

**'Stainless Steel' ISO Cylinders
Magnetic Piston
Double Acting
Ø 12 to 25 mm**

- High corrosion and acid resistance
- Magnetic piston as standard
- Conforming to ISO 6432
- Suitable for applications in the Food Industry
- 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 buffer or adjustable cushioning

Operating Pressure:

1 to 10 bar

Operating Temperature:

- 5°C* to +80°C max.

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

Cylinder Diameters:

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

20, 25 mm (adjustable cushioning)

Strokes:

Standard, see page N 1.5.025.02

Non-standard up to 500 mm max.

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)

Piston: POM

Buffer: Polyurethane

Piston rod seal: Polyurethane

Piston and cushion seal: Nitrile rubber

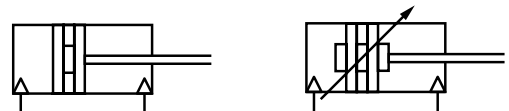
'O'-rings: Nitrile rubber

Ordering Examples

See page N 1.5.025.03

Mountings and Switches

See page N 1.5.025.03





Cylinder Variants

Symbol	Model magnetic piston	Description	Dimensions Page
	KM/8000/M	Standard cylinders with integral eye mounting	04
	KM/8000/MF	Cylinders with flat rear cover	04
	KM/8000/MU	Cylinders with extended piston rod Note: Extended piston rod 75 mm: KM/8***/MU/Stroke/75	04
	KM/8000/JM	Cylinders with double ended piston rod (∅ 16 to 25 mm)	05
	KM/8021/M	Cylinder ∅ 20 mm with adjustable cushioning	04
	KM/8026/M	Cylinder ∅ 25 mm with adjustable cushioning	04
	KM/8021/JM	Cylinder ∅ 20 mm with double ended piston rod and adjustable cushioning	05
	KM/8026/JM	Cylinder ∅ 25 mm with double ended piston rod and adjustable cushioning	05

For combinations of cylinder variants consult our Technical Service.

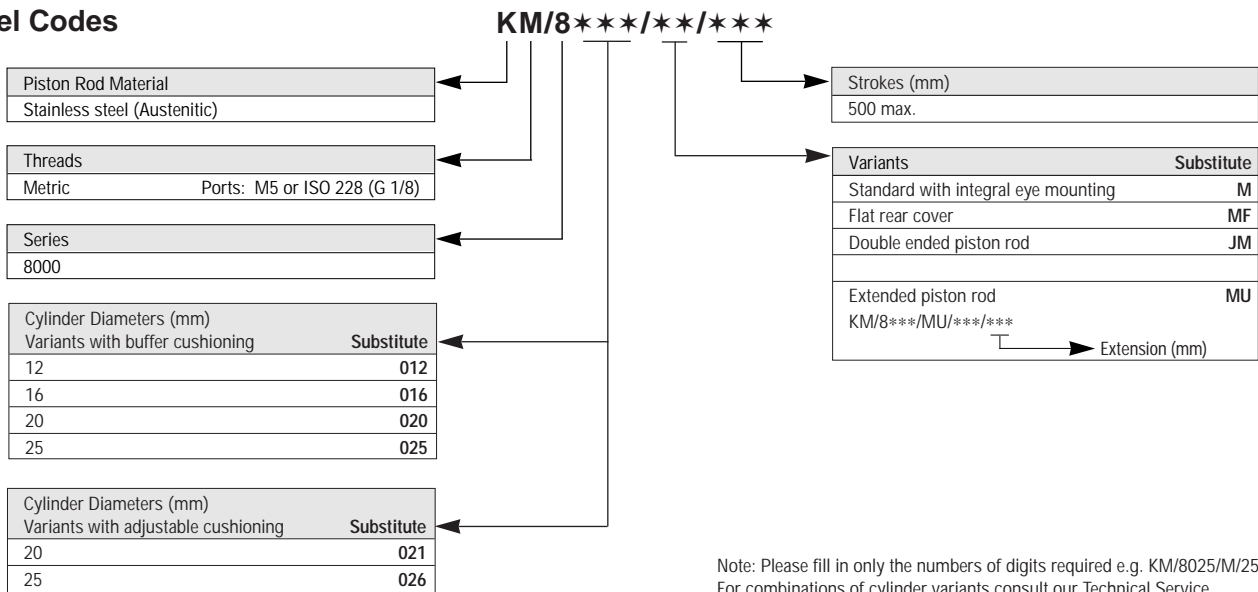
Standard Strokes (buffer cushioning)

