THE **DYNAMICS** OF **MOVEMENT**

MATARA
MATARA UK LTD

A RUBIX Company

PNEUMATICS

PRODUCT CATALOGUE

MATARA UK LTD - **CP0220-1ED**

Welcome to MATARA UK

For more than 25 years Matara has delivered an outstanding range of pneumatic and linear automation products throughout all industrial sectors both in the UK and World-wide.

From automotive to aerospace, food to pharmaceuticals our reputation as the partner of choice for prompt service, rapid delivery and superb after sales support is widely recognised.

Our headquarters, located in Gloucestershire has an extensive CNC machine shop, clean room assembly area and an automated storage facility. Whether its an electronic, pneumatic or linear product we have technical experts on-site ready to deal with your enquiry.

A customer-centric business model allows Matara to offer;

- Unrivalled flexibility
- Consistent pricing policies
- Short and effective lines of communication
- Technical Support through every stage of your project, from concept to completion.

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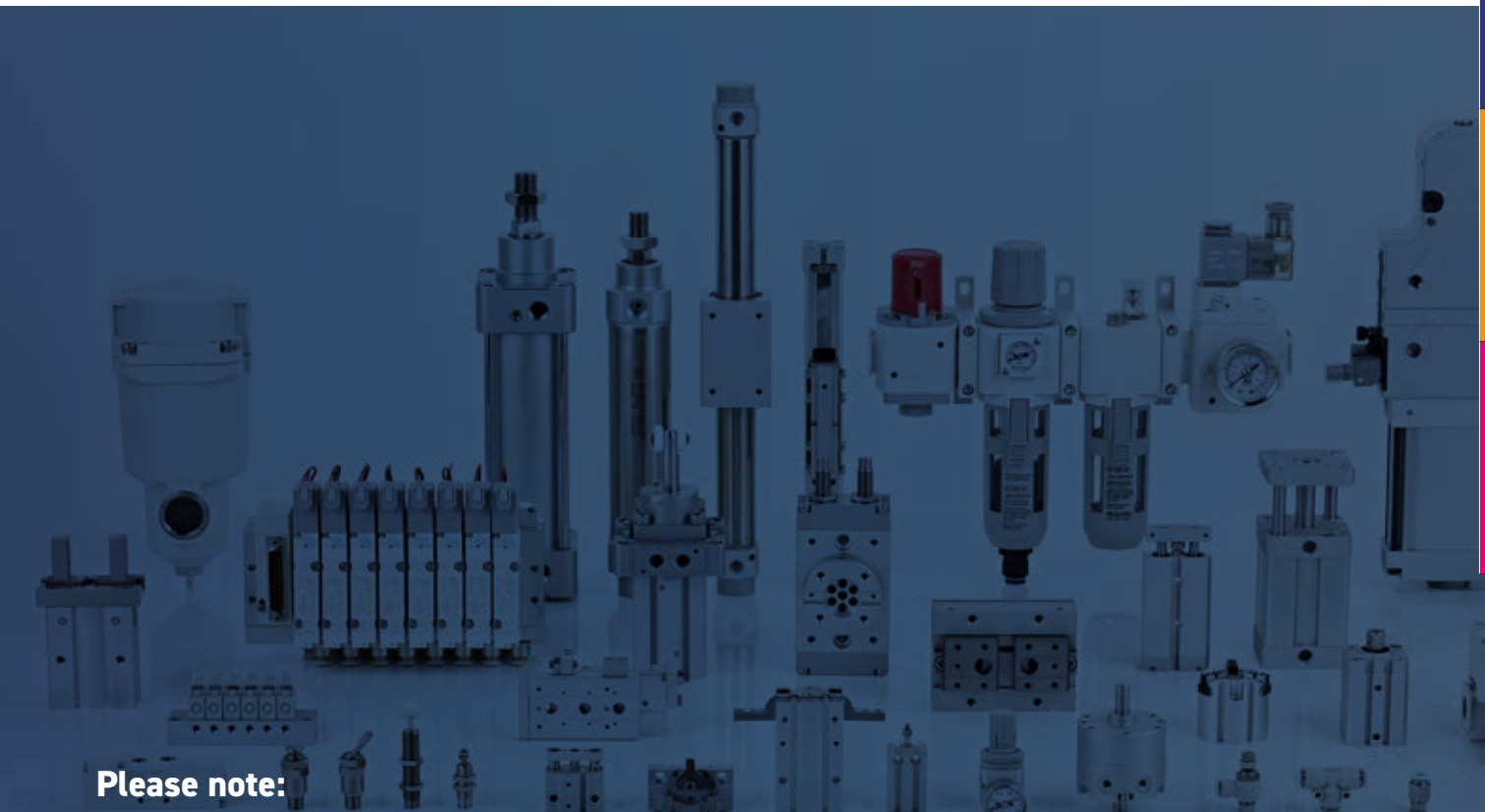
If you can't find the pneumatic components in this catalogue that you require, please contact our team on sales@matarauk.co.uk



Please note:

- All prices are correct at time of publication, to check current pricing, please visit www.matara.com or alternatively email sales@matarauk.co.uk

Useful Information

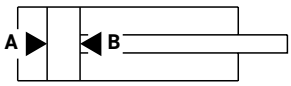
Pressure conversion chart

Pa	kPa	MPa	bar	mbar	kgf/cm^2	cmH^{2}O	mmH^{2}O	mmHg	p.s.i.
1	0.001	0.000001	0.00001	0.01	0.0000102	0.0102	0.10197	0.0075	0.000145
1000	1	0.001	0.01	10	0.0102	10.2	101.97	7.5	0.145
1000000	1000	1	10	10000	10.2	10200	101970	7500	145
100000	100	0.1	1	1000	1.02	1020	10200	750.06	14.5
100	0.1	0.0001	0.001	1	0.00102	1.02	10.2	0.75	0.0145
98066.5	98.07	0.09807	0.98	980.67	1	1000	10000	735.56	14.22
98.0665	0.9807	0.0009807	0.00098	0.98	0.001	1	10	0.74	0.01422
9.80665	0.09807	0.00009807	0.00009807	0.09807	0.0001	0.1	1	0.07356	0.00142
133.32	0.13332	0.00013332	0.00133	1.33	0.00136	1.36	13.6	1	0.01934
6895	6.895	0.006895	0.06895	68.95	0.07031	70.31	703.07	51.71	1

Flow rate conversion chart

m^3/s	l/s	cm^3/s	m^3/h	m^3/min	l/h	l/min	ft^3/min (scfm)	gallon min UK	gallon min USA
1	1000	1000000	3600000	60	3600000	60000	2120	13200	15850
0.001	1	1000	3.6	0.06	3600	60	2.12	13.2	15.85
0.000001	0.001	1	0.0036	0.00006	3.6	0.06	0.0212	0.0132	0.01585
0.00028	0.28	280	1	0.1667	1000	16.67	0.59	3.67	4.4
0.01667	16.67	16670	60	1	60000	1000	35.31	219.97	264.17
0.00000028	0.00028	0.28	0.001	0.00001667	1	0.01667	0.00059	0.00367	0.0044
0.00001667	0.01667	16.67	0.06	0.001	60	1	0.03531	0.21997	0.264
0.00047	0.47	470	1.699	0.02832	1699	28.32	1	6.23	7.48
0.00007579	0.07577	75.77	0.273	0.00455	273	4.55	0.16	1	1.2
0.00006309	0.06309	63.09	0.227	0.00379	227	3.79	0.13	0.83	1

Cylinders' theoretic force



Unit: N

Bore (mm)			12	16	20	25	32	40	50	63	80	100	125	150	200
Rod (mm)			6	6	8	10	12	16	20	20	25	25	35	40	50
Area (mm^2)		A	113	201	314	491	804	1257	1963	3117	5027	7854	12272	17671	31416
		B	85	173	264	412	691	1056	1649	2803	4536	7363	11310	16414	29453
Operating pressure (MPa)	0.1	A	11	20	31	49	80	126	196	312	503	785	1227	1767	3142
		B	9	17	26	41	69	106	165	280	454	736	1131	1641	2945
	0.2	A	23	40	63	98	161	251	393	623	1005	1571	2454	3534	6283
		B	17	35	53	82	138	211	330	561	907	1473	2262	3283	5891
	0.3	A	34	60	94	147	241	377	589	935	1508	2356	3682	5301	9425
		B	26	52	79	124	207	317	495	841	1361	2209	3393	4924	8836
	0.4	A	45	80	126	196	322	503	785	1247	2011	3142	4909	7068	12566
		B	34	69	106	165	276	422	660	1121	1814	2945	4524	6566	11781
	0.5	A	57	101	157	246	402	629	982	1559	2514	3927	6136	8836	15708
		B	43	87	132	206	346	528	825	1402	2268	3682	5655	8207	14727
	0.6	A	68	121	188	295	482	754	1178	1870	3016	4712	7363	10603	18850
		B	51	104	158	247	415	634	989	1682	2722	4418	6786	9848	17672
	0.7	A	79	141	220	344	563	880	1374	2182	3519	5498	8590	12370	21991
		B	59	121	185	288	484	739	1154	1962	3175	5154	7917	11490	20617
	0.8	A	90	161	251	393	643	1006	1570	2494	4022	6283	9818	14137	25133
		B	68	138	211	330	553	845	1319	2242	3629	5890	9048	13131	23562
	0.9	A	102	181	283	442	724	1131	1767	2805	4524	7069	11045	15904	28274
		B	77	156	238	371	622	950	1484	2523	4082	6627	10179	14773	26508
	1.0	A	113	201	314	491	804	1257	1963	3117	5027	7854	12272	17671	31416
		B	85	173	264	412	691	1056	1649	2803	4536	7363	11310	16414	29453

The method of calculation (Cylinders' force)

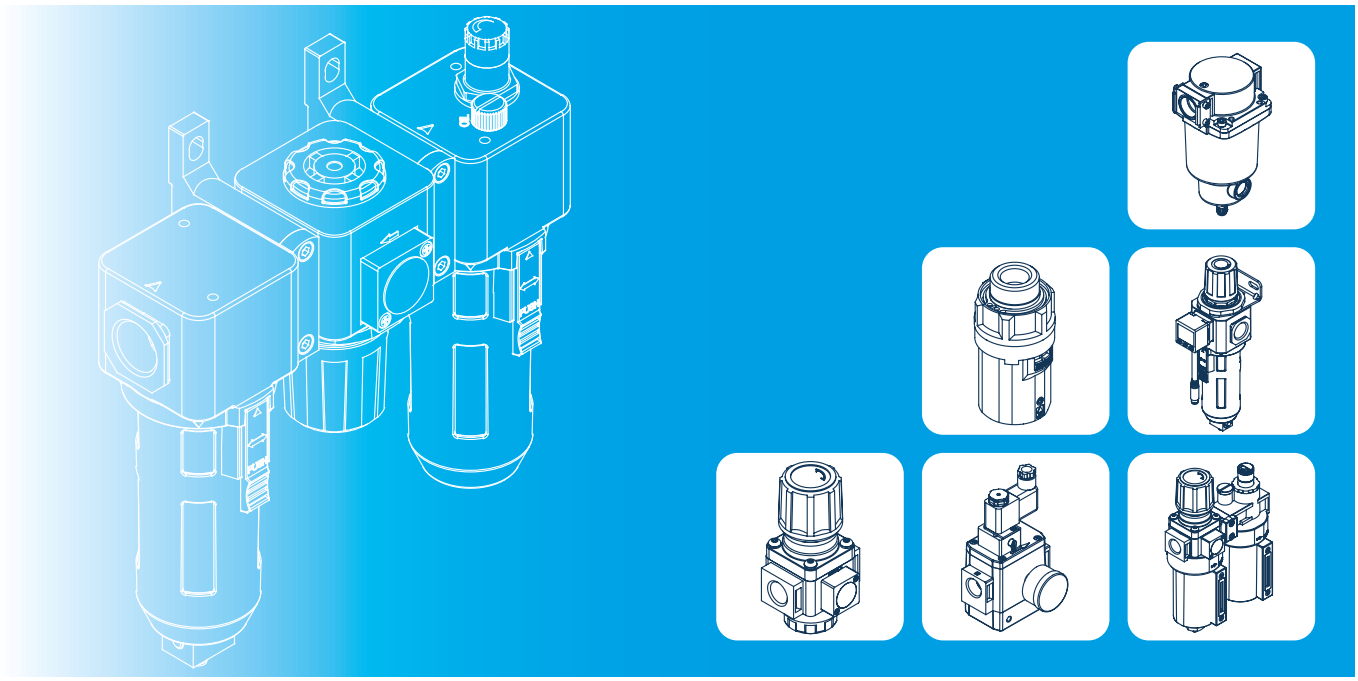
$$F = P \times A - f$$

F:	Cylinder's force	(N)
P:	Air pressure	(MPa)
A:	Piston area	(mm^2)
f:	Friction drag	(N)

Pressure conversion chart

Pa	kPa	MPa	bar	mbar	kgf/cm^2	cmH^2O	mmH^2O	mmHg	p.s.i.
1	0.001	0.000001	0.00001	0.01	0.0000102	0.0102	0.10197	0.0075	0.000145
1000	1	0.001	0.01	10	0.0102	10.2	101.97	7.5	0.145
1000000	1000	1	10	10000	10.2	10200	101970	7500	145
100000	100	0.1	1	1000	1.02	1020	10200	750.06	14.5
100	0.1	0.0001	0.001	1	0.00102	1.02	10.2	0.75	0.0145
98066.5	98.07	0.09807	0.98	980.67	1	1000	10000	735.56	14.22
98.0665	0.9807	0.0009807	0.00098	0.98	0.001	1	10	0.74	0.01422
9.80665	0.09807	0.00009807	0.00009807	0.09807	0.0001	0.1	1	0.07356	0.00142
133.32	0.13332	0.00013332	0.00133	1.33	0.00136	1.36	13.6	1	0.01934
6895	6.895	0.006895	0.06895	68.95	0.07031	70.31	703.07	51.71	1

AIR PREPARATION RANGE



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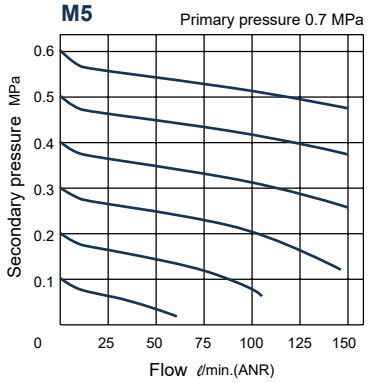
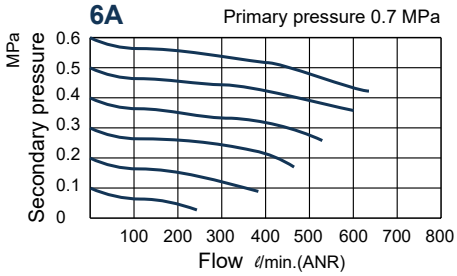
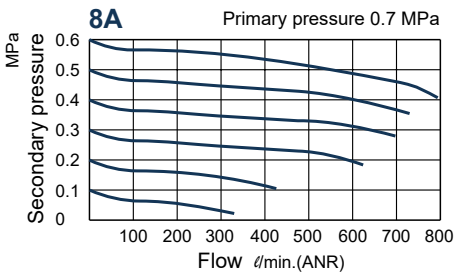
MAR Regulator Flow rates

MAR 100

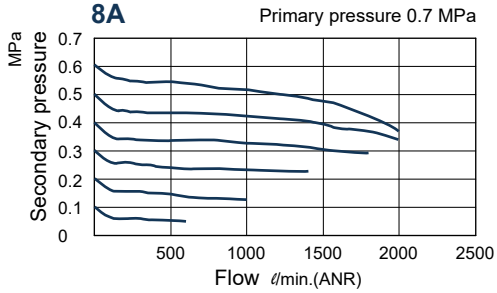


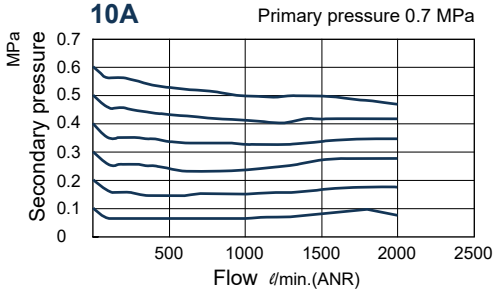
MAR 200





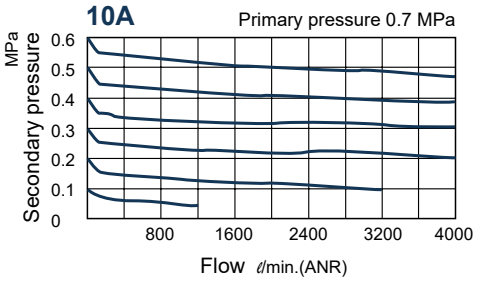
MAR 302

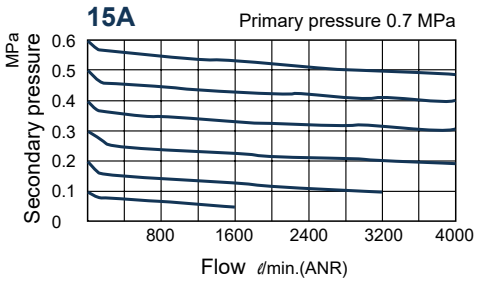




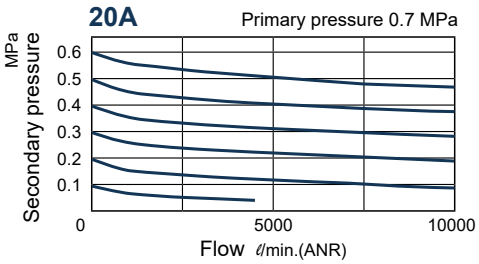
MAR Regulator Flow rates

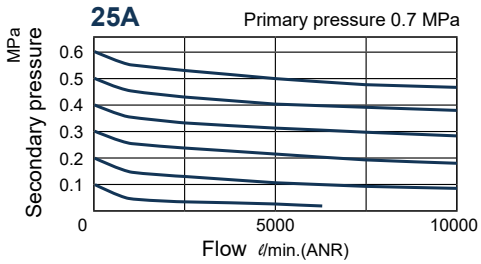
MAR 401





MAR 501

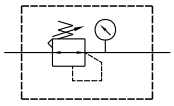




MAR100 SERIES

PRESSURE REGULATOR

Symbol



Specification

Model	MAR100
Port size	M5×0.8
Medium	Air
Max. operating pressure	1 MPa
Proof pressure	1.5 MPa
Regulated pressure range	0.05~0.7 MPa
Ambient temperature	– 5~+60°C (No freezing)
Attachment	Pressure gauge (PG-25), bracket
Weight	100g

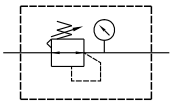
Part Number	Port Size	List Price
MAR100-M5-B	M5x0.8	£28.87

- Bracket is included
- PG-25 series guage not included, please see page 34 for pricing.

MAR200 SERIES

PRESSURE REGULATOR

Symbol



Specification

Model	MAR200	
Bore No.	6A	8A
Port size	1/8	1/4
Medium	Air	
Max. operating pressure	1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	Standard type: 0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Attachment	L type bracket	
Option	Pressure gauge (PG-40)	
Weight	190 g	

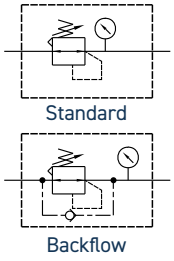
Part Number	Port Size	List Price
MAR200-6A-G	1/8"	£17.07
MAR200-8A-G	1/4"	£17.07

- Bracket is included
- PG-40 series guage not included, please see page 34 for pricing.

MAR302 SERIES

PRESSURE REGULATOR

Symbol



Specification

Model	MAR302	
Bore No.	8A	10A
Port size	1/4	3/8
Medium	Air	
Max. operating pressure	1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Attachment	Pressure gauge (PG-20), Bracket	
Weight	270 g	

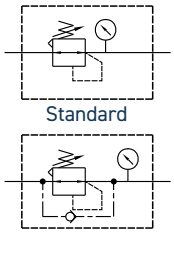
Part Number	Port Size	List Price
MAR302-8A-G	1/4"	£43.30
MAR302-10A-G	3/8"	£43.30

- Bracket is included.
- PG-20 guage included.
- PG-40 series guage option available, ask Matara for details.
- MP41P Pressure switch option available, ask Matara for details.

MAR401 SERIES

PRESSURE REGULATOR

Symbol



Specification

Model	MAR401	
Bore No.	10A	15A
Port size	3/8	1/2
Medium	Air	
Max. operating pressure	1.5 MPa	
Proof pressure	2 MPa	
Regulated pressure range	Standard type: 0.1~0.85 MPa	
	High pressure type: 0.1~1.5 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Attachment	Pressure gauge (PG-20), L-type bracket	
Weight	450 g	

Part Number	Port Size	List Price
MAR401-10A-W-G	3/8"	£59.40
MAR401-15A-W-G	1/2"	£59.40

- Bracket is included.
- PG-20 guage included.
- PG-40 series guage option available, ask Matara for details.
- MP41P Pressure switch option available, ask Matara for details.

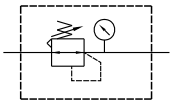
MAR501 SERIES

PRESSURE REGULATOR

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

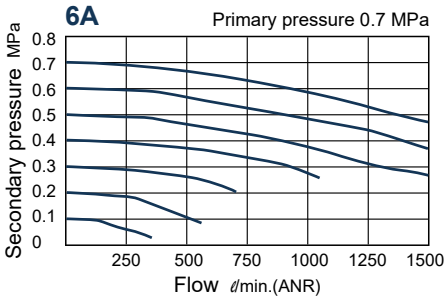
Model	MAR501	
Bore No.	20A	25A
Port size	3/4	1
Medium	Air	
Max. operating pressure	1.5 MPa	
Proof pressure	2 MPa	
Regulated pressure range	0.05~0.85 MPa	
Repeatability	±7% F.S.	
Ambient temperature	– 5~+60°C (No freezing)	
Attachment	Pressure gauge(PG-20),L-type bracket	
Weight	1460 g	

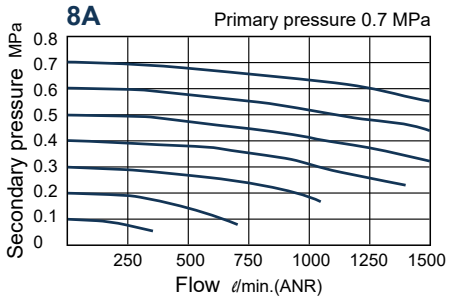
Part Number	Port Size	List Price
MAR501-20A-G	3/4"	£103.25
MAR501-25A-G	1"	£103.25

- Bracket is included.
- PG-20 guage included.
- PG-40 series guage option available, ask Matara for details.
- MP41P Pressure switch option available, ask Matara for details.

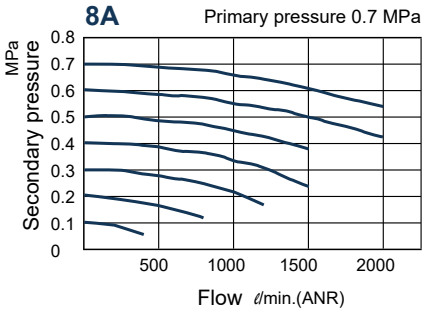
MAF Filter Flow rates

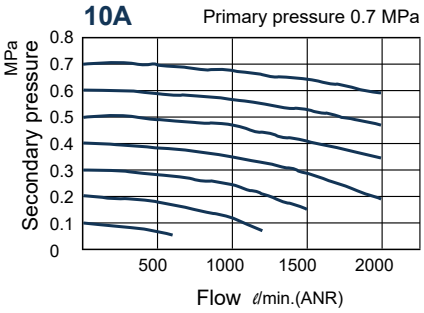
MAF 200



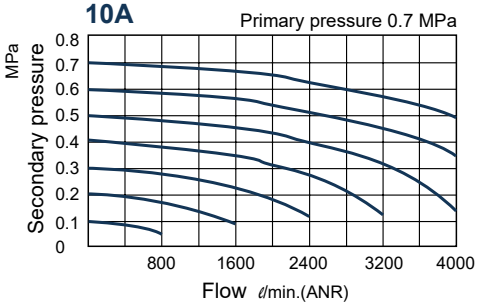


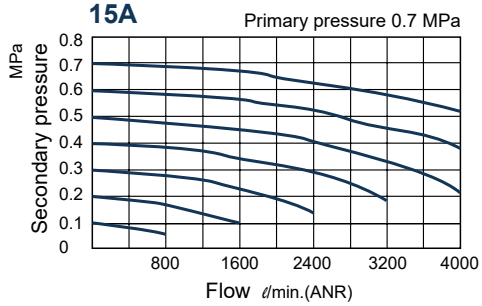
MAF 302



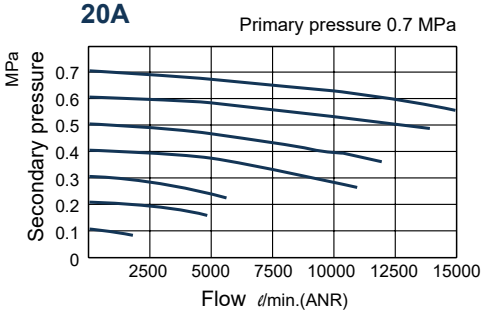


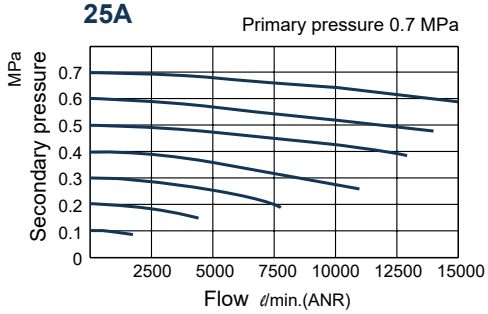
MAF 401





MAF 501





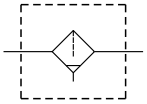
MAF200 SERIES

AIR UNIT (FILTER)

MAF200L

Longer case,
no case guard

Symbol



Specification

Model	MAF200	
Bore No.	6A	8A
Port size	1/8	1/4
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5μm	
Drain capacity	9.5 cm^3, 25 cm^3 (MAF200L)	
Weight	187 g, 155 g (MAF200L)	

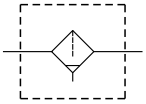
* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

Part Number	Port Size	List Price
MAF200-6A-B-G	1/8"	£35.76
MAF200-8A-B-G	1/4"	£35.76
MAF200L-6A-G	1/8"	£23.60
MAF200L-8A-G	1/4"	£23.60

MAF302 SERIES

AIR UNIT (FILTER)

Symbol



Specification

Model	MAF302	
Bore No.	8A	10A
Port size	1/4	3/8
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 5μm	
Drain capacity	35 cm^3	
Weight	335 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

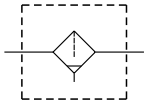
* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MAF302-8A-G	1/4"	£30.27
MAF302-10A-G	3/8"	£30.27

MAF401 SERIES

AIR UNIT (FILTER)

Symbol



Specification

Model	MAF401	
Bore No.	10A	15A
Port size	3/8	1/2
Medium	Air	
Operating perssure range (*1.2)	0.05~1.5 MPa	
Proof pressure	2 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5μm	
Drain capacity	70 cm^3	
Max. flow rate(*3) l /min(ANR)	1500	2000
Weight	480 g	

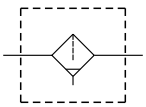
*1. Sandard unit contains semi-auto-drain function when operating ressure below 0.05 MPa.
*2. Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.
*3. Flow is at pressure P=0.7 MPa with pressure drop △ P=0.03 MPa.

Part Number	Port Size	List Price
MAF401-10A-W-G	3/8"	£43.97
MAF401-15A-W-G	1/2"	£43.97

MAF501 SERIES

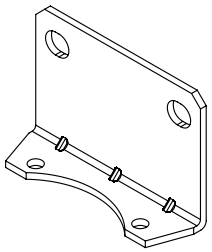
AIR UNIT (FILTER)

Symbol



Option accessories

L type bracket



Specification

Model	MAF501	
Bore No.	20A	25A
Port size	3/4	1
Medium	Air	
Operating perssure range (*)	Nylon bowl, PC bowl: 0.05~1 MPa	
	Metal bowl: 0.05~1.5 MPa	
Proof pressure	Nylon bowl, PC bowl: 1.5 MPa	
	Metal bowl: 2 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	40 μm	
Drain capacity	Nylon bowl, PC bowl: 75 cm^3	
	Metal bowl: 70 cm^3	
Weight	Nylon bowl, PC bowl: 1180g	
	Metal bowl: 1300g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

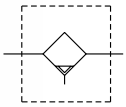
* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MAF501-20A-G	3/4"	£86.77
MAF501-25A-G	1"	£86.77

MAD400 SERIES

AUTO DRAINER

Symbol



Specification

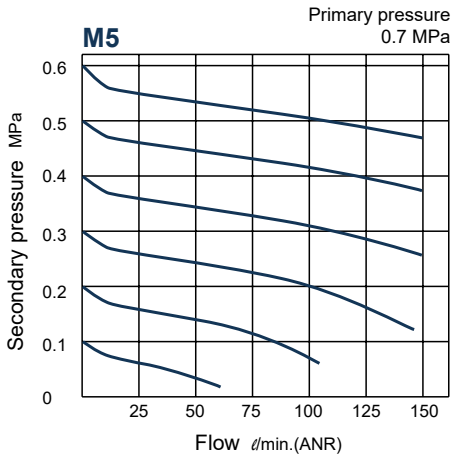
Model	MAD400
Bore No.	15A
Port size	1/2
Medium	Air
Operating pressure range (*)	0.15~1 MPa
Proof pressure	1.5 MPa
Ambient temperature	— 5~+60°C (No freezing)
Weight	480 g

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

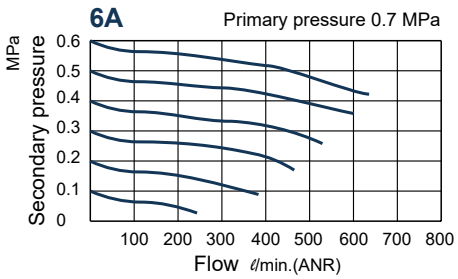
Part Number	Port Size	List Price
MAD400-15A-G	1/2"	£71.56

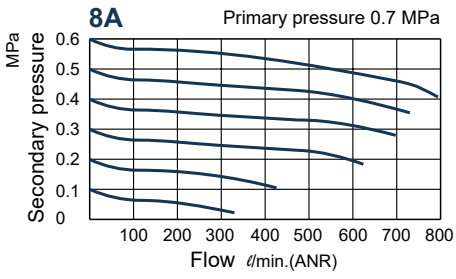
MAFR Filter Regulator Flow Rates

MAFR 100

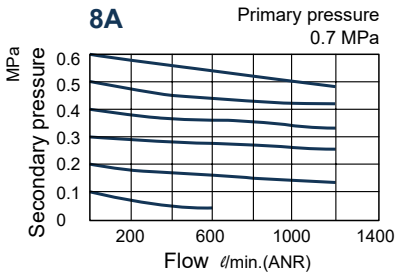


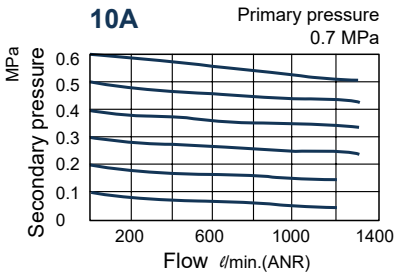
MAFR 200





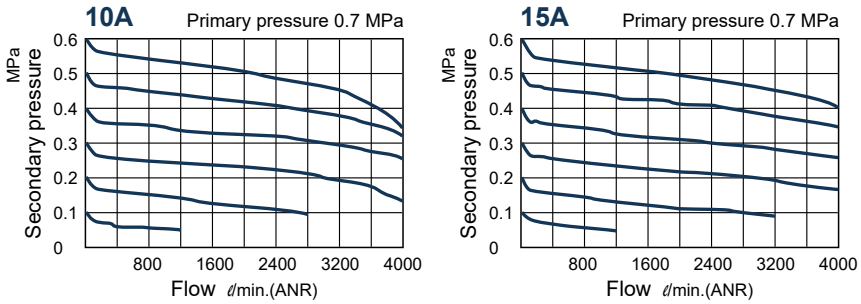
MAFR 302



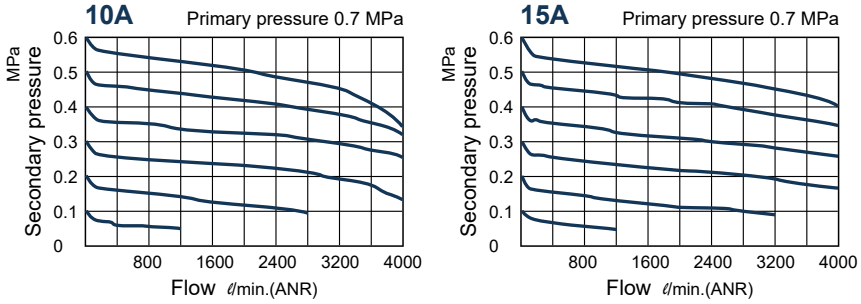


MAFR Filter Regulator Flow Rates

MAFR 401



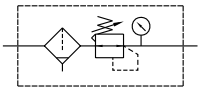
MAFR 501



MAFR100 SERIES

AIR UNIT (F.R. UNIT)

Symbol



Specification

Model	MAFR100
Port size	M5×0.8
Medium	Air
Operating perssure range (*)	0.05~1 MPa
Proof pressure	1.5 MPa
Regulated pressure range	0.05~0.7 MPa
Ambient temperature	– 5~+60°C (No freez ing)
Filter element	Standard: 5μm, Option: 40μm
Drain capacity	3.5 cm^3
Attachment	Pressure gauge (PG-25), bracket
Weight	130 g

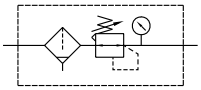
*Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

Part Number	Port Size	List Price
MAFR100-M5	M5×0.8	£40.74

MAFR200 SERIES

AIR UNIT (F.R. UNIT)

Symbol



MAFR200L

Longer case, no case guard

Specification

Model	MAFR200	
Bore No.	6A	8A
Port size	1/8	1/4
Medium	Air	
Operating perssure range (*)	By order specifications	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5 μm	
Drain capacity	9.5 cm^3, 25 cm^3 (MAFR200L)	
Attachment	Pressure gauge (PG-40), L-type bracket	
Weight	257 g, 226 g (MAFR200L)	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

Part Number	Port Size	List Price
MAFR200-6A-G	M5×0.8	£55.09
MAFR200-8A-G	1/4"	£55.09
MAFR200L-6A-G	M5×0.8	£35.25
MAFR200L-8A	1/4"	£35.25

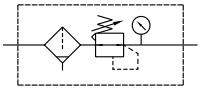
MAFR302 SERIES

AIR UNIT (F.R. UNIT)

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

Model	MAFR302	
Bore No.	8A	10A
Port size	1/4	3/8
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 5μm, Option: 40μm	
Drain capacity	35 cm^3	
Attachment	Pressure gauge (PG-20), bracket	
Weight	490 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MAFR302-8A-G	1/4"	£58.64
MAFR302-10A-G	3/8"	£58.64

MAFR302-HT with shutoff valve

AIR UNIT (F.R. UNIT)

Part Number	Port Size	List Price
MAFR302-8A-40u-HT302-BSP	1/4"	£117.53
MAFR302-10A-40u-HT302-BSP	3/8"	£117.53

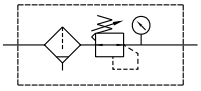
MAFR401 SERIES

AIR UNIT (F.R. UNIT)

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

Model	MAFR401	
Bore No.	10A	15A
Port size	3/8	1/2
Medium	Air	
Operating perssure range (*)	0.05~1.5 MPa	
Proof pressure	2 MPa	
Regulated pressure range	Standard type: 0.1~0.85 MPa	
	High pressure type: 0.1~1.5 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5μm	
Drain capacity	70 cm^3	
Attachment	Pressure gauge(PG-20),L-type bracket	
Weight	800 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MAFR401-10A-W-G	3/8"	£93.76
MAFR401-15A-W-G	1/2"	£93.76

MAFR401/MAFR-HT Dimensions

AIR UNIT (F.R. UNIT)

MAFR401-HT

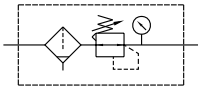
With shutoff valve (MVHT-400)

Part Number	Port Size	List Price
MAFR-401-10A-40u-HT401-BSP	3/8"	£153.11
MAFR-401-15A-40u-HT401-BSP	1/2"	£153.11

MAFR501 SERIES

AIR UNIT (F.R. UNIT)

Symbol



Specification

Model	MAFR501	
Bore No.	20A	25A
Port size	3/4	1
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.1~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	40μm	
Drain capacity	PC, Nylon bowl: 75 cm^3	
	Metal bowl: 70 cm^3	
Attachment	Pressure gauge(PG-20), L-type bracket	
Weight	PC, Nylon bowl: 1940 g	
	Metal bowl: 2060 g	

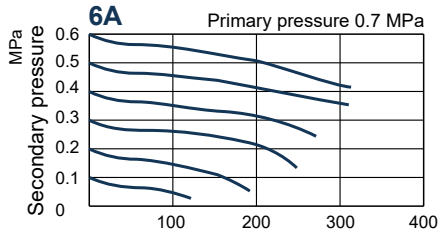
* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

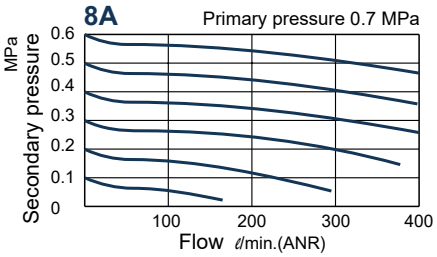
* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MAFR501-20A-G	3/4"	£182.20
MAFR501-25A-G	1"	£182.20

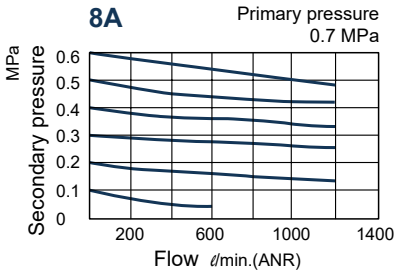
MACP Filter Regulator Lubricator Flow Rates

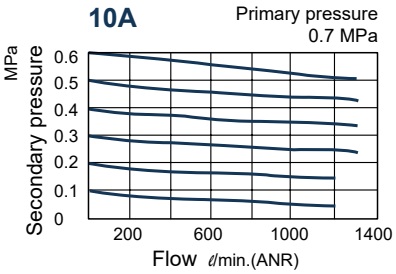
MACP 200



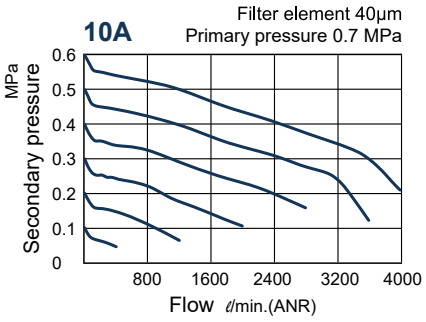


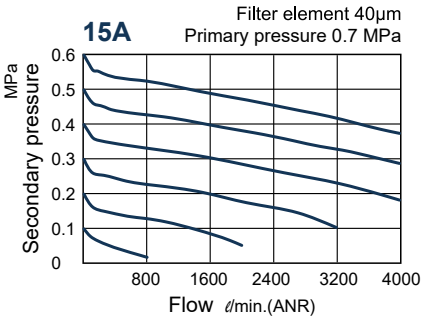
MACP 302



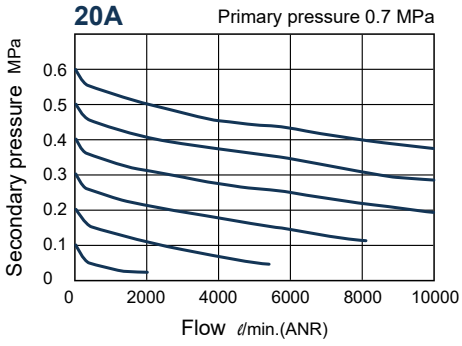


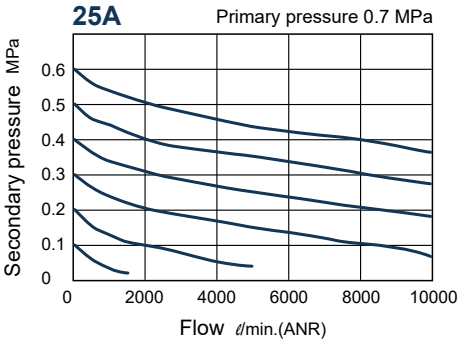
MACP 401





MACP 501



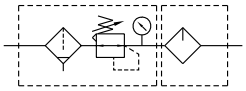


MACP200 SERIES

AIR UNIT (F.R.L UNIT)

MACP200L

Symbol



Specification

Model	MACP200	
Components	MAFR200, MAL200	
Bore No.	6A	8A
Port size	1/8	1/4
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5μm	
Lubricating oil capacity	20c.c, 35c.c (MACP200L)	
Min. flow for oil drip	35 l/min	50 l/min
Recommended lubricating oil	Turbine oil ISO-VG32	
Attachment	Pressure gauge (PG-40), bracket	
Weight	432 g, 380 g (MACP200L)	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

Part Number	Port Size	List Price
MACP200-6A-B-G	1/8"	£73.73
MACP200-8A-B-G	1/4"	£73.73

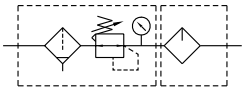
MACP302 SERIES

AIR UNIT (F.R.L UNIT)

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

Model	MACP302	
Components	MAFR302, MAL302	
Bore No.	8A	10A
Port size	1/4	3/8
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 5μm, Option: 40μm	
Lubricating oil capacity	65c.c	
Min. flow for oil drip	50 l/min	60 l/min
Recommended lubricating oil	Turbine oil ISO-VG32	
Attachment	Pressure gauge(PG-20),T-type bracket	
Weight	845 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MACP302-8A-G	1/4"	£95.25
MACP302-10A-G	3/8"	£95.25

MACP302-HT With shutoff valve

AIR UNIT (F.R.L UNIT)

Part Number	Port Size	List Price
MACP-302-8A-40u-HT302-BSP	1/4"	£154.14
MACP-302-10A-40u-HT302-BSP	3/8"	£154.14

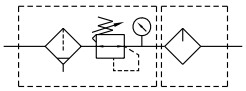
MACP401 SERIES

AIR UNIT (F.R.L UNIT)

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

Model	MACP401	
Components	MAFR401, MAL401	
Bore No.	10A	15A
Port size	3/8	1/2
Medium	Air	
Operating perssure range (*)	0.05~1.5 MPa	
Proof pressure	2 MPa	
Regulated pressure range	Standard type: 0.1~0.85 MPa High pressure type: 0.1~1.5 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	Standard: 40μm, Option: 5μm	
Lubricating oil capacity	200c.c	
Min. flow for oil drip	30 l/min	65 l/min
Recommended lubricating oil	Turbine oil ISO-VG32	
Attachment	Pressure gauge (PG-20), L-type bracket	
Weight	1518 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MACP401-10A-W-G	3/8"	£139.40
MACP401-15A-W-G	1/2"	£139.40

MACP401-HT With shutoff valve

AIR UNIT (F.R.L UNIT)

Part Number	Port Size	List Price
MACP-401-10A-40u-HT401-BSP	3/8"	£198.75
MACP-401-15A-40u-HT401-BSP	1/2"	£198.75

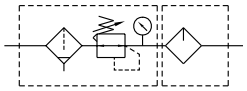
MACP501 SERIES

AIR UNIT (F.R.L UNIT)

PRESSURE SWITCH

Option: **MP43**
(Ordered separately)
See p.37 for details

Symbol



Specification

Model	MACP501	
Components	MAFR501, MAL501	
Bore No.	20A	25A
Port size	3/4	1
Medium	Air	
Operating perssure range (*)	0.05~1 MPa	
Proof pressure	1.5 MPa	
Regulated pressure range	0.05~0.85 MPa	
Ambient temperature	– 5~+60°C (No freezing)	
Filter element	40μm	
Lubricating oil capacity	200c.c	
Min. flow for oil drip	25 l/min	33 l/min
Recommended lubricating oil	Turbine oil ISO-VG32	
Attachment	Pressure gauge (PG-20), bracket	
Weight	Nylon bowl, PC bowl: 3480 g	
	Metal bowl: 3720 g	

* Standard unit contains semi-auto-drain function when operating pressure below 0.05 MPa.

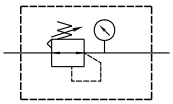
* Choose auto-drain FMRF300, the pressure range is 0.15~1 MPa.

Part Number	Port Size	List Price
MACP501-20A-G	3/4"	£213.41
MACP501-25A-G	1"	£213.41

MAIR100 SERIES

AIR UNIT (PRECISION REGULATOR)

Symbol



Specification

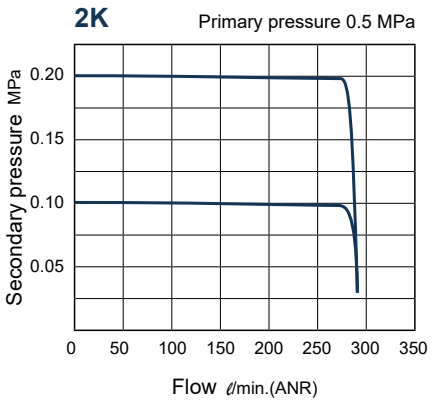
Model	MAIR100
Bore No.	6A
Port size	1/8
Medium	Air
Max. operating pressure	1 MPa
Min. operating pressure	Setting pressure+0.05 MPa
Proof pressure	1.5 MPa
Regulated pressure range	2K: 0.005~0.2 MPa
	4K: 0.01~0.4 MPa
	8K: 0.01~0.8 MPa
Sensitivity	0.2% F.S.
Repeatability	±0.5% F.S.
Air consumption (*)	4.4 l /min(ANR) F.S.
Ambient temperature	– 5~+60°C (No freezing)
Attachment	Bracket
Option	Pressure gauge (PG-33S)
Weight	150 g

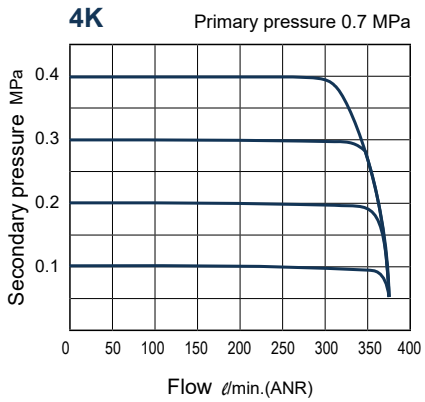
* For supply pressure 1 MPa.

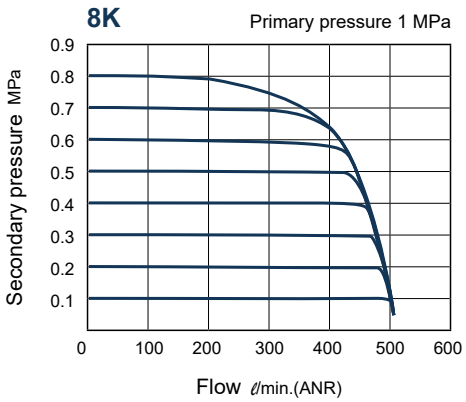
Part Number	Port Size	Price
MAIR100-6A-2K-G	1/8"	£81.80
MAIR100-6A-4K-G	1/8"	£81.80
MAIR100-6A-8K-G	1/8"	£81.80

- Bracket is included.
- Guage not included.
- PG-33S Guage option available, please see page 34 for pricing.

Flow rates



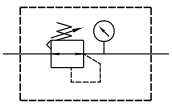




MAIR200 SERIES

AIR UNIT (PRECISION REGULATOR)

Symbol



Specification

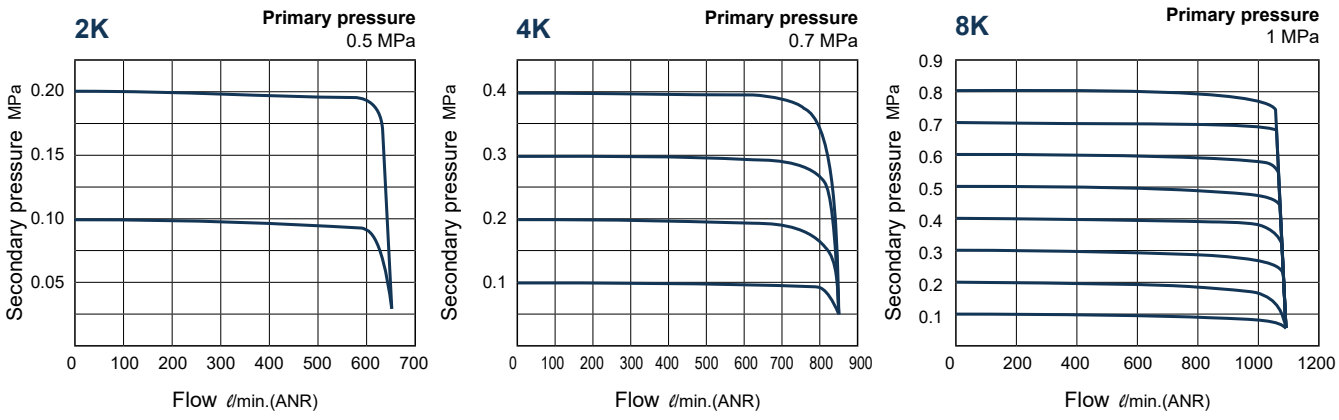
Model	MAIR200
Bore No.	8A
Port size	1/4
Medium	Air
Max. operating pressure	1 MPa
Min. operating pressure	Setting pressure+0.05 MPa
Proof pressure	1.5 MPa
Regulated pressure range	2K: 0.005~0.2 MPa
	4K: 0.01~0.4 MPa
	8K: 0.01~0.8 MPa
Sensitivity	0.2% F.S.
Repeatability	±0.5% F.S.
Air consumption(*)	4.4 l/min(ANR) F.S.
Ambient temperature	– 5~+60°C (No freezing)
Attachment	Bracket
Option	Pressure gauge (PG-40S)
Weight	300 g

* For supply pressure 1 MPa.

Part Number	Port Size	Price
MAIR200-8A-2K-G	1/4"	£100.15
MAIR200-8A-4K-G	1/4"	£100.15
MAIR200-8A-8K-G	1/4"	£100.15

- Bracket is included.
- Guage not included.
- PG-40S Guage option available, please see page 34 for pricing.

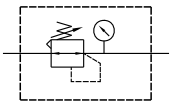
Flow rates



MAIR300 SERIES

AIR UNIT (PRECISION REGULATOR)

Symbol



Specification

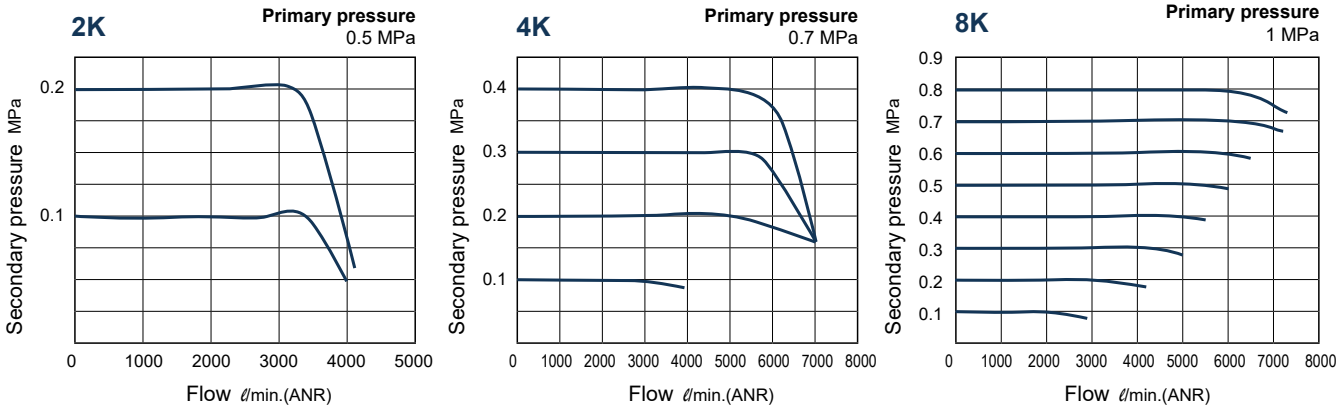
Model	MAIR300		
Bore No.	8A	10A	15A
Port size	1/4	3/8	1/2
Medium	Air		
Max. operating pressure	1 MPa		
Min. operating pressure	Setting pressure+0.05 MPa		
Proof pressure	1.5 MPa		
Regulated pressure range	2K: 0.005~0.2 MPa		
	4K: 0.01~0.4 MPa		
	8K: 0.01~0.8 MPa		
Sensitivity	0.2% F.S.		
Repeatability	±0.5% F.S.		
Air consumption(*)	11.5 l/min(ANR) F.S.		
Ambient temperature	– 5~+60°C (No freezing)		
Attachment	Bracket		
Option	Pressure gauge (PG-40S)		
Weight	875 g		

* For supply pressure 1 MPa.

Part Number	Port Size	Price
MAIR300-8A-2K-G	1/4"	£149.97
MAIR300-8A-4K-G	1/4"	£149.97
MAIR300-8A-8K-G	1/4"	£149.97
MAIR300-10A-2K-G	3/8"	£149.97
MAIR300-10A-4K-G	3/8"	£149.97
MAIR300-10A-8K-G	3/8"	£149.97
MAIR300-15A-2K-G	1/2"	£149.97
MAIR300-15A-4K-G	1/2"	£149.97
MAIR300-15A-8K-G	1/2"	£149.97

- Bracket is included.
- Guage not included.
- PG-40S Guage option available, please see page 34 for pricing.

Flow rates



MAVS SERIES

SOFT START UP (VALVE)

- Start-up valve for low speed air supply to gradually raise initial pressure in an air system and for quick exhaust by cutting off air supply.
- Combination with modular type air units (F.R.L. unit).

Specification

Model		MAVS200	MAVS300	MAVS400
Bore No.		8A	10A	15A
Port size		1/4	3/8	1/2
Medium		Air		
Operating pressure range (*)		0.25~1 MPa		
Effective orifice	1(P)→2(A)	20 mm^2	37 mm^2	62 mm^2
	2(A)→3(R)	24 mm^2	49 mm^2	76 mm^2
Ambient temperature		0~+60°C		
Voltage		AC110V, 220V (50/60)Hz, DC24V		
Power consumption		AC=4.8/4.4VA, 6/4.9VA DC=2W		
Available voltage range		±10%		
Insulation class		F class		
Option		Pressure gauge (PG-40), L type bracket		
Weight		450 g	520 g	800 g

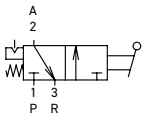
Part Number	Port Size	Voltage	Price
MAVS200-8A-3-DC24-L-G	1/4"	DC24V	£123.29
MAVS200-8A-3-AC110-L-G	1/4"	AC110V	£123.29
MAVS300-10A-3-DC24-L-G	3/8"	DC24V	£124.49
MAVS300-10A-3-AC110-L-G	3/8"	AC110V	£124.49
MAVS400-15A-DC24-L-G	1/2"	DC24V	£153.06
MAVS400-15A-3-AC110-L-G	1/2"	AC110V	£153.06

MVHR SERIES

ON-OFF VALVE

(Lock is not attached)

Symbol



Specification – Manual type

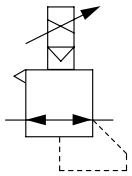
Model	MVHR-302 / 400		
Bore No.	8A	10A	15A
Port size	Rc1/4	Rc3/8	Rc1/2
No. of port	3		
No. of position	2		
Medium	Air		
Operating pressure range	0.1~1 MPa		
Proof pressure	1.5 MPa		
Ambient temperature	-5~+60℃ (No freezing)		
Weight	304g / 311g		

Part Number	Control Type	Port Type	Port Size	Price
MVHR-302-3H-8A-G	Manual	3way (3port)	1/4"	£34.92
MVHR-302-3H-10A-G	Manual	3way (3port)	3/8"	£34.92
MVHR-400-3H-15A-G	Manual	3way (3port)	1/2"	£34.92

MAER200 SERIES

AIR UNIT (ELECTRO – PNEUMATIC REGULATOR)

Symbol:



Features:

- Controls Air Pressure in proportion to an Electrical Signal.
- Available in MPa, kgf/cm^2, bar, psi & kPa Units.
- Modular Assembly with MA***302 Air Preparation.
- Port Sizes 1/4" and 3/8".
- Bright, easy to read LED Display.
- Analogue and switched output.
- Precise control with microcomputer PID.

Model		MAER200		
Pressure range		7K	5K	9K
Bore No.		8A, 10A		
Port size		1/4, 3/8		
Medium		Air		
Proof pressure		0.3 MPa	1.5 MPa	
Ambient temperature		+5~+50°C (No condensation)		
Min. supply pressure		Set pressure +0.1 MPa		
Max. supply pressure		0.2 MPa	0.7 MPa	1 MPa
Setting pressure range (*1)		0.005~0.1 MPa	0.005~0.5 MPa	0.009~0.9 MPa
Power Consumption	Vlotage	DC24V±10%		
	Current	DC24V: 0.1A or less		
Signal Input	Current type	DC4~20 mA		
	Voltage type	DC0~5V, DC0~10V		
	Preset input (*2)	4 points		
Input impedance	Current type	≤ 430Ω		
	Voltage type	Approx. ≤ 3kΩ		
	Preset type	Approx. ≤ 100kΩ		
Signal output (Monitor output)	Analog output	Current type DC4~20mA (Load impedance 600Ω or less)		
		Voltage type DC1~5V (Load impedance 500Ω or above)		
	Switch Output	NPN,PNP: Max. 24V, 160mA		
Linearity		Within ±1% (F.S.)		
Hysteresis		Within 0.5% (F.S.)		
Repeatability		Within ±0.5% (F.S.)		
Sensitivity		Within 0.2% (F.S.)		
Temperature characteristics		Within ±0.2% (F.S.)/°C		
Output pressure display (*3)	Precision	±2% F.S. ±1 digit		
	Min. unit	MPa:0.001, kgf/cm2:0.01, bar:0.01, psi:0.1, kPa:1		
Enclosure		Equivalent to IP65		
Weight		Main: 360 g; Bracket: Approx. 86g(B1) , 80g(B2); Cable connector: Approx. 55g(1m) , 130g(3m)		

*1. Minimum setting pressure is equal to 1% F.S..
*2. For safety reasons, it is recommended that one of the preset pressures be set to 0 MPa.
*3. Linearity setting and pre-set pressure setting value both are set by the minimum unit of the output pressure display.
*4. The above characteristics are confined to no flow in the pipeline. When air is consumed on the output side, pressure may become unstable.
*5. The above characteristics apply for a control pressure of 10% to 90% when power voltage is 24 VDC, ambient temperature is 25±3°C, no-loading and working pressure is maximum control pressure.

MAER200 Order Example

MAER200 – 8A – 9K – 1 1 1 – B1 S1 – □

- **MODEL**
- **PORT SIZE**
  - **8A**: 1/4
  - **10A**: 3/8
- **PRESSURE RANGE**
  - **1K**: 0.1 MPa (*)
  - **5K**: 0.5 MPa
  - **9K**: 0.9 MPa
- **BRACKET**
  - Blank: Without
  - **B1**: L type
  - **B2**: Flat type
- **CABLE CONNECTOR**
  - Blank: Without
  - **S1**: Straight 1m
  - **S3**: Straight 3m
  - **L1**: Right angle 1m
  - **L3**: Right angle 3m
- **PORT THREAD**
  - Blank: Rc thread
  - **G**: G thread
  - **NPT**: NPT thread

SIGNAL INPUT	SIGNAL OUTPUT	PRESSURE DISPLAY UNIT
1: Current DC4~20mA **2**: Voltage DC0~10V **3**: Voltage DC0~5V (*)	**1**: Analog output DC1~5V **2**: Switch output NPN **3**: Switch output PNP **4**: Analog output DC4~20mA (Source type)	**1**: MPa **2**: kgf/cm^2 **3**: bar **4**: psi **5**: kPa
40: Preset input (*)	–	

* Made to order.

Standard stock

Contact our team for other variations

Part Number	Port Size	Price
MAER200-8A-9K-114-B2-S3-G	1/4"	£437.19
MAER200-8A-9K-313-B2-G	1/4"	£437.19
MAER200-10A-9K-214-B2-L3-G	3/8"	£437.19

PG SERIES

PRESSURE GAUGE

PG-20	PG-20W	PG-25	PG-33S
PG-40	**PG-40W**	**PG-40S**	**PG-50**

Specification

Model	PG-20	PG-25	PG-33	PG-40	PG-50
Bore No.	—	—	6A	6A	8A
Port size	—	1/16	1/8	1/8	1/4
Medium	Air				
Operating perssure range	By order specifications				
Precision	JIS 2.5 class or ASME B class				
Ambient temperature	-5~+60°C (No freezing)				
Weight	11 g	17 g	34 g	54 g	108 g

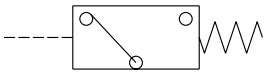
* Please consult us if out of specification.

Part Number	Port Size	Price
PG-20	-	£13.58
PG20-W	-	£13.58
PG-25	1/16"	£13.58
PG-33S	1/8"	£10.91
PG-40	1/8"	£6.06
PG-40W	1/8"	£6.06
PG-40S	1/8"	£6.06
PG-50	1/4"	£8.10

MPS SERIES

PNEUMATIC PRESSURE SWITCH

Symbol



Specification

Model	MPS-6A	MPS-6A-R
Fitting method	R1/8 (for port thread fitting)	O-ring: S4 (for O-ring fitting)
Ambient temperature	-5~+60℃ (No freezing)	
Max. operating pressure	0.8 MPa	
Proof pressure	1 MPa	
Pressure setting range	0.1~0.7 MPa	
Operation output	Normal open ON (Red led lighting up) above value	
Sensor switch	RCE2 Reed switch / Normal open Voltage range: 5~110V DC/AC Max. Current: 100mA	
Weight	185 g	189 g

Part Number	Port Size	Price
MPS-6A	1/8"	£57.22
MPS-6AR	S4	£57.22

MPG-60 SERIES

DIGITAL PRESSURE GAUGE

Features

- 6 user programmable pressure units (kPa, MPa, kgf/cm^2, psi, bar, mmHg) available.
- Battery powered.
- Easy / fast read out with digital display.
- Power saving mode.
- Back light option.
- IP65 enclosure, dust and splash-proof.

Specification

Model		Positive	
		MPG-60P	MPG-60P-L
Rate / display pressure range		0 ~ 1 MPa / -0.1 ~ 1 MPa	
Proof pressure		1.5 MPa	
Fluid		Filtered air, Non-corrosive gases ,incombustible gases	
Set pressure resolution	kPa / MPa	— / 0.001	
	kgf/cm^2 / bar	0.01	
	psi	0.1	
	mmHg	—	
Battery / Battery replaceable		CR 2032 lithium / Yes	
Battery life		3 years (5 times/day)	1 year (5 times/day)
Low-power indicator		Yes	
Back light		No	Yes
Turn-on interval		Display turn off after 60 sec.	
Sampling rate		2 Hz (2 times/sec.)	
Programmable pressure unit		psi, bar, kfg/cm^2, MPa user selectable	
Repeatability		≤ ±0.2% F.S. ±1digit	
LCD display		7 segment, 3 1/2 digit	
Indicator accuracy		≤ ±2% F.S. ±1 digit (Ambient temperature: 25 ±3 °C)	
Environment	Enclosure	IP65 (Air tube must be installed to maintain IP65)	
	Ambient temp. range	Operation: 0 ~ 50°C, storage : —10 ~ 60°C (No condensation or freezing)	
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)	
	Vibration	Total amplitude 1.5mm or 10G, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z	
	Shock	100m/s^2 (10G), 3 times each in direction of X, Y and Z	
Temperature characteristic		≤±2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C	
Weight		Approx. 40 g	

Order example

MPG — 60 P — L — F1

- MPG — 60: MODEL
- P: PRESSURE RANGE — **P:** Positive
- L: BACK LIGHT — _: (Blank); **L:** Back light available
- F1: PRESSURE PORT — **F3:** G1/8", M5; **F6:** G1/4", M5

Price List

Part Number	Port Size	Price
MPG-60P-F3	1/8", M5	£33.53
MPG-60P-F6	1/4", M5	£33.53
MPG-60P-L-F3	1/8", M5	£36.41
MPG-60P-L-F6	1/4", M5	£36.41

MP43 SERIES

HIGH PRECISION DIGITAL PRESSURE SWITCH

Features

- 3 color digital LCD display.
- Copy function.
- Programmable pressure unit: kPa, MPa, kgf/cm^2, bar, psi, mmHg, inHg.
- Dual LCD display allow setting value to be displayed.
- Key lock indicator.
- Max. 20% energy saving.

Specification

Model		MP43C (Compound)	MP43V (Vacuum)	MP43P (Positive)
Rated pressure range		−100.0~100.0 kPa	−101.3 ~0.0 kPa	0 ~ 1.0 MPa
Set pressure range		−101.0~101.0 kPa	−101.3 ~ 10.0 kPa	−0.1 ~ 1.0 MPa
Withstand pressure		300 kPa		1.5 MPa
Fluid		Filtered air, Non-corrosive / Non-flammable gas		
Set pressure resolution	KPa / MPa	0.1 / —		— / 0.001
	kgf/cm^2 / bar	0.001		0.01
	psi	0.01		0.1
	mmHg	1		—
	InHg	0.1		—
Power supply voltage		12 to 24V DC ± 10%, Ripple (P-P) 10% or less		
Current consumption		≤ 40mA (With no load)		
Switch output		NPN: open collector 2 outputs Max. load current : 125mA Max. supply voltage: 30V DC Residual voltage : ≤1.5V		PNP: open collector 2 outputs Max. load current : 125mA Max. supply voltage: 24V DC Residual voltage : ≤1.5V
Repeatability (Switch output)		± 0.2% F.S. ±1digit		
Hysteresis	Hysteresis mode / Window comparator mode	Adjustable(*1)		
Response time		≤2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)		
Output short circuit protection		Yes		
7 segment LCD display		2 color(Red/Green) main & unit display, Orange sub-dispaly (Sampling rate: 5 times/1sec.)		
Indicator accuracy		±2% F.S. ±1 digit (Ambient temperature: 25 ± 3°C)		
Switch ON Indicator		Orange (1 & 2 indicator) OUT1 / OUT2		
Analog output (Voltage Output) (*2)		Output Voltage: 1 to 5V ±2.5%F.S. (within rated pressure range) Linearity: ±1% F.S. Output impedance: about 1kΩ		
Analog output (Current Output) (*3)		Output Current: 4 to 20mA ±2.5%F.S. (within rated pressure range); Linearity: ±1% F.S. Max. load impedance: 300Ω at power supply of 12V, 600Ω at power supply of 24V Min. load impedance: 50Ω		
Environment	Enclosure	IP40		
	Ambient temp. range	Operation: 0 ~ 50°C, storage : −10~ 60°C (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)		
	Withstand voltage	1000V AC in 1-min. (between case and lead wire)		
	Insulation resistance	50M Ω (at 500V DC, between case and lead wire)		
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, 2 hours each direction of X, Y and Z		
	Shock	100m/s^2 (10G), 3 times each in direction of X, Y and Z		

Order example

MP43C — 010 — F1

MODEL

PRESSURE RANGE
C: Compound (−101.0~101.0 kPa)
V: Vacuum (−101.3~10.0 kPa)
P: Positive (−0.1~1.0 MPa)

OUTPUT METHOD
010: 2 NPN output + 1 Analog output (1~5V)
011: 2 NPN output + 1 Analog output (4~20mA)
02 : 2 NPN output + Copy function
030: 2 PNP output + 1 Analog output (1~5V)
031: 2 PNP output + 1 Analog output (4~20mA)
04 : 2 PNP output + Copy function

PRESSURE PORT
F1: R1/8, M5×0.8
F2: NPT1/8, #10-32UNF
F3: G1/8, M5×0.8

Standard Stock

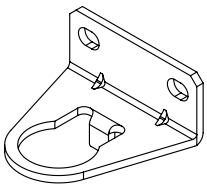
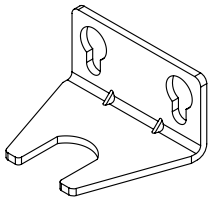
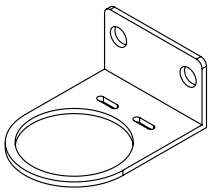
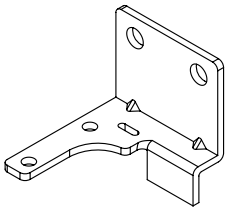
Part Number	Port Size	Price
MP43P-04-F1	1/8", M5x0.8	£89.44

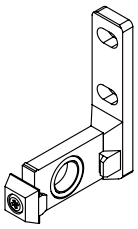
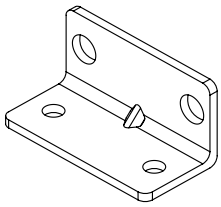
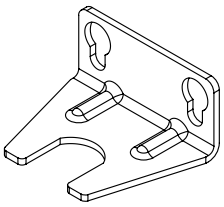
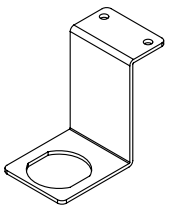
Contact our team for other variations

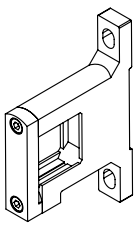
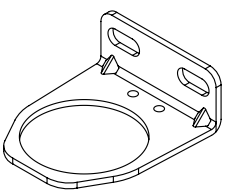
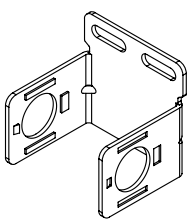
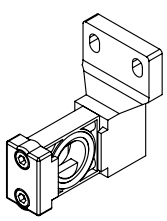
MA* Selector table

AIR UNIT (F.R.L.UNIT)

Bracket

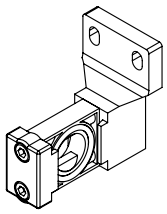
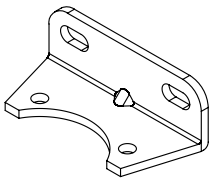
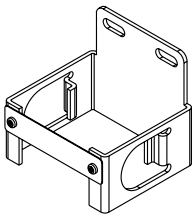
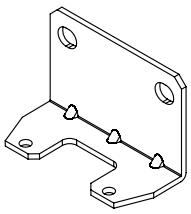
Order example	B1-MAR100	B1-MAIR100	B1-MAR200	B1-MAL200 (*)
Pictures				
Applicable model	MAR100, MAFR100	MAIR100	MACP200, MACT200 MAFR200, MAR200 MAR201	MAL200
Price	£2.33	£1.74	£1.18	£2.33

Order example	BL-MACP200	B1-MAF200 (*)	B1-MAIR200	B3-MAR200
Pictures				
Applicable model	MACP200, MACT200	MAF200	MAIR200	MAFR200, MAR200 MAR201
Price	£6.99	£2.04	£2.33	£3.80

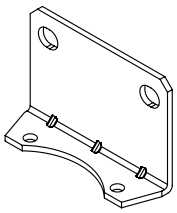
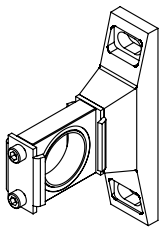
Order example	BT-MACP302	B1-MAR302	B2-MAF302	BL-MACP401
Pictures				
Applicable model	MACP302, MACT302	MAFR302, MAR302	MAL302, MAF302	MACP401, MACT401
Price	£7.88	£3.21	£7.58	£4.37

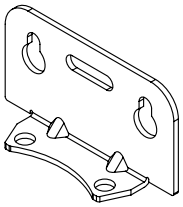
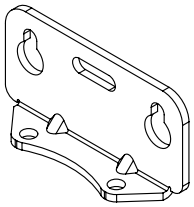
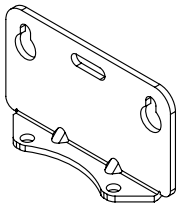
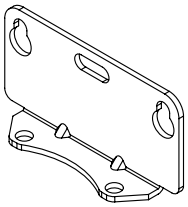
MA* Selector table

AIR UNIT (F.R.L.UNIT)

Order example	BL-MACP403	B1-MAR401	B2-MAF401	B1-MAR501
Pictures				
Applicable model	MACP401-W, MACT401-W MACP403, MACT403	MAFR401, MAR401 MAFR403, MAR403	MAF401, MAL401 MAF403, MAL403	MAR501, MAFR501
Price	£9.69	£2.63	£8.17	£6.43

Bracket

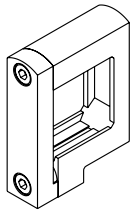
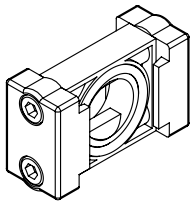
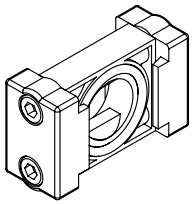
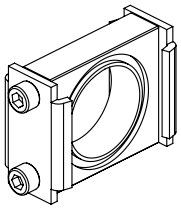
Order example	B1-MAF501	BT-MACP501
Pictures		
Applicable model	MAF501, MAL501	MACP501, MACT501
Price	£4.96	£26.26

Order example	B1-MAMG25	B1-MAMG35	B1-MAMG45	B1-MAMG55
Pictures				
Applicable model	MAM*25	MAM*35	MAM*45	MAM*55
Price	£4.98	£6.14	£7.29	£7.88

MA* Selector table

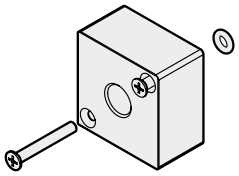
AIR UNIT (F.R.L.UNIT)

Joiner set

Order example	BS-MACP302	BS-MACP401	BS-MACP403	BS-MACP501
Pictures				
Applicable model	MACP302, MACT302	MACP401, MACT401	MACP401-W, MACT401-W MACP403, MACT403, MAM*25, MAM*35	MACP501, MACT501 MAM*45, MAM*55
Price	£9.62	£10.06	£10.06	£22.19

Gauge adapter set

*Order example: **A-MAR302-NPT**



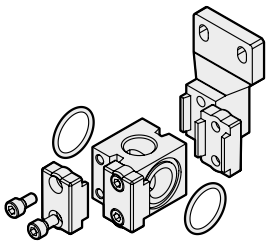
Applicable model	Order example	Port thread	
		—	**NPT**
		Rc thread	NPT thread
MAR302, MAFR302	**A—MAR302—□**	●	◎
MAR401, MAFR401	**A—MAR401—□**	●	◎
MAR401-W, MAFR401-W MAR403, MAFR403 MAR501, MAFR501	**A—MAR302—□** (Shared with 302)	●	◎
Price	£1.45		

● Standard type ◎ Option

T type module mounting bracket

*Order example : **T8-MACP302-G**

● Standard type ◎ Option

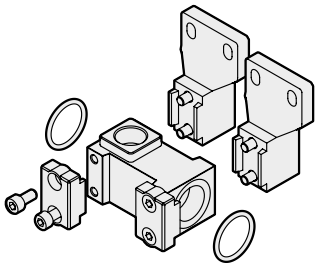


Price	Applicable model	Order example	Port size		Port thread	
			T8,T10	**T15**	—	**G, NPT**
			1/4, 3/8	1/2	Rc thread	G,NPT thread
£39.27	MACP302, MACT302	**T8/T10/T15—MACP302—□**	◎	◎	●	◎
£32.69	MACP401, MACT401	**T8/T10/T15—MACP401—□**	◎	◎	●	◎
£36.52	MACP401-W, MACT401-W MACP403, MACT403	**T8/T10/T15—MACP403—□**				
£46.30	MACP501, MACT501	**T8/T10/T15—MACP501—□**	◎	◎	●	◎

