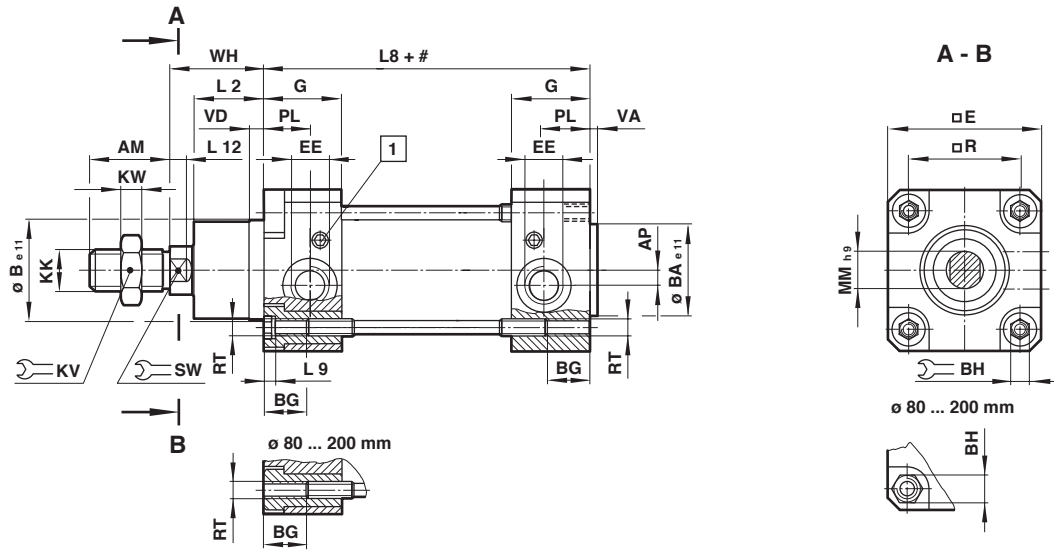
Type	With cable		With connector (M8x1)		Current max.	Temperature °C	LED	Features	Cable/ Connector length	Cable type	Cable with Connector	Datasheet
	Reed	Solid state	Voltage V a.c.	V d.c.								
M/50/LSU*/V	-	-	10 to 240	10 to 170	180 mA	-20 to +80	•	-	2, 5, 10 m	PVC 2 x 0,25	-	N/UK 4.3.005
M/50/LSU/5U	-	-	10 to 240	10 to 170	180 mA	-20 to +80	•	-	5 m	PUR 2 x 0,25	-	N/UK 4.3.005
TM/50/RAU/2S	-	-	10 to 240	10 to 170	180 mA	-20 to +150	-	-	2 m	Silicone 2 x 0,25	-	N/UK 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/UK 4.3.005
M/50/LSU/CP	-	-	10 to 60	10 to 75	180 mA	-20 to +80	•	Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 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/UK 4.3.007
-	M/50/EAP/CP	-	-	10 to 30	150 mA	-20 to +80	•	PNP, Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 4.3.007
-	M/50/EAP/CC	-	-	10 to 30	150 mA	-20 to +80	•	PNP, Plug M12x1	5 m	PVC 3 x 0,25	M/P34614/5	N/UK 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/UK 4.3.007
-	M/50/EAN/CP	-	-	10 to 30	150 mA	-20 to +80	•	NPN, Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 4.3.007

* Please insert cable length
Further information (technical data, cable material, dimensions) see datasheet.