Cylinder ∅	Strokes (mm)									
	10	25	40	50	80	100	125	160	200	250
12	●	●	●	●	●	●	●	●	●	
16	●	●	●	●	●	●	●	●	●	
20	●	●	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●	●	●

Standard Strokes (adjustable cushioning)

Cylinder ∅	Strokes (mm)									
	10	25	40	50	80	100	125	160	200	250
12										
16										
20		●	●	●	●	●	●	●	●	●
25		●	●	●	●	●	●	●	●	●

Model Codes



Note: Please fill in only the numbers of digits required e.g. KM/8025/M/25
For combinations of cylinder variants consult our Technical Service.

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 'F'	Style 'L'
Cylinder Ø	Page 05	Page 05	Page 06	Page 06
12	M/P 72405	M/P 72403	KQM/8012/25	KQM/8012/24
16	M/P 72405	M/P 72403	KQM/8012/25	KQM/8012/24
20	M/P 72406	M/P 72404	KQM/8020/25	KQM/8020/24
25	M/P 72406	M/P 72404	KQM/55433/25	KQM/8020/24
	Style 'N'		Switch Mounting Brackets # ≥ 15 mm stroke	Switch Mounting Brackets # < 15 mm stroke
Cylinder Ø	Page 06		Page 07	Page 07
12	M/P 72398		QM/33/012/22	QM/33/010/23
16	M/P 72398		QM/33/016/22	QM/33/016/23
20	M/P 72399		QM/33/020/22	QM/33/020/23
25	M/P 72399		QM/33/025/22	QM/33/025/23

QM/33, QM/34 or QM/134

Materials of Mountings

Style 'B' and 'G'	Flange mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304)
Style 'C'	Foot mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304)
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 'L'	Rear hinge mounting: X 5 Cr Ni 18 10 (1.4301; AISI 304), 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 'N'	Nose nut: X 10 Cr Ni S 18 9 (1.4305; AISI 303)
Bracket for switches:	Body POM

Switches

	Without LED	With LED	With LED (plug in connector)
Model	Ø 8 mm	Ø 8 mm	Ø 8 mm
Reed	QM/33	QM/34	QM/34/P
Reed	—	—	—
Solid state	—	QM/134	QM/134/P

Model	Reed	Solid state	Voltage V a.c.	V d.c.	Current Max.	Temperature °C	LED	Features	Cable Length	Cable Type	Plug-in Cable Straight	90°	Catalogue Page
QM/33/**	—	—	10 to 240	10 to 240	1,5 A	-20° to +80°	—	—	2, 5, 10 m	PVC 2 x 0,34	—	—	N 4.3.051
QM/33/C/**	—	—	10 to 110	10 to 175	0,25 A	-20° to +80°	—	Changeover	5 m	PVC 2 x 0,34	—	—	N 4.3.051
QM/34/**	—	—	—	10 to 30	1 A	-20° to +80°	●	Output: Positive	2, 5, 10 m	PVC 3 x 0,34	—	—	N 4.3.051
QM/34/P	—	—	—	10 to 30	1 A	-20° to +80°	●	Output: Positive	5 m	PVC 3 x 0,25	M/P34614/5	M/P34615/5	N 4.3.051
QM/34/S/**	—	—	10 to 240	10 to 240	0,5 A	-20° to +80°	●	—	2, 5, 10 m	PVC 2 x 0,34	—	—	N 4.3.051
QM/34/N/**	—	—	—	10 to 30	1 A	-20° to +80°	●	Output: Negative	2, 5 m	PVC 3 x 0,34	—	—	N 4.3.051
—	—	QM/134/**	—	10 to 30	0,2 A	-20° to +80°	●	PNP	2, 5 m	PVC 3 x 0,34	—	—	N 4.3.055
—	—	QM/134/P	—	10 to 30	0,2 A	-20° to +80°	●	PNP	5 m	PVC 3 x 0,25	M/P34614/5	M/P34615/5	N 4.3.055
—	—	QM/134/E/**	—	10 to 30	0,2 A	-20° to +80°	●	Pulse stretcher	5 m	PVC 3 x 0,34	—	—	N 4.3.055
—	—	QM/134/N/**	—	10 to 30	0,2 A	-20° to +80°	●	NPN	2, 5 m	PVC 3 x 0,34	—	—	N 4.3.055
—	—	QM/134/N/P	—	10 to 30	0,2 A	-20° to +80°	●	NPN	5 m	PVC 3 x 0,25	M/P34614/5	M/P34615/5	N 4.3.055
—	—	QM/134/X/**	—	8,2	2,2/1 mA	-25° to +75°	●	NAMUR	5 m	PVC 2 x 0,34	—	—	N 4.3.055

