

Single Acting
 \varnothing 10 - 25 mm bore

- Rugged, compact units
- Integral rear eye mounting
- Corrosion resistant construction
- Non-rotating piston rods on 10 and 16 mm bore models



Technical Data

Medium:

Compressed air, filtered and lubricated

Operation:

Single acting

Operating Pressure:

3 - 10 bar 10 and 16 mm bore models

2 - 10 bar 20 and 25 mm bore models

Operating Temperature

-20°C* to +60°C 10 and 16 mm bore models

-20°C* to +80°C 20 and 25 mm bore models

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

Stock Strokes:

15, 25, 50 mm all bore sizes

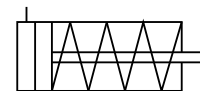
10 and 75 mm also on 20 and 25 mm bore models

Cylinder Diameters

10, 16, 20, 25 mm

Materials

Stainless steel (Austenitic) piston rod (mild steel on 10 and 16 mm bore models), aluminium barrel, brass piston, glass filled nylon end covers on 10 and 16 mm bore models, die cast aluminium end covers on 20 and 25 mm bore models, nitrile rubber seals.

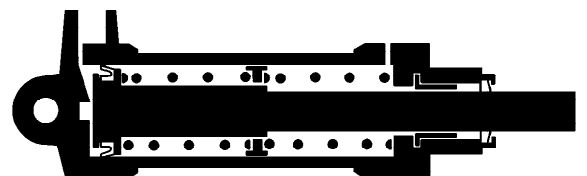


Ordering Information

To order a 16 mm bore cylinder with a 50 mm stroke without mounting brackets quote:

M/7016/50.

To order mounting brackets refer to appropriate cylinder mounting table.





Theoretical Forces/Air Consumption

Bar		2	3	4	5	6	7	8	9	10
M/7010 Ø10	F1	-	18	26	34	42	49	57	65	73
	Q1	-	0,00314	0,00392	0,00471	0,00549	0,00628	0,00706	0,00785	0,00864
	F2 = 3/7									
M/7016 Ø16	F1	-	48	68	88	108	128	148	168	189
	Q1	-	0,00804	0,01005	0,01206	0,01407	0,01608	0,01809	0,02010	0,02211
	F2 = 6/18,5									
M/7020 Ø20	F1	37	69	100	132	163	194	226	257	289
	Q1	0,00942	0,01256	0,01571	0,01885	0,02199	0,02513	0,02827	0,03142	0,03456
	F2 = 10/40									
M/7025 Ø25	F1	71	120	169	218	267	316	365	414	463
	Q1	0,01472	0,01963	0,02454	0,02945	0,03436	0,03927	0,04418	0,04909	0,05400
	F2 = 15/40									

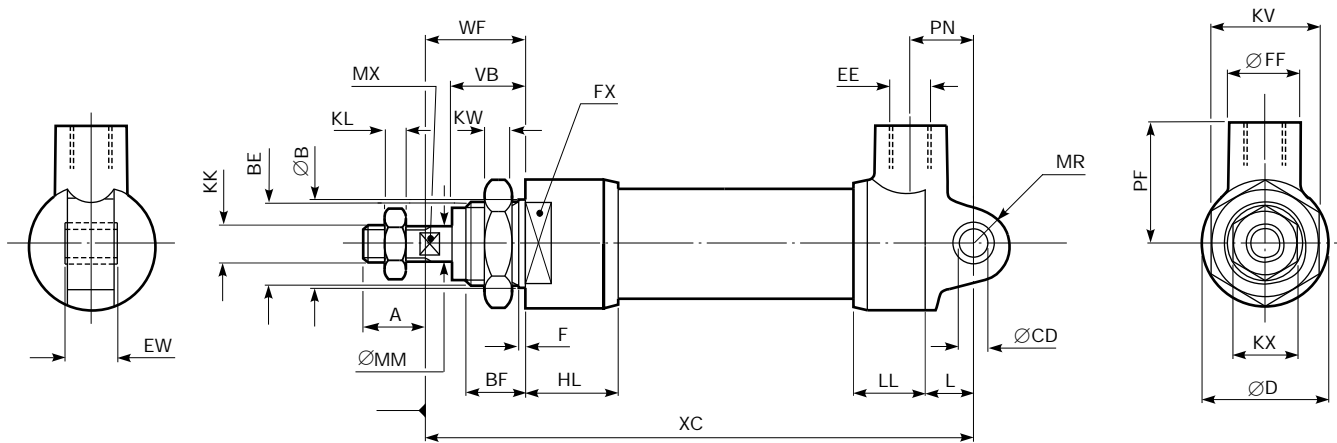
F1 - Force (N) outstroke Q1 - Consumption (l/cm)
 F2 - Return force (N) of spring retracted/extended

