

RM/8000/M

ISO Cylinder
Magnetic piston
Double acting
Ø 10 to 25 mm

Magnetic piston as standard

Conforming to ISO 6432

Corrosion resistant

With buffer or adjustable cushioning

**Nose mounting nut and piston rod
locknut as standard**



Technical data

Medium:

Compressed air, filtered, lubricated
or non-lubricated

Standard:

ISO 6432

Operation:

Double acting with magnetic piston
and buffer or adjustable cushioning

Operating pressure:

1 to 10 bar

Operating temperature:

-10 to +80°C max.

(please consult our technical service
for use below 2°C)

Cylinder diameter:

10, 12, 16, 20, 25 mm (buffer)

16, 20, 25 mm (adjustable cushioning)

Strokes:

Standard see page 2

Non-standard up to 500 mm max. on request

Materials:

Barrel: stainless steel (austenitic)

End covers: clear anodised aluminium alloy

Piston rod: stainless steel (austenitic)

Buffer: polyurethane

Wiper: polyurethane

Seals: nitrile rubber

Ordering information

See page 2

Mountings and switches

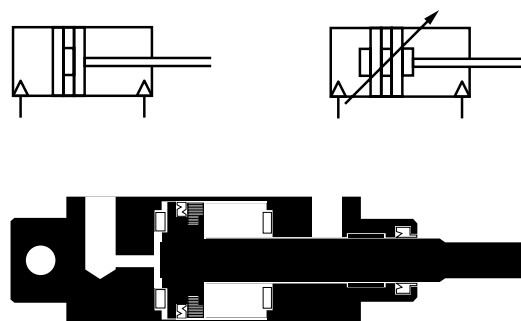
See page 3 and 4

Alternative variants

Single acting cylinder,
see page N/UK 1.4.031.01

Guiding units

QM/8000/61/* – Roller guide,
see page N/UK 1.10.011



RM/8000/M

Alternative variants

Symbol	Type non-magnetic piston	Symbol	Type magnetic piston	Description	Dimensions see page
			RM/8000/M	Standard cylinders	4
			RM/8000/MC	Cylinder with central rear port	4
			RM/8000/MF	Cylinder with flat rear cover	4
	TRM/8000			Cylinder (Ø 16 to 25 mm) with heat resistant seals 150°C max.	4
	RM/8000/IU		RM/8000/MU	Cylinder with extended piston rod	4
	TRM/8000/IU			piston rod extension 75 mm: *RM/8***/*U/stroke/75	
				Cylinder (Ø 16 to 25 mm) with heat resistant seals 150°C max.	4
			RM/8000/JM	Cylinder with double ended piston rod (Ø 16 to 25 mm)	5
			RM/8017/M	Cylinder Ø 16 mm with adjustable cushioning	5
			RM/8021/M	Cylinder Ø 20 mm with adjustable cushioning	5
			RM/8026/M	Cylinder Ø 25 mm with adjustable cushioning	5
			RM/8017/MU	Cylinder Ø 16 mm with extended piston rod and adjustable cushioning	5
			RM/8021/MU	Cylinder Ø 20 mm with extended piston rod and adjustable cushioning	5
			RM/8026/MU	Cylinder Ø 25 mm with extended piston rod and adjustable cushioning	5
			RM/8017/JM	Cylinder Ø 16 mm with double ended piston rod and adjustable cushioning	5
			RM/8021/JM	Cylinder Ø 20 mm with double ended piston rod and adjustable cushioning	5
			RM/8026/JM	Cylinder Ø 25 mm with double ended piston rod and adjustable cushioning	5
			RM/8000/N2	Cylinder with non-rotating piston rod (Ø 12 to 25 mm)	5
			RM/8000/L4	Cylinder Ø 12 to 25 mm with locking unit (PASSIVE). achieved by spring force on removal of the signal to the unit. Operating pressure for locking unit: 4 to 10 bar	5

Standard strokes (with buffer)