** Insert cable length

Full information on switches (technical data, polyurethane cable, dimensions etc.) please see catalogue pages

Ordering Examples

Cylinders

To order a basic 25 mm bore cylinder with a 50 mm stroke quote: **KM/8025/M/50**

Mountings

To order a front flange mounting style 'G' for 25 mm bore cylinder quote: **M/P 72406**

Switches

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

Switch Mounting Brackets

To order a bracket for magnetically operated switches QM/34; 25 mm bore cylinder quote: **QM/33/025/22**

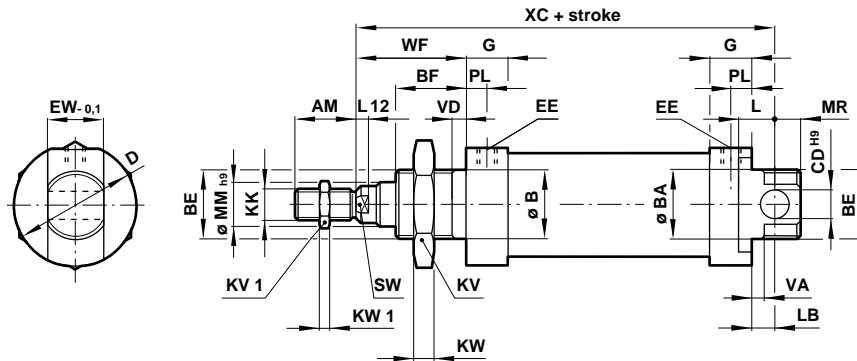


Theoretical Forces • Air Consumption • Cushioning

Cylinder Ø	Theoretical forces (N) at 6 bar		Air consumption (l/cm stroke) at 6 bar		Model	Cushion length (mm)	Initial volume (cm ³)
	Outstroke	Instroke	Outstroke	Instroke			
12	67,8	51	0,008	0,006	—	—	—
16	120	104	0,014	0,013	—	—	—
20	188	158	0,022	0,019	8021	19	4,4
25	294	247	0,035	0,028	8026	19	7,2

BASIC DIMENSIONS

KM/8000/M — Standard Cylinders with Integral Eye Mounting



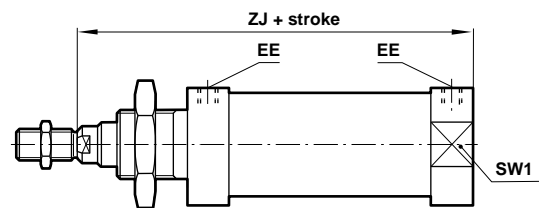
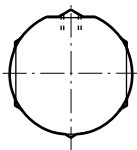
Cylinder Ø	AM	ØB/BA	BE	BF	Ø CD ^{H9}	Ø D	EE	EW-0,1	G	KK	KV (A/F)	KV1 (A/F)	KW
12	16	16	M16x1,5	17	6	20	M5	11,9	9,5	M6	22	10	5
16	16	16	M16x1,5	17	6	20	M5	11,9	9,5	M6	22	10	5
20	20	22	M22x1,5	20	8	30	G1/8	15,9	15	M8	27	13	8
25	22	22	M22x1,5	22	8	30	G1/8	15,9	15	M10x1,25	27	17	8

Cylinder Ø	KW1	L	L12	LB	Ø MM ^{h9}	MR	PL	SW (A/F)	WF	VA/VD	XC	at 0mm	per 25mm
12	3	9	3	3	6	8	5,5	5	22	2	75	0,116 kg	0,011 kg
16	3	9	3	4	6	7	5,5	5	22	2	82	0,137 kg	0,012 kg
20	4	12	3	3	8	11	8	7	24	2	95	0,306 kg	0,018 kg
25	5	12	4	7	10	9	8	9	28	2	104	0,383 kg	0,028 kg