Check valve

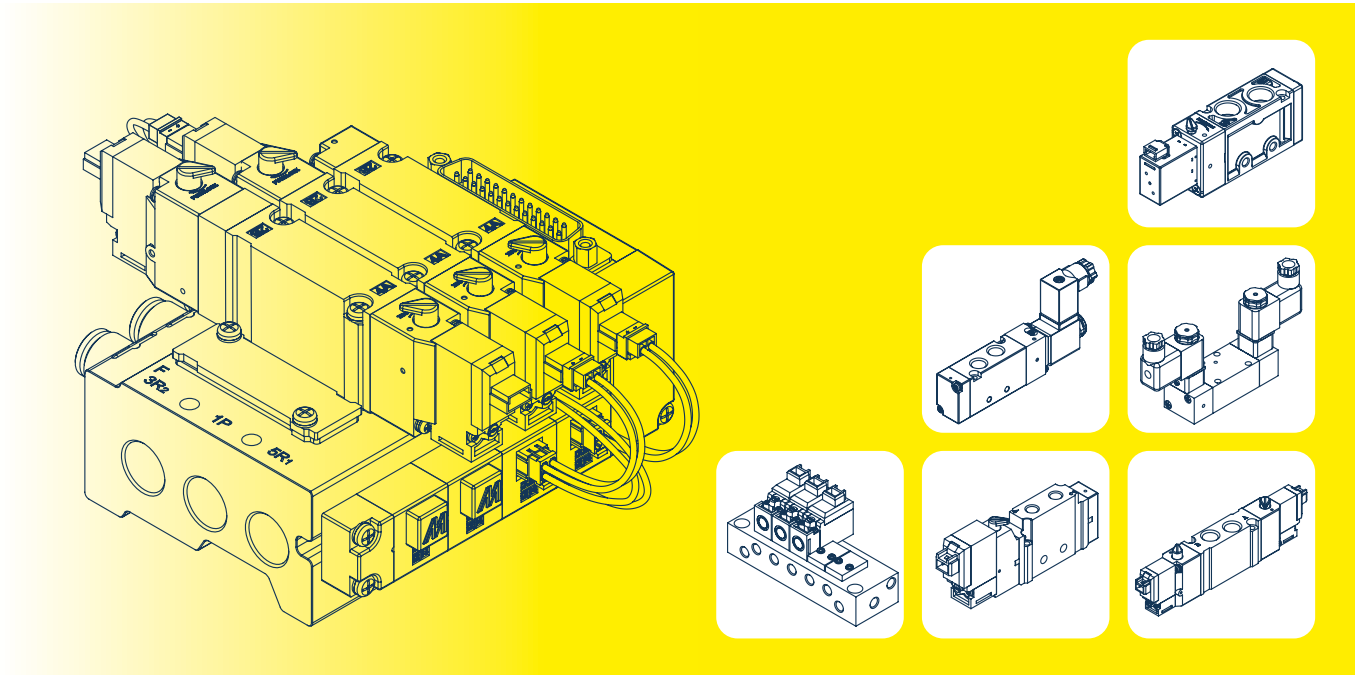
*Order example : **K8-MACP401-G**

● Standard type ◎ Option



Price	Applicable model	Order example	Port size	Port thread	
			K8,K10	—	**G, NPT**
			1/4, 3/8	Rc thread	G,NPT thread
£47.86	MACP302, MACT302	**K8/K10—MACP302—□**	◎	●	◎
£48.50	MACP401, MACT401	**K8/K10—MACP401—□**			
£49.13	MACP401-W, MACT401-W MACP403, MACT403	**K8/K10—MACP403—□**			

SOLENOID VALVE RANGE



SOLENOID VALVE

MVSC1	MVSC1-180	p.42
MVSC	MVSC-220	p.43
	MVSC-300	p.44
	MVSC-460	p.45
MVSY	MVSY-100M	p.46
	MVSY-156M	p.47
	MVSY-188M	p.48

MANIFOLDS/ MULTI CONNECTOR SYSTEMS

MVB	MVB-100	p.49
	MVB-156	p.50
	SVR	p.52-54

DIRECT OPERATED SOLENOID VALVE

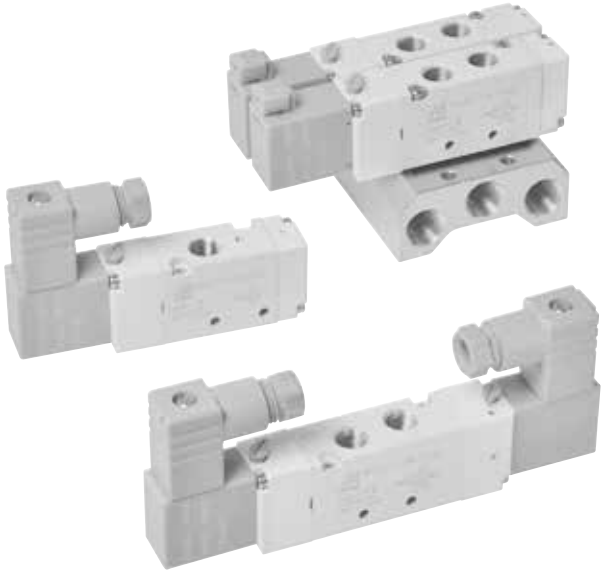
	MVDC	p.51

DIRECT ACTING SOLENOID VALVE

	MCS	p.55

MVSC1-180 SERIES

SOLENOID VALVE



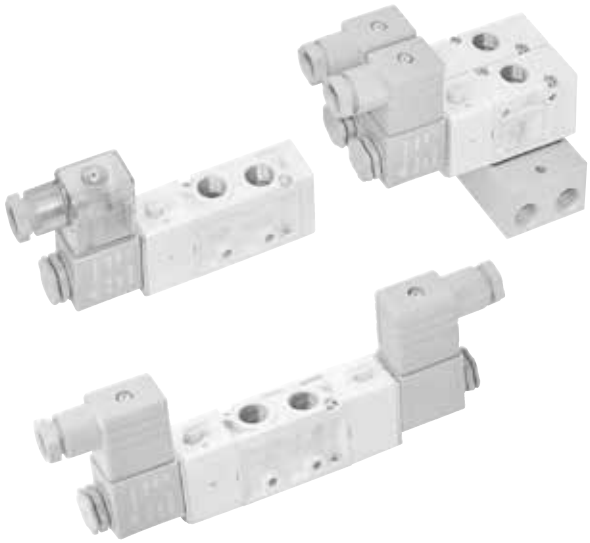
Specification

Model	3E1	4E1	4E2	4E2 C.P.R
Bore No.	6A			
Port size	Rc1/8			
No. of port / position	3 / 2	5 / 2		5 / 3
Medium	Air			
Operating perssure range	0.15~0.8 MPa			0.2~0.7 MPa
Proof pressure	1 MPa			
Effective orifice	15 mm^2	12 mm^2		9 mm^2
Reponse time	DC<25 ms, AC<35 ms			DC<30ms, AC<35ms
Ambient temperature	-5~+50°C (No freezing)			
Voltage	AC110V, 220V (50/60)Hz, DC24/12V			
Power consumption	AC=1.12VA, DC=0.95W			
Available voltage range	±10%			
Insulation class	F class			
Weight	90 g	94 g	129 g	143 g

Part Number	Port Size	Type	Solenoid	Centre Type	Normally Open/ Normally Closed	Voltage	Price
MVSC1-180-3E1-NC-DC24-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	DC24V	£61.12
MVSC1-180-3E1-NC-AC110-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC110V	£61.12
MVSC1-180-3E1-NC-AC220-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC220V	£61.12
MVSC1-180-3E1-N0-DC24-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	DC24V	£61.12
MVSC1-180-3E1-N0-AC110-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC110V	£61.12
MVSC1-180-3E1-N0-AC220-L-G	1/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC220V	£61.12
MVSC1-180-4E1-DC24-L-G	1/8"	4 way (5 port)	Single Solenoid	N/A	N/A	DC24V	£54.67
MVSC1-180-4E1-AC110-L-G	1/8"	4 way (5 port)	Single Solenoid	N/A	N/A	AC110V	£54.67
MVSC1-180-4E1-AC220-L-G	1/8"	4 way (5 port)	Single Solenoid	N/A	N/A	AC220V	£54.67
MVSC1-180-4E2-DC24-L-G	1/8"	4 way (5 port)	Double Solenoid	N/A	N/A	DC24V	£89.43
MVSC1-180-4E2-AC110-L-G	1/8"	4 way (5 port)	Double Solenoid	N/A	N/A	AC110V	£89.43
MVSC1-180-4E2-AC220-L-G	1/8"	4 way (5 port)	Double Solenoid	N/A	N/A	AC220V	£89.43
MVSC1-180-4E2C-DC24-L-G	1/8"	4 way (5 port)	Double Solenoid	Closed	N/A	DC24V	£114.28
MVSC1-180-4E2P-DC24-L-G	1/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	DC24V	£114.28
MVSC1-180-4E2R-DC24-L-G	1/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	DC24V	£114.28
MVSC1-180-4E2C-AC110-L-G	1/8"	4 way (5 port)	Double Solenoid	Closed	N/A	AC110V	£114.28
MVSC1-180-4E2P-AC110-L-G	1/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC110V	£114.28
MVSC1-180-4E2R-AC110-L-G	1/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC110V	£114.28
MVSC1-180-4E2C-AC220-L-G	1/8"	4 way (5 port)	Double Solenoid	Closed	N/A	AC220V	£114.28
MVSC1-180-4E2P-AC220-L-G	1/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC220V	£114.28
MVSC1-180-4E2R-AC220-L-G	1/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC220V	£114.28

MVSC-220 SERIES

SOLENOID VALVE



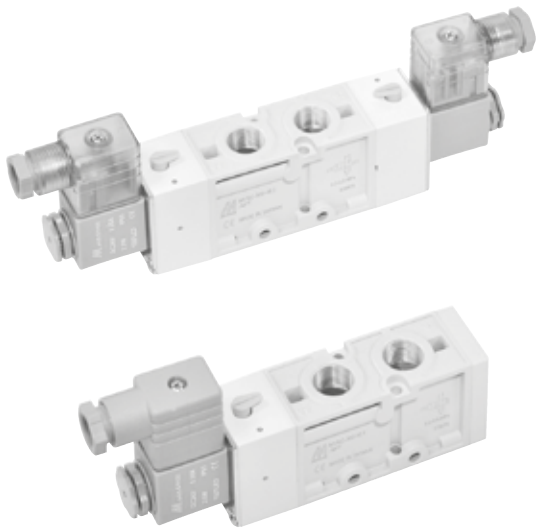
Specification

Model	3E1	4E1	4E2	4E2 C.P.R
Bore No.	8A	8A		
Port size	Rc1/4	Rc1/4		
No. of port	3	5		
No. of position	2	2		3
Medium	Air			
Operating perssure range	0.2~0.8 MPa			0.3~0.8 MPa
Operating pressue (LP)	0~0.8 MPa			
External pilot pressure (LP)	0.2~0.8 MPa			0.3~0.8 MPa
Proof pressure	1 MPa			
Effective orifice	18 mm^2			16 mm^2
Reponse time	30 ms			40 ms
Ambient temperature	-5~+50°C (No freezing)			
Voltage	AC110V, 220V (50/60)Hz, DC24V			
Power consumption	AC=4.8/4.4VA, 6/4.9VA, DC=2W			
Available voltage range	±10%			
Insulation class	F class			
Weight	203 g	184 g	292 g	338 g

Part Number	Port Size	Type	Solenoid	Centre Type	Normally Open/ Normally Closed	Voltage	Price
MVSC-220-3E1-NC-DC24-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	DC24V	£61.12
MVSC-220-3E1-NC-AC110-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC110V	£61.12
MVSC-220-3E1-NC-AC220-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC220V	£61.12
MVSC-220-3E1-N0-DC24-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Open	DC24V	£61.12
MVSC-220-3E1-N0-AC110-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC110V	£61.12
MVSC-220-3E1-N0-AC220-L-G	1/4"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC220V	£61.12
MVSC-220-4E1-DC24-L-G	1/4"	4 way (5 port)	Single Solenoid	N/A	N/A	DC24V	£54.67
MVSC-220-4E1-AC110-L-G	1/4"	4 way (5 port)	Single Solenoid	N/A	N/A	AC110V	£54.67
MVSC-220-4E1-AC220-L-G	1/4"	4 way (5 port)	Single Solenoid	N/A	N/A	AC220V	£54.67
MVSC-220-4E2-DC24-L-G	1/4"	4 way (5 port)	Double Solenoid	N/A	N/A	DC24V	£89.43
MVSC-220-4E2-AC110-L-G	1/4"	4 way (5 port)	Double Solenoid	N/A	N/A	AC110V	£89.43
MVSC-220-4E2-AC220-L-G	1/4"	4 way (5 port)	Double Solenoid	N/A	N/A	AC220V	£89.43
MVSC-220-4E2C-DC24-L-G	1/4"	4 way (5 port)	Double Solenoid	Closed	N/A	DC24V	£114.28
MVSC-220-4E2P-DC24-L-G	1/4"	4 way (5 port)	Double Solenoid	Pressure	N/A	DC24V	£114.28
MVSC-220-4E2R-DC24-L-G	1/4"	4 way (5 port)	Double Solenoid	Exhaust	N/A	DC24V	£114.28
MVSC-220-4E2C-AC110-L-G	1/4"	4 way (5 port)	Double Solenoid	Closed	N/A	AC110V	£114.28
MVSC-220-4E2P-AC110-L-G	1/4"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC110V	£114.28
MVSC-220-4E2R-AC110-L-G	1/4"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC110V	£114.28
MVSC-220-4E2C-AC220-L-G	1/4"	4 way (5 port)	Double Solenoid	Closed	N/A	AC220V	£114.28
MVSC-220-4E2P-AC220-L-G	1/4"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC220V	£114.28
MVSC-220-4E2R-AC220-L-G	1/4"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC220V	£114.28

MVSC-300 SERIES

SOLENOID VALVE



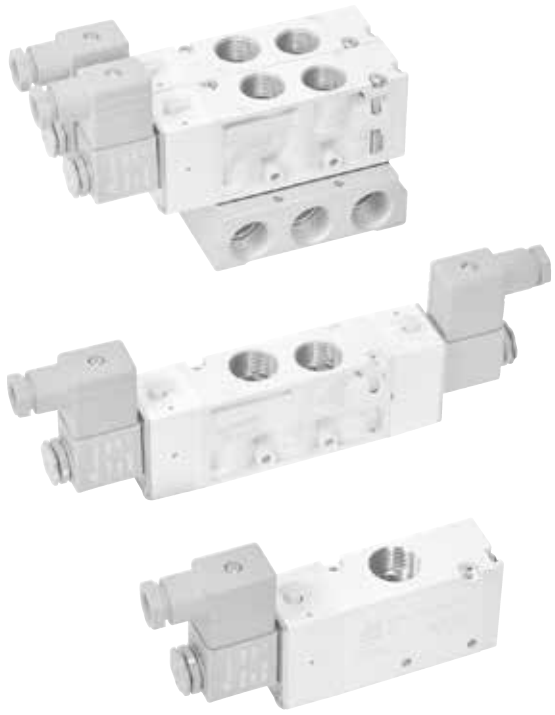
Specification

Model	3E1	4E1	4E2	4E2 C.P.R
Bore No.	10A			
Port size	Rc3/8			
No. of port	3	5		
No. of position	2			3
Medium	Air			
Operating perssure range	0.2~0.8 MPa			0.3~0.8 MPa
Operating pressue (LP)	0~0.8 MPa			
External pilot pressure (LP)	0.2~0.8 MPa			0.3~0.8 MPa
Proof pressure	1 MPa			
Effective orifice	30 mm^2	35 mm^2		25 mm^2
Reponse time	50ms			
Ambient temperature	-5~+50°C (No freezing)			
Voltage	AC110V, 220V (50/60)Hz, DC24V			
Power consumption	AC=4.8/4.4VA, 6/4.9VA, DC=2W			
Available voltage range	±10%			
Insulation class	F class			
Weight	350 g	293 g	387 g	530 g

Part Number	Port Size	Type	Solenoid	Centre Type	Normally Open/ Normally Closed	Voltage	Price
MVSC-300-3E1-NC-DC24-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	DC24V	£63.74
MVSC-300-3E1-NC-AC110-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC110V	£63.74
MVSC-300-3E1-NC-AC220-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC220V	£63.74
MVSC-300-3E1-N0-DC24-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	DC24V	£63.74
MVSC-300-3E1-N0-AC110-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC110V	£63.74
MVSC-300-3E1-N0-AC220-L-G	3/8"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC220V	£63.74
MVSC-300-4E1-DC24-L-G	3/8"	4 way (5 port)	Single Solenoid	N/A	N/A	DC24V	£63.74
MVSC-300-4E1-AC110-L-G	3/8"	4 way (5 port)	Single Solenoid	N/A	N/A	AC110V	£63.74
MVSC-300-4E1-AC220-L-G	3/8"	4 way (5 port)	Single Solenoid	N/A	N/A	AC220V	£63.74
MVSC-300-4E2-DC24-L-G	3/8"	4 way (5 port)	Double Solenoid	N/A	N/A	DC24V	£92.81
MVSC-300-4E2-AC110-L-G	3/8"	4 way (5 port)	Double Solenoid	N/A	N/A	AC110V	£92.81
MVSC-300-4E2-AC220-L-G	3/8"	4 way (5 port)	Double Solenoid	N/A	N/A	AC220V	£92.81
MVSC-300-4E2C-DC24-L-G	3/8"	4 way (5 port)	Double Solenoid	Closed	N/A	DC24V	£132.68
MVSC-300-4E2P-DC24-L-G	3/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	DC24V	£132.68
MVSC-300-4E2R-DC24-L-G	3/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	DC24V	£132.68
MVSC-300-4E2C-AC110-L-G	3/8"	4 way (5 port)	Double Solenoid	Closed	N/A	AC110V	£132.68
MVSC-300-4E2P-AC110-L-G	3/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC110V	£132.68
MVSC-300-4E2R-AC110-L-G	3/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC110V	£132.68
MVSC-300-4E2C-AC220-L-G	3/8"	4 way (5 port)	Double Solenoid	Closed	N/A	AC220V	£132.68
MVSC-300-4E2P-AC220-L-G	3/8"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC220V	£132.68
MVSC-300-4E2R-AC220-L-G	3/8"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC220V	£132.68

MVSC-460 SERIES

SOLENOID VALVE



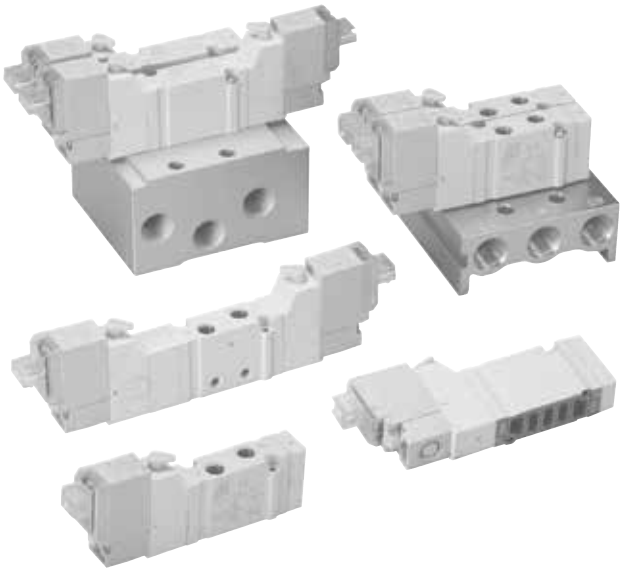
Specification

Model	3E1	4E1	4E2	4E2 C.P.R
Bore No.	15A			
Port size	G1/2			
No. of port	3	5		
No. of position	2			3
Medium	Air			
Operating perssure range	0.2~0.8 MPa			0.3~0.8 MPa
Operating pressue (LP)	0~0.8 MPa			
External pilot pressure (LP)	0.2~0.8 MPa			0.3~0.8 MPa
Proof pressure	1 MPa			
Effective orifice	60 mm^2	50 mm^2		30 mm^2
Reponse time	50 ms			
Ambient temperature	-5~+50°C (No freezing)			
Voltage	AC110V, 220V (50/60)Hz, DC24V			
Power consumption	AC=4.8/4.4VA, 6/4.9VA, DC=2W			
Available voltage range	±10%			
Insulation class	F class			
Weight	353 g	330 g	452 g	550 g

Part Number	Port Size	Type	Solenoid	Centre Type	Normally Open/ Normally Closed	Voltage	Price
MVSC-460-3E1-NC-DC24-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	DC24V	£74.69
MVSC-460-3E1-NC-AC110-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC110V	£74.69
MVSC-460-3E1-NC-AC220-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Closed	AC220V	£74.69
MVSC-460-3E1-N0-DC24-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Open	DC24V	£74.69
MVSC-460-3E1-N0-AC110-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC110V	£74.69
MVSC-460-3E1-N0-AC220-L-G	1/2"	3 way (3 port)	Single Solenoid	N/A	Normally Open	AC220V	£74.69
MVSC-460-4E1-DC24-L-G	1/2"	4 way (5 port)	Single Solenoid	N/A	N/A	DC24V	£74.69
MVSC-460-4E1-AC110-L-G	1/2"	4 way (5 port)	Single Solenoid	N/A	N/A	AC110V	£74.69
MVSC-460-4E1-AC220-L-G	1/2"	4 way (5 port)	Single Solenoid	N/A	N/A	AC220V	£74.69
MVSC-460-4E2-DC24-L-G	1/2"	4 way (5 port)	Double Solenoid	N/A	N/A	DC24V	£103.81
MVSC-460-4E2-AC110-L-G	1/2"	4 way (5 port)	Double Solenoid	N/A	N/A	AC110V	£103.81
MVSC-460-4E2-AC220-L-G	1/2"	4 way (5 port)	Double Solenoid	N/A	N/A	AC220V	£103.81
MVSC-460-4E2C-DC24-L-G	1/2"	4 way (5 port)	Double Solenoid	Closed	N/A	DC24V	£142.96
MVSC-460-4E2P-DC24-L-G	1/2"	4 way (5 port)	Double Solenoid	Pressure	N/A	DC24V	£142.96
MVSC-460-4E2R-DC24-L-G	1/2"	4 way (5 port)	Double Solenoid	Exhaust	N/A	DC24V	£142.96
MVSC-460-4E2C-AC110-L-G	1/2"	4 way (5 port)	Double Solenoid	Closed	N/A	AC110V	£142.96
MVSC-460-4E2P-AC110-L-G	1/2"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC110V	£142.96
MVSC-460-4E2R-AC110-L-G	1/2"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC110V	£142.96
MVSC-460-4E2C-AC220-L-G	1/2"	4 way (5 port)	Double Solenoid	Closed	N/A	AC220V	£142.96
MVSC-460-4E2P-AC220-L-G	1/2"	4 way (5 port)	Double Solenoid	Pressure	N/A	AC220V	£142.96
MVSC-460-4E2R-AC220-L-G	1/2"	4 way (5 port)	Double Solenoid	Exhaust	N/A	AC220V	£142.96

MVSY-100M SERIES

SOLENOID VALVE



Caution

- Don't energize continuously for about 2 hours or more.
- The total energizing time of a day don't exceeds the total non-energizing time even if it is intermittent energizing.

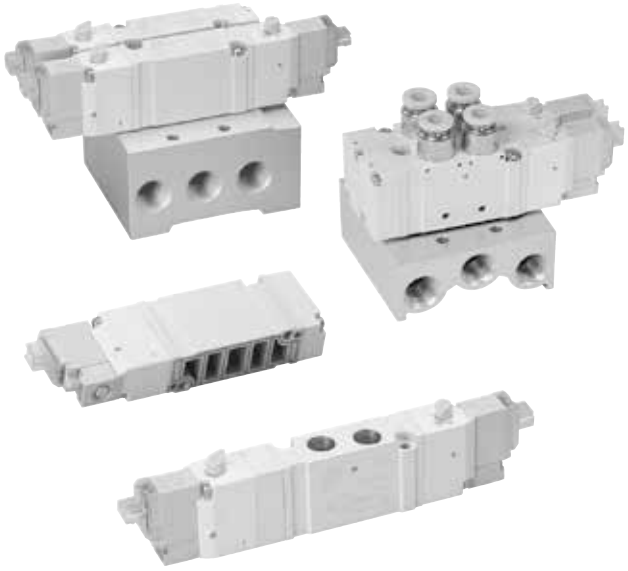
Specification

Model		4E1	4E2	4E2 C.P.R
Bore No.		M5		
Port size		M5×0.8		
No. of port		5		
No. of position		2		3
Medium		Air		
Operating perssure range		0.2~0.7 MPa		
Proof pressure		1 MPa		
Effective orifice	Body ported	4.5 mm^2		
	Manifold	4.5 mm^2		4.5 / 5 / 4.5 mm^2
Reponse time		12 ms		15 ms
Ambient temperature		+5~+50°C		
Max. operating frequency		5 Hz		
Voltage		AC110V, 220V (50/60)Hz, DC24/12/6V		
Power consumption		AC=1.6/2.5VA, DC6=1.2W, DC12/24=0.55W		
Available voltage range		±10%		
Insulation class		B class		
Weight		30 g	43 g	55 g

Part Number	Port Size	Type	Solenoid	Centre Type	Voltage	Price
MVSY-100M-4E1-DC24-LJ3	M5×0.8	4 way (5 port)	Single Solenoid	N/A	DC24V	£60.75
MVSY-100M-4E1-AC110-LJ3	M5×0.8	4 way (5 port)	Single Solenoid	N/A	AC110V	£62.95
MVSY-100M-4E1-AC220-LJ3	M5×0.8	4 way (5 port)	Single Solenoid	N/A	AC220V	£65.80
MVSY-100M-4E2-DC24-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	N/A	DC24V	£121.81
MVSY-100M-4E2-AC110-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	N/A	AC110V	£127.50
MVSY-100M-4E2-AC220-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	N/A	AC220V	£134.77
MVSY-100M-4E2C-DC24-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Closed	DC24V	£158.64
MVSY-100M-4E2C-AC110-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Closed	AC110V	£164.33
MVSY-100M-4E2C-AC220-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Closed	AC220V	£171.60
MVSY-100M-4E2P-DC24-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Pressure	DC24V	£158.64
MVSY-100M-4E2P-AC110-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Pressure	AC110V	£164.33
MVSY-100M-4E2P-AC220-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Pressure	AC220V	£171.60
MVSY-100M-4E2R-DC24-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Exhaust	DC24V	£158.64
MVSY-100M-4E2R-AC110-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Exhaust	AC110V	£164.33
MVSY-100M-4E2R-AC220-LJ3	M5×0.8	4 way (5 port)	Double Solenoid	Exhaust	AC220V	£171.60

MVSY-156M SERIES

SOLENOID VALVE



Caution

- Don't continuous energizing for about 2 hours or more.
- The total energizing time of a day don't exceeds the total non-energizing time even if it is intermittent energizing.

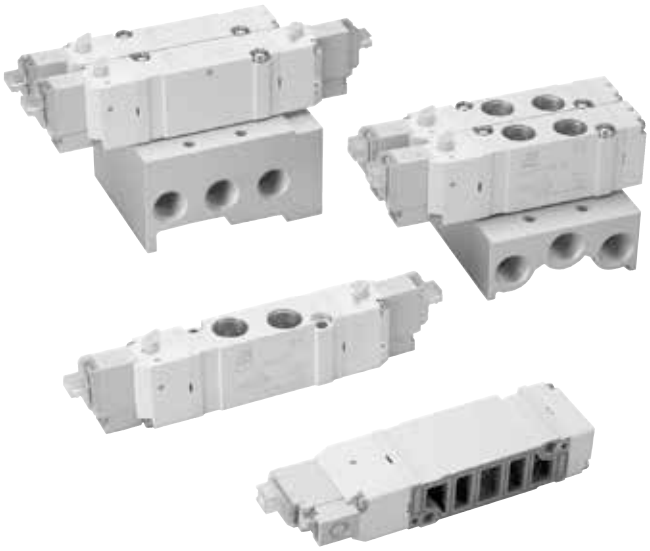
Specification

Model		4E1	4E2	4E2 C.P.R
Bore No.		6A		
Port size		Rc1/8		
No. of port		5		
No. of position		2		3
Medium		Air		
Operating perssure range		0.15~0.7 MPa		0.2~0.7 MPa
Proof pressure		1 MPa		
Effective orifice	Body ported	11 mm^2		9.5 / 14.6 / 9.5 mm^2
	Manifold	10 mm^2		7.5 / 13 / 8 mm^2
Reponse time		19 ms		20 ms
Ambient temperature		+5~+50°C		
Max. operating frequency		5 Hz		
Voltage		AC110V, 220V (50/60)Hz, DC24/12/6V		
Power consumption		AC=1.6/2.5VA, DC6=1.2W, DC12/24=0.55W		
Available voltage range		±10%		
Insulation class		B class		
Weight		68 g	87 g	96 g

Part Number	Port Size	Type	Solenoid	Centre Type	Voltage	Price
MVSY-156M-4E1-DC24-LJ3	1/8"	4 way (5 port)	Single Solenoid	N/A	DC24V	£62.95
MVSY-156M-4E1-AC110-LJ3	1/8"	4 way (5 port)	Single Solenoid	N/A	AC110V	£65.16
MVSY-156M-4E1-AC220-LJ3	1/8"	4 way (5 port)	Single Solenoid	N/A	AC220V	£68.00
MVSY-156M-4E2-DC24-LJ3	1/8"	4 way (5 port)	Double Solenoid	N/A	DC24V	£124.24
MVSY-156M-4E2-AC110-LJ3	1/8"	4 way (5 port)	Double Solenoid	N/A	AC110V	£129.92
MVSY-156M-4E2-AC220-LJ3	1/8"	4 way (5 port)	Double Solenoid	N/A	AC220V	£137.20
MVSY-156M-4E2C-DC24-LJ3	1/8"	4 way (5 port)	Double Solenoid	Closed	DC24V	£154.21
MVSY-156M-4E2C-AC110-LJ3	1/8"	4 way (5 port)	Double Solenoid	Closed	AC110V	£159.87
MVSY-156M-4E2C-AC220-LJ3	1/8"	4 way (5 port)	Double Solenoid	Closed	AC220V	£167.14
MVSY-156M-4E2P-DC24-LJ3	1/8"	4 way (5 port)	Double Solenoid	Pressure	DC24V	£154.21
MVSY-156M-4E2P-AC110-LJ3	1/8"	4 way (5 port)	Double Solenoid	Pressure	AC110V	£159.87
MVSY-156M-4E2P-AC220-LJ3	1/8"	4 way (5 port)	Double Solenoid	Pressure	AC220V	£167.14
MVSY-156M-4E2R-DC24-LJ3	1/8"	4 way (5 port)	Double Solenoid	Exhaust	DC24V	£154.21
MVSY-156M-4E2R-AC110-LJ3	1/8"	4 way (5 port)	Double Solenoid	Exhaust	AC110V	£159.87
MVSY-156M-4E2R-AC220-LJ3	1/8"	4 way (5 port)	Double Solenoid	Exhaust	AC220V	£167.14

MVSY-188M SERIES

SOLENOID VALVE



Caution

- Don't continuous energizing for about 2 hours or more.
- The total energizing time of a day don't exceeds the total non-energizing time even if it is intermittent energizing.

Specification

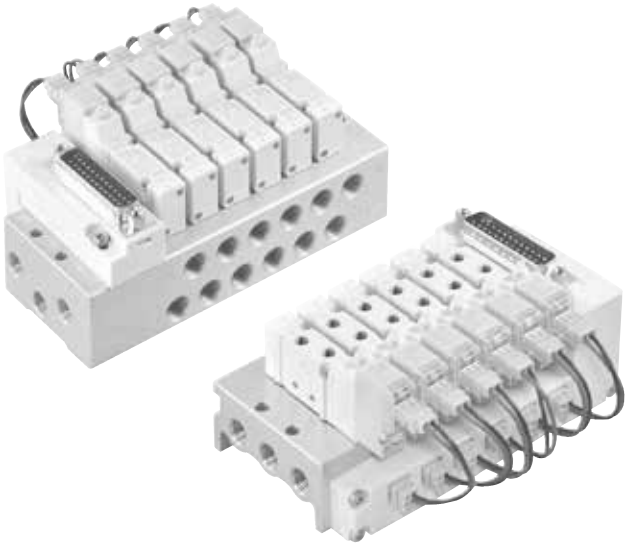
Model		4E1	4E2	4E2 C.P.R
Bore No.		8A		
Port size		Rc1/4		
No. of port		5		
No. of position		2		3
Medium		Air		
Operating perssure range		0.15~0.7 MPa		0.2~0.7 MPa
Proof pressure		1 MPa		
Effective orifice	Body ported	15 mm^2		16.3/27/12.4 mm^2
	Manifold	13 mm^2		13.5/18.4/11 mm^2
Reponse time		23 ms		50 ms
Ambient temperature		+5~+50°C		
Max. operating frequency		5 Hz		
Voltage		AC110V, 220V (50/60)Hz, DC24/12/6V		
Power consumption		AC=1.6/2.5VA, DC6=1.2W, DC12/24=0.55W		
Available voltage range		±10%		
Insulation class		B class		
Weight		84 g	106 g	116 g

Part Number	Port Size	Type	Solenoid	Centre Type	Voltage	Price
MVSY-188M-4E1-DC24-LJ3	1/4"	4 way (5 port)	Single Solenoid	N/A	DC24V	£65.16
MVSY-188M-4E1-AC110-LJ3	1/4"	4 way (5 port)	Single Solenoid	N/A	AC110V	£67.36
MVSY-188M-4E1-AC220-LJ3	1/4"	4 way (5 port)	Single Solenoid	N/A	AC220V	£70.20
MVSY-188M-4E2-DC24-LJ3	1/4"	4 way (5 port)	Double Solenoid	N/A	DC24V	£127.89
MVSY-188M-4E2-AC110-LJ3	1/4"	4 way (5 port)	Double Solenoid	N/A	AC110V	£133.55
MVSY-188M-4E2-220-LJ3	1/4"	4 way (5 port)	Double Solenoid	N/A	AC220V	£140.85
MVSY-188M-4E2C-DC24-LJ3	1/4"	4 way (5 port)	Double Solenoid	Closed	DC24V	£142.47
MVSY-188M-4E2C-AC110-LJ3	1/4"	4 way (5 port)	Double Solenoid	Closed	AC110V	£148.13
MVSY-188M-4E2C-AC220-LJ3	1/4"	4 way (5 port)	Double Solenoid	Closed	AC220V	£155.41
MVSY-188M-4E2P-DC24-LJ3	1/4"	4 way (5 port)	Double Solenoid	Pressure	DC24V	£142.47
MVSY-188M-4E2P-AC110-LJ3	1/4"	4 way (5 port)	Double Solenoid	Pressure	AC110V	£148.13
MVSY-188M-4E2P-AC220-LJ3	1/4"	4 way (5 port)	Double Solenoid	Pressure	AC220V	£155.41
MVSY-188M-4E2R-DC24-LJ3	1/4"	4 way (5 port)	Double Solenoid	Exhaust	DC24V	£142.47
MVSY-188M-4E2R-AC110-LJ3	1/4"	4 way (5 port)	Double Solenoid	Exhaust	AC110V	£148.13
MVSY-188M-4E2R-AC220-LJ3	1/4"	4 way (5 port)	Double Solenoid	Exhaust	AC220V	£155.41

MVB-100 SERIES

MULTI CONNECTOR SYSTEM

Contact our team for pricing

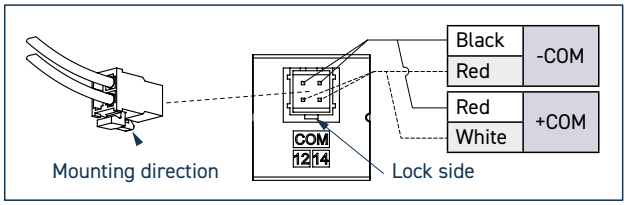


Specification

- 25-Pin D-sub connector (cable length 3m).
- Simple electric wire system.
- Max. operating frequency: 5Hz.

Remark

- Don't continuous energizing for about 2 hours or more.
- The total energizing time of a day don't exceeds the total non-energizing time even if it is intermittent energizing.
- Maximum number of stations
  4E1: 12 stations
  4E2 & 4EC.P.R: 11 stations
- For MVSY-100M series solenoid valve only (Only with LJ plug type).



* PLC type (PNP output) is applied to –COM.
* PLC type (NPN output) is applied to +COM

Order example (Multi connector system)

MVB1 — 100M — 5M4 — — SSDC — AC110 □ — F — G

- MODEL
- BODY WIDTH: **M**: Manifold type
- MANIFOLD: **5M**: 5 port (for manifold type)
- MANIFOLD NUMBER: **4, 5, 6, ... 12**
  * Maximum 12 stations
  Minimum 4 stations
- COM SPEC.: Blank: -COM; **N**: +COM (Only for **DC** voltage)
- SOLENOID VALVE

S	4E1: 5/2 Single solenoid
D	4E2: 5/2 Double solenoid
C	4E2C: 5/3 Double solenoid
P	4E2P: 5/3 Double solenoid
R	4E2R: 5/3 Double solenoid
B	Blocking plate

- VOLTAGE: **AC220**V(50/60)Hz; **AC110**V(50/60)Hz; **DC24**V; **DC12**V; **DC6**V
- POWER CONSUMPTION (Only for **DC12/24**V): Blank: 1.2W; **L**: 0.55W
- CONNECTOR: Blank: Without; **F**: With flat cable connector
- PORT THREAD: Blank: Rc thread; **G**: G thread; **NPT**: NPT thread

Order example of circuit board and manifold

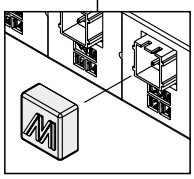
MVB1 — 100M — 5M6 — G

- MODEL
- **M**: Manifold type
- MANIFOLD: **5M**: 5 port (for manifold type)
- MANIFOLD NUMBER: **4, 5, 6..., 12**
- PORT THREAD: Blank: Rc thread; **G**: G thread; **NPT**: NPT thread

Order example of protective plate

* Use the same accessories with MVB-100.

MVB — 100 — P



Order example of connector

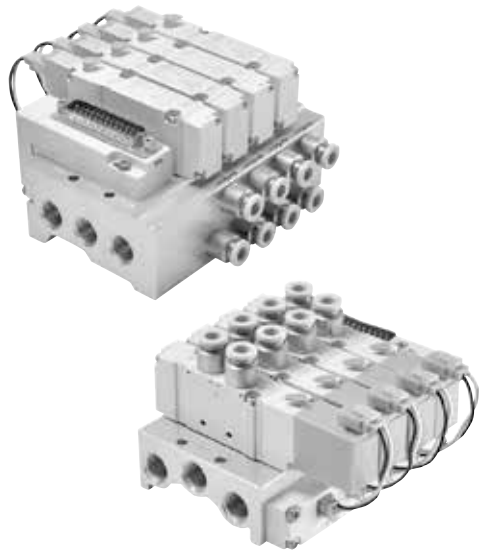
MVB1 — 100 — F

- **F**: Flat cable connector

MVB-156 SERIES

MULTI CONNECTOR SYSTEM

Contact our team for pricing

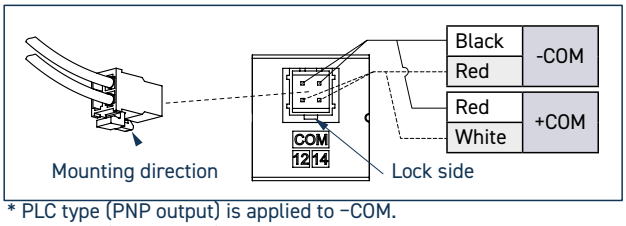


Specification

- 25-Pin D-sub connector (cable length 3m).
- Simple electric wire system.
- Max. operating frequency: 5Hz.

Remark

- Don't continuous energizing for about 2 hours or more.
- The total energizing time of a day don't exceeds the total non-energizing time even if it is intermittent energizing.
- Maximum number of stations
  4E1: 12 stations
  4E2 & 4E2C.P.R: 11 stations
- For MVSY-156M series solenoid valve only (Only with LJ plug type).



* PLC type (PNP output) is applied to –COM.
* PLC type (NPN output) is applied to +COM.

Order example (Multi connector system)

MVB — 156M4 — 5B4 □ □ — SSDC — AC110 — D — G

- **MODEL**
- **BODY WIDTH**
  - **C4**: Body ported type with tube fitting (dia. ø4mm)
  - **C6**: Body ported type with tube fitting (dia. ø6mm)
  - **C8**: Body ported type with tube fitting (dia. ø8mm)
  - **M4**: Manifold type with tube fitting (dia. ø4mm)
  - **M6**: Manifold type with tube fitting (dia. ø6mm)
  - **M8**: Manifold type with tube fitting (dia. ø8mm)
- **MANIFOLD**
  - **5B**: 5 port (for body ported type)
  - **5M**: 5 port (for manifold type)
- **MANIFOLD NUMBER**
  - **2, 3, 4..., 12**
- **COM SPEC.**
  - Blank: -COM
  - **N**: +COM
  - (for **DC** voltage)
- **SOLENOID VALVE TYPE**
  - Blank: MVSY-156
  - **P**: MVSP-156
- **CODE**

S	**4E1**: 5/2 Single solenoid
D	**4E2**: 5/2 Double solenoid
C	**4E2C**: 5/3 Double solenoid
P	**4E2P**: 5/3 Double solenoid
R	**4E2R**: 5/3 Double solenoid
B	Blocking plate

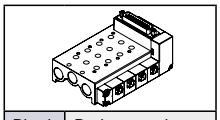
* Valves are assembled from the D-sub side.

- **VOLTAGE**
  - **AC220**V(50/60)Hz
  - **AC110**V(50/60)Hz
  - **DC24**V
  - **DC12**V
- **CONNECTOR**
  - Blank: Without
  - **D**: With D-sub connector
- **PORT THREAD**
  - Blank: Rc thread
  - **G**: G thread
  - **NPT**: NPT thread

Order example of circuit board and manifold

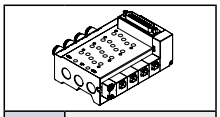
MVB — 156M4 — 5M3 — G

- **MODEL**
- Body ported type



Blank	Body ported type

Manifold type with tube fitting



M4	dia. ø4mm
M6	dia. ø6mm
M8	dia. ø8mm

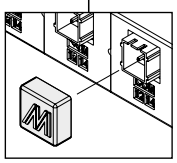
- **MANIFOLD**
  - **5B**: 5 port (for body ported type)
  - **5M**: 5 port (for manifold type)
- **MANIFOLD NUMBER**
  - **2, 3, 4..., 12**
- **PORT THREAD**
  - Blank: Rc thread
  - **G**: G thread
  - **NPT**: NPT thread

Order example of protective plate

* Use the same accessories with MVB-100.

MVB — 100 — P

- **MODEL**



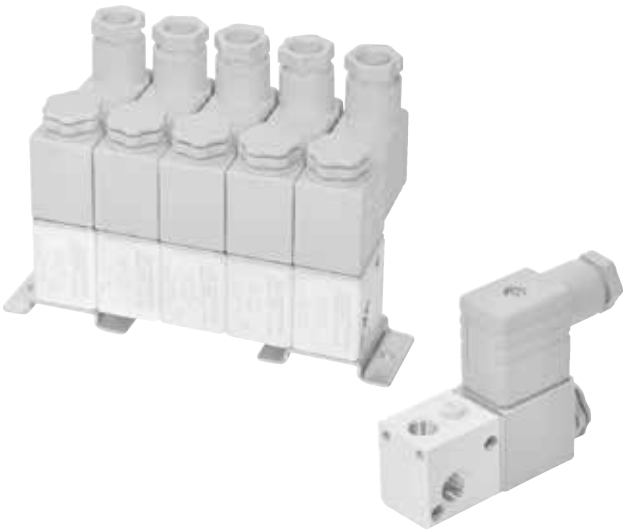
Order example of connector

MVB — 100 — D

- **MODEL**
- **D-SUB CONNECTOR**

MVDC-220 SERIES

SOLENOID VALVE (DIRECT OPERATED TYPE)



Specification

Model	3E1
Bore No.	6A
Port size	Rc1/8
No. of port	3
No. of position	2
Medium	Air
Operating perssure range	0.01~0.7 MPa
Proof pressure	1 MPa
Effective orifice	0.8 mm^2
Reponse time	20 ms
Ambient temperature	-5~+50°C (No freezing)
Voltage	AC110V, 220V (50/60)Hz, DC24V
Power consumption	AC=4.8/4.4VA, 6/4.9VA, DC=2W
Available voltage range	±10%
Insulation class	F class
Weight	155 g

Valves

Part Number	Port Size	No. of ports	Solenoid	Voltage	Price
MVDC-220-3E1-DC24V-L-G	1/8"	3 (3way)	Single Solenoid	DC24V	£39.74
MVDC-220-3E1-AC110V-L-G	1/8"	3 (3way)	Single Solenoid	AC110V (50/60)Hz	£39.74
MVDC-220-3E1-AC220V-L-G	1/8"	3 (3way)	Single Solenoid	AC220V (50/60)Hz	£39.74

Bracket

Part Number	Price
MVDC-220-B	£4.50

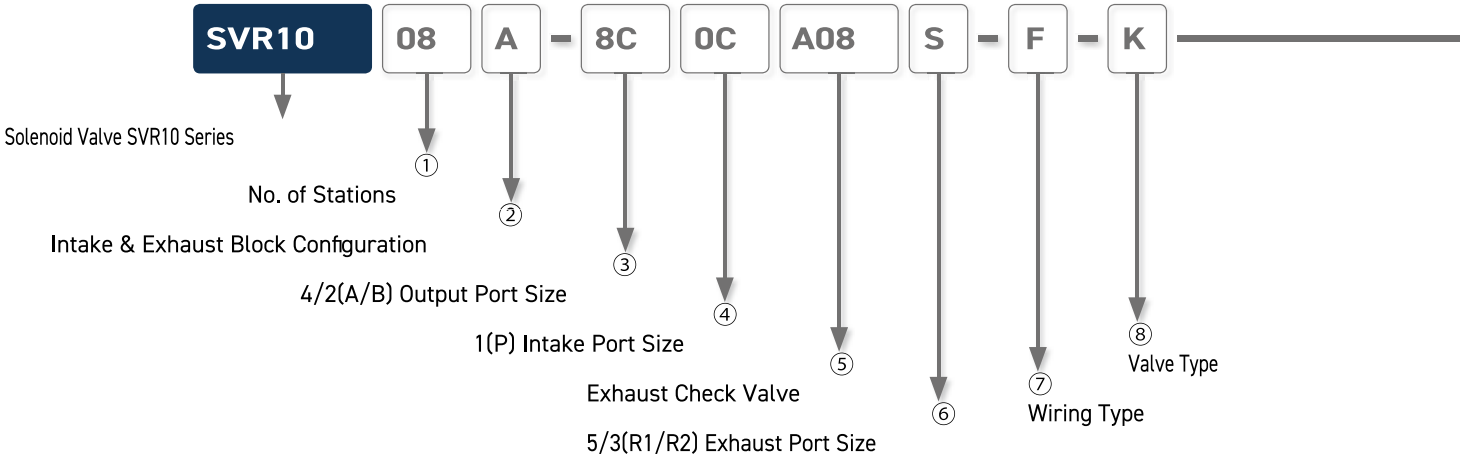
Connecting Screw

Part Number	Price Per Screw
MVDC-220-M	£2.12

SVR SERIES

MULTI CONNECTOR SYSTEM

■ Model Designation (Example)

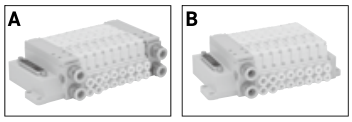


① No. of Stations

Code	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
No. of stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

② Intake & Exhaust Block Configuration

Code	A	B
Specification	Both Sides	One Side



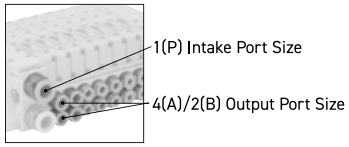
③ 4/2(A/B) Output Port Size

Fitting Type	Push-In Fitting (mm)						Push-In Fitting (inch)			
Code	1C	2C	3C	4C	6C	8C(*)	1/8C	5/32C	1/4C	5/16C(☒)
Size (mm)	Combination of Port Size	ø1.8	ø3	ø4	ø6	ø8	ø3.18	ø3.97	ø6.35	ø7.94
Port Position	Side									

* Compresstion Fitting Special for Urethane tube.

④ 1(P)Intake Port Size

Fitting Type	Push-In Fitting (mm)			Push-In Fitting (inch)		
Code	6C	8C	0C	1/4C	5/16C	3/8C
Size (mm)	ø6	ø8	ø10	ø3.18	ø7.94	ø9.53
Port Position	Side					



⑤ Exhaust Check Valve

No Code : Without Check Valve

A☒ : With Check Valve

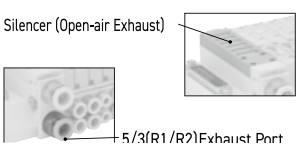
Code	A01	A02	A03	A04	A05	A06	A07	A08	A09	A10
Qty	1	2	3	4	5	6	7	8	9	10

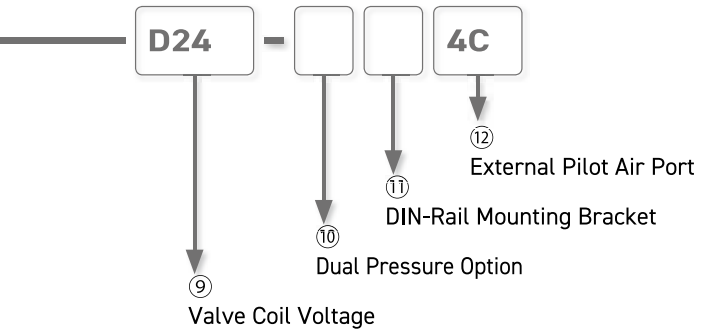
Code	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
Qty	11	12	13	14	15	16	17	18	19	20

* This option is not selectable for purchasing a Manifold-block only. Select Exhaust Check Valve Ass'y (SVR-EXV) for a Manifold-block separately.

⑥ 5/3(R1/R2) Exhaust Port Size

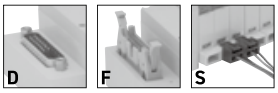
Fitting Type	Push-In Fitting (mm)			Push-In Fitting (inch)			Silencer (Open-air Exhaust)
Code	6	8	0	1/4	5/16	3/8	S
Size (mm)	ø6	ø8	ø10	ø6.35	ø7.94	ø9.53	–





⑦ Wiring Type

Code	Wiring Type
D	Sub-D connector
S	Individual Plug-in Connector
F	Flat Cable (Ribbon Cable) Connector



⑧ Valve Type

Code	No. of Port	No. of Position	Valve Type
S	5	2	Single Solenoid
D	5	2	Double Solenoid
E	3	2	4(A), 2(B). Normally Closed (Twin 3-Way Valve)
F	3	2	4(A), 2(B). Normally Open (Twin 3-Way Valve)
G	3	2	4(A). Normally Closed, 2(B). Normally Open (Twin 3-Way Valve)
H	3	2	4(A). Normally Open, 2(B). Normally Closed (Twin 3-Way Valve)

Code	No. of Port	No. of Position	Valve Type
A	5	3	Closed Center
R	5	3	Exhaust Center
P	5	3	Pressure Center
K	–	–	Combination of Valves
B	–	–	Block Plate
M	–	–	Manifold-block Only

⑨ Valve Coil Voltage

Code	D24	A100
Coil Voltage	DC24V	AC100V

⑩ Dual Pressure Option

Code	No Code	P
Supply Pressure	Single Pressure	Dual Pressure

* Please specify where on the manifold to mount using the order form. (Refer to page 100).
For the manifold type with Dual Pressure, Intake & Exhaust Block "A" (Intake & Exhaust Block on Both Sides) is only selectable.

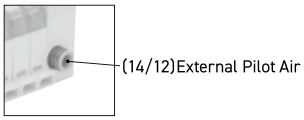
⑪ DIN-Rail Mounting Bracket

Code	No Code	D
Bracket Spec.	Without Bracket	With Bracket (*)

* 1 set (2pcs) is equipped.

⑫ External Pilot Air (14/12)

Code	Spec.	Fitting Size & Type
No Code	Internal Pilot Air	–
4C	External Pilot Air	ø4mm • Straight Type
6C	External Pilot Air	ø6mm • Straight Type
4L	External Pilot Air	ø4mm • Elbow Type
6L	External Pilot Air	ø6mm • Elbow Type



SVR SERIES
PRICE LIST

Notes	Item code	Price
Single Solenoid	SVR10S-D24D	£106.73
Double Solenoid	SVR10D-D24D	£134.54
4(A), 2(B). Normally Closed (Twin 3-Way Valve)	SVR10E-D24D	£146.49
2 4(A). Normally Closed, 2(B). Normally Open (Twin 3-Way Valve)	SVR10F-D24D	£146.49
4(A). Normally Closed, 2(B). Normally Open (Twin 3-Way Valve)	SVR10G-D24D	£146.49
4(A). Normally Open, 2(B). Normally Closed (Twin 3-Way Valve	SVR10H-D24D	£146.49
5/3 closed centre	SVR10A-D24D	£146.49
5/3 exhaust centre	SVR10R-D24D	£146.49
5/3 pressure centre	SVR10P-D24D	£146.49
blank	SVR10B	£14.54
Single Solenoid - individual wiring	SVR10S-D24S	£95.18
Double Solenoid - individual wiring	SVR10D-D24S	£129.76
5/3 closed centre - individual wiring	SVR10A-D24S	£141.31
5/3 exhaust centre - individual wiring	SVR10R-D24S	£141.31
5/3 pressure centre - individual wiring	SVR10P-D24S	£141.31

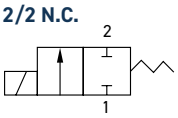
Item code	Price
SVR1004A-6C8C8-D-M	£232.14
SVR1006A-6C8C8-D-M	£320.11
SVR1008A-6C8C8-D-M-P	£429.09
SVR1010A-6C8C8-D-M-P	£494.86
SVR1012A-6C8C8-D-M-P	£560.64
SVR1016A-6C8C8-S(*)-M-P	£508.95

Outlet	Item code	Price
4C	CJC09-04A	£3.19
6C	CJC09-06A	£2.39
8C	CJC09-08A	£6.03
Inlet	**Item code**	**Price**
6C	CJC14-06	£3.27
8C	CJC14-08	£3.42
0C	CJC14-10	£3.50
Description	**Item code**	**Price**
9 Pin Din Connector - 1 M	PCVV9-100	£8.31
9 Pin Din Connector - 2 M	PCVV9-200	£16.59
25 Pin Din Connector 1 M	PCVV25-100	£17.70
25 Pin Din Connector 3 M	PCVV25-300	£53.11
Description	**Item code**	**Price**
Individual Cable to suit SVR10S-D24S	CSV032B01-C150	£3.59
Individual Cable to suit SVR10D/A/R/P/-DC24V	CSV033B01-C150	£4.81

MCS SERIES

2/2 WAY N.C. PLUNGER TYPE DIRECT ACTING SOLENOID VALVE

Contact our team for pricing



Specification

- IP65 waterproof coil.
- Continuous cycle, 100% ED
- Ex coil is EExm II T4 or EEx ia II C T6 PTB approval.
- Ambient temp.: -15~+50°C
- Voltage tolerance: ±8%
- Installing position is free. (You'd better put the coil upright)
- The Max. Orifice for seal **J**=5.0mm, **T**=4.0mm, **R**=2.5mm, **Z**=5.0mm.

Order example

MCS — 06 — 2 — J — 5 — D — AC110

MODEL	CODE	FIG.	SEAL MAT'L	COIL	PLUG	VOLTAGE
	06: 1/4 **10**: 3/8 **15**: 1/2 **20**: 3/4	**1, 2, 3, 4, 5, 6, 7, 8, 9**	**N**: NBR **J**: EPDM **V**: Viton **T**: Teflon (*1) **R**: RUBY (*1) **Z**: FFKM	**4**: #4 **5**: Bigger **3E**: Explosion-Proof (*2)	Blank: DIN **D**: LED **G**: 1/2" NPT	**AC220**V(50/60)Hz **AC110**V(50/60)Hz **DC24**V

*1. When the seal material is (T) Teflon or (R) RUBY, the valve has slight leakage, not suitable for vacuum.
*2. Explosion-Proof (3E) coil with LED (D) plug is not applicable.

Weight

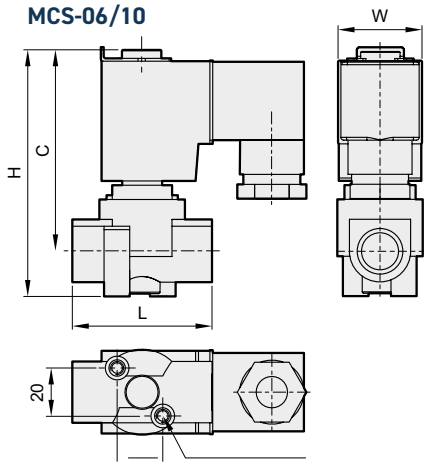
Unit: kg

Model	MCS		
Coil Code	**4**	**5**	**3E**
06	0.43	0.51	0.74
10	0.41	0.49	0.72
15	0.47	0.55	0.80
20	0.55	0.63	0.88
Coil power			
AC (VA)	18.0	24.0	8.6
DC (W)	15.0	18.5	10.0

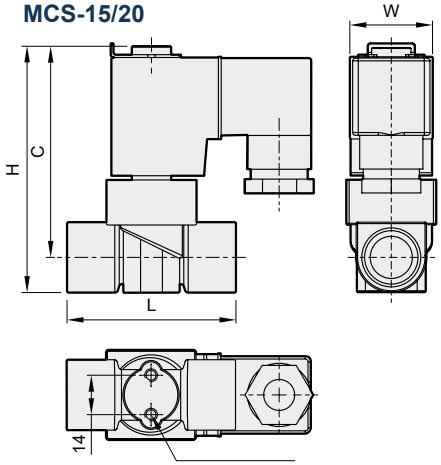
Dimensions

Code / Dimension (mm)		06	10	15	20
L		49		55	60
H		86		88	91
C		71		74	74
W	Coil 4	30		32	
	Coil 5	36		36	
	Coil 3E	36		36	

MCS-06/10



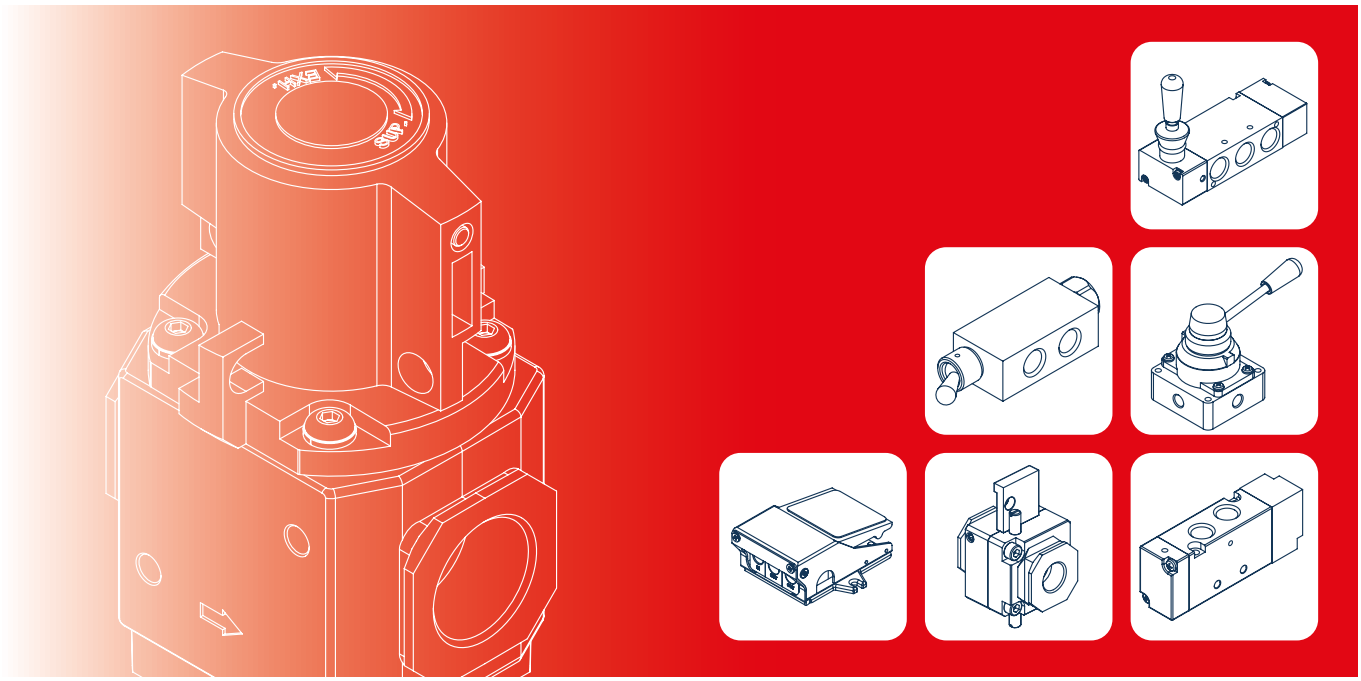
MCS-15/20



Model **MCS**: Forged brass body, 2/2 way N.C. Available fluid: water, air, gas, vacuum, light oil (50cst down) etc.

Code (Port) G	Fig. no.	Seal mat'l	Coil	Orifice mm	Seal temp.°C												Max. O.P.D bar (Min. 0 bar)						CV	VAC. torr
					Coil 4, 3E						Coil 5						Coil 4		Coil 5		Coil 3E			
					N	J	V	R	T	Z	N	J	V	R	T	Z	AC	DC	AC	DC	AC	DC		
06(1/4) 10(3/8) 15(1/2) 20(3/4)	1	N J V T R Z	4 5 3E	1.6	-5 ~ 80	-10 ~ 145		-20 ~ 160			-5 ~ 80	-10 ~ 145		-20 ~ 185			30	20	40	30	25	20	0.10	10^{-2}
	2			2.0													24	14	30	28	16	12	0.15	
	3			2.5													17	10	24	20	10	8	0.20	
	4			3.0													10	6	16	13	7	6	0.31	
	5			4.0													8	4	12	8	4.5	3.5	0.54	10^{-1}
	6			5.0													6	2	9	5	2.5	2	0.80	
	7			5.5													4	2	7	4	2	2	0.95	
	8			7.5													2	0.8	3	2	1	1	1.10	10
	9			10.0													0.8	0.4	1.6	0.8	0.4	0.4	1.30	

PILOT & MECHANICAL VALVE RANGE



PILOT VALVE

MVAA MVAA-180 ..... p.57
MVAA-220 ..... p.58
MVAA-300 ..... p.59
MVAA-460 ..... p.60

MECHANICAL VALVE

MVMC MVMC-210 ..... p.61
MVMC-220-4* p.62

HAND LEVER VALVE

MVHB MVHB-220 ..... p.64

HAND LEVER VALVE

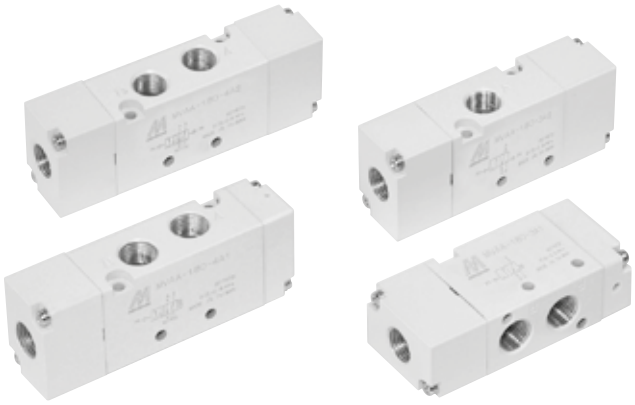
MVHC p.65

FOOT PEDAL VALVE

MVFA p.66

MVAA-180 SERIES

PILOT VALVE



Specification

Model	3A1	3A2	4A1	4A2
Bore No.	6A			
Port size	Rc1/8			
No. of port	3		5	
Medium	Air			
Operating pressure range (MPa)	0~0.8		0.15~0.8	0~0.8
Proof pressure	1 MPa			
Effective orifice	12 mm^2			
Pilot pressure range	(0.45×P*+0.1)~0.8 MPa			
Ambient temperature	-5~+60°C (No freezing)			
Weight	61 g	74 g	71 g	84 g

* P: Operating pressure.

Part Number	Port Size	Type	Pilot	Normally Open/ Normally Closed	Price
MVAA-180-3A1-NC-G	1/8"	3 way (3 port)	Single Pilot	Normally Closed	£33.26
MVAA-180-3A1-NO-G	1/8"	3 way (3 port)	Single Pilot	Normally open	£33.26
MVAA-180-3A2-G	1/8"	3 way (3 port)	Double Pilot	N/A	£36.90
MVAA-180-4A1-G	1/8"	4 way (5 port)	Single Pilot	N/A	£33.26
MVAA-180-4A2-G	1/8"	4 way (5 port)	Double Pilot	N/A	£36.90

MVAA-220 SERIES

PILOT VALVE

Specification

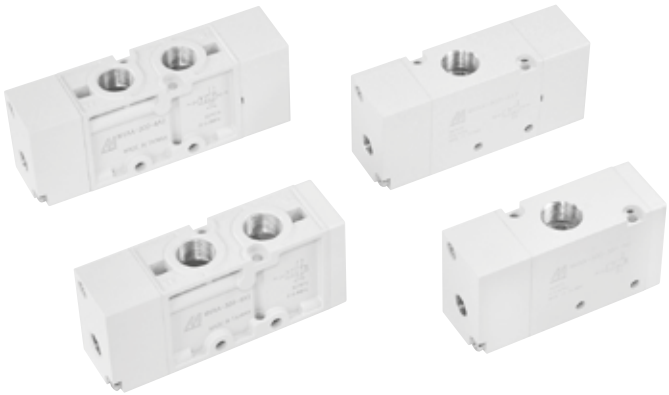
Model	3A1	3A2	4A1	4A2	4A2C.P.R
Bore No.	8A				
Port size	Rc1/4				
No. of port	3		5		
Medium	Air				
Operating pressure range	0~0.8 MPa				
Proof pressure	1 MPa				
Effective orifice	18 mm^2				
Pilot pressure range	(0.3×P*+0.1)~0.8 MPa				
Ambient temperature	-5~+60℃ (No freezing)				
Weight	122 g	134 g	106 g	134 g	179 g

* P: Operating pressure.

Part Number	Port Size	Type	Pilot	Centre Type	Normally Open/ Normally Closed	Price
MVAA-220-3A1-NC-G	1/4"	3 way (3 port)	Single Pilot	N/A	Normally Closed	£32.73
MVAA-220-3A1-NO-G	1/4"	3 way (3 port)	Single Pilot	N/A	Normally open	£32.73
MVAA-220-3A2-G	1/4"	3 way (3 port)	Double Pilot	N/A	N/A	£38.10
MVAA-220-4A1-G	1/4"	4 way (5 port)	Single Pilot	N/A	N/A	£32.73
MVAA-220-4A2-G	1/4"	4 way (5 port)	Double Pilot	N/A	N/A	£38.10
MVAA-220-4A2-C-G	1/4"	4 way (5 port)	Double Pilot	Closed centre	N/A	£67.76
MVAA-220-4A2-P-G	1/4"	4 way (5 port)	Double Pilot	Pressure centre	N/A	£67.76
MVAA-220-4A2-R-G	1/4"	4 way (5 port)	Double Pilot	Exhaust centre	N/A	£67.76

MVAA-300 SERIES

PILOT VALVE



Specification

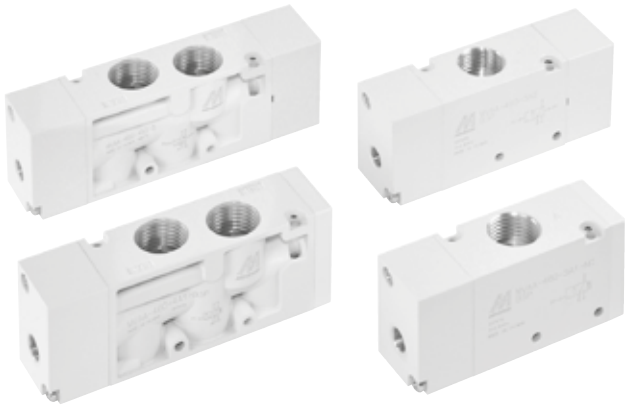
Model	3A1	3A2	4A1	4A2	4A2C.P.R
Bore No.	10A				
Port size	Rc3/8				
No. of port	3		5		
Medium	Air				
Operating pressure range	0~0.8 MPa				
Proof pressure	1 MPa				
Effective orifice	35 mm^2				
Pilot pressure range	(0.34×P*+0.1)~0.8 MPa				
Ambient temperature	-5~+60°C (No freezing)				
Weight	295 g	324 g	236 g	301 g	385 g

* P: Operating pressure.

Part Number	Port Size	Type	Pilot	Centre Type	Normally Open/ Normally Closed	Price
MVAA-300-3A1-NC-G	3/8"	3 way (3 port)	Single Pilot	N/A	Normally Closed	£42.01
MVAA-300-3A1-NO-G	3/8"	3 way (3 port)	Single Pilot	N/A	Normally open	£42.01
MVAA-300-3A2-G	3/8"	3 way (3 port)	Double Pilot	N/A	N/A	£48.63
MVAA-300-4A1-G	3/8"	4 way (5 port)	Single Pilot	N/A	N/A	£42.01
MVAA-300-4A2-G	3/8"	4 way (5 port)	Double Pilot	N/A	N/A	£48.63
MVAA-300-4A2-C-G	3/8"	4 way (5 port)	Double Pilot	Closed centre	N/A	£75.06
MVAA-300-4A2-P-G	3/8"	4 way (5 port)	Double Pilot	Pressure centre	N/A	£75.06
MVAA-300-4A2-R-G	3/8"	4 way (5 port)	Double Pilot	Exhaust centre	N/A	£75.06

MVAA-460 SERIES

PILOT VALVE



Specification

Model	3A1	3A2	4A1	4A2	4A2C.P.R
Bore No.	15A				
Port size	G1/2				
No. of port	3		5		
Medium	Air				
Operating pressure range	0~0.8 MPa				
Proof pressure	1 MPa				
Effective orifice	50 mm^2				
Pilot pressure range	(0.34×P*+0.1)~0.8 MPa				
Ambient temperature	-5~+60°C (No freezing)				
Weight	300 g	326 g	275 g	338 g	410 g

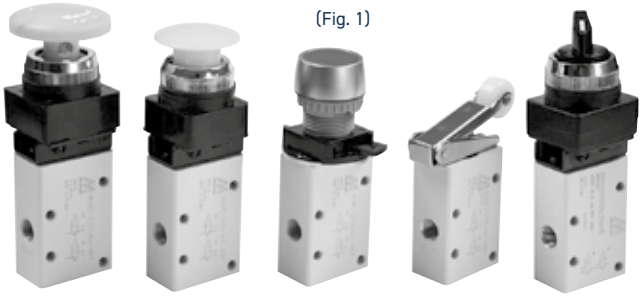
* P: Operating pressure.

Part Number	Port Size	Type	Pilot	Centre Type	Normally Open/ Normally Closed	Price
MVAA-460-3A1-NC-G	1/2"	3 way (3 port)	Single Pilot	N/A	Normally Closed	£53.01
MVAA-460-3A1-NO-G	1/2"	3 way (3 port)	Single Pilot	N/A	Normally open	£53.01
MVAA-460-3A2-G	1/2"	3 way (3 port)	Double Pilot	N/A	N/A	£59.84
MVAA-460-4A1-G	1/2"	4 way (5 port)	Single Pilot	N/A	N/A	£53.01
MVAA-460-4A2-G	1/2"	4 way (5 port)	Double Pilot	N/A	N/A	£59.84
MVAA-460-4A2-C-G	1/2"	4 way (5 port)	Double Pilot	Closed centre	N/A	£94.34
MVAA-460-4A2-P-G	1/2"	4 way (5 port)	Double Pilot	Pressure centre	N/A	£94.34
MVAA-460-4A2-R-G	1/2"	4 way (5 port)	Double Pilot	Exhaust centre	N/A	£94.34

MVMC-210 SERIES

MECHANICAL VALVE

(Fig. 1)



Actuator-holder

(Fig. 2)

- Type ø22 only show body and actuator-holder in (Fig. 2).
- Type ø25, ø30 fix bracket in (Fig. 1).
- Type ø22 actuator set or released by one-action.

Specification

Model	MVMC-210	
Bore No.	6A	8A
Port size	Rc1/8	Rc1/4
No. of port	3	
No.of position	2	
Medium	Air	
Operating pressure range	0~1 MPa	
Proof pressure	1 MPa	
Effective orifice	19 mm^2	
Ambient temperature	-5~+60°C (No freezing)	
Weight	155 g	

Valves

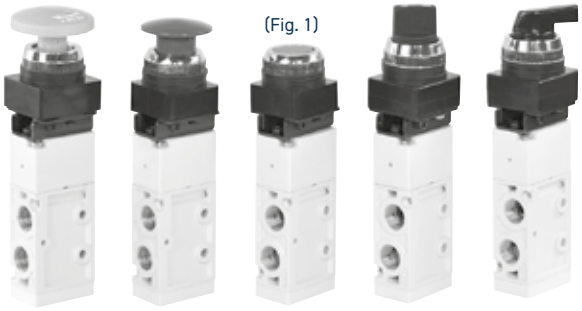
Part Number	Port Size	Type	Price
MVMC-210-6A-3XX-22	1/8"	3 way (3 port)	£34.15
MVMC-210-8A-3XX-22	1/4"	3 way (3 port)	£34.15

Buttons (see page 63 for dimensions)

Part Number	Button Size	Colour	Button Type	Price
MVMC-EB-22R	ø22	Red	Latching Palm Button	£11.01
MVMC-LB-22B	ø22	Black	Extended twist button	£8.10
MVMC-TB-22B	ø22	Black	Twist button	£8.10
MVMC-PB-22B	ø22	Black	Mushroom palm button	£6.30
MVMC-PB-22G	ø22	Green	Mushroom palm button	£6.30
MVMC-PB-22R	ø22	Red	Mushroom palm button	£6.30
MVMC-PP-22B	ø22	Black	Push button	£4.51
MVMC-PP22G	ø22	Green	Push button	£4.51
MVMC-PP-22R	ø22	Red	Push button	£4.51

MVMB-220-4** SERIES

MECHANICAL VALVE



(Fig. 1)

Actuator-holder

(Fig. 2)

- Type ø22 only show body and actuator-holder in (Fig. 2).
- Type ø25, ø30 fix bracket in (Fig. 1).
- Type ø22 actuator set or released by one-action.
- Type ø25, ø30 Actuator set or released by screwdriver.

