

Magnetic piston as standard
Generally conforms to ISO 6432
High strength, double crimped end cap design
Corrosion resistant
Nose mounting nut and piston rod locknut supplied as standard
Technical features
Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Single acting (Spring return), magnetic piston, buffer cushioning

Operating pressure:

29 to 145 psi (2 to 10 bar)

Operating temperature:

14°F to 176°F (-10°C to +80°C) max.

Consult our technical service for use below 32°F (2°C)

Materials

Barrel: stainless steel

End covers: clear anodised aluminum alloy

Piston rod: stainless steel

Buffer: polyurethane

Seals: nitrile rubber


Standard models

Ø	Piston rod Ø	Port size	Models	Reed switch with integral 5m cable	Accessories Switch mounting <15 mm stroke	Straight fitting	Elbow fitting	
10	4	M5	RM/28010/M*	M/50/LSU/5V	QM/33/010/22	QM/33/010/23	C02250405	C02470405
12	6	M5	RM/28012/M*	M/50/LSU/5V	QM/33/012/22	QM/33/016/23	C02250405	C02470405
16	6	M5	RM/28016/M*	M/50/LSU/5V	QM/33/016/22	QM/33/016/23	C02250405	C02470405
20	8	G1/8	RM/28020/M*	M/50/LSU/5V	QM/33/020/22	QM/33/020/23	C02250618	C02470618
25	10	G1/8	RM/28025/M*	M/50/LSU/5V	QM/33/025/22	QM/33/025/23	C02250618	C02470618

* Insert stroke length in mm.

Service kits are not available for these cylinders.

Standard strokes

Ø	10	25	50
12	•	•	•
16	•	•	•
20	•	•	•
25	•	•	•

Theoretical forces

Cylinder Ø	Theoretical forces (N) at 6 bar	F1
	Outstroke	
10	40,7	3,7
12	57,7	4,8
16	102	10,5
20	165	16,1
25	260	21,6

F1 = Return force of spring

Options selector

RM/28****/****/****

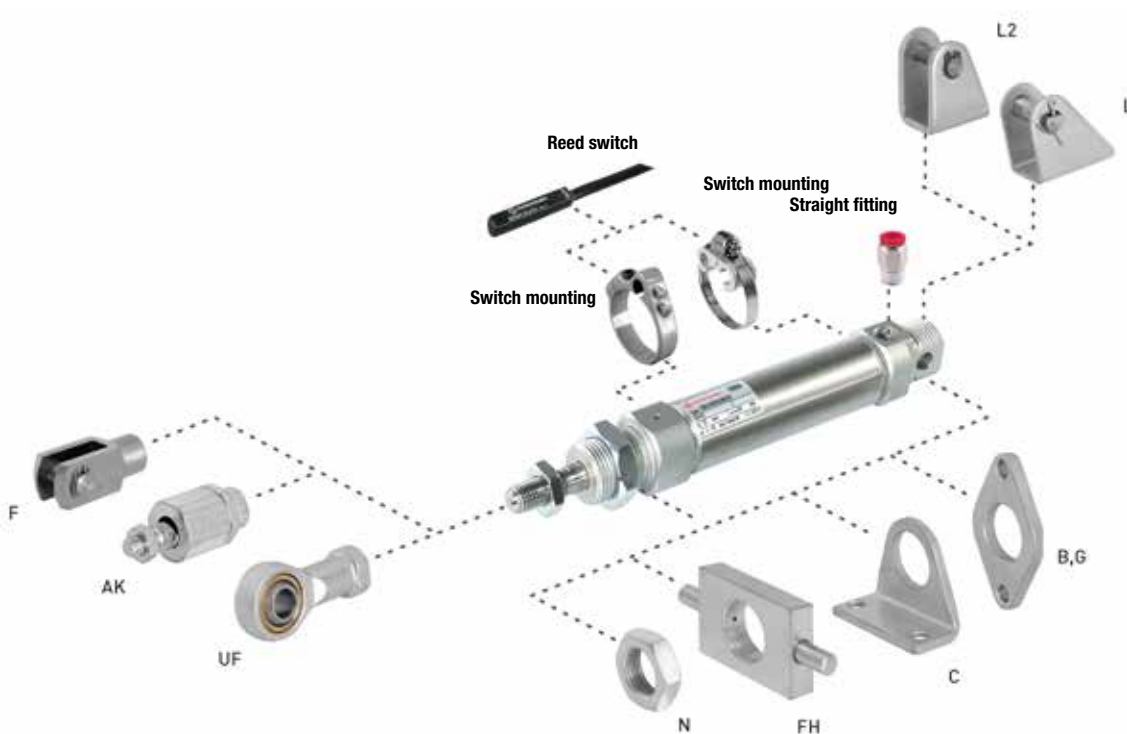
Cylinder Ø (mm)	Substitute
10	010
12	012
16	016
20	020
25	025

Note: If option is not required, disregard option position within part number eg. RM/28025/M/50. This options selector explains only the cylinder variants. Additional variants/options are not possible.

