

ISO Cylinders
Magnetic Piston
Single Acting
Ø 10 to 25 mm

- Magnetic piston as standard
- Conforming to ISO 6432
- Corrosion resistance
- Nose mounting nut and piston rod locknut as standard



Technical Data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

ISO 6432

Operation:

Single acting (sprung in), magnetic piston, buffer cushioning

Operating Pressure:

2 to 10 bar

Operating Temperature:

-10°C* to +80°C max.

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

Cylinder Diameters:

10, 12, 16, 20, 25 mm

Strokes:

Standard, see page N 1.4.031.02

Non-standard up to 50 mm max. available

Materials:

Barrel: Stainless steel (Austenitic)

End covers: Clear anodised aluminium alloy

Piston rod: Stainless steel (Austenitic)

Buffer: Polyurethane

Seals: Nitrile rubber

Ordering Examples

See page N 1.4.031.03

Mountings and Switches

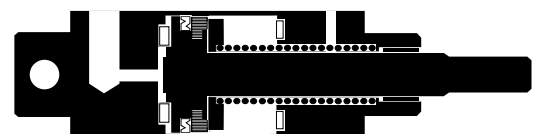
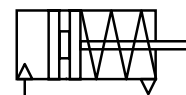
See page N 1.4.031.03.

Alternative Models

Double acting cylinders

See page

N 1.5.021.01





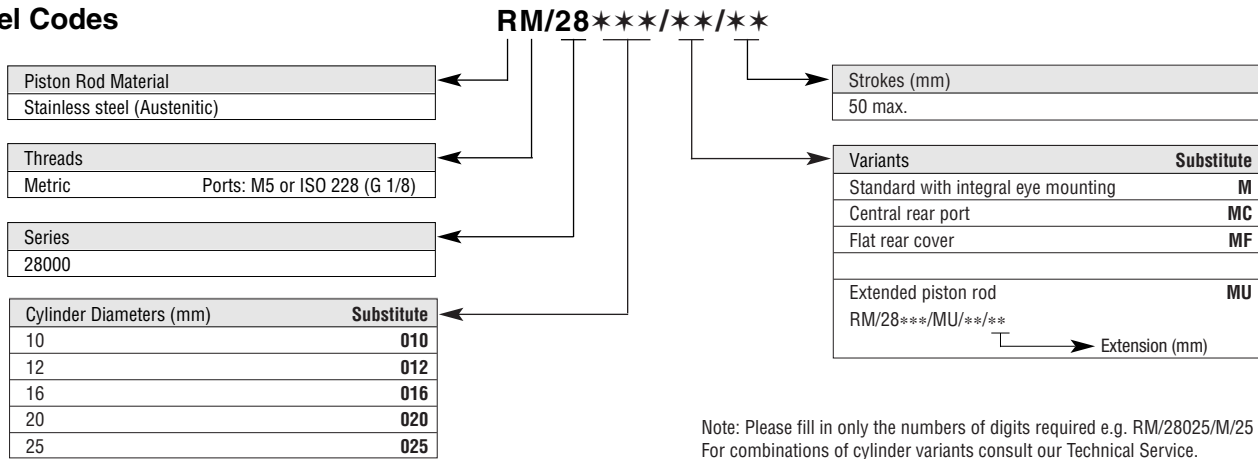
Cylinder Variants

Symbol	Model magnetic piston	Description	Dimensions Page
	RM/28000/M	Standard cylinders with side port, integral eye mounting	04
	RM/28000/MC	Cylinders with central rear port	04
	RM/28000/MF	Cylinders with flat rear cover	04
	RM/28000/MU	Extended piston rod Note: Extended piston rod 20 mm: RM/28***/MU/Stroke/20	04

Standard Strokes

Cylinder Ø	Strokes (mm)		
	10	25	50
10	●	●	●
12	●	●	●
16	●	●	●
20	●	●	●
25	●	●	●

Model Codes



Note: Please fill in only the numbers of digits required e.g. RM/28025/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.