Specification

Model	MVMB-220-4**
Bore No.	8A
Port size	Rc1/4
No. of port	5
No.of position	2
Medium	Air
Operating pressure range	0.15~0.8 MPa
Proof pressure	1 MPa
Effective orifice	18 mm^2
Ambient temperature	-5~+60°C (No freezing)
Weight	180 g

Valves

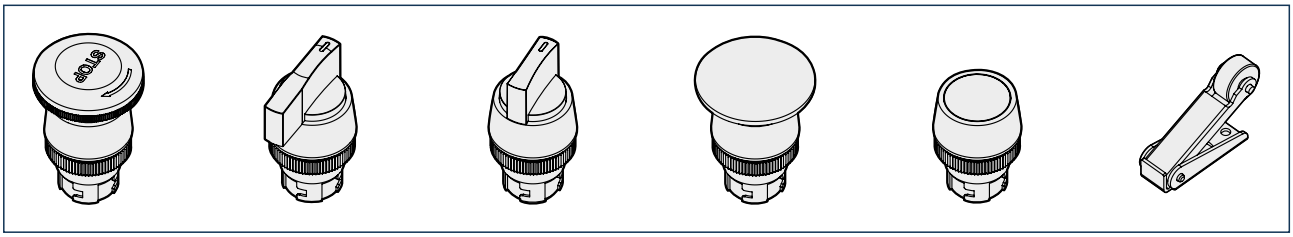
Part Number	Port Size	Type	Price
MVMB-220-8A-4XX-22	1/4"	4way (5 port)	£34.59

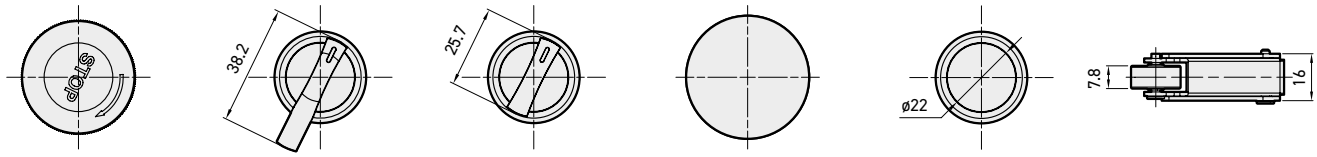
Buttons

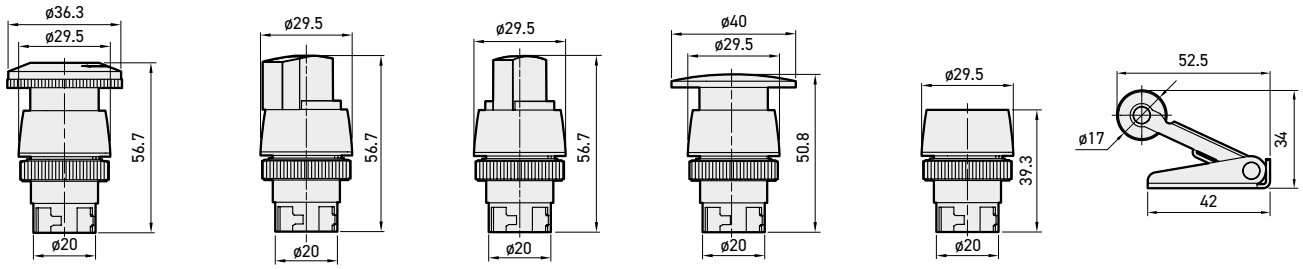
Part Number	Button Size	Colour	Button Type	Price
MVMB-EB-22R	ø22	Red	Latching Palm Button	£11.01
MVMB-LB-22B	ø22	Black	Extended twist button	£8.10
MVMB-TB-22B	ø22	Black	Twist button	£8.10
MVMB-PB-22B	ø22	Black	Mushroom palm button	£6.30
MVMB-PB-22G	ø22	Green	Mushroom palm button	£6.30
MVMB-PB-22R	ø22	Red	Mushroom palm button	£6.30
MVMB-PP-22B	ø22	Black	Push button	£4.51
MVMB-PP22G	ø22	Green	Push button	£4.51
MVMB-PP-22R	ø22	Red	Push button	£4.51

MVMC/MVMB Buttons

EB-22	LB-22	TB-22	PB-22	PP-22	R1
Latching palm button	Extended twist button	Twist button	Mushroom palm button	Push button	Roller lever







MVHB-220 SERIES

HAND LEVER VALVE

Specification

Model	MVHB-220-4TV MVHB-220-4TV-SP	MVHB-220-4TV* MVHB-220-4TV*-SP
Bore No. (Port size)	8A (Rc1/4)	
No. of port	5	
No.of position	2	3
Medium	Air	
Operating pressure range	0~0.8 MPa	
Effective orifice	18 mm^2	16 mm^2
Ambient temperature	-5~+60°C (No freezing)	
Weight	193 g	234 g

Part Number	Port Size	Type	Centre	Return	Price
MVHB-220-4TV-G	1/4"	4way (5 port)	5/2	-	£48.39
MVHB-220-4TVC-G	1/4"	4way (5 port)	Closed center (5/3)	-	£48.39
MVHB-220-4TVP-G	1/4"	4way (5 port)	Pressure center(5/3)	-	£48.39
MVHB-220-4TVR-G	1/4"	4way (5 port)	Exhaust center (5/3)	-	£48.39
MVHB-220-4TV-SP-G	1/4"	4way (5 port)	5/2	Spring Return	£58.40
MVHB-220-4TVC-SP-G	1/4"	4way (5 port)	Closed center (5/3)	Spring Return	£58.40
MVHB-220-4TVP-SP-G	1/4"	4way (5 port)	Pressure center(5/3)	Spring Return	£58.40
MVHB-220-4TVR-SP-G	1/4"	4way (5 port)	Exhaust center (5/3)	Spring Return	£58.40

MVHC SERIES

ROTARY HAND LEVER VALVE

Need to condense ?

Specification

Model	MVHC-2**		MVHC-3**			MVHC-4**			
Bore No.	6A	8A	8A	10A	15A	8A	10A	15A	20A
No. of port	4								
Medium	Air								
Operating pressure range	0.05~1 MPa								
Effective orifice (mm^2)	7		26	29	33	26	59	64	71
Ambient temperature	-5~+60°C (No freezing)								
Option	Mounting nut								
Weight	280 g		420 g			1100 g			

Bore size / Model	6A	8A	10A	15A	20A
	Rc1/8	Rc1/4	Rc3/8	Rc1/2	Rc3/4
MVHC-2**	●	●			
MVHC-3**		●	●	●	
MVHC-4**		●	●	●	●

Part Number	Port Size	Price
MVHC-200-4H-6A-G	1/8"	£42.96
MVHC-200-4H-8A-G	1/4"	£42.96
MVHC-200-M (Mounting Nut)	-	£6.62
MVHC-201-4H-6A-G	1/8"	£48.26
MVHC-201-4H-8A-G	1/4"	£48.26
MVHC-202-4H-6A-G	1/8"	£48.26
MVHC-202-4H-8A-G	1/4"	£48.26
MVHC-300-4H-10A-G	3/8"	£46.19
MVHC-300-4H-15A-G	1/2"	£46.19
MVHC-300-4H-8A-G	1/4"	£46.19
MVHC-300-M (Mounting Nut)	-	£8.29
MVHC-301-4H-15A-G	1/2"	£51.49
MVHC-301-4H-8A-G	1/4"	£51.49
MVHC-302-4H-10A-G	3/8"	£51.49
MVHC-302-4H-15A-G	1/2"	£51.49
MVHC-302-4H-8A-G	1/4"	£51.49
MVHC-320-4H-10A-G	3/8"	£51.49
MVHC-322-4H-10A-G	3/8"	£54.48
MVHC-400-4H-10A-G	3/8"	£61.82
MVHC-400-4H-15A-G	1/2"	£61.82
MVHC-400-4H-20A-G	3/4"	£61.82
MVHC-400-M (Mounting Nut)	-	£9.93
MVHC-401-4H-20A-G	3/4"	£67.12
MVHC-402-4H-10A-G	3/8"	£67.12
MVHC-402-4H-15A-G	1/2"	£67.12

MVFA SERIES

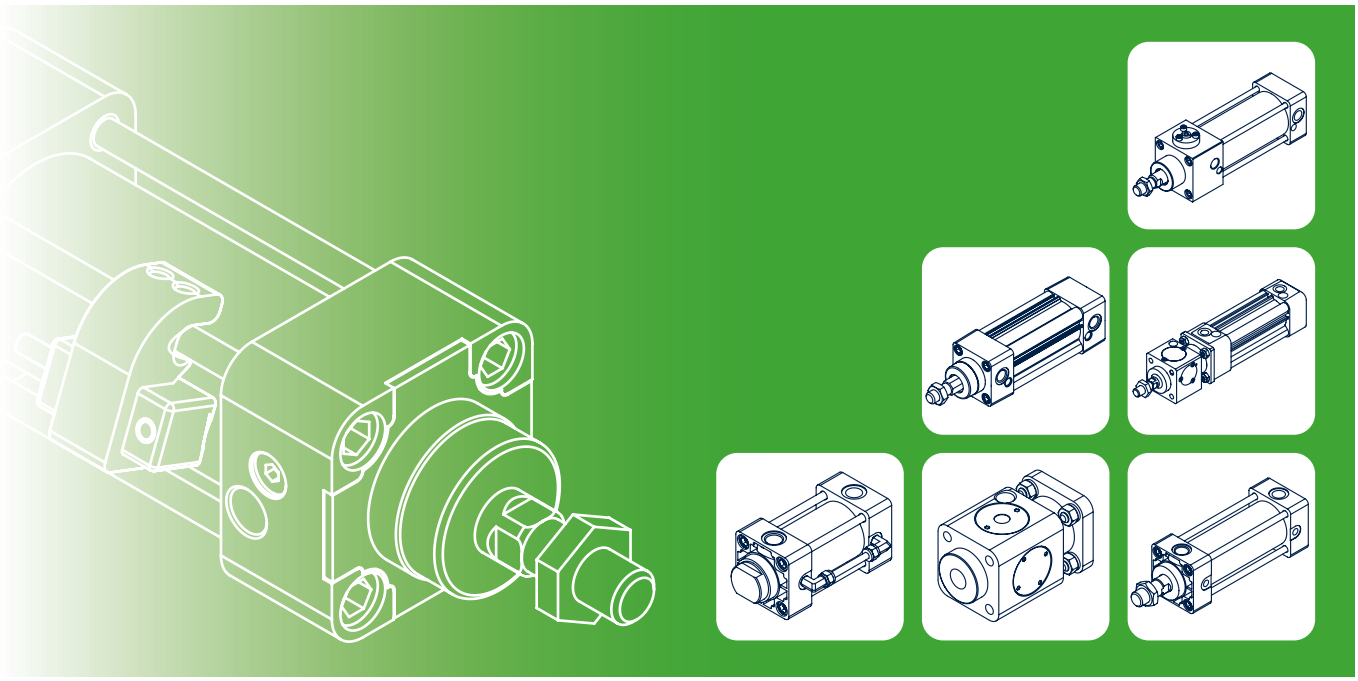
FOOT PEDAL VALVE

Specification

Model	MVFA-230	MVFA-231	MVFA-240
Bore No.	8A		
Port size	Rc1/4		
No. of port	3		4
No. of position	2		
Medium	Air		
Operating pressure range	0.2~0.7 MPa		
Proof pressure	1 MPa		
Effective orifice	8 mm^2		
Ambient temperature	-5~+60°C (No freezing)		
Weight (with protection)	684 (1426) g	739 (1481) g	774 (1516) g

Part Number	Port Size	Type	Centre	Protection	Lock	Price
MVFA-230-8A-G	1/4"	3/2	NC	-	-	£55.23
MVFA-230-8A-L-G	1/4"	3/2	NC	-	With lock	£60.90
MVFA-230-8A-P-G	1/4"	3/2	NC	With protection	-	£81.07
MVFA-230-8A-PL-G	1/4"	3/2	NC	With protection	With lock	£90.02
MVFA-231-8A-G	1/4"	3/2	NO	-	-	£55.23
MVFA-231-8A-L-G	1/4"	3/2	NO	-	With lock	£60.90
MVFA-231-8A-P-G	1/4"	3/2	NO	With protection	-	£81.07
MVFA-231-8A-PL-G	1/4"	3/2	NO	With protection	With lock	£90.02
MVFA-240-8A-G	1/4"	3/2	-	-	-	£70.02
MVFA-240-8A-L-G	1/4"	3/2	-	-	With lock	£75.69
MVFA-240-8A-P-G	1/4"	3/2	-	With protection	-	£93.63
MVFA-240-8A-PL-G	1/4"	3/2	-	With protection	With lock	£102.55

PNEUMATIC CYLINDER RANGE



ISO-VDMA CYLINDER

MCQ* MCQI2 ..... p.68-71
MVQV p.72-75
VDMA ACCESSORIES p.76-78

MINIATURE CYLINDER

MCMI p.79-84

ROD LOCKING UNIT

MCB* p.85-89

COMPACT CYLINDER

MCJI p.90-93
UNITOP ADM p.94-97
GUIDED MCGI p.98-99
MCJQ p.100-112

TWIN-GUIDE CYLINDER

MCGS p.113-116

ROUND CYLINDER

MCCG p.117-122

POWER CYLINDER

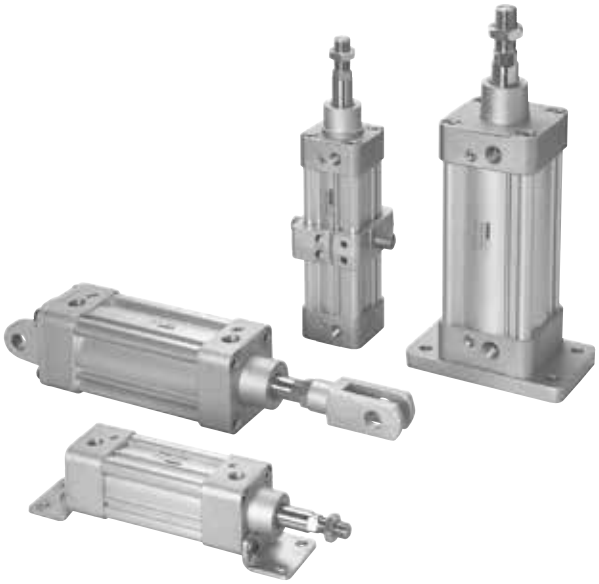
MHPD p.123-127

MCQI2 SERIES

ISO-VDMA STANDARD **PROFILE** CYLINDER

FULLY STAINLESS STEEL OPTIONS AVAILABLE

SAMEDAY BUILD PREMIUM AVAILABLE



Features

- **Non lubrication**

  Special housing and bushing enables self lubrication of piston rod.

- **High quality long service life**

  Hard anodised aluminium cylinder tubes offer a high resistance to corrosion and low internal friction.

- **ISO-VDMA standard specification**

  Conforms to ISO-6431 and VDMA 24562 specification enabling worldwide interchangeability.

- **Easy to insert reed switch**

  With four grooves on the tube, proximity and reed sensors can be easily inserted into any position.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø32,40	50,75,100,125,150,175,200,250,300,350,400,450,500
ø50,63	↑ 600
ø80,100,125	↑ 600,700

· Stroke out of specification is also available.
· Please consult us if stroke out of specification.

Specification

Model	MCQI2
Tube I.D. (mm)	32,40,50,63,80,100
Medium	Air
Operating perssure range	0.05~1 MPa
Proof pressure	1.5 MPa
Ambient temperature	-5~+60°C (No freezing)
Available speed range	50~500 mm/sec
Sensor switch (*)	AL39

* AL39 specification, please refer to page 205.

Order example

MCQI2 — 11 — 50 — 100M — VIT

- MCQI2 — MODEL
- 11 — **1**: Single rod, **2**: Double rod
- 50 — TUBE I.D.
- 100 — STROKE
- M — **M**: Magnet
- VIT — **Blank**: Standard seals, **VIT**: VITON Seals

STYLE

Code	Symbol	Description
10		Double acting / Male thread Stainless Steel
11		Double acting / Male thread Chrome (standard)
12		Double acting / Female thread Chrome
120		Double acting / Female thread Stainless Steel
20		Double rod / Male thread Stainless Steel
21		Double rod / Male thread Chrome
27		Double rod / Adjustable male thread (*) Chrome
270		Double rod / Adjustable male thread (*) Stainless Steel

Contact us for Rc or NPT thread.

Mounting accessories

* Use the same accessories with **MCQV**.

FAC — MCQV — 50

- FAC — MODEL
- MCQV — MODEL
- 50 — TUBE I.D.

MOUNTING TYPE

	LB
	CA
	CB
	CDB (+CB+PIN)*
	FAC
	FBC
	TA
	TB
	CICP
	Y
	I
	YS (Y+Floating+PIN)

* CB+PIN have to extra purchase.

Model is MCQI2

Refer to MCQV dimension

MCQI2 SERIES

PRICE LIST

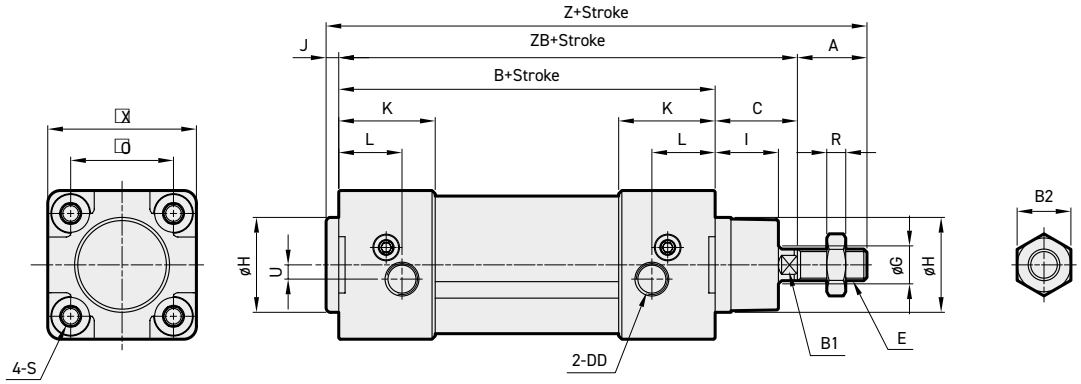
SAMEDAY BUILD
PREMIUM AVAILABLE

Stroke (mm)	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø	125Ø
Up to 25	£67.37	£73.70	£85.62	£107.98	£152.86	£185.50	£318.19
26-50	£68.95	£75.44	£86.95	£111.19	£154.27	£187.09	£319.78
51-100	£75.73	£81.38	£98.82	£124.02	£162.23	£209.27	£345.14
101-125	£77.37	£84.65	£101.82	£124.74	£165.12	£209.27	£351.41
126-160	£79.70	£87.18	£106.12	£132.61	£167.31	£222.14	£381.49
161-200	£80.22	£90.08	£111.06	£142.06	£175.77	£234.99	£396.36
201-250	£90.33	£98.80	£116.03	£145.35	£188.39	£247.86	£418.34
251-320	£95.26	£104.14	£127.64	£159.52	£209.18	£260.74	£427.43
321-350	£95.90	£108.56	£128.57	£164.31	£209.18	£273.57	£432.33
351-400	£100.86	£113.43	£132.88	£166.56	£218.62	£286.44	£442.21
401-450	£104.13	£118.32	£140.47	£173.73	£227.86	£299.29	£456.59
451-500	£107.85	£123.04	£146.51	£193.71	£237.27	£312.16	£469.62
501-550	£113.73	£136.66	£163.18	£200.85	£263.75	£325.66	£484.90
551-600	£113.73	£136.66	£163.18	£200.85	£263.75	£337.86	£498.49
601-650	£121.50	£148.80	£175.26	£215.45	£283.17	£350.02	£514.74
651-700	£121.50	£149.15	£175.26	£215.45	£283.17	£363.60	£527.07
701-750	£127.99	£149.15	£182.16	£223.41	£291.96	£375.20	£535.54
751-800	£131.85	£153.02	£187.61	£216.89	£302.43	£389.31	£544.54
801-850	£137.10	£166.38	£199.88	£244.72	£321.71	£407.03	£558.13
851-900	£137.10	£166.38	£199.88	£244.72	£321.71	£415.05	£569.71
901-950	£140.64	£171.10	£205.88	£251.79	£331.14	£431.96	£589.62
951-1000	£158.04	£175.50	£205.88	£251.79	£331.14	£440.72	£618.42
1001-1100	£168.43	£188.73	£224.82	£272.40	£355.87	£474.43	£667.83
1101-1200	£178.82	£201.96	£243.76	£293.00	£380.60	£508.14	£717.25
1201-1300	£189.21	£215.20	£262.70	£313.61	£405.33	£541.85	£766.66
1301-1400	£199.60	£228.43	£281.64	£334.21	£430.06	£575.56	£816.07
1401-1500	£209.98	£241.66	£300.58	£354.82	£454.79	£609.27	£865.49
1501-1600	£220.37	£254.89	£319.52	£375.42	£479.52	£642.98	£914.90
1601-1700	£230.76	£268.12	£338.46	£396.02	£504.25	£676.68	£964.31
1701-1800	£241.15	£281.35	£357.40	£416.63	£528.98	£710.39	£1,013.73
1801-1900	£251.54	£294.59	£376.34	£437.23	£553.71	£744.10	£1,063.14
1901-2000	£261.93	£307.82	£395.28	£457.84	£578.44	£777.81	£1,112.55
Additional 100mm	£10.39	£13.23	£18.94	£20.60	£24.73	£33.71	£49.41
10: Male Rod Stainless Steel				List x1.1			
11: Male Rod Chrome (Standard)				List			
12: Female Rod Chrome				List			
120: Female Rod Stainless Steel				List x 1.1			
20: Through Rod Stainless Steel				List x1.5			
21: Through Rod Chrome				List x 1.4			
27: Adjustable Rod				List 1.7			
270: Adjustable Stainless Rod				List x 1.85			
Air/ Oil Reservoir				List x 0.9			
Non-Rotate				List x 2.3			
AL-39-R-5M (Reed Switch)				£18.73			
AL-39-R-QD (QD Lead)				£22.92			
AL-39-S-5				£29.96			
AL-39-S-QD (PNP/NPN Inductive Switch)				£33.18			
M83RPVC-5M (QD Lead)				£17.63			
Additional Cost For Viton Seals	£60.72	£66.24	£81.04	£89.70	£120.72	£141.94	£193.35
PS-MCQVI2-XX (Bore Ø) Nitrite Seal Kit MCQI2	£30.28	£30.60	£34.33	£37.80	£46.91	£58.89	£86.73
PS-MCQVI2-XX (Bore Ø)-XB6 Viton Seal Kit MCQI2	£73.45	£78.96	£93.76	£102.42	£133.44	£154.66	£260.92
PS-MCQV2-XX (Bore Ø) Thro Rod Nitrite Seal Kit MCQI2	£60.55	£61.19	£68.65	£75.59	£93.81	£117.79	£173.46
PS-MCQV2-XX (Bore Ø) -XB6 Thro Rod Nitrite Seal Kit MCQI2	£146.90	£157.91	£187.53	£204.85	£266.88	£309.32	£521.85
Passive Locking Head	**BH032**	**BH040**	**BH050**	**BH063**	**BH080**	**BH100**	**BH125**
	£399.31	£490.76	£525.61	£721.71	£1,011.35	£1,196.93	£1,813.65

MCQI2 Dimensions

PRICE LIST

11



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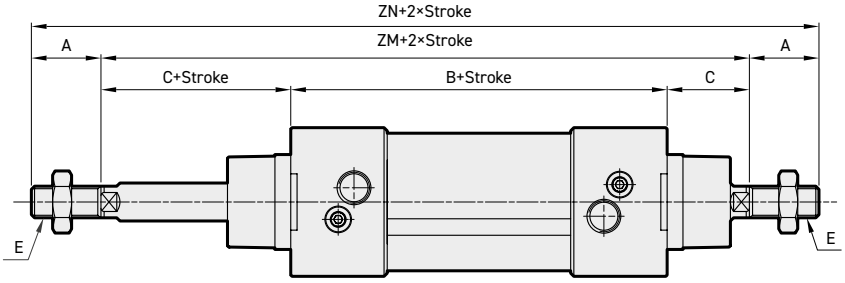

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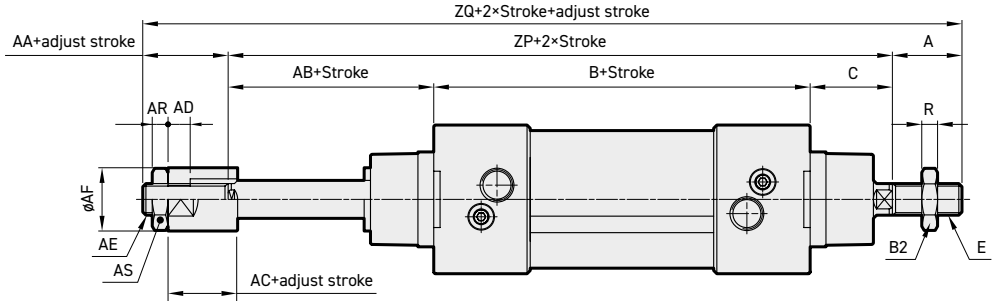
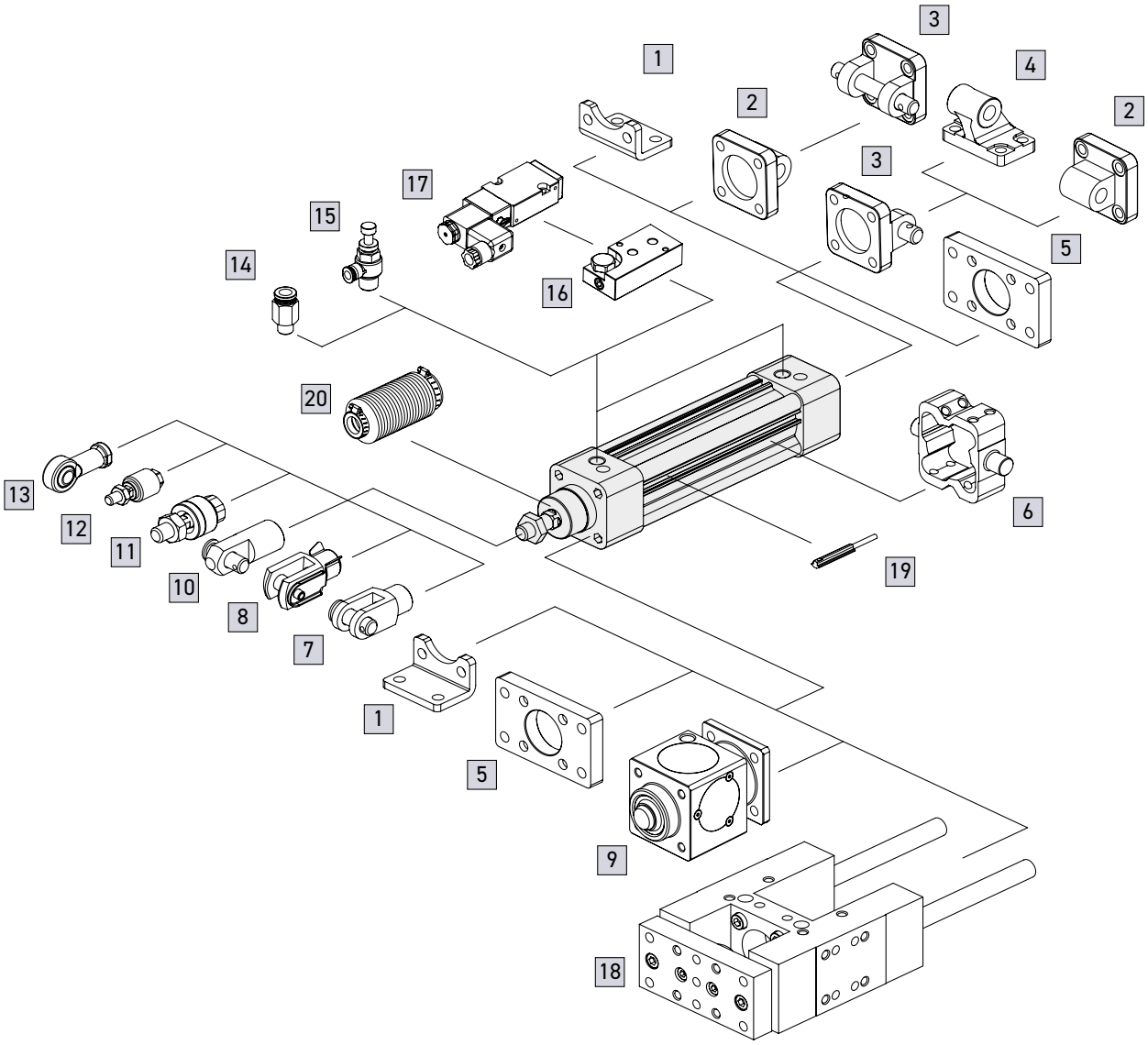


Code / Tube I.D.	A	AA	AB	AC	AD	AE	AF	AR	AS	B	B1	B2	C	DD	E	G	H	I	J	K	L	O
32	22	16	26	12	7	M10×1.25	20	5	17	94	10	17	26	G1/8	M10×1.25	12	30	20	4	30.5	20	32.5
40	24	20	27	12	7	M12×1.25	30	6	19	105	13	19	30	G1/4	M12×1.25	16	35	20.5	4	34	14.5	38
50	32	18	34	15	10	M16×1.5	40	8	24	106	16	24	37	G1/4	M16×1.5	20	40	28	4	31	16	46.5
63	32	20	32	15	10	M16×1.5	40	8	24	121	16	24	37	G3/8	M16×1.5	20	45	26	4	33	16	56.5
80	40	32	41	20	14	M22×1.5	50	13	32	128	21	30	46	G3/8	M20×1.5	25	45	32.5	4	35.5	20.5	72
100	40	30	46	20	14	M22×1.5	50	13	32	138	21	30	51	G1/2	M20×1.5	25	55	37.5	4	37	19	89

Code / Tube I.D.	R	S	U	X	Z	ZB	ZM	ZN	ZP	ZQ
32	5	M6×1.0	4.5	47	146	120	146	190	146	184
40	6	M6×1.0	5.3	55	163	135	165	213	162	206
50	8	M8×1.25	8.5	65	179	143	180	244	177	227
63	8	M8×1.25	8	78	194	158	195	259	190	242
80	10	M10×1.5	9	95	218	174	220	300	215	287
100	10	M10×1.5	13	115	233	189	240	320	235	305

MCQI2 Accessories

ISO-VDMA STANDARD **PROFILE** CYLINDER



No.	Accessories
1	Mounting accessories LB
2	Mounting accessories CA
3	Mounting accessories CB+PIN
4	Mounting accessories CDB
5	Mounting accessories FAC / FBC
6	Mounting accessories TA / TB / TC
7	Accessories Y+PIN
8	Accessories YS (Y+Floating pin)
9	Accessories I+PIN
10	Locking unit MCBQI2

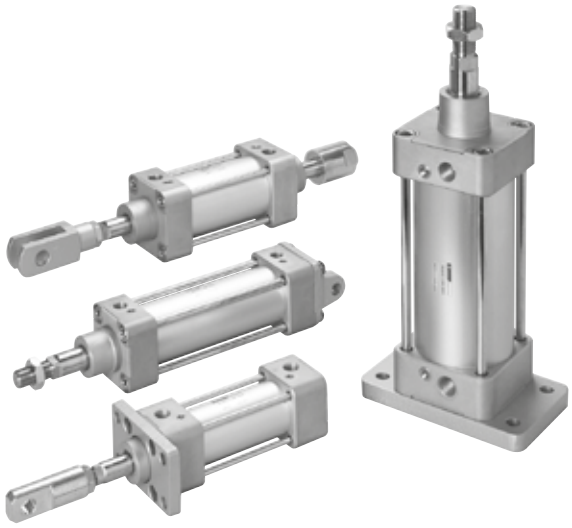
No.	Accessories
11	Floating joint MFC
12	Floating joint MFCS (please enquire)
13	Female rod ends PHS
14	Fitting PC (PISCO)
15	Speed controller JSC (PISCO)
16	Sensor switch RCI
17	Cylinder link seats MVSN-300-C
18	Solenoid valve MVSN-220 / 300
19	Twin-guide cylinders MGTB/TU/TX
20	Protective bellows kit

MCQV / MCQV2 SERIES

ISO-VDMA STANDARD CYLINDER

FULLY STAINLESS STEEL OPTIONS AVAILABLE

SAMEDAY BUILD PREMIUM AVAILABLE



Features

- **Non lubrication**

  Special housing and bushing enables self lubrication of piston rod.

- **High quality long service life**

  Hard anodised aluminium cylinder tubes offer a high resistance to corrosion and low internal friction.

- **ISO-VDMA standard specification**

  Conforms to ISO-6431 and VDMA 24562 specification enabling worldwide interchangeability.

- **Cylinder mountings**

  Available with comprehensive internationally recognised range of fixed and flexible mountings.

Specification

Model	MCQV2			MCQV		
Tube I.D. (mm)	32,40	50,63	80,100	125	160	200
Medium	Air					
Operating perssure range	0.05~1 MPa					
Proof pressure	1.5 MPa					
Ambient temperature	-5~+60°C (No freezing)					
Available speed range	50~500 mm/sec					
Sensor switch (*)	RCA					
Sensor switch holder	HV1	HV2	HV3	HV4	PM16	HA5V

* RCA specification, please refer to page 202.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø32,40	50,75,100,125,150,175,200,250,300,350,400,450,500
ø50,63	↑ 600
ø80,100,125,160	↑ 600,700
ø200, 250, 320	↑ 600,700,800,900,1000,1500

- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

Order example

MCQV2 — 11 — 40 — 100M— VIT

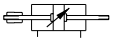
- MCQV2 — MODEL
- 11 — STYLE
- 40 — TUBE I.D.
- 100 — STROKE
- M — **M**: Magnet
- VIT — **Blank**: Standard seals, **VIT**: VITON Seals

1: Single rod
2: Double rod

MODEL

MODEL	Tube I.D.
MCQV2	ø32~ø100
MCQV	ø125~ø320

STYLE

Code	Symbol	Description
10		Double acting / Male thread Stainless Steel
11		Double acting / Male thread Chrome (standard)
12		Double acting / Female thread Chrome
120		Double acting / Female thread Stainless Steel
20		Double rod / Male thread Stainless Steel
21		Double rod / Male thread Chrome
27		Double rod / Adjustable male thread (*) Chrome
270		Double rod / Adjustable male thread (*) Stainless Steel

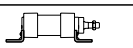
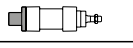
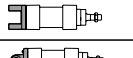
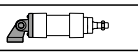
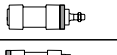
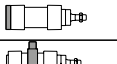
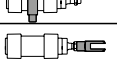
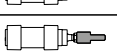
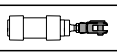
Contact us for Rc or NPT thread.

Mounting accessories

FAC — MCQV — 40

- FAC — MOUNTING TYPE
- MCQV — MODEL
- 40 — TUBE I.D.

MOUNTING TYPE

	**LB**
	**CA**
	**CB**
	**CDB** (+CB+PIN)
	**FAC**
	**FBC**
	**CICT**
	**Y-VIP**
	**I**
	YS (Y+Floating+PIN)

* for ø32~ø100 CB+PIN are purchased additionally.

MCQV / MCQV2 SERIES

PRICE LIST

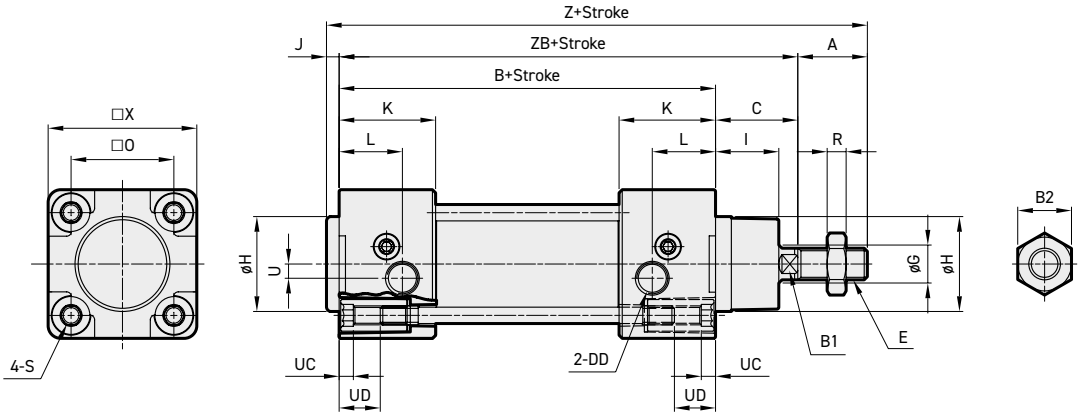
SAMEDAY BUILD
PREMIUM AVAILABLE

Stroke (mm)	MCQV						MCQV2				
	Diameter (BORE) Ø										
	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø	125Ø	160Ø	200Ø	250Ø	320Ø
Up to 25	£71.64	£78.37	£91.04	£114.82	£162.55	£197.25	£318.19	£581.39	£736.42	Enquire with Matara	
26-50	£73.32	£80.21	£92.46	£118.24	£164.05	£198.95	£319.78	£587.56	£751.97		
51-100	£80.52	£86.54	£105.08	£131.87	£172.51	£222.53	£345.14	£592.96	£783.07		
101-125	£82.27	£90.01	£108.27	£132.64	£175.59	£222.53	£351.41	£599.88	£798.62		
126-160	£84.76	£92.70	£112.84	£141.02	£177.90	£236.22	£381.49	£611.44	£823.51		
161-200	£85.29	£95.79	£118.09	£151.06	£186.91	£249.88	£396.36	£680.05	£848.39		
201-250	£96.05	£105.07	£123.38	£154.56	£200.32	£263.57	£418.34	£711.13	£879.49		
251-320	£101.28	£110.74	£135.73	£169.63	£222.43	£277.25	£427.43	£759.92	£929.26		
321-350	£101.98	£115.43	£136.71	£174.73	£222.43	£290.89	£432.33	£803.56	£954.14		
351-400	£107.25	£120.63	£141.30	£177.11	£232.46	£304.58	£442.21	£830.77	£985.24		
401-450	£110.73	£125.81	£149.37	£184.73	£242.29	£318.25	£456.59	£861.10	£1,016.34		
451-500	£114.69	£130.84	£155.77	£205.99	£252.29	£331.95	£469.62	£888.23	£1,047.45		
501-550	£120.93	£145.32	£173.52	£213.58	£280.46	£346.29	£484.90	£918.07	£1,078.55		
551-600	£120.93	£145.32	£173.52	£213.58	£280.46	£359.26	£498.49	£947.90	£1,109.65		
601-650	£129.18	£158.59	£186.35	£229.10	£301.10	£372.20	£514.74	£977.73	£1,140.76		
651-700	£129.18	£158.59	£186.35	£229.10	£301.10	£386.63	£527.07	£1,007.57	£1,171.86		
701-750	£136.11	£168.96	£193.69	£237.56	£310.45	£398.96	£535.54	£1,037.42	£1,202.96		
751-800	£140.21	£168.96	£199.50	£242.93	£321.59	£413.97	£544.54	£1,067.24	£1,234.07		
801-850	£145.79	£176.92	£212.54	£260.23	£342.08	£432.81	£558.13	£1,097.08	£1,265.17		
851-900	£145.79	£176.92	£212.54	£260.23	£342.08	£441.35	£569.71	£1,126.92	£1,296.27		
901-950	£149.53	£181.94	£218.93	£267.74	£352.10	£459.32	£589.62	£1,151.95	£1,327.37		
951-1000	£168.06	£186.62	£220.85	£272.85	£352.10	£468.64	£618.42	£1,183.28	£1,358.48		
1001-1100	£180.22	£201.94	£240.56	£291.47	£380.78	£507.64	£667.83	£1,245.71	£1,430.29		
1101-1200	£191.33	£216.10	£260.83	£313.51	£407.24	£543.71	£717.25	£1,308.15	£1,502.10		
1201-1300	£202.45	£230.26	£281.09	£335.56	£433.70	£579.78	£766.66	£1,370.59	£1,573.90		
1301-1400	£213.57	£244.42	£301.36	£357.61	£460.16	£615.85	£816.07	£1,433.02	£1,645.71		
1401-1500	£224.68	£258.58	£321.62	£379.65	£486.62	£651.92	£865.49	£1,495.46	£1,717.52		
1501-1600	£235.80	£272.73	£341.89	£401.70	£513.08	£687.98	£914.90	£1,557.90	£1,789.33		
1601-1700	£246.92	£286.89	£362.16	£423.75	£539.54	£724.05	£964.31	£1,620.34	£1,861.14		
1701-1800	£258.03	£301.05	£382.42	£445.79	£566.00	£760.12	£1,013.73	£1,682.77	£1,932.95		
1801-1900	£269.15	£315.21	£402.69	£467.84	£592.47	£796.19	£1,063.14	£1,745.21	£2,004.76		
1901-2000	£280.26	£329.36	£422.95	£489.89	£618.93	£832.26	£1,112.55	£1,807.65	£2,076.57		
Additional 100mm	£11.00	£14.08	£20.14	£21.91	£26.30	£35.85	£49.41	£62.44	£71.81		
10: Male Rod Stainless Steel					List x1.1						
11: Male Rod Chrome (Standard)					List						
12: Female Rod Chrome					List						
120: Female Rod Stainless Steel					List x 1.1						
20: Through Rod Stainless Steel					List x1.5						
21: Through Rod Chrome					List x 1.4						
27: Adjustable Rod					List 1.7						
270: Adjustable Stainless Rod					List x 1.85						
Air/ Oil Reservoir					List x 0.9						
Non-Rotate					List x 2.3						
RCA-3M (Reed Switch)					£16.58						
RCA-5M (Reed Switch)					£18.96						
RCA-EQD (QD Lead)					£16.47						
RNA-3M (Reed Switch)					£33.16						
RNA-EQD (QD Lead)					£22.72						
RPA-3M (Reed Switch)					£23.55						
RPA-EQD (QD Lead)					£39.42						
M83RPVC-5M (QD Lead)					£17.63						
Switch Holder	HV1	HV1	HV2	HV2	HV3	HV3	HV4	PM16	HA5V		
	£3.64	£3.64	£4.85	£4.85	£5.47	£5.47	£8.49	£8.49	£9.46		
Additional Cost For Viton Seals	£56.75	£61.91	£75.74	£83.83	£112.82	£132.65	£81.05	£101.84	£182.27		
PS-MCQVI2-XX (Bore Ø) Nitrite Seal Kit MCQl2	£28.30	£28.60	£32.08	£35.33	£43.84	£55.04	£95.61	£106.58	£182.27		
PS-MCQVI2-XX (Bore Ø)-XB6 Viton Seal Kit MCQl2	£68.64	£73.80	£87.63	£95.72	£124.71	£144.54	£243.85	£271.52	£423.33		
PS-MCQV2-XX (Bore Ø) Thro Rod Nitrite Seal Kit MCQl2	£56.59	£57.19	£64.16	£70.64	£87.68	£110.08	£162.11	£203.67	£364.55		
"PS-MCQV2-XX (Bore Ø) - XB6 Thro Rod Nitrite Seal Kit MCQl2"	£137.29	£147.58	£175.26	£191.45	£249.42	£289.08	£487.71	£543.04	£846.67		
Passive Locking Head	BH032	BH040	BH050	BH063	BH080	BH100	BH125	Enquire	Enquire		
	£399.31	£490.76	£525.61	£721.71	£1,011.35	£1,196.93	£1,813.65				

MCQV / MCQV2 Dimensions

ø32~ø100

11



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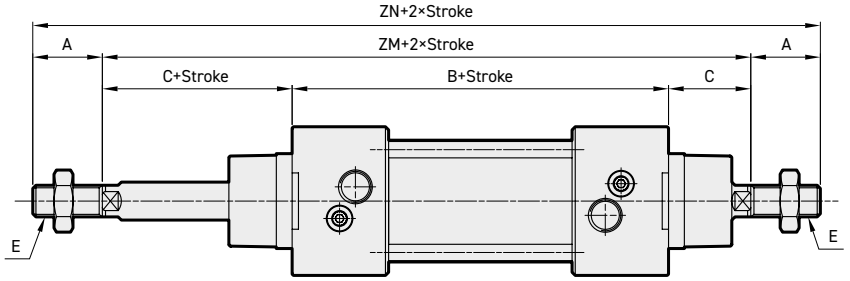

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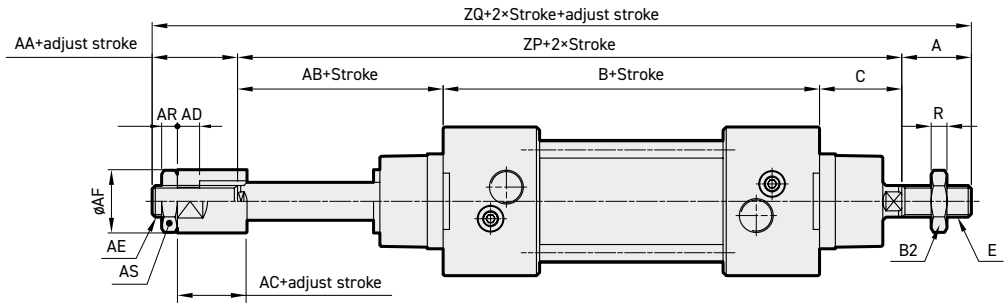

Code / Tube I.D.	A	AA	AB	AC	AD	AE	AF	AR	AS	B	B1	B2	C	DD	E	G	H	I	J	K	L	O	R
32	22	16	26	12	7	M10×1.25	20	5	17	94	10	17	26	G1/8	M10×1.25	12	30	20	4	30.5	20	32.5	5
40	24	20	27	12	7	M12×1.25	30	6	19	105	13	19	30	G1/4	M12×1.25	16	35	20.5	4	34	14.5	38	6
50	32	18	34	15	10	M16×1.5	40	8	24	106	16	24	37	G1/4	M16×1.5	20	40	28	4	31	16	46.5	8
63	32	20	32	15	10	M16×1.5	40	8	24	121	16	24	37	G3/8	M16×1.5	20	45	26	4	33	16	56.5	8
80	40	32	41	20	14	M22×1.5	50	13	32	128	21	30	46	G3/8	M20×1.5	25	45	32.5	4	35.5	20.5	72	10
100	40	30	46	20	14	M22×1.5	50	13	32	138	21	30	51	G1/2	M20×1.5	25	55	37.5	4	37	19	89	10

Code / Tube I.D.	S	U	UC	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
32	M6×1.0	4.5	4.5	12	47	146	120	146	190	146	184
40	M6×1.0	5.3	4.5	12	55	163	135	165	213	162	206
50	M8×1.25	8.5	4.5	16	65	179	143	180	244	177	227
63	M8×1.25	8	4.5	16	78	194	158	195	259	190	242
80	M10×1.5	9	4.5	18	95	218	174	220	300	215	287
100	M10×1.5	13	4.5	18	115	233	189	240	320	235	305

MCQV / MCQV2 Dimensions

ø125 ~ ø200

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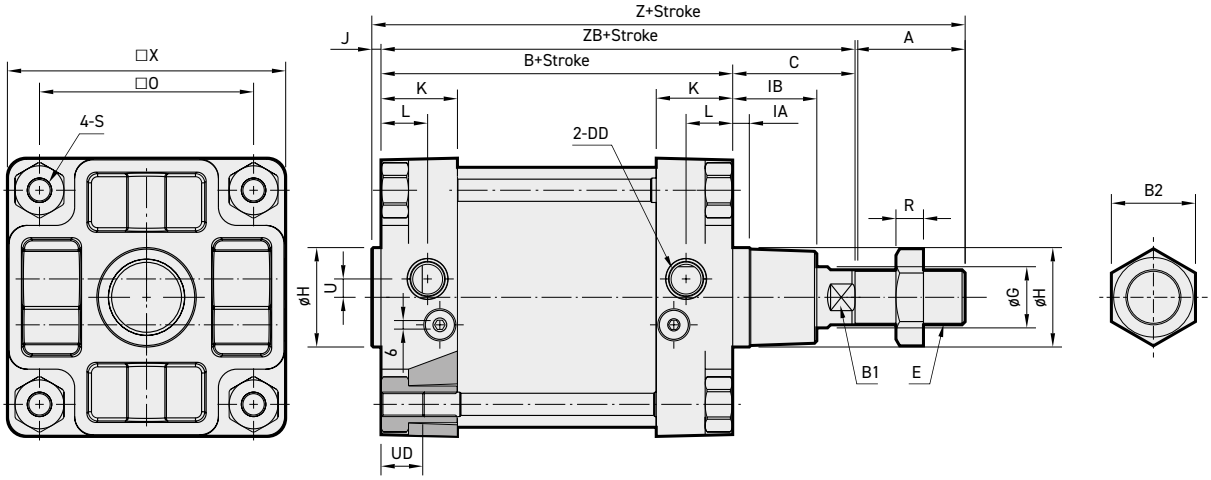

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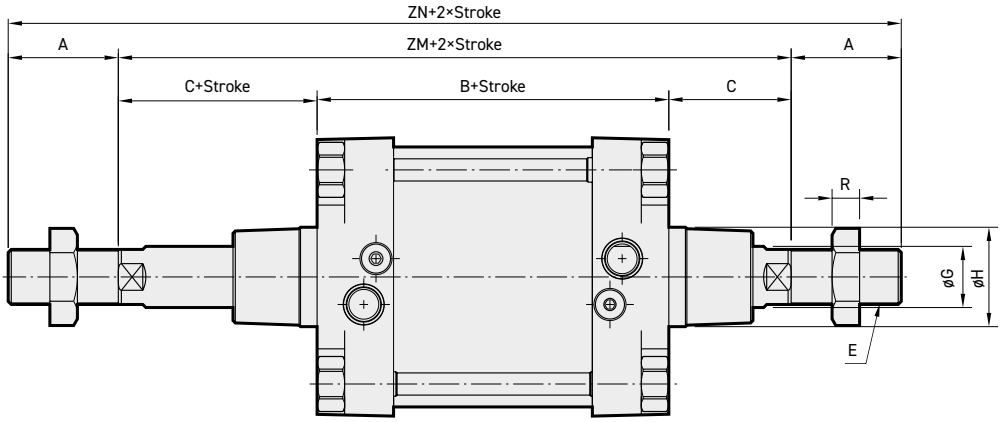

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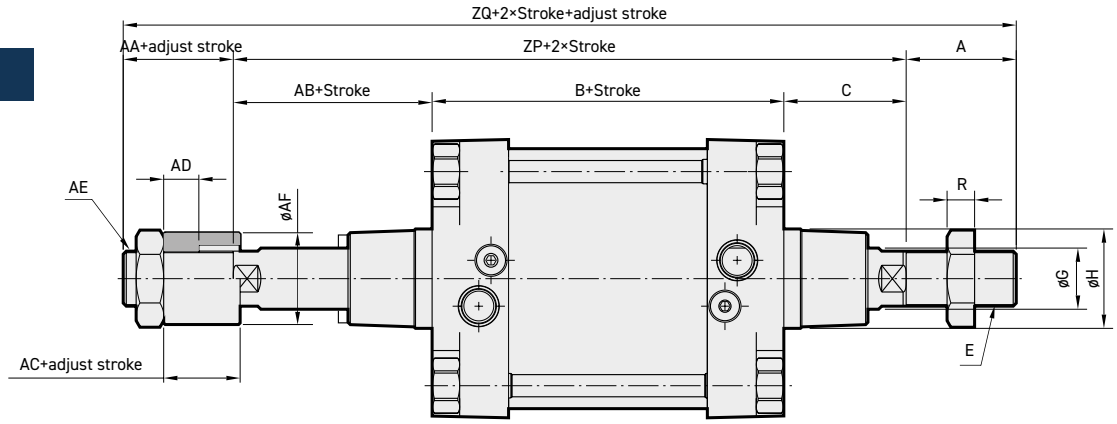
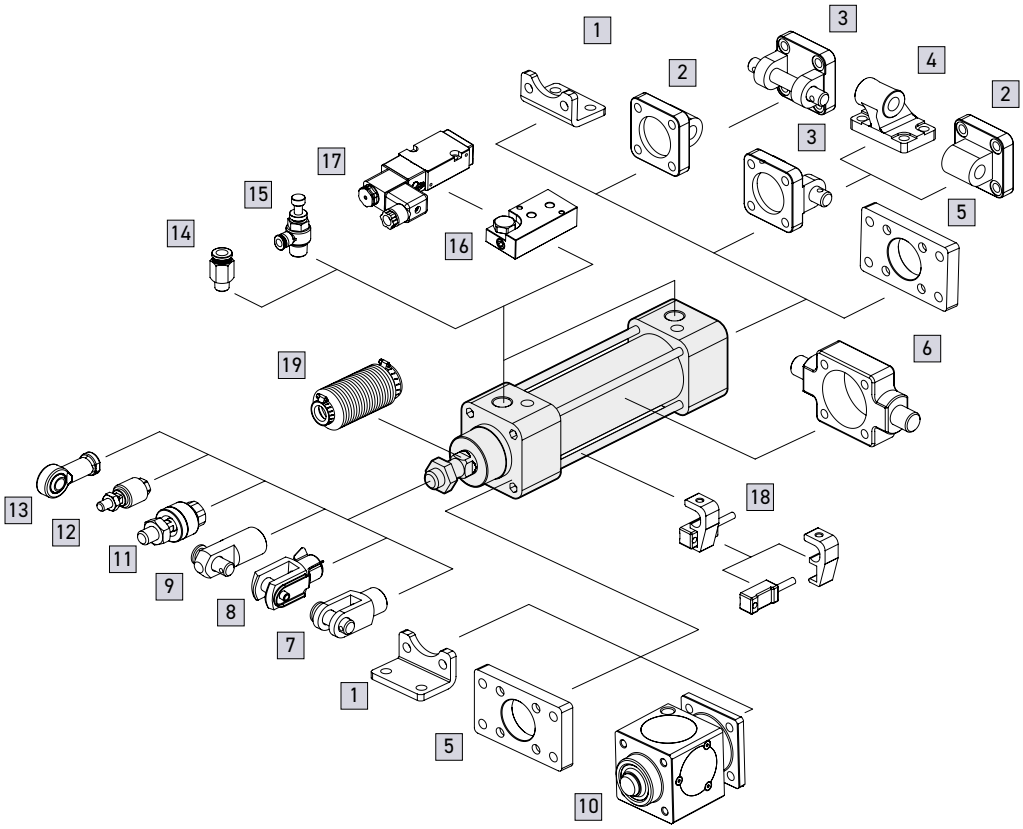


Code / Tube I.D.	A	AA	AB	AC	AD	AE	AF	B	B1	B2	C	DD	E	G	H	IA	IB	J	K	L	O	R	S
125	54	38	55	30	18	M30×1.5	60	160	27	41	65	G1/2	M27×2	32	60e11	10	40	6	40	25	110	13.5	M12×1.75
160	72	38	71	30	18	M30×1.5	60	180	36	55	80	G3/4	M36×2	40	65e11	10	55	6	50	30.5	140	18	M16×2.0
200	72	40.5	94.5	42.5	20	M36×2.0	60	180	36	55	95	G3/4	M36×2	40	75e11	15	55	6	56	36.5	175	18	M16×2.0

Code / Tube I.D.	U	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
125	11	22	140	285	225	290	398	280	372
160	12	27	182	338	260	340	484	331	441
200	12	28	220	353	275	370	514	369.5	482

MCQV* Accessories

ISO-VDMA STANDARD CYLINDER

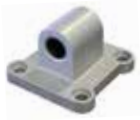


No.	Accessories
1	Mounting accessories LB
2	Mounting accessories CA
3	Mounting accessories CB+PIN
4	Mounting accessories CDB
5	Mounting accessories FAC / FBC
6	Mounting accessories TA / TB / TC
7	Accessories Y+PIN
8	Accessories YS (Y+Floating pin)
9	Accessories I+PIN
10	Locking unit MCBQV*

No.	Accessories
11	Floating joint MFC
12	Floating joint MFCS (please enquire)
13	Female rod ends PHS
14	Fitting PC (PISCO)
15	Speed controller JSC (PISCO)
16	Cylinder link seats MVSN-300-C
17	Solenoid valve MVSN-220 / 300
18	Sensor switch RCA+HV*
19	Protective bellows kit

MCQI2 / MCQV / MCQV2 Accessories

Rear Clevis Male



Part Number	To Suit	List Price
CA-32MM	32 Bore VDMA Cylinder	£12.42
CA-40MM	40 Bore VDMA Cylinder	£13.91
CA-50MM	50 Bore VDMA Cylinder	£15.83
CA-63MM	63 Bore VDMA Cylinder	£19.04
CA-80MM	80 Bore VDMA Cylinder	£24.29
CA-100MM	100 Bore VDMA Cylinder	£34.35
CA-125MM	125 Bore VDMA Cylinder	£74.49
CA-160MM	160 Bore VDMA Cylinder	£104.24
CA-200MM	200 Bore VDMA Cylinder	£205.80

Rear Clevis Female with pin

Part Number	To Suit	List Price
CB-32-PIN	32 Bore VDMA Cylinder	£14.82
CB-40-PIN	40 Bore VDMA Cylinder	£18.49
CB-50-PIN	50 Bore VDMA Cylinder	£21.41
CB-63-PIN	63 Bore VDMA Cylinder	£26.05
CB-80-PIN	80 Bore VDMA Cylinder	£29.19
CB-100-PIN	100 Bore VDMA Cylinder	£44.65
CB-125-PIN	125 Bore VDMA Cylinder	£114.73
CB-160-PIN	160 Bore VDMA Cylinder	£150.50
CB-200-PIN	200 Bore VDMA Cylinder	£249.73

Pair of footbrackets

Part Number	To Suit	List Price
LB-32	32 Bore VDMA Cylinder	£7.02
LB-40	40 Bore VDMA Cylinder	£7.66
LB-50	50 Bore VDMA Cylinder	£8.35
LB-63	63 Bore VDMA Cylinder	£9.04
LB-80	80 Bore VDMA Cylinder	£11.76
LB-100	100 Bore VDMA Cylinder	£18.17
LB-125	125 Bore VDMA Cylinder	£44.49
LB-160	160 Bore VDMA Cylinder	£61.79
LB-200	200 Bore VDMA Cylinder	£220.35

Centre Trunion Tie Rod Type

Part Number	To Suit	List Price
CICP032	32 Bore VDMA Cylinder	£122.51
CICP040	40 Bore VDMA Cylinder	£143.13
CICP050	50 Bore VDMA Cylinder	£166.61
CICP063	63 Bore VDMA Cylinder	£173.52
CICP080	80 Bore VDMA Cylinder	£197.82
CICP100	100 Bore VDMA Cylinder	£228.88
CICP125	125 Bore VDMA Cylinder	£323.65

Centre Trunion Profile Type

Part Number	To Suit	List Price
CICT032	32 Bore VDMA Cylinder	£53.13
CICT040	40 Bore VDMA Cylinder	£58.81
CICT050	50 Bore VDMA Cylinder	£67.46
CICT063	63 Bore VDMA Cylinder	£90.44
CICT080	80 Bore VDMA Cylinder	£106.75
CICT100	100 Bore VDMA Cylinder	£133.44
CICT125	125 Bore VDMA Cylinder	£239.20
CICT160	160 Bore VDMA Cylinder	£300.23
CICT200	200 Bore VDMA Cylinder	£506.81

Front or Rear Flange Mount

Part Number	To Suit	List Price
FAC-32	32 Bore VDMA Cylinder	£16.49
FAC-40	40 Bore VDMA Cylinder	£18.55
FAC-50	50 Bore VDMA Cylinder	£22.26
FAC-63	63 Bore VDMA Cylinder	£24.79
FAC-80	80 Bore VDMA Cylinder	£40.61
FAC-100	100 Bore VDMA Cylinder	£49.90
FAC-125	125 Bore VDMA Cylinder	£111.29
FAC-160	160 Bore VDMA Cylinder	£153.28
FAC-200	200 Bore VDMA Cylinder	£249.78

Y Front Clevis (Inc Spring)

Part Number	To Suit	List Price
Y-VIP-10	32 Bore VDMA Cylinder	£8.04
Y-VIP-12	40 Bore VDMA Cylinder	£10.53
Y-VIP-16	50/63 Bore VDMA Cylinder	£13.73
Y-VIP-20	80/100 Bore VDMA Cylinder	£24.65
Y-VIP-27	125 Bore VDMA Cylinder	£73.16
Y-VIP-36	160/200 Bore VDMA Cylinder	£99.36

Pin for CA/CB

Part Number	To Suit	List Price
PIN-32	32 Bore VDMA Cylinder	£2.49
PIN-40	40 Bore VDMA Cylinder	£4.99
PIN-50	50 Bore VDMA Cylinder	£6.24
PIN-63	63 Bore VDMA Cylinder	£4.24
PIN-80	80 Bore VDMA Cylinder	£8.74
PIN-100	100 Bore VDMA Cylinder	£14.97
PIN-125	125 Bore VDMA Cylinder	£19.96
PIN-160/200	160/200 Bore VDMA Cylinder	£44.91

MCQI2 / MCQV / MCQV2 Accessories

Spherical Rod Eye

Part Number	To Suit	List Price
PHS10	32 Bore VDMA Cylinder	£15.31
PHS12	40 Bore VDMA Cylinder	£21.88
PHS16	50/63 Bore VDMA Cylinder	£39.12
PHS20	80/100 Bore VDMA Cylinder	£44.41
PHS27	125 Bore VDMA Cylinder	£108.40
PHS36	160/200 Bore VDMA Cylinder	£152.18

Locking Head Unit

Part Number	To Suit	List Price
LHU032	32 Bore VDMA Cylinder	£399.31
LHU040	40 Bore VDMA Cylinder	£490.76
LHU050	50 Bore VDMA Cylinder	£525.61
LHU063	63 Bore VDMA Cylinder	£721.71
LHU080	80 Bore VDMA Cylinder	£1,011.35
LHU100	100 Bore VDMA Cylinder	£1,196.93
LHU125	125 Bore VDMA Cylinder	£1,813.65

Offset Rear Clevis

Part Number	To Suit	List Price
CDB-32	32 Bore VDMA Cylinder	£19.86
CDB-40	40 Bore VDMA Cylinder	£19.86
CDB-50	50 Bore VDMA Cylinder	£22.47
CDB-63	63 Bore VDMA Cylinder	£29.60
CDB-80	80 Bore VDMA Cylinder	£32.49
CDB-100	100 Bore VDMA Cylinder	£51.35
CDB-125	125 Bore VDMA Cylinder	£54.54
CDB-160	160 Bore VDMA Cylinder	£379.46
CDB-200	200 Bore VDMA Cylinder	£439.59

Centre Trunion Mountings

Part Number	To Suit	List Price
TF32	32 Bore VDMA Cylinder	£33.48
TF40/50	40/50 Bore VDMA Cylinder	£35.73
TF63/80	63/80 Bore VDMA Cylinder	£45.04
TF100/125	100/125 Bore VDMA Cylinder	£49.94
TF160/200	160/200 Bore VDMA Cylinder	£83.83

Locknut

Part Number	To Suit	List Price
LK-32	32 Bore VDMA Cylinder	£1.87
LK-40	40 Bore VDMA Cylinder	£2.00
LK-50/63	50/63 Bore VDMA Cylinder	£2.12
LK-80/100	80/100 Bore VDMA Cylinder	£2.25
LK-125	125 Bore VDMA Cylinder	£6.15
LK-200	160/200 Bore VDMA Cylinder	£7.82

Floating Joint

Part Number	To Suit	List Price
MFC-1010T	32 Bore VDMA Cylinder	£30.11
MFC-1012T	40 Bore VDMA Cylinder	£34.04
MFC-1016T	50/63 Bore VDMA Cylinder	£48.46
MFC-1022T	80/100 Bore VDMA Cylinder	£56.49
MFC-1027T	125 Bore VDMA Cylinder	£107.25
MFC-1036T	160/200 Bore VDMA Cylinder	£146.80

MCMI SERIES

ISO-6432 MINIATURE CYLINDER/**NON-PIVOT TYPE** MINIATURE CYLINDER

Features

- **Non lubrication**
  Special housing and bushing enables self lubrication of piston rod.
- **High quality long service life**
  Hard anodised stainless steel cylinder tubes offer a high resistance to corrosion and low internal friction.
- **Cylinder mountings**
  Available with a comprehensive range of accessories for rigid or flexible mounting.
- **ISO-6432 standard**
  Enables world-wide inter-changeability.
- **Port thread Rc. NPT. are also available**
- **Magnetic as standard**

Table for standard stroke

	Tube I.D.	Stroke (mm)
Single acting	ø16	15,25,50,75,100
	ø20,25	15,25,50,75,100,125,150
Double acting	ø8,10	10,25,40,50,80,100
	ø12	10,25,40,50,80,100,125,160,200
	ø16,20,25	15,25,50,75,100,125,150,200,250, 300,350,400,450,500

* Stroke out of specification is also available.
* Please consult us if stroke out of specification.

Tightening torque

Tube I.D.	Rod thread	Tightening torque (kgf·cm)	Tube I.D.	Rod thread	Tightening torque (kgf·cm)
ø8	M4×0.8	11.8	ø16	M6×1.0	41
ø10	M4×0.8	11.8	ø20	M8×1.25	170
ø12	M6×1.0	41	ø25	M10×1.25	340

* Make sure the tightening torque of rod thread does not exceed the value above.
* The tolerance of tightening torque is ±5%.

Model		MCMI					
Tube I.D. (mm)		8	10	12	16	20	25
Port size		M5×0.8				G1/8	
Medium		Air					
Max. operating perssure		0.7 MPa					
Min. operating perssure (MPa)	Double acting	0.1	0.08		0.06		
	Single acting Extended	—			0.23		
	Single acting Returned	—			0.18		
Proof pressure		1 MPa					
Lubricator		Not required					
Ambient temperature		-5~+60°C (No freezing)					
Available speed range		50~500 mm/sec					
Max. allowable kinetic energy (J)	Cushion pad	0.02	0.03	0.04	0.09	0.27	0.4
	Cushion air	—	—	—	0.4	0.66	0.97
Sensor switch (*)		RCM					
Sensor switch (band)		BM8	BM10	BM12	BM16	BM20	BM25

* RCM specification, please refer to page 204.

Order example

MCMI — 11 — 16 — 100 — A — N

- MODEL
- STYLE — **1**: Single rod, **2**: Double rod
- TUBE I.D.
- STROKE
- Blank: Cushion pad (Unadjustable), **A**: Cushion air (Adjustable) (*), * ø8~12 not applicable.
- Blank: Standard, **N**: Non-pivot type (end-plain)

Code		Symbol	Description
1	1		Double acting / Male thread
1	3		Single acting / Normally extended male thread
1	5		Single acting / Normally returned male thread
2	1		Double rod / Male thread
2	7		Double rod / Adjustable male thread Please mark "adjustable distance(mm)" at order list

* Single acting type, please consult us.

Mounting accessories

LB — MCMI — 16

- MODEL
- TUBE I.D.
- MOUNTING TYPE

	LB
	FA
	FB
	SDB
	Y
	I
	YS (Y+Floating pin)

MCMI SERIES

Price List

MCMI series (Cylinders ISO-6432)

Stroke (mm)	Diameter (BORE) Ø							
	8Ø	10Ø	12Ø	16Ø	20Ø	25Ø	32Ø	40Ø
10	£32.95	£36.93	£36.44					
15	£33.41	£37.61	£37.15					
25	£34.12	£38.32	£37.86	£39.49	£46.97	£47.18	£63.96	£81.25
50	£35.51	£39.96	£39.71	£42.06	£48.60	£49.07	£66.30	£83.87
75	£37.15	£41.59	£41.81	£44.40	£51.63	£52.58	£68.92	£87.28
100	£38.57	£42.98	£43.69	£46.97	£53.98	£55.61	£72.33	£91.21
150			£47.46	£51.63	£57.71	£60.52	£76.80	£97.51
200			£51.19	£56.54	£63.55	£66.60	£82.83	£104.32
250				£61.45	£68.92	£72.44	£88.86	£111.66
300				£66.36	£74.76	£78.50	£94.89	£118.73
350				£71.02	£80.38	£84.82	£100.64	£125.82
400				£75.93	£85.75	£90.88	£106.67	£132.88
450				£80.84	£91.37	£97.21	£113.49	£141.01
500				£85.75	£96.74	£103.29	£119.79	£148.62
Additional 100mm				£13.53	£13.53	£13.53	£13.53	£13.53
DUAL ROD	× 1.5	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4
SINGLE ACTING	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3

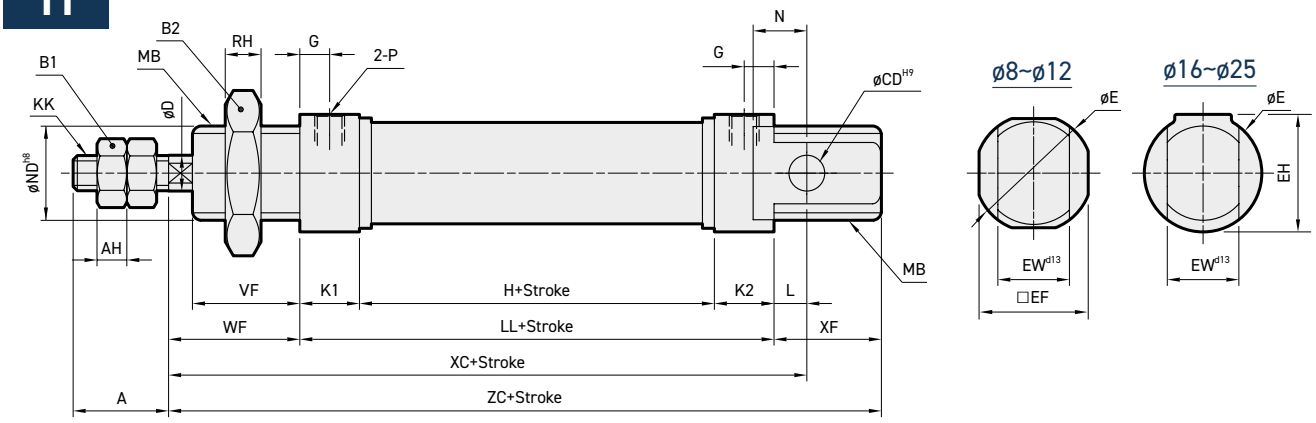
MCMI series (With Cushion Adjustable Feature)

Stroke (mm)	Diameter (BORE) Ø							
	8Ø	10Ø	12Ø	16Ø	20Ø	25Ø	32Ø	40Ø
25				£73.37	£69.55	£75.55	£88.51	£104.54
50				£76.37	£72.28	£78.55	£91.29	£107.62
75				£79.64	£74.73	£81.55	£94.37	£111.31
100				£82.64	£77.46	£84.82	£98.38	£115.94
150				£89.19	£82.64	£91.64	£103.62	£123.66
200				£95.19	£88.91	£98.73	£110.71	£131.68
250				£101.46	£95.19	£105.82	£118.10	£140.30
300				£108.55	£101.73	£113.19	£124.59	£148.02
350				£114.55	£107.73	£120.01	£131.68	£156.96
400				£120.83	£114.01	£127.37	£138.77	£164.98
450				£127.10	£120.28	£134.19	£146.79	£174.83
500				£133.37	£126.55	£141.28	£154.48	£183.77

MCMI Dimensions – Double acting ø8~ø25

ISO-6432 MINIATURE CYLINDER

11



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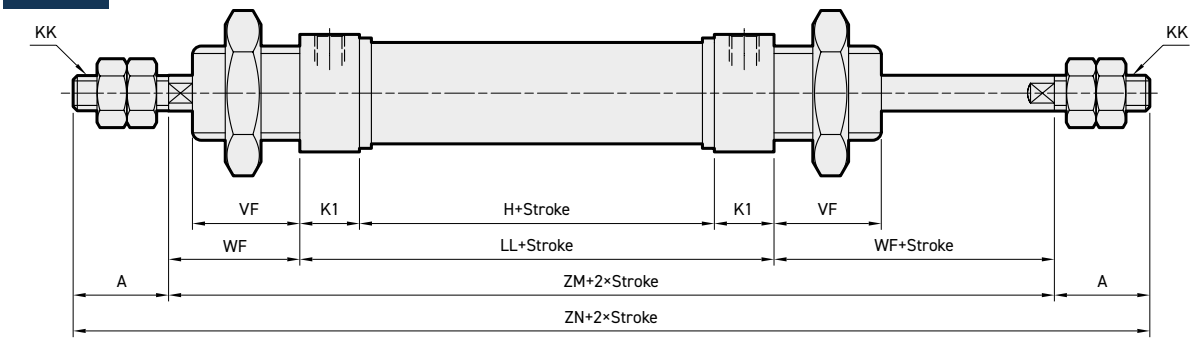

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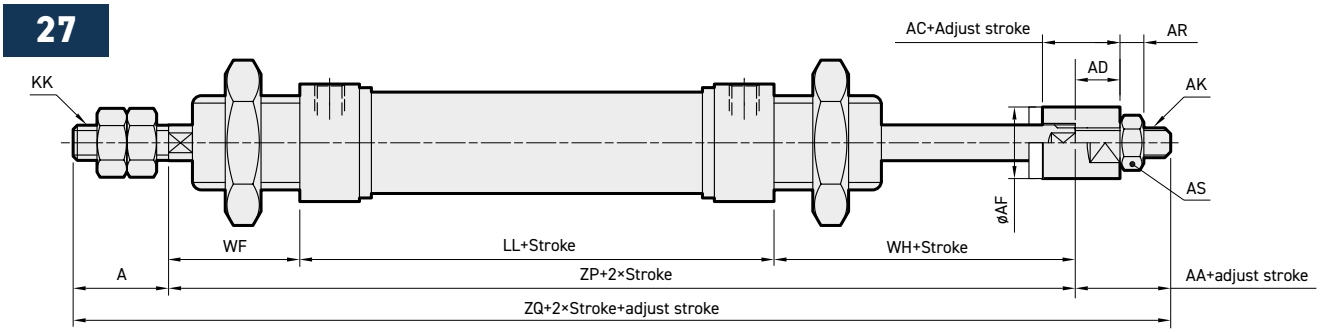


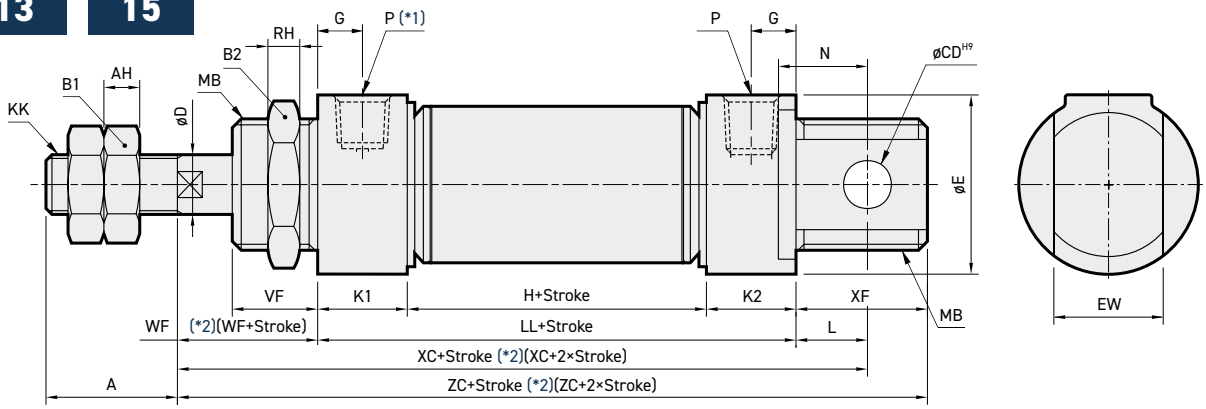
Code / Tube I.D.	A	AA	AC	AD	AF	AH	AK	AR	AS	B1	B2	CD	D	E	EF	EH	EW	G	H	KK	K1	K2	L	LL
8	12	—	—	—	—	3.2	—	—	—	7	19	4	4	16.7	15	—	8	6	24	M4×0.7	11	11	2	46
10	12	—	—	—	—	3.2	—	—	—	7	19	4	4	16.7	15	—	8	6	24	M4×0.7	11	11	2	46
12	16	—	—	—	—	5	—	—	—	10	24	6	6	19.7	—	—	12	6	28	M6×1.0	11	11	3	50
16	16	16	13	7.5	12	5	M5×0.8	4	8	10	22	6	6	20	—	20	12	5	34.5	M6×1.0	10	10	5.5	54.5
20	20	19	15	9.5	16	5	M8×1.25	5	13	13	30	8	8	27	—	27	16	8	38	M8×1.25	15	15	3	68
25	22	19	15	9.5	16	5	M8×1.25	5	13	17	30	8	10	27	—	27	16	7.5	37	M10×1.25	15	15	9	67

Code / Tube I.D.	MB	N	ND	P	RH	VF	WF	WH	XC	XF	ZC	ZM	ZN	ZP	ZQ
8	M12×1.25	6	12	M5×0.8	6	12	16	—	64	12	74	—	—	—	—
10	M12×1.25	6	12	M5×0.8	6	12	16	—	64	12	74	—	—	—	—
12	M16×1.5	9	16	M5×0.8	8	17	22	—	75	17	89	—	—	—	—
16	M16×1.5	9	16	M5×0.8	6	18	22	25.5	82	18	94.5	98.5	130.5	102	134
20	M22×1.5	12	22	G1/8	6	20	24	27	95	20	112	116	156	119	158
25	M22×1.5	12	22	G1/8	6	22	28	29.5	104	22	117	123	167	124.5	165.5

MCMI Dimensions – Single acting ø8~ø25

ISO-6432 MINIATURE CYLINDER

13 **15**



*1. 15 type ø16 without this air port.
*2. ( ) Dimension for 13 type.