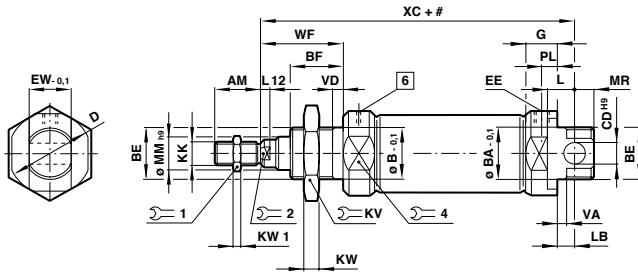
Stroke (mm)
max. 50

Variants (magnetic piston)	Substitute
Standard with integral eye mounting	M
Central rear port	MC
Flat rear cover	MF
20	020
25	025

Mountings



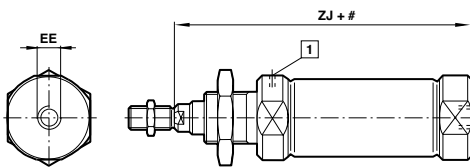
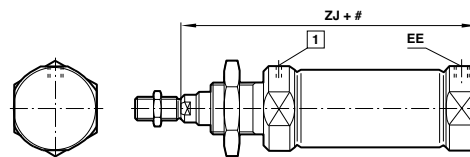
Ø	AK	B, G	C	F	FH	L	L2	N	UF
10	QM/8010/38	M/P19407	M/P19369	QM/8010/25	-	QM/947	QM/8010/44	M/P1501/90	QM/8010/32
12	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44	M/P13834	QM/8012/32
16	QM/8012/38	M/P19408	M/P19389	QM/8012/25	QM/8012/34	QM/8012/24	QM/8012/44	M/P13834	QM/8012/32
20	QM/8020/38	M/P19409	M/P19406	QM/8020/25	QM/8020/34	QM/8020/24	QM/8020/44	M/P13615	QM/8020/32
25	QM/8025/38	M/P19409	M/P19406	QM/8025/25	QM/8020/34	QM/8020/24	QM/8020/44	M/P13615	QM/8025/32

Basic dimensions
RM/28000/M – Standard


Stroke

1 Exhaust position, do not obstruct

Models	Ø	AM	Ø B/BA _{0,1}	BE	BF	Ø CD _{H9}	Ø D	EE	EW _{0,1}	G	KK	∅ 2 KV	∅ 1	KW	KW1
RM/28010/M.	10	12	12	M12x1,25	12	4	16,5	M5	7,9	9	M4	19	7	6	2
RM/28012/M.	12	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
RM/28016/M.	16	16	16	M16x1,5	17	6	21	M5	11,9	9,5	M6	22	10	5	3
RM/28020/M.	20	20	22	M22x1,5	20	8	30	G1/8	15,9	15	M8	27	13	8	4
RM/28025/M.	25	22	22	M22x1,5	22	8	30	G1/8	15,9	15	M10x1,25	27	17	8	5
Models	Ø	L	L12	LB	Ø MM _{H9}	MR	PL	∅ 2	∅ 4	WF	VA/VD	XC	at 0 mm	per 25 mm	
RM/28010/M.	10	6	—	2	4	8	5,5	—	14	16	1,5	64	0.075 lb	0.015 lb	
RM/28012/M.	12	9	3	3	6	8	5,5	5	19	22	2	75	0.138 lb	0.024 lb	
RM/28016/M.	16	9	3	4	6	7	5,5	5	19	22	2	82	0.154 lb	0.026 lb	
RM/28020/M.	20	12	3	3	8	11	8	7	27	24	2	95	0.320 lb	0.039 lb	
RM/28025/M.	25	12	4	7	10	9	8	9	27	28	2	104	0.441 lb	0.062 lb	