Weights of Cylinders and Mountings (kg)

Ø	Weight up to 25 mm	Weight per 25 mm	Weight of Mountings					
			C	F	L	M	T	UF
10	0,046	0,027	0,010	0,010	0,006	0,015	0,025	-
16	0,106	0,052	0,018	0,015	0,012	0,026	0,045	-
20	0,250	0,040	0,040	0,020	0,020	0,040	-	0,045
25	0,360	0,050	0,055	0,050	0,035	0,080	-	0,070



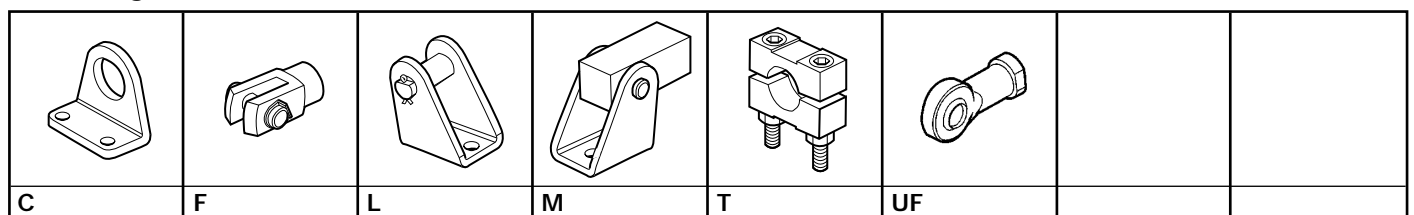
Basic Cylinder Dimensions



Model	M/7010	M/7016	M/7020	M/7025
Ø	10	16	20	25
A	8 ⁺¹	12 ⁺¹	15 ^{+0,5}	20 ^{+0,5}
B	11 ^{-0,02 -0,15}	17 ^{-0,02 -0,15}	19h8	23h8
D	16,6	25,4	28	33
F	1	1	1	1,5
L	5,5	7	8	9
BE	M10x1,25 - 6g	M16x1,5 - 6g	M18x1,5	M22x1,5
BF	10,5	12	13	16
CD	4,10 4,02	5,10 5,02	5,01 5,00	6,01 5,99
EE	M5x0,8 - 6H	M5x0,8 - 6H	G ¹ / ₈	G ¹ / ₈
EW	8,3	10	12,1 11,8	16,1 15,8
FF	8	8	16	16
FX A/F	-	-	22,0	27,0
HL	11	14,5	30	30
KK	M4x0,7 - 6g	M6x1 - 6g	M8x1,25 - 6g	M10x1,5 - 6g
KL	2	3	5	6
KV A/F	14,0	22,0	24,0	27,0
KW	4,5	5	5	8
KX A/F	7,00	10,00	13,00	17,00
LL	8,5	11	15,5	15,5
MM	4h11*	6h11*	8,000 7,964	10,000 9,964
MR	4,5	6	8	9
MX A/F	-	-	6,0	8,0
PF	13	14	26	28
PN	3,5	5,5	11	12
VB	-	-	16	18,5
WF	16,5	20,5	20,5	27,5
XC 10 mm stroke	-	-	100 ^{±0,75}	101 ^{±0,75}
15 mm stroke	66 ^{±1,6}	81 ^{±1,6}	100 ^{±0,75}	101 ^{±0,75}
25 mm stroke	86 ^{±1,6}	91 ^{±1,6}	100 ^{±0,75}	101 ^{±0,75}
50 mm stroke	131 ^{±1,6}	132 ^{±1,6}	152 ^{±0,75}	152 ^{±0,75}
75 mm stroke	-	-	205 ^{±0,75}	203 ^{±0,75}