Theoretical forces, air consumption, cushion

Ø	Theoretical force (N) at 6 bar		Cushion length (mm)	Initial cushion volume (cm³)	Air consumption (l/cm stroke) at 6 bar	
	outstroke	instroke			outstroke	instroke
32	482	414	19	12,3	0,056	0,048
40	754	633	22	20,7	0,088	0,074
50	1178	990	24	36	0,137	0,114
63	1870	1680	24	64	0,218	0,195
80	3016	2722	27	116	0,35	0,32
100	4710	4416	34	242	0,55	0,51
125	7363	6882	41	451	0,86	0,79
160	12064	11310	45	816	1,41	1,32
200	18840	18090	45	1324	2,20	2,10

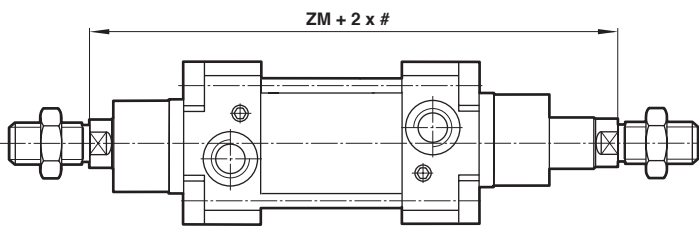
Basic dimensions
KA/8000/M – Standard cylinder



Type	Ø	AM	AP	Ø Be 11	Ø BAe 11	BG	BH	E	EE	G	KK	KV	KW	L2
KA/8032/M.	32	22	3,5	30	30	18	6	47	G 1/8	27,5	M10x1,25	17	5	20
KA/8040/M.	40	24	4,5	35	35	18	6	53	G 1/4	32	M12x1,25	19	6	22
KA/8050/M.	50	32	6	40	40	18	8	65	G 1/4	31	M16x1,5	24	8	27
KA/8063/M.	63	32	10	45	45	17,5	8	75	G 3/8	33	M16x1,5	24	8	29
KA/8080/M.	80	40	8,5	45	45	21,5	19	95	G 3/8	33	M20x1,5	30	10	33
KA/8100/M.	100	40	9	55	55	21,5	19	115	G 1/2	37	M20x1,5	30	10	36
KA/8125/M.	125	54	10	60	60	32	24	140	G 1/2	46	M27x2	41	13,5	45
KA/8160/M.	160	72	18	65	65	28,5	32	180	G 3/4	50	M36x2	55	18	58
KA/8200/M.	200	72	18	75	75	28,5	32	220	G 3/4	50	M36x2	55	18	67

Type	Ø	L8	L9	L12	Ø MMh9	PL	R	RT	SW	VA	VD	WH	at 0 mm	per 25 mm
KA/8032/M.	32	94	4	6	12	13	32,5	M 6	10	3	6	26	1,12 kg	0,06 kg
KA/8040/M.	40	105	4	6,5	16	15	38	M 6	13	3,5	6	30	1,65 kg	0,08 kg
KA/8050/M.	50	106	5	8	20	18,5	46,5	M 8	17	3,5	6	37	2,57 kg	0,13 kg
KA/8063/M.	63	121	5	8	20	19	56,5	M 8	17	4	6	37	3,95 kg	0,14 kg
KA/8080/M.	80	128	-	10	25	19	72	M 10	22	4	6	46	6,64 kg	0,30 kg
KA/8100/M.	100	138	-	10	25	20,5	89	M 10	22	4	6	51	10,67 kg	0,34 kg
KA/8125/M.	125	160	-	13	32	20,5	110	M 12	27	6	15,5	65	20,82 kg	0,51 kg
KA/8160/M.	160	180	-	16	40	21	140	M 16	36	4	15	80	37,3 kg	0,88 kg
KA/8200/M.	200	180	-	16	40	21	175	M 16	36	5	15	95	59,0 kg	1,14 kg

Alternative variants
KA/8000/JM – Cylinder with double ended piston rod

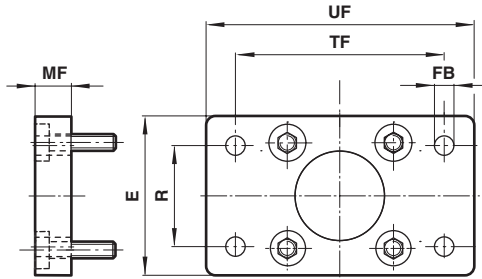


Type	Ø	ZM	at 0 mm	per 25 mm
KA/8032/JM.	32	146	1,17 kg	0,08 kg
KA/8040/JM.	40	165	1,80 kg	0,12 kg
KA/8050/JM.	50	180	2,81 kg	0,19 kg
KA/8063/JM.	63	195	4,22 kg	0,20 kg
KA/8080/JM.	80	220	7,18 kg	0,40 kg
KA/8100/JM.	100	240	11,21 kg	0,44 kg
KA/8125/JM.	125	290	21,94 kg	0,67 kg
KA/8160/JM.	160	340	39,54 kg	1,13 kg
KA/8200/JM.	200	370	61,39 kg	1,39 kg