Cylinder variants
RM/28000/MC – Cylinders with central rear port

RM/28000/MF – Cylinders with flat rear cover


Stroke

1 Exhaust position, do not obstruct

Models	Ø	EE	ZJ	at 0 mm	per 25 mm
RM/28010/M.	10	M5	62	0.068 lb	0.015 lb
RM/28012/M.	12	M5	72	0.115 lb	0.024 lb
RM/28016/M.	16	M5	78	0.141 lb	0.026 lb
RM/28020/M.	20	G1/8	92	0.287 lb	0.040 lb
RM/28025/M.	25	G1/8	97	0.408 lb	0.062 lb



- Magnetic piston as standard**
- Conforms to ISO 6432**
- High strength, double crimped end cap design**
- Corrosion resistant**
- Buffer or adjustable cushioning**
- Nose mounting nut and piston rod locknut supplied as standard**

Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting, magnetic piston with buffer or adjustable cushioning

Operating pressure:

29 to 145 psi (2 to 10 bar)

Operating temperature:

14°F to 176°F (-10°C to +80°C) max.

Consult our technical service for use below 32°F (2°C)

Materials

Barrel: stainless steel
 End covers: clear anodised aluminum alloy
 Piston rod: stainless steel
 Buffer: polyurethane
 Wiper: polyurethane
 Seals: nitrile rubber

Standard Models

	Bore Ø	Piston rod Ø	Port size	Models Buffer cushioning	Adjustable cushioning	Accessories Reed switch with integral 5m cable	Switch mounting >15 mm stroke	Switch mounting <15 mm stroke	Banjo flow control Tube diameter in bold	Straight fitting	Elbow fitting
											
											
	10	4	M5	RM/8010/M/*		M/50/LSU/5V	QM/33/010/22	QM/33/010/23	C0K510405	C02250405	C02470405
	12	6	M5	RM/8012/M/*		M/50/LSU/5V	QM/33/012/22	QM/33/016/23	C0K510405	C02250405	C02470405
	16	6	M5	RM/8016/M/*	RM/8017/M/*	M/50/LSU/5V	QM/33/016/22	QM/33/016/23	C0K510405	C02250405	C02470405
	20	8	G1/8	RM/8020/M/*	RM/8021/M/*	M/50/LSU/5V	QM/33/020/22	QM/33/020/23	C0K510618	C02250618	C02470618
	25	10	G1/8	RM/8025/M/*	RM/8026/M/*	M/50/LSU/5V	QM/33/025/22	QM/33/025/23	C0K510618	C02250618	C02470618

*Insert stroke length in mm.
 Service kits are not available for these cylinders.

Standard strokes (buffer cushioning) RM/8010, 12, 16, 20, 25

Ø	10	25	40	50	80	100	125	160	200	250
10	•	•	•	•	•	•				
12	•	•	•	•	•	•	•	•	•	
16	•	•	•	•	•	•	•	•	•	
20	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•

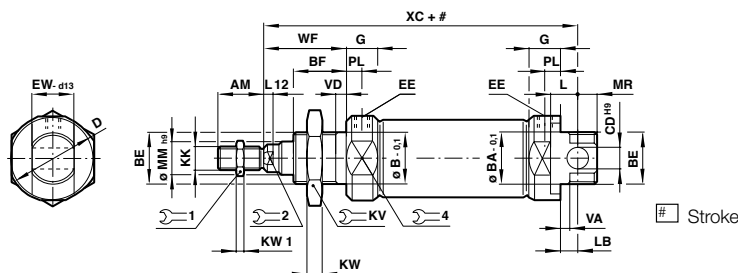
Other strokes available

Standard strokes (adjustable cushioning) RM/8017, 21, 26

Ø	25	50	80	100	125	160	200	250
16	•	•	•	•	•	•	•	
20	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•

Other strokes available

Basic dimensions
RM/8000/M – Standard

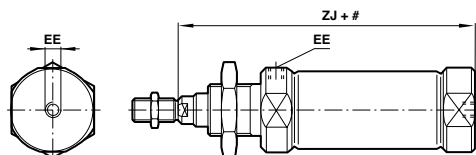


Models	Ø	AM	Ø B/ BA _{-0.1}	BE	BF	Ø CD ^{H9}	Ø D	EE	EW _{-0.1}	G	KK	Ø KV	Ø 1	KW	KW1
RM/8010/M/.	10	12	12	M12x1.25	12	4	16.5	M5	7.9	9	M4	19	7	6	2
RM/8012/M/.	12	16	16	M16x1.5	17	6	21	M5	11.9	9.5	M6	22	10	5	3
RM/8016/M/.	16	16	16	M16x1.5	17	6	21	M5	11.9	9.5	M6	22	10	5	3
RM/8020/M/.	20	20	22	M22x1.5	20	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