Code / Tube I.D.	A	AH	B1	B2	CD	D	E	EW	G	KK	K1	K2	L	LA	MB	N	P	RH	VF	WF	XF	ZM	ZN	ZP	ZQ
16	16	5	10	22	6	6	20	12 -0.05 -0.4	5	M6×1.0	10	10	5.5	54.5	M16×1.5	9	M5×0.8	6	18	22	18	98.5	130.5	96	134
20	20	5	13	30	8	8	27	16 -0.05 -0.4	8	M8×1.25	15	15	3	68	M22×1.5	12	G1/8	6	20	24	20	116	156	119	158
25	22	6	17	30	8	10	27	16 -0.05 -0.4	7.5	M10×1.25	15	15	9	67	M22×1.5	12	G1/8	6	22	28	22	123	167	124.5	165.5

MCMI-13

Code / Stroke / Tube I.D.	H			LL			XC			ZC		
	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150
16	53.5	79.5	105.5	73.5	99.5	125.5	101	127	153	113.5	139.5	165.5
20	63	88	113	93	118	143	120	145	170	137	162	187
25	60.5	85.5	110.5	90.5	115.5	140.5	127.5	152.5	177.5	140.5	165.5	190.5

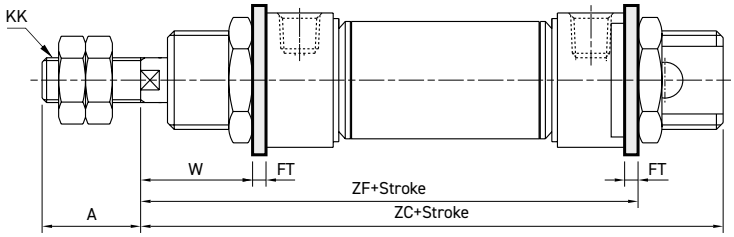
MCMI-15

Code / Stroke / Tube I.D.	H			LL			XC			ZC		
	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150	1~50	51~100	101~150
16	34.5	50	65.5	54.5	70	85.5	82	97.5	113	94.5	110	125.5
20	38	88	113	68	118	143	95	145	170	112	162	187
25	37	85.5	110.5	67	115.5	140.5	104	152.5	177.5	117	165.5	190.5

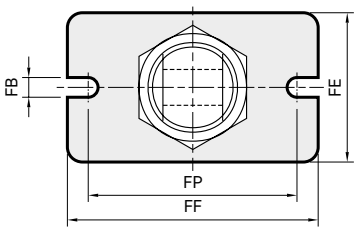
Mounting accessories – Double acting

FA/FB

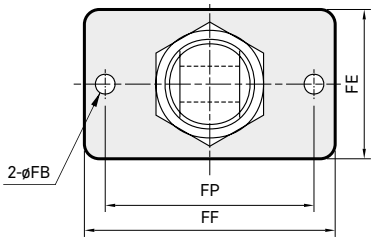
Code / Tube I.D.	A	FB	FE	FF	FP	FT	KK	W	ZC	ZF
8	12	4.5	22	40	30	3.2	M4×0.7	12.8	74	65.2
10	12	4.5	22	40	30	3.2	M4×0.7	12.8	74	65.2
12	16	5.5	26	52	40	3.2	M6×1.0	18.8	89	75.2
16	16	5.5	26	52	40	3.2	M6×1.0	18.8	94.5	79.7
20	20	6.6	38	64	50	4.5	M8×1.25	19.5	112	96.5
25	22	6.6	38	64	50	4.5	M10×1.25	23.5	117	99.5



ø12, ø16

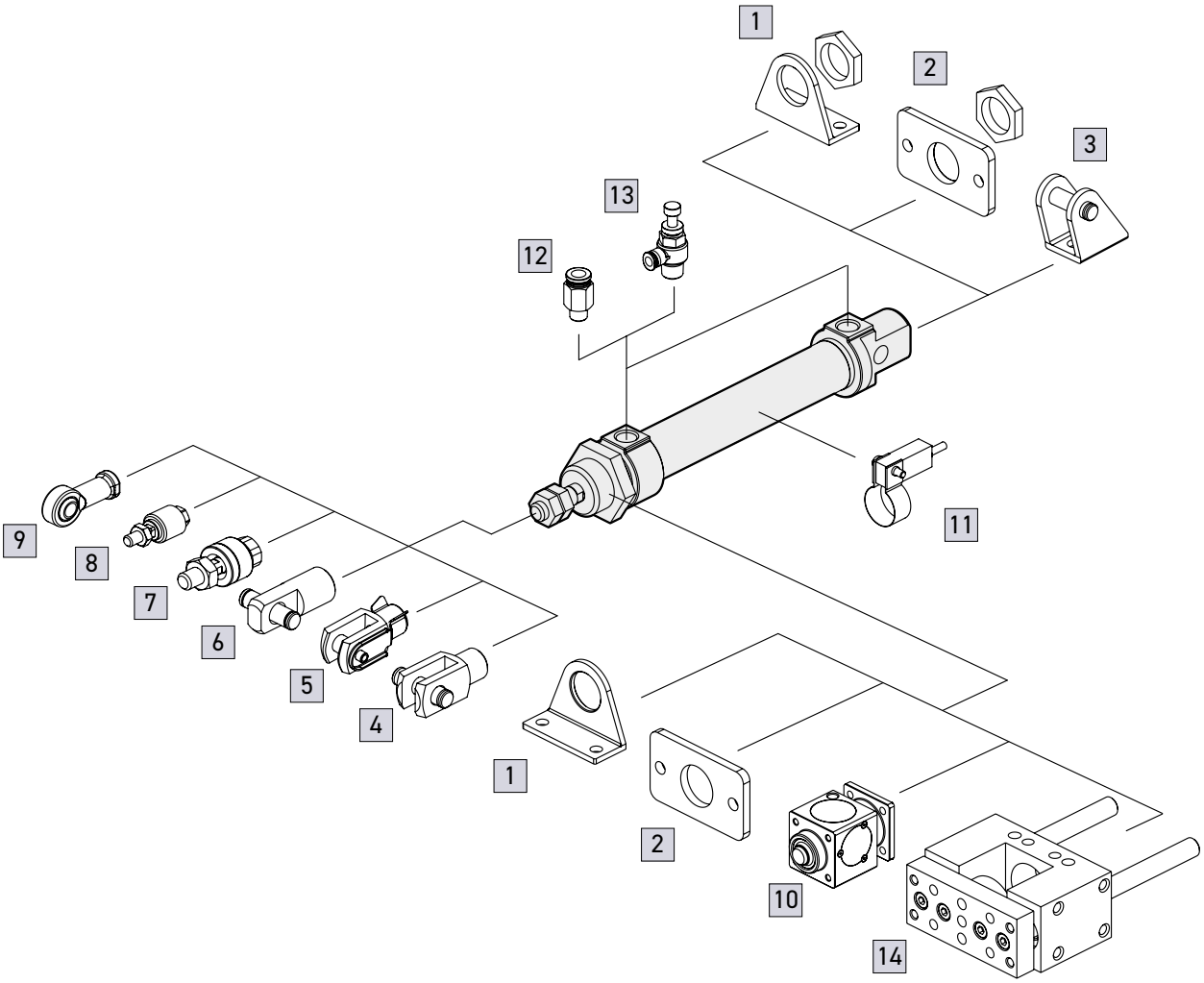


ø8, ø10, ø20, ø25



MCMI Accessories

ISO-6432 MINIATURE CYLINDER

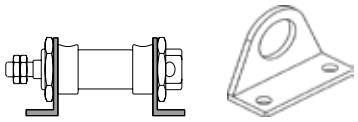


No.	Accessories
1	Mounting accessories LB
2	Mounting accessories FA/FB
3	Mounting accessories SDB+PIN
4	Accessories Y+PIN
5	Accessories YS (Y+Floating pin)
6	Accessories I+PIN
7	Floating joint MFC
8	Floating joint MFCS (please enquire)

No.	Accessories
9	Female rod ends PHS
10	Locking unit MCBMI
11	Sensor switch RCM+BM**
12	Fitting PC
13	Fitting JSC
14	Twin-guide cylinders MGTB/TK/TU

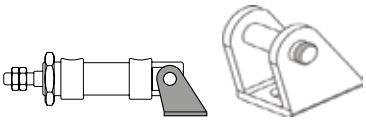
MCMI Accessories

Foot Bracket



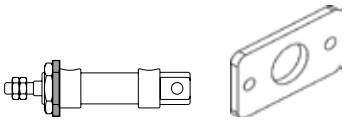
Part Number	To Suit	List Price
LB-MCMI-8	To Suit MCMI 8 Bore	£1.52
LB-MCMI-10	To Suit MCMI 10 Bore	£1.52
LB-MCMI-12	To Suit MCMI 12 Bore	£2.19
LB-MCMI-16	To Suit MCMI 16 Bore	£2.19
LB-MCMI-25	To Suit MCMI 20/25 Bore	£2.61

Rear Mounting Bracket



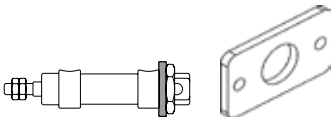
Part Number	To Suit	List Price
SDB-MCMI-8	To Suit MCMI 8 Bore	£3.06
SDB-MCMI-10	To Suit MCMI 10 Bore	£3.06
SDB-MCMI-16	To Suit MCMI 12 Bore	£3.70
SDB-MCMI-16	To Suit MCMI 16 Bore	£3.70
SDB-MCMI-20/25	To Suit MCMI 20/25 Bore	£5.47

Flange



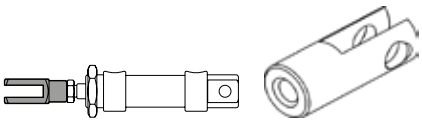
Part Number	To Suit	List Price
FA-MCMI-8	Flange To Suit MCMI 8 Bore FA/FB	£0.87
FA-MCMI-10	Flange To Suit MCMI 10 Bore FA/FB	£0.87
FA-MCMI-12	Flange To Suit MCMI 12 Bore FA/FB	£1.09
FA-MCMI-16	Flange To Suit MCMI 16 Bore FA/FB	£1.09
FA-MCMI-20	Flange To Suit MCMI 20 Bore FA/FB	£2.19
FA-MCMI-25	Flange To Suit MCMI 25 Bore FA/FB	£2.19

Flange



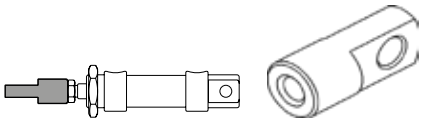
Part Number	To Suit	List Price
FB-MCMI-8	To Suit MCMI 8 Bore FA/FB	£0.87
FB-MCMI-10	To Suit MCMI 10 Bore FA/FB	£0.87
FB-MCMI-12	To Suit MCMI 12 Bore FA/FB	£1.09
FB-MCMI-16	To Suit MCMI 16 Bore FA/FB	£1.09
FB-MCMI-20	To Suit MCMI 20 Bore FA/FB	£2.19
FB-MCMI-25	To Suit MCMI 25 Bore FA/FB	£2.19

Y-Clevis



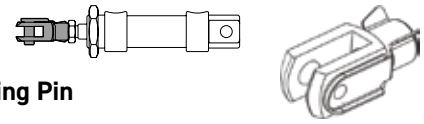
Part Number	To Suit	List Price
Y-MCMI-10	Y Clevis To Suit MCMI 8/10 Bore	£5.67
Y-MCMI-16	Y Clevis To Suit MCMI 12/16 Bore	£6.76
Y-MCMI-20	Y Clevis to Suit MCMI 20 Bore	£9.02
Y-VIPGBA-10	Y Clevis to Suit MCMI 25/32 Bore	£10.98

I-Clevis



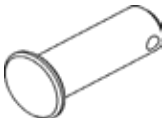
Part Number	To Suit	List Price
I-MCMI-12	To Suit MCMI 12 Bore	£5.17
I-MCMI-16	To Suit MCMI 16 Bore	£5.17
I-MCMI-20	To Suit MCMI 20 Bore	£8.10
I-MCMI-25	To Suit MCMI 25/32 Bore	£8.42

Y Piece With Floating Pin



Part Number	To Suit	List Price
YS-MCMI-16	To Suit MCMI 16 Bore	£14.34
YS-MCMI-20	To Suit MCMI 20 Bore	£11.73
YS-MCMI-25	To Suit MCMI 25 Bore	£14.11

PIN



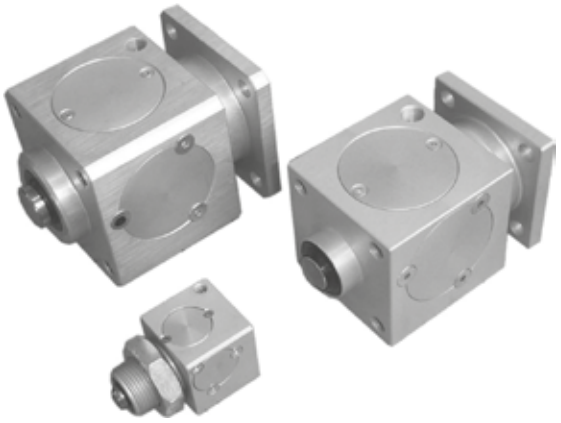
Part Number	To Suit	List Price
PIN-MCMI-8	To Suit MCMI 8 Bore	£2.19
PIN-MCMI-10	To Suit MCMI 10 Bore	£2.19
PIN-MCMI-12	To Suit MCMI 12 Bore	£1.74
PIN-MCMI-16	To Suit MCMI 16 Bore	£1.74
PIN-MCMI-20	To Suit MCMI 20 Bore	£1.74
PIN-MCMI-25	To Suit MCMI 25/32 Bore	£2.19

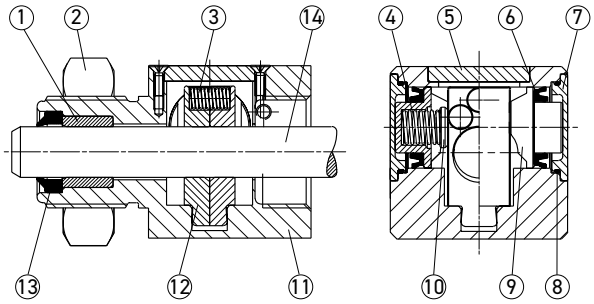
Floating Joint

Part Number	To Suit	List Price
MFC-1004T	8/10 Bore MCMI Cylinder	£18.18
MFC-1006T	12/16 Bore MCMI Cylinder	£22.81
MFC-1010T	25 Bore MCMI Cylinder	£30.11

MCB SERIES

LOCKING UNIT





Features

- Locking unit is a mechanical device to apply to cylinders ISO 15552 and 6432 VDMA whose scope is to block cylinder's rod in any position. This solution allows to block the race of the cylinder anytime takes place an unexpected fall of pressure.
- The blocking force is always and however greater of the one developed from the respective cylinder at 1 MPa.

Specification

Model	MCB								
Tube I.D. (mm)	20	25	32	40	50	63	80	100	125
Rod diameter (mm)	8	10	12	16	20	20	25	25	32
Medium	Air								
Operating perssure range	0.3~0.6 MPa								
Proof pressure	1.5 MPa								
Ambient temperature	-5~+80°C (No freezing)								
Min. working pressure	0.3 MPa								
Locking mode	Secure locking of piston rod in any position								
Lock retention forces (N) Max. static loading- Horizontal mounting	490	490	790	1240	1930	3060	5400	7700	12040
Weight (kg)	0.19	0.19	0.40	0.60	1.10	1.50	2.60	3.50	6.50

Attention

- Locking unit functioning is static type (cylinder's rod stopped).
- Before using the brake, take care to stop cylinder's rod.

Assemble attention

- Unlocking the locking unit by supplying air to the ⑪ body of locking unit. Please don't take out the ⑭ support pin after unlocking the locking unit.
- Using piston rod to push the ⑭ support pin off until the piston rod replaces the position of the ⑭ support pin. Finally you can lock the piston rod by removing the air supply.

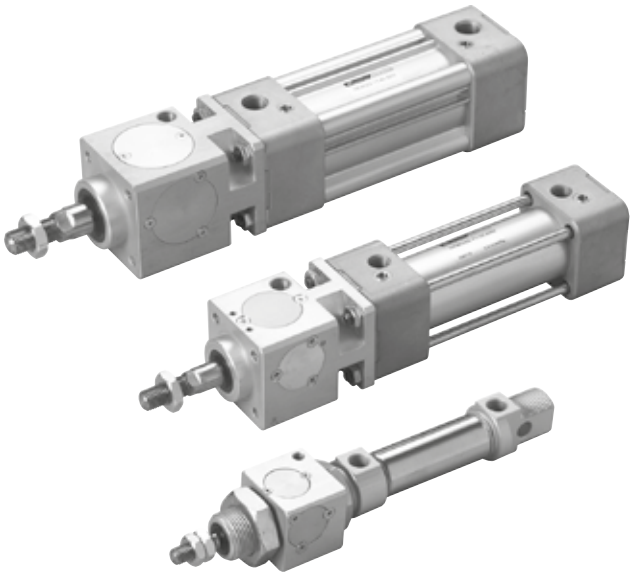
* When the ⑪ body of locking unit is removed the air supply, if there is no ⑭ support pin or piston rod to support inside structure, it will cause the ⑫ jaws deviation. The piston rod can't be mounted anymore.

No.	Part name	Material
1	Guide bush	Iglidur
2	Nut	Steel
3	Spring	Steel
4	Spring	Steel
5	Superior cover	Aluminum alloy
6	Seal piston	NBR
7	Lateral cover	Aluminum alloy
8	O-ring	NBR
9	Piston	Delrin
10	Spring cover	Delrin
11	Body	Aluminum alloy
12	Jaws	Bronze
13	Rod seal	NBR
14	Support pin	Carbon steel

Part Number	To Suit	List Price
LHU-20	20 Bore Pneumatic Cylinder	£399.31
LHU-25	25 Bore Pneumatic Cylinder	£490.76
LHU-32	32 Bore Pneumatic Cylinder	£525.61
LHU-40	40 Bore Pneumatic Cylinder	£721.71
LHU-50	50 Bore Pneumatic Cylinder	£1,011.35
LHU-63	63 Bore Pneumatic Cylinder	£1,196.93
LHU-80	80 Bore Pneumatic Cylinder	£1,813.65
LHU-100	100 Bore Pneumatic Cylinder	£1,062.28
LHU-125	125 Bore Pneumatic Cylinder	£1,609.68

MCB* SERIES

ROD LOCKING CYLINDER



Features

- **Multi-specification**
  There are nine specifications: tube I.D.ø20~125. Application to hold state in the stroke range.
- **Brake function**
  The brake function is bi-directional.
- **Non lubrication**
  Designs of oil-filled alloy. Special housing and bushing provide the needed self-lubrication of piston rod.
- **High quality long service life**
  Hard anodized aluminum cylinder tubes and stainless steel tubes resist corrosion and abrasion.
- **ISO-VDMA standard specification**
  Conformance to ISO-6431 & VDMA-24562 specification.
  Unified design, most parts of each type are interchangeable among each other.
- **Cylinder mountings**
  Available with a comprehensive selection of mountings for fixed or flexible installation.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø20,25	15,25,50,75,100,125,150,175,200,250,300, 350,400,450,500
ø32,40	50,75,100,125,150,175,200,250,300,350,400, 450,500
ø50,63	↑ 600
ø80,100,125	↑ 600,700

- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

Order example

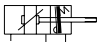
MCBQV2 — 11 — 40 — 100M

1: Single rod | TUBE I.D. | STROKE | **M**: Magnet

MODEL

MODEL	Tube I.D.
MCBMI	ø20, ø25
MCBQV2	ø32~ø100
MCBQI2	ø32~ø100
MCBQV	ø125

STYLE

Code		Symbol	Description
1	1		Double acting / Male thread

Specification

Model	MCBMI		MCBQI2					
Tube I.D. (mm)	20	25	32	40	50	63	80	100
Medium	Air							
Operating perssure range	0.3~0.6 MPa							
Proof pressure	1.5 MPa							
Ambient temperature	-5~+60°C (No freezing)							
Min. working pressure	0.3 MPa							
Available speed range	50~500 mm/sec							
Locking mode	Secure locking of piston rod in any position							
Lock retention forces (N)	490	490	790	1240	1930	3060	5400	7700
Sensor switch (*)	RCM		RCI					
Sensor switch (band)	BM20	BM25	—					

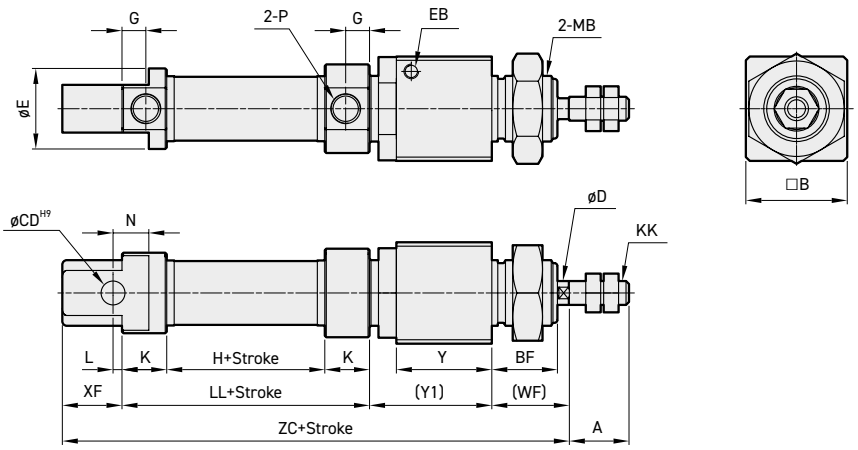
Model	MCBQV2						MCBQV
Tube I.D. (mm)	32	40	50	63	80	100	125
Medium	Air						
Operating perssure range	0.3~0.6 MPa						
Proof pressure	1.5 MPa						
Ambient temperature	-5~+60°C (No freezing)						
Min. working pressure	0.3 MPa						
Available speed range	50~500 mm/sec						
Locking mode	Secure locking of piston rod in any position						
Lock retention forces (N)	790	1240	1930	3060	5400	7700	12040
Sensor switch (*)	RCA						
Sensor switch (holder)	HV1		HV2		HV3		HV4

* RCA, RCI, RCM specification, please refer to pages 202-204.

MCB** Dimensions ø20~ø100

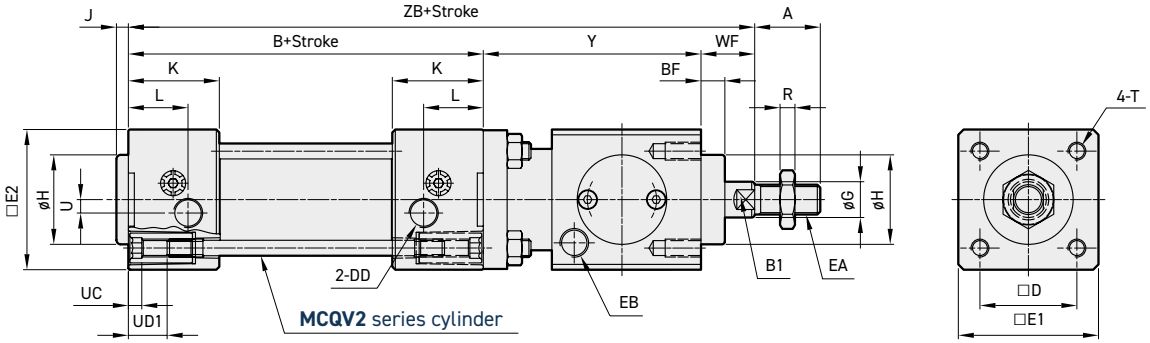
ROD LOCKING CYLINDER

MCBMI

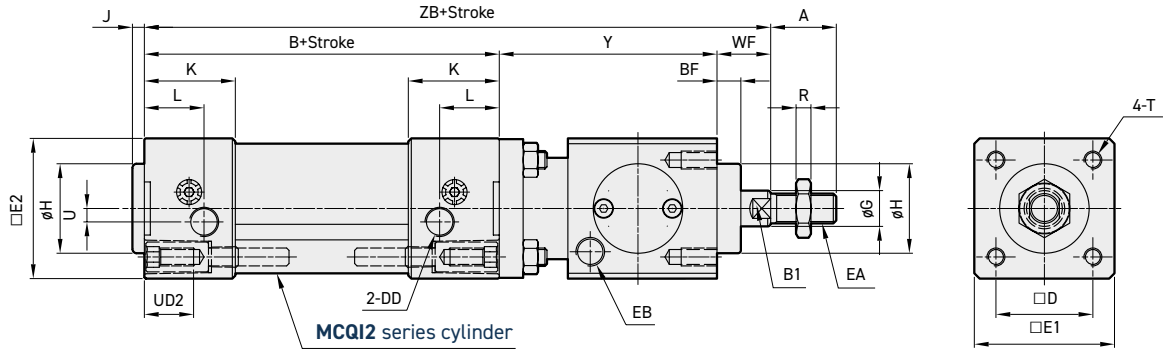


Code / Tube I.D.	A	B	BF	CD	D	E	EB	G	H	K	KK	L	LL	MB	N	P	WF	XF	Y	Y1	ZC
20	20	34	22	8	8	27	M5	8	38	15	M8×1.25	3	68	M22×1.5	12	G1/8	26	20	32	43	157
25	22	34	22	8	10	27	M5	7.5	37	15	M10×1.25	9	67	M22×1.5	12	G1/8	28	22	32	45	162

MCBQV2



MCBQI2

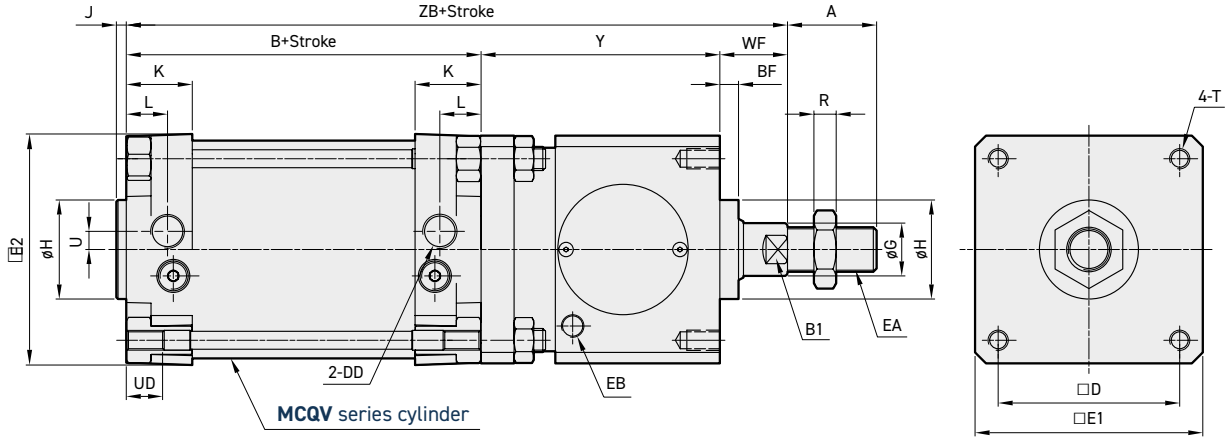


Code / Tube I.D.	A	B	BF	B1	D	DD	E1	E2	EA	EB	G	H	J	K	L	R	T	U	UC	UD1	UD2	WF	Y	ZB
32	22	94	7.5	10	32.5	G1/8	47	47	M10×1.25	G1/8	12	30	4	30.5	20	5	M6×12L	4.5	4.5	12	M6×1.0×15L	26	60	180
40	24	105	10	13	38	G1/4	54	53	M12×1.25	G1/8	16	35	4	34	14.5	6	M6×12L	5.3	4.5	12	M6×1.0×15L	30	70	205
50	32	106	10	16	46.5	G1/4	65	65	M16×1.5	G1/8	20	40	4	31	16	8	M8×14L	8.5	4.5	16	M8×1.25×18L	37	90	233
63	32	121	10	16	56.5	G3/8	75	78	M16×1.5	G1/8	20	45	4	33	16	8	M8×14L	8	4.5	16	M8×1.25×18L	37	90	248
80	40	128	10	21	72	G3/8	95	95	M20×1.5	G1/4	25	45	4	35.5	20.5	10	M10×16L	9	4.5	18	M10×1.5×19L	46	110	284
100	40	138	10	21	89	G1/2	114	115	M20×1.5	G1/4	25	55	4	37	19	10	M10×16L	13	4.5	18	M10×1.5×19L	51	110	299

MCBQV Dimensions ø125

ROD LOCKING CYLINDER

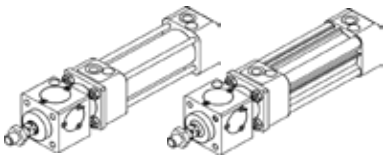
MCBQV



Code / Tube I.D.	A	B	BF	B1	D	DD	E1	E2	EA	EB	G	H	J	K	L	R	T	U	UC	UD	WF	Y	ZB
125	54	160	16	27	110	G1/2	138	140	M27×2.0	G1/4	32	60	6	40	25	13.5	M12×20L	11	22	18	65	140	365

MCB* Price List

MCBQV2/MCBQV Price List



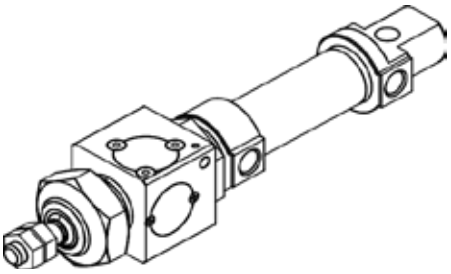
BORE SIZE	ø32	ø40	ø50	ø63	ø80	ø100	ø125
100 mm	£751.63	£839.54	£1,104.24	£1,249.50	£1,545.72	£1,961.66	£2,879.60
200 mm	£763.55	£850.21	£1,116.40	£1,262.42	£1,568.34	£1,991.94	£2,946.58
300 mm	£774.97	£860.65	£1,128.56	£1,277.31	£1,594.64	£2,024.46	£3,013.97
400 mm	£785.67	£871.56	£1,139.74	£1,290.71	£1,621.97	£2,074.12	£3,082.46
500 mm	£797.08	£881.02	£1,152.16	£1,305.12	£1,649.52	£2,105.17	£3,153.97
600 mm	£816.20	£900.11	£1,172.53	£1,327.71	£1,681.81	£2,146.14	£3,247.92
700 mm	£827.12	£911.56	£1,184.95	£1,342.86	£1,707.39	£2,180.41	£3,314.90
800 mm	£838.29	£922.97	£1,197.34	£1,357.51	£1,733.22	£2,215.16	£3,382.66
900 mm	£849.47	£934.15	£1,206.80	£1,369.69	£1,759.04	£2,244.96	£3,450.04
1000 mm	£862.37	£947.31	£1,223.43	£1,388.55	£1,785.34	£2,277.51	£3,527.14
MAGNET(+)	£1.59	£1.85	£2.65	£2.91	£3.97	£3.97	£27.33

MCBQI2 Price List

BORE SIZE	ø32	ø40	ø50	ø63	ø80	ø100
100 mm	£758.60	£848.73	£1,116.64	£1,260.67	£1,557.40	£1,984.25
200 mm	£772.50	£863.38	£1,134.28	£1,278.31	£1,583.97	£2,023.98
300 mm	£785.90	£877.52	£1,152.40	£1,297.91	£1,614.50	£2,066.68
400 mm	£798.56	£891.93	£1,168.79	£1,315.79	£1,645.81	£2,127.02
500 mm	£811.49	£904.59	£1,186.67	£1,335.15	£1,677.60	£2,168.26
600 mm	£829.61	£924.72	£1,209.77	£1,359.76	£1,714.09	£2,219.64
700 mm	£843.01	£940.35	£1,228.15	£1,379.86	£1,743.89	£2,264.08
800 mm	£856.68	£956.24	£1,246.53	£1,399.73	£1,773.93	£2,309.03
900 mm	£870.08	£971.39	£1,261.92	£1,417.10	£1,803.96	£2,347.52
1000 mm	£882.74	£986.78	£1,281.70	£1,438.45	£1,834.02	£2,387.51
MAGNET(+)	£1.59	£1.85	£2.65	£2.91	£3.97	£3.97

MCBMI Price List

BORE SIZE	ø20	ø25
25 mm	£501.85	£506.41
50 mm	£503.93	£508.93
75 mm	£506.16	£511.40
100 mm	£508.25	£514.11
150 mm	£512.76	£520.03
200 mm	£517.99	£525.75
250 mm	£523.23	£531.62
300 mm	£528.90	£538.21
350 mm	£534.14	£544.13
400 mm	£539.38	£550.04
450 mm	£544.37	£555.72
500 mm	£549.61	£561.88



MCJI SERIES

COMPACT CYLINDER

FULLY STAINLESS STEEL OPTIONS AVAILABLE

SAMEDAY BUILD PREMIUM AVAILABLE

Features

- ISO-21287 standard.
- Wide range of bore sizes and strokes.
- Ultra compact, light weight and space saving.
- Sensor slots on RCI sides for flush mounting of proximity sensors.
- Magnetic as standard.

Specification

Model	MCJI	
Acting type	Double acting	
Tube I.D. (mm)	20,25	32,40,50,63,80,100
Port size	M5×0.8	G1/8
Medium	Air	
Operating perssure range	0.05~1 MPa	
Proof pressure	1.5 MPa	
Cushion	Rubber bumper	
Lubricator	Without lubrication	
Stroke length tolerance (*)	+0~+1.0 mm	
Ambient temperature	-5°C~+60°C (No freezing)	
Available speed range	50~500 mm/sec	
Sensor switch	RCI (Please refer to page 203)	

* Stroke length tolerance does not include the amount of bumper change.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø20,25	5,10,15,20,25,30,40,50,60,80,100,200
ø32,40	5,10,15,20,25,30,40,50,60,80,100,200,300
ø50,63	10,15,20,25,30,40,50,60,80,100,200,300,400
ø80,100	15,20,25,30,40,50,60,80,100,200,300,400,500

* Please consult us if stroke out of specification.

Order example

MCJI — 12 — 20 — 25

MODEL

1: Single rod
2: Double rod

TUBE I.D.

STROKE

STYLE

Code		Symbol	Description
1	1		Double acting / Male thread
1	2		Double acting / Female thread
2	1		Double rod / Male thread
2	2		Double rod / Female thread

Stroke (mm)	Diameter (BORE) Ø							
	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø
5 mm	£56.56	£62.09	£63.12	£67.23				
10 mm	£57.59	£63.12	£63.73	£67.83	£79.31	£95.70	£130.53	£179.72
15 mm	£58.20	£63.73	£64.36	£68.23	£80.34	£96.93	£131.98	£181.15
20 mm	£58.80	£64.36	£64.75	£68.65	£81.16	£97.96	£133.40	£183.41
25 mm	£59.64	£65.17	£65.38	£69.47	£81.97	£98.99	£135.04	£185.25
30 mm	£60.25	£65.78	£65.78	£69.89	£83.00	£100.01	£136.48	£187.10
40 mm	£61.49	£67.23	£67.23	£71.31	£85.05	£102.25	£139.56	£190.57
50 mm	£62.91	£68.65	£68.44	£72.55	£86.90	£104.31	£142.22	£194.68
60 mm	£63.94	£69.68	£70.49	£74.81	£89.14	£106.97	£145.49	£198.79
80 mm	£68.04	£73.78	£73.78	£78.08	£92.83	£111.28	£151.44	£206.37
100 mm	£69.68	£75.63	£77.26	£81.76	£97.35	£116.60	£158.21	£214.98
150 mm	£74.81	£80.95	£85.66	£90.38	£108.20	£129.11	£174.59	£234.44
200 mm	£83.82	£90.17	£96.12	£101.23	£119.47	£141.62	£190.99	£254.51
300 mm			£108.80	£114.12	£131.39	£167.22	£224.20	£292.03
400 mm					£152.86	£193.05	£254.51	£330.96
500 mm							£290.19	£367.43

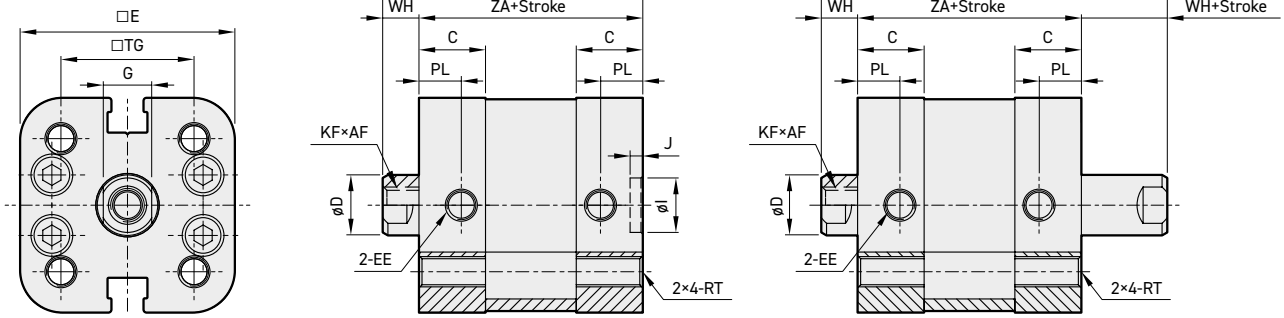
MCJI Dimensions ø20~ø100

COMPACT CYLINDER

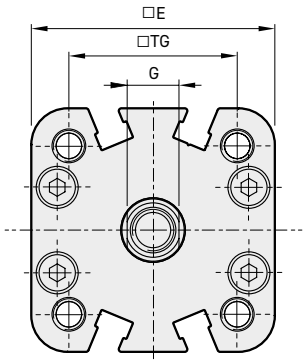
Single rod

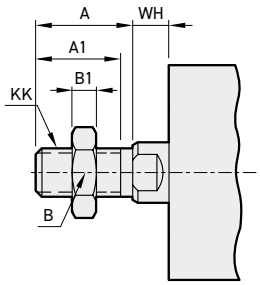
Double rod

ø20~ø25



ø32~ø100



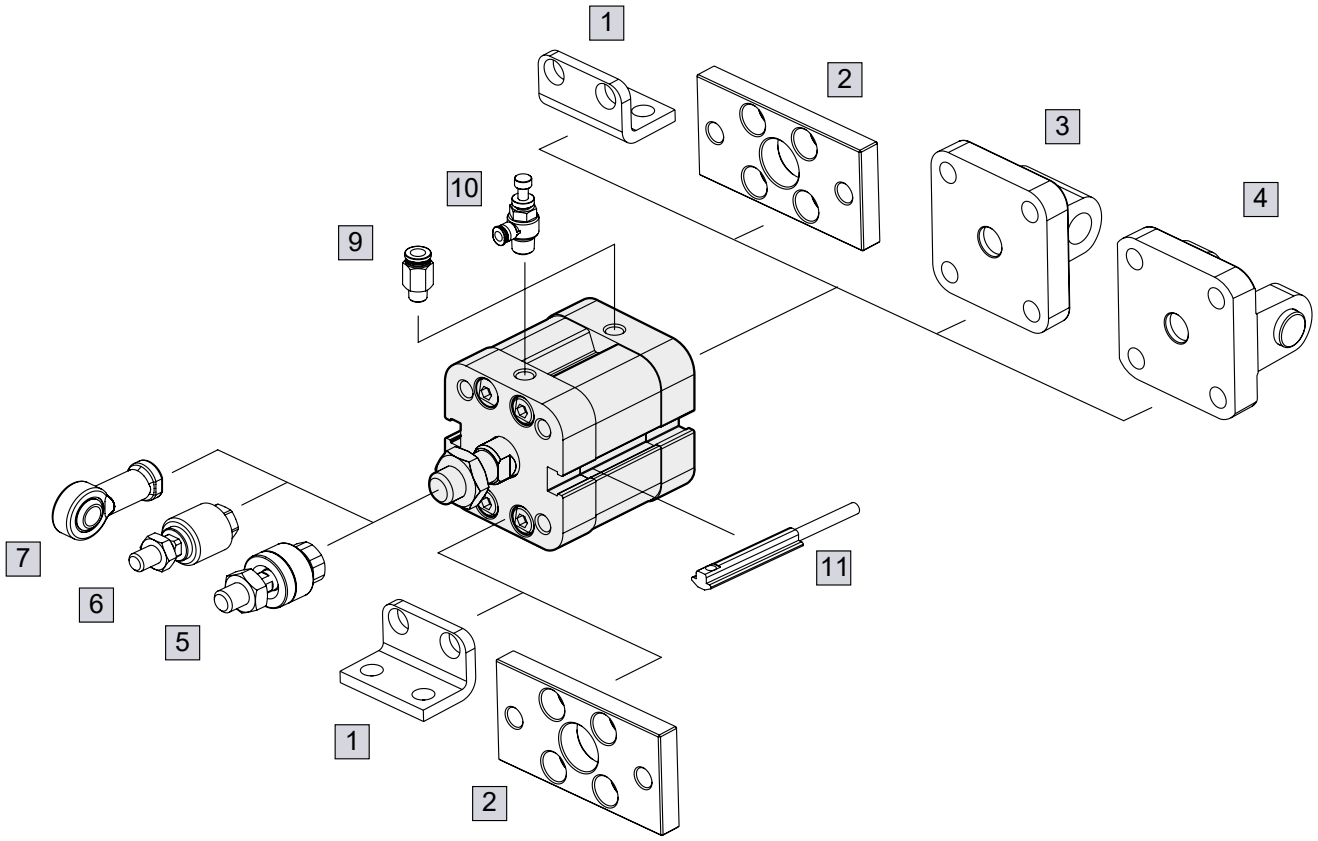


MCJI-11/21 male thread size

Code / Tube I.D.	A	A1	B	B1	KK
20	16	14	13	4	M8×1.25
25	16	14	13	4	M8×1.25
32	19	17	17	5	M10×1.25
40	19	17	17	5	M10×1.25
50	22	20	19	6	M12×1.25
63	22	20	19	6	M12×1.25
80	28	26	24	8	M16×1.5
100	28	26	24	8	M16×1.5

Code / Tube I.D.	AF	C	D	E	EE	G	WH	I	J	KF	PL	TG	RT	ZA	ZB	ZC
20	14	11	10	35.5	M5×0.8	8	6	9	2.1	M6×1.0	7	22	M5×0.8	37	43	49
25	14	11	10	39.5	M5×0.8	8	6	9	2.1	M6×1.0	7	26	M5×0.8	39	45	51
32	15	14	12	47.0	G1/8	10	7	9	2.1	M8×1.25	7.5	32.5	M6×1.0	44	51	58
40	15	14	12	54.5	G1/8	10	7	9	2.1	M8×1.25	7.5	38	M6×1.0	45	52	59
50	18	14	16	65.5	G1/8	14	8	12	2.6	M10×1.5	7.5	46.5	M8×1.25	45	53	61
63	18	14.5	16	75.5	G1/8	14	8	12	2.6	M10×1.5	7.5	56.5	M8×1.25	49	57	65
80	20	15.5	20	95.5	G1/8	17	10	12	2.6	M12×1.75	8	72	M10×1.5	54	64	74
100	20	18.5	20	113.5	G1/8	17	10	12	2.6	M12×1.75	9.5	89	M10×1.5	67	77	87

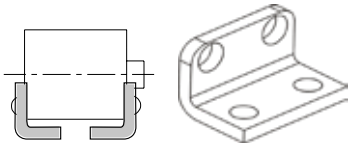
MCJI Accessories



No.	Accessories
1	Mounting accessories LB
2	Mounting accessories FAC/FBC
3	Mounting accessories CA
4	Mounting accessories CB+PIN
5	Floating joint MFC
6	Floating joint MFCS (please enquire)
7	Female rod ends PHS
8	Fitting PC (PISCO)
9	Speed controller JSC (PISCO)
10	Sensor switch RCI

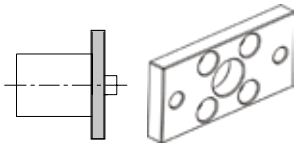
MCJI Accessories

Foot Bracket



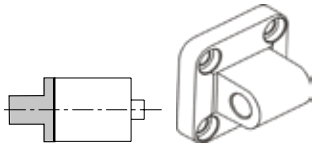
Part Number	To Suit	List Price
LB-MCJI-20	To Suit MCJI 20 Bore	£ 2.18
LB-MCJI-25	To Suit MCJI 25 Bore	£ 2.18
LB-MCJI-32	To Suit MCJI 32 Bore	£2.36
LB-MCJI-40	To Suit MCJI 40 Bore	£2.56
LB-MCJI-50	To Suit MCJI 50 Bore	£3.95
LB-MCJI-63	To Suit MCJI 63 Bore	£4.34
LB-MCJI-80	To Suit MCJI 80 Bore	£6.72
LB-MCJI-100	To Suit MCJI 100 Bore	£7.48

Flange



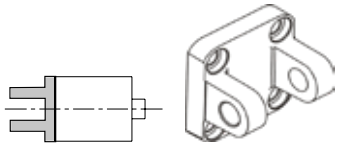
Part Number	To Suit	List Price
FAC-MCJI-20	To Suit MCJI 20 Bore	£14.20
FAC-MCJI-25	To Suit MCJI 25 Bore	£15.59
FAC-MCJI-32	To Suit MCJI 32 Bore	£17.75
FAC-MCJI-40	To Suit MCJI 40 Bore	£20.71
FAC-MCJI-50	To Suit MCJI 50 Bore	£26.24
FAC-MCJI-63	To Suit MCJI 63 Bore	£29.79
FAC-MCJI-80	To Suit MCJI 80 Bore	£46.37
FAC-MCJI-100	To Suit MCJI 100 Bore	£49.13

Rear Clevis Male



Part Number	To Suit	List Price
CA-MCJI-20	To Suit MCJI 20 Bore	£ 2.18
CA-MCJI-25	To Suit MCJI 25 Bore	£ 2.18
CA-MCJI-32	To Suit MCJI 32 Bore	£2.36
CA-MCJI-40	To Suit MCJI 40 Bore	£2.56
CA-MCJI-50	To Suit MCJI 50 Bore	£3.95
CA-MCJI-63	To Suit MCJI 63 Bore	£4.34
CA-MCJI-80	To Suit MCJI 80 Bore	£6.72

Rear Clevis Female

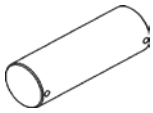


Part Number	To Suit	List Price
CB-MCJI-20	To Suit MCJI 20 Bore	£ 2.18
CB-MCJI-25	To Suit MCJI 25 Bore	£ 2.18
CB-MCJI-32	To Suit MCJI 32 Bore	£2.36
CB-MCJI-40	To Suit MCJI 40 Bore	£2.56
CB-MCJI-50	To Suit MCJI 50 Bore	£3.95
CB-MCJI-63	To Suit MCJI 63 Bore	£4.34
CB-MCJI-80	To Suit MCJI 80 Bore	£6.72

Floating Joint

Part Number	To Suit	List Price
MFC-1008T	20/25 Bore MCJI Cylinder	£24.75
MFC-1010T	32/ 40 Bore MCJI Cylinder	£30.11
MFC-1012T	50/63 Bore MCJI Cylinder	£34.04
MFC-1016T	80/100 Bore MCJI Cylinder	£48.46

PIN



Part Number	To Suit	List Price
PIN-MCJI-20	To Suit MCJI 20 Bore	£ 2.18
PIN-MCJI-25	To Suit MCJI 25 Bore	£ 2.18
PIN-MCJI-32	To Suit MCJI 32 Bore	£2.36
PIN-MCJI-40	To Suit MCJI 40 Bore	£2.56
PIN-MCJI-50	To Suit MCJI 50 Bore	£3.95
PIN-MCJI-63	To Suit MCJI 63 Bore	£4.34
PIN-MCJI-80	To Suit MCJI 80 Bore	£6.72

ADM SERIES

UNITOP COMPACT CYLINDER

Features

- ISO-21287 standard.
- Wide range of bore sizes and strokes.
- Ultra compact, light weight and space saving.
- Sensor slots on RCI sides for flush mounting of proximity sensors.
- Magnetic as standard.

Specification

Model	ADM		
Acting type	Double acting		
Tube I.D. (mm)	20,25	32,40,50,63,80	100
Port size	M5×0.8	G1/8	G1/4
Medium	Air		
Operating perssure range	0.05~1 MPa		
Proof pressure	1.5 MPa		
Cushion	Rubber bumper		
Lubricator	Without lubrication		
Stroke length tolerance (*)	+0~+1.0 mm		
Ambient temperature	0°C~+80°C (No freezing)		
Available speed range	50~500 mm/sec		
Sensor switch	RCI (Please refer to page 203)		

* Stroke length tolerance does not include the amount of bumper change.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø12,16,20,25	5,10,15,20,25,30,40,50,60,80,100,200
ø32,40	5,10,15,20,25,30,40,50,60,80,100,200,300
ø50,63	10,15,20,25,30,40,50,60,80,100,200,300,400
ø80,100	15,20,25,30,40,50,60,80,100,200,300,400,500

* Please consult us if stroke out of specification.

Order example

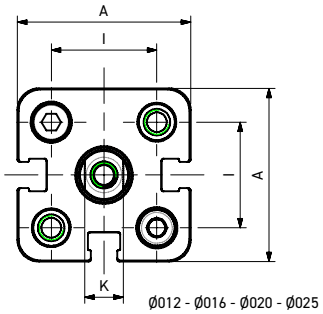
A D M — 012 — 020 — GS — F

- A — MODEL
- D — DOUBLE ACTING
- M — MAGNETIC
- 012 — TUBE I.D.
- 020 — STROKE
- GS — SEALS
  - **GS -** standard seals
  - **VR -** high temperature rod seal
  - **VA -** all seals for high temperature
- F — ROD
  - **F -** Female
  - **M -** Male

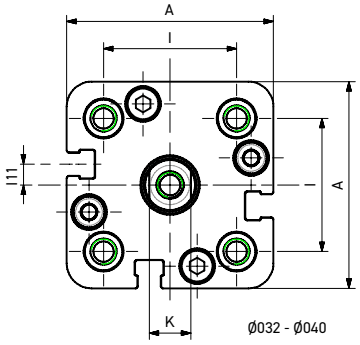
Stroke (mm)	Diameter (BORE) Ø									
	12Ø	16Ø	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø
5 mm	£39.59	£39.59	£56.56	£62.09	£63.12	£67.23				
10 mm	£40.31	£40.31	£57.59	£63.12	£63.73	£67.83	£79.31	£153.11	£208.85	£287.56
15 mm	£40.74	£40.74	£58.20	£63.73	£64.36	£68.23	£80.34	£155.09	£211.17	£289.84
20 mm	£41.16	£41.16	£58.80	£64.36	£64.75	£68.65	£81.16	£156.73	£213.45	£293.46
25 mm	£41.75	£41.75	£59.64	£65.17	£65.38	£69.47	£81.97	£158.38	£216.06	£296.41
30 mm	£42.18	£42.18	£60.25	£65.78	£65.78	£69.89	£83.00	£160.02	£218.38	£299.36
40 mm	£43.04	£43.04	£61.49	£67.23	£67.23	£71.31	£85.05	£163.60	£223.30	£304.92
50 mm	£44.04	£44.04	£62.91	£68.65	£68.44	£72.55	£86.90	£166.89	£227.56	£311.49
60 mm	£44.76	£44.76	£63.94	£69.68	£70.49	£74.81	£89.14	£171.15	£232.79	£318.06
80 mm	£47.63	£47.63	£68.04	£73.78	£73.78	£78.08	£92.83	£178.05	£242.31	£330.20
100 mm	£48.77	£48.77	£69.68	£75.63	£77.26	£81.76	£97.35	£186.57	£253.13	£343.97
150 mm	£52.37	£52.37	£74.81	£80.95	£85.66	£90.38	£108.20	£206.58	£279.34	£375.11
200 mm	£58.67	£58.67	£83.82	£90.17	£96.12	£101.23	£119.47	£226.59	£305.59	£407.22
300 mm					£117.42	£123.16	£141.80	£267.55	£358.72	£467.25
400 mm							£164.98	£308.88	£407.22	£529.53
500 mm									£464.30	£587.88

ADM Dimensions ø12~ø100

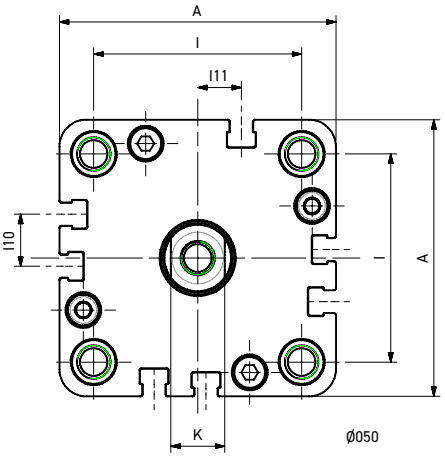
UNITOP COMPACT CYLINDER



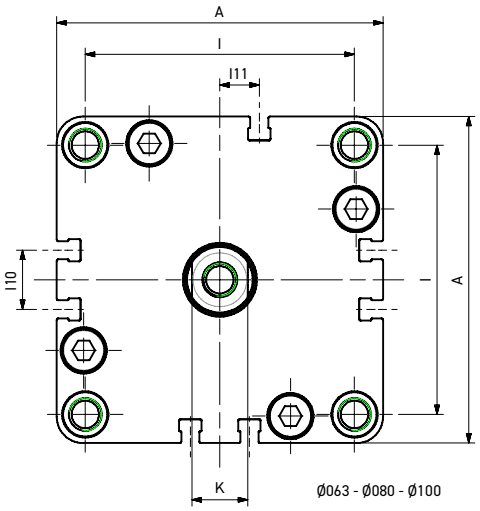
Ø012 - Ø016 - Ø020 - Ø025



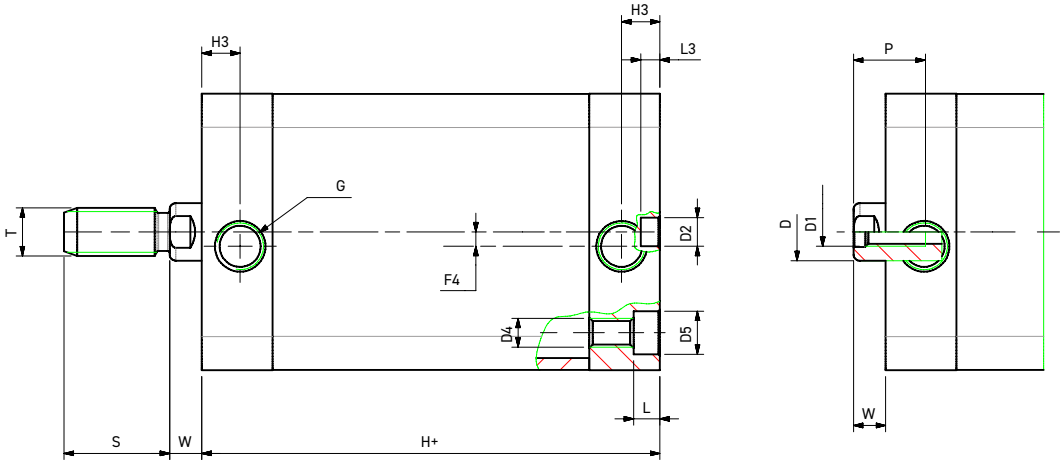
Ø032 - Ø040



Ø050

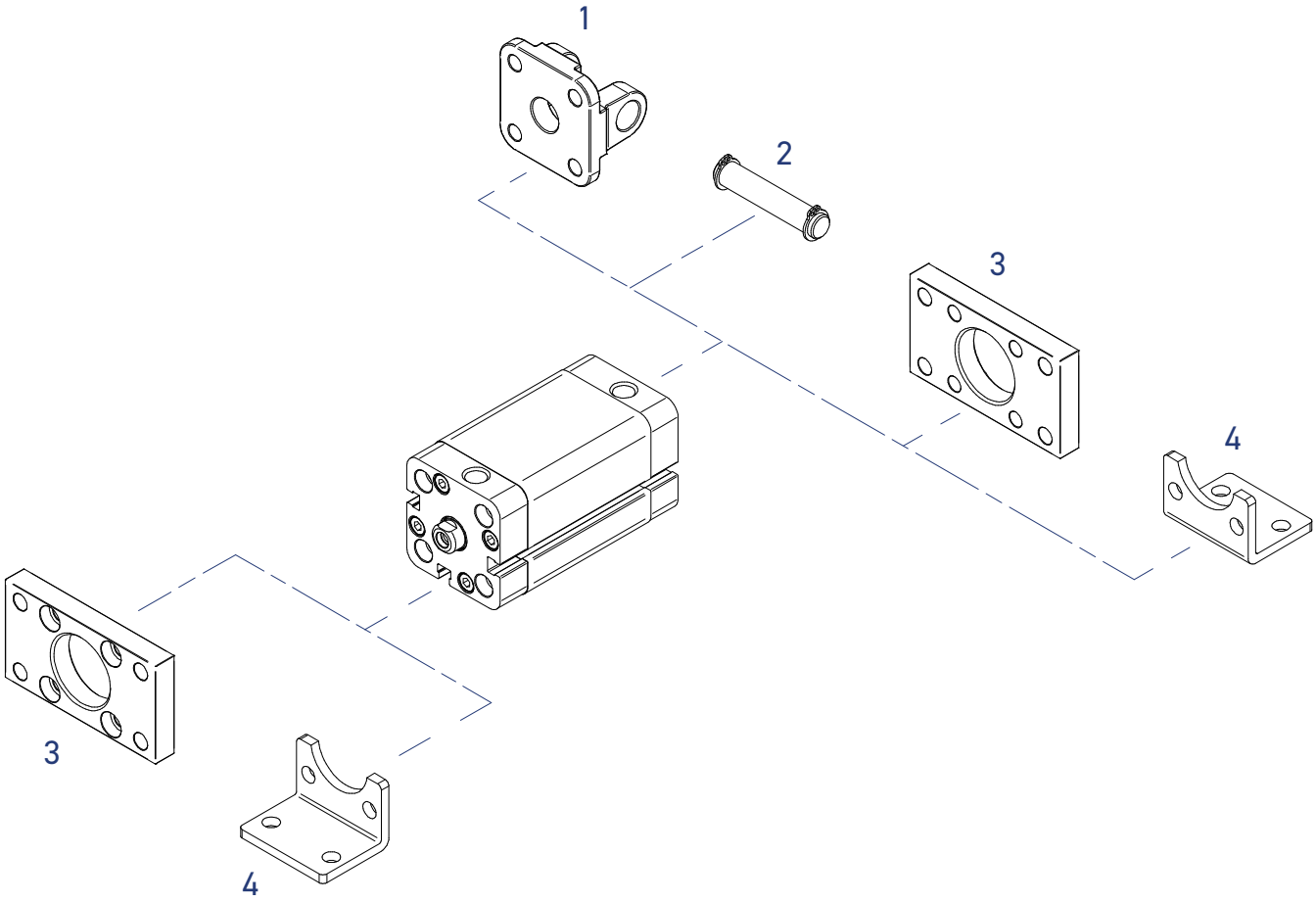


Ø063 - Ø080 - Ø100



Code / Tube I.D.	A	ØD	D1	ØD2	D4	ØD5	F4	G	H+	H3	I	I10	I11	K	L	L3	P	S	T	W
12	29	6	M3	6	M4	6	-	M5	38	8	18	-	-	5	3.5	4	8	6	M6	4.5
16	29	8	M4	6	M4	6	-	M5	38	8	18	-	-	6	3.5	4	11	20	M8	4.5
20	36	10	M5	6	M5	7.5	-	M5	38	8	22	-	-	8	4.5	4	12	22	M10x1.25	4.5
25	40	10	M5	6	M5	7.5	-	M5	39.5	8	26	-	-	8	4.5	4	12	22	M10x1.25	5.5
32	50	12	M6	6	M6	9	4	G1/8	44.5	8	32	-	5	10	5.5	4	15	22	M10x1.25	6
40	58	12	M6	6	M6	9	3	G1/8	45.5	8	42	-	3	10	5.5	4	15	22	M10x1.25	6.5
50	67	16	M8	6	M8	10.5	-	G1/8	45.5	8	50	12.5	10.5	13	6.5	4	17	24	M12x1.25	7.5
63	80	16	M8	8	M10	13.5	-	G1/8	50	8	62	14	12	13	8.5	4	17	24	M12x1.25	7.5
80	100	20	M10	8	M10	13.5	-	G1/8	56	8.5	82	18	12	17	8.5	4	17	32	M16x1.5	8
100	124	25	M12	8	M10	13.5	-	G1/4	66.5	10.5	103	35	17.5	22	8.5	4	22	40	M20x1.5	0

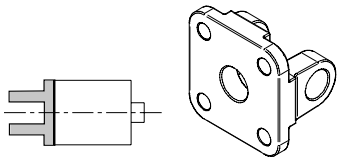
ADM Accessories



No.	Accessories
1	CFU Unitop female rear clevis
2	PCF Unitop pin for clevis
3	FU Unitop flange
4	PBU Unitop foot mounting

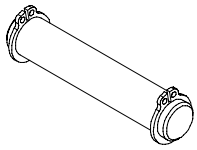
ADM Accessories

Rear Clevis Female



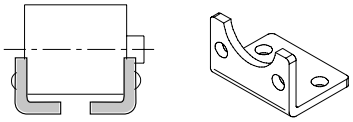
Part Number	To Suit	List Price
CFU032	To Suit ADM 32 Bore	Please Enquire
CFU040	To Suit ADM 40 Bore	
CFU050	To Suit ADM 50 Bore	
CFU063	To Suit ADM 63 Bore	
CFU080	To Suit ADM 80 Bore	
CFU100	To Suit ADM 100 Bore	

PIN



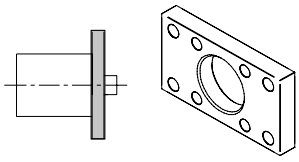
Part Number	To Suit	List Price
PCF032	To Suit ADM 32 Bore	Please Enquire
PCF040	To Suit ADM 40 Bore	
PCF050	To Suit ADM 50 Bore	
PCF063	To Suit ADM 63 Bore	
PCF080	To Suit ADM 80 Bore	
PCF100	To Suit ADM 80 Bore	

Foot Bracket



Part Number	To Suit	List Price
FI016	To Suit ADM 16 Bore	Please Enquire
FI020	To Suit ADM 20 Bore	
FI025	To Suit ADM 25 Bore	
FI032	To Suit ADM 32 Bore	
FI040	To Suit ADM 40 Bore	
FI050	To Suit ADM 50 Bore	
FI063	To Suit ADM 63 Bore	
FI080	To Suit ADM 80 Bore	
FI100	To Suit ADM 100 Bore	

Flange



Part Number	To Suit	List Price
PBI016	To Suit ADM 16 Bore	Please Enquire
PBI020	To Suit ADM 20 Bore	
PBI025	To Suit ADM 25 Bore	
PBU032	To Suit ADM 32 Bore	
PBU040	To Suit ADM 40 Bore	
PBU050	To Suit ADM 50 Bore	
PBU063	To Suit ADM 63 Bore	
PBU080	To Suit ADM 80 Bore	
PBU100	To Suit ADM 100 Bore	

MCGI SERIES

COMPACT TWIN-GUIDE CYLINDER

SAMEDAY BUILD
PREMIUM AVAILABLE

Features

- Higher loading capacity compared to unguided standard compact cylinders.
- Wide range of bore sizes and strokes.
- Ultra compact, light weight and space saving.
- Sensor slots on RCI sides for flush mounting of proximity sensors.
- Magnetic as standard.

Specification

Model	MCGI	
Acting type	Double acting	
Tube I.D. (mm)	20,25	32,40,50,63,80,100
Port size	M5×0.8	G1/8
Medium	Air	
Operating perssure range	0.15~1 MPa	0.1~1 MPa
Proof pressure	1.5 MPa	
Ambient temperature	−5~+60°C (No freezing)	
Cushion	Rubber bumper	
Available speed range	50~500 mm/sec	
Stroke length tolerance (*1)	+0~+1.0 mm	
Lubricator	Without lubrication	
Sensor switch (*2)	RCI	

*1. Stroke length tolerance does not include the amount of bumper change.
*2. RCI specification, please refer to page 203.

Table for standard stroke

Tube I.D.	Stroke (mm)
ø20,25	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100
ø32,40	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 150, 200
ø50,63,80,100	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 150, 200, 250, 300

- Please consult us if stroke is out of specification.

Order example

MCGI — 12 — 20 — 25

MODEL | TUBE I.D. | STROKE

PURPOSE / TYPE OF BEARING

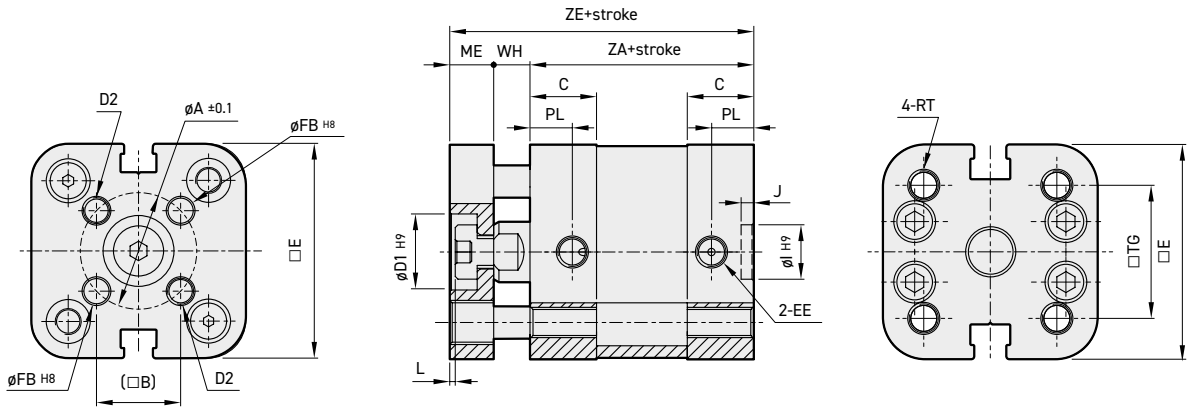
Code	Purpose / Type of bearing
12	Lift / Slide bush

PRICE LIST

Stroke (mm)	Diameter (BORE) Ø							
	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø
10 mm	£71.53	£74.52	£76.75	£82.35	£102.84	£119.60	£160.03	£210.33
15 mm	£72.66	£75.46	£77.49	£83.09	£104.33	£121.28	£162.26	£212.75
20 mm	£73.59	£76.39	£78.26	£84.03	£106.00	£122.95	£164.32	£215.36
25 mm	£74.52	£77.49	£79.17	£84.96	£107.49	£124.63	£166.55	£217.42
30 mm	£75.65	£78.43	£79.93	£85.70	£108.99	£126.30	£168.60	£219.83
40 mm	£77.49	£80.48	£81.97	£87.74	£112.35	£129.85	£173.08	£224.50
50 mm	£79.55	£82.54	£83.64	£89.80	£115.51	£133.39	£176.98	£229.34
60 mm	£80.67	£83.84	£85.70	£92.02	£118.67	£136.74	£181.27	£234.17
80 mm	£86.06	£89.24	£89.80	£96.50	£125.37	£144.19	£189.46	£243.13
100 mm	£89.24	£92.41	£94.46	£101.36	£132.10	£151.27	£198.79	£253.56
200 mm			£114.96	£123.33	£165.61	£187.61	£242.74	£302.38
300 mm					£188.71	£212.75	£276.66	£342.43

MCGI Dimensions ø20~ø100

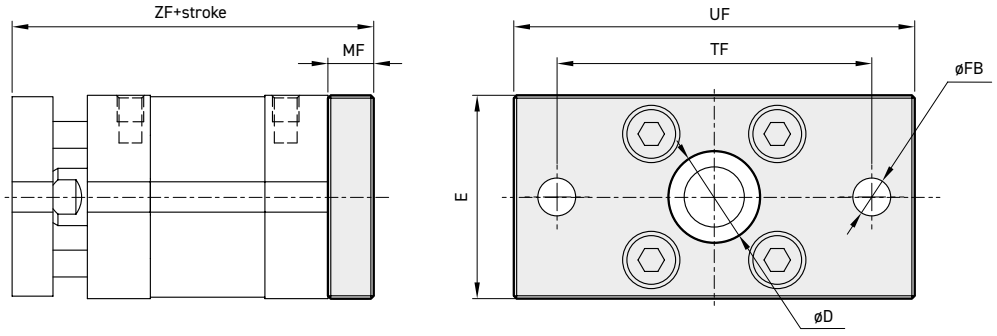
COMPACT TWIN-GUIDE CYLINDER



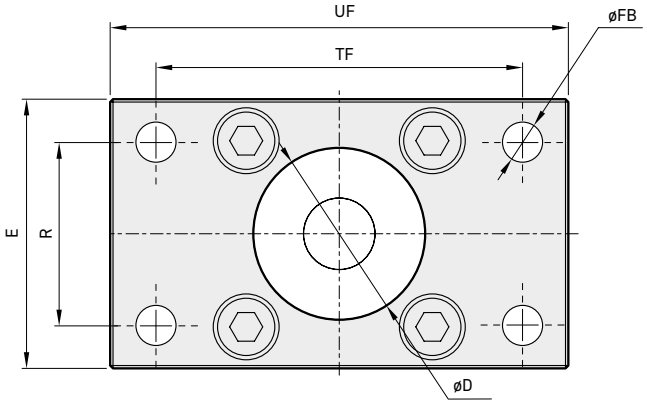
Code / Tube I.D.	A	B	C	D1	D2	E	EE	FB	I	J	L	ME	PL	RT	TG	WH	ZA	ZE
20	17	12	11	11	M4×0.7	35.5	M5×0.8	4	9	2.1	1	8	7	M5×0.8	22	6	37	51
25	22	15.6	11	14	M5×0.8	39.5	M5×0.8	5	9	2.1	1	8	7	M5×0.8	26	6	39	53
32	28	19.8	14	17	M5×0.8	47	G1/8	5	9	2.1	1.5	10	7.5	M6×1.0	32.5	7	44	61
40	33	23.3	14	17	M5×0.8	54.5	G1/8	5	9	2.1	1.5	10	7.5	M6×1.0	38	7	45	62
50	42	29.7	14	22	M6×1.0	65.5	G1/8	6	12	2.6	1.5	12	7.5	M8×1.25	46.5	8	45	65
63	50	35.4	14.5	22	M6×1.0	75.5	G1/8	6	12	2.6	1.5	12	7.5	M8×1.25	56.5	8	49	69
80	65	46	15.5	24	M8×1.25	95.5	G1/8	8	12	2.6	2	14	8	M10×1.5	72	10	54	78
100	80	56.6	18.5	24	M10×1.5	113.5	G1/8	10	12	2.6	2	14	9.5	M10×1.5	89	10	67	91

FBC

ø20, ø25



ø32~ø100



Code / Tube I.D.	D	E	FB	MF	R	TF	UF	ZF
20	16	35.5	6.6	8	—	55	70	59
25	16	39.5	6.6	8	—	60	76	61
32	30	47	7	10	32	64	80	71
40	35	54.5	9	10	36	72	90	72
50	40	65.5	9	12	45	90	110	77
63	45	75.5	9	12	50	100	120	81
80	45	95.5	12	16	63	126	150	94
100	55	113.5	14	16	75	150	175	107

MCJQ SERIES

COMPACT CYLINDER

Features

- Ultra Compact, light weight and space saving cylinder.
- Wide range of bore sizes and strokes (12mm~100mm).
- Single and double acting available.
- Ideal for use in machinery where space is limited and incorporating sensor groove which enables flush fitting of sensors.
- Sensor can be mounted on any one of three faces on 12 and 16 bore and on four faces on 20~100 bore.

Specification

Model	MCJQ									
Acting type	Double acting / Single acting							Double		
Tube I.D. (mm)	12	16	20	25	32	40	50	63	80	100
Port size	M5×0.8				Rc1/8		Rc1/4		Rc3/8	
Medium	Air									
Operating perssure range (MPa) Double acting	0.07~1		0.05~1							
Operating perssure range (MPa) Single acting	0.2~1		0.15~1		0.1~1			—		
Proof pressure	1.5 MPa									
Ambient temperature	-5°C~+60°C (No freezing)									
Available speed range	50~500 mm/sec									
Sensor switch (*)	RCB, RCE, RCE1, RDEP									

Order example

MCJQ — 12 — 20 — 25 M — F — G

- MODEL — **1**: Single rod, **2**: Double rod
- TUBE I.D.
- STROKE
- **M**: Magnet — Magnetic as standard, for non-magnetic option please contact our team.
- Blank: Standard, **F**: Rear flange
- PORT THREAD — Blank: M5×0.8 (for ø12~ø25); Blank: Rc thread, **G**: G thread, **NPT**: NPT thread (for ø32~ø100)

STYLE

Code		Symbol	Description
1	1		Double acting / Male thread
1	2		Double acting / Female thread
1	3		Single acting / Normally extended male thread
1	4		Single acting / Normally extended female thread
1	5		Single acting / Normally returned male thread
1	6		Single acting / Normally returned female thread
2	1		Double rod / Male thread
2	2		Double rod / Female thread
2	3		Single acting / Double rod / Male thread
2	4		Single acting / Double rod / Female thread
2	7		Double rod / Adjustable male thread
2	8		Double rod / Adjustable female thread

Mounting accessories

FAC — MCJQ — 20

- MOUNTING TYPE
- MODEL
- TUBE I.D.

	LB		FBC
	CB		RF
	FAC		

* Only for double acting / single rod type.

Single acting – Table for standard stroke

Tube I.D.	Standard stroke (mm)
ø12,16,20,25,32,40	5,10
ø50	5,10,15,20

Double acting – Table for standard stroke

Tube I.D.	Standard stroke	Long stroke (mm)
ø12,16	5,10,15,20,25,30	35,40,45,50,75,100
ø20	5,10,15,20,25,30, 35,40,45,50	75,100,125,150,175,200
ø25		75,100,125,150,175,200,250,300
ø32~80	5,10,15,20,25,30, 35,40,45,50,75,100	125,150,175,200,250,300
Tube I.D.	Standard stroke (mm)	
ø100	5,10,15,20,25,30,35,40,45,50,75,100	

- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

MCJQ

PRICE LIST

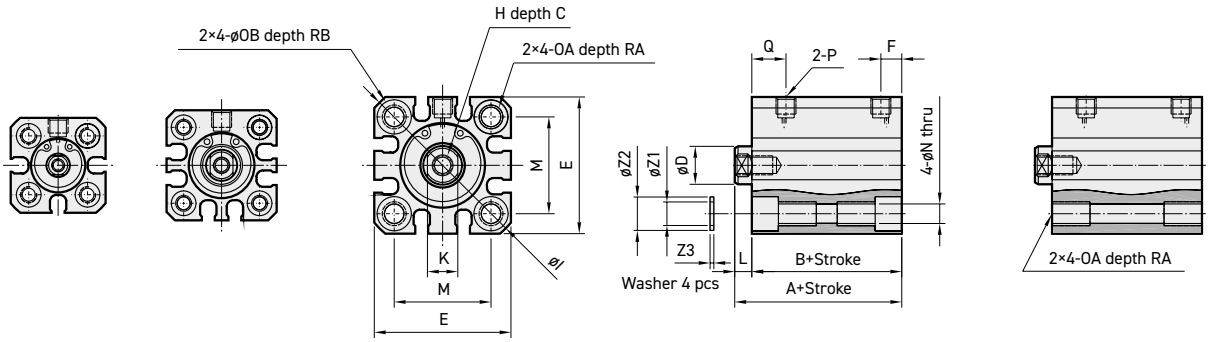
Stroke (mm)	Diameter (BORE) Ø									
	12Ø	16Ø	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø
5 mm	£28.79	£30.82	£38.58	£40.56	£44.34	£51.86	£59.85	£74.22	£112.56	£153.55
10 mm	£29.26	£31.67	£39.00	£41.65	£45.01	£52.76	£60.94	£75.36	£114.55	£155.77
15 mm	£30.16	£32.34	£39.43	£42.78	£45.67	£53.61	£61.84	£76.68	£116.34	£158.23
20 mm	£30.82	£33.23	£39.90	£43.64	£46.09	£54.27	£62.92	£78.00	£118.09	£160.64
25 mm	£31.49	£33.90	£40.33	£44.77	£46.76	£54.98	£64.06	£79.33	£120.13	£163.10
30 mm	£32.57	£34.79	£41.22	£46.09	£47.42	£56.07	£65.38	£80.65	£122.11	£165.56
35 mm	£34.81	£37.59	£41.65	£47.18	£48.08	£56.97	£66.28	£81.98	£123.86	£167.97
40 mm	£37.04	£40.38	£42.31	£48.08	£48.74	£57.63	£67.60	£83.35	£125.66	£170.43
45 mm	£39.28	£43.18	£42.78	£49.21	£49.40	£58.29	£68.45	£84.67	£127.64	£173.08
50 mm	£41.51	£45.97	£43.21	£50.06	£50.30	£59.38	£69.83	£85.99	£129.63	£175.30
Additional 5mm	£0.95	£1.18	£1.47	£1.89	£2.46	£2.98	£3.78	£4.44	£6.00	£7.42
DUAL ROD	× 1.5	× 1.5	× 1.5	× 1.5	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4
SINGLE ACTING	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3	× 1.3
MAGNET (+)	£4.63	£6.67	£9.29	£9.76	£9.76	£11.23	£15.08	£16.85	£24.54	£40.49
REPAIR KITS	£2.58	£3.52	£3.76	£4.23	£4.47	£4.94	£5.89	£7.30	£9.64	£10.83
REPAIR KITS (VITON)	£7.07	£7.56	£10.64	£12.53	£14.75	£14.75	£24.70	£31.56	£45.05	£58.13

Magnetic as standard, for non-magnetic option please contact our team.