Cylinder Ø	Stroke (mm)									
	10	25	40	50	80	100	125	160	200	250
10	•	•	•	•	•	•				
12	•	•	•	•	•	•	•	•	•	
16	•	•	•	•	•	•	•	•	•	•
20	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•

Standard strokes
(with adjustable cushioning)

Cylinder Ø	Stroke (mm)									
	10	25	40	50	80	100	125	160	200	250
10										
12										
16		•		•	•	•	•	•	•	
20		•		•	•	•	•	•	•	•
25		•		•	•	•	•	•	•	•

Options selector

Special variants	Substitute
High temperature version: 150°C max..	T
Cylinder Ø (mm) With buffer	Substitute
10	010
12	012
16	016
20	020
25	025
Cylinder Ø (mm) with adjustable cushioning	Substitute
16	017
20	021
25	026

★RM/8★ ★★/★ ★/★ ★★

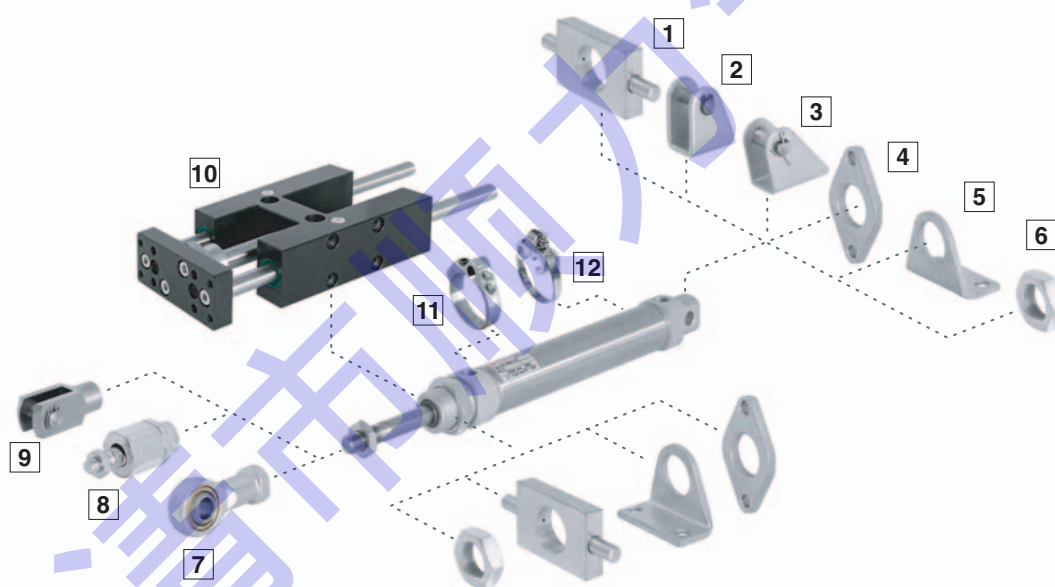
Stroke (mm)	
max. 500	
Variants (non-magnetic piston)	Substitute
Extended piston rod	IU
RM/8***/IU*/***/***/**	
	Extension (mm)
Variants (magnetic piston)	Substitute
Standard with integral eye mounting	M
Central rear port	MC
Flat rear cover	MF
Non-rotating piston rod	N2
Double ended piston rod	JM
Locking unit	L4
Extended piston rod	MU
RM/8***/MU***/***/***/**	
	Extension (mm)

Note: If option is not required, disregard option position within part number eg. RM/8025/M/50. For combinations of cylinder variants consult our Technical Service. Please note that heat resistant seals are not available for all variants. This options selector explains only the cylinder variants. Additional variants/options are not possible.