Mountings

Rear flange B, front flange G

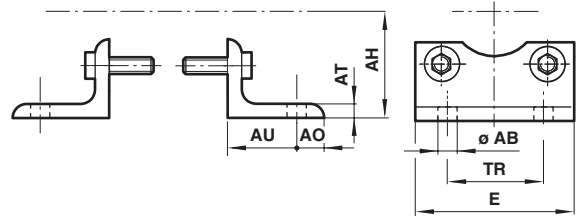
Corresponds to DIN ISO 6431 or VDMA 24562 part 2
Type MF1 and MF2



Type	Ø	E	Ø FB	MF	R	TF	UF	kg
KQA/8032/22	32	50	7	10	32	64	80	0,26
KQA/8040/22	40	55	9	10	36	72	90	0,31
KQA/8050/22	50	65	9	12	45	90	110	0,56
KQA/8063/22	63	75	9	12	50	100	125	0,73
KQA/8080/22	80	100	12	16	63	126	154	1,73
KQA/8100/22	100	120	14	16	75	150	186	2,51
KQA/8125/22	125	140	16	20	90	180	224	4,48

Foot C

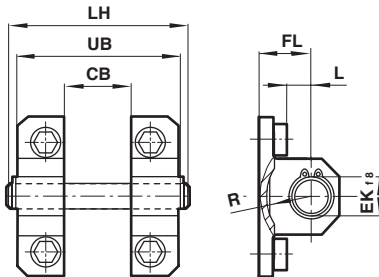
Corresponds to DIN ISO 6431 or VDMA 24562 part 2
Type MS1



Type	Ø	Ø AB	AH	AO	AT	AU	E	TR	kg
KQA/8032/21	32	7	32	11	4	24	48	32	0,22
KQA/8040/21	40	9	38	12	4	28	53	36	0,31
KQA/8050/21	50	9	45	13	5	32	64	45	0,43
KQA/8063/21	63	9	50	13	5	32	74	50	0,49
KQA/8080/21	80	12	63	19	6	41	98	63	1,06
KQA/8100/21	100	14	71	19	6	41	115	75	1,25
KQA/8125/21	125	16	90	25	7	45	140	90	1,90

Rear clevis mounting D

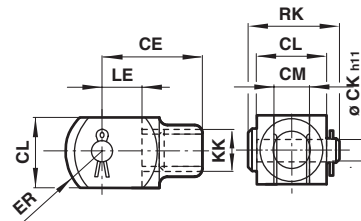
Corresponds to DIN ISO 6431 and VDMA 24562 part 2,
Type MP2



Type	Ø	CB	Ø EK 18	FL	L	LH	UB	kg
KQA/8032/23	32	26	10	22	10	52	45	0,13
KQA/8040/23	40	28	12	25	13	60	52	0,20
KQA/8050/23	50	32	12	27	12	68	60	0,31
KQA/8063/23	63	40	16	32	17	79	70	0,54
KQA/8080/23	80	50	16	36	16	99	90	0,95
KQA/8100/23	100	60	20	41	21	119	110	1,06
KQM/8125/23	125	70	25	50	28	140	130	2,44