Models	Ø	L	L12	LB	Ø MM _{H9}	MR	PL	Ø 2	Ø 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	0.127 lb	0.015 lb
RM/8012/M/.	12	9	3	3	6	8	5.5	5	19	22	2	75	0.128 lb	0.024 lb
RM/8016/M/.	16	9	3	4	6	7	5.5	5	19	22	2	82	0.154 lb	0.026 lb
RM/8020/M/.	20	12	3	3	8	11	8	7	27	24	2	95	0.320 lb	0.040 lb
RM/8025/M/.	25	12	4	7	10	9	8	9	27	28	2	104	0.441 lb	0.062 lb

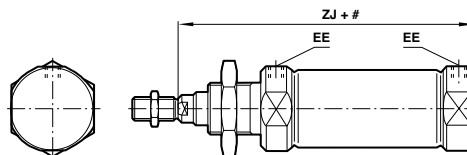
Cylinder Variants

RM/8000/MC – Cylinder with central rear port



Models	Ø	EE	ZJ	at 0 mm	per 25 mm
RM/8010/M/.	10	M5	62	0.068 lb	0.015 lb
RM/8012/M/.	12	M5	72	0.115 lb	0.024 lb
RM/8016/M/.	16	M5	78	0.141 lb	0.026 lb
RM/8020/M/.	20	G1/8	92	0.287 lb	0.040 lb
RM/8025/M/.	25	G1/8	97	0.420 lb	0.062 lb

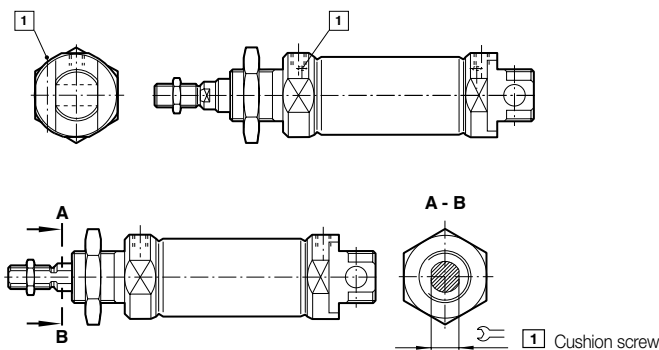
RM/8000/MF – Cylinder with flat rear cover



Models	Ø	EE	ZJ	at 0 mm	per 25 mm
RM/8010/M/.	10	M5	62	0.068 lb	0.015 lb
RM/8012/M/.	12	M5	72	0.115 lb	0.024 lb
RM/8016/M/.	16	M5	78	0.141 lb	0.026 lb
RM/8020/M/.	20	G1/8	92	0.287 lb	0.040 lb
RM/8025/M/.	25	G1/8	97	0.420 lb	0.062 lb

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

Models	Ø	at 0 mm	per 25 mm
RM/8017/M/.	16	0.154 lb	0.026 lb
RM/8021/M/.	20	0.320 lb	0.040 lb
RM/8026/M/.	25	0.430 lb	0.062 lb

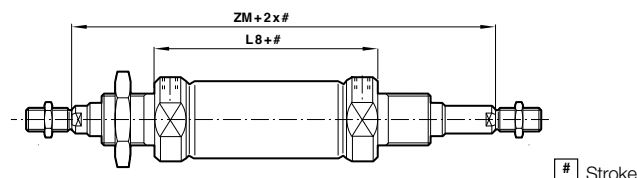


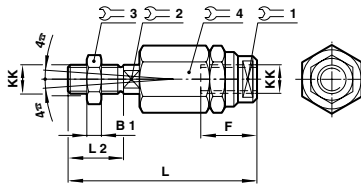
RM/8000/N2 – Cylinder with non-rotating piston rod

Models max.	Ø	Ø	Torque	at 0 mm	per 25 mm
RM/8012/N2/.	12	5	0.04 Nm	0.128 lb	0.024 lb
RM/8016/N2/.	16	5	0.04 Nm	0.154 lb	0.026 lb
RM/8020/N2/.	20	6	0.15 Nm	0.320 lb	0.040 lb
RM/8025/N2/.	25	8	0.25 Nm	0.441 lb	0.062 lb