Note: Please fill in only the numbers of digits required, e.g. RM/8025/M/50

Mountings

Style	AK	B, G	C	F	FH	L	L2
							
	8	4	5	9	1	3	2
Cylinder Ø	Page 7	Page 6	Page 6	Page 7	Page 10	Page 6	Page 7
10	QM/8010/38	M/P19407	M/P19369	QM/8010/25	–	QM/947	QM/8010/44
12	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44
16	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44
20	QM/8020/38	M/P19409	M/P19406	QM/8020/25	QM/8020/34	QM/8020/24	QM/8020/44
25	QM/8025/38	M/P19409	M/P19406	QM/8025/25	QM/8020/34	QM/8020/24	QM/8020/44
Style	N	UF	Switch mounting brackets		Guiding unit		
			≥ 15 mm stroke < 15 mm stroke				
	6	7	11	12	10	See data sheet 1.10.011	
Cylinder Ø	Page 9	Page 7	Page 10	Page 10	See data sheet 1.10.011		
10	M/P1501/90	QM/8010/32		QM/33/010/22	QM/33/010/23		
12	M/P13834	QM/8012/32	QM/33/012/22	QM/33/016/23			
16	M/P13834	QM/8012/32	QM/33/016/22	QM/33/016/23			
20	M/P13615	QM/8020/32	QM/33/020/22	QM/33/020/23			
25	M/P13615	QM/8025/32	QM/33/025/22	QM/33/025/23			



Switches

												
Type	Reed	Solid state	Voltage V a.c.	V d.c.	Current max.	Temperature °C	LED	Features	Cable/ Connector length	Cable type	Cable with Connector	Data sheet
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.

RM/8000/M

Ordering information

Cylinder

Pneumatic cylinder Ø 25 mm,
magnetic piston, stroke 200 mm

quote: RM/8025/M/200

Mountings

Front flange style G for cylinder Ø 25 mm

quote: M/P19409

Switches

Magnetically operated switch with LED
and 2 m cable

quote: M/50/LSU/2V

Mountings of switches

Mounting for magnetically operated
switch M/50/LSU/2V, cylinder Ø 25 mm

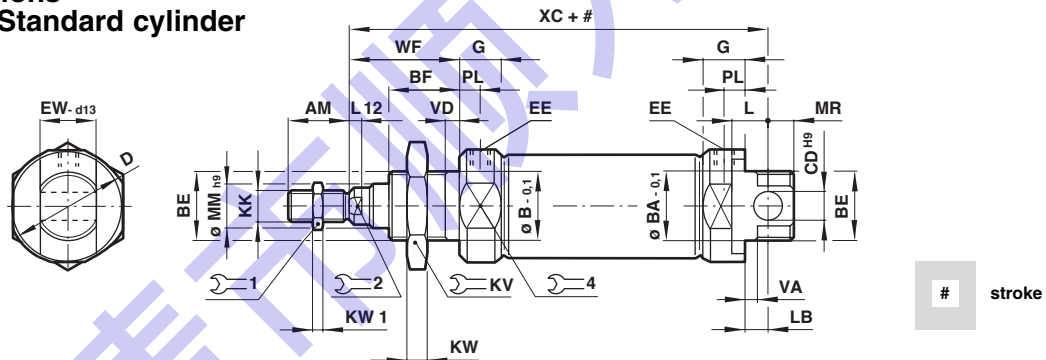
quote: QM/33/025/22

Theoretical forces, air consumption, cushioning

Cylinder Ø	Theoretical forces (N) at 6 bar		Air consumption (l/cm stroke) at 6 bar		Type	Cushion length (mm)	Initial volume (cm³)
	outstroke	instroke	outstroke	instroke			
10	47,1	39,6	0,006	0,005	—	—	—
12	67,8	51	0,008	0,006	—	—	—
16	120	104	0,014	0,013	8017	16	2,4
20	188	158	0,022	0,019	8021	19	4,4
25	294	247	0,035	0,028	8026	19	7,2