Piston rod clevis mounting F

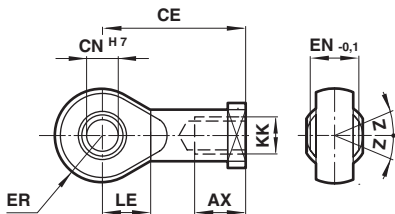
Corresponds to DIN ISO 8140



Type	Ø	KK	CE	Ø CK H11	CL	CM	ER	LE	RK	kg
KQM/55433/25	32	M10x1,25	40	10	20	10	16	20	28	0,09
KQM/55441/25	40	M12x1,25	48	12	24	12	19	24	32	0,13
KQM/55451/25	50/63	M16x1,5	64	16	32	16	25	32	41,5	0,33
KQM/8080/25	80/100	M20x1,5	80	20	40	20	32	40	50	0,67
KQM/8125/25	125	M27x2	110	30	55	30	45	54	62	1,35

Universal piston rod eye UF

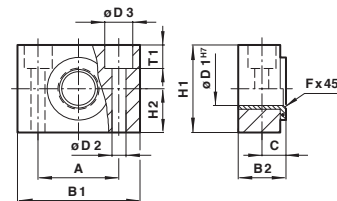
Corresponds to DIN ISO 8139



Type	Ø	Thread KK	AX	CE	Ø CN H7	EN -0,1	ER	LE	Z	kg
KQM/8032/32	32	M10x1,25	20	43	10	14	14,5	14	13°	0,07
KQM/8040/32	40	M12x1,25	22	50	12	16	16,5	16	13°	0,11
KQM/8050/32	50/63	M16x1,5	28	64	16	21	21,5	21	15°	0,21
KQM/8080/32	80/100	M20x1,5	33	77	20	25	25,5	25	15°	0,38
KQM/8125/32	125	M27x2	51	110	30	37	35	35	15°	1,15

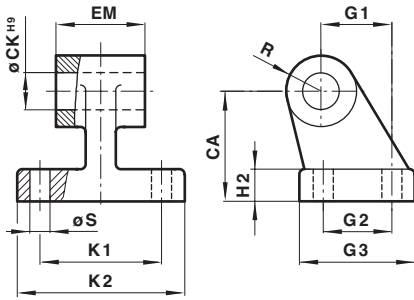
Swivel bearing S

Corresponds to VDMA 24562 part 2



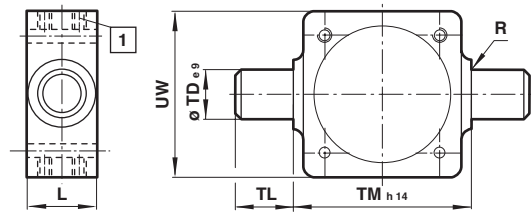
Type	Ø	A	B1	B2	C	Ø D1 H7	Ø D2	Ø D3	Fx 45°	H1	H2	T1	kg
KQA/8032/41	32	32	46	18	10,5	12	6,6	11	1	30	15	6,8	0,10
KQA/8040/41	40/50	36	55	21	12	16	9	15	1,6	36	18	9	0,14
KQA/8063/41	63/80	42	65	23	13	20	11	18	1,6	40	20	11	0,18
KQA/8100/41	100/125	50	75	28,5	16	25	14	20	2	50	25	13	0,34

Bracket for clevis mounting SW
Corresponds to VDMA 24562 part 2



Type	Ø	CA	Ø CK ^{H9}	H2	EM	G1	G2	G3	K1	K2	R	Ø S	kg
M/P72288	32	32	10	8	26	21	18	31	38	1,6	10	6,6	0,15
M/P72289	40	36	12	10	28	24	22	35	41	1,6	11	6,6	0,21
M/P72290	50	45	12	12	32	33	30	45	50	1,6	13	9	0,41
M/P72291	63	50	16	12	40	37	35	50	52	1,6	15	9	0,53
M/P72292	80	63	16	14	50	47	40	60	66	2,5	15	11	0,82
M/P72293	100	71	20	15	60	55	50	70	76	2,5	19	11	1,22