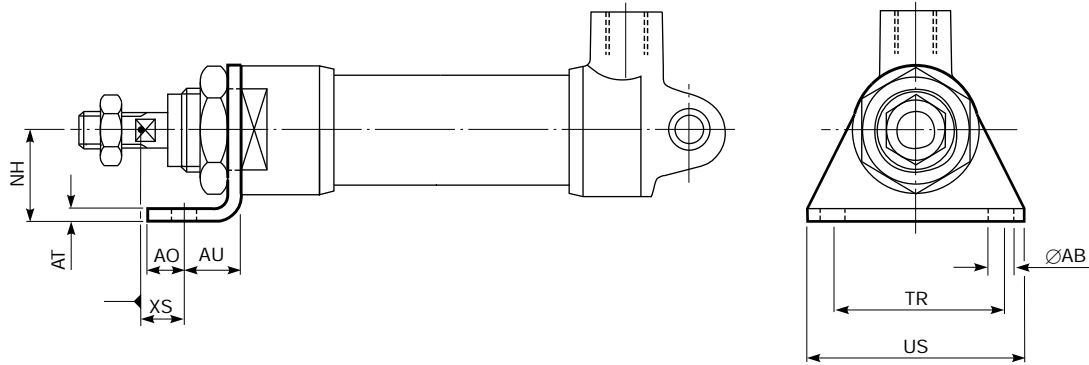
*Square section piston rod

Mountings





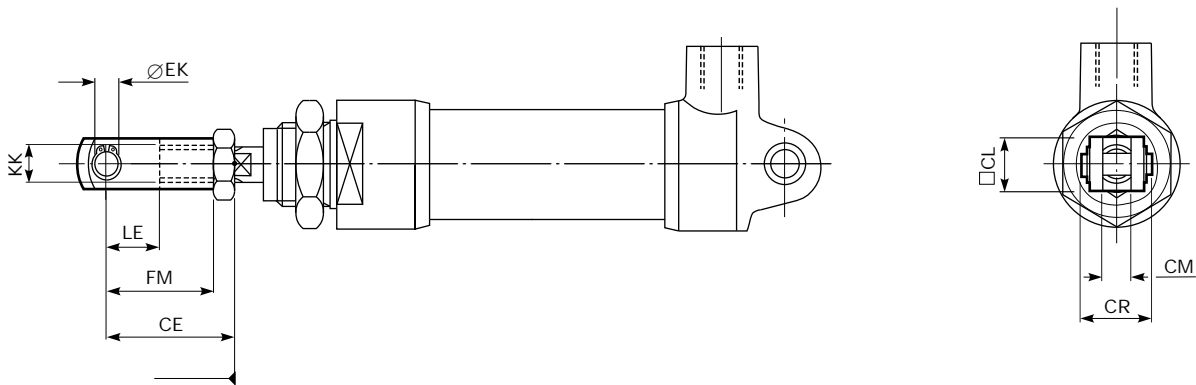
Foot Mounting Style 'C'



Model	M/7010	M/7016	M/7020	M/7025
Reference	M/P13849	M/P13855	M/P13746	M/P13747
AB	4,8 \pm 0,2	4,8 \pm 0,2	5,8 \pm 0,2	7 \pm 0,2
AO	5	5	8	9
AT	1,5	2	3	3
AU	7 \pm 0,2	9 \pm 0,2	12,5 \pm 0,2	13 \pm 0,2
NH	12 \pm 0,3	16 \pm 0,3	20 \pm 0,3	22 \pm 0,3
TR	22 \pm 0,2	30 \pm 0,2	38 \pm 0,2	44 \pm 0,2
US	32 \pm 0,5	40 \pm 0,5	49 \pm 0,5	57 \pm 0,5
XS	10,5	12	11,5	14

To order a Foot Mounting Style 'C', quote Reference, e.g. M/P13849 for M/7010.

Piston Rod Clevis Mounting Style 'F'