Basic dimensions

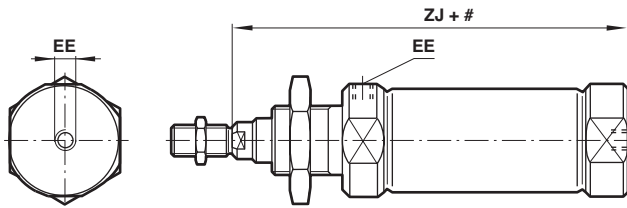
RM/8000/M – Standard cylinder



Type	Ø	AM	Ø B/BA-0,1	BE	BF	Ø CD H9	Ø D	EE	EW-0,1	G	KK	3	1	KW	KW1
RM/8010/M/.	10	12	12	M12x1,25	12	4	16,5	M5	7,9	9	M4	19	7	6	2
RM/8012/M/.	12	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
RM/8016/M/.	16	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
RM/8020/M/.	20	20	22	M22x1,5	20	8	30	G1/8	15,9	15	M8	27	13	8	4
RM/8025/M/.	25	22	22	M22x1,5	22	8	30	G1/8	15,9	15	M10x1,25	27	17	8	5
Type	Ø	L	L12	LB	Ø MM h9	MR	PL	2	4	WF	VA/VD	XC	at 0 mm per 25 mm		
RM/8010/M/.	10	6	—	2	4	8	5,5	—	14	16	1,5	64	0,034 kg	0,007 kg	
RM/8012/M/.	12	9	3	3	6	8	5,5	5	19	22	2	75	0,058 kg	0,011 kg	
RM/8016/M/.	16	9	3	4	6	7	5,5	5	19	22	2	82	0,070 kg	0,012 kg	
RM/8020/M/.	20	12	3	3	8	11	8	7	27	24	2	95	0,145 kg	0,018 kg	
RM/8025/M/.	25	12	4	7	10	9	8	9	27	28	2	104	0,200 kg	0,028 kg	

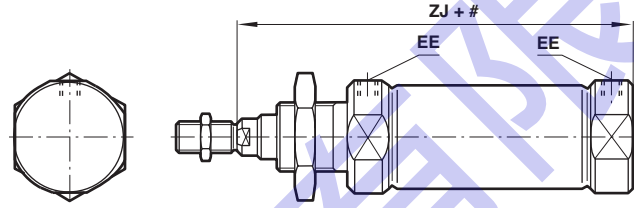
Alternative variants

RM/8000/MC – Cylinder with central rear port



Type	Ø	EE	ZJ	at 0 mm	per 25 mm
RM/8010/M/.	10	M5	62	0,031 kg	0,007 kg
RM/8012/M/.	12	M5	72	0,052 kg	0,011 kg
RM/8016/M/.	16	M5	78	0,064 kg	0,012 kg
RM/8020/M/.	20	G1/8	92	0,130 kg	0,018 kg
RM/8025/M/.	25	G1/8	97	0,185 kg	0,028 kg

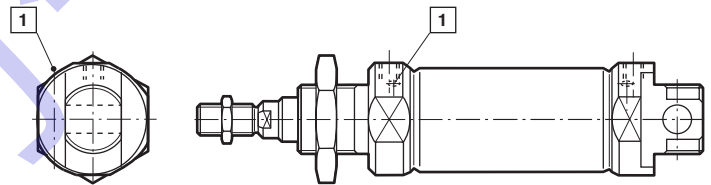
RM/8000/MF – Cylinder with flat rear cover



stroke

RM/8017/M, RM/8021/M, RM/8026/M – Cylinder with adjustable cushioning

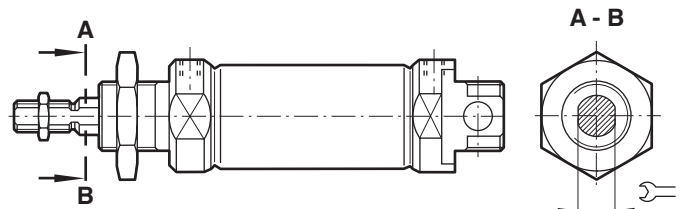
Type	Ø	at 0 mm	per 25 mm
RM/8017/M/.	16	0,070 kg	0,012 kg
RM/8021/M/.	20	0,145 kg	0,018 kg
RM/8026/M/.	25	0,195 kg	0,028 kg