Adjustable intermediate trunnion mounting UH



1 Anzugsmoment

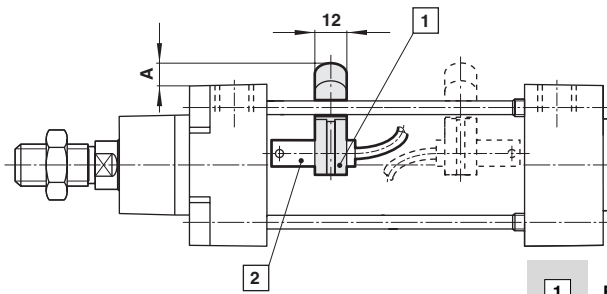
Type	Ø	L	R	Ø TD e ₉	TL	TM h ₁₄	UW	XV min.	XV max.	kg
KQA/8032/40	32	20	1	12	12	50	53	63,5	82,5	0,24
KQA/8040/40	40	24	1,6	16	16	63	65	74	91	0,48
KQA/8050/40	50	28	1,6	16	16	75	75	82	98	0,70
KQA/8063/40	63	28	1,6	20	20	90	95	84	111	1,35
KQA/8080/40	80	28	1,6	20	20	110	115	93	127	1,46
KQA/8100/40	100	38	2	25	25	132	140	112	128	2,76
KQA/8125/40	125	50	2	25	25	160	143	136	154	3,28

Mountings for switches

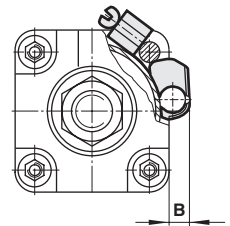
QM/27/2/1 – Bracket

Magnetically operated switch: M/50

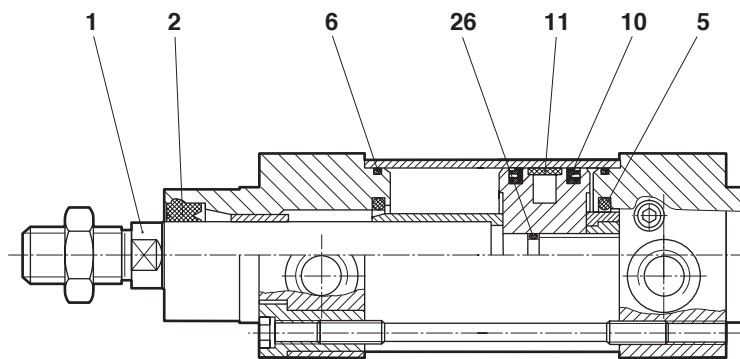
Ø	A	B	Weight
32	9	7	0,010 kg
40	8	8	0,010 kg
50	7	5	0,010 kg
63	7	7	0,010 kg
80	7	4	0,010 kg
100	2	2	0,010 kg
125	-4	-3	0,010 kg
160	-10	-9	0,010 kg
200	-17	-14	0,010 kg



1 Bracket
2 Switch



Spares



Ø	Type	Spares kit	Comprising Position	Description	Quantity	Piston rod Position 1
32	KA/8032, KA/8032/M	KQA/8032/00	2	Piston rod seal	1	SM/P19966/*
40	KA/8040, KA/8040/M	KQA/8040/00	5	Cushion seal	2	SM/P19967/*
50	KA/8050, KA/8050/M	KQA/8050/00	6	'O'-ring	2	SM/P19968/*
63	KA/8063, KA/8063/M	KQA/8063/00	10	Piston seal	2	SM/P19969/*
80	KA/8080, KA/8080/M	KQA/8080/00	11	Wear ring	1	SM/P19970/*
100	KA/8100, KA/8100/M	KQA/8100/00	26	'O'-ring	1	SM/P19971/*
125	KA/8125, KA/8125/M	KQA/8125/00		Grease		SM/P30988/*
160	KA/8160, KA/8160/M	KQA/8160/00				SM/P30989/*
200	KA/8200, KA/8200/M	KQA/8200/00				SM/P30990/*

* Insert stroke length

Note: Please quote the cylinder type number when ordering spare parts. Spares for cylinder variants please consult our Technical Service