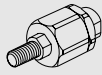








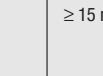
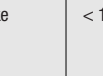

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

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 'AK'	Style 'B', 'G'	Style 'C'	Style 'F'	Style 'FH'	Style 'L'	Style 'L2'
Cylinder Ø	 Page 07	 Page 06	 Page 06	 Page 07	 Page 10	 Page 06	 Page 07
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
Cylinder Ø	Style 'N'  Page 09	Style 'UF'  Page 07			Switch Mounting Brackets # ≥ 15 mm stroke  Page 10	Switch Mounting Brackets # < 15 mm stroke  Page 10	Switch Mounting Brackets ##  Page 10
10	M/P1501/90	QM/8010/32			QM/33/010/22	QM/33/010/23	QM/45/210/22
12	M/P13834	QM/8012/32			QM/33/012/22	QM/33/016/23	QM/45/212/22
16	M/P13834	QM/8012/32			QM/33/016/22	QM/33/016/23	QM/45/216/22
20	M/P13615	QM/8020/32			QM/33/020/22	QM/33/020/23	QM/45/220/22
25	M/P13615	QM/8025/32			QM/33/025/22	QM/33/025/23	QM/45/225/22

QM/33, QM/34 or QM/134
QM/45

Switches

Model	Without LED		With LED		With LED (plug in connector)	
	Ø 8 mm	Ø 5 mm	Ø 8 mm	Ø 5 mm	Ø 8 mm	—
Reed	QM/33	QM/45/RAP	QM/34	QM/45/LAP	QM/34/P	—
Reed	—	—	—	QM/45/LSU	—	—
Solid state	—	—	QM/134	QM/45/EAP	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/45/RAP/**	—	—	10 to 30	10 to 30	0,5 A	-20° to +80°	—	—	2, 5, 10 m	PVC 2 x 0,34	—	—	N 4.3.045
QM/45/LAP/**	—	—	—	10 to 30	0,5 A	-20° to +80°	●	—	2, 5, 10 m	PVC 3 x 0,34	—	—	N 4.3.045
QM/45/LSU/**	—	—	10 to 240	10 to 170	0,18 A	-20° to +80°	●	—	2, 5 m	PVC 2 x 0,34	—	—	N 4.3.045
—	QM/45/EAP/**	—	—	10 to 30	0,2 A	-20° to +80°	●	PNP	2, 5 m	PVC 3 x 0,14	—	—	N 4.3.047
—	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: **RM/28025/M/50**

Mountings

To order a front flange mounting style 'G' for 25 mm bore cylinder quote: **M/P19409**

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**

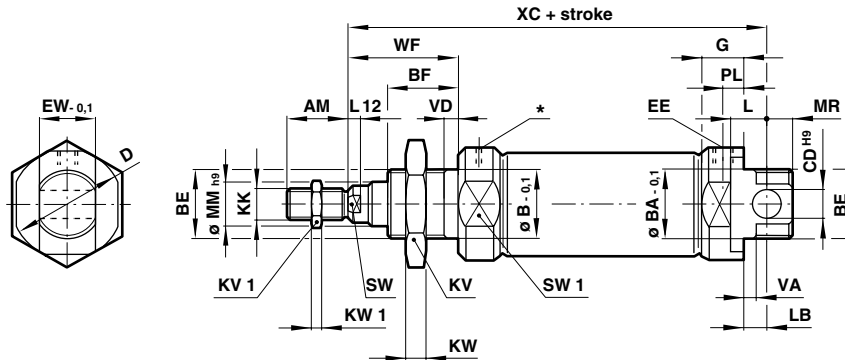


Theoretical Forces • Air Consumption

Cylinder Ø	Theoretical forces (N) at 6 bar Outstroke	Instroke F1 (spring force)	Air consumption (l/cm stroke) at 6 bar Outstroke
10	40,7	3,7	0,006
12	57,7	4,8	0,008
16	102	10,5	0,014
20	165	16,1	0,022
25	260	21,6	0,035