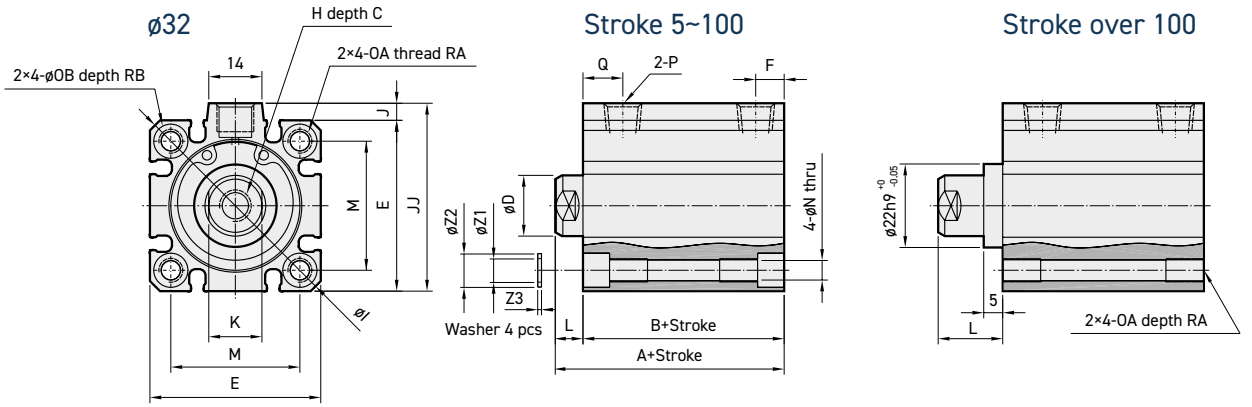
MCJQ Dimensions – Double acting ø12~ø32

COMPACT CYLINDER

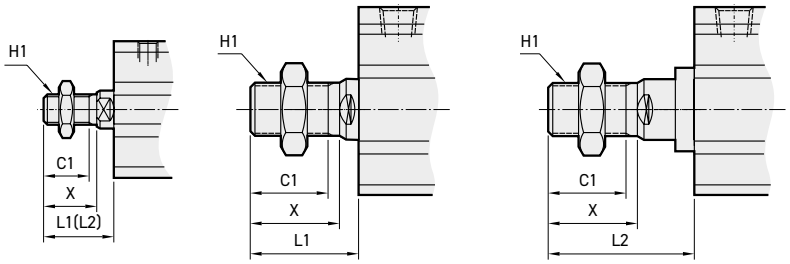
ø12 ø16 ø20, ø25 Stroke 5~100 Stroke over 100



ø32 Stroke 5~100 Stroke over 100



ø12~25 ø32 for stroke 5~100 ø32 for stroke over 100



MCJQ-11 male thread size

Code / Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

* L1: Standard stroke, L2: Long stroke

ø12~25

Code / Tube I.D.	Standard stroke									Long stroke					C	D	E	H	I	K	M	N	OA	OB	P	Q	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet				Magnet				Stroke range	A	B	F	L																	
		A	B	F	L	A	B	F	L																							
12	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	6	6	25	M3×0.5	32	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
16	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	8	8	29	M4×0.7	38	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
20	5~50	24	19.5	5.5	4.5	34	29.5	5.5	4.5	51~200	55.5	41	9	14.5	7	10	36	M5×0.8	47	8	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	6.2	8.8	1
25	5~50	27.5	22.5	5.5	5	37.5	32.5	5.5	5	51~300	59	44	11	15	12	12	40	M6×1.0	52	10	28	5.4	M6×1.0	9	M5×0.8	11	10	7	6.2	8.8	1

ø32

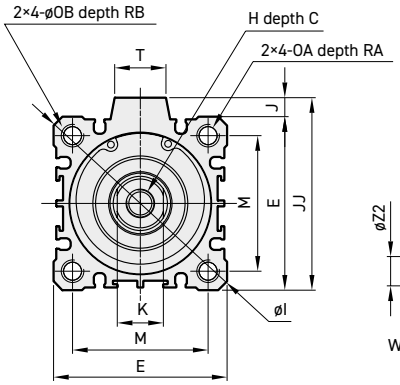
Code / Tube I.D.	Standard stroke							Long stroke						P	C	D	E	H	I	J	JJ	K	M	N	OA	OB	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet		F	L	Q	Stroke range	A	B	F	L	Q																	
		A	B	A	B																										
32	5~50	30	23	40	33	7.5	7	10.5	101 ~300	62.5	45.5	12.5	17	12.5	Rc1/8 (*1)	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	10	7	6.2	8.8	1
	51~100	40	33	40	33	7.5	7	10.5																							

*1. Without magnet with stroke=5mm, P=M5×0.8, Q=11.5, F=5.5

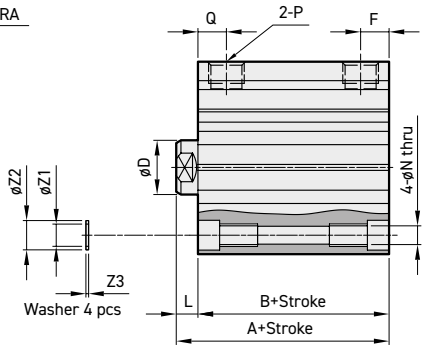
MCJQ Dimensions – Double acting ø40~ø100

COMPACT CYLINDER

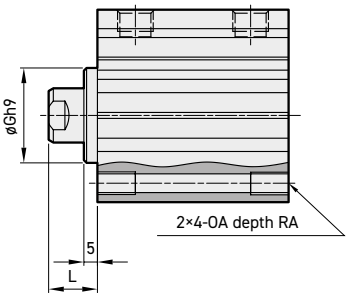
ø50~ø100



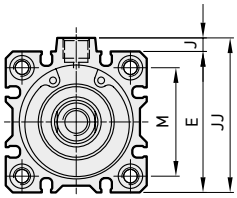
Stroke 5~100



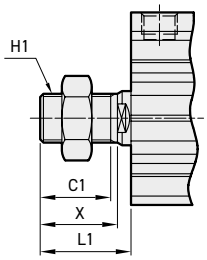
Stroke over 100



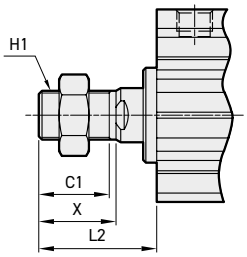
ø40



ø40~ø100 (Stroke 5~100)



ø40~ø80 (Stroke over 100)



MCJQ-11 male thread size

Code / Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	–	35.5

Code / Tube I.D.	Standard stroke								Long stroke					
	Stroke range	Without magnet		Magnet		F	L	Q	Stroke range	A	B	F	L	Q
		A	B	A	B									
40	5~50	36.5	29.5	46.5	39.5	8	7	11	125~300	72	55	14	17	14
	75,100	46.5	39.5											
50	5~50	38.5	30.5	48.5	40.5	10.5	8	10.5	125~300	73.5	55.5	14	18	14
	75,100	48.5	40.5											
63	5~50	44	36	54	46	10.5	8	15	125~300	75	57	16.5	18	16.5
	75,100	54	46											
80	5~50	53.5	43.5	63.5	53.5	12.5	10	16	125~300	86	66	19	20	19
	75,100	63.5	53.5											
100	5~50	65	53	75	63	13	12	23	–					
	75,100	75	63											

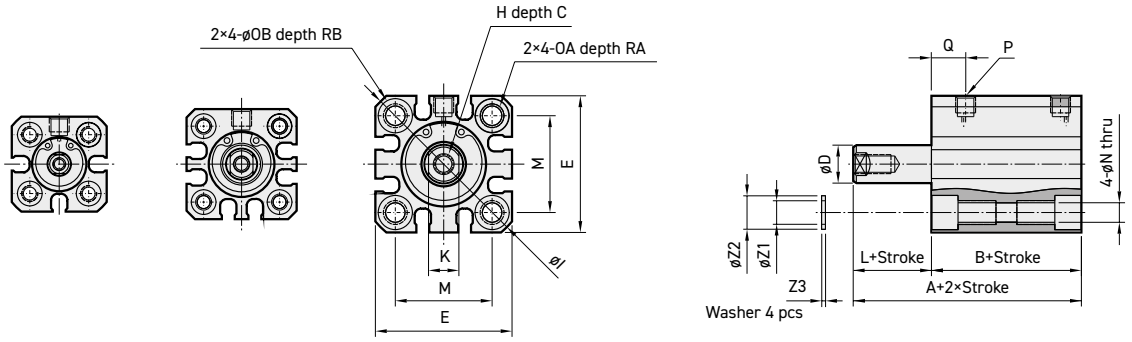
Code / Tube I.D.	C	D	E	G^{h9}	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 $^{+0}_{-0.052}$	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 $^{+0}_{-0.062}$	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4 (*1)	14	8	19	8.2	10.8	1
63	15	20	77	35 $^{+0}_{-0.062}$	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*2)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 $^{+0}_{-0.062}$	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2
100	27	30	117	–	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12, F=8
*2. Without magnet with stroke=5mm, P=Rc1/8
*3. Without magnet with stroke=5mm, P=Rc1/4

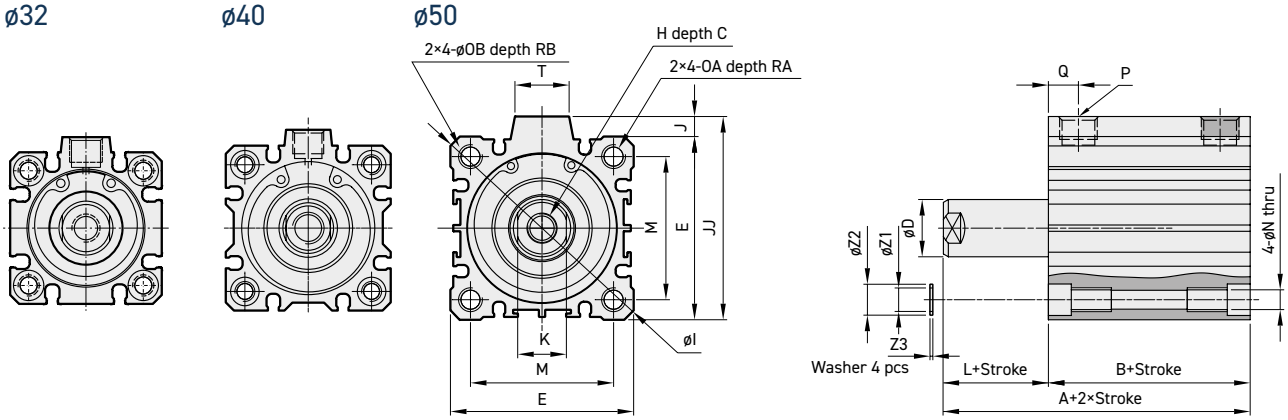
MCJQ Dimensions – Normally extented ø12~ø50

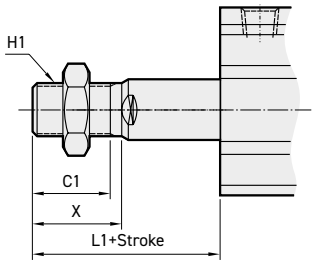
COMPACT CYLINDER

ø12 ø16 ø20, ø25



ø32 ø40 ø50





* L1: Standard stroke

MCJQ-13 male thread size

Code / Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

Note: The value **B** of ø12~ø40 type is greater then double acting type.

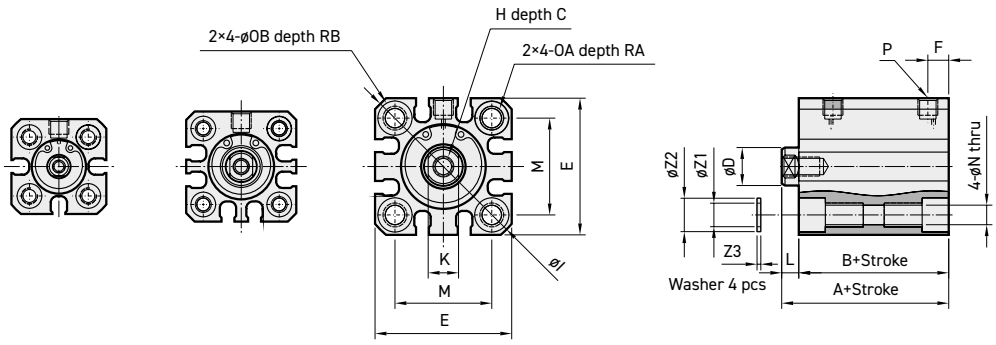
Code / Tube I.D.	Standard stroke					C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	30.5	27	35.5	32	6	6	25	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
16	5,10	35.5	32	40.5	37	8	8	29	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
20	5,10	34	29.5	44	39.5	7	10	36	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	–	6.2	8.8	1
25	5,10	47.5	42.5	57.5	52.5	12	12	40	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	–	6.2	8.8	1
32	5,10	55	48	65	58	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8	10.5	10	7	14	6.2	8.8	1
40	5,10	61.5	54.5	71.5	64.5	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	11	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*1)	10.5	14	8	19	8.2	10.8	1

*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12

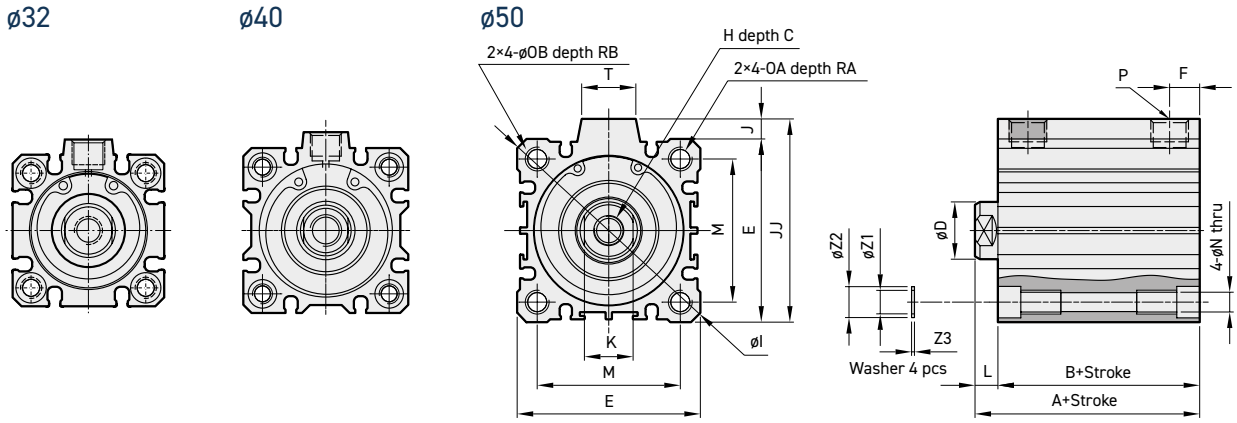
MCJQ Dimensions – Normally returned ø12~ø50

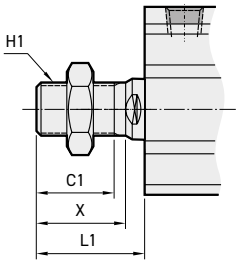
COMPACT CYLINDER

ø12 ø16 ø20, ø25



ø32 ø40 ø50





* L1: Standard stroke

MCJQ-15 male thread size

Code / Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

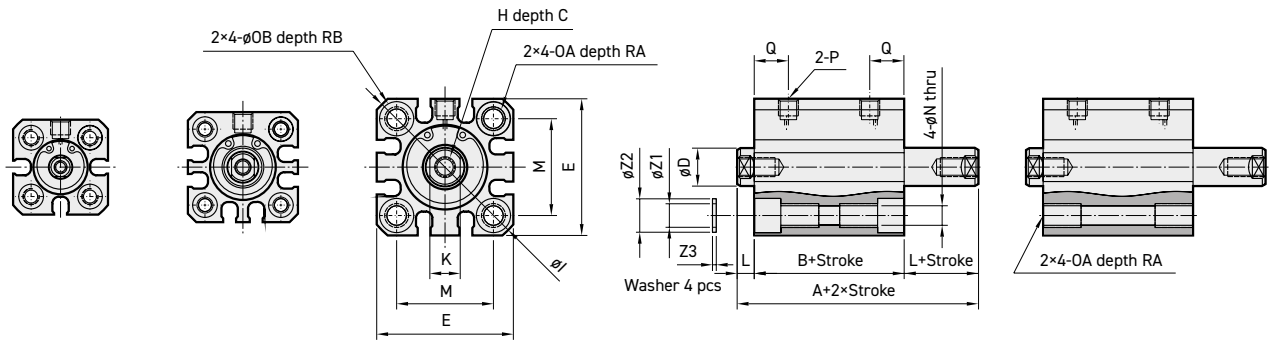
Code / Tube I.D.	Standard stroke					C	D	E	F	H	I	J	JJ	K	L	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	20.5	17	25.5	22	6	6	25	5	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7	4	–	4.2	6.3	0.5
16	5,10	20.5	17	25.5	22	8	8	29	5	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7	4	–	4.2	6.3	0.5
20	5,10	24	19.5	34	29.5	7	10	36	5.5	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	10	7	–	6.2	8.8	1
25	5,10	27.5	22.5	37.5	32.5	12	12	40	5.5	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	10	7	–	6.2	8.8	1
32	5,10	30	23	40	33	13	16	45	7.5	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	10	7	14	6.2	8.8	1
40	5,10	36.5	29.5	46.5	39.5	13	16	52	8	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	10.5	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*2)	14	8	19	8.2	10.8	1

*1. Without magnet with stroke=5mm, P=M5×0.8, F=5.5
*2. Without magnet with stroke=5mm, P=Rc1/8, F=8

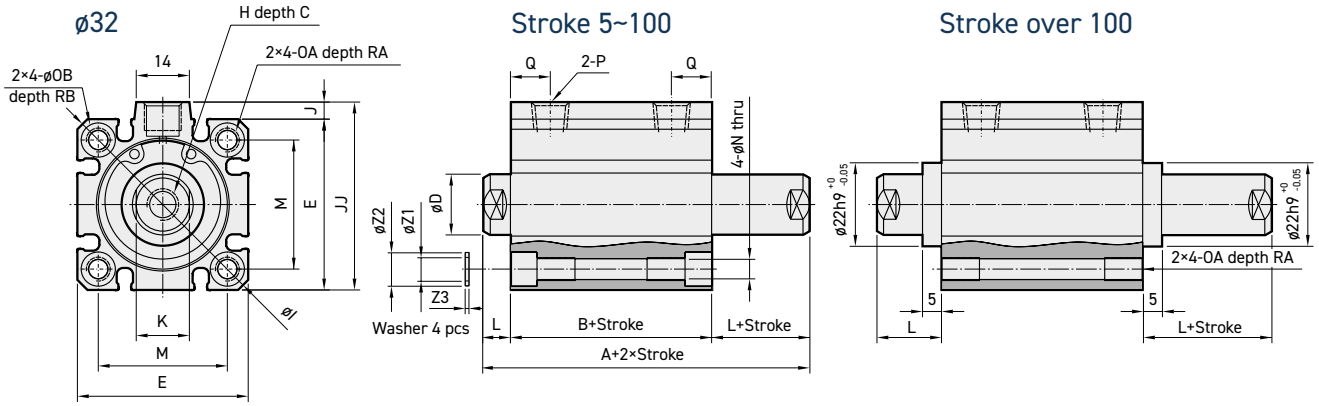
MCJQ Dimensions – Double acting / Double rod ø12~ø32

COMPACT CYLINDER

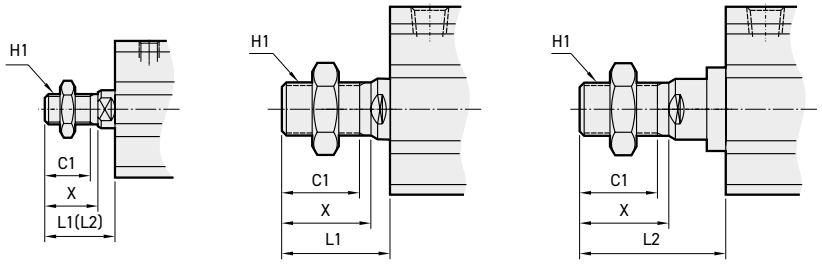
ø12 ø16 ø20, ø25 Stroke 5~100 Stroke over 100



ø32 Stroke 5~100 Stroke over 100



ø12~25 ø32 for stroke 5~100 ø32 for stroke over 100



* L1: Standard stroke, L2: Long stroke

MCJQ-21 male thread size

Code / Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

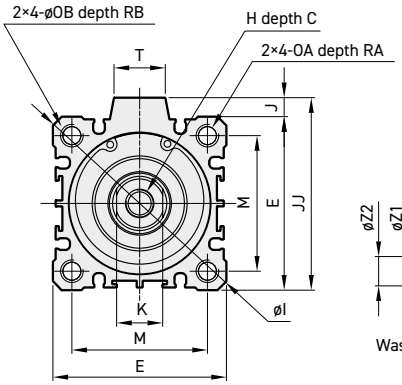
Code / Tube I.D.	Standard stroke							Long stroke				C	D	E	H	I	J	JJ	K	M	N	OA	OB	P	Q	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet			Magnet			Stroke range	A	B	L																			
		A	B	L	A	B	L																							
12	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	6	6	25	M3×0.5	32	–	–	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
16	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	8	8	29	M4×0.7	38	–	–	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
20	5~50	35	26	4.5	45	36	4.5	51~200	70	41	14.5	7	10	36	M5×0.8	47	–	–	8	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	6.2	8.8	1
25	5~50	39	29	5	49	39	5	51~300	74	44	15	12	12	40	M6×1.0	52	–	–	10	28	5.4	M6×1.0	9	M5×0.8	11	10	7	6.2	8.8	1
32	5~50	44.5	30.5	7	54.5	40.5	7	101~300	79.5	45.5	17	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5	10	7	6.2	8.8	1
	51~100	54.5	40.5	7	54.5	40.5	7																							

*1. Without magnet with stroke=5mm, P=M5×0.8

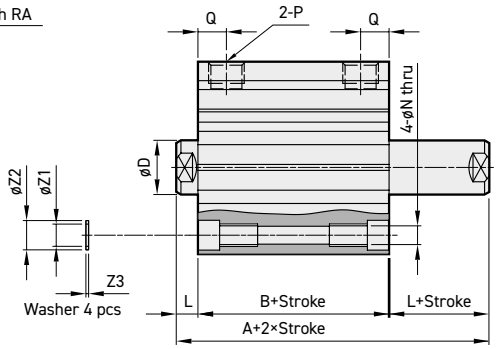
MCJQ Dimensions – Double acting / Double rod ø40~ø100

COMPACT CYLINDER

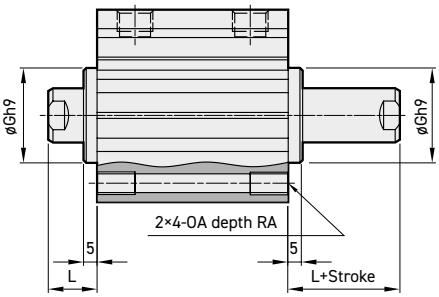
ø50~ø100



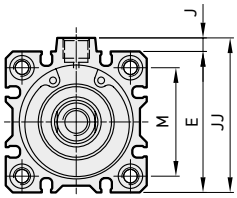
Stroke 5~100



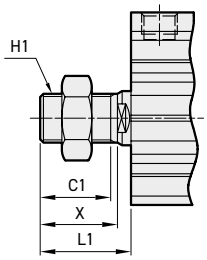
Stroke over 100



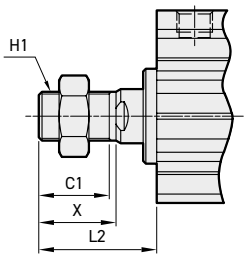
ø40



ø40~ø100 (Stroke 5~100)



ø40~ø80 (Stroke over 100)



MCJQ-21 male thread size

Code / Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	–	35.5

Code / Tube I.D.	Standard stroke							Long stroke				
	Stroke range	Without magnet A	Without magnet B	Magnet A	Magnet B	L	Q	Stroke range	A	B	L	Q
40	5~50	54	40	64	50	7	14	101~300	89	55	17	14
	51~100	64	50									
50	5~50	56.5	40.5	66.5	50.5	8	14	101~300	91.5	55.5	18	14
	51~100	66.5	50.5									
63	5~50	58	42	68	52	8	15.5	101~300	93	57	18	16.5
	51~100	68	52									
80	5~50	71	51	81	61	10	18	101~300	106	66	20	19
	51~100	81	61									
100	5~50	84.5	60.5	94.5	70.5	12	22	–				
	51~100	94.5	70.5									

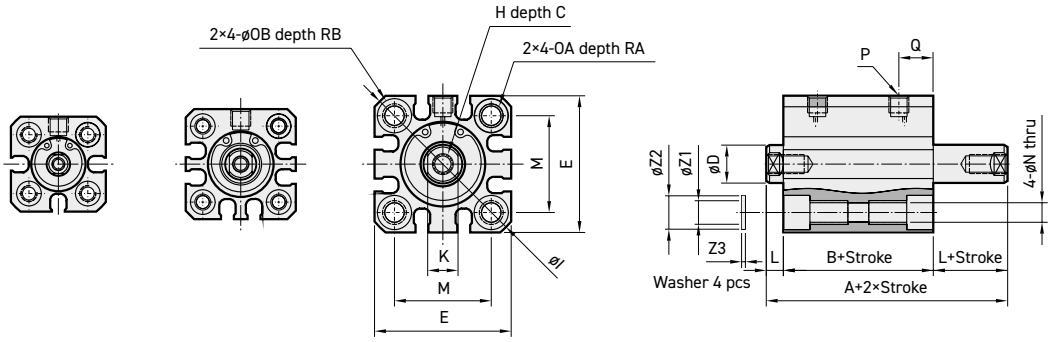
Code / Tube I.D.	C	D	E	G h9	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 +0 -0.052	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 +0 -0.062	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4	14	8	19	8.2	10.8	1
63	15	20	77	35 +0 -0.062	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*1)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 +0 -0.062	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2
100	27	30	117	–	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8
*2. Without magnet with stroke=5mm, P=Rc1/4

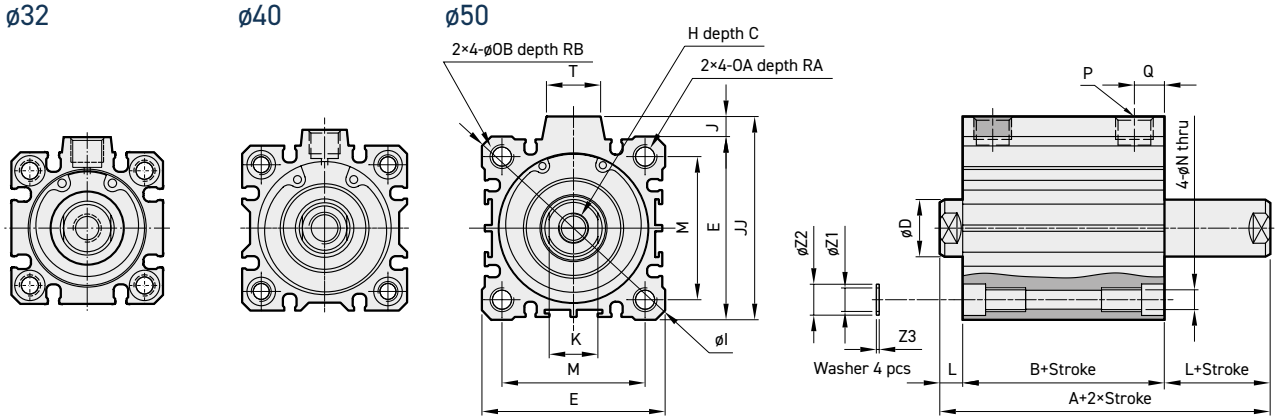
MCJQ Dimensions – Single acting / Double rod ø12~ø50

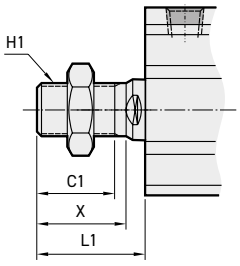
COMPACT CYLINDER

ø12 ø16 ø20, ø25



ø32 ø40 ø50





* L1: Standard stroke

MCJQ-23 male thread size

Code / Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

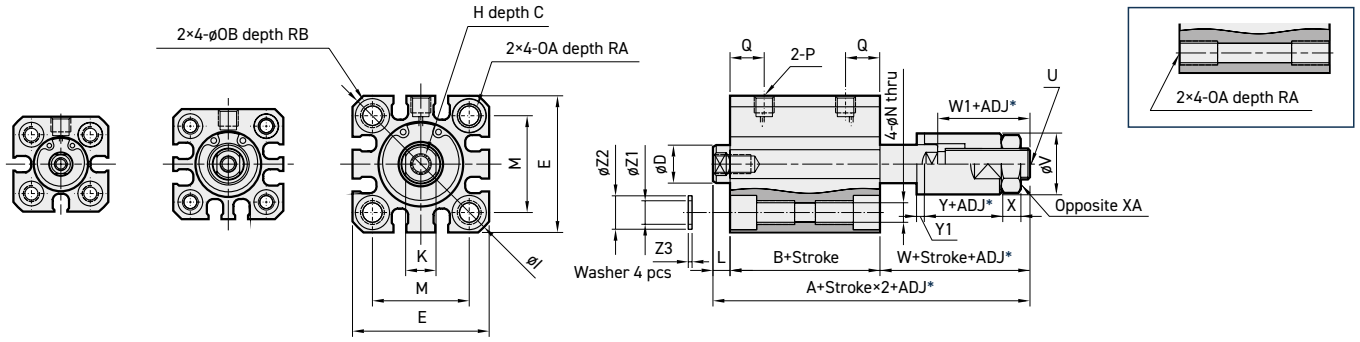
Code / Tube I.D.	Standard stroke					C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	29	22	34	27	6	6	25	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
16	5,10	29	22	34	27	8	8	29	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
20	5,10	35	26	45	36	7	10	36	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	–	6.2	8.8	1
25	5,10	39	29	49	39	12	12	40	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	–	6.2	8.8	1
32	5,10	44.5	30.5	54.5	40.5	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5	10	7	14	6.2	8.8	1
40	5,10	54	40	64	50	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	14	10	7	14	6.2	8.8	1
50	5~20	56.5	40.5	66.5	50.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4	14	14	8	19	8.2	10.8	1

*1. Without magnet with stroke=5mm, P=M5×0.8

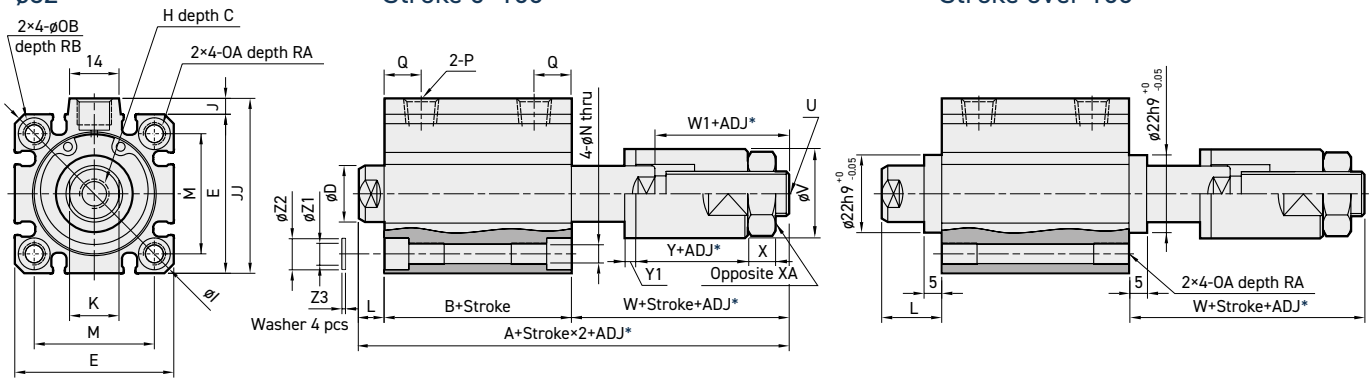
MCJQ Dimensions – Double rod / Adjustable stroke ø12~ø32

COMPACT CYLINDER

ø12 ø16 ø20, ø25 Stroke 5~100 Stroke over 100

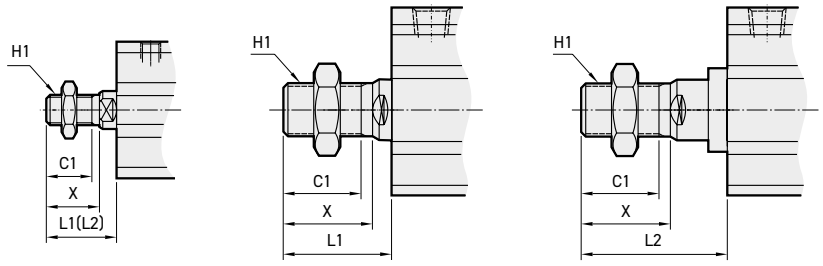


ø32 Stroke 5~100 Stroke over 100



* ADJ: Adjustable stroke

ø12~25 ø32 for stroke 5~100 ø32 for stroke over 100



* L1: Standard stroke, L2: Long stroke

MCJQ-27 male thread size

Code / Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

Code / Tube I.D.	Standard stroke							Long stroke				
	Stroke range	Without magnet		Magnet		L	W	Stroke range	A	B	L	W
		A	B	A	B							
12	5~30	45.5	22	50.5	27	3.5	20	31~100	65.5	32	13.5	20
16	5~30	49	22	54	27	3.5	23.5	31~100	69	32	13.5	23.5
20	5~50	54.3	26	64.3	36	4.5	23.8	51~200	79.3	41	14.5	23.8
25	5~50	56.5	29	66.5	39	5	22.5	51~300	81.5	44	15	22.5
32	5~50	60.9	30.5	70.9	40.5	7	23.4	101~300	91.5	45.5	17	29
	51~100	70.9	40.5									

*1. Without magnet with stroke=5mm, P=M5×0.8

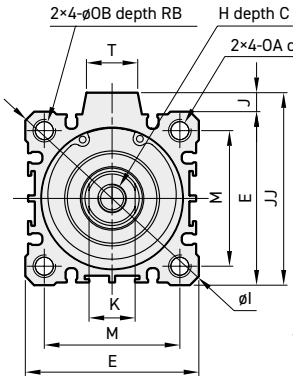
Code / Tube I.D.	C	D	E	H	I	J	JJ	K	M	N	OA	OB	P	Q
12	6	6	25	M3×0.5	32	–	–	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5
16	8	8	29	M4×0.7	38	–	–	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5
20	7	10	36	M5×0.8	47	–	–	8	25.5	5.4	M6×1.0	9	M5×0.8	9
25	12	12	40	M6×1.0	52	–	–	10	28	5.4	M6×1.0	9	M5×0.8	11
32	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5

Code / Tube I.D.	RA	RB	U	V	W1	X	XA	Y	Y1	Z1	Z2	Z3
12	7	4	M5×0.8	12	16	4	8	13	2	4.2	6.3	0.5
16	7	4	M8×1.25	16	19	5	13	15	2	4.2	6.3	0.5
20	10	7	M8×1.25	16	19	5	13	15	2	6.2	8.8	1
25	10	7	M10×1.25	20	18	6	17	12	2	6.2	8.8	1
32	10	7	M12×1.25	30	19	7	19	12	2	6.2	8.8	1

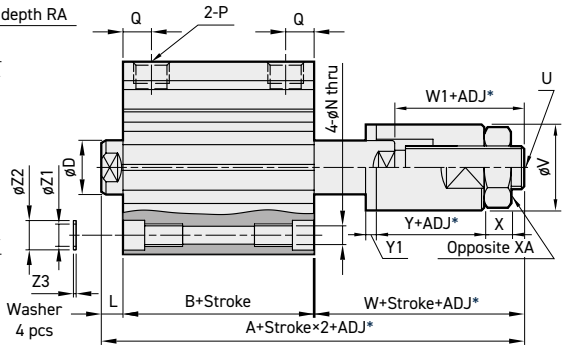
MCJQ Dimensions – Double rod / Adjustable stroke ø40~ø100

COMPACT CYLINDER

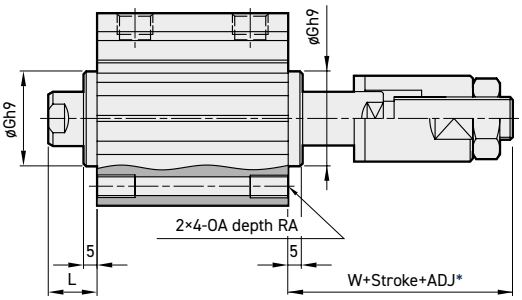
ø50~ø100



Stroke 5~100

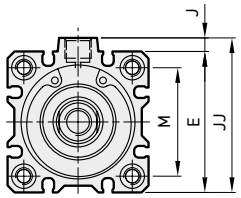


Stroke over 100

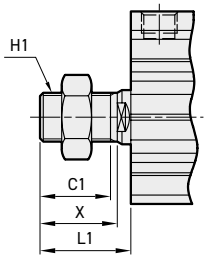


* ADJ: Adjustable stroke

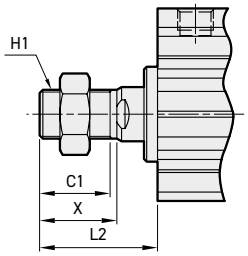
ø40



ø40~ø100 (Stroke 5~100)



ø40~ø80 (Stroke over 100)



MCJQ-27 male thread size

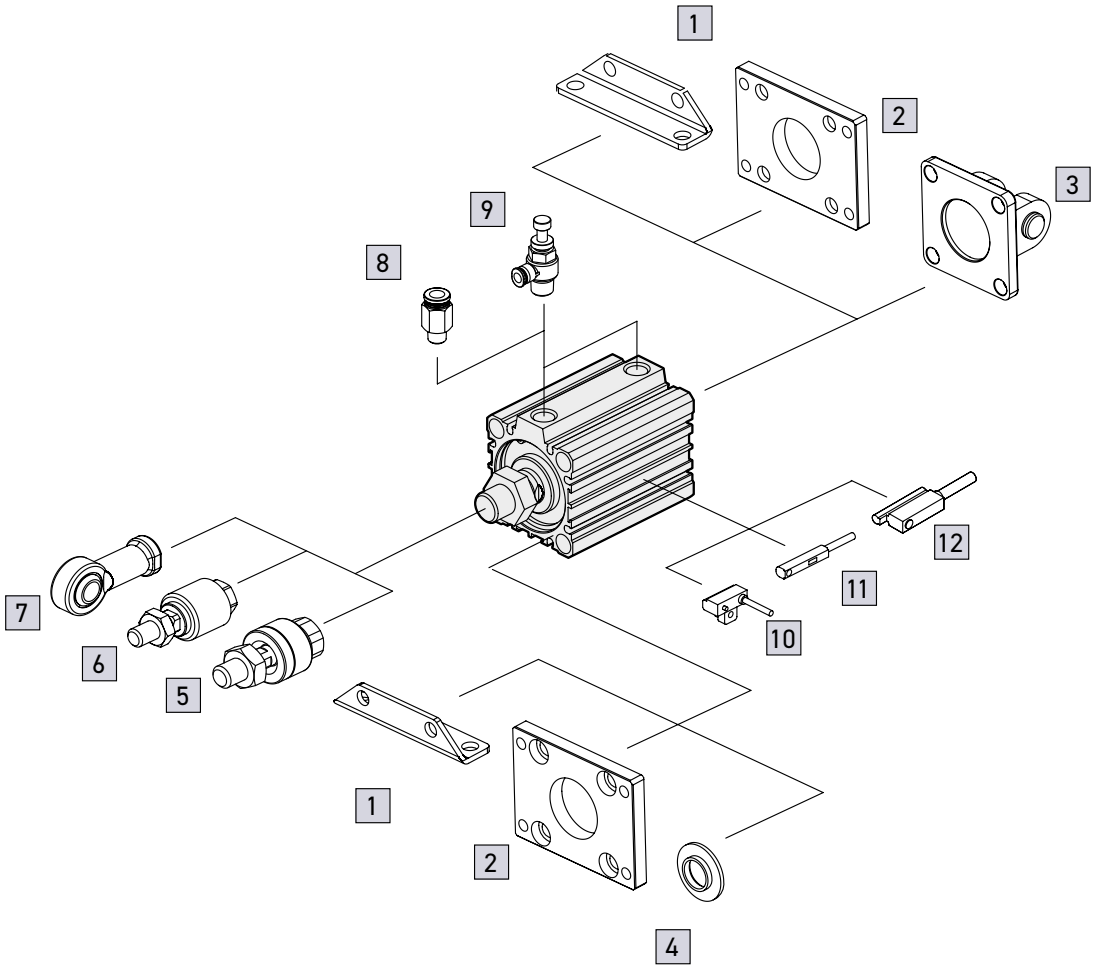
Code / Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	–	35.5

Code / Tube I.D.	Standard stroke								Long stroke					
	Stroke range	Without magnet		Magnet		L	Q	W	Stroke range	A	B	L	Q	W
		A	B	A	B									
40	5~50	71	40	81	50	7	14	24	101~300	102.5	55	17	14	30.5
	51~100	81	50											
50	5~50	75	40.5	85	50.5	8	14	26.5	101~300	105.5	55.5	18	14	32
	51~100	85	50.5											
63	5~50	80	42	90	52	8	15.5	30	101~300	110	57	18	16.5	35
	51~100	90	52											
80	5~50	100	51	110	61	10	18	39	101~300	130	66	20	19	44
	51~100	110	61											
100	5~50	111	60.5	121	70.5	12	22	38.5	–					
	51~100	121	70.5											

Code / Tube I.D.	C	D	E	G^{h9}	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	U	V	W1	X	XA	Y	Y1	Z1	Z2	Z3
40	13	16	52	28 $^{+0}_{-0.052}$	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	M12×1.25	30	21	7	19	12	2	6.2	8.8	1
50	15	20	64	35 $^{+0}_{-0.062}$	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4	14	8	19	M16×1.5	40	22.5	8	24	15	2	8.2	10.8	1
63	15	20	77	35 $^{+0}_{-0.062}$	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*1)	18	10.5	19	M16×1.5	40	25.5	8	24	15	2	10.2	13.8	1
80	21	25	98	43 $^{+0}_{-0.062}$	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22×1.5	50	33	13	32	20	3	12.2	17.3	2
100	27	30	117	–	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22×1.5	50	33	13	32	20	3	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8
*2. Without magnet with stroke=5mm, P=Rc1/4

MCJQ Accessories

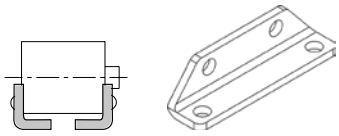


No.	Accessories
1	Mounting accessories LB
2	Mounting accessories FAC/FBC
3	Mounting accessories CB+PIN
4	Mounting accessories RF
5	Floating joint MFC
6	Floating joint MFCS (please enquire)

No.	Accessories
7	Female rod ends PHS
8	Fitting PC (PISCO)
9	Speed controller JSC (PISCO)
10	Sensor switch RCB
11	Sensor switch RCE/RCE1
12	Sensor switch RDEP

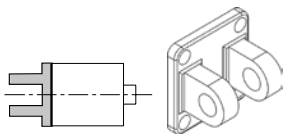
MCJQ Accessories

Foot Bracket



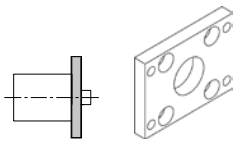
Part Number	To Suit	List Price
LB-MCJQ-12	To Suit MCJQ 12 Bore	£2.09
LB-MCJQ-16	To Suit MCJQ 16 Bore	£2.32
LB-MCJQ-20	To Suit MCJQ 20 Bore	£4.18
LB-MCJQ-25	To Suit MCJQ 25 Bore	£4.18
LB-MCJQ-32	To Suit MCJQ 32 Bore	£3.97
LB-MCJQ-40	To Suit MCJQ 40 Bore	£3.97
LB-MCJQ-50	To Suit MCJQ 50 Bore	£5.27
LB-MCJQ-63	To Suit MCJQ 63 Bore	£6.33
LB-MCJQ-80	To Suit MCJQ 80 Bore	£11.07
LB-MCJQ-100	To Suit MCJQ 100 Bore	£16.87

Female Rear Clevis



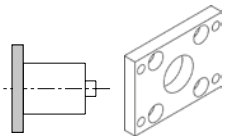
Part Number	To Suit	List Price
CB-MCJQ-12	To Suit MCJQ 12 Bore	£16.24
CB-MCJQ-16	To Suit MCJQ 16 Bore	£17.43
CB-MCJQ-20	To Suit MCJQ 20 Bore	£12.42
CB-MCJQ-25	To Suit MCJQ 25 Bore	£12.90
CB-MCJQ-32	To Suit MCJQ 32 Bore	£14.09
CB-MCJQ-40	To Suit MCJQ 40 Bore	£14.33
CB-MCJQ-50	To Suit MCJQ 50 Bore	£19.34
CB-MCJQ-63	To Suit MCJQ 63 Bore	£25.56
CB-MCJQ-80	To Suit MCJQ 80 Bore	£37.27
CB-MCJQ-100	To Suit MCJQ 100 Bore	£49.90

Flange



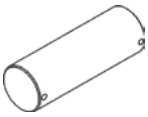
Part Number	To Suit	List Price
FAC-MCJQ-12	To Suit MCJQ 12 Bore	£17.22
FAC-MCJQ-16	To Suit MCJQ 16 Bore	£17.22
FAC-MCJQ-20	To Suit MCJQ 20 Bore	£20.86
FAC-MCJQ-25	To Suit MCJQ 25 Bore	£22.51
FAC-MCJQ-32	To Suit MCJQ 32 Bore	£22.84
FAC-MCJQ-40	To Suit MCJQ 40 Bore	£24.50
FAC-MCJQ-50	To Suit MCJQ 50 Bore	£33.51
FAC-MCJQ-63	To Suit MCJQ 63 Bore	£37.74
FAC-MCJQ-80	To Suit MCJQ 80 Bore	£47.46
FAC-MCJQ-100	To Suit MCJQ 100 Bore	£61.87

Flange



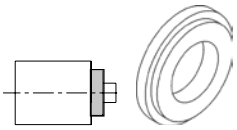
Part Number	To Suit	List Price
FBC-MCJQ-12	To Suit MCJQ 12 Bore	£17.22
FBC-MCJQ-16	To Suit MCJQ 16 Bore	£17.22
FBC-MCJQ-20	To Suit MCJQ 20 Bore	£20.86
FBC-MCJQ-25	To Suit MCJQ 25 Bore	£22.51
FBC-MCJQ-32	To Suit MCJQ 32 Bore	£22.84
FBC-MCJQ-40	To Suit MCJQ 40 Bore	£24.50
FBC-MCJQ-50	To Suit MCJQ 50 Bore	£33.51
FBC-MCJQ-63	To Suit MCJQ 63 Bore	£37.74
FBC-MCJQ-80	To Suit MCJQ 80 Bore	£47.46
FBC-MCJQ-100	To Suit MCJQ 100 Bore	£61.87

PIN



Part Number	To Suit	List Price
PIN-MCJQ-12	To Suit MCJQ 12 Bore	£1.43
PIN-MCJQ-16	To Suit MCJQ 16 Bore	£1.43
PIN-MCJQ-20	To Suit MCJQ 20 Bore	£1.67
PIN-MCJQ-25	To Suit MCJQ 25 Bore	£1.67
PIN-MCJQ-32	To Suit MCJQ 32 Bore	£1.91
PIN-MCJQ-40	To Suit MCJQ 40 Bore	£1.91
PIN-MCJQ-50	To Suit MCJQ 50 Bore	£6.44
PIN-MCJQ-63	To Suit MCJQ 63 Bore	£6.44
PIN-MCJQ-80	To Suit MCJQ 80 Bore	£8.37
PIN-MCJQ-100	To Suit MCJQ 100 Bore	£9.80

RF



Part Number	To Suit	List Price
RF-MCJQ-12	To Suit MCJQ 12 Bore	£6.44
RF-MCJQ-16	To Suit MCJQ 16 Bore	£6.57
RF-MCJQ-20	To Suit MCJQ 20 Bore	£6.73
RF-MCJQ-25	To Suit MCJQ 25 Bore	£7.02
RF-MCJQ-32	To Suit MCJQ 32 Bore	£7.42
RF-MCJQ-40	To Suit MCJQ 40 Bore	£8.77
RF-MCJQ-50	To Suit MCJQ 50 Bore	£10.57
RF-MCJQ-63	To Suit MCJQ 63 Bore	£12.40
RF-MCJQ-80	To Suit MCJQ 80 Bore	£15.73
RF-MCJQ-100	To Suit MCJQ 100 Bore	£20.77

Floating Joint

Part Number	To Suit	List Price
MFC-1005T	to suit MCJQ 12 Bore	£20.66
MFC-1006T	to suit MCJQ 16 Bore	£22.81
MFC-1008T	to suit MCJQ 20 Bore	£24.75
MFC-1010T	to suit MCJQ 25 Bore	£30.11
MFC-1014T	to suit MCJQ 32/40 Bore	£37.94
MFC-1018T	to suit MCJQ 50/63 Bore	£48.46
MFC-1022T	to suit MCJQ 80 Bore	£56.49
MFC-1026T	to suit MCJQ 100 Bore	£71.28

MCGS SERIES ø6, ø10

TWIN-GUIDE CYLINDER

Features

- Multi-ports as standard enabling both direction mounting.
- Non-rotating accuracy ± 0.1°
- Embedding type sensors.
- The sensor cable will be in the same direction as the piping tube if vertical type sensor switch (Angle cable) is used.
- Magnetic as standard.

Specification

Model	MCGS	
Acting type	Double acting	
Tube I.D. (mm)	6	10
Stroke (mm)	5, 10, 15	5, 10, 15, 20
Port size	M3×0.5	
Medium	Air	
Max. operating perssure	0.7 MPa	
Min. operating perssure	0.15 MPa	
Proof pressure	1 MPa	
Lubrication	Not required	
Ambient temperature	-5~+60°C (No freezing)	
Available speed range	50~400 mm/sec	
Sensor switch (*)	RDGV	

*1. This product is not applicable for stopper purpose.

Order example

MCGS — 6 — 10

MODEL | TUBE I.D. | STROKE

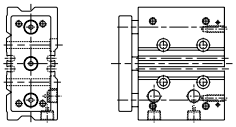
MCGS SERIES ø12~ø63

TWIN-GUIDE CYLINDER

Features

- Proven track record in manufacturing precision guided cylinders.
- Multi-Ports as standard enabling two direction mounting option.
- Flush fitting sensors.
- Flush fitting sensors.
- Magnetic as standard

Specification

Model	MCGS		
Model			
Acting type	Double acting		
Tube I.D. (mm)	12,16	20,25,32,40	50,63
Port size	M5×0.8	Rc1/8	Rc1/4
Medium	Air		
Operating perssure range	0.1~1 MPa		
Proof pressure	1.5 MPa		
Ambient temperature	-5~+60°C (No freezing)		
Cushion	With rubber cushion pad		
Available speed range	50~500 mm/sec		
Lubrication	Not required		
Sensor switch (*)	RCE, RCE1, RDEP		

Order example

MCGS — 03 — 12 — 50 — 20 — G

MODEL | TUBE I.D. | STROKE | ADJUST STROKE (for 07, 27 type) | PORT THREAD

PORT THREAD:
Blank: M5×0.8 (for ø12, ø16)
Blank: Rc thread
G: G thread
NPT: NPT thread (for ø20~ø63)

PURPOSE / TYPE OF BEARING

Code	Purpose / Type of bearing
03	Stop / Slide bush
07	Stop / Slide bush / Stroke adjustable
23	Push / Linear bearing (Could attach a table for the use as a lifter)
27	Push / Linear bearing / Stroke adjustable (Could attach a table for the use as a lifter)

Please get in touch with the Matara team for price and availability on 07 and 27 versions.

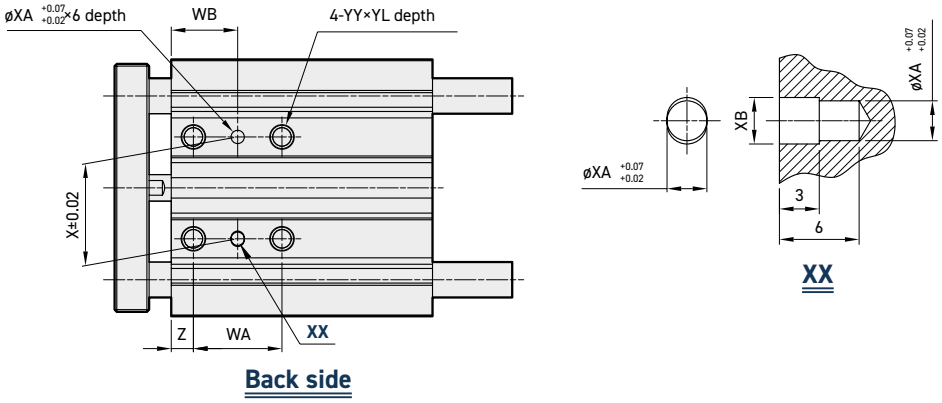
MCGS SERIES

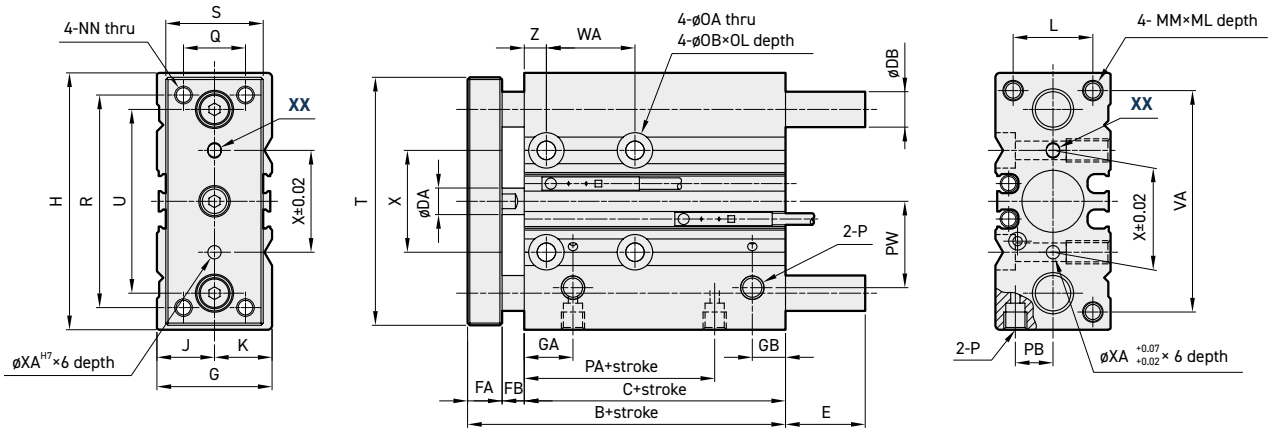
PRICE LIST

Stroke (mm)	Type	Diameter (BORE) Ø									
		6Ø	10Ø	12Ø	16Ø	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø
STROKE=5mm	MCGS-03	£75.16	£74.43								
	MCGS-23										
STROKE=10mm	MCGS-03	£76.80	£76.34	£106.21	£122.33						
	MCGS-23			£136.78	£147.45						
STROKE=15mm	MCGS-03	£78.70	£78.23								
	MCGS-23										
STROKE=20mm	MCGS-03		£80.13	£107.62	£124.93	£138.46	£139.64				
	MCGS-23			£140.59	£151.26	£174.73	£177.10				
STROKE=25mm	MCGS-03			£111.42	£129.68	£141.05	£144.37	£174.24	£190.61	£245.37	£293.96
	MCGS-23			£143.67	£155.04	£177.32	£180.64	£205.30	£222.61	£277.62	£326.69
STROKE=30mm	MCGS-03			£112.13	£130.38	£144.37	£146.26				
	MCGS-23			£146.75	£158.60	£181.13	£184.20				
STROKE=40mm	MCGS-03			£113.32	£133.00	£148.18	£149.58				
	MCGS-23			£170.46	£179.23	£210.05	£213.59				
STROKE=50mm	MCGS-03			£114.75	£135.60	£151.72	£153.61	£189.17	£211.24	£273.35	£330.71
	MCGS-23			£174.24	£183.02	£216.21	£220.47	£224.98	£248.69	£305.11	£366.03
STROKE=75mm	MCGS-03			£127.30	£147.21	£165.71	£166.89	£203.89	£233.03	£306.54	£367.92
	MCGS-23			£186.10	£195.58	£232.57	£236.35	£249.15	£310.08	£370.30	£435.25
STROKE=100mm	MCGS-03			£133.95	£156.93	£177.56	£177.80	£218.58	£254.61	£341.14	£409.89
	MCGS-23			£198.19	£208.86	£249.40	£252.65	£268.60	£334.98	£406.11	£468.68
STROKE=125mm	MCGS-03			£143.18	£167.60	£195.28	£200.33	£241.57	£279.02	£369.60	£438.81
	MCGS-23			£220.23	£253.42	£274.29	£281.88	£321.69	£359.88	£463.47	£528.90
STROKE=150mm	MCGS-03			£152.20	£176.62	£207.67	£211.94	£256.74	£304.62	£401.11	£480.08
	MCGS-23			£231.84	£266.00	£298.95	£306.30	£344.70	£392.12	£495.71	£567.06
STROKE=175mm	MCGS-03			£160.49	£185.85	£220.72	£225.23	£271.92	£327.83	£428.68	
	MCGS-23			£243.70	£279.02	£316.26	£319.80	£364.38	£434.98	£563.26	
STROKE=200mm	MCGS-03			£168.57	£196.52	£233.76	£236.11	£285.67	£352.21	£461.02	
	MCGS-23			£255.55	£292.55	£334.03	£336.17	£384.99	£461.85	£599.99	
STROKE=250mm	MCGS-03			£197.01	£225.23	£267.17	£270.97	£330.71	£387.03	£511.18	
	MCGS-23			£296.57	£319.80	£371.49	£380.51	£436.22	£573.68	£711.00	
STROKE=300mm	MCGS-03					£310.08	£309.13	£375.51	£454.18	£582.19	
	MCGS-23					£407.05	£422.93	£481.97	£624.40	£782.28	
STROKE=350mm	MCGS-03					£339.24	£348.02	£419.61	£481.58	£640.57	
	MCGS-23					£444.27	£457.07	£526.29	£672.35	£848.34	
STROKE=400mm	MCGS-03					£374.11	£385.72	£466.31	£526.26	£698.39	
	MCGS-23					£480.08	£494.77	£571.11	£722.51	£913.29	

MCGS-03/23 Dimensions ø12~ø32

TWIN-GUIDE CYLINDER





MCGS-03 / MCGS-23

Code / Tube I.D.	B	C	DA	DB		FA	FB	G	GA	GB	H	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB
				03 type	23 type																		
12	42	29	6	8	6	8	5	26	11	15(*1)	58	13	13	18	M4×0.7	10	M4×0.7	4.3	8.0	4.5	M5×0.8	14	8.5
16	46	33	8	10	8	8	5	30	11	18(*2)	64	15	15	22	M5×0.8	12	M5×0.8	4.3	8.0	4.5	M5×0.8	15	10.0
20	53	37	10	12	10	10	6	36	10.5	8.5	85	17	19	24	M5×0.8	13	M5×0.8	5.2	9.5	5.5	Rc1/8	12.5	11.5
25	53.5	37.5	12	16	13	10	6	42	11.5	9	96	21	21	30	M6×1.0	15	M6×1.0	5.2	9.5	5.5	Rc1/8	12.5	13.5
32	59.5	37.5	16	20	16	12	10	51	12.5	9	116	26	25	34	M8×1.25	20	M8×1.25	6.6	11.0	7.5	Rc1/8	7	16.0

Code / Tube I.D.	PW	Q	R	S	T	U	VA	X	XA	XB	YY	YL	Z
12	18	14	48	22	56	41.5	50	23	3	3.5	M5×0.8	10	5
16	19	16	54	25	62	46	56	24	3	3.5	M5×0.8	10	5
20	25	18	70	30	81	55	72	28	3	3.5	M6×1.0	12	17
25	28.5	26	78	38	91	65	82	34	4	4.5	M6×1.0	12	17
32	34	30	96	44	110	80	98	42	4	4.5	M8×1.25	16	21

Code / Tube I.D.	WA					WB				
	~39st	40~100st	125~200st	201st~300st	301st~	20~39st	40~100st	125~200st	201~300st	301st~
12	20	40	110	200	—	15	25	60	105	—
16	24	44	110	200	—	17	27	60	105	—
20	24	44	120	200	300	29	39	77	117	167
25	24	44	120	200	300	29	39	77	117	167

Code / Tube I.D.	WA					WB				
	25~49st	50~100st	125~200st	201st~300st	301st~	25~49st	50~100st	125~200st	201~300st	301st~
32	24	48	124	200	300	33	45	83	121	171

*1. When stroke length is equal to 19mm or less, GB=7.5 mm
*2. When stroke length is equal to 19mm or less, GB=9 mm

MCGS-03

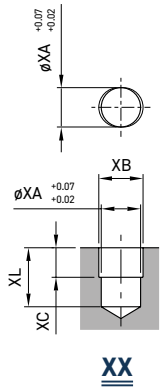
Code / Tube I.D.	E		
	10~50st	51~100st	101st~
12	—	18.5	43
16	—	18.5	49
	10~50st	51~200st	201st~
20	—	31.5	69
25	—	31.5	68.5
32	37.5	42.5	80.5

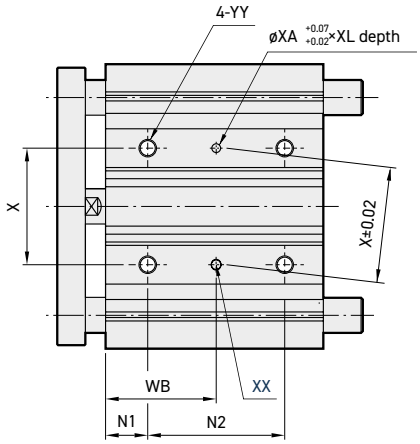
MCGS-23

Code / Tube I.D.	E			
	10~30st	31~100st	101st~	
12	1	13	43	
16	3	19	49	
	20~30st	31~100st	101~200st	201st~
20	10	27	51	69
25	16	32	51	68.5
32	21.5	38.5	58.5	80.5

MCGS-03/23 Dimensions ø40~ø63

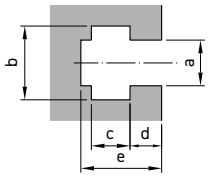
TWIN-GUIDE CYLINDER





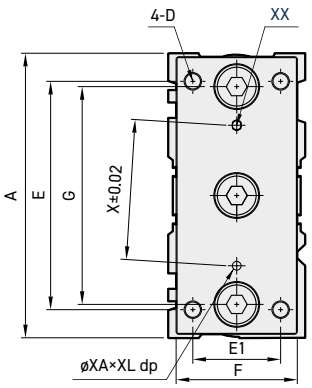
Back side

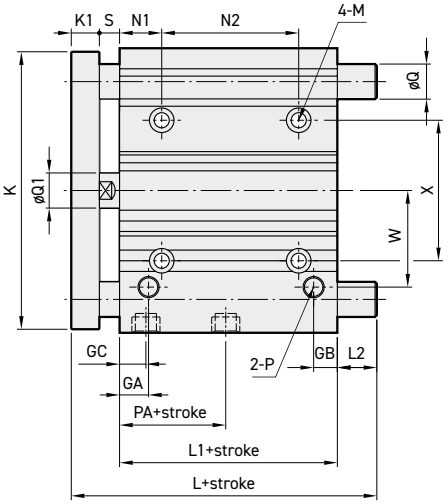
T slot for hexagon head bolt

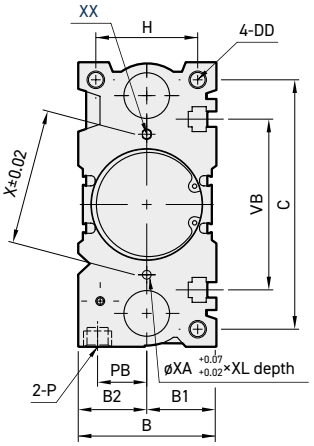


T slot for hexagon head bolt

Code / Tube I.D.	a	b	c	d	e
40	6.5	10.5	5.5	4	11
50	8.5	13.5	7.5	4.5	13.5
63	11	17.8	10	7	18.5







MCGS-03 / MCGS-23

Code / Tube I.D.	A	B	B1	B2	C	D	DD	E	E1	F	G	GA	GB	GC	H	K	K1	L1	M	N1	P
40	120	54	27	27	106	M8×1.25	M8×1.25×20 dp	104	30	44	86	14	10	14	40	118	12	44	ø6.6thru, ø11×7.5dp	22	Rc1/8
50	148	64	32	32	130	M10×1.5	M10×1.5×22 dp	130	40	60	110	14	11	12	46	146	16	44	ø8.6thru, ø14×9dp	24	Rc1/4
63	162	78	39	39	142	M10×1.5	M10×1.5×22 dp	130	50	70	124	16.5	13.5	16.5	58	158	16	49	ø8.6thru, ø14×9dp	24	Rc1/4

Code / Tube I.D.	PA	PB	Q1	S	VB	W	X	XA	XB	XC	XL	YY	N2					WB				
													25st	50,75,100st	101st~200st	201~300st	301~400st	25st	50,75,100st	101st~200st	201~300st	301~400st
40	13	18	16	10	72	38	50	4	4.5	3	6	M8×1.25×16 dp	24	48	124	200	300	34	46	84	122	172
50	9	21.5	20	12	92	47	66	5	6	4	8	M10×1.5×20 dp	24	48	124	200	300	36	48	86	124	174
63	14	28	20	12	110	55	80	5	6	4	8	M10×1.5×20 dp	28	52	128	—	—	38	50	88	—	—

MCGS-03

Code / Tube I.D.	L		L2			Q
	25,50st	51st~	25,50st	51~200st	201~400st	
40	97	102	31	36	63.5	ø20
50	106.5	118	34.5	46	78.5	ø25
63	106.5	118	29.5	41	—	ø25

MCGS-23

Code / Tube I.D.	L			L2				Q
	25,50st	75,100st	101st~	25,50st	75,100st	101~200st	201~400st	
40	81	98	118	15	32	52	72.5	ø16
50	93	114	134	21	42	62	87.5	ø20
63	93	114	134	16	37	57	—	ø20

MCCG SERIES

ROUND CYLINDER

Specification

Model	MCCG							
Acting type	Double acting							
Tube I.D. (mm)	20	25	32	40	50	63	80	100
Port size	Rc1/8				Rc1/4		Rc3/8	Rc1/2
Medium	Air							
Max. operating perssure	1 MPa							
Min. operating perssure	0.05 MPa							
Proof pressure	1.5 MPa							
Lubrication	Not required							
Ambient temperature	-5~+60°C (No freezing)							
Available speed range	50~500 mm/sec							
Max. allowable kinetic energy (J) Cushion pad	0.07	0.10	0.17	0.3	0.5	0.85	1.48	2.48
Max. allowable kinetic energy (J) Cushion air	0.09	0.14	0.23	0.45	0.85	1.23	2.95	4.18
Sensor switch	RCM (please refer to page 204)							
Sensor switch band	BMG20	BMG25	BMG32	BMG40	BMG50	BMG63	BMG80	BMG100

Table for standard stroke

Tube I.D.	Stroke (mm)	Long stroke
ø20	25,50,75,100,125,150,200	201~350
ø25	25,50,75,100,125,150,200, 250,300	301~400
ø32		301~450
ø40		301~800
ø50		301~1200
ø63		301~700
ø80		301~700
ø100		301~700

Please reconfirm the dimension with our sales department when the stroke over our standard.

Order example

MCCG — 11 — 40 — 100M — A — □

- MODEL
- STYLE — **1**: Single rod
- TUBE I.D.
- STROKE
- **M**: Magnet
- Blank: Cushion pad (Unadjustable)
  A: Cushion air (Adjustable)
- PORT THREAD
  Blank: Rc thread
  NPT: NPT thread

Code		Symbol	Description
1	1		Double acting / Male thread

* Order example for **G** thread, please consult us.

Mounting accessories

FAC — MCCG — 40

- MODEL
- TUBE I.D.
- MOUNTING TYPE

	LB	
	CB	
	FAC	
	FBC	
	SDB-R	For tube I.D. ø20~63
	SDB-H	
	CB+SDB	
	CB+SDB	For tube I.D. ø80,100
	TA	For tube I.D. ø20~63
	TB	
	Y	
	I	

MCCG SERIES

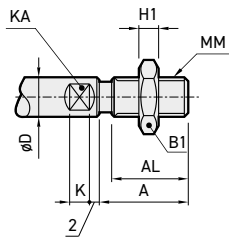
PRICE LIST

Stroke (mm)	Diameter (BORE) Ø							
	20Ø	25Ø	32Ø	40Ø	50Ø	63Ø	80Ø	100Ø
25 mm	£65.20	£68.04	£73.06	£88.60	£108.06	£118.14	£200.26	£251.59
50 mm	£66.50	£69.79	£75.04	£90.56	£110.70	£122.06	£204.51	£257.43
75 mm	£66.50	£71.31	£77.21	£93.41	£114.85	£127.55	£210.13	£265.50
100 mm	£71.54	£72.85	£79.20	£96.47	£119.22	£133.22	£216.17	£273.58
125 mm	£71.54	£74.39	£81.39	£99.10	£123.16	£138.47	£221.56	£281.42
150 mm	£73.06	£76.14	£83.35	£101.72	£127.31	£144.16	£227.16	£289.49
200 mm	£76.79	£79.85	£88.39	£107.41	£135.64	£155.11	£238.60	£304.98
250 mm		£82.91	£93.64	£113.03	£142.41	£164.51	£249.80	£321.34
300 mm		£85.76	£98.66	£118.56	£150.07	£175.01	£261.47	£337.26
350 mm							£286.13	£364.39
400 mm							£297.56	£379.42
450 mm							£310.58	£395.34
500 mm							£323.14	£411.48
600 mm							£351.16	£447.82
700 mm							£376.74	£479.67
OVER 300mm STROKE EVERY 50mm PLUS	£9.94	£9.94	£12.41	£14.89	£19.83	£24.78		
MAGNET (+)	£1.07	£1.31	£1.31	£1.54	£2.19	£2.43	£3.36	£3.80
DUAL ROD	× 1.5	× 1.5	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4	× 1.4
Adjustable Cushion	£14.54	£21.79	£28.35	£30.52	£30.52	£30.52	£30.52	£41.26

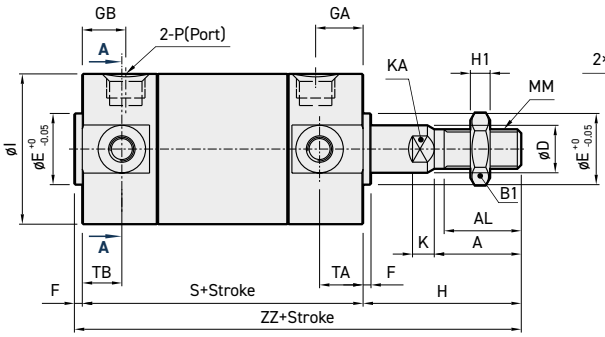
MCCG Dimensions ø20~ø100

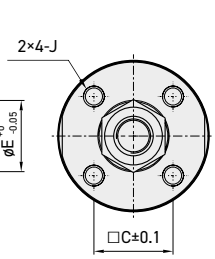
ROUND CYLINDER

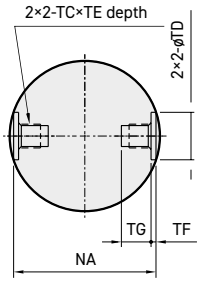
ø20, ø25



ø32~ø100



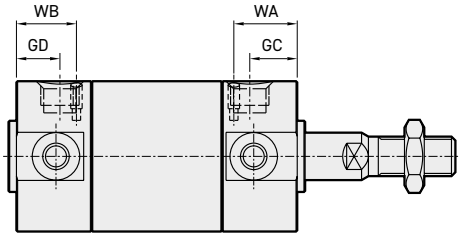




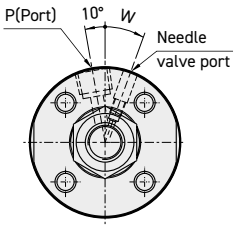
A-A

With cushion air (Adjustagle)

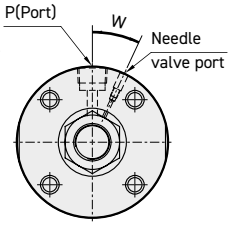
A



ø20~ø63



ø80, ø100



Code / Tube I.D.	Standard stroke range	Long stroke range	A	AL	B1	C	D	E	F	GA	GB	GC	GD	H	H1	I	J	K	KA
20	~200	201~350	18	15.5	13	14	8	12	2	12	12 (12)	12	12 (12)	35	5	26	M4×0.7×7 dp	4	6
25	~300	301~400	22	19.5	17	16.5	10	14	2	12	12 (12)	12	12 (12)	40	6	31	M5×0.8×7.5 dp	5	8
32	~300	301~450	22	19.5	17	20	12	18	2	12	11 (12)	12	11 (12)	40	6	38	M5×0.8×8 dp	5.5	10
40	~300	301~800	30	27	22	26	16	25	2	13	12 (13)	13	10 (13)	50	8	47	M6×1.0×12 dp	6	14
50	~300	301~1200	35	32	26	32	20	30	2	14	13 (13)	14	12 (14)	58	11	58	M8×1.25×16 dp	7	18
63	~300	301~700	35	32	26	38	20	32	2	14	13 (13)	14	12 (14)	58	11	72	M10×1.5×16 dp	7	18
80	~300	301~700	40	37	32	50	25	40	3	20	16 (16)	20	16 (16)	71	13	89	M10×1.5×22 dp	10	22
100	~300	301~700	40	37	35	60	30	50	3	20	16 (16)	20	16 (16)	71	14	110	M12×1.75×22 dp	10	26

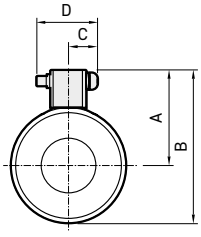
Code / Tube I.D.	MM	NA	P	S	TA	TB	TC	TD_{H9}	TE	TF	TG	W	WA	WB	ZZ
20	M8×1.25	24	Rc1/8	69(77)	11	11 (11)	M5×0.8	$8^{+0.036}_{-0}$	4	0.5	5.5	40°	14	14 (14)	106 (114)
25	M10×1.25	29	Rc1/8	69(77)	11	11 (11)	M6×0.75	$10^{+0.036}_{-0}$	5	1	6.5	40°	14	13 (13)	111 (119)
32	M10×1.25	36	Rc1/8	71(79)	11	10 (11)	M8×1.0	$12^{+0.043}_{-0}$	5.5	1.25	7.5	30°	14	13 (13)	113 (121)
40	M14×1.5	44	Rc1/8	78(87)	12	10 (12)	M10×1.25	$14^{+0.043}_{-0}$	6	1.25	8	20°	16	15 (16)	130 (139)
50	M18×1.5	55	Rc1/4	90(102)	13	12 (13)	M12×1.25	$16^{+0.043}_{-0}$	7.5	2	10	20°	16	16 (16)	150 (162)
63	M18×1.5	69	Rc1/4	90(102)	13	12 (13)	M14×1.5	$18^{+0.043}_{-0}$	11.5	3	14.5	20°	18	18 (18)	150 (162)
80	M22×1.5	86	RC3/8	108(122)	–	–	–	–	–	–	–	25°	24	20 (20)	182 (196)
100	M26×1.5	106	RC1/2	108(122)	–	–	–	–	–	–	–	25°	24	20 (20)	182 (196)

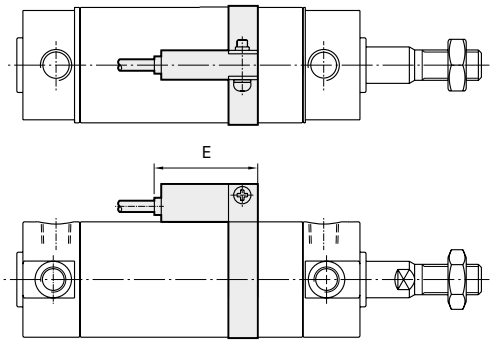
( ): Dimension for long stroke.