1 cushion screw

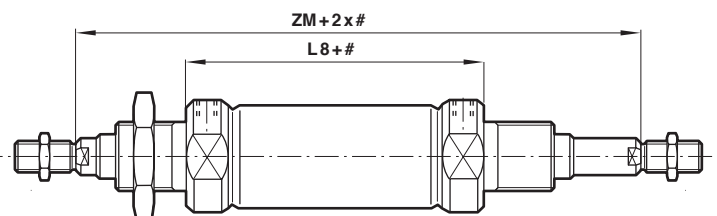
RM/8000/N2 – Cylinder with non-rotating piston rod

Type	Ø	Torque max.	at 0 mm	per 25 mm
RM/8012/N2/.	12	5	0,058 kg	0,011 kg
RM/8016/N2/.	16	5	0,070 kg	0,012 kg
RM/8020/N2/.	20	6	0,145 kg	0,018 kg
RM/8025/N2/.	25	8	0,200 kg	0,028 kg



RM/8000/JM – Cylinder with double ended piston rod

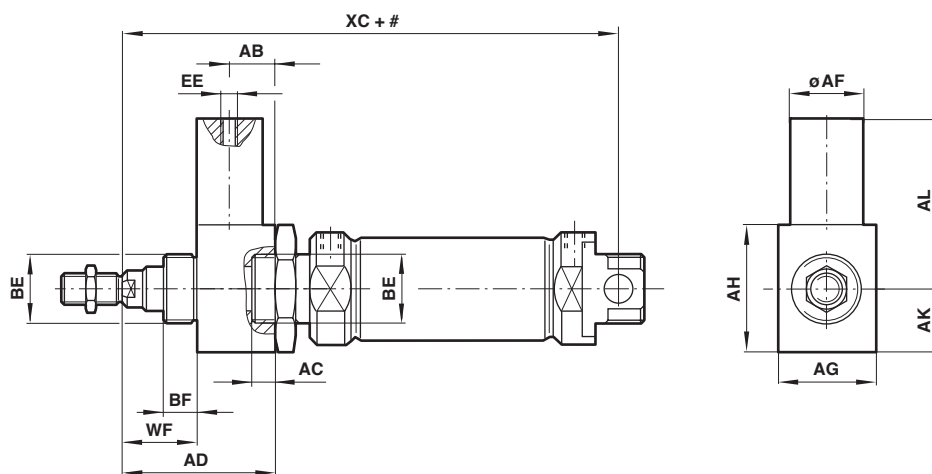
Type	Ø	L8	ZM	at 0 mm	per 25 mm
RM/8016/JM/.	16	56	100	0,080 kg	0,017 kg
RM/8020/JM/.	20	68	116	0,165kg	0,028 kg
RM/8025/JM/.	25	69	125	0,250 kg	0,043 kg



stroke

RM/8000/M

RM/8000/L4 – Cylinder with locking unit

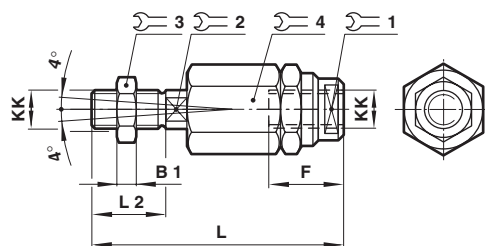


Type	Ø	AB	AC	AD	Ø AF	AG	AH	AL	AK
RM/8012/L4/.	12	21	13	48,5	20	20	20	43,5	10
RM/8016/L4/.	16	21	13	48,5	20	20	20	43,5	10
RM/8020/L4/.	20	24	14	66	22	27	33	45,5	16,5
RM/8025/L4/.	25	24	14	65	22	27	33	45,5	16,5

Type	Ø	BE	BF	EE	WF	XC	Locking forces	at 0 mm	per 25 mm
RM/8012/L4/.	12	M16x1,5	12	M5	18,5	109	200 N	0,130 kg	0,011 kg
RM/8016/L4/.	16	M16x1,5	12	M5	18,5	116	200 N	0,140 kg	0,012 kg
RM/8020/L4/.	20	M22x1,5	23	M5	31	145	350 N	0,300 kg	0,018 kg
RM/8025/L4/.	25	M22x1,5	23	M5	30	151,5	400 N	0,360 kg	0,028 kg