BASIC DIMENSIONS

RM/28000/M — Standard Cylinders with Integral Eye Mounting



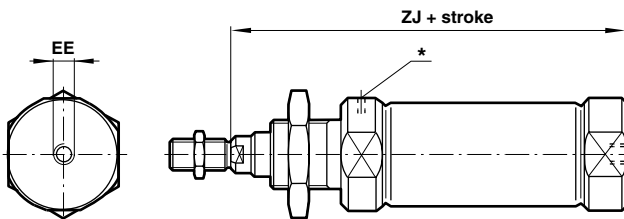
* Exhaust position, do not obstruct

Cylinder Ø	AM	Ø B/BA-0,1	BE	BF	Ø CD H9	Ø D	EE	EW-0,1	G	KK	KV (A/F)	KV1 (A/F)	KW	KW1
10	12	12	M12x1,25	12	4	16,5	M5	7,9	9	M4	19	7	6	2
12	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
16	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
20	20	22	M22x1,5	20	8	30	G1/8	15,9	15	M8	27	13	8	4
25	22	22	M22x1,5	22	8	30	G1/8	15,9	15	M10x1,25	27	17	8	5

Cylinder Ø	L	L12	LB	Ø MM h9	MR	PL	SW (A/F)	SW1 (A/F)	WF	VA/VD	XC	at 0 mm	per 25 mm
10	6	—	2	4	8	5,5	—	14	16	1,5	64	0,034 kg	0,007 kg
12	9	3	3	6	8	5,5	5	19	22	2	75	0,058 kg	0,011 kg
16	9	3	4	6	7	5,5	5	19	22	2	82	0,070 kg	0,012 kg
20	12	3	3	8	11	8	7	27	24	2	95	0,145 kg	0,018 kg
25	12	4	7	10	9	8	9	27	28	2	104	0,200 kg	0,028 kg

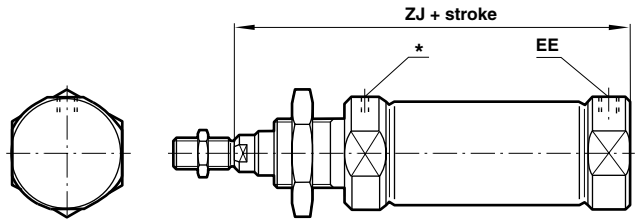
CYLINDER VARIANTS

RM/28000/MC — Cylinder with Central Rear Port



* Exhaust position, do not obstruct

RM/28000/MF — Cylinder with Flat Rear Cover

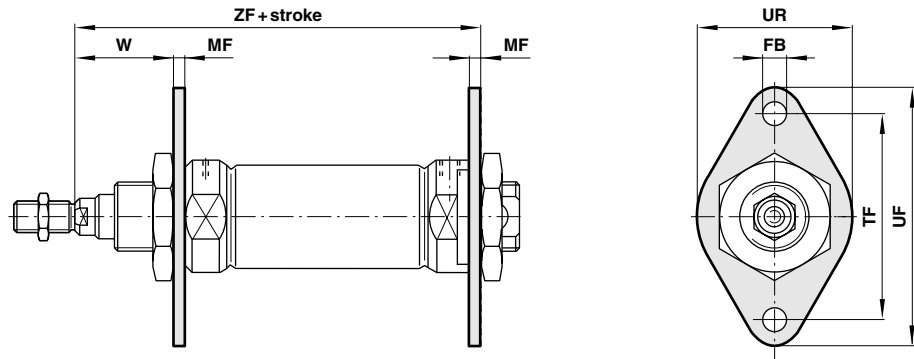


Cylinder Ø	EE	ZJ	at 0 mm	per 25 mm
10	M5	62	0,031 kg	0,007 kg
12	M5	72	0,052 kg	0,011 kg
16	M5	78	0,064 kg	0,012 kg
20	G1/8	92	0,130kg	0,018 kg
25	G1/8	97	0,185 kg	0,028 kg

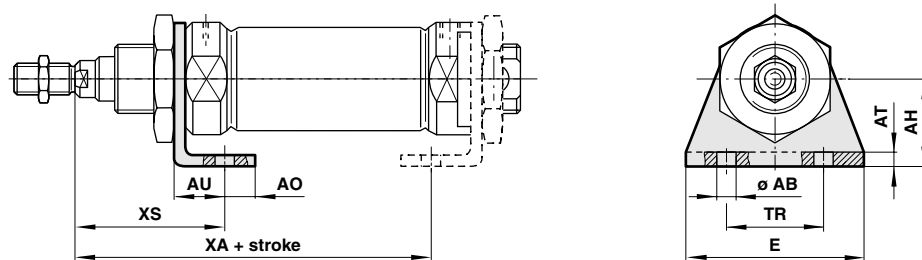


MOUNTINGS

**M/P 19 . . . — Rear Flange Mounting Style ‘B’
Front Flange Mounting Style ‘G’**



M/P 19 . . . — Foot Mounting Style ‘C’