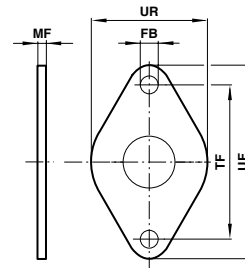
RM/8000/JM – Cylinder with double ended piston rod

Models	Ø	L8	ZM	at 0 mm	per 25 mm
RM/8016/JM/.	16	56	100	0.176 lb	0.037 lb
RM/8020/JM/.	20	68	116	0.364 lb	0.062 lb
RM/8025/JM/.	25	69	125	0.551 lb	0.095 lb

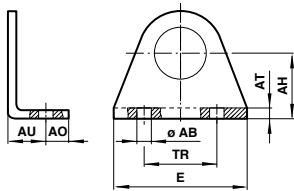


Piston rod swivel - AK, ISO 8139


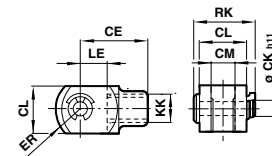
Models	Ø	KK	B1	F	L	L2					lb
							1	2	3	4	
QM/8010/38	10	M 4	2	12.5	33	8	11	3.2	7	11	0.02
QM/8012/38	12/16	M 6	3	14	39	12	7	5	10	13	0.04
QM/8020/38	20	M 8	4	18	55	16	10	7	13	17	0.11
QM/8025/38	25	M 10x1.25	5	26	73	20	19	12	17	30	0.44

Front or rear flange - B & G


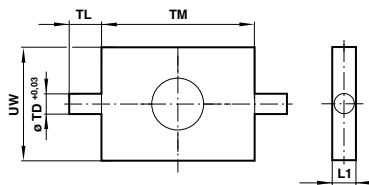
Models	Ø	Ø FB	MF	TF	UF	UR	lb
M/P19407	10	4.5	3	30	40	22	0.04
M/P19408	12/16	5.5	4	40	51	28	0.07
M/P19409	20/25	6.6	5	50	63	38	0.11

Foot - C, ISO 6432


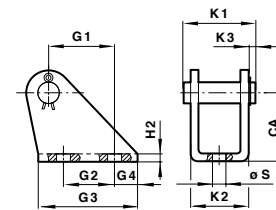
Models	Ø	Ø AB	AH	AO	AT	AU	E	TR	lb
M/P19369	10	4.5	16	6	2	10	35	25	0.04
M/P19389	12/16	5.5	20	6	3	13	43	32	0.07
M/P19406	20/25	6.6	25	7.5	4	16	53	40	0.13

Piston rod clevis - F, ISO 8140


Models	Ø	KK	CE	Ø CK _{h11}	CL	CM	ER	LE	RK	lb
QM/8010/25	10	M 4	16	4	8	4	6.5	8	11.5	0.02
QM/8012/25	12/16	M 6	24	6	12	6	9.5	12	17.5	0.04
QM/8020/25	20	M 8	32	8	16	8	13	16	22	0.13
QM/8025/25	25	M 10 x 1.25	40	10	20	10	16	20	28	0.22

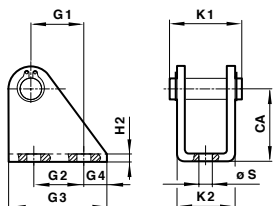
Front or rear detachable trunnion - FH


Models	Ø	L1	ø TD ^{+0.03}	TL	TM	UW	lb
QM/8012/34	12/16	8	6	10	38	25	0.11
QM/8020/34	20/25	8	6	10	46	30	0.15

Rear hinge - L


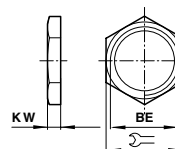
Models	Ø	CA	G1	G2	G3	G4	H2	K1	K2	K3	ø S	lb
QM/947	10	12	6.5	-	15	6	1	13.5	10.5	2	4.8	0.02
QM/8012/24	12/16	20	18.5	15	30	8	1.5	20	15	3	5.5	0.04
QM/8020/24	20/25	25	20	15	35	10	2	25	20.5	3	6.6	0.09