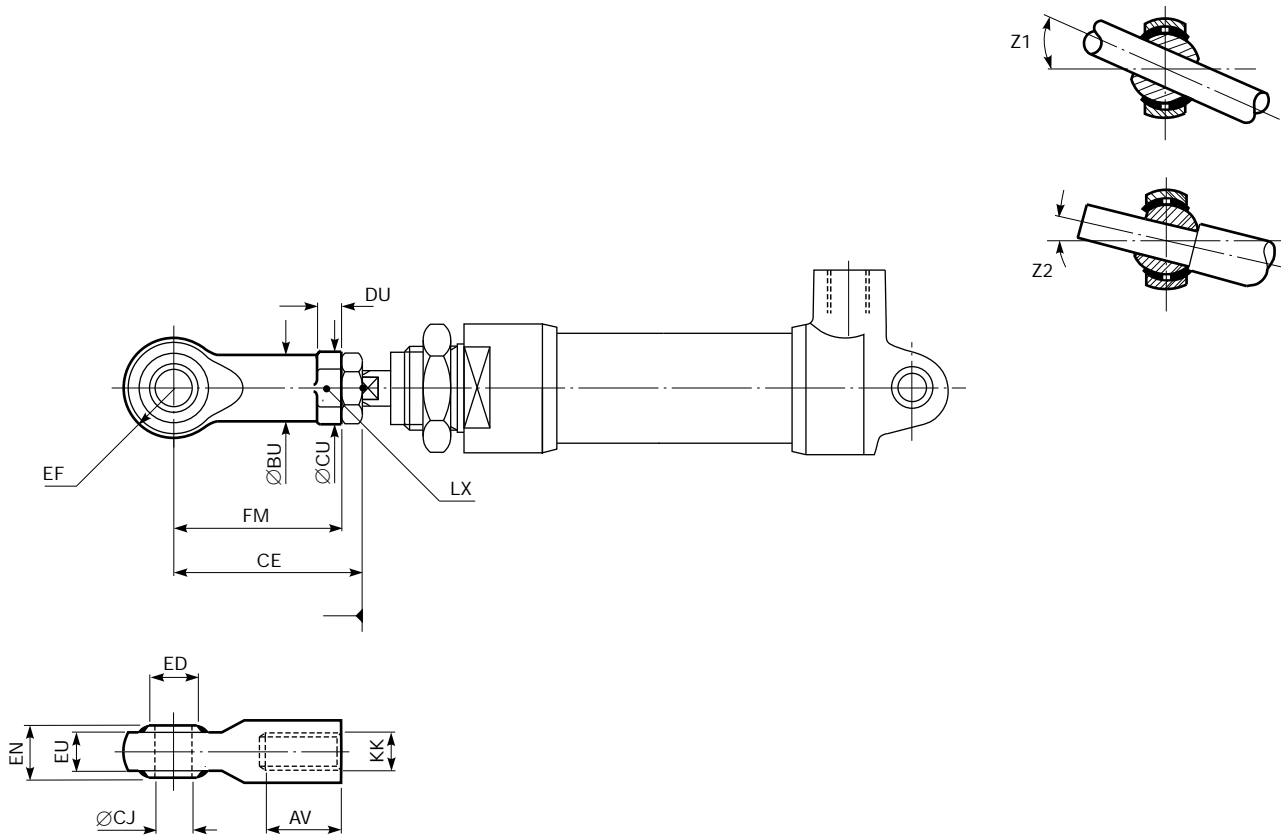


Model	M/7010	M/7016	M/7020	M/7025
Reference	QM/8010/25	QM/8012/25	QM/375	QM/376
CE	16	22	29	36
CL	8	10	12	16
CM	4	5	6	7
CR	12,5	14,5	16,5	21,5
EK ^{h8} _{G9}	4	5	5	6
FM	14	19	24	30
LE	8	10	12	14
KK	M4x0,7 - 6H	M6x1 - 6H	M8x1,25 - 6H	M10x1,5 - 6H

To order a Piston Rod Clevis Mounting Style 'F', quote Reference, e.g. QM/8012/25 for M/7016.



Universal Piston Rod Eye Mounting Style 'UF'