Installation of sensor switch

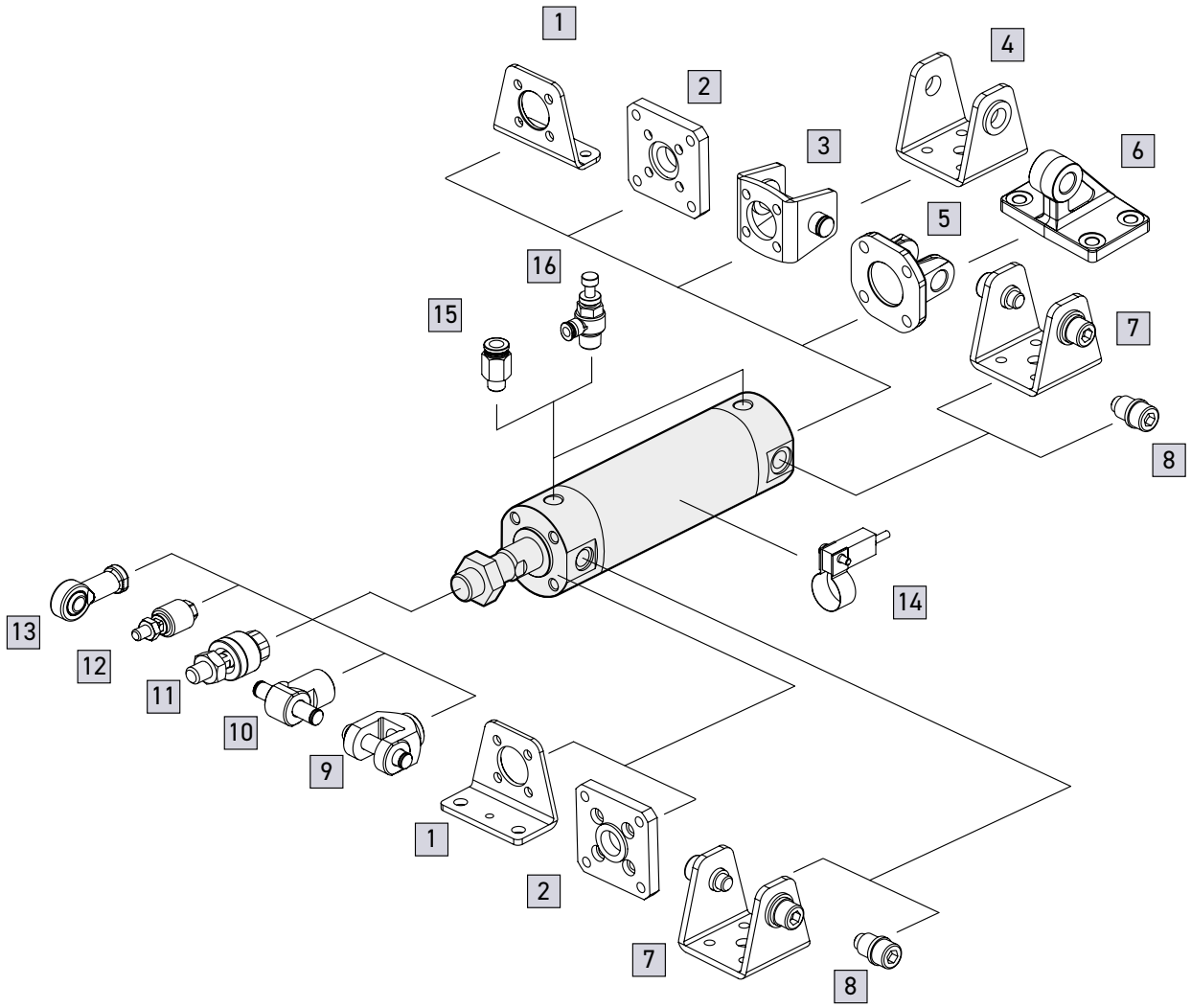
Sensor switch: RCM (Band: BMG**)

Code / Tube I.D.	A	B	C	D	E
20	24	37.5	7	16	28
25	26.5	42.5	7	16	28
32	30.5	50.5	7	16	28
40	35	59.5	7	16	28
50	40.5	70.5	7	16	28
63	47.5	84.5	7	16	28
80	56	101.5	7	16	28
100	66.5	122.5	7	16	28





MCCG Accessories

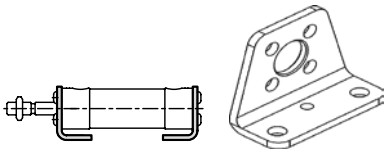


No.	Accessories
1	Mounting accessories LB
2	Mounting accessories FAC/FBC
3	Mounting accessories CB+PIN (*1)
4	Mounting accessories SDB (*1)
5	Mounting accessories CB+PIN (*2)
6	Mounting accessories SDB (*2)
7	Mounting accessories SDB-R/H
8	Mounting accessories TA/TB

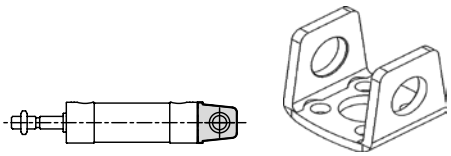
No.	Accessories
9	Accessories Y+PIN
10	Accessories I+PIN
11	Floating joint MFC
12	Floating joint MFCS (please enquire)
13	Female rod ends PHS
14	Sensor switch RCM+BMG**
15	Fitting PC (PISCO)
16	Speed controller JSC (PISCO)

*1. For tube I.D. ø20~63
*2. For tube I.D. ø80,100

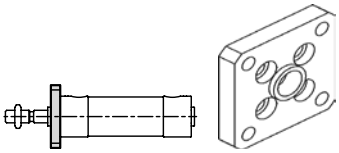
MCCG Accessories



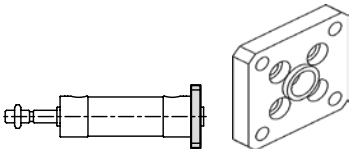
Part Number	To Suit	List Price
LB-MCCG-20	Foot Bracket To Suit MCCG 20 Bore	£4.10
LB-MCCG-25	Foot Bracket To Suit MCCG 25 Bore	£4.32
LB-MCCG-32	Foot Bracket To Suit MCCG 32 Bore	£4.56
LB-MCCG-40	Foot Bracket To Suit MCCG 40 Bore	£5.92
LB-MCCG-50	Foot Bracket To Suit MCCG 50 Bore	£8.63
LB-MCCG-63	Foot Bracket To Suit MCCG 63 Bore	£10.91
LB-MCCG-80	Foot Bracket To Suit MCCG 80 Bore	£29.82
LB-MCCG-100	Foot Bracket To Suit MCCG 100 Bore	£40.49



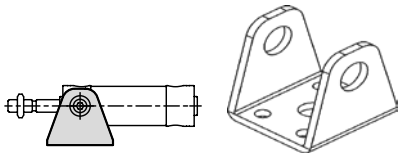
Part Number	To Suit	List Price
CB-MCCG-20	Foot Bracket To Suit MCCG 20 Bore	£12.17
CB-MCCG-25	Foot Bracket To Suit MCCG 25 Bore	£13.09
CB-MCCG-32	Foot Bracket To Suit MCCG 32 Bore	£15.47
CB-MCCG-40	Foot Bracket To Suit MCCG 40 Bore	£27.73
CB-MCCG-50	Foot Bracket To Suit MCCG 50 Bore	£33.65
CB-MCCG-63	Foot Bracket To Suit MCCG 63 Bore	£46.14
CB-MCCG-80	Foot Bracket To Suit MCCG 80 Bore	£49.34
CB-MCCG-100	Foot Bracket To Suit MCCG 100 Bore	£58.60



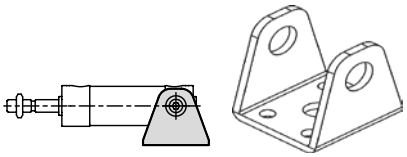
Part Number	To Suit	List Price
FAC-MCCG-20	Flange To Suit MCCG 20 Bore	£22.69
FAC-MCCG-25	Flange To Suit MCCG 25 Bore	£24.53
FAC-MCCG-32	Flange To Suit MCCG 32 Bore	£26.38
FAC-MCCG-40	Flange To Suit MCCG 40 Bore	£27.86
FAC-MCCG-50	Flange To Suit MCCG 50 Bore	£31.01
FAC-MCCG-63	Flange To Suit MCCG 63 Bore	£38.18
FAC-MCCG-80	Flange To Suit MCCG 80 Bore	£69.70
FAC-MCCG-100	Flange To Suit MCCG 100 Bore	£86.33



Part Number	To Suit	List Price
FBC-MCCG-20	Flange To Suit MCCG 20 Bore	£22.69
FBC-MCCG-25	Flange To Suit MCCG 25 Bore	£24.53
FBC-MCCG-32	Flange To Suit MCCG 32 Bore	£26.38
FBC-MCCG-40	Flange To Suit MCCG 40 Bore	£27.86
FBC-MCCG-50	Flange To Suit MCCG 50 Bore	£31.01
FBC-MCCG-63	Flange To Suit MCCG 63 Bore	£38.18
FBC-MCCG-80	Flange To Suit MCCG 80 Bore	£69.70
FBC-MCCG-100	Flange To Suit MCCG 100 Bore	£86.33



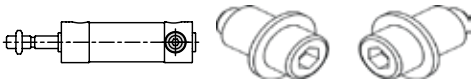
Part Number	To Suit	List Price
SDB-R-MCCG-20	Bracket To Suit MCCG 20 Bore	£14.57
SDB-R-MCCG-25	Bracket To Suit MCCG 25 Bore	£16.24
SDB-R-MCCG-32	Bracket To Suit MCCG 32 Bore	£20.22
SDB-R-MCCG-40	Bracket To Suit MCCG 40 Bore	£35.01
SDB-R-MCCG-50	Bracket To Suit MCCG 50 Bore	£42.28
SDB-R-MCCG-63	Bracket To Suit MCCG 63 Bore	£54.09
SDB-R-MCCG-80	Bracket To Suit MCCG 80 Bore	£41.58
SDB-R-MCCG-100	Bracket To Suit MCCG 100 Bore	£53.26



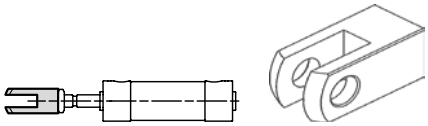
Part Number	To Suit	List Price
SDB-H-MCCG-20	Bracket To Suit MCCG 20 Bore	£14.57
SDB-H-MCCG-25	Bracket To Suit MCCG 25 Bore	£16.24
SDB-H-MCCG-32	Bracket To Suit MCCG 32 Bore	£20.22
SDB-H-MCCG-40	Bracket To Suit MCCG 40 Bore	£35.01
SDB-H-MCCG-50	Bracket To Suit MCCG 50 Bore	£42.28
SDB-H-MCCG-63	Bracket To Suit MCCG 63 Bore	£54.09
SDB-H-MCCG-80	Bracket To Suit MCCG 80 Bore	£41.58
SDB-H-MCCG-100	Bracket To Suit MCCG 100 Bore	£53.26

MCCG Accessories

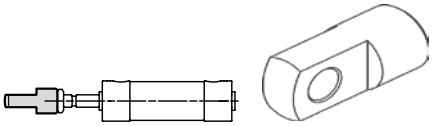
Part Number	To Suit	List Price
TA-MCCG-20	TA To Suit MCCG 20 Bore	£3.69
TA-MCCG-25	TA To Suit MCCG 25 Bore	£4.56
TA-MCCG-32	TA To Suit MCCG 32 Bore	£4.99
TA-MCCG-40	TA To Suit MCCG 40 Bore	£7.27
TA-MCCG-50	TA To Suit MCCG 50 Bore	£8.41
TA-MCCG-63	TA To Suit MCCG 63 Bore	£9.55



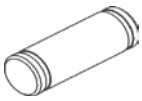
Part Number	To Suit	List Price
TB-MCCG-20	TB To Suit MCCG 20 Bore	£3.69
TB-MCCG-25	TB To Suit MCCG 25 Bore	£4.56
TB-MCCG-32	TB To Suit MCCG 32 Bore	£4.99
TB-MCCG-40	TB To Suit MCCG 40 Bore	£7.27
TB-MCCG-50	TB To Suit MCCG 50 Bore	£8.41
TB-MCCG-63	TB To Suit MCCG 63 Bore	£9.55



Part Number	To Suit	List Price
Y-MCCG-20	Y Connector To Suit MCCG 20 Bore	£2.74
Y-MCCG-25	Y Connector To Suit MCCG 25 Bore	£3.18
Y-MCCG-32	Y Connector To Suit MCCG 32 Bore	£3.18
Y-MCCG-40	Y Connector To Suit MCCG 40 Bore	£3.42
Y-MCCG-50	Y Connector To Suit MCCG 50 Bore	£3.85
Y-MCCG-63	Y Connector To Suit MCCG 63 Bore	£3.85
Y-MCCG-80	Y Connector To Suit MCCG 80 Bore	£6.13
Y-MCCG-100	Y Connector To Suit MCCG 100 Bore	£7.42



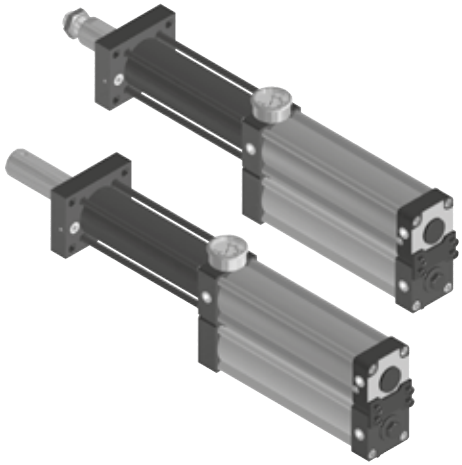
Part Number	To Suit	List Price
I-MCCG-20	I Connector To Suit MCCG 20 Bore	£7.95
I-MCCG-25	I Connector To Suit MCCG 25 Bore	£18.18
I-MCCG-32	I Connector To Suit MCCG 32 Bore	£18.18
I-MCCG-40	I Connector To Suit MCCG 40 Bore	£8.87
I-MCCG-50	I Connector To Suit MCCG 50 Bore	£10.91
I-MCCG-63	I Connector To Suit MCCG 63 Bore	£10.91
I-MCCG-80	I Connector To Suit MCCG 80 Bore	£30.84
I-MCCG-100	I Connector To Suit MCCG 100 Bore	£42.55



Part Number	To Suit	List Price
PIN-MCCG-20	PIN To Suit MCCG 20 Bore	£2.74
PIN-MCCG-25	PIN To Suit MCCG 25 Bore	£3.18
PIN-MCCG-32	PIN To Suit MCCG 32 Bore	£3.64
PIN-MCCG-40	PIN To Suit MCCG 40 Bore	£4.10
PIN-MCCG-50	PIN To Suit MCCG 50 Bore	£5.45
PIN-MCCG-63	PIN To Suit MCCG 63 Bore	£6.13
PIN-MCCG-80	PIN To Suit MCCG 80 Bore	£6.13
PIN-MCCG-100	PIN To Suit MCCG 100 Bore	£7.42

MHPD SERIES

POWER CYLINDER



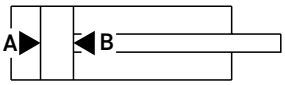
Features

- Hydro-pneumatic solution provides high power in confined space.
- Simple construction make these units ideal in many applications where previously hydraulics were the only option.
- Quiet in operation.
- Only requires a pneumatic valve to make the system operate.
- Wide range of working strokes and output forces available.

Specification

Model	MHPD
Pressure boost model	1T, 3T, 5T, 8T, 10T
Total stroke (mm)	50, 75, 100, 150, 200
Working stroke (mm)	5, 10, 15, 20
Medium	Filtered air with or without lubrication
Operating pressure range	0.3 ~ 0.8 MPa
Ambient temperature	-10~+60 °C (No freezing)

MHPD	Female thread in rod end type	
MHPD-Z	Male thread in rod end type	

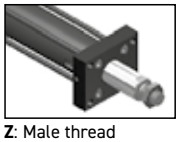


Order example

MHPD — 3T × 100 — 10 — Z

- MODEL
- THRUST MODEL: **1T**, **3T**, **5T**, **8T**, **10T**
- TOTAL STROKE: **50**: 50mm, **75**: 75mm, **100**: 100mm, **150**: 150mm, **200**: 200mm
- WORKING STROKE: **5**: 5mm, **10**: 10mm, **15**: 15mm, **20**: 20mm
- ROD END TYPE

Blank: Female thread



Z: Male thread

Power cylinders theoretic force

Unit: N

Thrust model			1T	3T	5T	8T	10T
Tube I.D. (mm)			ø50	ø70	ø80	ø100	ø125
Rod (mm)			ø30	ø40	ø50	ø60	ø70
Operating pressure (MPa)	0.3	A	7,216	18,473	30,054	46,959	67,630
		B	377	778	919	1,508	2,527
	0.4	A	9,621	24,630	40,072	62,612	90,174
		B	503	1,037	1,225	2,011	3,369
	0.5	A	12,026	30,788	50,090	78,265	112,717
		B	628	1,296	1,532	2,513	4,212
	0.6	A	14,432	36,945	60,108	93,918	135,261
		B	754	1,555	1,838	3,016	5,054
	0.7	A	16,837	43,103	70,126	109,571	157,804
		B	880	1,814	2,144	3,519	5,896
	0.8	A	19,242	49,260	80,143	125,224	180,347
		B	1,005	2,073	2,450	4,021	6,739

MHPD SERIES

PRICE LIST

WORKING STROKE= 5 mm

THRUST MODEL	1T	3T	5T	8T	10T
BORE SIZE	ø50	ø70	ø80	ø100	ø125
50 mm	£1,592.97	£1,852.09	£2,007.38	£3,341.44	£4,144.41
75 mm	£1,631.75	£1,903.76	£2,072.19	£3,522.58	£4,403.31
100 mm	£1,631.75	£1,903.76	£2,072.19	£3,522.58	£4,403.31
125 mm	£1,670.74		£2,110.97		

WORKING STROKE= 10 mm

THRUST MODEL	1T	3T	5T	8T	10T
BORE SIZE	ø50	ø70	ø80	ø100	ø125
50 mm	£1,618.82	£1,877.91	£2,072.19	£3,431.92	£4,273.84
75 mm	£1,683.66	£1,942.75	£2,136.82	£3,561.57	£4,532.96
100 mm	£1,683.66	£1,942.75	£2,136.82	£3,561.57	£4,532.96
125 mm	£1,813.10	£2,072.19	£2,201.66	£3,691.01	£4,791.84
150 mm	£1,813.10	£2,072.19	£2,201.66	£3,691.01	£4,791.84
200 mm	£1,942.75	£2,266.47	£2,460.75	£3,885.29	£5,180.39

WORKING STROKE= 15 mm

THRUST MODEL	1T	3T	5T	8T	10T
BORE SIZE	ø50	ø70	ø80	ø100	ø125
50 mm	£1,644.88				£4,532.96
75 mm	£1,748.47	£2,007.38	£2,201.66	£3,755.85	£4,791.84
100 mm	£1,748.47	£2,007.38	£2,201.66	£3,755.85	£4,791.84
125 mm	£1,877.91	£2,072.19	£2,331.09	£3,950.13	£5,050.96
150 mm	£1,877.91	£2,072.19	£2,331.09	£3,950.13	£5,050.96
200 mm	£2,007.38	£2,331.09	£2,525.37	£4,144.41	£5,309.83

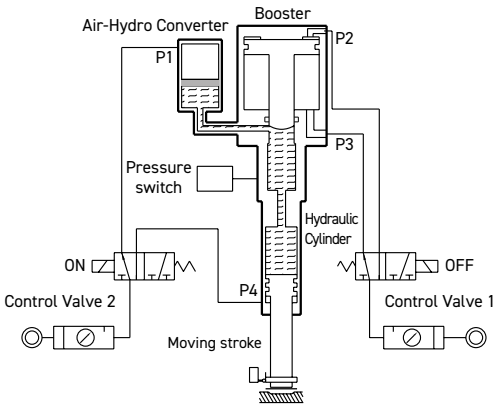
WORKING STROKE= 20 mm

THRUST MODEL	1T	3T	5T	8T	10T
BORE SIZE	ø50	ø70	ø80	ø100	ø125
100 mm	£1,813.10				
125 mm	£1,942.75				£5,309.83
150 mm	£1,942.75	£2,136.82	£2,460.75	£4,144.41	£5,309.83
200 mm	£2,072.19	£2,395.93	£2,590.21	£4,403.31	£5,568.95

MHPD Working principle

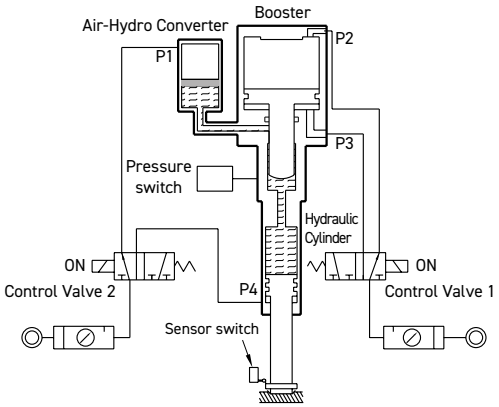
POWER CYLINDER

1. Quick traverse



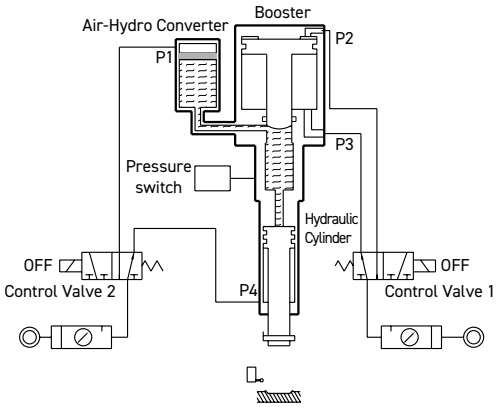
When the air is charged from the port P1, the oil in the tank will forward the hydraulic cylinder quickly. The pressure is the same as the air pressure, but the inflow of oil is large in volume.

2. Intensified feeding



When the air is charged from the port P2, a ram will advance. the highly pressured fluid will come in to the hydraulic cylinder which will be forwarded by large thrust.

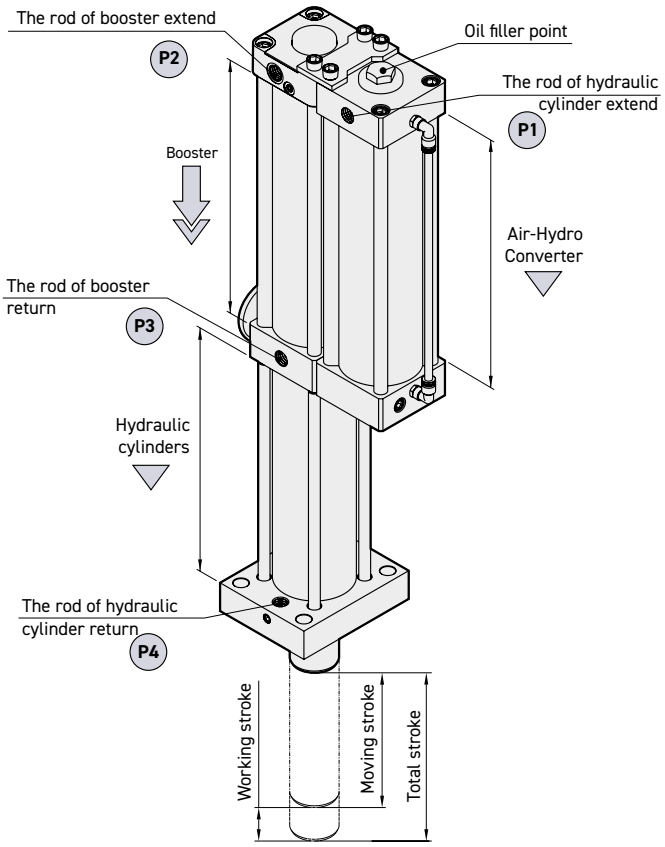
3. Swift reverse



When the air is send into port P4 and P3. the hydraulic cylinder is swiftly reversed. and at the same time the ram goes back.

Points in usage

- The booster must be levelled. The booster must be higher than the work cylinder.
- Standard booster are designed for use with petroleum base hydraulic oil.
- Before working, the rod of booster and hydraulic must return.
- Frequency of use should be 20 times/min or lower.



Power Cylinders bore and stroke

Type		Working stroke (mm)				
Thrust model / Total stroke		1T	3T	5T	8T	10T
MHPD	50mm	⑤⑩⑮	⑤⑩	⑤⑩	⑤⑩	⑤⑩⑮
	75mm	⑤⑩⑮⑳	❺⑩⑮	⑤⑩⑮	⑤⑩⑮	❺⑩⑮
	100mm	❺⑩⑮⑳	❺⑩⑮	❺⑩⑮	❺⑩⑮	❺⑩⑮
	125mm	❺⑩⑮⑳	❿⑮	❺⑩⑮	⑩⑮	⑩⑮⑳
	150mm	❿⑮⑳	❿⑮⑳	⑩⑮⑳	⑩⑮⑳	❿⑮⑳
	200mm	❿⑮⑳	❿⑮⑳	⑩⑮⑳	❿⑮⑳	❿⑮⑳
MHPD-Z	50mm	⑤⑩⑮	⑤⑩	⑤⑩⑮	⑤⑩⑮	⑤⑩⑮
	75mm	⑤⑩⑮⑳	❺⑩⑮	⑤⑩⑮	⑤⑩⑮	❺⑩⑮⑳
	100mm	❺⑩⑮⑳	❺⑩⑮⑳	❺⑩⑮	❺⑩⑮⑳	❺⑩⑮⑳
	125mm	❺⑩⑮⑳	❿⑮⑳	❺⑩⑮⑳	⑩⑮⑳	⑩⑮⑳
	150mm	❿⑮⑳	❿⑮⑳	⑮⑳	⑩⑮⑳	❿⑮⑳
	200mm	❿⑮⑳	❿⑮⑳	❿⑮⑳	❿⑮⑳	❿⑮⑳

Note. ⑤ = Working stroke 5mm, ⑩ = Working stroke 10mm;
⑮ = Working stroke 15mm, ⑳ = Working stroke 20mm;
Short stroke: ⑤⑩⑮⑳, Long stroke: ❺❿⓯⓴

MHPD Dimensions – Short stroke

POWER CYLINDER

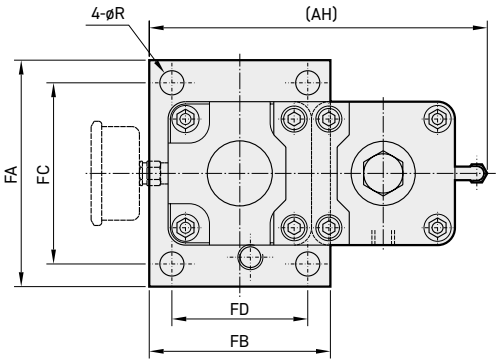
MHPD / MHPD-Z

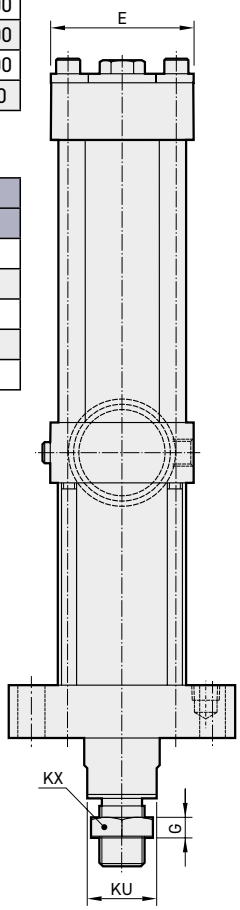
Standard stroke (Short stroke)

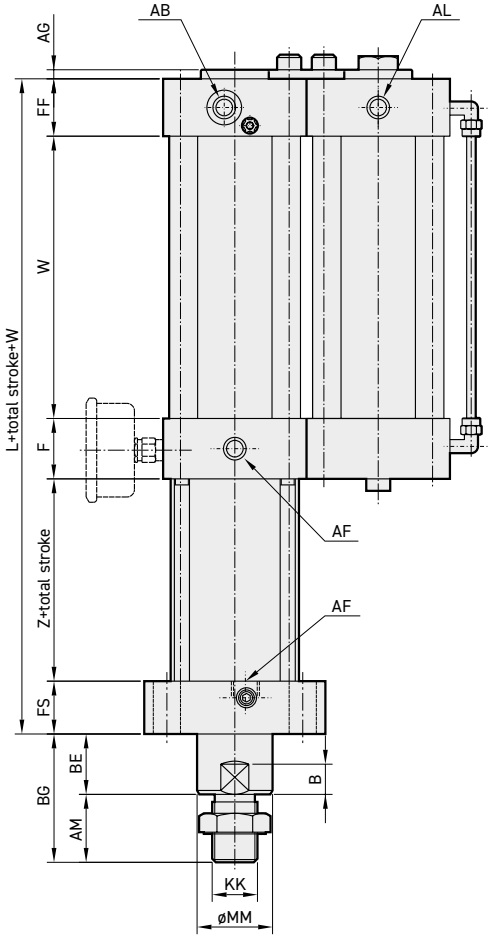
Type	Working stroke			
	5	10	15	20
1T	50~75	50~125	50~150	75~200
3T	50	50~100	75~150	150~200
5T	50~75	50~150	75~200	150~200
8T	50~75	50~150	75~200	150~200
10T	50	50~125	50~200	125~200
1T-Z	50~75	50~125	50~150	50~200
3T-Z	50	50~100	75~150	100~200
5T-Z	50~75	50~150	50~200	125~200
8T-Z	50~75	50~150	50~200	100~200
10T-Z	50	50~125	50~200	75~200

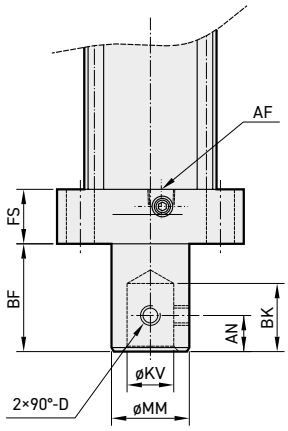
Working stroke

Type	W			
	5	10	15	20
1T	108	146	184	222
3T	126	187	248	309
5T	135	199	263	327
8T	150	214	278	342
10T	148	212	276	340









Female thread

Code / Type	AB	AF	AG	AH	AL	AM	AN	B	BE	BF	BG	BK	D	E	F
1T	G3/8	G3/8	5	187	G3/8	35	12	12	25	40	60	28	M6×1.0	75	40
3T	G3/8	G3/8	6	227	G3/8	45	15	20	40	50	85	35	M6×1.0	95	40
5T	G1/2	G1/2	6	262	G1/2	60	20	20	40	60	100	40	M10×1.5	115	40
8T	G1/2	G1/2	6	315	G1/2	70	25	20	50	70	120	60	M10×1.5	140	45
10T	G3/4	G3/4	6	381	G3/4	80	30	27	60	85	140	50	M10×1.5	174	55

Code / Type	FA	FB	FC	FD	FF	FS	G	KK	KU	KV	KX	L	MM	R	Z
1T	130	100	100	70	32	35	11	M22×1.5	27	16	32	167	30	11	60
3T	150	120	120	90	38	35	13	M30×1.5	36	20	41	187	40	16	74
5T	185	130	155	100	40	45	15	M40×2.0	46	25	57	199	50	17	74
8T	230	160	190	120	45	45	15	M48×2.0	55	30	65	218	60	22	83
10T	270	190	220	140	55	50	20	M56×2.0	65	40	80	243	70	26	83

MHPD Dimensions – Long stroke

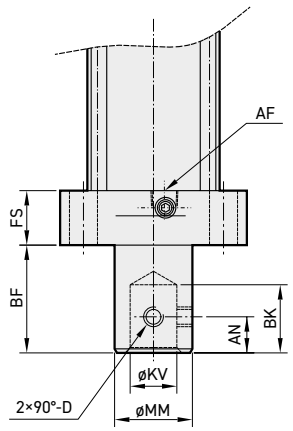
POWER CYLINDER

MHPD / MHPD-Z

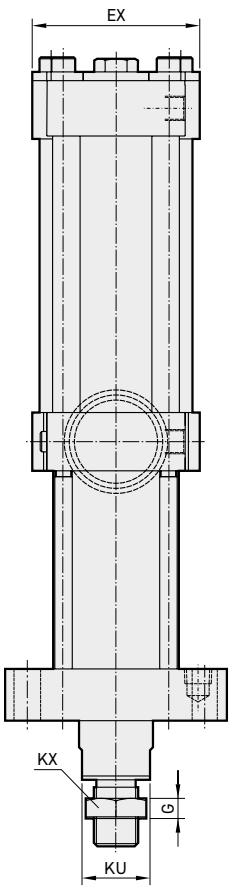
Standard stroke (Long stroke)

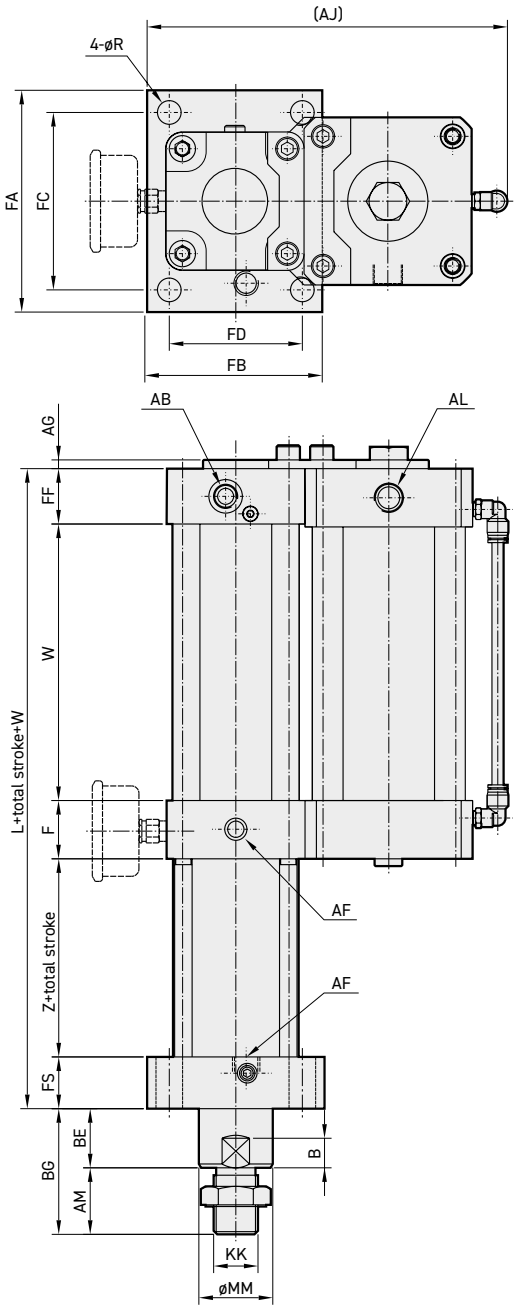
Type	Working stroke		
	5	10	15
1T	80~125	130~200	155~200
3T	55~100	105~200	155~200
5T	80~125	155~200	–
8T	80~100	155~200	–
10T	75~100	130~200	–
1T-Z	80~125	130~200	155~200
3T-Z	55~100	105~200	155~200
5T-Z	80~125	155~200	–
8T-Z	80~100	155~200	–
10T-Z	55~100	130~200	–

Type	W		
	5	10	15
1T	108	146	184
3T	126	187	248
5T	135	199	263
8T	150	214	278
10T	148	212	276



Female thread

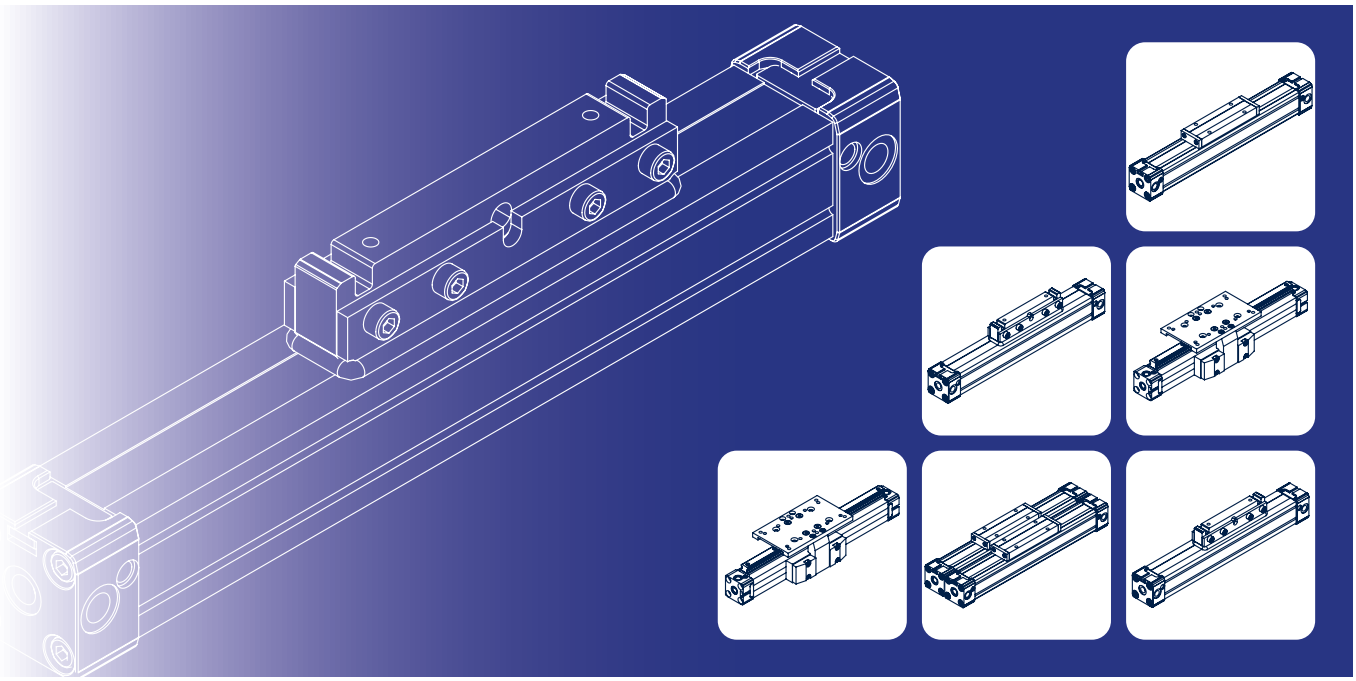




Code / Type	AB	AF	AG	AJ	AL	AM	AN	B	BE	BF	BG	BK	D	EX	F
1T	G3/8	G3/8	5	207	G3/8	35	12	12	25	40	60	28	M6×1.0	95	40
3T	G3/8	G3/8	6	247	G3/8	45	15	20	40	50	85	35	M6×1.0	115	40
5T	G1/2	G1/2	6	287	G1/2	60	20	20	40	60	100	40	M10×1.5	140	40
8T	G1/2	G1/2	6	341	G1/2	70	25	20	50	70	120	60	M10×1.5	174	45
10T	G3/4	G3/4	6	411	G3/4	80	30	27	60	85	140	50	M10×1.5	204	55

Code / Type	FA	FB	FC	FD	FF	FS	G	KK	KU	KV	KX	L	MM	R	Z
1T	130	100	100	70	32	35	11	M22×1.5	27	16	32	167	30	11	60
3T	150	120	120	90	38	35	13	M30×1.5	36	20	41	187	40	16	74
5T	185	130	155	100	40	45	15	M40×2.0	46	25	57	199	50	17	74
8T	230	160	190	120	45	45	15	M48×2.0	55	30	65	218	60	22	83
10T	270	190	220	140	55	50	20	M56×2.0	65	40	80	243	70	26	83

RODLESS CYLINDER



STANDARD

LOW CARRIAGE PLF.....p.125-131
STANDARD PL-00.....p.132-139
FLEXI MOUNT PL-20.....p.140-147

GUIDED

PLG.....p.148-157
BRAKED PLG-140.....p.148-157

DUPLEX

PL-DUO96.....p.158-162

BASIC

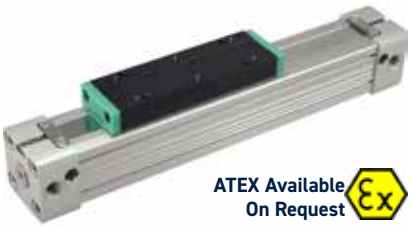
PLS.....p.163-165

SERVICE KITS

MAT.....p.166-167

PLF SERIES (Standard)

SAMEDAY BUILD
PREMIUM AVAILABLE



ATEX Available On Request

LOW CARRIAGE STANDARD RODLESS PNEUMATIC CYLINDER

As Origa OSP-P Style (63Ø Piston has a sleight height difference)

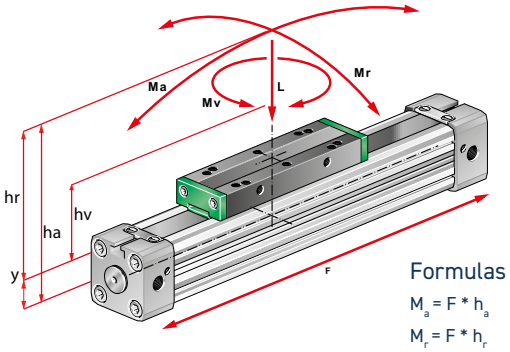
Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-63 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–4400mm, in increments of 1mm
Air connection	(M5, G 1/8“, G 1/4“, g3/8“)
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0.5–8.0 bar
Medium	compressed air, filtered max. 50µm

- Equal forces on both ends of the piston
- Force connection direct, torque safe
- Piston with or without magnets
- 50% space-savings
- Long strokes up to > 5700mm
- End caps with 3 air connections and adjustable cushioning
- Fast acceleration and high piston velocity
- Very flexible in the user`s design
- Non lubricated or lubricated air supply**)
- 3 stage cushioning characteristics for protection of the cushioning- and loadsystem *)
- Use in EX area possible - ATEX

*) Special Version On request

**) Attention: Before changing operation from lubricated to nonlubricated air, the cylinder has to be disassembled, cleaned, newly greased and reassembled

Forces and Moments



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

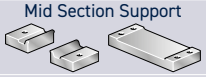
Cylinder		Effect Force (N)	Cushioning	Max. allowed load (N)	Max. allowed bending moments (Nm)		Max. allowed torque (Nm)
		at 6 Bar	(mm)	PLF	PLF		PLF
Ø	Y	F	S	L	Ma axial	Mr radial	Mv central
16	9	110	15	120	4	0.3	0.5
25	14	250	21	300	15	1	3.0
32	18	420	26	450	30	2	4.5
40	22	640	32	750	60	4	8.0
50	28	1000	32	1200	115	7	15.0
63		1550	40	1650	200	8	24.0

Order example

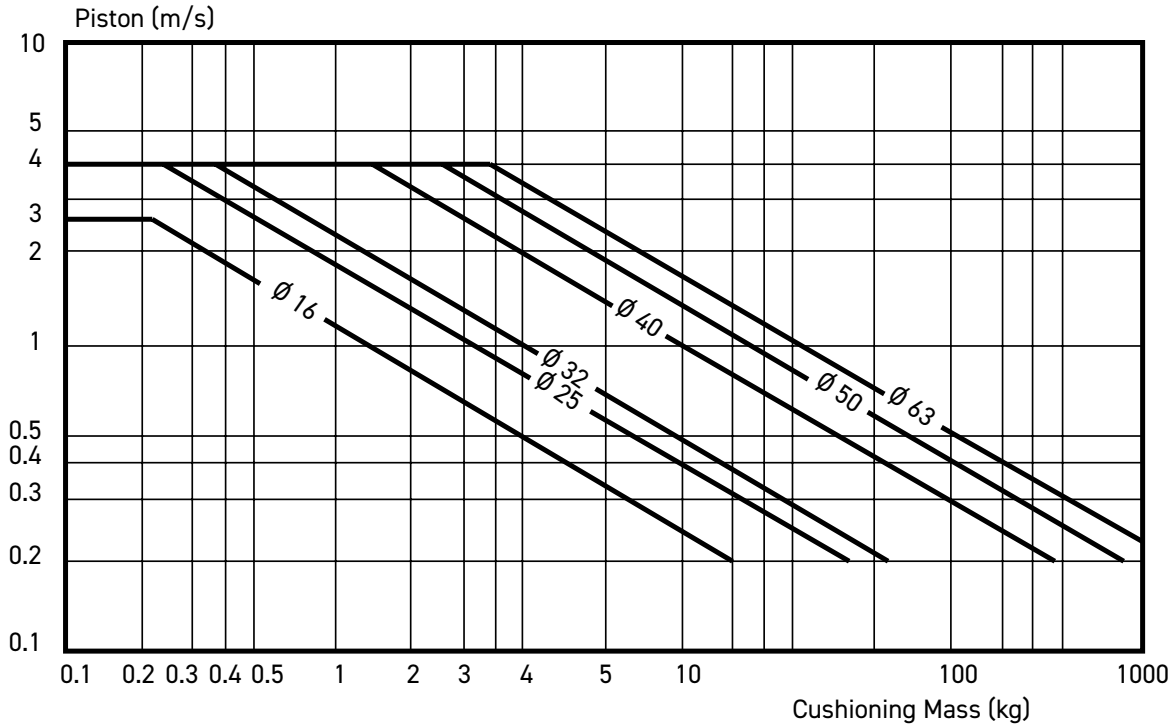
PLF — 25 — 0100 — SSG — SSS — VS — PS+ — 3636

- **MODEL**: Standard Low Carriage Type
- **BORE Ø**: 16, 25, 32, 40, 50, 63
- **STROKE**: 10-5800mm
- **GREASE TYPE**: Blank: Standard Grease; **SSG**: Slow Speed Grease
- **SCREW TYPE**: Blank: Standard Screws; **SSS**: Stainless Steel Screws
- **SEAL TYPE**: Blank: Nitrile Seals; **VS**: Viton Seals
- **PISTON OPTIONS**: Blank: Standard One Piston; **PS+**: Additional Piston
- **3636 ENDCAPS**: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

PLF SERIES Pricing

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£190.15	£224.70	£305.59	£398.85	£704.66	£933.83
200 mm	£206.89	£244.84	£330.93	£431.57	£742.86	£985.34
300 mm	£223.64	£264.98	£356.28	£464.28	£781.06	£1,036.85
400 mm	£240.38	£285.13	£381.62	£496.99	£819.26	£1,088.37
500 mm	£257.12	£305.27	£406.97	£529.70	£857.46	£1,139.88
600 mm	£273.86	£325.41	£432.31	£562.41	£895.66	£1,191.40
700 mm	£290.60	£345.55	£457.66	£595.13	£933.86	£1,242.91
800 mm	£307.34	£365.70	£483.00	£627.84	£972.06	£1,294.42
900 mm	£324.08	£385.84	£508.34	£660.55	£1,010.26	£1,345.94
1000 mm	£340.82	£405.98	£533.69	£693.26	£1,048.46	£1,397.45
1100 mm	£357.57	£426.12	£559.03	£725.97	£1,086.66	£1,448.97
1200 mm	£374.31	£446.27	£584.38	£758.68	£1,124.86	£1,500.48
1300 mm	£391.05	£466.41	£609.72	£791.40	£1,163.06	£1,551.99
1400 mm	£407.79	£486.55	£635.07	£824.11	£1,201.26	£1,603.51
1500 mm	£424.53	£506.69	£660.41	£856.82	£1,239.46	£1,655.02
1600 mm	£441.27	£526.84	£685.76	£889.53	£1,277.66	£1,706.54
1700 mm	£458.01	£546.98	£711.10	£922.24	£1,315.86	£1,758.05
1800 mm	£474.75	£567.12	£736.44	£954.96	£1,354.06	£1,809.56
1900 mm	£491.50	£587.27	£761.79	£987.67	£1,392.26	£1,861.08
2000 mm	£508.24	£607.41	£787.13	£1,020.38	£1,430.46	£1,912.59
Additional 100mm	£15.08	£20.22	£25.72	£32.87	£38.53	£52.24
3636 Endcaps (Pair Fitted PL00 / PLF 32)			£151.20			
Additional Piston Assy (PS+)	£134.47	£148.19	£193.20	£223.38	£268.67	£313.95
End Supports (Pair)	**24-1**	**24-2**	**24-3**	**24-4**	**24-5**	**24-6**
	£34.56	£41.04	£51.84	£51.84	£62.64	£62.64
Mid Section Support 	**25-1**	**25-2**	**25-3**	**25-4**	**25-5**	**25-6**
	£32.62	£36.94	£34.26	£51.84	£51.84	£51.84
Adjustable Clamp Support (Preferred Stock)	**25-1-3**	**25-2-3**	**25-3-3**			
	£58.61	£68.97	£73.57			
Inversion Bracket	**231-1-F**	**231-2-F**	**231-3-F**	**231-4-F**	**231-5-F**	**231-6-F**
	£35.00	£50.83	£53.65	£75.64	£98.98	£114.58
Slow Speed Grease (SSG)	£7.30	£8.83	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SSS)	£14.24	£16.46	£19.80	£19.80	£20.91	£23.14
Viton Seals (VS)	£59.06	£81.44	£97.82	£107.37	£121.46	£145.69
RCAL-3M Reed Switch	£16.93					
RCAL-EQD	£16.93					
RCI-3M Reed Switch			£18.09			
RCI-EQD			£20.45			
RNA-3M Inductive Switch	£33.16					
RNA-EQD	£22.72					
RPA-3M Inductive Switch	£23.55					
RPA-EQD	£39.42					
RNI-3M Inductive Switch			£31.41			
RNI-EQD			£30.51			
RPI-3M Inductive Switch			£31.41			
RPI-QD			£31.86			
M83RPVC-5M (QR Lead)			£17.63			
Switch Clamp (Use With RCAL / NA / PA)	**HPL**	**HPL**				
	£4.22	£4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1**				
		£4.31				

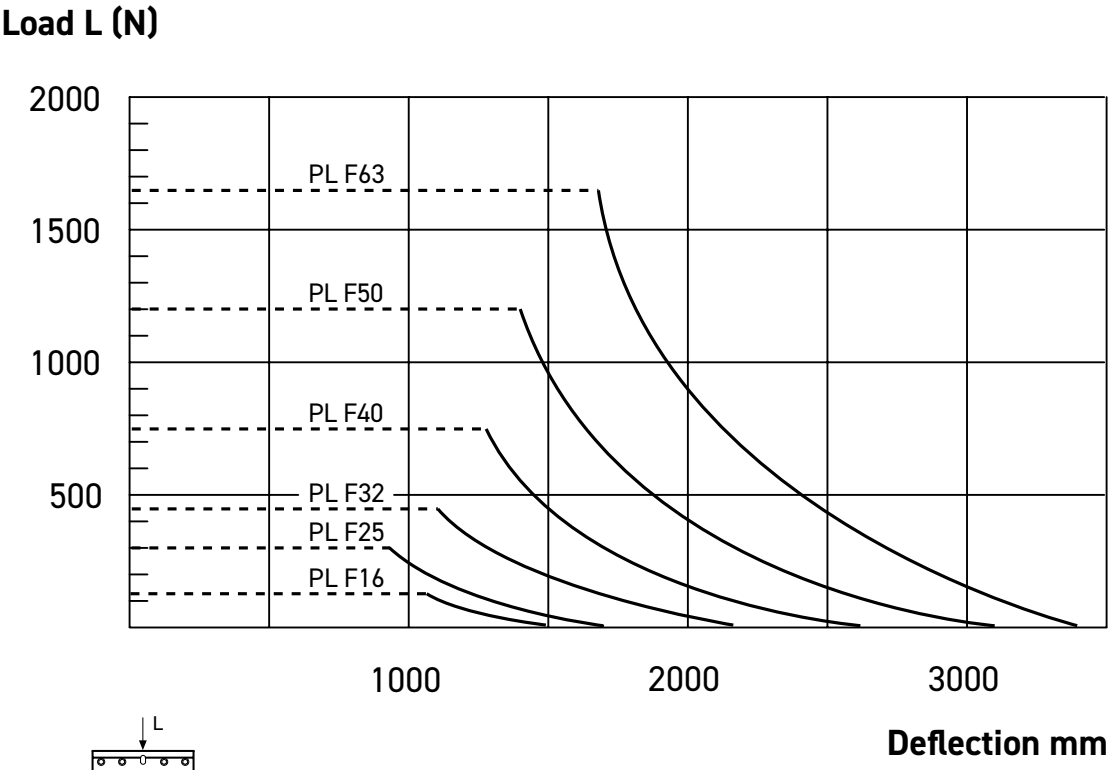
PLF SERIES Cushioning Diagram

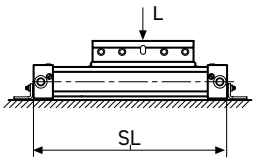


Pay attention to the following points:

- If the limits above are exceeded additional shock absorbers are necessary.
- For piston speeds of more than ⟩ 1m/s viton seals are recommended.
- For piston speeds ⟨ 0,1m/s (NBR), ⟨ 0,2m/s (VITON) slow speed lubrication is necessary
- Maximum life duration will be achieved when piston speeds do not exceed 1m/s.

PLF SERIES Deflection Diagram





max. distance (SL) in mm - free of mounting No. 25

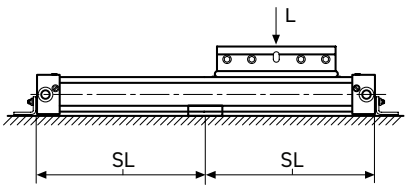
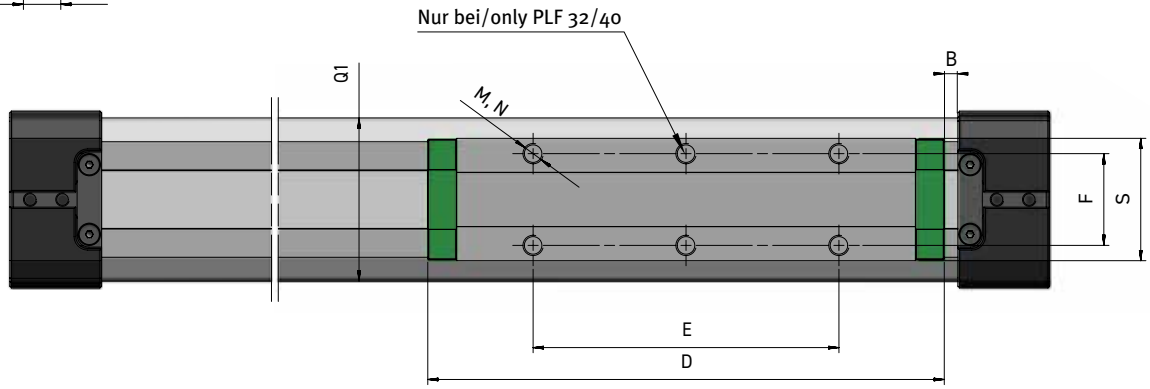
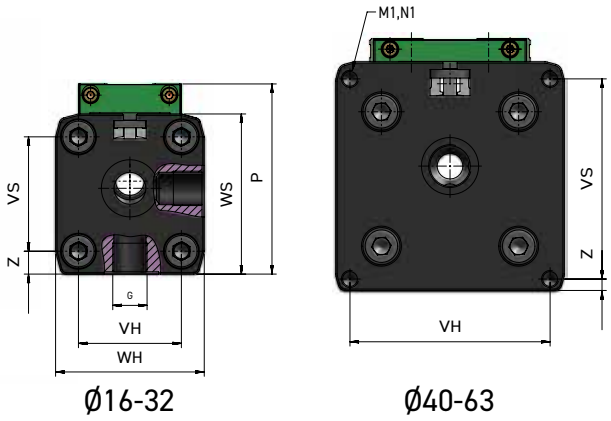


Diagram Information:

- Calculated deflections without support of 0.5 – 1mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – max 1.5mm require reduction of the supporting distance.

PLF SERIES Dimensions





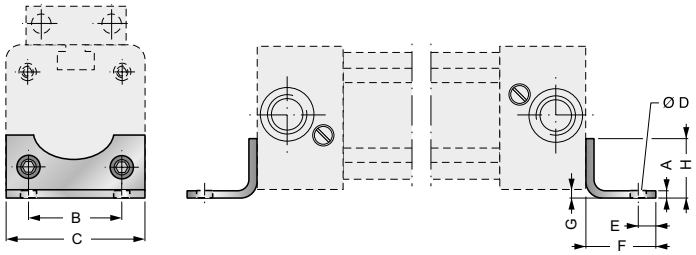
Ø16-32 Ø40-63

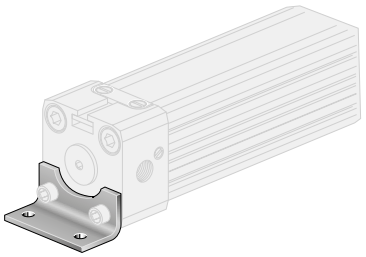
ø	A	B	C	D	E	F	G	H	L	M	M1	N	N1	P	QxQ1	S	VS	VS	WS	WH	Z
16	65	15.5	15	69	36	16.5	M5	1.0	5.5	M4	M3	7	7.0	36.5	24.5x25	22.0	18	18	27	27	4.5
25	100	21.0	23	111	65	25.0	G1/8	2.0	8.5	M5	M5	10	12	52.5	36x36	33.0	27	27	40	40	6.5
32	125	22.0	27	152	90	27.0	G1/4	2.0	10.5	M6	M6	7	14	66.5	52x51	36.0	40	40	56	52	8.0
40	150	44.0	30	152	90	27.0	G1/4	6.75	15.0	M6	M6	10	17	80.0	58.5x59	36.4	54	54	69	72	9.0
50	175	42.0	33.0	200	110	27.0	G1/4	0.5	11.7	M6	M6	6	18	88.0	77x78	56.0	70	70	80	80	4.0
63	215	47.5	50	235	155	36.0	G3/8	1.5	25.0	M8	M8	15	18	123.0	102x102	50.0	78	78	106	106	14.5

PLF SERIES Mountings

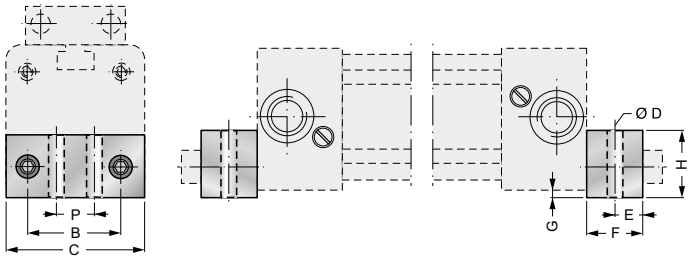
End cover bracket (foot)

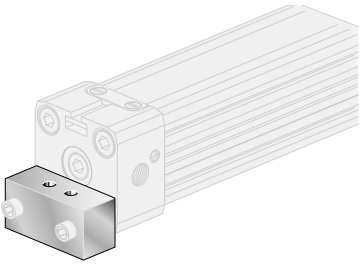
24/1.0 - 2.0*





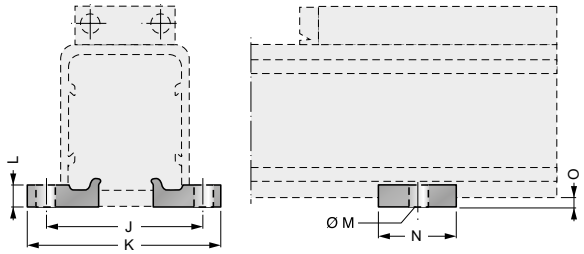
24/3.0 - 6.0*

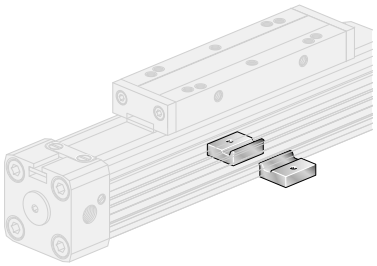




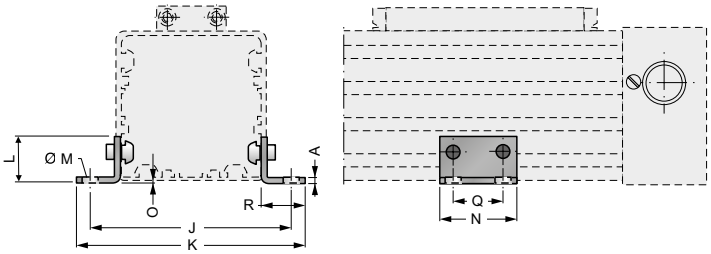
Mid section support

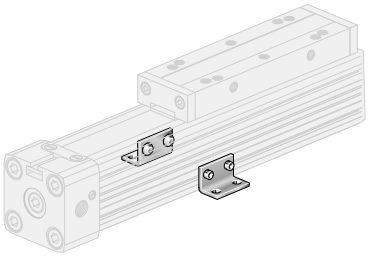
25/1.0 - 2.0*





25/3.0 - 6.0*

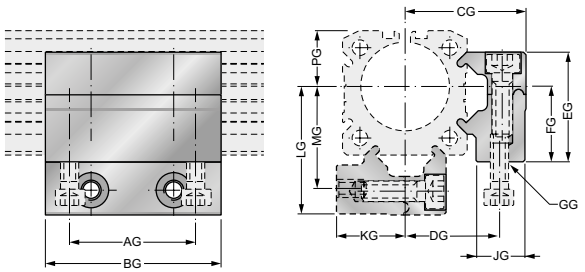


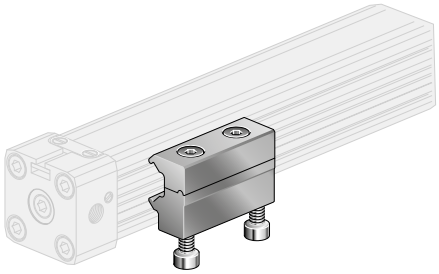


ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
16	1.5	18	26	3.6	4.0	14	1.5	12.5	41.5	53.5	5	ø5.5	20	3	-	-	-
25	2.5	27	40	5.5	6.0	22	2	18	48.5	60	6	ø5.5	20	4	-	-	-
32	5.0	36	51	6.5	8.0	24	4	20	82	91	30	ø4.5	45	6	20	30	20
40	5.0	54	71	9	11.5	24	2	20	90	99	25	ø4.5	45	8.5	30	30	20
50	5.0	70	80	9	12.5	25	1.0	25	123	148	35	6.5	45	1	45	30	35
63	5.0	78	105	11	15	30	2.0	40	147	172	35	6.5	45	3.5	48	30	35

Application No.	
24/1.0 = ø16	24/2.0 = ø25
24/3.0 = ø32	24/4.0 = ø40
24/5.0 = ø50	24/6.0 = ø63
25/1.0 = ø16	25/2.0 = ø25
25/3.0 = ø32	25/4.0 = ø40
25/5.0 = ø50	25/6.0 = ø63

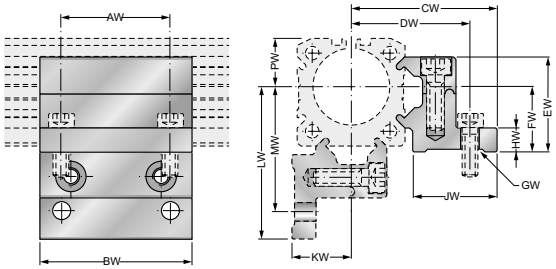
Mobile Mid Section Support, Type G for Cylinder Ø25/32

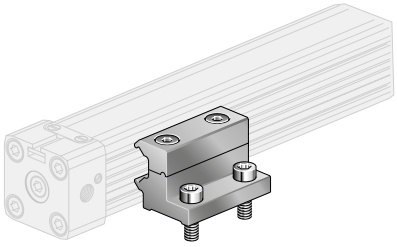




ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
16	18.0	30.0	27.5	18.4	21.0	15.0	M4	11.5	13.9	29.0	19.7	10.8
25	36.0	50.0	34.5	27.0	31.3	22.0	M5	14.0	20.0	36.5	29.0	16.0
32	36.0	50.0	41.8	34.2	39.0	30.0	M6	14.0	27.6	47.0	39.5	21.5

Mobile Mid Section Support, Type W for Cylinder Ø25/32





ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
16	18.0	30.0	37.0	32.5	21.0	15.0	ø4.5	6.0	22.4	13.9	38.0	32.9	10.8
25	36.0	50.0	47.5	40.0	31.3	22.0	ø5.5	10.0	26.0	20.0	49.5	42.0	16.0
32	36.0	50.0	56.0	47.5	39.0	30.0	ø6.5	10.0	28.5	27.6	61.0	52.5	21.5

PL-00 SERIES

SAMEDAY BUILD
PREMIUM AVAILABLE

STANDARD PROFILE RODLESS PNEUMATIC CYLINDER

As Origa P210-20 / P120-S20 or S22 / L26 / L28 Style

ATEX Available On Request

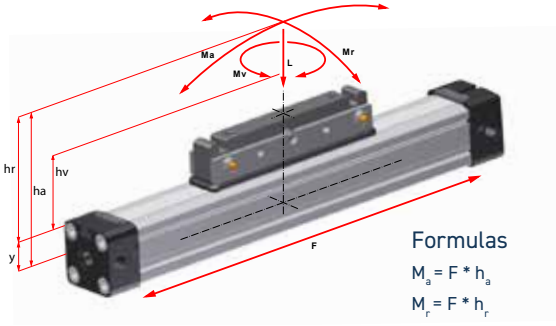
Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-40 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–4400mm, in increments of 1mm
Air connection	(M5, G 1/8", G 1/4", g3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0,5–8,0 bar
Medium	compressed air, filtered max. 50µm

- Equal forces on both ends of the piston
- Force connection direct, torque safe
- Piston with or without magnets
- 50% space-savings
- Long strokes up to 5700mm
- End caps with 3 air connections and adjustable cushioning
- Fast acceleration and high piston velocity
- Very flexible in the user`s design
- Non lubricated or lubricated air supply**)
- 3 stage cushioning characteristics for protection of the cushioning- and loadsystem *)
- Use in EX area possible - ATEX

*) Special Version On request

**) Attention: Before changing operation from lubricated to nonlubricated air the cylinder has to be disassembled, cleaned, newly greased and reassembled

Forces and Moments



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

Cylinder		Effect Force (N)	Cushioning	Max. allowed load (N)	Max. allowed bending moments (Nm)		Max. allowed torque (Nm)
		at 6 Bar	(mm)	PL	PL		PL
Ø	Y	F	S	L	Ma axial	Mr radial	Mv central
16	9	110	15	120	4	0.3	0.3
25	14	250	21	300	15	1.0	3.0
32	18	420	26	450	30	2.0	4.5
40	22	640	32	750	60	4.0	8.0
50	28	1000	32	1200	115	7.0	15.0
63		1550	40	1650	200	8.0	24.0

Order example

PL — 00 — 25 — 0100 — SSG — SSS — VS — PS+ — 3636

MODEL
Standard Type

TYPE
00: Standard Block Mount
05: T Load Mount
09: Long T Load Mount
10: Long Standard Mount

BORE Ø
16
25
32
40
50
63

STROKE
10-5800mm

GREASE TYPE
Blank: Standard Grease
SSG: Slow Speed Grease

SCREW TYPE
Blank: Standard Screws
SSS: Stainless Steel Screws

SEAL TYPE
Blank: Nitrile Seals
VS: Viton Seals

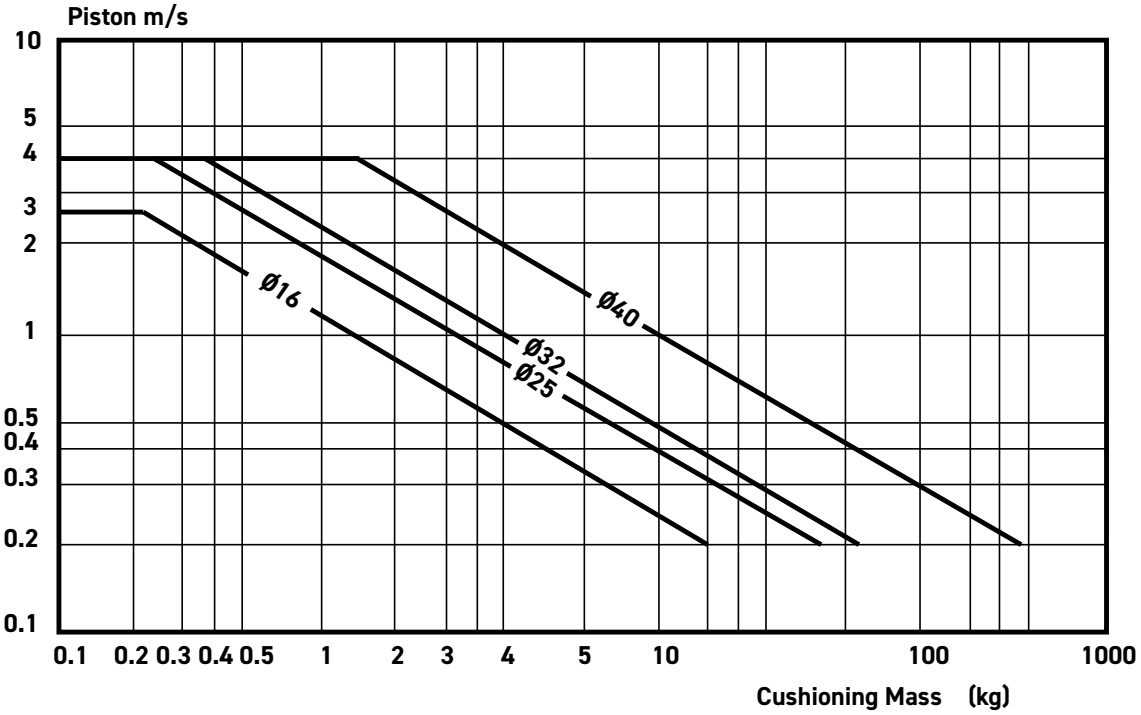
PISTON OPTIONS
Blank: Standard One Piston
PS+: Additional Piston

3636 ENDCAPS
Blank: Standard
3636: 3636 Endcaps
(Only available on Ø32)

PL-00 SERIES Price List

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£190.15	£229.06	£311.52	£406.60	£855.39	£1,090.14
200 mm	£206.89	£249.59	£337.36	£439.95	£894.33	£1,142.65
300 mm	£223.64	£270.13	£363.20	£473.29	£933.27	£1,195.16
400 mm	£240.38	£290.66	£389.03	£506.64	£972.21	£1,247.68
500 mm	£257.12	£311.20	£414.87	£539.99	£1,011.15	£1,300.19
600 mm	£273.86	£331.73	£440.71	£573.33	£1,050.10	£1,352.71
700 mm	£290.60	£352.26	£466.54	£606.68	£1,089.04	£1,405.22
800 mm	£307.34	£372.80	£492.38	£640.03	£1,127.98	£1,457.74
900 mm	£324.08	£393.33	£518.22	£673.38	£1,166.92	£1,510.25
1000 mm	£340.82	£413.86	£544.05	£706.72	£1,205.86	£1,562.76
1100 mm	£357.57	£434.40	£569.89	£740.07	£1,244.81	£1,615.28
1200 mm	£374.31	£454.93	£595.73	£773.42	£1,283.75	£1,667.79
1300 mm	£391.05	£475.47	£621.56	£806.76	£1,322.69	£1,720.31
1400 mm	£407.79	£496.00	£647.40	£840.11	£1,361.63	£1,772.82
1500 mm	£424.53	£516.53	£673.24	£873.46	£1,400.57	£1,825.33
1600 mm	£441.27	£537.07	£699.07	£906.80	£1,439.51	£1,877.85
1700 mm	£458.01	£557.60	£724.91	£940.15	£1,478.46	£1,930.36
1800 mm	£474.75	£578.13	£750.74	£973.50	£1,517.40	£1,982.88
1900 mm	£491.50	£598.67	£776.58	£1,006.84	£1,556.34	£2,035.39
2000 mm	£508.24	£619.20	£802.42	£1,040.19	£1,595.28	£2,087.91
Additional 100mm	£15.08	£20.22	£25.72	£32.87	£38.53	£52.24
PL-05 (T Load) Mounting As Origa S22			£135.56	£149.22	£168.70	£199.58
PL-09 (Long T Type Piston Mounting As Origa L28)			£389.79	£389.79	£335.02	£358.78
PL-10 (Long Piston Mounting As Origa L26)			£389.79	£389.79	£335.02	£358.78
3636 Endcaps (Pair Fitted PL00 / PLF 32)			£151.20			
Additional Piston Assy (PS+)	£134.47	£148.19	£193.20	£223.38	£268.67	£313.95
End Supports (Pair)	**24-1**	**24-2**	**24-3**	**24-4**	**24-5**	**24-6**
	£34.56	£41.04	£51.84	£51.84	£62.64	£62.64
Mid Section Support	**25-1**	**25-2**	**25-3**	**25-4**	**25-5**	**25-6**
Adjustable Clamp Support	£32.62	£36.94	£38.58	£51.84	£62.64	£62.64
Adjustable Clamp Support (Preferred Stock)	**25-1-3**	**25-2-3**	**25-3-3**			
	£58.61	£68.97	£73.57			
Inversion Bracket	**231-1-F**	**231-2-F**	**231-3-F**	**231-4-F**	**231-5-F**	**231-6-F**
	£35.00	£50.83	£53.65	£75.64	£98.98	£114.58
Slow Speed Grease (SSG)	£7.30	£8.83	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SSS)	£14.24	£16.46	£19.80	£19.80	£20.91	£23.14
Viton Seals (VS)	£59.06	£81.44	£97.82	£107.37	£121.46	£145.69
RCAL-3M Reed Switch	£16.93					
RCAL-EQD	£16.93					
RCI-3M Reed Switch					£18.09	
RCI-EQD					£20.45	
RNA-3M Inductive Switch	£33.16					
RNA-EQD	£22.72					
RPA-3M Inductive Switch	£23.55					
RPA-EQD	£39.42					
RNI-3M Inductive Switch					£31.41	
RNI-EQD					£30.51	
RPI-3M Inductive Switch					£31.41	
RPI-QD					£31.86	
M83RPVC-5M (QR Lead)				£17.63		
Switch Clamp (Use With RCAL / NA / PA)	**HPL** £4.22	**HPL** £4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1** £4.31				

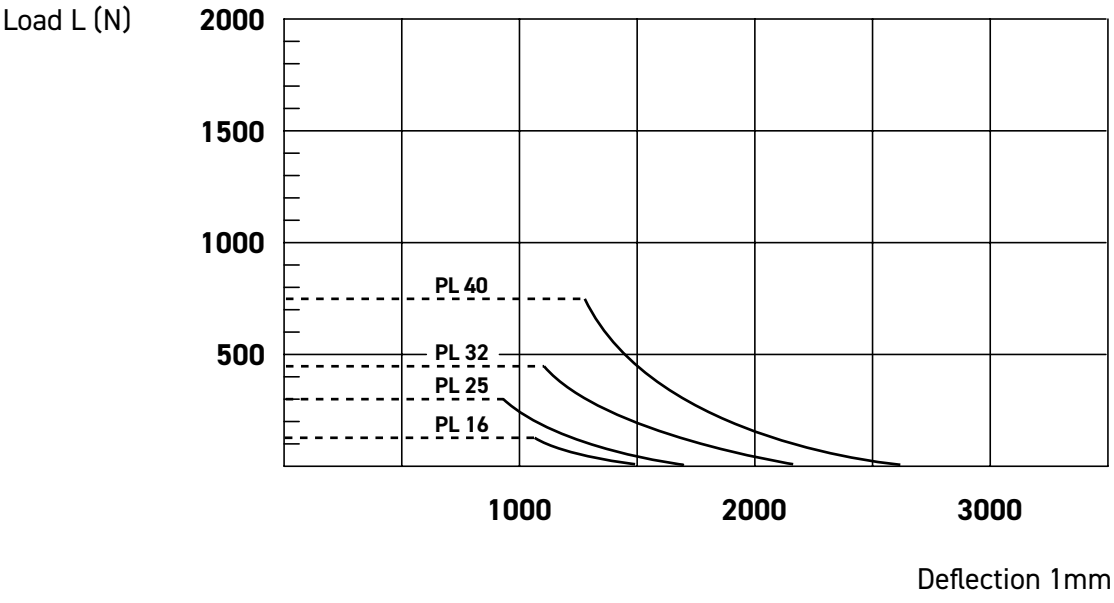
PL-00 SERIES Cushioning Diagram

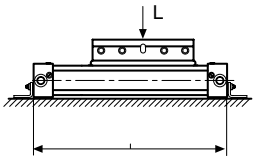


Pay attention to the following points:

- If the limits above are exceeded additional shock absorbers are necessary.
- For piston speeds of more than ⩾ 1m/s viton seals are recommended.
- For piston speeds ⩽ 0,1m/s (NBR), ⩽ 0,2m/s (VITON) slow speed lubrication is necessary
- Maximum duration life will be achieved when piston speeds do not exceed 1m/s.