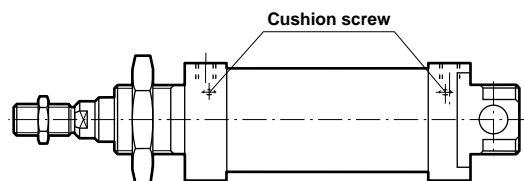
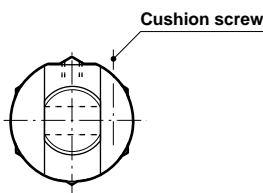
CYLINDER VARIANTS

KM/8000/MF — Cylinders with Flat Rear Cover

Cylinder Ø	EE	ZJ	SW1 (A/F)
12	M5	72	17
16	M5	78	17
20	G1/8	92	27
25	G1/8	97	27



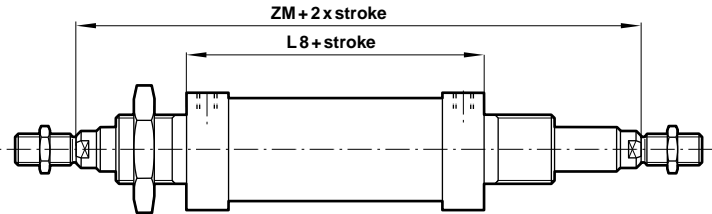
KM/8021/M, KM/8026/M — Cylinders with Adjustable Cushioning





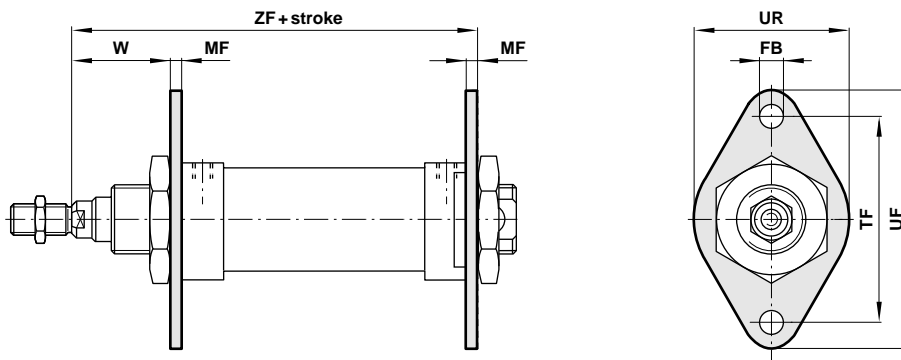
KM/8000/JM — Cylinders with Double Ended Piston Rod
KM/8021/JM, KM/8026/JM — Cylinders with Double Ended Piston Rod and Adjustable Cushioning

Cylinder Ø	L8	ZM
16	56	100
20	68	116
25	69	125

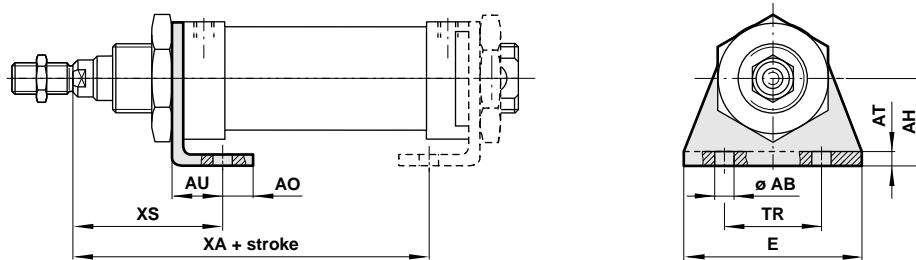


MOUNTINGS

M/P7240 . — Rear Flange Mounting Style 'B'
Front Flange Mounting Style 'G'



M/P7240 . — Foot Mounting Style 'C'