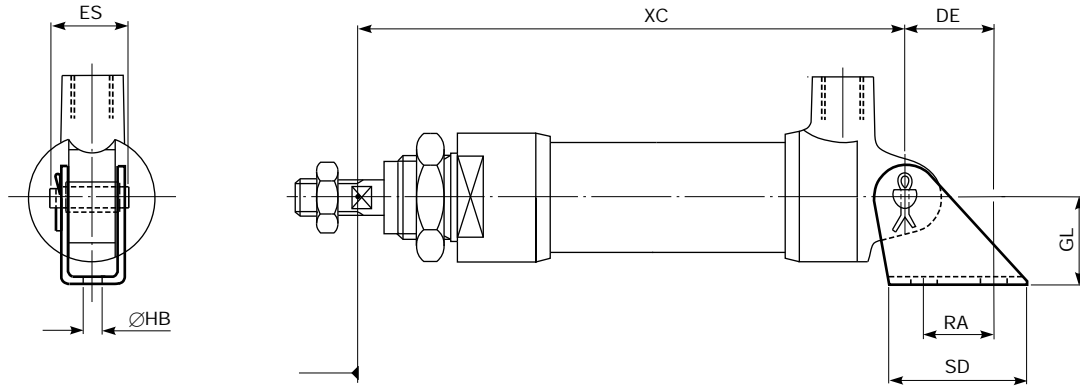


Model	M/7020	M/7025
Reference	QM/1147	QM/1148
AV	16	20
BU	14	17
CE	41	49
CJ	8 ^{+0,05} _{-0,00}	10 ^{+0,05} _{-0,00}
CU	16	19
DU	5	6,5
ED	10,4	12,9
EF	11	13
EN	12	14
EU	9	10,5
FM	36	43
KK	M8x1,25 - 6H	M10x1,5 - 6H
LX A/F	14	17
Z1	24°	24°
Z2	13°	13°

To order a Universal Piston Rod Eye Mounting Style 'UF', quote Reference, e.g. QM/1148 for M/7025.



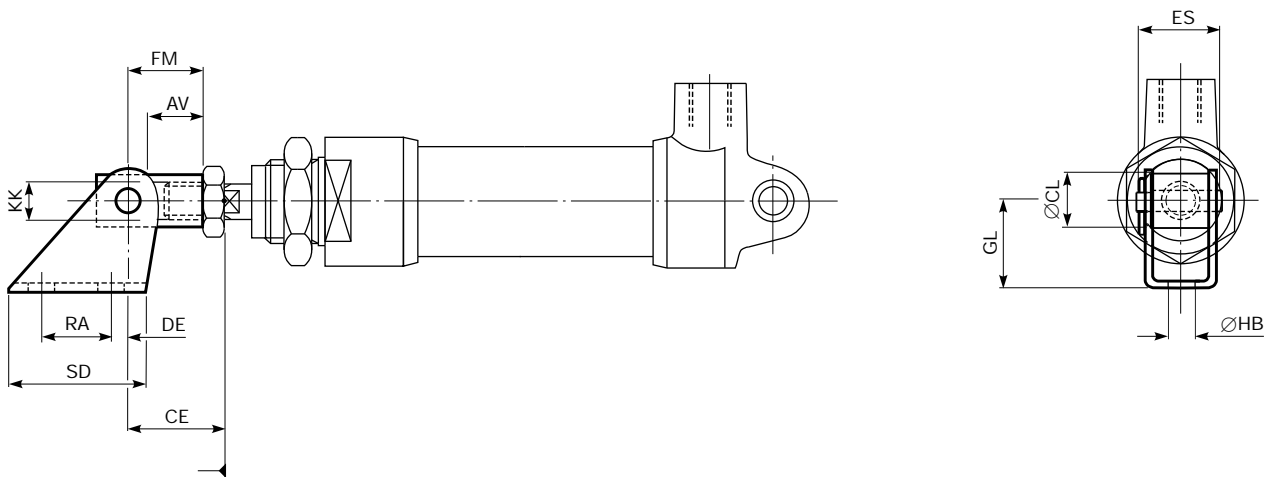
Rear Hinge Mounting Style 'L'



Model	M/7010	M/7016	M/7020	M/7025
Reference	QM/947	QM/946	QM/377	QM/378
DE	6,5	13	19	20
ES	13,5	16	19	24
GL	12	16,05	20	22
HB	4,8	4,8	6	7
RA	-	10	15	15
SD	15	22	30	33
XC 10 mm stroke	-	-	99,25	100,25
15 mm stroke	66,25	80,25	-	-
25 mm stroke	86,25	90,65	99,25	100,25
50 mm stroke	131,25	131,85	151,25	151,25
75 mm stroke	-	-	204,25	202,25

To order a Rear Hinge Mounting Style 'L', quote Reference, e.g. QM/378 for M/7025.