PL-00 SERIES Deflection Diagram





max. distance (SL) in mm - free of mounting No. 25

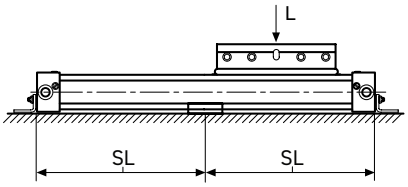
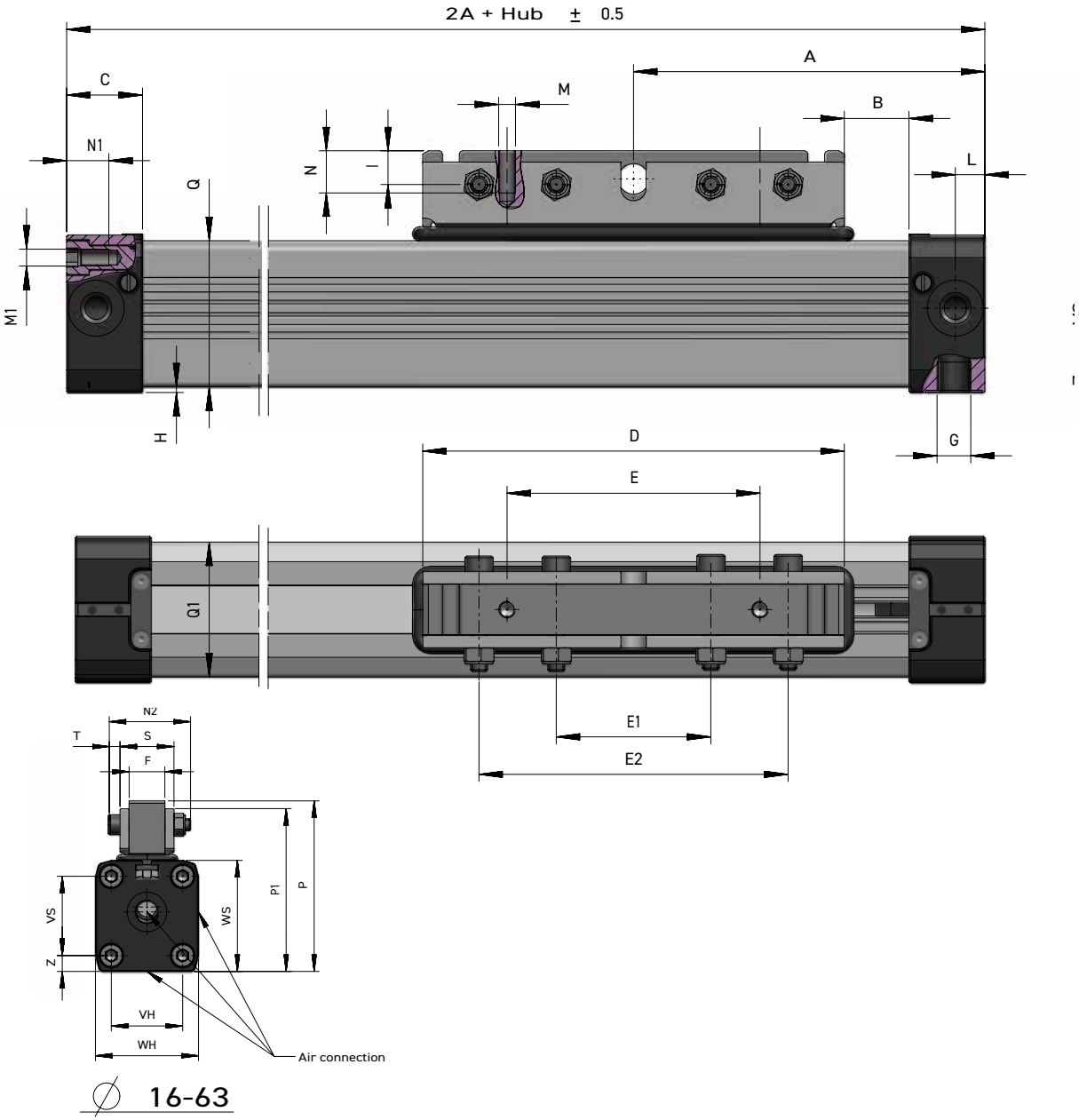


Diagram Information:

- Calculated deflections without support of 0,5 – 1mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – max 1,5mm require reduction of the supporting distance.

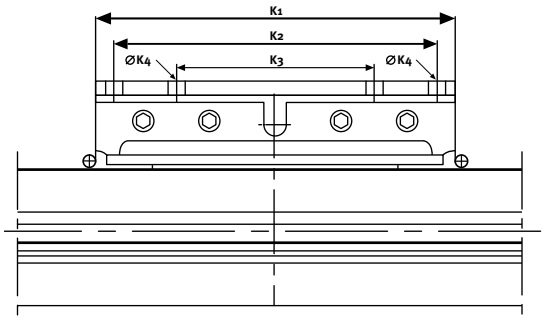
PL-00 SERIES Dimensions



Ø	A	B	C	D	E	E1	F	G	I	L	M	M1	N1	N2	P-P1	P1	QxQ1	E2	H	S	T	VH	WH	VS	WS	Z
16	65	12	15	76	48	32	10	M5	6	5.5	M4	M3	7	27	43.5 - 42.3	37.5	24.5x25	64	1.0	18	4	18	27	18	27	4.5
16L	90	37	15	76	48	32	10	M5	6	5.5	M4	M3	7	27	43.5 - 42.3	37.5	24.5x25	64	1.0	18	4	18	27	18	27	4.5
25	100	17	23	120	80	50	15	1/8'	13	8.5	M5	M5	10	35	66-58	53	36x36	100	2	23	5	27	40	27	40	6.5
25L	150	67	23	120	80	50	15	1/8'	13	8.5	M5	M5	10	35	66-58	53	36x36	100	2	23	5	27	40	27	40	6.5
32	125	23	27	150	90	55	18	1/4'	12	10.5	M6	M6	14	41	86-82	74	52x51	110	2	27	6	36	52	40	56	8
32L	200	23	27	300	180	120	18	1/4'	12	10.5	M6	M6	14	41	86-82	74	52x51	240	2	27	6	36	52	40	56	8
40	150	45	30	150	90	55	18	1/4'	12	15	M6	M6	17	41	97-93	85	58.5x59	110	7	28	6	54	72	54	69	9
40L	250	70	30	300	180	120	18	1/4'	12	15	M6	M6	17	41	97-93	85	58.5x59	240	7	28	6	54	72	54	69	9
50	175	42	33	180	110	70	27	1/4'	12	11.7	-	M6	18	-	114	-	77X78	140	0.5	56	-	70	80	70	80	4
63	215	47	50	220	140	90	36	3/8'	15	25	-	M8	18	-	136	-	102X102	180	1.5	50	-	78	106	78	106	14.5

PL-05/09/10 SERIES Dimensions

T-load

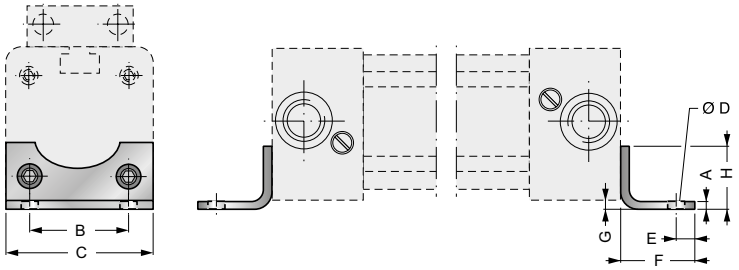


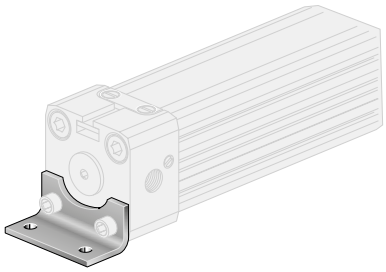
ø	K1	K2	K3	K4
16	-	-	-	-
25	-	-	-	-
32	150	-	80	7
32L	300	160	80	7
40	150	-	80	7
40L	300	160	80	7

PL-00 SERIES Mountings

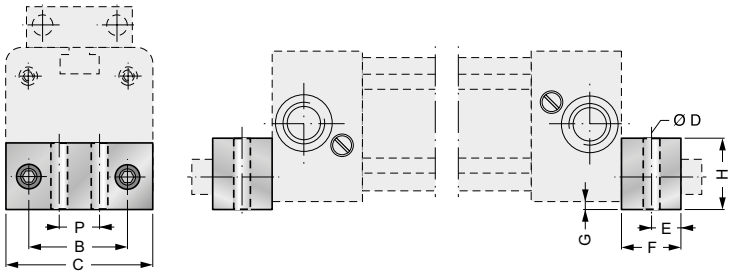
End cover bracket (foot)

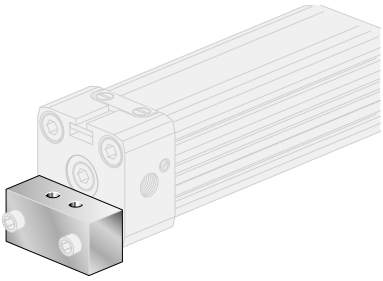
24/1.0 - 2.0*





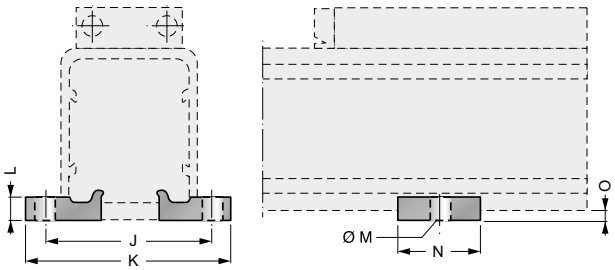
24/3.0 - 4.0*

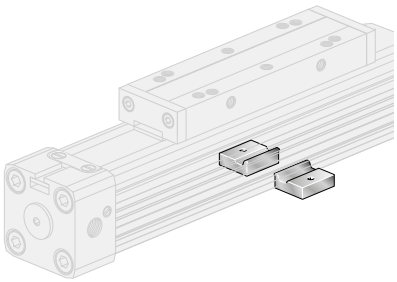




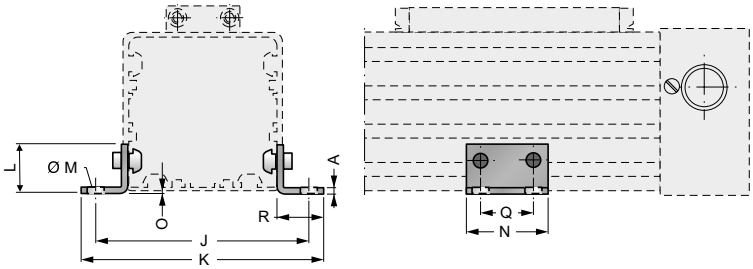
Mid section support

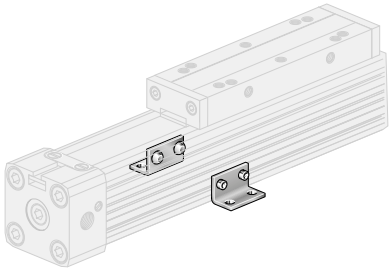
25/1.0 - 2.0*





25/3.0 - 4.0*



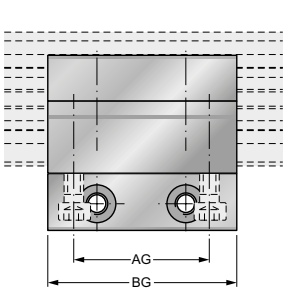


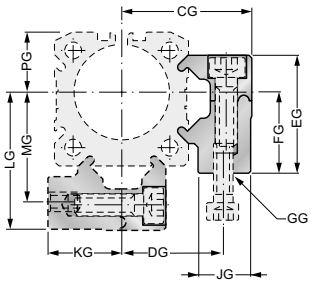
ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
16	1.5	18	26	3.6	4.0	14	1.5	12.5	41.5	53.5	5	ø5.5	20	3	-	-	-
25	2.5	27	40	5.5	6.0	22	2	18	48.5	60	6	ø5.5	20	4	-	-	-
32	5.0	36	51	6.5	8.0	24	4	20	82	91	30	ø4.5	45	6	20	30	20
40	5.0	54	71	9	11.5	24	2	20	90	99	25	ø4.5	45	8.5	30	30	20

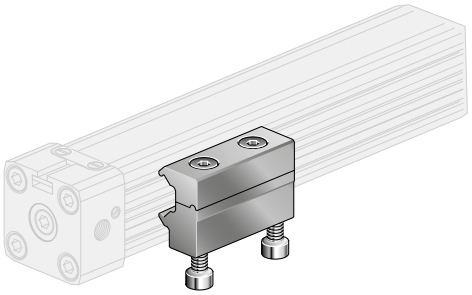
Application No.	
24/1.0 = ø16	24/2.0 = ø25
24/3.0 = ø32	24/4.0 = ø40
25/1.0 = ø16	25/2.0 = ø25
25/3.0 = ø32	25/4.0 = ø40

PL-00 SERIES Mountings

Mobile Mid Section Support, Type G for Cylinder Ø25/32

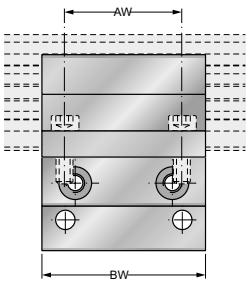


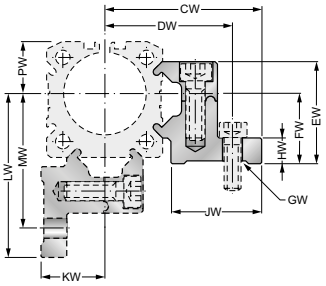


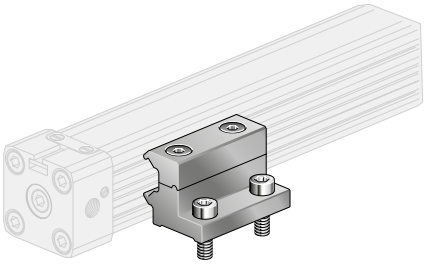


ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
16	18.0	30.0	27.5	18.4	21.0	15.0	M4	11.5	13.9	29.0	19.7	10.8
25	36.0	50.0	34.5	27.0	31.3	22.0	M5	14.0	20.0	36.5	29.0	16.0
32	36.0	50.0	41.8	34.2	39.0	30.0	M6	14.0	27.6	47.0	39.5	21.5

Mobile Mid Section Support, Type W for Cylinder Ø25/32







ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
16	18.0	30.0	37.0	32.5	21.0	15.0	ø4.5	6.0	22.4	13.9	38.0	32.9	10.8
25	36.0	50.0	47.5	40.0	31.3	22.0	ø5.5	10.0	26.0	20.0	49.5	42.0	16.0
32	36.0	50.0	56.0	47.4	39.0	30.0	ø6.5	10.0	28.5	27.6	61.0	52.5	21.5

PL-20 SERIES

SAMEDAY BUILD
PREMIUM AVAILABLE

FLEXIBLE CARRIAGE RODLESS PNEUMATIC CYLINDER

As Origa P210-25 / P120-S25

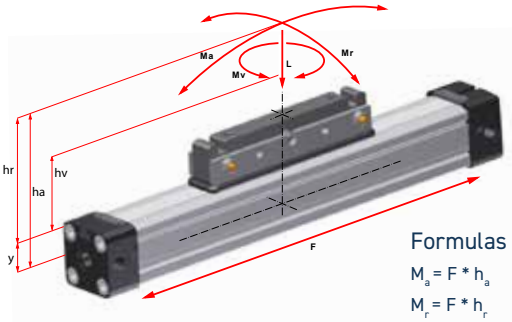
Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-40 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–4400mm, in increments of 1mm
Air connection	(M5, G 1/8", G 1/4", g3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0,5–8,0 bar
Medium	compressed air, filtered max. 50µm

- Equal forces on both ends of the piston
- Force connection direct, torque safe
- Piston with or without magnets
- 50% space-savings
- Long strokes up to 5700mm
- End caps with 3 air connections and adjustable cushioning
- Fast acceleration and high piston velocity
- Very flexible in the user`s design
- Non lubricated or lubricated air supply**)
- 3 stage cushioning characteristics for protection of the cushioning- and loadsystem *)
- Use in EX area possible - ATEX

*) Special Version On request

**) Attention: Before changing operation from lubricated to nonlubricated air the cylinder has to be disassembled, cleaned, newly greased and reassembled

Forces and Moments



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

Cylinder		Effect Force (N)	Cushioning	Max. allowed load (N)	Max. allowed bending moments (Nm)		Max. allowed torque (Nm)
		at 6 Bar	(mm)	PL	PL		PL
Ø	Y	F	S	L	Ma axial	Mr radial	Mv central
16	9	110	15	120	4	0.3	0.3
25	14	250	21	300	15	1.0	3.0
32	18	420	26	450	30	2.0	4.5
40	22	640	32	750	60	4.0	8.0
50							
63							

Order example

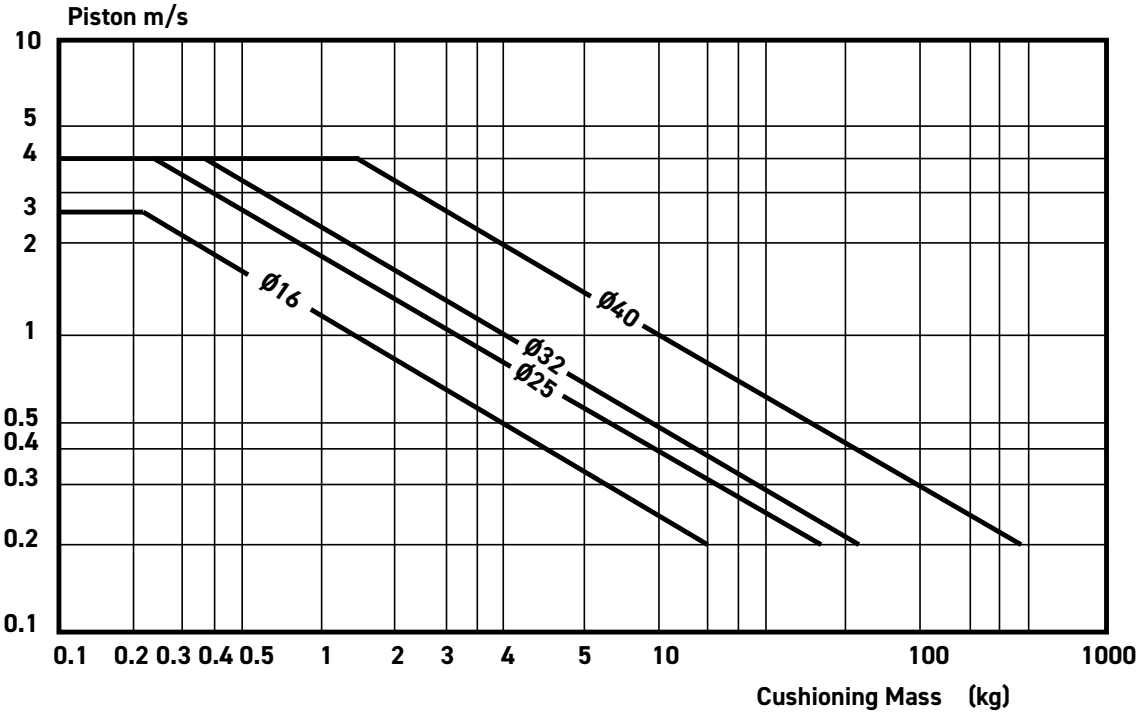
PL — 20 — 25 — 0100 — SSG — SSS — VS — PS+ — 3636

- **MODEL**: Flexible Carriage Mount Type
- **BORE Ø**: 16, 25, 32, 40, 50, 63
- **STROKE**: 10-5800mm
- **GREASE TYPE**: Blank: Standard Grease; **SSG**: Slow Speed Grease
- **SCREW TYPE**: Blank: Standard Screws; **SSS**: Stainless Steel Screws
- **SEAL TYPE**: Blank: Nitrile Seals; **VS**: Viton Seals
- **PISTON OPTIONS**: Blank: Standard One Piston; **PS+**: Additional Piston
- **3636 ENDCAPS**: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

PL-20 SERIES Price List

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£235.55	£314.81	£536.64	£636.24	£976.44	£1,221.17
200 mm	£252.90	£337.06	£564.93	£672.40	£1,018.83	£1,278.63
300 mm	£270.25	£359.31	£593.22	£708.56	£1,061.21	£1,336.09
400 mm	£287.60	£381.55	£621.51	£744.72	£1,103.60	£1,393.55
500 mm	£304.95	£403.80	£649.80	£780.88	£1,145.99	£1,451.02
600 mm	£322.30	£426.04	£678.09	£817.03	£1,188.37	£1,508.48
700 mm	£339.65	£448.29	£706.38	£853.19	£1,230.76	£1,565.94
800 mm	£357.00	£470.53	£734.67	£889.35	£1,273.15	£1,623.40
900 mm	£374.35	£492.78	£762.96	£925.51	£1,315.54	£1,680.86
1000 mm	£391.70	£515.03	£791.25	£961.67	£1,357.92	£1,738.33
1100 mm	£409.05	£537.27	£819.54	£997.83	£1,400.31	£1,795.79
1200 mm	£426.40	£559.52	£847.83	£1,033.99	£1,442.70	£1,853.25
1300 mm	£443.75	£581.76	£876.12	£1,070.14	£1,485.08	£1,910.71
1400 mm	£461.10	£604.01	£904.41	£1,106.30	£1,527.47	£1,968.18
1500 mm	£478.46	£626.26	£932.70	£1,142.46	£1,569.86	£2,025.64
1600 mm	£495.81	£648.50	£960.99	£1,178.62	£1,612.24	£2,083.10
1700 mm	£513.16	£670.75	£989.28	£1,214.78	£1,654.63	£2,140.56
1800 mm	£530.51	£692.99	£1,017.58	£1,250.94	£1,697.02	£2,198.02
1900 mm	£547.86	£715.24	£1,045.87	£1,287.10	£1,739.40	£2,255.49
2000 mm	£565.21	£737.48	£1,074.16	£1,323.25	£1,781.79	£2,312.95
Additional 100mm	£15.09	£20.22	£25.72	£32.87	£38.53	£52.24
Additional Piston	£122.25	£134.72	£159.67	£184.62	£222.04	£259.46
3636 Endcaps (Pair Fitted PL00 / PLF 32)			£151.20			
End Supports (Pair)	**24-1** £34.56	**24-2** £41.04	**24-3** £51.84	**24-4** £51.84	**24-5** £62.64	**24-6** £62.64
Mid Section Support	**25-1** £32.62	**25-2** £36.94	**25-3** £34.26	**25-4** £51.84	**25-5** £51.84	**25-6** £51.84
Adjustable Clamp Support	**25-1-3**	**25-2-3**	**25-3-3**			
(Preferred Stock)	£58.61	£68.97	£73.57			
	£14.59	£17.66	£20.16	£22.94	£24.92	£28.19
Stainless Screws (SS)	£18.00	£25.36	£27.59	£29.81	£32.04	£33.15
Viton Seals (VS)	£69.99	£101.65	£109.53	£151.29	£197.96	£229.15
RCAL-3M Reed Switch	£16.93					
RCAL-EQD	£16.93					
RCI-3M Reed Switch			£18.09			
RCI-EQD			£20.45			
RNA-3M Inductive Switch	£33.16					
RNA-EQD	£22.72					
RPA-3M Inductive Switch	£23.55					
RPA-EQD	£39.42					
RNI-3M Inductive Switch			£31.41			
RNI-EQD			£30.51			
RPI-3M Inductive Switch			£31.41			
RPI-QD			£31.86			
M83RPVC-5M (QR Lead)			£17.63			
Switch Clamp (Use With RCAL / NA / PA)	**HPL** £4.22	**HPL** £4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1** £4.31				

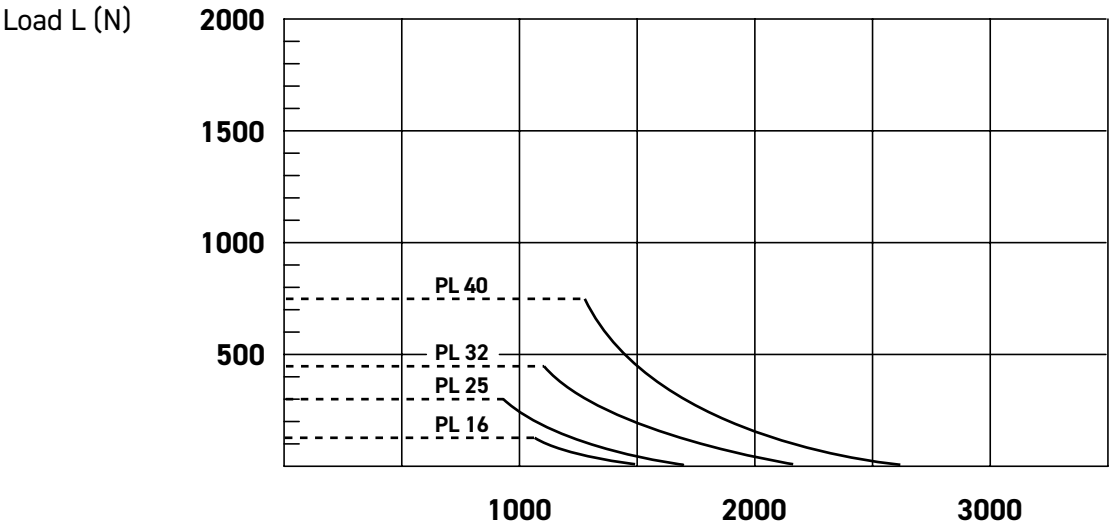
PL-20 SERIES Cushioning Diagram

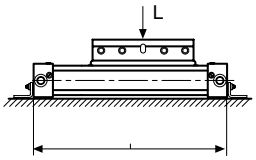


Pay attention to the following points:

- If the limits above are exceeded additional shock absorbers are necessary.
- For piston speeds of more than ⩾ 1m/s viton seals are recommended.
- For piston speeds ⩽ 0,1m/s (NBR), ⩽ 0,2m/s (VITON) slow speed lubrication is necessary
- Maximum duration life will be achieved when piston speeds do not exceed 1m/s.

PL-20 SERIES Deflection Diagram





max. distance (SL) in mm - free of mounting No. 25

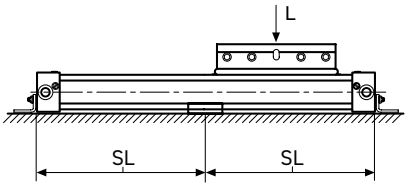
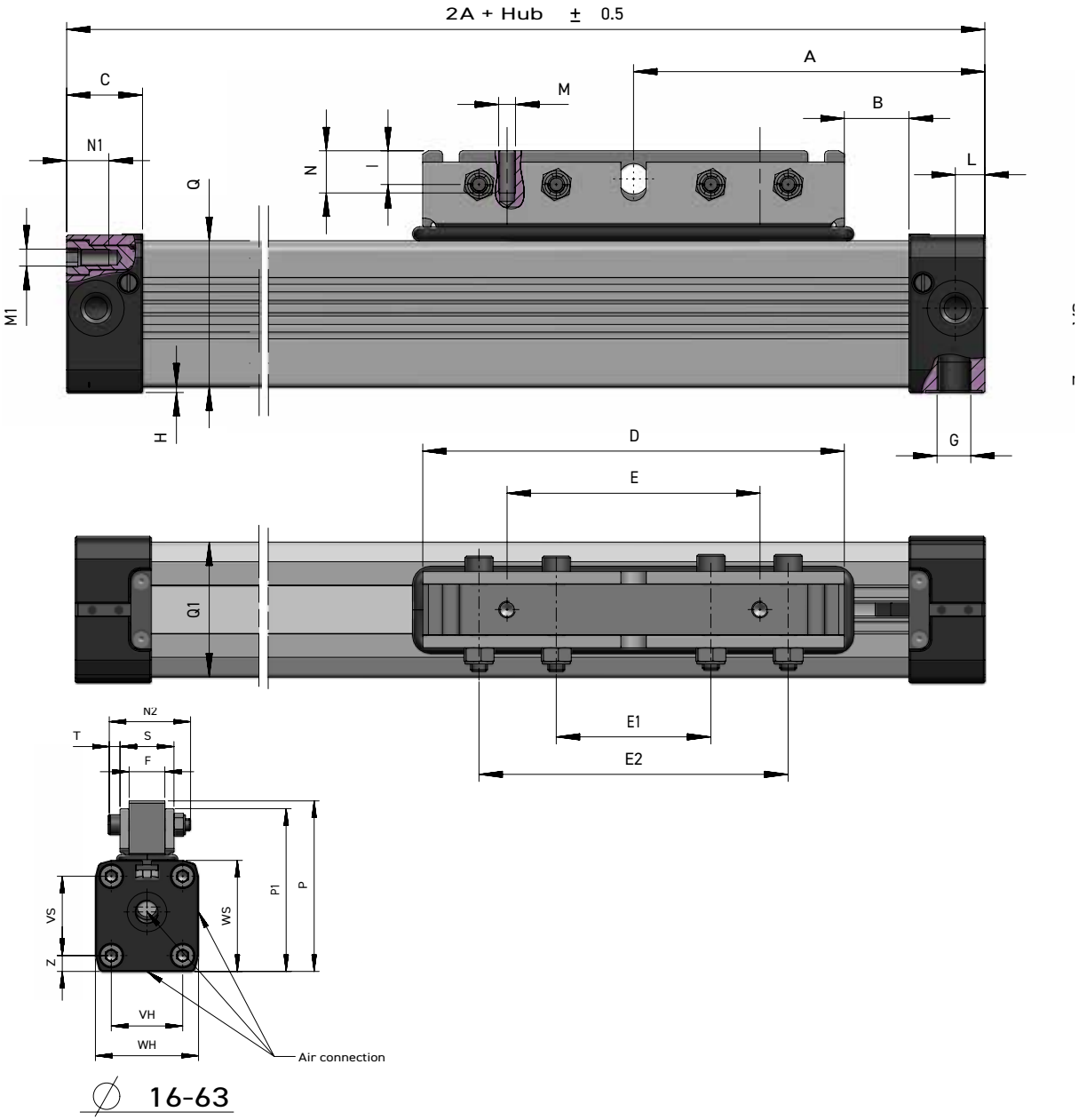


Diagram Information:

- Calculated deflections without support of 0,5 – 1mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – max 1,5mm require reduction of the supporting distance.

PL-20 SERIES Dimensions

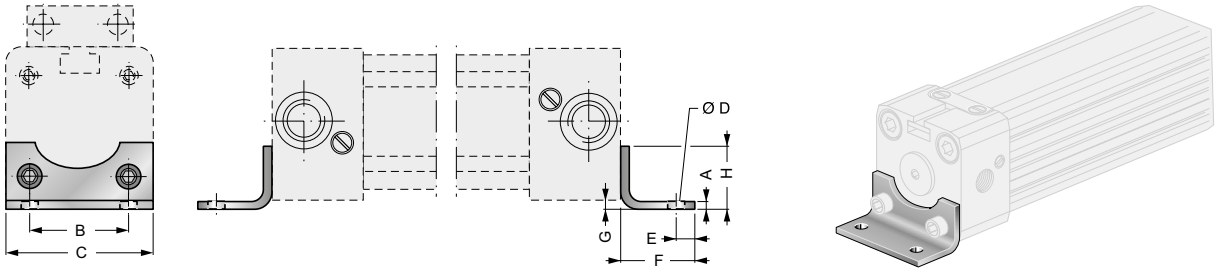


Ø	A	B	C	D	E	E1	F	G	I	L	M	M1	N1	N2	P-P1	P1	QxQ1	E2	H	S	T	VH	WH	VS	WS	Z
16	65	12	15	76	48	32	10	M5	6	5.5	M4	M3	7	27	43.5 - 42.3	37.5	24.5x25	64	1.0	18	4	18	27	18	27	4.5
16L	90	37	15	76	48	32	10	M5	6	5.5	M4	M3	7	27	43.5 - 42.3	37.5	24.5x25	64	1.0	18	4	18	27	18	27	4.5
25	100	17	23	120	80	50	15	1/8'	13	8.5	M5	M5	10	35	66-58	53	36x36	100	2	23	5	27	40	27	40	6.5
25L	150	67	23	120	80	50	15	1/8'	13	8.5	M5	M5	10	35	66-58	53	36x36	100	2	23	5	27	40	27	40	6.5
32	125	23	27	150	90	55	18	1/4'	12	10.5	M6	M6	14	41	86-82	74	52x51	110	2	27	6	36	52	40	56	8
32L	200	23	27	300	180	120	18	1/4'	12	10.5	M6	M6	14	41	86-82	74	52x51	240	2	27	6	36	52	40	56	8
40	150	45	30	150	90	55	18	1/4'	12	15	M6	M6	17	41	97-93	85	58.5x59	110	7	28	6	54	72	54	69	9
40L	250	70	30	300	180	120	18	1/4'	12	15	M6	M6	17	41	97-93	85	58.5x59	240	7	28	6	54	72	54	69	9
50	175	42	33	180	110	70	27	1/4'	12	11.7	-	M6	18	-	114	-	77X78	140	0.5	56	-	70	80	70	80	4
63	215	47	50	220	140	90	36	3/8'	15	25	-	M8	18	-	136	-	102X102	180	1.5	50	-	78	106	78	106	14.5

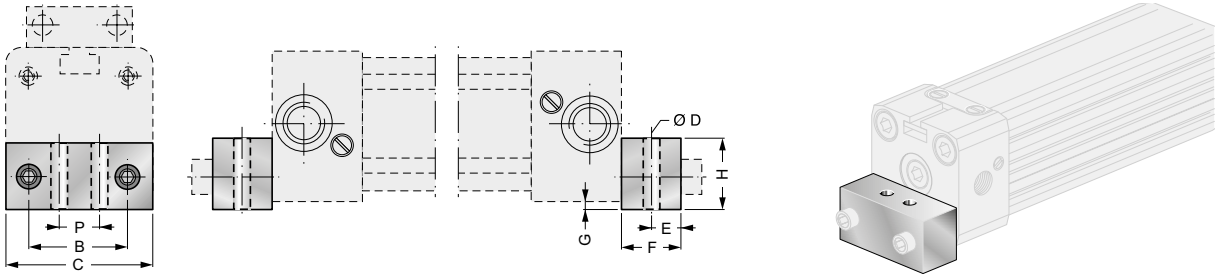
PL-20 SERIES Mountings

End cover bracket (foot)

24/1.0 - 2.0*

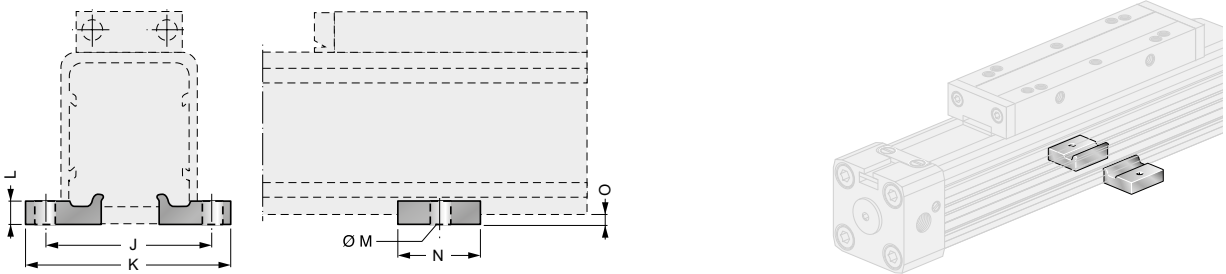


24/3.0 - 4.0*

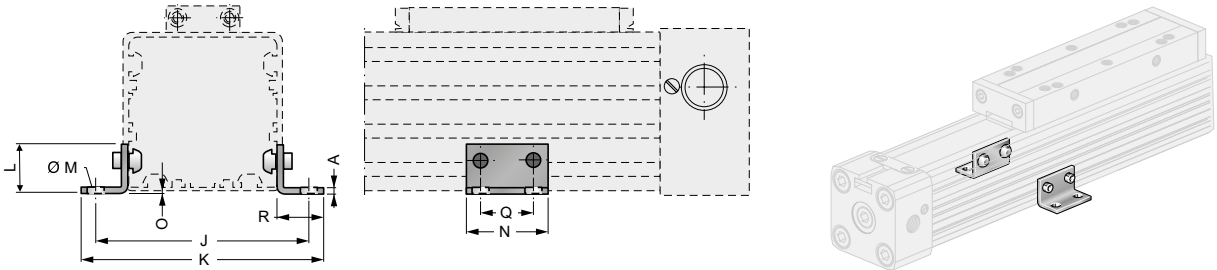


Mid section support

25/1.0 - 2.0*



25/3.0 - 4.0*

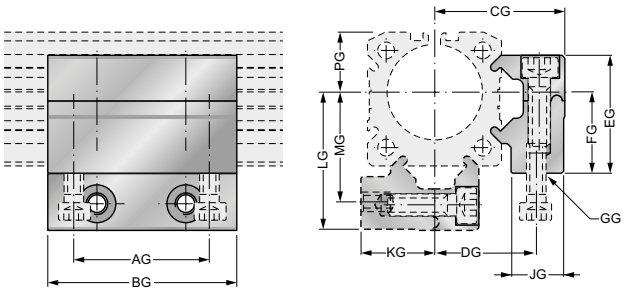


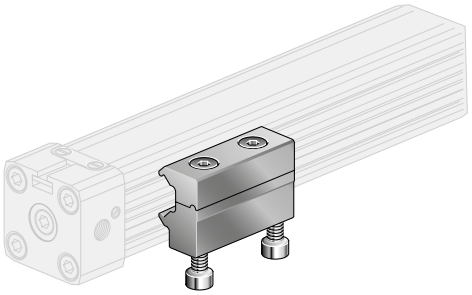
ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
16	1.5	18	26	3.6	4.0	14	1.5	12.5	41.5	53.5	5	ø5.5	20	3	-	-	-
25	2.5	27	40	5.5	6.0	22	2	18	48.5	60	6	ø5.5	20	4	-	-	-
32	5.0	36	51	6.5	8.0	24	4	20	82	91	30	ø4.5	45	6	20	30	20
40	5.0	54	71	9	11.5	24	2	20	90	99	25	ø4.5	45	8.5	30	30	20

Application No.	
24/1.0 = ø16	24/2.0 = ø25
24/3.0 = ø32	24/4.0 = ø40
25/1.0 = ø16	25/2.0 = ø25
25/3.0 = ø32	25/4.0 = ø40

PL-20 SERIES Mountings

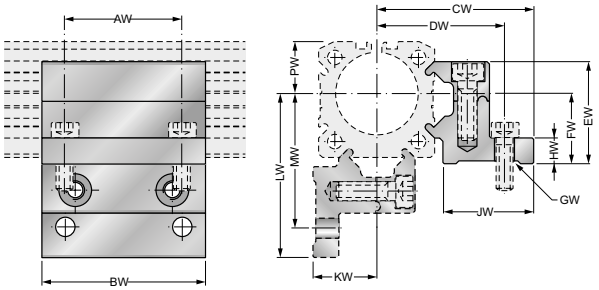
Mobile Mid Section Support, Type G for Cylinder Ø25/32

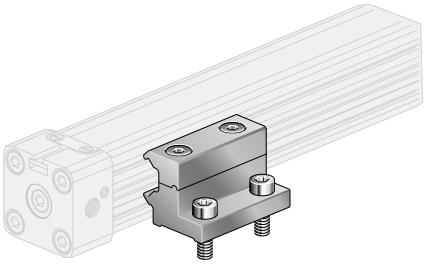




ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
16	18.0	30.0	27.5	18.4	21.0	15.0	M4	11.5	13.9	29.0	19.7	10.8
25	36.0	50.0	34.5	27.0	31.3	22.0	M5	14.0	20.0	36.5	29.0	16.0
32	36.0	50.0	41.8	34.2	39.0	30.0	M6	14.0	27.6	47.0	39.5	21.5

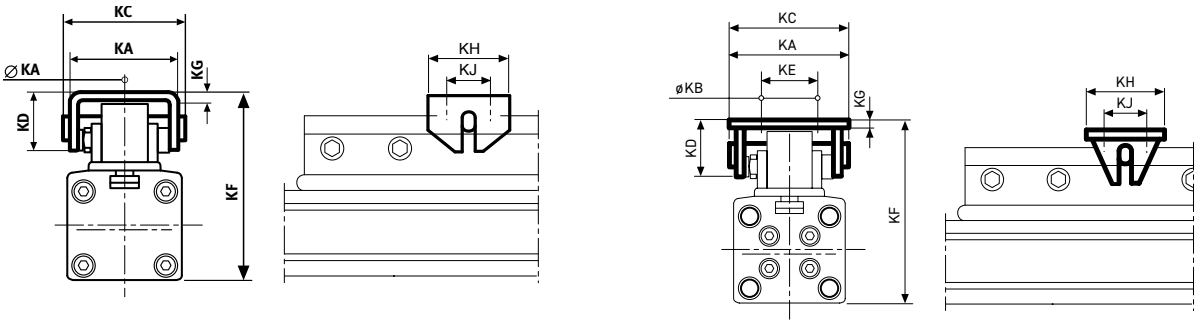
Mobile Mid Section Support, Type W for Cylinder Ø25/32





ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
16	18.0	30.0	37.0	32.5	21.0	15.0	ø4.5	6.0	22.4	13.9	38.0	32.9	10.8
25	36.0	50.0	47.5	40.0	31.3	22.0	ø5.5	10.0	26.0	20.0	49.5	42.0	16.0
32	36.0	50.0	56.0	47.4	39.0	30.0	ø6.5	10.0	28.5	27.6	61.0	52.5	21.5

Flexi Mount



ø	KA	KB	KC	KD	KE	KF*	KG	KH	KJ	KK	KS	KT
16	25	4.5	28	12	-	47-50	2	20	10	-	-	-
25	37	5.5	42	20	-	72-75	3	30	16	-	-	-
32	70	7.0	70	38	55	91-100	5	90	75	60	45	58.5
32L	-	7.0	-	-	-	-	-	-	-	60	45	58.5
40	70	7.0	70	38	55	111-120	5	90	75	60	45	63
40L	-	7.0	-	-	-	-	-	-	-	60	45	63

- * KF-Dimensions are variable within the length of the slot of the load friction.

PLG/ PLG-140 SERIES

SAMEDAY BUILD
PREMIUM AVAILABLE

GUIDED RODLESS PNEUMATIC CYLINDER-(Formerly PL-AMT /HSR /LGW)

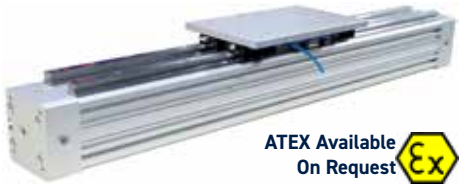
As Origa OSP-PS & Powerslide (Available with Brake & Shock Absorber)

Design	Rodless cylinder, double acting, direct load transmission
Strokes	
ø 25-63 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–3300mm, in increments of 1mm
Air connection	(M5, G 1/8", G 1/4", G 3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
Guide	Steel/ Stainless steel
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0.5–8.0 bar
Medium	compressed air, filtered max. 50µm

PLG Guided

ATEX Available On Request

PLG-140 Braked Guided



ATEX Available On Request

- High loading characteristics
- High static loading in all directions
- Quiet and smooth running
- Robust bearing housing
- Easy access to grease nipple
- Hardened and grinded guiderail
- Low friction bearing
- Easy interchangeability

PLG order example

PLG — 25 — MSB15 — 1 — S2 — 0100 — SSG — SSS — VS — 3636

MODEL: Guided

BORE Ø	RAIL SIZE	QTY OF RAILS	CARRIAGE TYPE AND QUANTITY
16	MSC15	1	M2
25	MSB15	1	S2
32	MSA15	1	S2
40	MSB15	2	TS4
50	MSA20	2	S4
63	MSA20	2	S4

STROKE: 10-5800mm

GREASE TYPE: Blank: Standard Grease; **SSG**: Slow Speed Grease

SCREW TYPE: Blank: Standard Screws; **SSS**: Stainless Steel Screws

SEAL TYPE: Blank: Nitrile Seals; **VS**: Viton Seals

3636 ENDCAPS: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

PLG-140 order example

PLG — 140 — A — 25 — MSB15 — 1 — S2 — 0100 — SSG — SSS — VS — 3636

MODEL: Braked Guided Type

MODEL: Brake Options

A: Passive Brake, Air Fail Brake On
Blank: Air On Brake On

BORE Ø	RAIL SIZE	QTY OF RAILS	CARRIAGE TYPE AND QUANTITY
16	MSC15	1	M2
25	MSB15	1	S2
32	MSA15	1	S2
40	MSB15	2	TS4
50	MSA20	2	S4
63	MSA20	2	S4

STROKE: 10-5800mm

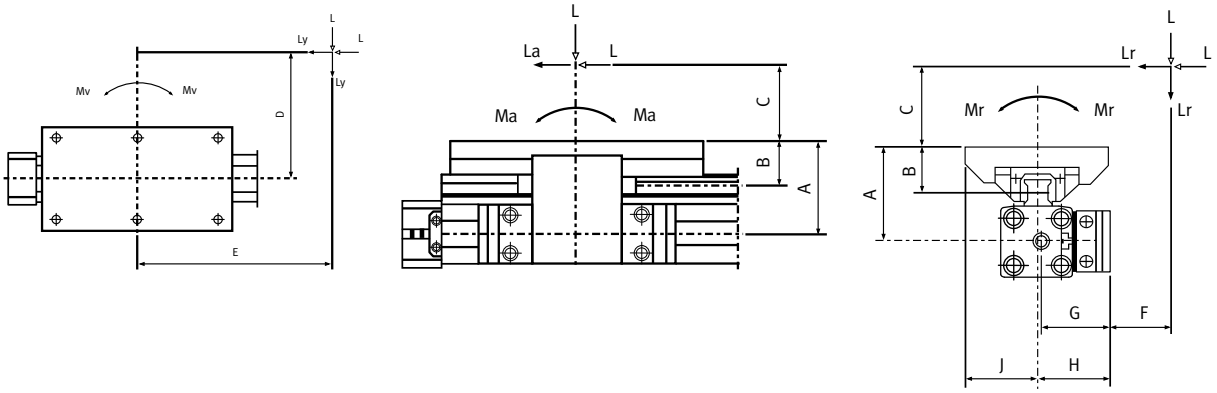
GREASE TYPE: Blank: Standard Grease; **SSG**: Slow Speed Grease

SCREW TYPE: Blank: Standard Screws; **SSS**: Stainless Steel Screws

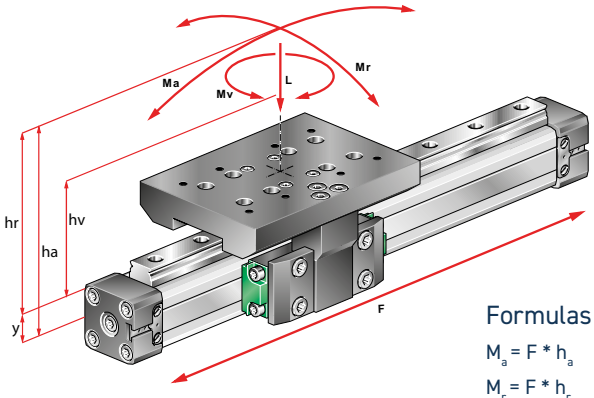
SEAL TYPE: Blank: Nitrile Seals; **VS**: Viton Seals

3636 ENDCAPS: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

PLG/ PLG-140 SERIES Forces and Moments



Characteristics	16	25	32	40	50	63
effect force (6 bar) (N)	110	250	420	640	1000	1550
cushioning (mm)	15	21	26	32	32	40
A (mm)	35.0	53.0	64.0	69	90	102
B (mm)	19.0	26.0	29.7	29.7	40	38.5
C/D/E/F (mm)	Dimensions according design					
G (mm)	30.3	38.0	55.0	54.5	65	75
H (mm)	31.5	40.0	57.5	57.5	68.5	85
J (mm)	31.5	40.0	57.5	57.5	65	85
Load forces max L (N)	500	1500	3000	3000	4000	4000
Moment forces maxLa.Lr.Lv (N)	500	1500	3000	3000	4000	4000
Axial moments max Ma (Nm)	8	40	58	58	200	200
Radial moments max Mr (Nm)	4	15	23	23	70	70
torsion moments max Mv (Nm)	8	40	58	58	200	200



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

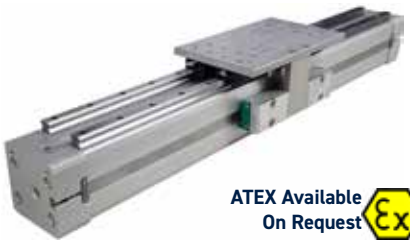
$M_v = F * h_v$

- 1. The above mentioned moments (Ma max, Mr max, Mv max) are related to the guide rail centre. The load force (L) is the summary of all single forces related to the common centre of the mass. The centre of the mass can be placed inside or outside the surface area of the carriage.
- 2. Normally the carriage would experience a dynamic load, which has to be considered with the calculation of needed piston force (F) and capacity of the ballguided system. Use the following calculation formula:

$$\frac{M_a}{M_{a\,max}} + \frac{M_r}{M_{r\,max}} + \frac{M_v}{M_{v\,max}} + \frac{L}{L_{max}} \leq 1$$

PLG SERIES

SAMEDAY BUILD
PREMIUM AVAILABLE



GUIDED RODLESS PNEUMATIC CYLINDER-(Formerly PL-AMT /HSR /LGW)

As Origa OSP-PS & Powerslide (Available with Brake & Shock Absorber)

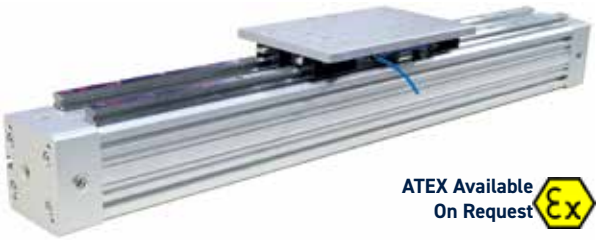
ATEX Available On Request

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£463.32	£487.71	£594.44	£750.09	£1,032.99	£1,219.55
200 mm	£499.92	£526.23	£641.92	£799.65	£1,093.92	£1,290.56
300 mm	£536.52	£564.75	£689.40	£849.21	£1,154.86	£1,361.56
400 mm	£573.11	£603.28	£736.88	£898.76	£1,215.80	£1,432.57
500 mm	£609.71	£641.80	£784.35	£948.32	£1,276.74	£1,503.57
600 mm	£646.31	£680.32	£831.83	£997.88	£1,337.67	£1,574.57
700 mm	£682.90	£718.84	£879.31	£1,047.44	£1,398.61	£1,645.58
800 mm	£719.50	£757.37	£926.78	£1,096.99	£1,459.55	£1,716.58
900 mm	£756.09	£795.89	£974.26	£1,146.55	£1,520.49	£1,787.59
1000 mm	£792.69	£834.41	£1,021.74	£1,196.11	£1,581.42	£1,858.59
1100 mm	£829.29	£872.93	£1,069.22	£1,245.67	£1,642.36	£1,929.60
1200 mm	£865.88	£911.46	£1,116.69	£1,295.22	£1,703.30	£2,000.60
1300 mm	£902.48	£949.98	£1,164.17	£1,344.78	£1,764.23	£2,071.61
1400 mm	£939.08	£988.50	£1,211.65	£1,394.34	£1,825.17	£2,142.61
1500 mm	£975.67	£1,027.02	£1,259.13	£1,443.90	£1,886.11	£2,213.61
1600 mm	£1,012.27	£1,065.55	£1,306.60	£1,493.45	£1,947.05	£2,284.62
1700 mm	£1,048.86	£1,104.07	£1,354.08	£1,543.01	£2,007.98	£2,355.62
1800 mm	£1,085.46	£1,142.59	£1,401.56	£1,592.57	£2,068.92	£2,426.63
1900 mm	£1,122.06	£1,181.11	£1,449.03	£1,642.12	£2,129.86	£2,497.63
2000 mm	£1,158.65	£1,219.64	£1,496.51	£1,691.68	£2,190.80	£2,568.64
Additional 100mm	£33.73	£39.63	£48.59	£50.67	£63.16	£73.23
Passive Brake Unit (Air Off = Brake On)		£460.95	£460.95	£460.95	£536.55	£536.55
Pair Shock Absorbers & Mounting Brackets	£297.00	£318.60	£365.04	£365.04	£502.20	£502.20
3636 Endcaps (Pair Fitted PL00 / PLF 32)			£151.20			
End Supports (Pair)	**24-1** £34.56	**24-2** £41.04	**24-3** £51.84	**24-4** £51.84	**24-5** £62.64	**24-6** £62.64
Mid Section Support	**25-1** £32.62	**25-2** £36.94	**25-3** £34.26	**25-4** £51.84	**25-5** £51.84	**25-6** £51.84
Adjustable Clamp Support (Preferred Stock)	**25-1-3** £58.61	**25-2-3** £68.97	**25-3-3** £73.57			
Slow Speed Grease (SSG)	£7.30	£8.83	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SSS)	£19.80	£25.36	£27.59	£29.81	£32.04	£33.15
Viton Seals (VS)	£35.00	£50.83	£54.76	£75.64	£98.98	£114.58
RCAL-3M Reed Switch	£16.93					
RCAL-EQD	£16.93					
RCI-3M Reed Switch			£18.09			
RCI-EQD			£20.45			
RNA-3M Inductive Switch	£33.16					
RNA-EQD	£22.72					
RPA-3M Inductive Switch	£23.55					
RPA-EQD	£39.42					
RNI-3M Inductive Switch			£31.41			
RNI-EQD			£30.51			
RPI-3M Inductive Switch			£31.41			
RPI-QD			£31.86			
M83RPVC-5M (QR Lead)	£17.63					
Switch Clamp (Use With RCAL / NA / PA)	**HPL** £4.22	**HPL** £4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1** £4.31				

PLG-140 SERIES

SAMEDAY BUILD
PREMIUM AVAILABLE

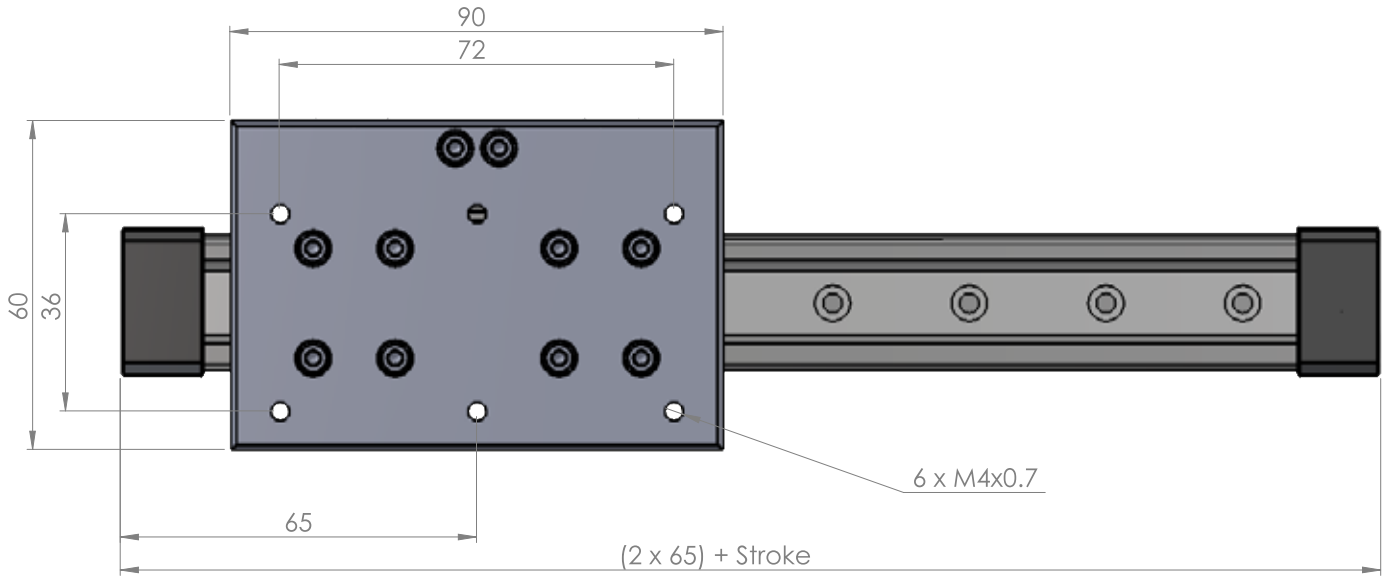
GUIDED AND BRAKED RODLESS PNEUMATIC CYLINDER
(Active)

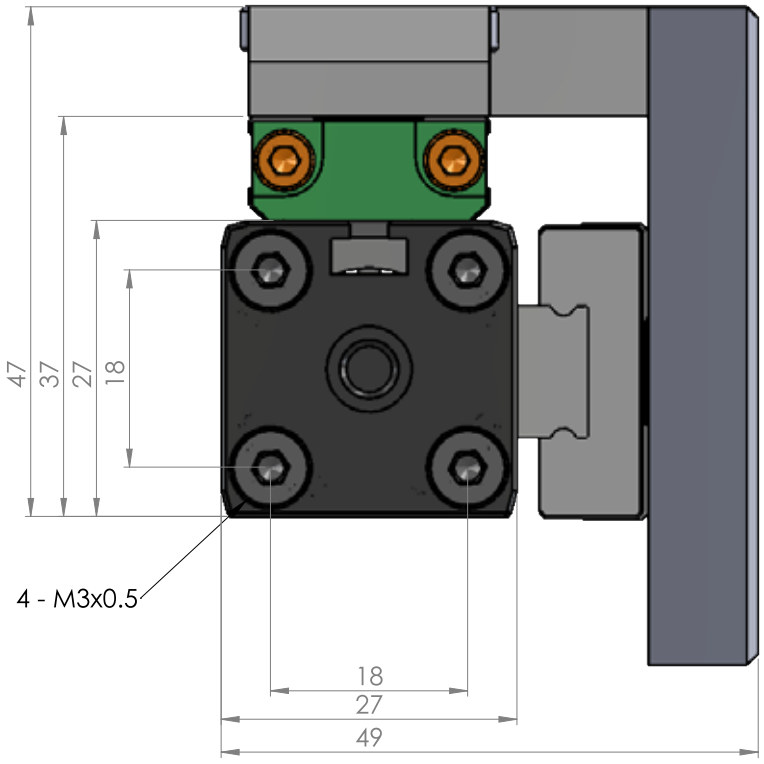


ATEX Available On Request

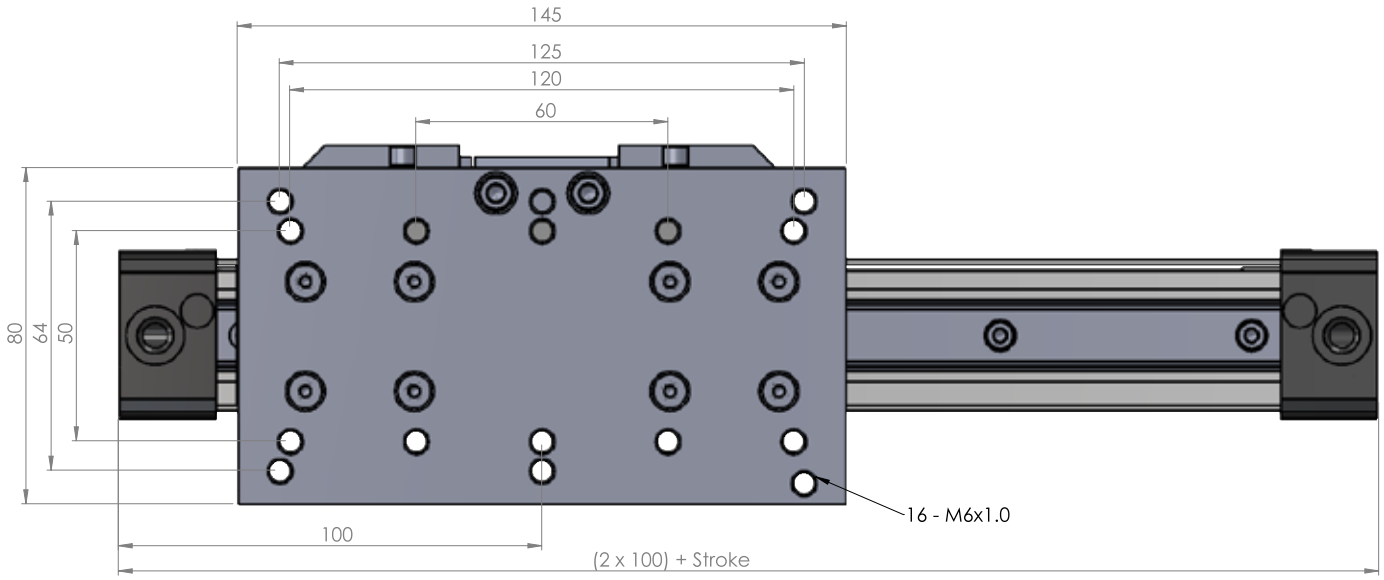
Bore Ø / Stroke	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£827.60	£923.88	£1,423.01	£1,814.25	£2,194.14
200 mm	£865.00	£969.98	£1,471.13	£1,873.41	£2,263.08
300 mm	£902.40	£1,016.07	£1,519.24	£1,932.57	£2,332.01
400 mm	£939.80	£1,062.17	£1,567.36	£1,991.73	£2,400.95
500 mm	£977.20	£1,108.26	£1,561.47	£2,050.90	£2,469.89
600 mm	£1,014.60	£1,154.36	£1,609.58	£2,110.06	£2,538.82
700 mm	£1,052.00	£1,200.45	£1,657.70	£2,169.22	£2,607.76
800 mm	£1,089.40	£1,246.54	£1,705.81	£2,228.38	£2,676.70
900 mm	£1,126.80	£1,292.64	£1,753.93	£2,287.55	£2,745.63
1000 mm	£1,164.20	£1,338.73	£1,802.04	£2,346.71	£2,814.57
1100 mm	£1,201.60	£1,384.83	£1,850.15	£2,405.87	£2,883.51
1200 mm	£1,239.00	£1,430.92	£1,898.27	£2,465.03	£2,952.44
1300 mm	£1,276.40	£1,477.02	£1,946.38	£2,524.20	£3,021.38
1400 mm	£1,313.80	£1,523.11	£1,994.50	£2,583.36	£3,090.32
1500 mm	£1,351.20	£1,569.21	£2,042.61	£2,642.52	£3,159.25
1600 mm	£1,388.60	£1,615.30	£2,090.72	£2,701.68	£3,228.19
1700 mm	£1,426.00	£1,661.39	£2,138.84	£2,760.85	£3,297.12
1800 mm	£1,463.40	£1,707.49	£2,186.95	£2,820.01	£3,366.06
1900 mm	£1,500.80	£1,753.58	£2,235.07	£2,879.17	£3,435.00
2000 mm	£1,538.20	£1,799.68	£2,283.18	£2,938.33	£3,503.93
Additional 100mm	£40.40	£50.67	£52.79	£63.25	£74.65
3636 Endcaps (Pair Fitted PL00 / PLF 32)		£151.20			
Pair Shock Absorbers & Mounting Brackets	£318.60	£365.04	£365.04	£502.20	£502.20
End Supports (Pair)	**24-2**	**24-3**	**24-4**	**24-5**	**24-6**
	£41.04	£51.84	£51.84	£62.64	£62.64
Mid Section Support	**25-2**	**25-3**	**25-4**	**25-5**	**25-6**
	£36.94	£34.26	£51.84	£51.84	£51.84
Adjustable Clamp Support	**25-2-3**	**25-3-3**			
(Preferred Stock)	£68.97	£73.57			
	£8.83	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SS)	£16.46	£19.80	£19.80	£20.91	£23.14
Viton Seals (VS)	£81.44	£97.82	£107.37	£121.46	£145.69
RCAL-3M Reed Switch	£16.93				
RCAL-EQD	£16.93				
RCI-3M Reed Switch				£18.09	
RCI-EQD				£20.45	
RNA-3M Inductive Switch	£33.16				
RNA-EQD	£22.72				
RPA-3M Inductive Switch	£23.55				
RPA-EQD	£39.42				
RNI-3M Inductive Switch				£31.41	
RNI-EQD				£30.51	
RPI-3M Inductive Switch				£31.41	
RPI-QD				£31.86	
M83RPVC-5M (QR Lead)			£17.63		
Switch Clamp (Use With RCAL / NA / PA)	**HPL** £4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only	**DC1** £4.31				

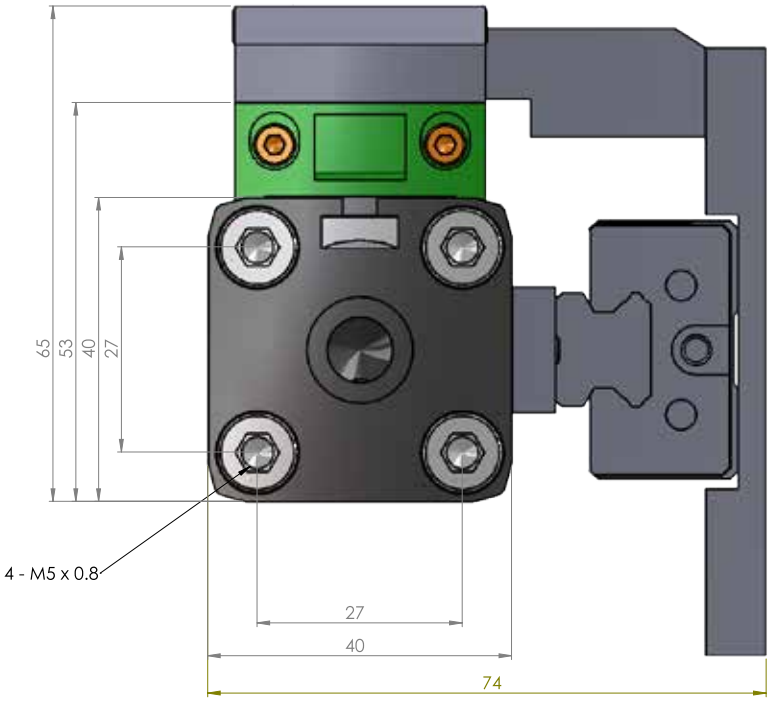
PLG/ PLG-140 16 Bore Dimensions



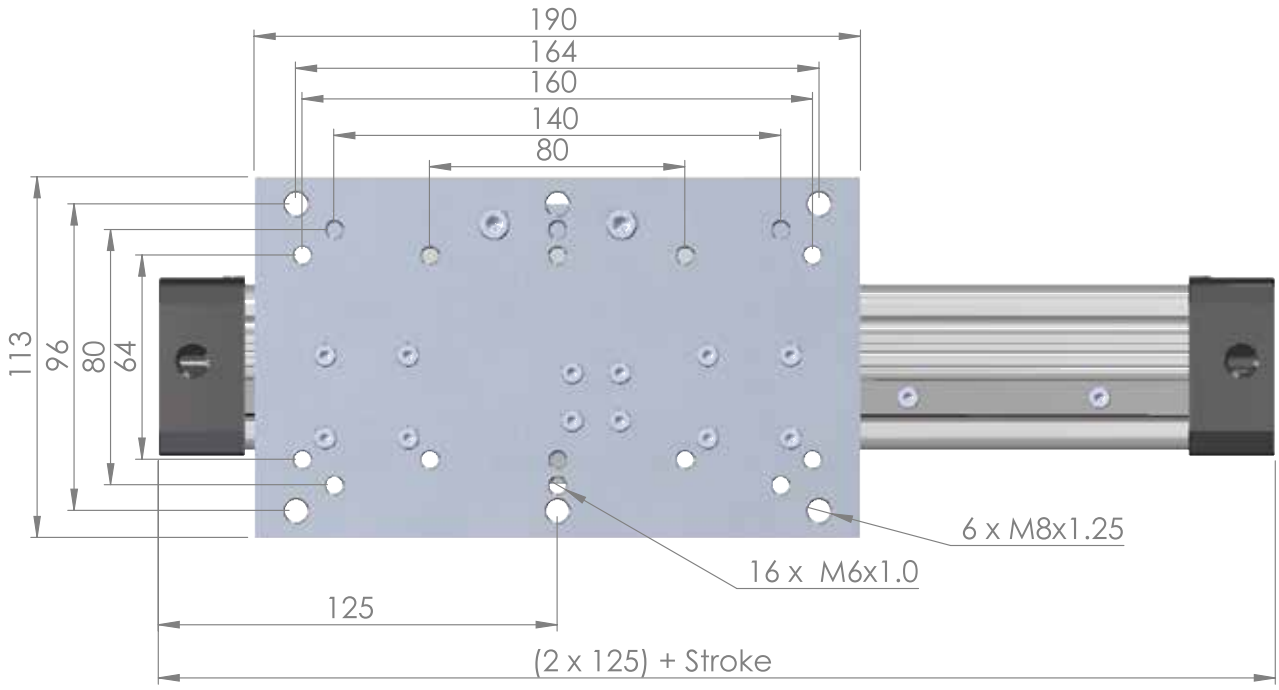


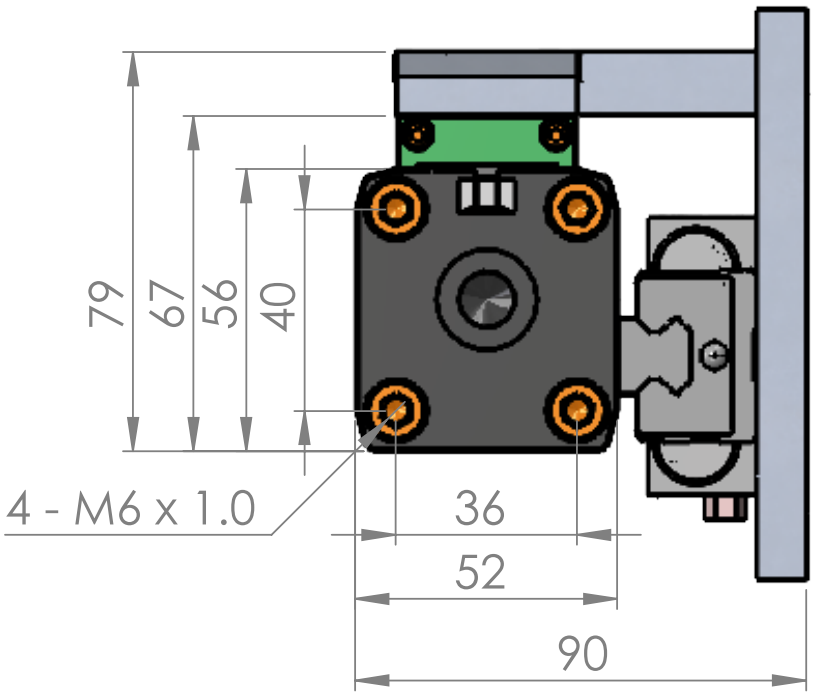
PLG/ PLG-140 25 Bore Dimensions



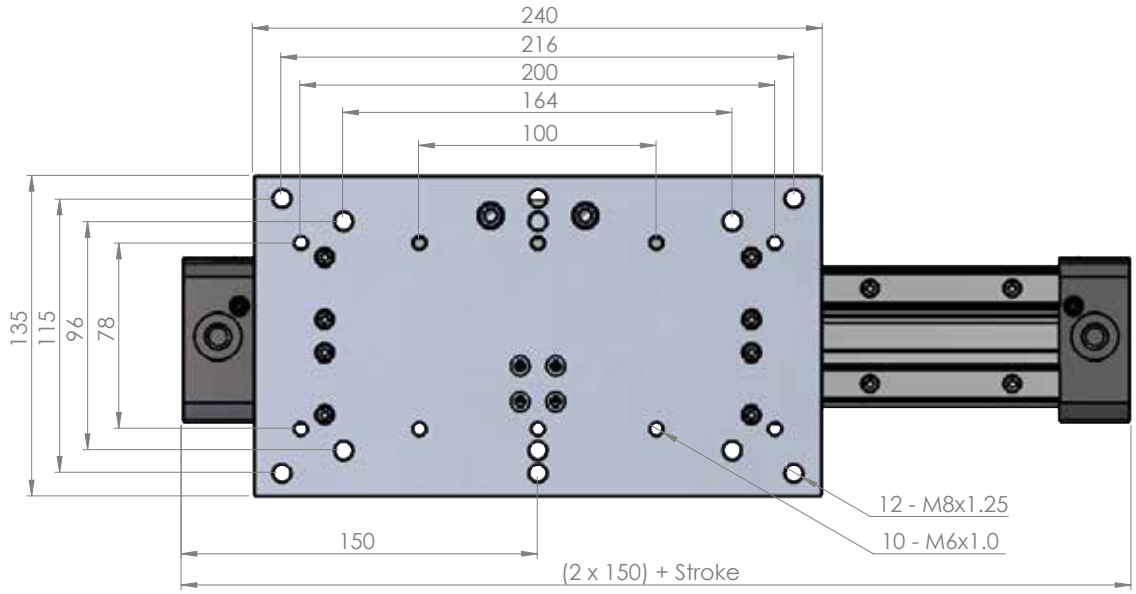


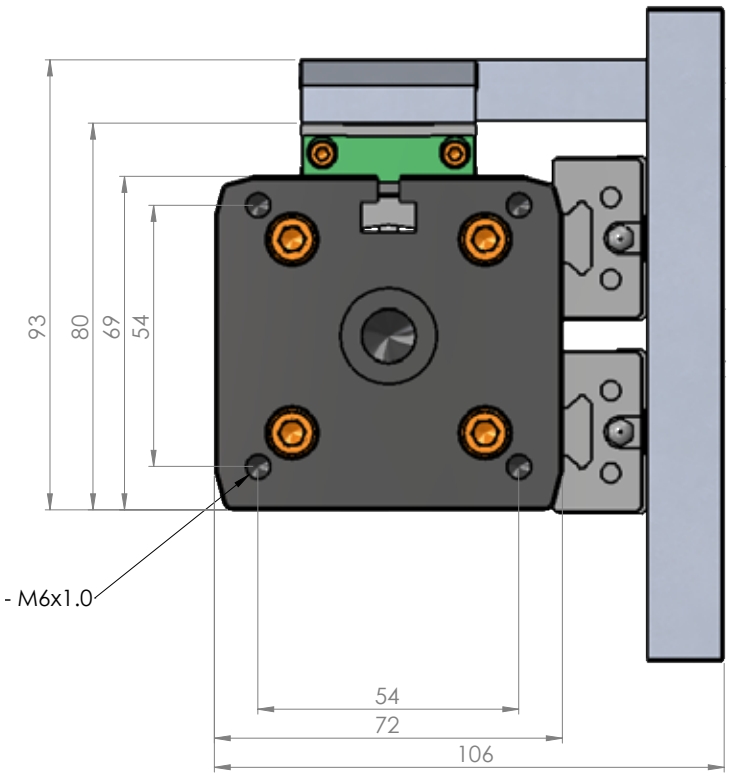
PLG/ PLG-140 32 Bore Dimensions



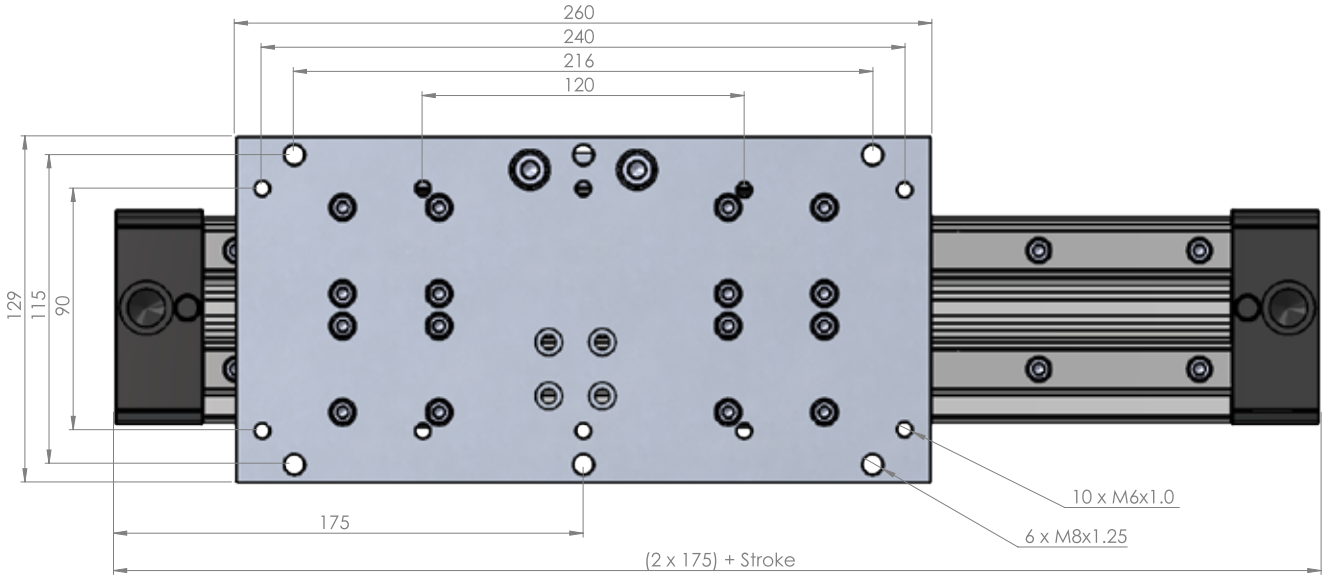


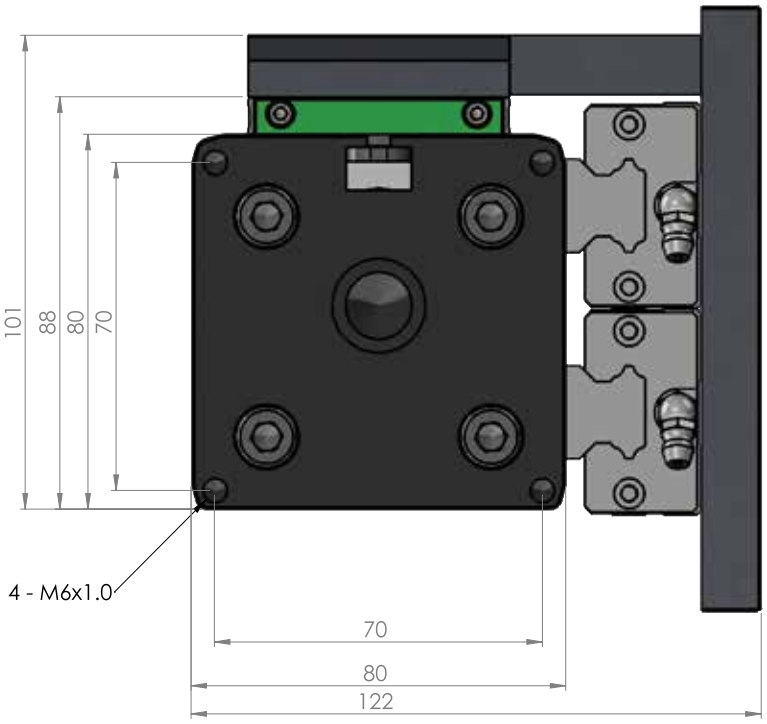
PLG/ PLG-140 40 Bore Dimensions



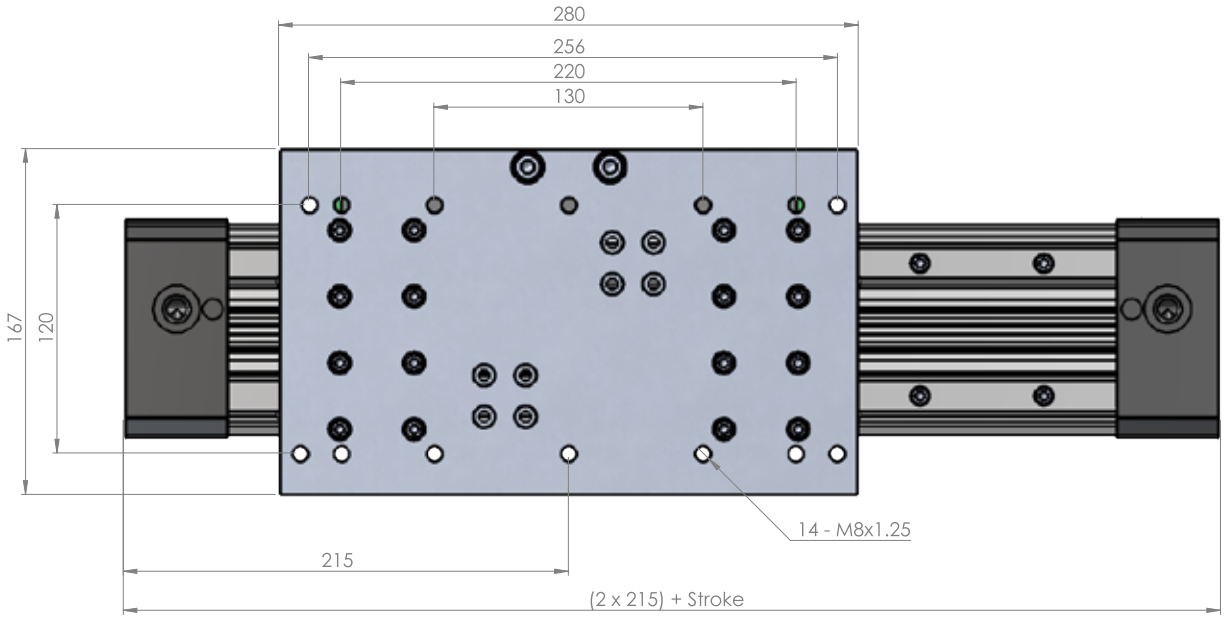


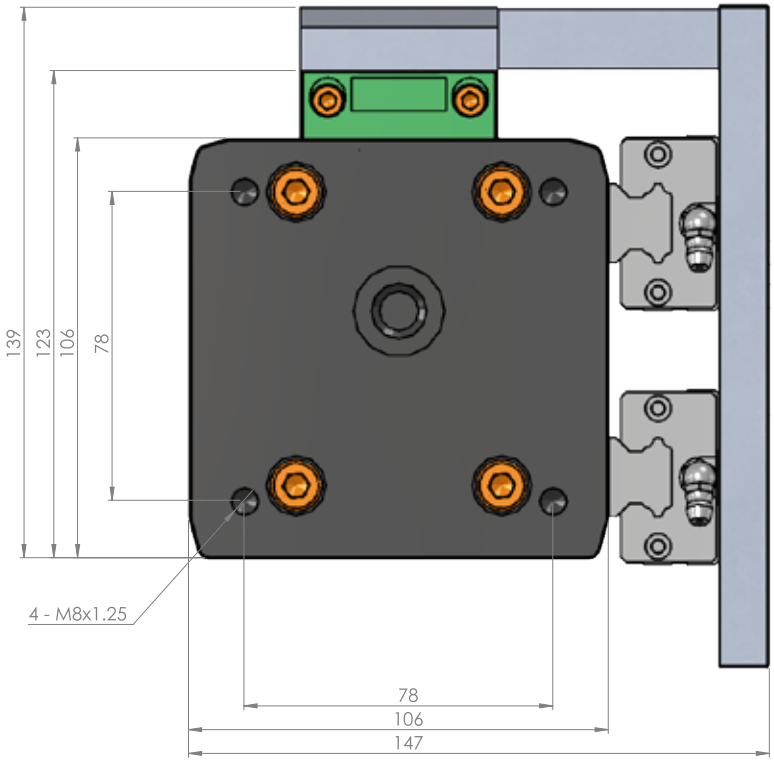
PLG/ PLG-140 50 Bore Dimensions





PLG/ PLG-140 63 Bore Dimensions





PL-DUO SERIES

DUPLEX RODLESS PNEUMATIC CYLINDER

Similar to Origa P220-21

SAMEDAY BUILD
PREMIUM AVAILABLE

ATEX Available On Request

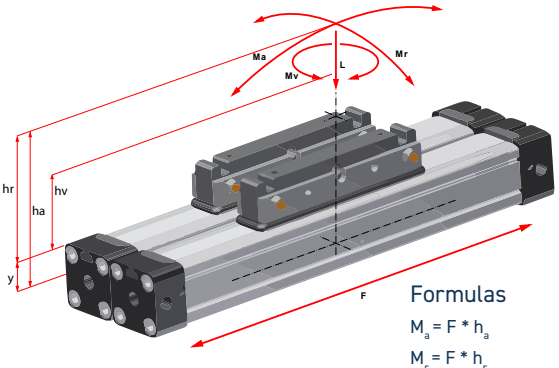
Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-32 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–3300mm, in increments of 1mm
Air connection	(M5, G 1/8", G 1/4", G 3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C to +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0,5–8,0 bar
Medium	compressed air, filtered max. 50µm