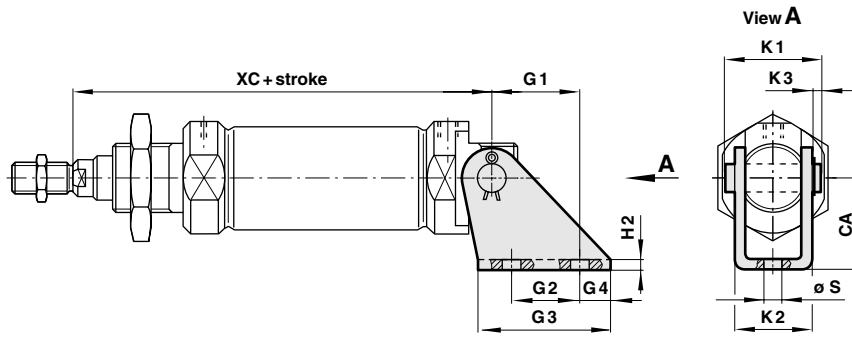


Cylinder Ø	Ø AB	AH	AO	AT	AU	E	Ø FB	MF	TF
10	4,5	16	6	2	10	35	4,5	3	30
12	5,5	20	6	3	13	43	5,5	4	40
16	5,5	20	6	3	13	43	5,5	4	40
20	6,6	25	7,5	4	16	53	6,6	5	50
25	6,6	25	7,5	4	16	53	6,6	5	50

Cylinder Ø	TR	UF	UR	W	XA	XS	ZF	Style ‘B’, ‘G’	Style ‘C’
10	25	40	22	13	54	24	65	0,020 kg	0,020 kg
12	32	51	28	18	62	32	76	0,030 kg	0,030 kg
16	32	51	28	18	68	32	82	0,030 kg	0,030 kg
20	40	63	38	19	80	36	97	0,050 kg	0,060 kg
25	40	63	38	23	85	40	102	0,050 kg	0,060 kg

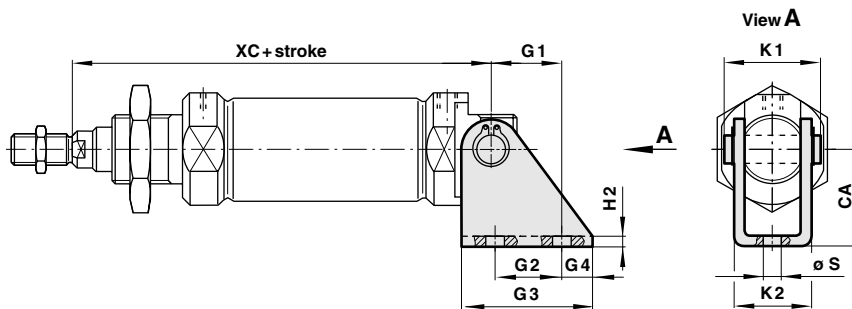


QM/8000/24 — Rear Hinge Mounting Style 'L'



Cylinder \varnothing	CA	G1	G2	G3	G4	H2	K1	K2	K3	$\varnothing S$	XC	Style 'L'
10	12	6,5	-	15	6	1	13,5	10,5	2	4,8	64	0,005 kg
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	20,5	3	6,6	95	0,040 kg
25	25	20	15	35	10	2	25	20,5	3	6,6	104	0,040 kg