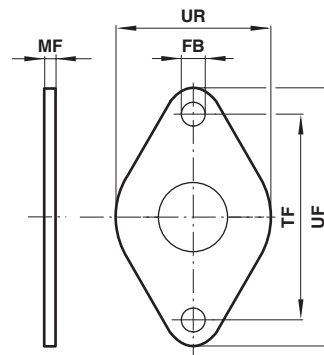
Mountings

Piston rod swivel AK, ISO 8139



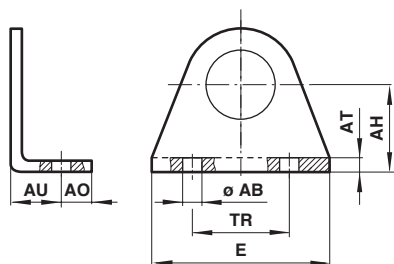
Type	Ø	KK	B1	F	L	L2	1	2	3	4	kg
QM/8010/38	10	M 4	2	12,5	33	8	11	3,2	7	11	0,01
QM/8012/38	12/16	M 6	3	14	39	12	7	5	10	13	0,02
QM/8020/38	20	M 8	4	18	55	16	10	7	13	17	0,05
QM/8025/38	25	M 10x1,25	5	26	73	20	19	12	17	30	0,20

Front or rear flange G and B



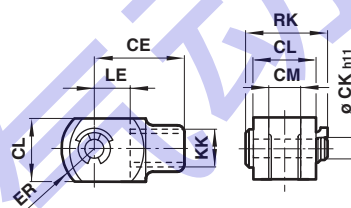
Type	Ø	Ø FB	MF	TF	UF	UR	kg
M/P19407	10	4,5	3	30	40	22	0,02
M/P19408	12/16	5,5	4	40	51	28	0,03
M/P19409	20/25	6,6	5	50	63	38	0,05

Foot C, ISO 6432



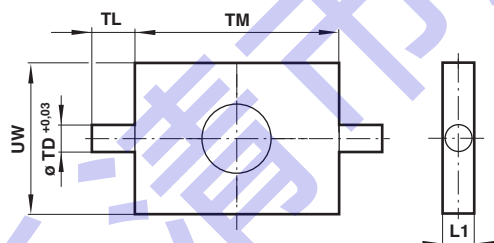
Type	Ø	Ø AB	AH	AO	AT	AU	E	TR	kg
M/P19369	10	4,5	16	6	2	10	35	25	0,02
M/P19389	12/16	5,5	20	6	3	13	43	32	0,03
M/P19406	20/25	6,6	25	7,5	4	16	53	40	0,06

Piston rod clevis F, ISO 8140



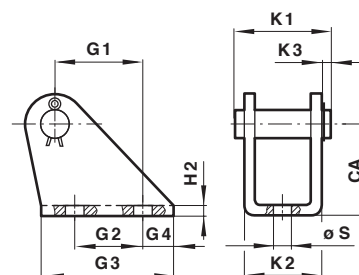
Type	Ø	KK	CE	Ø CK h11	CL	CM	ER	LE	RK	kg
QM/8010/25	10	M4	16	4	8	4	6,5	8	11,5	0,01
QM/8012/25	12/16	M6	24	6	12	6	9,5	12	17,5	0,02
QM/8020/25	20	M8	32	8	16	8	13	16	22	0,06
QM/8025/25	25	M10 x1,25	40	10	20	10	16	20	28	0,10

Front or rear detachable trunnion FH



Type	Ø	L1	Ø TD +0,03	TL	TM	UW	kg
QM/8012/34	12/16	8	6	10	38	25	0,05
QM/8020/34	20/25	8	6	10	46	30	0,07