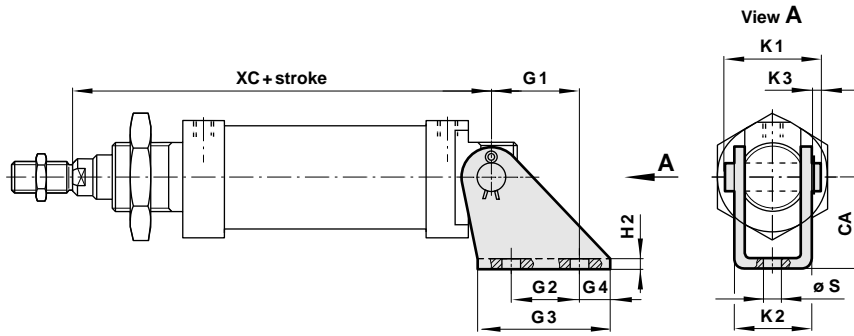


Cylinder Ø	Ø AB	AH	AO	AT	AU	E	Ø FB	MF	TF
12	5,5	20	6	3	13	43	5,5	4	40
16	5,5	20	6	3	13	43	5,5	4	40
20	6,6	25	7,5	4	16	53	6,6	5	50
25	6,6	25	7,5	4	16	53	6,6	5	50

Cylinder Ø	TR	UF	UR	W	XA	XS	ZF	Style 'B', 'G'	Style 'C'
12	32	52	30	18	62	32	76	0,030 kg	0,030 kg
16	32	52	30	18	68	32	82	0,030 kg	0,030 kg
20	40	66	40	19	80	36	97	0,050 kg	0,060 kg
25	40	66	40	23	85	40	102	0,050 kg	0,060 kg

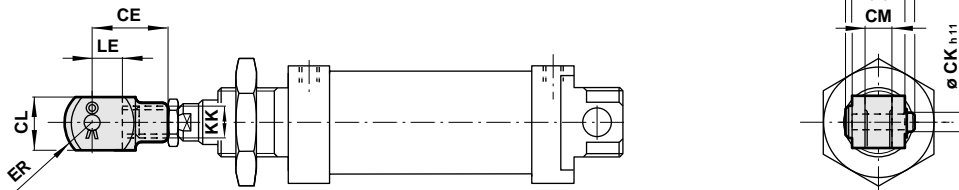


KQM/8000/24 — Rear Hinge Mounting Style 'L'



Cylinder Ø	CA	G1	G2	G3	G4	H2	K1	K2	K3	Ø S	XC	Style 'L'
12	20	18,5	15	30	8	1,5	20	15	3	5,5	75	0,020 kg
16	20	18,5	15	30	8	1,5	20	15	3	5,5	82	0,020 kg
20	25	20	15	35	10	2	25	20	3	6,6	95	0,040 kg
25	25	20	15	35	10	2	25	20	3	6,6	104	0,040 kg

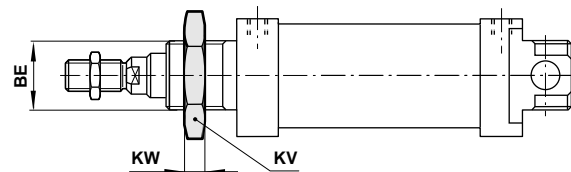
KQM/8000/25 — Piston Rod Clevis Mounting Style 'F'
(Corresponds to DIN ISO 8140)



Cylinder Ø	CE	Ø CK h11	CL	CM	ER	KK	LE	RK	Style 'F'
12	24	6	12	6	9,5	M6	12	20,5	0,020 kg
16	24	6	12	6	9,5	M6	12	20,5	0,020 kg
20	32	8	16	8	13	M8	16	24,5	0,060 kg
25	40	10	20	10	16	M10x1,25	20	28	0,100 kg

M/P 7239 . — Nose Nut Style 'N'

Cylinder Ø	BE	KV (A/F)	KW	Style 'N'
12	M16x1,5	22	5	0,009 kg
16	M16x1,5	22	5	0,009 kg
20	M22x1,5	27	8	0,017 kg
25	M22x1,5	27	8	0,017 kg