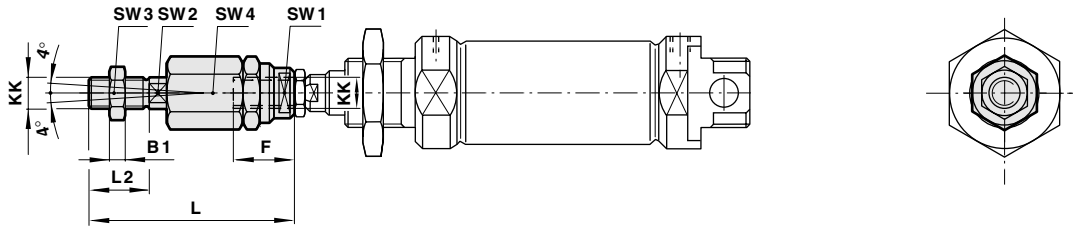
QM/8000/44 — Rear Hinge Mounting Style 'L2'



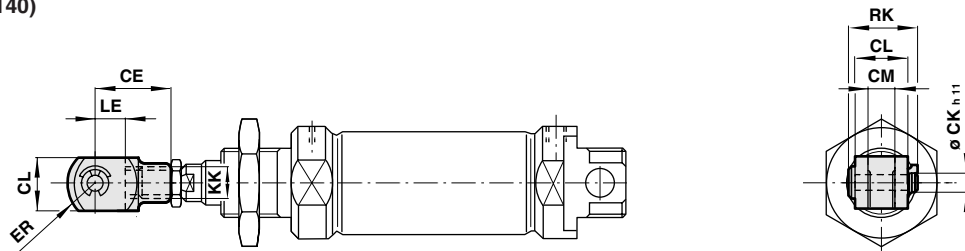
Cylinder \varnothing	CA	G1	G2	G3	G4	H2	K1	K2	$\varnothing S$	XC	Style 'L2'
10	24	11	12,5	20	4	2,5	17,5	13	4,5	64	0,018 kg
12	27	13	15	25	5	3	23	18	5,5	75	0,035 kg
16	27	13	15	25	5	3	23	18	5,5	82	0,035 kg
20	30	16	20	32	6	4	29,5	24	6,6	95	0,077 kg
25	30	16	20	32	6	4	29,5	24	6,6	104	0,077 kg



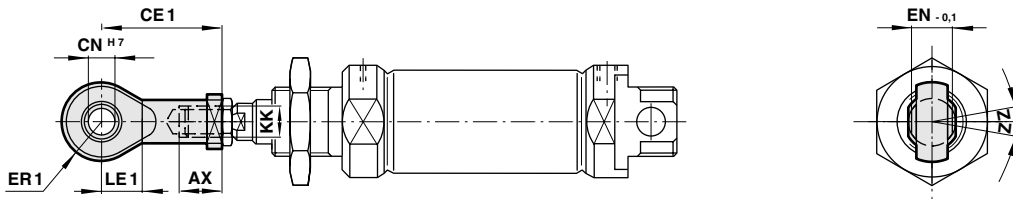
QM/8000/38 — Piston Rod Swivel Mounting Style ‘AK’



QM/8000/25 — Piston Rod Clevis Mounting Style ‘F’
(Corresponds to DIN ISO 8140)



QM/8000/32 — Universal Piston Rod Eye Mounting Style ‘UF’
(Corresponds to DIN ISO 8139)

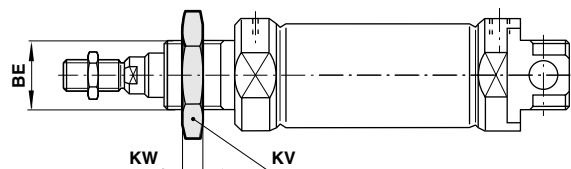


Cylinder Ø	AX	B1	CE	CE1	Ø CK h11	CL	CM	Ø CN H7	EN -0,1	ER	ER1	F	KK
10	14	2	16	27	4	8	4	5	8	6,5	8	12,5	M4
12	14	3	24	30	6	12	6	6	9	9,5	9	14	M6
16	14	3	24	30	6	12	6	6	9	9,5	9	14	M6
20	16	4	32	36	8	16	8	8	12	13	11	18	M8
25	25	5	40	42	10	20	10	10	14	16	14	26	M10x1,25