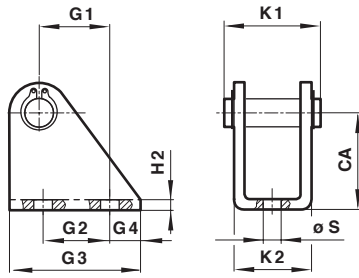
Rear hinge L



Type	Ø	CA	G1	G2	G3	G4	H2	K1	K2	K3	Ø S	kg
QM/947	10	12	6,5	—	15	6	1	13,5	10,5	2	4,8	0,01
QM/8012/24	12/16	20	18,5	15	30	8	1,5	20	15	3	5,5	0,02
QM/8020/24	20/25	25	20	15	35	10	2	25	20,5	3	6,6	0,04

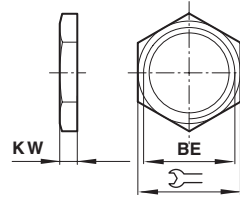
RM/8000/M

Rear hinge L2



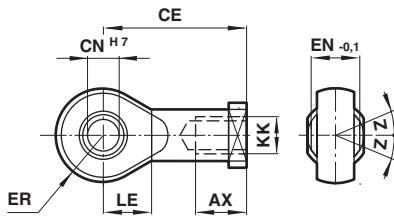
Type	Ø	CA	G1	G2	G3	G4	H2	K1	K2	Ø S	kg
QM/8010/44	10	24	11	12,5	20	4	2,5	17,5	13	4,5	0,018
QM/8012/44	12/16	27	13	15	25	5	3	23	18	5,5	0,035
QM/8020/44	20/25	30	16	20	32	6	4	29,5	24	6,6	0,077

Nose nut N



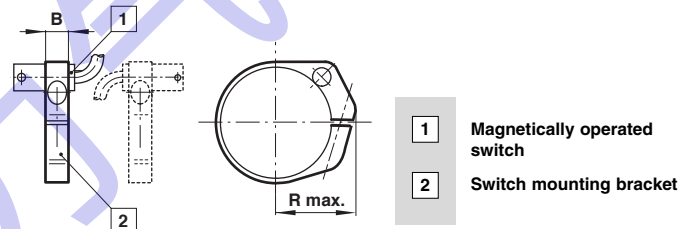
Type	Ø	BE	KW	kg
M/P1501/90	10	M12x1,25	19	6
M/P13834	12/16	M16x1,5	22	5
M/P13615	20/25	M22x1,5	27	8

Universal piston rod eye UF



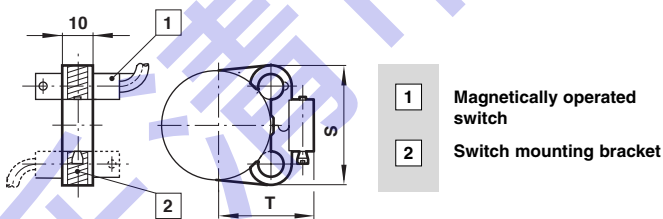
Type	Ø	KK	AX	CE	Ø CN H7	EN -0,1	ER	LE	Z	kg
QM/8010/32	10	M4	14	27	5	8	8	10	5°	0,02
QM/8012/32	12/16	M6	14	30	6	9	9	11	5°	0,02
QM/8020/32	20	M8	16	36	8	12	11	13	5°	0,05
QM/8025/32	25	M10x1,25	25	42	10	14	14	15	5°	0,08

Brackets > 15 mm stroke



Type	Ø	B	R max.	kg
QM/33/010/22	10	8	16	0,01
QM/33/012/22	12	8	18	0,01
QM/33/016/22	16	10	20	0,01
QM/33/020/22	20	10	22	0,01
QM/33/025/22	25	10	24	0,01

Brackets < 15 mm stroke



Type	Ø	S	T	kg
QM/33/010/23	10	27,5	19,5	0,01
QM/33/016/23	12	28,5	21,5	0,01
QM/33/016/23	16	29,5	23,5	0,01
QM/33/020/23	20	29,5	26	0,01
QM/33/025/23	25	31,5	28,5	0,01

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.