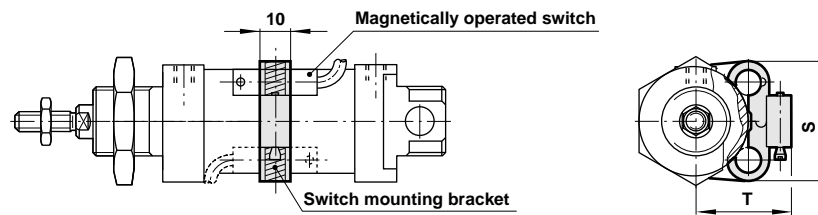




SWITCH MOUNTING BRACKETS

QM/33/000/23 — Brackets

< 15 mm stroke

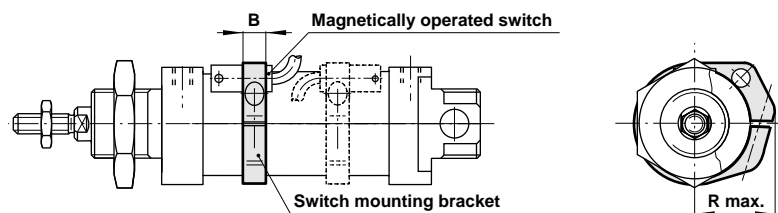


QM/33, QM/34, QM/134 (Ø 8 mm)

Cylinder Ø	S	T	Weight
12	28,5	21,5	0,008 kg
16	29,5	23,5	0,008 kg
20	29,5	26	0,008 kg
25	31,5	28,5	0,008 kg

QM/33/000/22 — Brackets

≥ 15 mm stroke



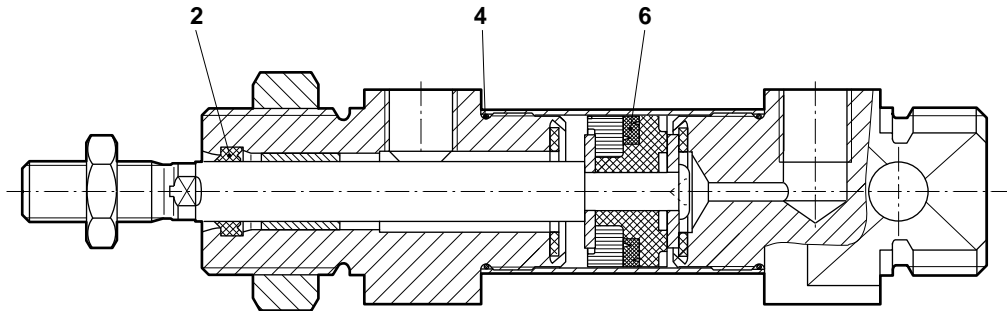
QM/33, QM/34, QM/134 (Ø 8 mm)

Cylinder Ø	B	R max.	Weight
12	8	18	0,004 kg
16	10	20	0,006 kg
20	10	22	0,006 kg
25	10	24	0,007 kg



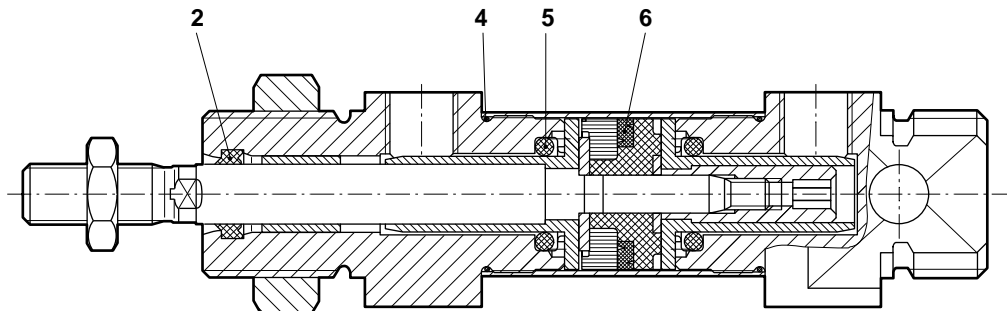
SPARES

KM/8000/M — Standard Cylinders with Buffer Cushioning



Cylinder Ø	Model	Spares kit	Comprising Item	Description	Quantity
12	KM/8012/M	KQM/8012/00	2	Piston rod seal	2
16	KM/8016/M	KQM/8016/00	4	'O'-ring	2
20	KM/8020/M	KQM/8020/00	6	Piston seal	1
25	KM/8025/M	KQM/8025/00		Grease	1

KM/8021/M, KM/8026/M — Cylinders with Adjustable Cushioning



Cylinder Ø	Model	Spares kit	Comprising Item	Description	Quantity
20	KM/8021/M	KQM/8020/00	2	Piston rod seal	2
25	KM/8026/M	KQM/8025/00	4	'O'-ring	2
			5	Cushion seal	2
			6	Piston seal	1
				Grease	1