Cylinder Ø	L	L2	LE	LE1	RK	SW1 (A/F)	SW2 (A/F)	SW3 (A/F)	SW4 (A/F)	Z	Style ‘AK’	Style ‘F’	Style ‘UF’
10	33	8	8	10	11,5	11	3,2	7	11	5°	0,015 kg	0,010 kg	0,020 kg
12	39	12	12	11	17,5	7	5	10	13	5°	0,024 kg	0,020 kg	0,020 kg
16	39	12	12	11	17,5	7	5	10	13	5°	0,024 kg	0,020 kg	0,020 kg
20	55	16	16	13	22	10	7	13	17	5°	0,054 kg	0,060 kg	0,050 kg
25	73	20	20	15	28	19	12	17	30	5°	0,233 kg	0,100 kg	0,080 kg

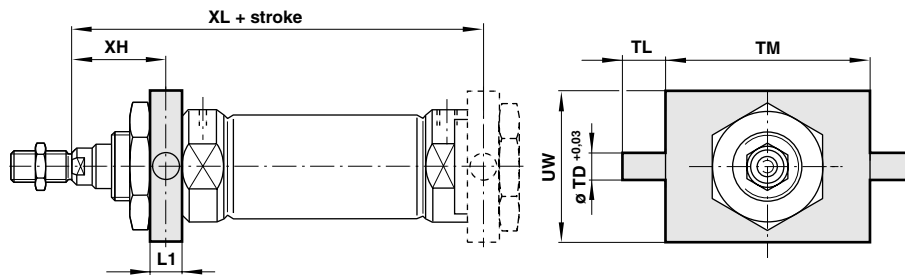
M/P1 . . . — Nose Nut Style ‘N’

Cylinder Ø	BE	KV (A/F)	KW	Style ‘N’
10	M12x1,25	19	6	0,010 kg
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





QM/8000/34 – Head (Cap) Detachable Trunnion Mounting Style ‘FH’

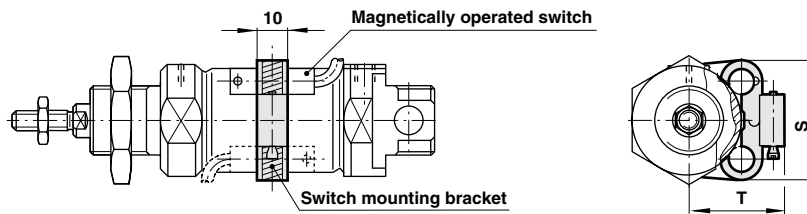


Cylinder Ø	L1	ø TD +0.03	TL	TM	UW	XH	XL	Style ‘FH’
12	8	6	10	38	25	18	—	0,051 kg
16	8	6	10	38	25	18	—	0,051 kg
20	8	6	10	46	30	20	96	0,067 kg
25	8	6	10	46	30	24	101	0,067 kg

SWITCH MOUNTING BRACKETS

QM/33/000/23 – Brackets

< 15 mm stroke



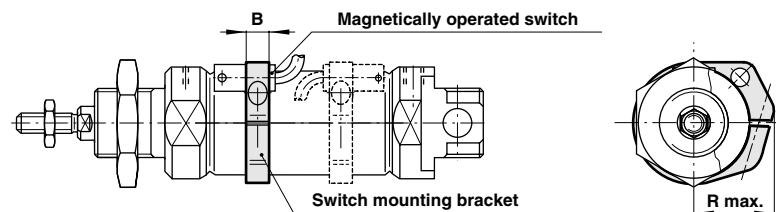
QM/33, QM/34, QM/134 (Ø 8 mm)

Cylinder Ø	S	T	Weight
10	27,5	19,5	0,007 kg
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	0,007 kg

QM/33/000/22 – Brackets

QM/45/200/22 – Brackets

≥ 15 mm stroke



QM/33, QM/34, QM/134 (Ø 8 mm)

Cylinder Ø	B	R max.	Weight
10	8	16	0,003 kg
12	8	18	0,004 kg
16	10	20	0,006 kg
20	10	22	0,006 kg
25	10	24	0,007 kg

QM/45 (Ø 5 mm)

Cylinder Ø	B	R max.	Weight
10	8	14	0,002 kg
12	8	15	0,002 kg
16	10	18	0,005 kg
20	10	20	0,005 kg
25	10	22,5	0,006 kg