Front Hinge Mounting Style 'M'

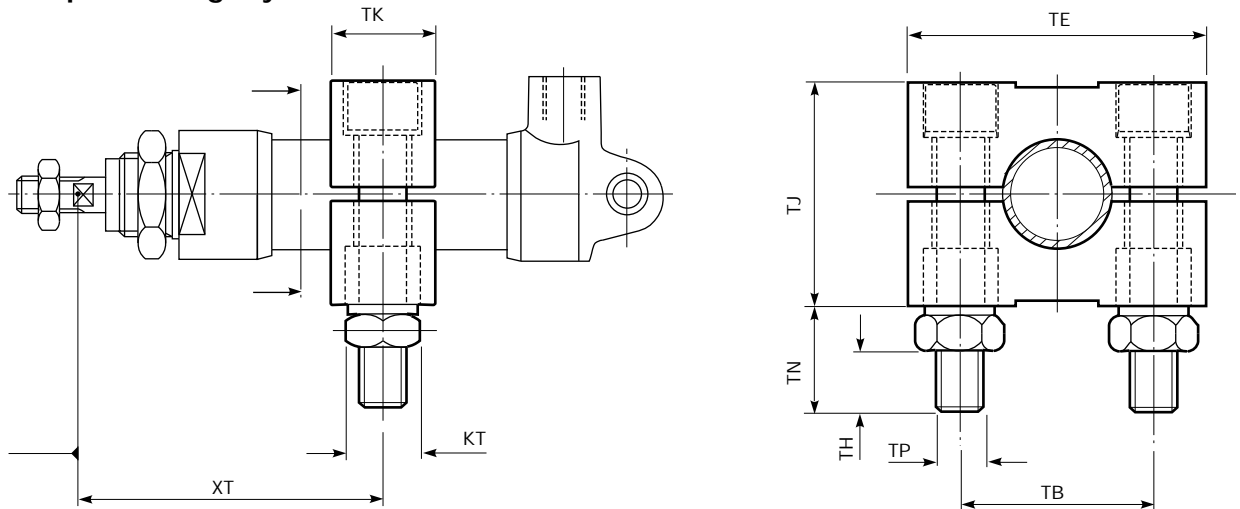


Model	M/7010	M/7016	M/7020	M/7025
Reference	QM/949	QM/948	QM/978	QM/979
AV	6	9	12	16
CE	16	22	21	27
CL	8	10	12	16
DE	6,5 ^{±0.2}	3 ^{±0.2}	4 ^{±0.2}	5 ^{±0.2}
ES	13,5	16	19	24
FM	14	19	16	21
GL	11 ^{±0.3}	14,8 ^{±0.3}	20 ^{±0.3}	22 ^{±0.3}
HB	4,8 ^{±0.2}	4,8 ^{±0.2}	6 ^{±0.2}	7 ^{±0.2}
KK	M4x0,7 - 6H	M6x1 - 6H	M8x1,25 - 6H	M10x1,5 - 6H
RA	-	10 ^{±0.2}	15 ^{±0.2}	15 ^{±0.2}
SD	15	22	30	33

To order a Front Hinge Mounting Style 'M', quote Reference, e.g. QM/978 for M/7020.



Side Clamp Mounting Style 'T'



Model	M/7010	M/7016
Reference	QM/1045	QM/1046
KT	8	10
TB	21	30
TE	33	43
TH	6	8
TJ	24	32
TK	12	13
TN	11,5	16,5
TP	M5x0,8	M6x1,0
XT	15 mm stroke, min. 15 mm stroke, max. 25 mm stroke, min. 25 mm stroke, max. 50 mm stroke, min. 50 mm stroke, max.	40 55 50 75 72 122
		48,5 63,5 53,5 78,5 73,5 123,5

To order a Side Clamp Mounting Style 'T', quote Reference, e.g. QM/1045 for M/7010

Spares

Model	Barrel	Piston & Piston Rod Assembly	Spares kit
M/7010	N/A	N/A	N/A
M/7016	N/A	N/A	N/A
M/7020/10	M/P13582	QM/7020/25/05	QM/7020/00
M/7020/15	M/P13582	QM/7020/25/05	QM/7020/00
M/7020/25	M/P13582	QM/7020/25/05	QM/7020/00
M/7020/50	M/P13583	QM/7020/50/05	QM/7020/00
M/7020/75	M/P13642	QM/7020/75/05	QM/7020/00
M/7025/10	M/P13590	QM/7025/25/05	QM/7025/00
M/7025/15	M/P13590	QM/7025/25/05	QM/7025/00
M/7025/25	M/P13590	QM/7025/25/05	QM/7025/00
M/7025/50	M/P13591	QM/7025/50/05	QM/7025/00
M/7025/75	M/P13644	QM/7025/75/05	QM/7025/00

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 MARTONAIR.

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.