Rear hinge - L2



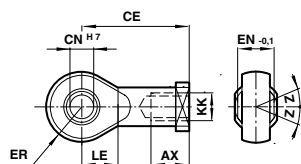
Models	Ø	CA	G1	G2	G3	G4	H2	K1	K2	Ø S	lb
QM/8010/44	10	24	11	12.5	20	4	2.5	17.5	13	4.5	0.040
QM/8012/44	12/16	27	13	15	25	5	3	23	18	5.5	0.077
QM/8020/44	20/25	30	16	20	32	6	4	29.5	24	6.6	0.170

Nose nut - N



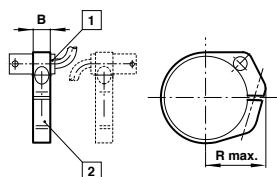
Models	Ø	BE	⌘	KW	lb
M/P1501/90	10	M12x1.25	19	6	0.02
M/P13834	12/16	M16x1.5	22	5	0.02
M/P13615	20/25	M22x1.5	27	8	0.04

Universal piston rod eye - UF



Models	Ø	KK	AX	CE	Ø CN ^{H7}	EN _{ø.1}	ER	LE	Z	lb
QM/8010/32	10	M4	14	27	5	8	8	10	5°	0.04
QM/8012/32	12/16	M6	14	30	6	9	9	11	5°	0.04
QM/8020/32	20	M8	16	36	8	12	11	13	5°	0.11
QM/8025/32	25	M10x1.25	25	42	10	14	14	15	5°	0.18

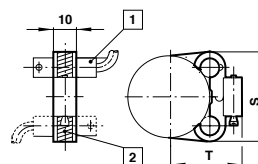
Switch Brackets for strokes > 15mm For use with M50 style switch



- 1 Magnetically operated switch
- 2 Switch mounting bracket

Models	Ø	B	R max.	lb
QM/33/010/22	10	8	16	0.02
QM/33/012/22	12	8	18	0.02
QM/33/016/22	16	10	20	0.02
QM/33/020/22	20	10	22	0.02
QM/33/025/22	25	10	24	0.02

Switch Brackets for strokes < 15mm For use with M50 style switch

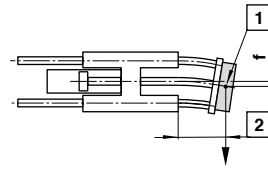
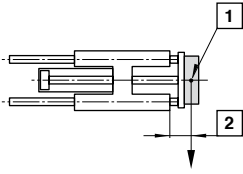


- 1 Magnetically operated switch
- 2 Switch mounting bracket

Models	Ø	S	T	lb
QM/33/010/23	10	27.5	19.5	0.02
QM/33/016/23	12	28.5	21.5	0.02
QM/33/016/23	16	29.5	23.5	0.02
QM/33/020/23	20	29.5	26	0.02
QM/33/025/23	25	31.5	28.5	0.02

Maximum load

In the case of shock load applications, the figures given in the diagrams above must be reduced by a factor of 2.



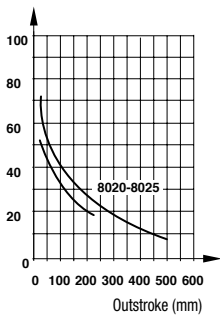
- 1 Centre of gravity
- 2 Outstroke

Maximum load capacity is dependent on the outstroke of a horizontally installed guide unit. In the case of short stroke operation, the load capacity figures taken from the diagram must be multiplied by the correction factor (diagram 2). In the load capacity graph (diagram 1), the short stroke corrections have already been taken into account for an outstroke > 60 mm

The total deflection of guide rods will be determined by the addition of that due to own weight (diagram 3) and that due to load capacity (diagram 4).

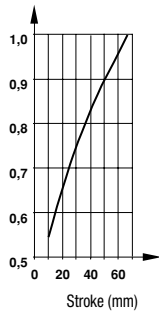
Maximum load capacity depending on outstroke
 (diagram 1)

Load capacity (N)



Correction factor
 (diagram 2)

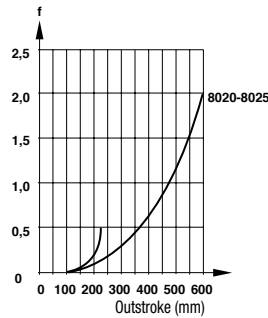
Correction factor



Reduction of load capacity for short stroke operation

Deflection caused by own weight
 (diagram 3)

Deflection (mm)



Deflection caused by a load of 10 N
 (diagram 4)

Deflection (mm)