- Superior guiding capacity
- Stronger forces
- Higher loads
- Equal forces on both ends of the piston
- Force connection direct, torque safe
- Piston with or without magnets
- 50% space-savings
- Long strokes up to 5700mm
- End caps with 3 air connections and adjustable cushioning
- Fast acceleration and high piston velocity
- Very flexible in the user`s design
- Non lubricated or lubricated air supply**)
- 3 stage cushioning characteristics for protection of the cushioning and load system *)
- Use in EX area possible - ATEX

*) Special Version On request

**) Attention: Before changing operation from lubricated to nonlubricated air the cylinder has to be disassembled, cleaned, newly greased and reassembled

Forces and Moments



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

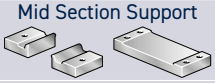
Cylinder	Effect Force (N)	Cushioning	Max. allowed load (N)	Max. allowed bending moments (Nm)		Max. allowed torque (Nm)
	at 6 Bar	(mm)	DUO	DUO		DUO
Ø	F	S	L	Ma axial	Mr radial	Mv central
2x16	200	15	240	8.0	2.4	1.0
2x25	480	21	600	30.0	8.0	6.0
2x32	820	26	900	60.0	16.5	10.0
2x40	1200	32	1500	120	12	16.0
2x50	1900	32	2400	230	20	30.0
2x63	3 3000	40	3300	400	24	48.0

Order example

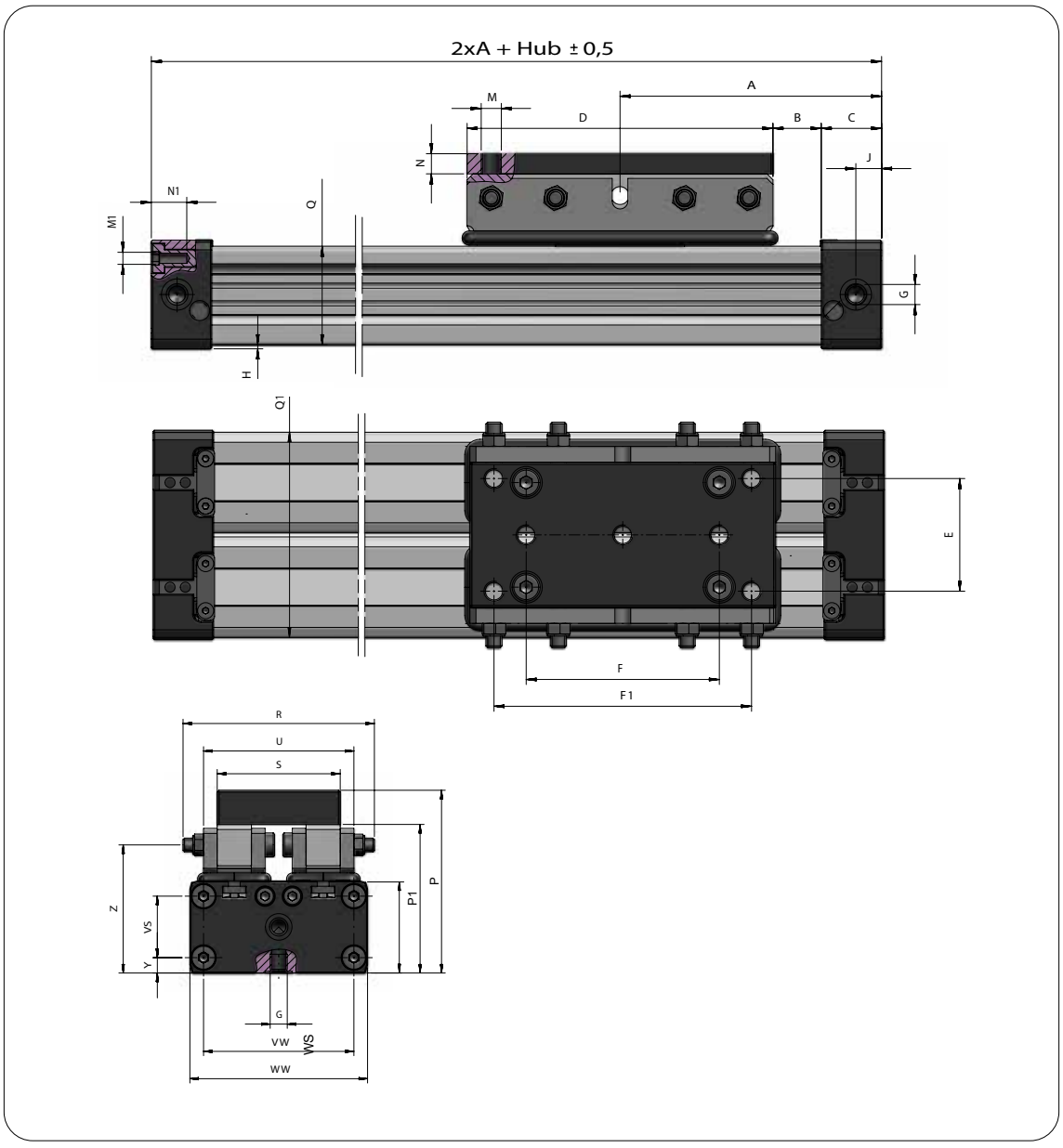
PL — DUO — 25 — 0100 — SSG — SSS — VS — PS+

- **MODEL**: Duplex Type
- **BORE Ø**: 16, 25, 32, 40, 50, 63
- **STROKE**: 10-5800mm
- **GREASE TYPE**: Blank: Standard Grease; **SSG**: Slow Speed Grease
- **SCREW TYPE**: Blank: Standard Screws; **SSS**: Stainless Steel Screws
- **SEAL TYPE**: Blank: Nitrile Seals; **VS**: Viton Seals
- **PISTON OPTIONS**: Blank: Standard One Piston; **PS+**: Additional Piston

PL-DUO Price List

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£380.31	£458.12	£623.05	£1,012.68	£1,796.31	£2,289.29
200 mm	£413.79	£499.19	£674.72	£1,078.43	£1,878.09	£2,399.57
300 mm	£447.27	£540.26	£726.39	£1,144.17	£1,959.87	£2,509.85
400 mm	£480.75	£581.32	£778.06	£1,209.91	£2,041.65	£2,620.13
500 mm	£514.24	£622.39	£829.74	£1,275.66	£2,123.43	£2,730.41
600 mm	£547.72	£663.46	£881.41	£1,341.40	£2,205.20	£2,840.69
700 mm	£581.20	£704.53	£933.08	£1,407.14	£2,286.98	£2,950.97
800 mm	£614.68	£745.59	£984.76	£1,472.88	£2,368.76	£3,061.24
900 mm	£648.17	£786.66	£1,036.43	£1,538.63	£2,450.54	£3,171.52
1000 mm	£681.65	£827.73	£1,088.10	£1,604.37	£2,532.31	£3,281.80
1100 mm	£715.13	£868.80	£1,139.78	£1,670.11	£2,614.09	£3,392.08
1200 mm	£748.61	£909.86	£1,191.45	£1,735.86	£2,695.87	£3,502.36
1300 mm	£782.10	£950.93	£1,243.12	£1,801.60	£2,777.65	£3,612.64
1400 mm	£815.58	£992.00	£1,294.80	£1,867.34	£2,859.43	£3,722.92
1500 mm	£849.06	£1,033.07	£1,346.47	£1,933.08	£2,941.20	£3,833.20
1600 mm	£882.54	£1,074.13	£1,398.14	£1,998.83	£3,022.98	£3,943.48
1700 mm	£916.03	£1,115.20	£1,449.82	£2,064.57	£3,104.76	£4,053.76
1800 mm	£949.51	£1,156.27	£1,501.49	£2,130.31	£3,186.54	£4,164.04
1900 mm	£982.99	£1,197.34	£1,553.16	£2,196.06	£3,268.31	£4,274.32
2000 mm	£1,016.47	£1,238.40	£1,604.84	£2,261.80	£3,350.09	£4,384.60
Additional 100mm	£31.99	£31.99	£35.71	£65.74	£77.07	£104.48
Passive Brake Unit (Air Off = Brake On)		Enquire with Matara - Available On 25ø - 63ø				
Additional Pair Of Pistons	£218.03	£240.28	£284.77	£329.27	£396.01	£462.76
End Supports (Pair)	**26-1**	**26-2**	**26-3**	**26-4**	**26-5**	**26-6**
	£56.29	£61.98	£69.25	£107.68	£144.39	£190.89
Mid Section Support 	**262-1**	**262-2**	**262-3**	**262-4**	**262-5**	**262-6**
	£47.67	£67.08	£76.81	£84.87	£89.33	£105.23
Adjustable Clamp Support (Preferred Stock)	**25-1-1**	**25-2-1**	**25-3-1**			
	£58.61	£68.97	£73.57			
	£14.59	£17.66	£20.16	£22.94	£24.92	£28.19
Stainless Screws (SS)	£18.00	£25.36	£27.59	£29.81	£32.04	£33.15
Viton Seals (VS)	£69.99	£101.65	£109.53	£151.29	£197.96	£229.15
Reed Switches	**RCAL-3M (EQD)** £16.93		**RCI-3M (EQD)** £16.93			
Inductive Switches (PNP or NPN)	**RNA/RPA (EQD)** £26.10		**RNI/RPI-3M (EQD)** £26.64			
M83RPVC-5M (QR Lead)	£17.63					
Switch Clamp (Use With RCAL / NA / PA)	**HPL** £4.22	**HPL** £4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1** £4.31				

PL-DUO Dimensions



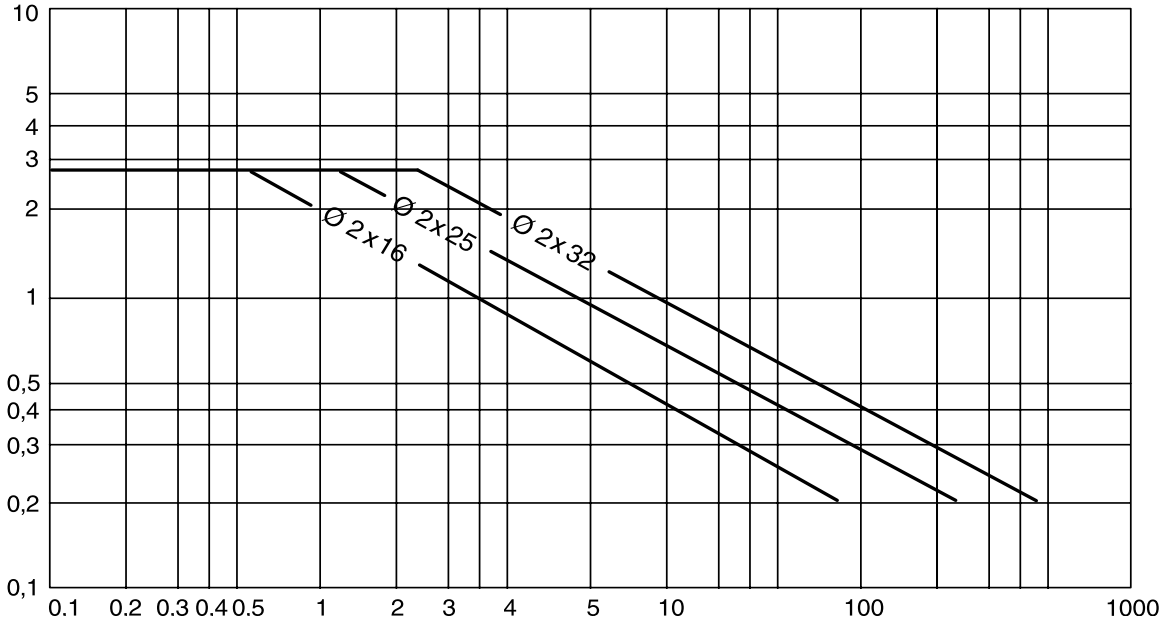
ø	A	B	C	D	E	F	F1	G	H	J	M	N	M1	N1
2x16	65	12	15	76	–	–	48	M5	1.5	5.5	M5	10.0	M3	7
2x25	100	17	23	120	32.4	80	100	1/8	2	8.5	M6	15.0	M5	10
2x32	125	23	27	150	40.4	90	120	1/4	2	10.5	M8	12.0	M6	14
2x40	162.5	44	42.5	152	72	70	110	1/4	7	27.5	M5	12.5	M5	12.5
2x50	187.5	42	45.5	200	80	76	156	1/4	0.5	24.2	M8	12.5	M8	12.5
2x63	228	47	62.7	233	155	155	205	3/8	1.5	37.5	M8	12.5	M8	12.5

ø	P	P1	Q x Q1	R	S	U	VW	VS	WW	WS	Y	Z
2x16	53.5	42.3	24x48	56	34	42	42	18	51	27	4.5	37.5
2x25	74.0	58.5	36x72	74	50	59	63	27	72	41	7.0	53.5
2x32	94.0	82	52x96	90	70	75	84	40	98	56	8.0	74.0
2x40	92.5	80	58x58	-	108.4	-	126	54	144	69	9	-
2x50	102	89	77x78	-	136	-	128	70	160	80	15.6	-
2x63	136	89	102x102	-	160	-	155	78	212	106	14	-

PL-DUO Cushioning Diagram

Piston (m/s)

Piston (m/s)



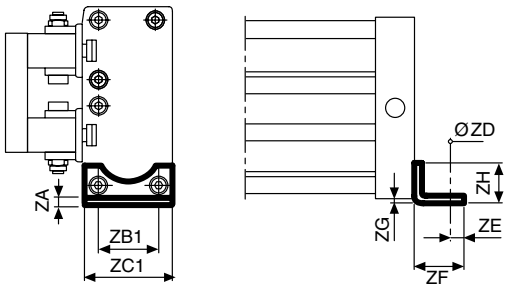
Pay attention to the following points:

- If the limits above are exceeded additional shock absorbers are necessary.
- For piston speeds of more than ⟩ 1m/s viton seals are recommended.
- For piston speeds ⟨ 0,1m/s (NBR), ⟨ 0,2m/s (VITON) slow speed lubrication is necessary see at sperpart kids
- Maximum duration life will be achieved when piston speeds do not exceed 1m/s.

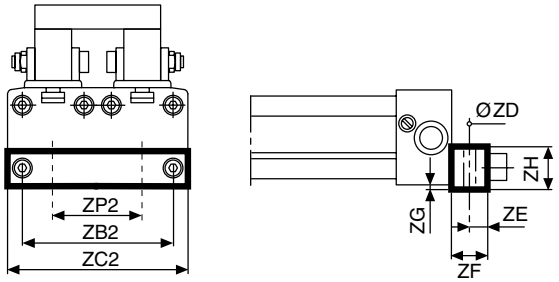
PL-DUO Mountings

End cover bracket (foot)

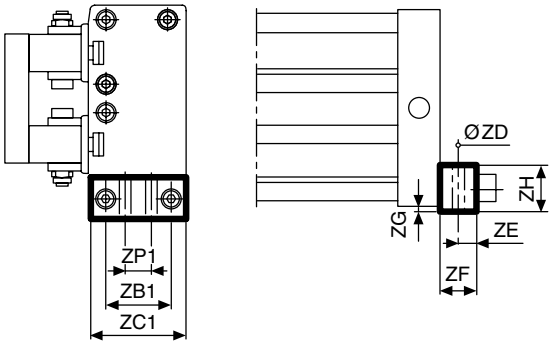
24/1.0 - 2.0



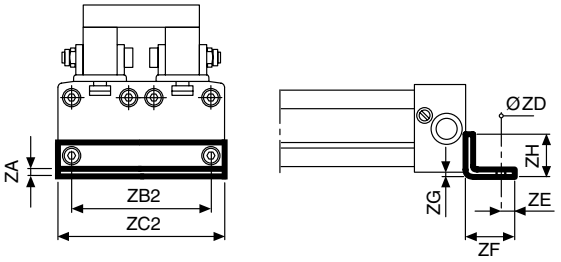
24/1.2 - 2.2



24/3.1

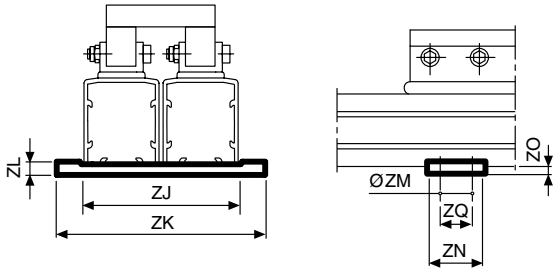


24/3.2



Mid section support

25/1.2 - 3.2



ø	ZA	ZB1	ZB2	ZC1	ZC2	ZD	ZE	ZF	ZG	ZH	ZJ	ZK	ZL	ZM	ZN	ZO	ZP1	ZP2	ZQ
2x16	1.6	18	42	26	51	3.6	4.0	14	1.5	12.5	56	64	6	Ø3.5	12	4	-	-	6.0
2x25	2.5	27	63	40	72	5.6	6.0	22	2.0	18.0	84.5	96	6	Ø5.5	20	4	-	-	10.5
2x32	-	40	84	56	97	6.6	8.0	26	4.0	20.0	109.0	121	10	Ø6.5	55	6	20	62.4	40

PLS SERIES

BASIC GUIDED RODLESS PNEUMATIC CYLINDER

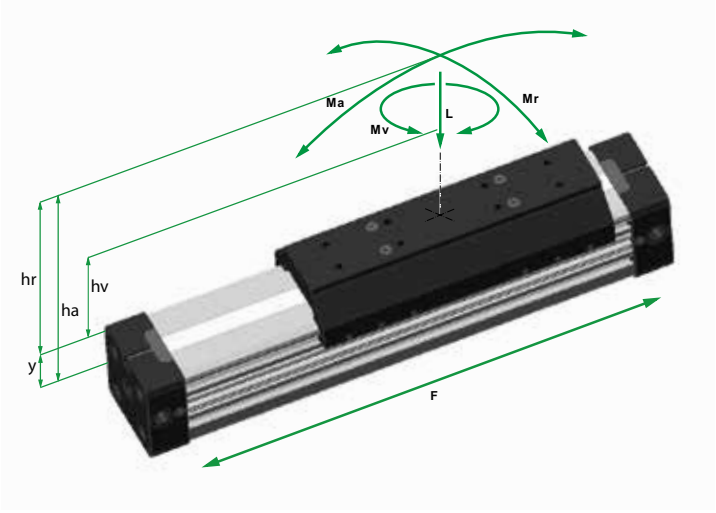
(Non preferred stock)

Design	Rodless cylinder, double acting, direct load transmission
Strokes	
ø 32-63 mm	100–5700mm, in increments of 1mm (longer strokes on request)
Air connection	(M5, G 1/8", G 1/4", G 3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	–10°C bis +55°C other temperatures on request i.e. see ATEX-Informations
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0,5–8,0 bar
Medium	compressed air, filtered max. 50µm

- high resistance to wear
- quiet running
- high resistance to dirt & moisture
- tolerances adjustable
- ability to take high loads & moments in all directions
- low weight
- high resistance to corrosion
- ability to take shock loadings and vibrations against blows and vibrations
- interchangeable gliding elements

The guide modul can be expanded at any time.

Forces and Moments



Data	32	40	50	63
effect force (6 bar) (N)	420	640	1000	1550
Max. zul. Last L (N)	495	825	1320	1815
Max. L a, L r, L v (N)	495	825	1320	1815
Max. Ma (Nm)	39	99	170	315
Max. Mr (Nm)	15	35	58	105
Max. Mv (Nm)	39	99	170	317

Order example

PLS — 32 — 0100 — SSG — SSS — VS — PS+ — 3636

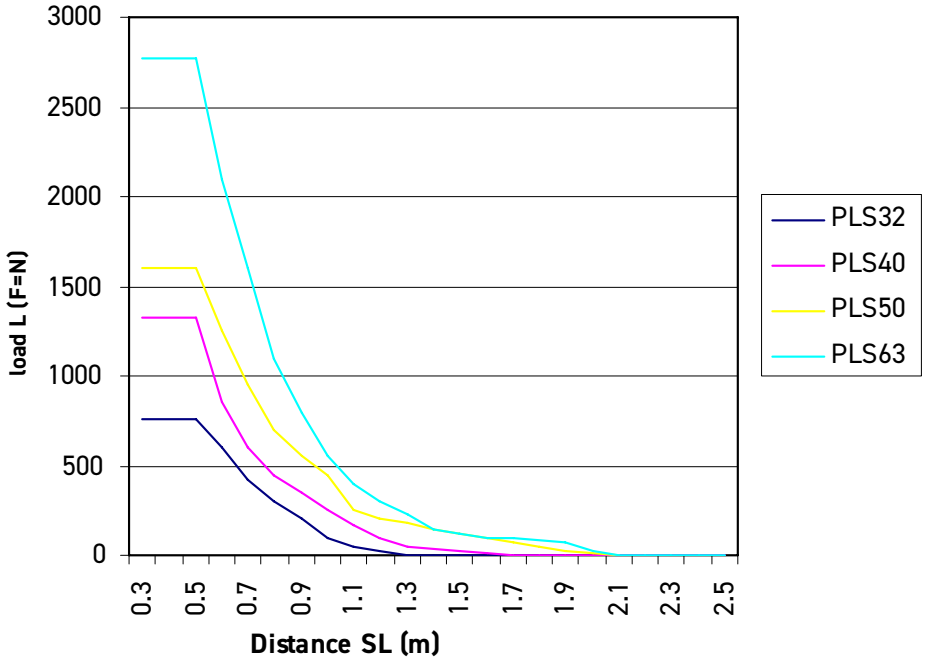
- **MODEL**: Basic Guided Type
- **BORE Ø**: 32, 40, 50, 63
- **STROKE**: 10-5800mm
- **GREASE TYPE**: Blank: Standard Grease; **SSG**: Slow Speed Grease
- **SCREW TYPE**: Blank: Standard Screws; **SSS**: Stainless Steel Screws
- **SEAL TYPE**: Blank: Nitrile Seals; **VS**: Viton Seals
- **PISTON OPTIONS**: Blank: Standard One Piston; **PS+**: Additional Piston
- **3636 ENDCAPS**: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

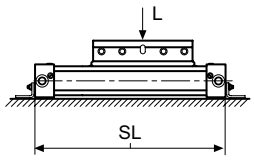
PLS SERIES Price List

Bore Ø / Stroke	Ø32	Ø40	Ø50	Ø63
100 mm	£855.45	£1,008.38	£1,465.29	£1,796.65
200 mm	£898.13	£1,036.93	£1,498.63	£1,841.61
300 mm	£940.81	£1,065.48	£1,531.97	£1,886.57
400 mm	£983.49	£1,094.03	£1,565.31	£1,931.53
500 mm	£1,026.17	£1,122.58	£1,598.65	£1,976.49
600 mm	£1,068.85	£1,151.13	£1,631.99	£2,021.45
700 mm	£1,111.53	£1,179.68	£1,665.33	£2,066.41
800 mm	£1,154.21	£1,208.23	£1,698.67	£2,111.37
900 mm	£1,196.89	£1,236.78	£1,732.01	£2,156.33
1000 mm	£1,239.57	£1,265.33	£1,765.35	£2,201.29
1100 mm	£1,282.25	£1,293.88	£1,798.69	£2,246.25
1200 mm	£1,324.93	£1,322.43	£1,832.03	£2,291.21
1300 mm	£1,367.61	£1,350.98	£1,865.37	£2,336.17
1400 mm	£1,410.29	£1,379.53	£1,898.71	£2,381.13
1500 mm	£1,452.97	£1,408.08	£1,932.05	£2,426.09
1600 mm	£1,495.65	£1,436.63	£1,965.39	£2,471.05
1700 mm	£1,538.33	£1,465.18	£1,998.73	£2,516.01
1800 mm	£1,581.01	£1,493.73	£2,032.07	£2,560.97
1900 mm	£1,623.69	£1,522.28	£2,065.41	£2,605.93
2000 mm	£1,666.37	£1,550.83	£2,098.75	£2,650.89
Additional 100mm	£23.81	£30.44	£35.68	£48.37
End Supports (Pair)	**25-3**	**25-4**	**25-5**	**25-6**
	£31.15	£36.71	£40.05	£66.74
Mid Section Support	**25-3**	**25-4**	**25-5**	**25-6**
	£31.15	£36.71	£40.05	£66.74
Slow Speed Grease (SSG)	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SS)	£19.80	£19.80	£20.91	£23.14
Viton Seals (VS)	£97.82	£107.37	£121.46	£145.69
RCI-3M Reed Switch		£18.09		
RCI-EQD		£20.45		
RNI-3M Inductive Switch		£31.41		
RNI-EQD		£32.92		
RPI-3M Inductive Switch		£31.41		
RPI-QD		£31.86		
M83RPVC-5M (QR Lead)		£17.63		

PLS SERIES Price List

max. distance (SL) in m – for PLS-Series 32 - 63 mm





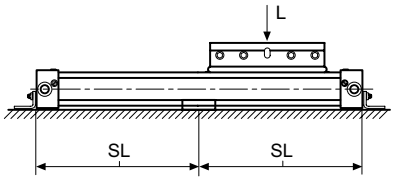


Diagram Information:

- à Calculated deflections without support of 0.5 – 1mm allow exceeding of supporting distance.
- à Calculated deflections without support of 1mm – max 1.5mm require reduction of the supporting distance.

• • • • Ident-figures for stroke definition (0100-5700 mm)

Types	Ident.-No.	Description
PLS 32/00	93.277.• • • •	Standard PLS32 with external gliding guide
PLS 40/00	94.077.• • • •	Standard PLS40 with external gliding guide
PLS 50/00	95.077.• • • •	Standard PLS50 with external gliding guide
PLS 63/00	96.377.• • • •	Standart PLS63 with external gliding guide

PL Series Service Kits (All Bands & Seals)

RODLESS PNEUMATIC CYLINDER

TO SUIT PL/PLF/PLG

Bore- Nitrile Kit	Part Number	Unit Price	Add per metre
16 Ø PL-PLF-PLG	MAT-1427 x Stroke	£90.00	£28.13
25 Ø PL-PLF-PLG	MAT-0481x Stroke	£101.25	£33.75
32 Ø PL-PLF-PLG	MAT-0482x Stroke	£123.75	£39.38
40 Ø PL-PLF-PLG	MAT-0483x Stroke	£146.25	£42.75
50 Ø PL-PLF-PLG	MAT-0484x Stroke	£191.25	£51.75
63 Ø PL-PLF-PLG	MAT-0485x Stroke	£219.38	£58.50

Bore- Viton Kit	Part Number	Unit Price	Add per metre
16 Ø PL-PLF-PLG	MAT-1428 x Stroke	£126.00	£28.13
25 Ø PL-PLF-PLG	MAT-0491x Stroke	£141.75	£33.75
32 Ø PL-PLF-PLG	MAT-0492x Stroke	£216.56	£39.38
40 Ø PL-PLF-PLG	MAT-0493x Stroke	£255.94	£42.75
50 Ø PL-PLF-PLG	MAT-0494x Stroke	£267.75	£51.75
63 Ø PL-PLF-PLG	MAT-0495x Stroke	£307.13	£58.50

TO SUIT PL-DUO

Bore- Nitrile Kit	Part Number	Unit Price	Add per metre
16 Ø PL-DUO	MAT-0486-2 x Stroke	£168.75	£56.25
25 Ø PL-DUO	MAT-0487x Stroke	£180.00	£67.50
32 Ø PL-DUO	MAT-0488x Stroke	£208.13	£78.75
40 Ø PL-DUO	MAT-0489x Stroke	£219.38	£85.50
50 Ø PL-DUO	MAT-0490x Stroke	£313.88	£103.50
63 Ø PL-DUO	MAT-0491x Stroke	£382.50	£117.00

Bore- Viton Kit	Part Number	Unit Price	Add per metre
16 Ø PL-DUO	MAT-0496- x Stroke	£236.25	£56.25
25 Ø PL-DUO	MAT-0497x Stroke	£252.00	£67.50
32 Ø PL-DUO	MAT-0498x Stroke	£364.22	£78.75
40 Ø PL-DUO	MAT-0410x Stroke	£383.91	£85.50
50 Ø PL-DUO	MAT-0411x Stroke	£439.43	£103.50
63 Ø PL-DUO	MAT-0412x Stroke	£535.50	£117.00

TO SUIT PL-09/10

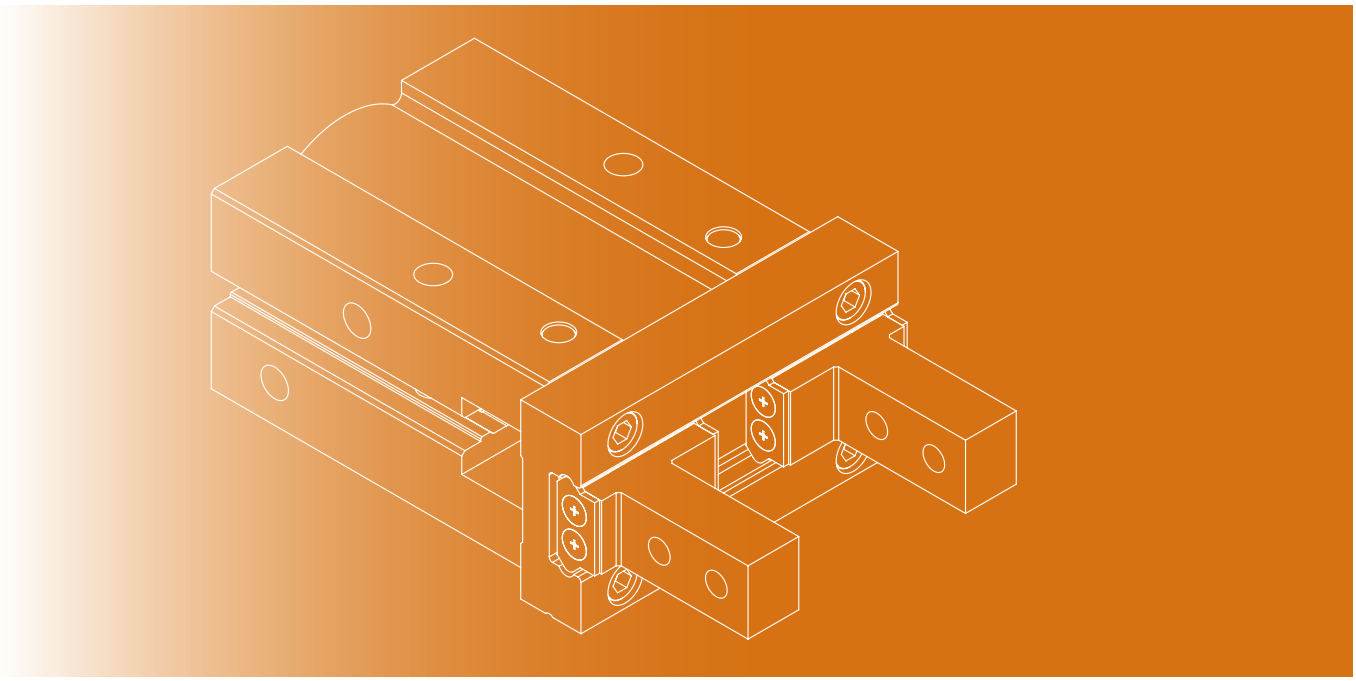
Bore- Nitrile Kit	Part Number	Unit Price	Add per metre
40 Ø PL09-10	MAT-0501-x Stroke	£157.50	£42.75
50 Ø PL09-10	MAT-0502x Stroke	£213.75	£51.75
63 Ø PL09-10	MAT-0503x Stroke	£241.88	£58.50

Bore- Viton Kit	Part Number	Unit Price	Add per metre
40 Ø PL09-10	MAT-0509-x Stroke	£275.63	£42.75
50 Ø PL09-10	MAT-0510x Stroke	£374.06	£51.75
63 Ø PL09-10	MAT-0511x Stroke	£423.28	£58.50

Grease Tubs

Grease Pot	Description	Unit Price	Add per metre
PT-RG	Red Grease Tub	£39.38	£39.38
PT-SSG	Slow Speed Grease Tub	£45.00	£45.00

Grippers

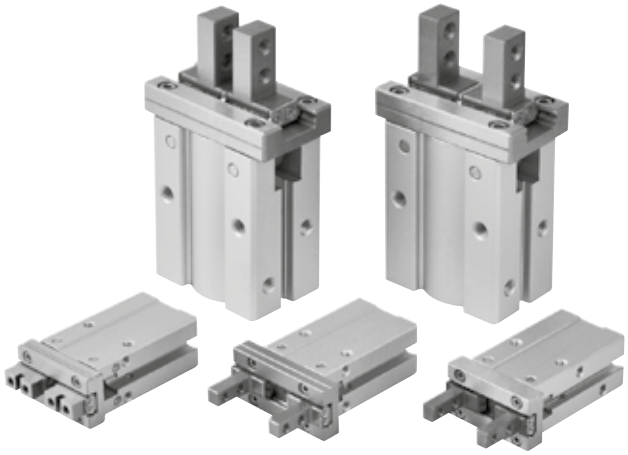


GRIPPERS

MCHC.....p.173-184

MCHC SERIES

PARALLEL GRIPPER (2-Finger)



Features

- Integral linear guide used for high rigidity and high precision.
- The material of finger is martensitic stainless steel.
- Body thickness tolerance ±0.05mm.
- Bottom pin holes for accurate re-locating.
- Grooves on the body for sensor switch to be inserted into.
- The gripping stroke of long-stroke type is approximately double compare with standard type.
- Standard with magnet.

Specification

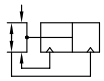
Model		MCHC				
Acting type		Double acting / Single acting				
Tube I.D. (mm)		6	10	16	20	25
Opening / Closing stroke (mm)		4	4(8)	6(12)	10(18)	14(22)
Port size		M3×0.5		M5×0.8		
Medium		Air				
Operating pressure range	Double acting	0.15~0.7	0.2~0.7	0.1~0.7 MPa		
	Single acting	–	0.35~0.7	0.25~0.7 MPa		
Ambient temperature		-10~+60°C (No freezing)				
Repeatability		± 0.01 mm				
Max. frequency		180 (120) cycle / min				
Lubricator		Not required				
Sensor switch (*2)		*1	RDE, RDE-D: Non-contact			
Weight (g)	Double acting	27	55(56)	124(125)	250(252)	461(463)
		–	[53]	[124]	[244]	[450]
	Single acting	–	70	145	270	490

Order example

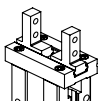
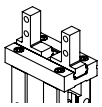
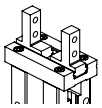
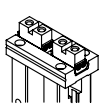
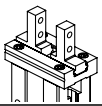
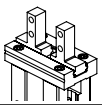
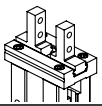
MCHC □ — 20 — □ N

Model	Tube ID.	Style (*1)	Type (*2)
MCHC (Standard stroke)	**6**	Blank: Double acting	Blank:Standard **1**: Side tapped mounting **2**: Standard (Through hole)
	10 **16** **20** **25**	Blank: Double acting **S**: Single acting / Normally open **C**: Single acting / Normally closed	Blank:Standard **1**: Side tapped mounting **2**: Standard (Through hole) **3**: Flat **N**: Narrow **N1**: Narrow type side tapped mounting **N2**: Narrow (Through hole)
MCHCL (Long stroke)	**10** **16** **20** **25**	Blank: Double acting	Blank:Standard **1**: Side tapped mounting **2**: Standard (Through hole)

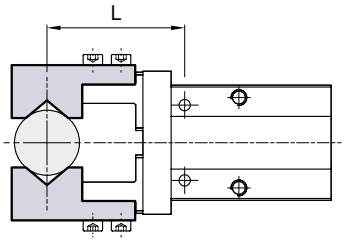
*1. STYLE

Blank: Double acting	**S**: Single acting / Normally open	**C**: Single acting / Normally closed
		

*2. TYPE

Blank: Standard	**1**: Side tapped mounting	**2**: Standard (Through hole)	**3**: Flat
			
N: Narrow	**N1**: Narrow type side tapped mounting	**N2**: Narrow (Through hole)	
			

Gripping force



Tube I.D. (mm)		6	10	16	20	25
Double acting	External	3.3(0.3)	11(1.1)	34(3.5)	42(4.3)	65(6.6)
	Internal	6.1(0.6)	17(1.7)	45(4.6)	66(6.7)	104(10.6)
Single acting / Normally open	External	–	7.1(0.7)	27(2.8)	33(3.4)	45(4.6)
Single acting / Normally closed	Internal	–	13(1.3)	38(3.9)	57(5.8)	83(8.5)

* Operation pressure 0.5 MPa, gripping length 20mm, the effective gripping force for each finger is *** N(kgf).

MCHC SERIES

PRICE LIST

Standard Grippers

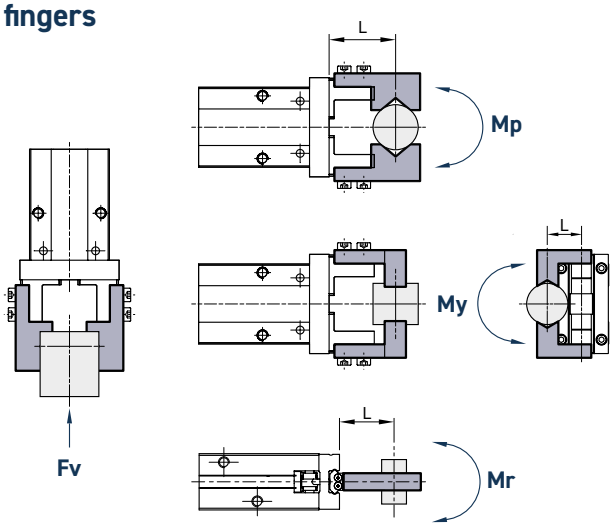
MCHC	Unit Price
MCHC-6	£280.02
MCHC-10	£280.02
MCHC-16	£280.02
MCHC-20	£280.02
MCHC-25	£305.47

For other specifications please contact our team

MCHC Allowable load calculation

PARALLEL GRIPPER (2-Finger)

Confirmation of external force on fingers

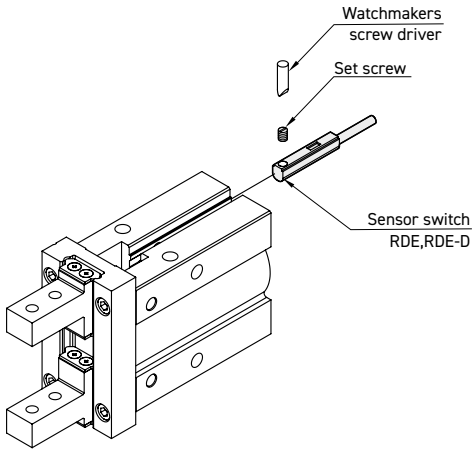


L: distance to the point at which the load is applied (mm)

Tube I.D. (mm)	Allowable vertical load Fv (N)	Maximum allowable moment		
		Pitch moment Mp (N-m)	Yaw moment My (N-m)	Roll moment Mr (N-m)
6	10	0.04	0.04	0.08
10	58	0.26	0.26	0.53
16	98	0.68	0.68	1.36
20	147	1.32	1.32	2.65
25	255	1.94	1.94	3.88

* Values for load and moment in the table indicate static values.

Installation of sensor switch



Allowable load calculation

$$\text{Allowable load } F(N) = \frac{M(\text{maximum allowable moment})(N\cdot m)}{L(m)}$$

Example

When a static load of f=20N is operating,which applies pitch moment to point L=25mm from the **MCHC-16** guide.

$$\text{Allowable load } F(N) = \frac{0.68\ (N\cdot m)}{25\times10^{-3}(m)}$$

$$= 27.2\ (N)$$

Load f=20 (N) < 27.2 (N), so can be used.

Model selection suggestions

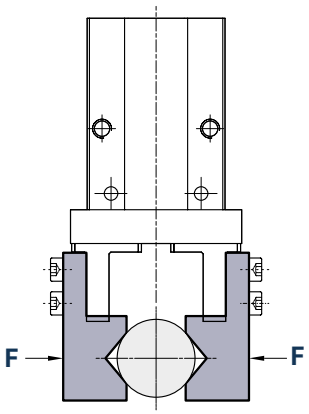
1. For normal gripping and carrying usage, the recommended safe factor (a) is 4.
2. The value of gripping force of single finger can be found at the gripping force table.
3. The safe factor (a) have to be higher if the gripper is using with a great accelerated velocity or impaction condition.

MCHC Capacity – Double acting

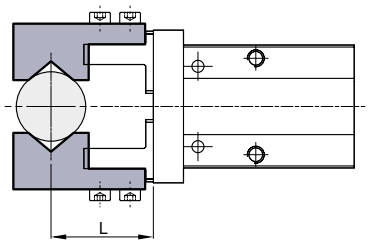
PARALLEL GRIPPER (2-Finger)

Effective gripping force (Double acting)

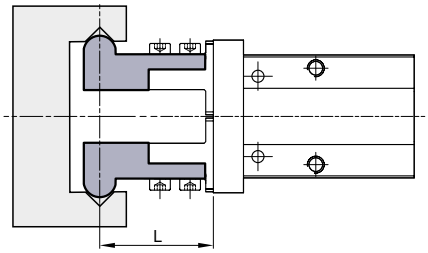
Indication of effective force.
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.



1N=0.102 kgf
1MPa=10.2 kgf/cm^2



External grip

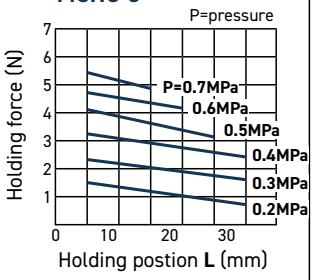


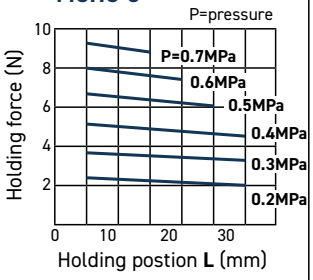
Internal grip

External gripping force

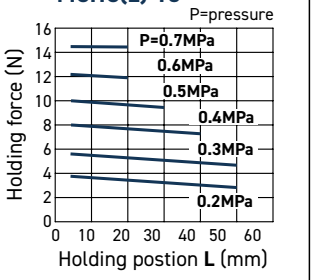
Internal gripping force

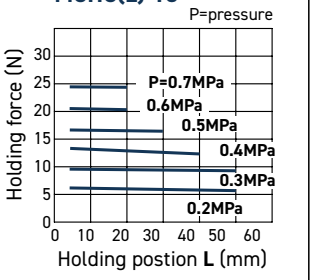
MCHC-6



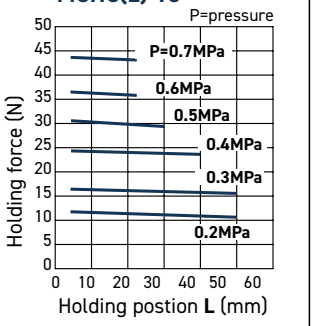


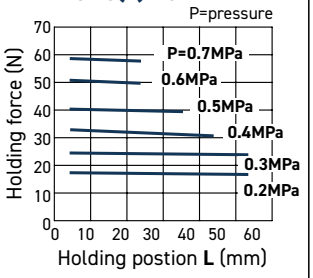
MCHC(L)-10



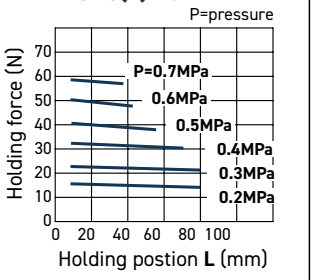


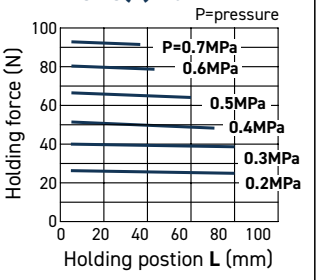
MCHC(L)-16



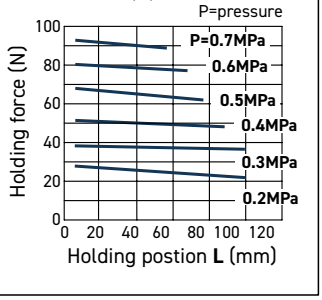


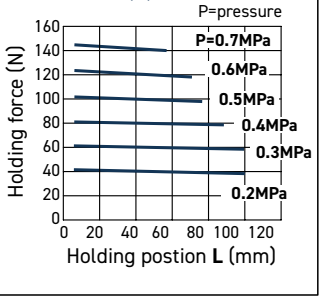
MCHC(L)-20





MCHC(L)-25





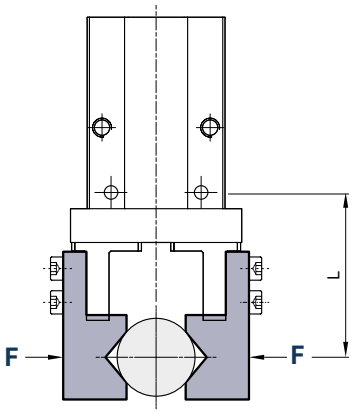
MCHC Capacity – Single acting

PARALLEL GRIPPER (2-Finger)

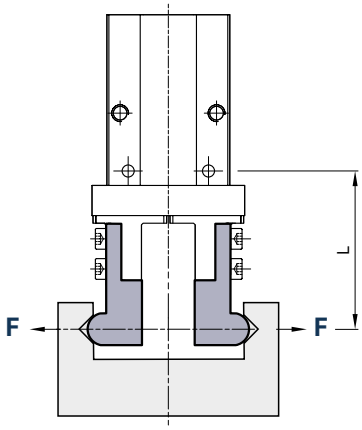
Effective gripping force (Single acting)

Indication of effective force.
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.

1N=0.102 kgf
1MPa=10.2 kgf/cm^2



External grip
(Single acting / Normally open)

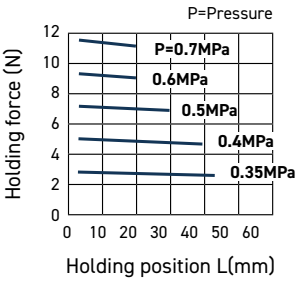


Internal grip
(Single acting / Normally closed)

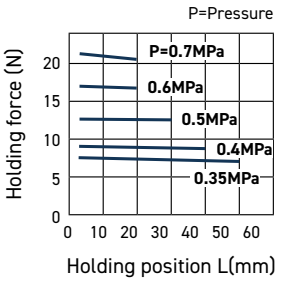
External gripping force
Single acting / N.O.

Internal gripping force
Single acting / N.C.

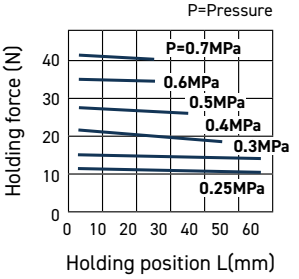
MCHC-10-S



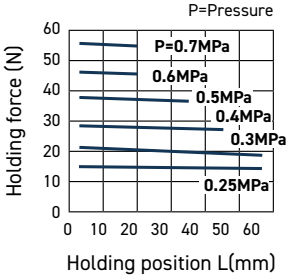
MCHC-10-C



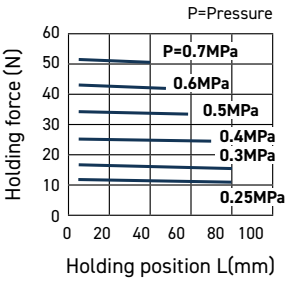
MCHC-16-S



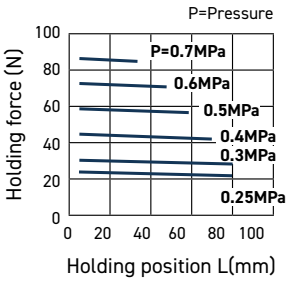
MCHC-16-C



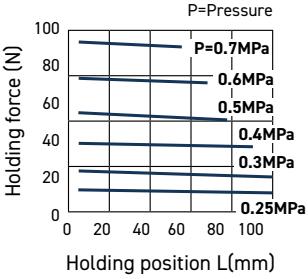
MCHC-20-S



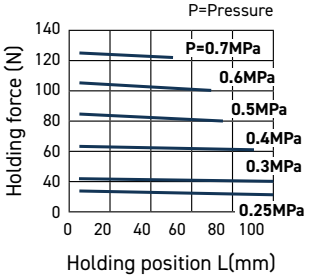
MCHC-20-C



MCHC-25-S



MCHC-25-C

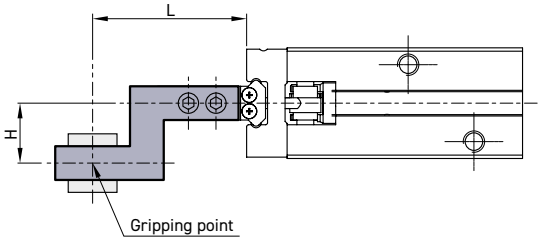


MCHC Capacity – Overhang

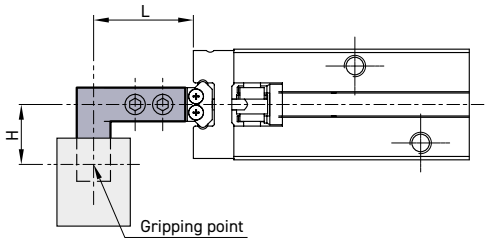
PARALLEL GRIPPER (2-Finger)

Confirmation of gripping point

- The air gripper should be operated so that the workpiece gripping point "L" and the amount of overhang "H" stay within the range shown for each operating pressure given in the graphs to the right.
- If the workpiece gripping point goes beyond the range limits, this will have an adverse effect on the life the air gripper.



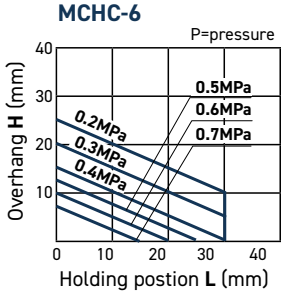
External grip



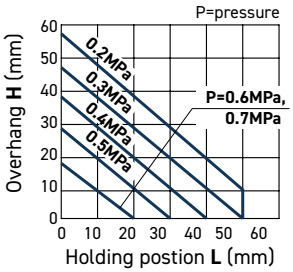
Internal grip

External gripping force

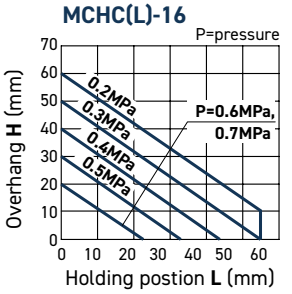
MCHC-6



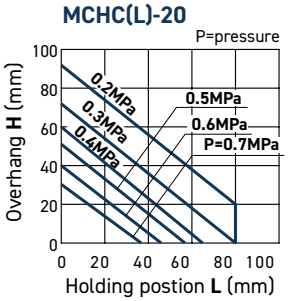
MCHC(L)-10



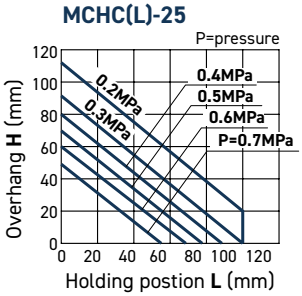
MCHC(L)-16



MCHC(L)-20

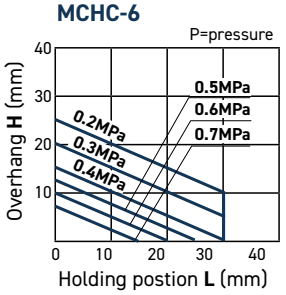


MCHC(L)-25



Internal gripping force

MCHC-6



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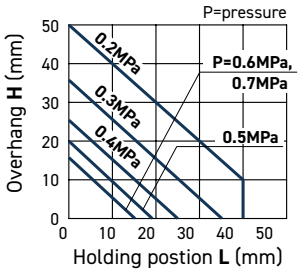

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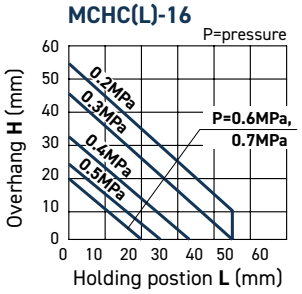

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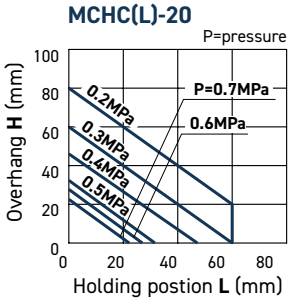

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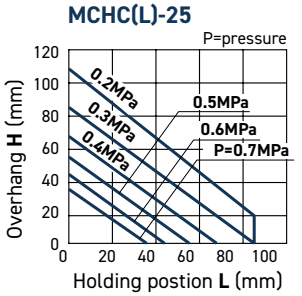
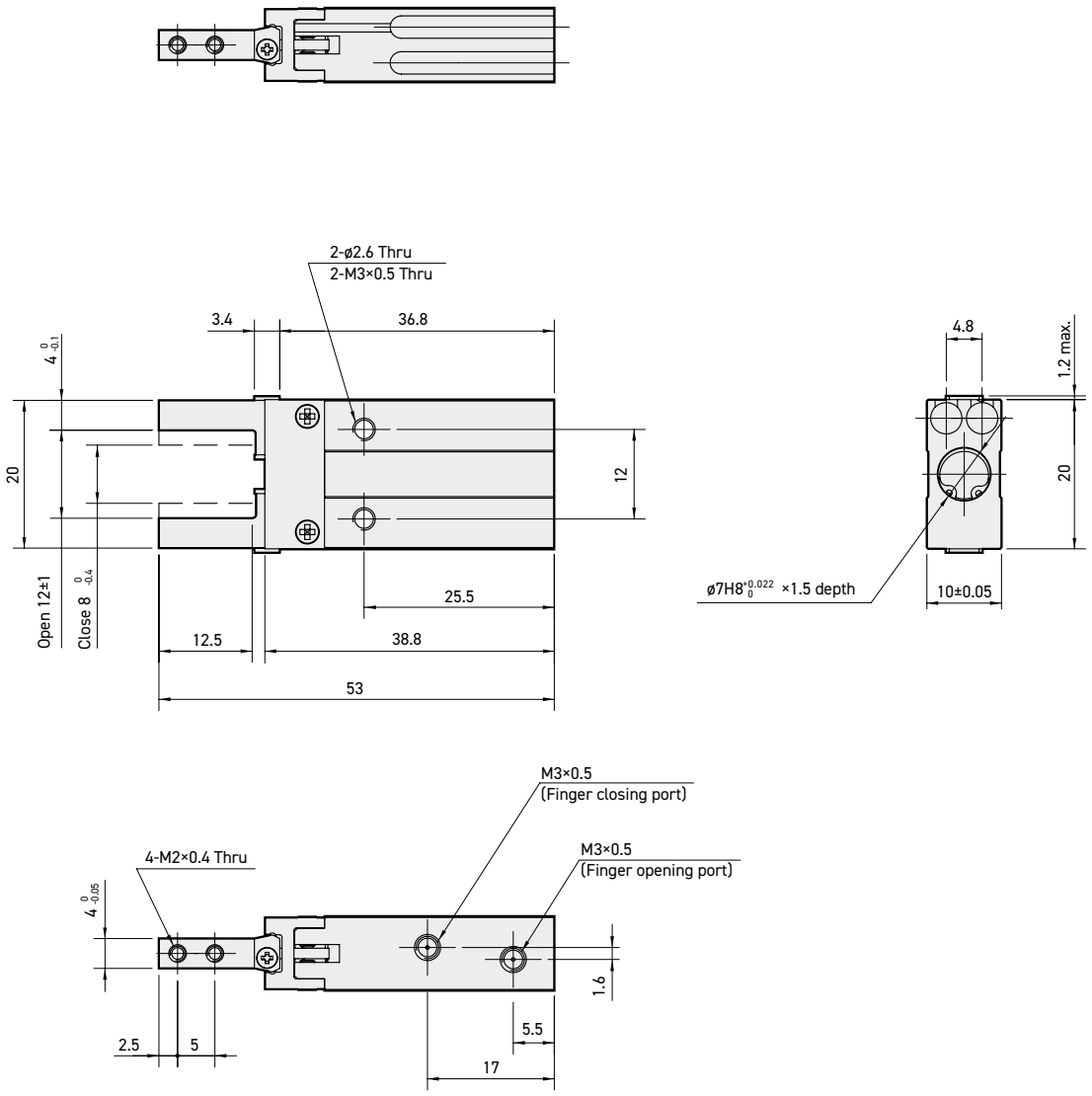


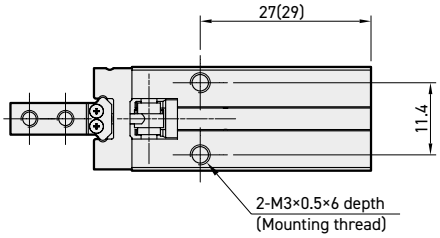
MCHC Dimensions ø6

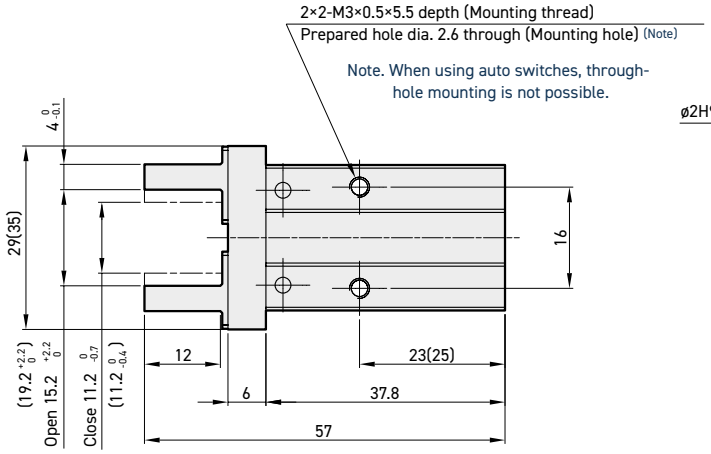
PARALLEL GRIPPER (2-Finger)

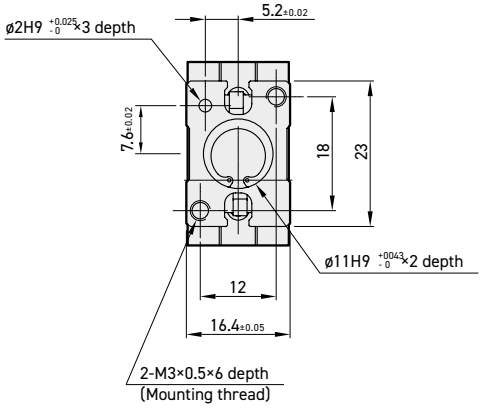


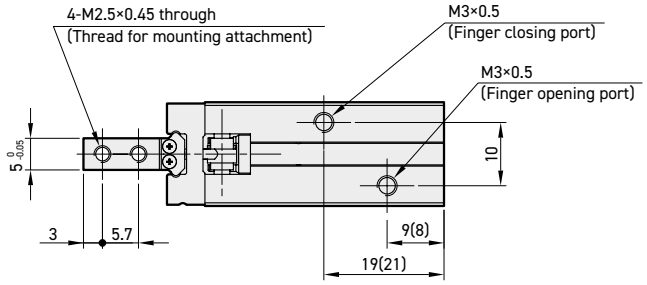
MCHC Dimensions ø10

PARALLEL GRIPPER (2-Finger)





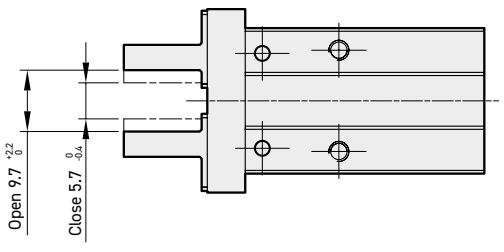




*( ) for long stroke value.

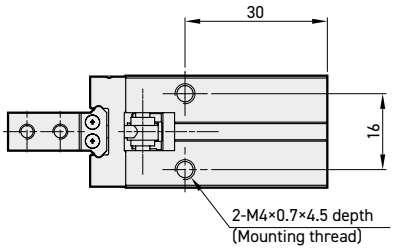
Finger position – Narrow type

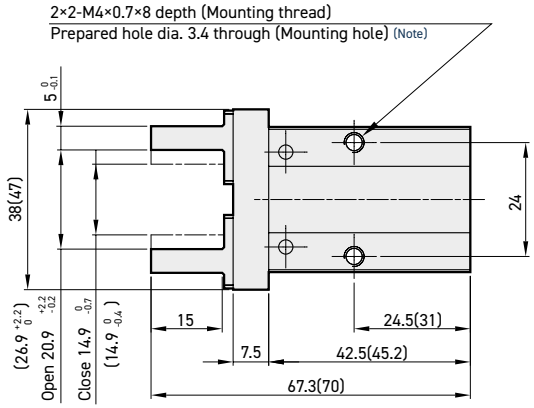
MCHC(L)-10-N



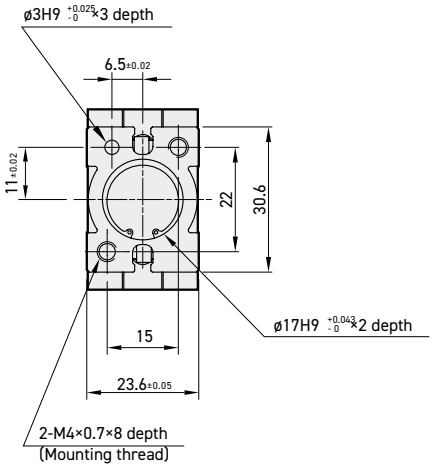
MCHC Dimensions ø16

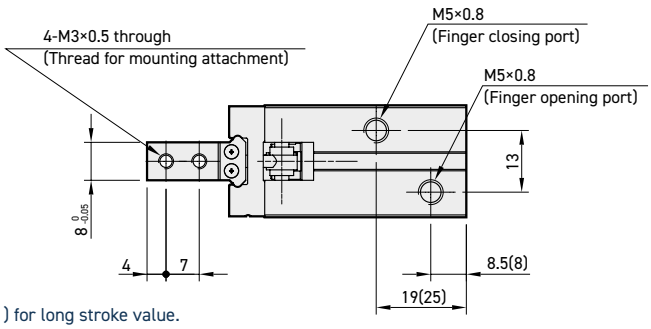
PARALLEL GRIPPER (2-Finger)





Note. Through-hole mounting is not possible when using the auto switch at the square groove.

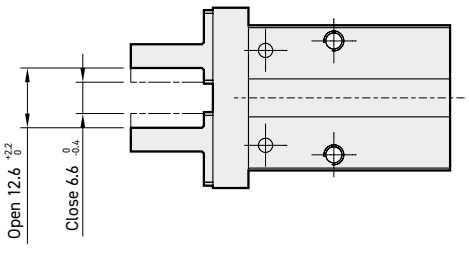




*( ) for long stroke value.

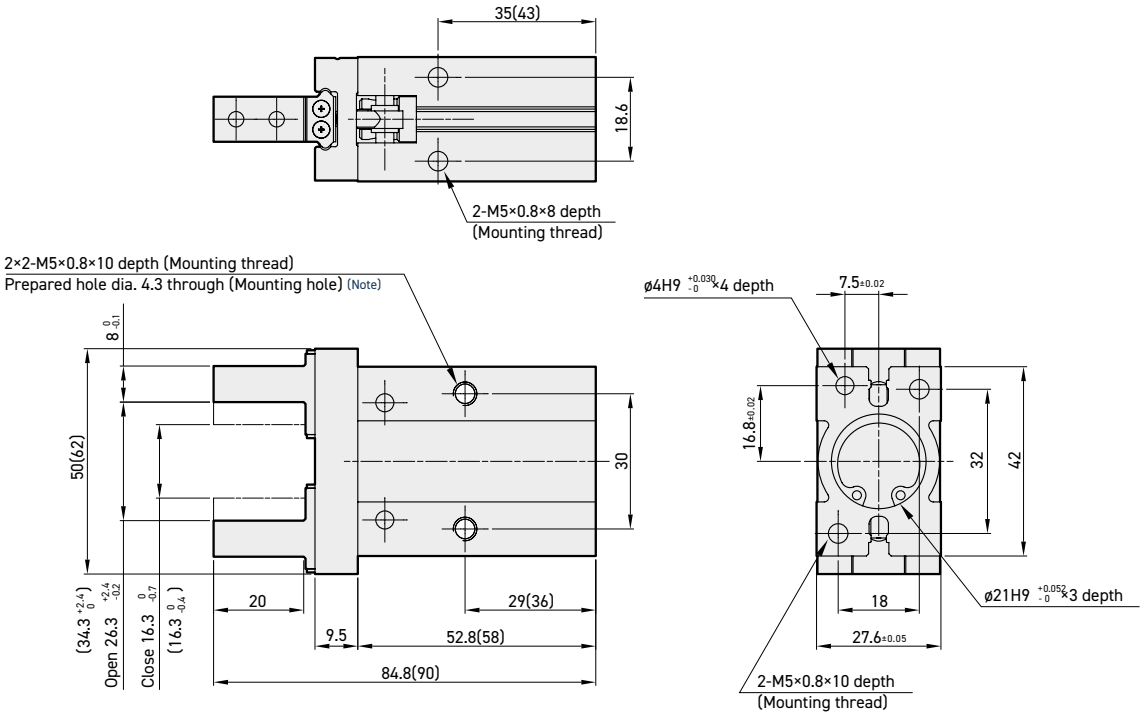
Finger position – Narrow type

MCHC(L)-16-N

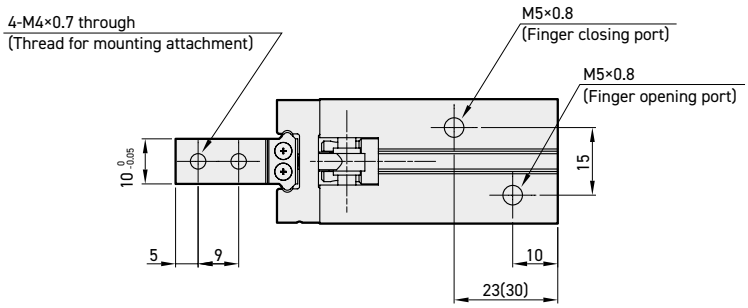


MCHC Dimensions ø20

PARALLEL GRIPPER (2-Finger)



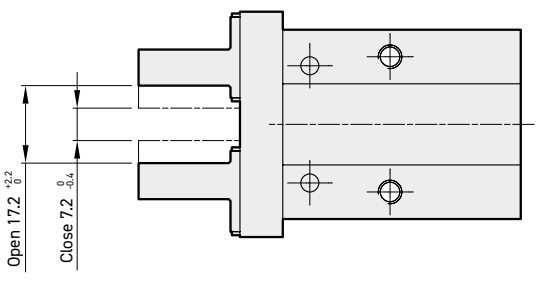
Note. Through-hole mounting is not possible when using the auto switch at the square groove.



*( ) for long stroke value.

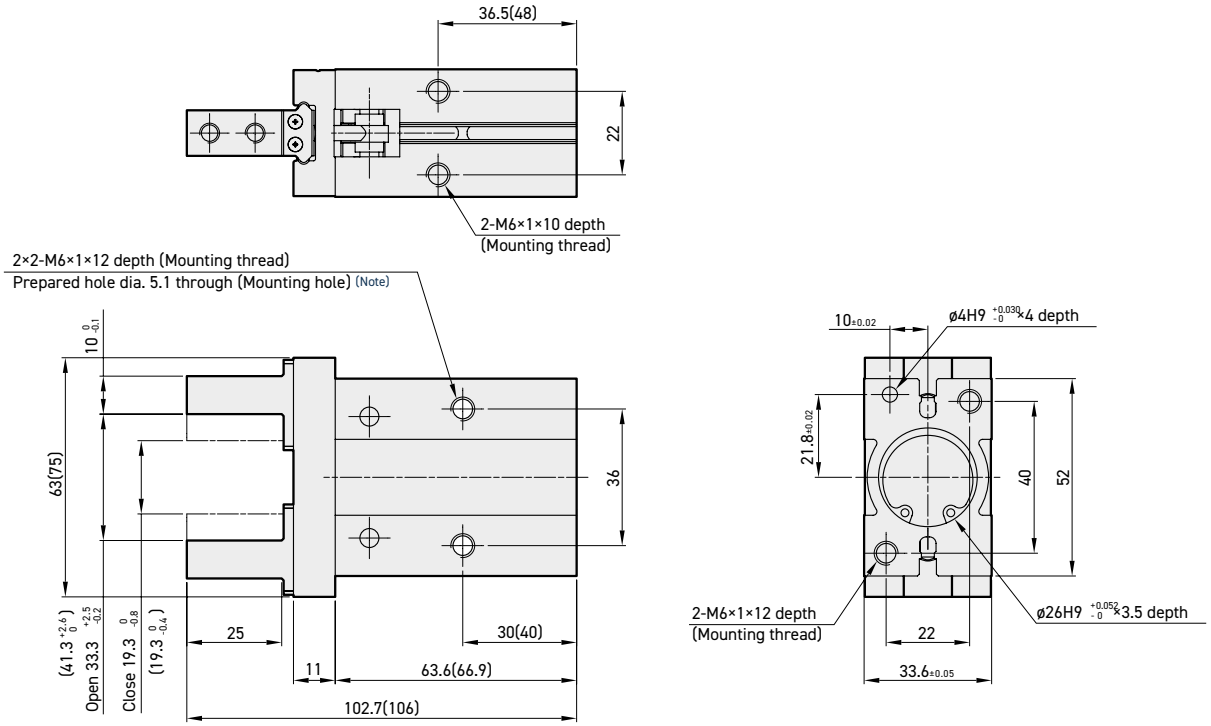
Finger position – Narrow type

MCHC(L)-20-N

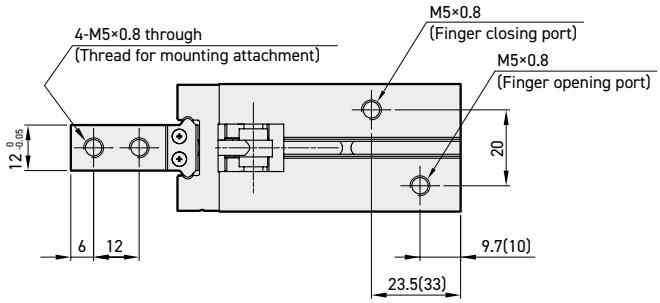


MCHC Dimensions ø25

PARALLEL GRIPPER (2-Finger)



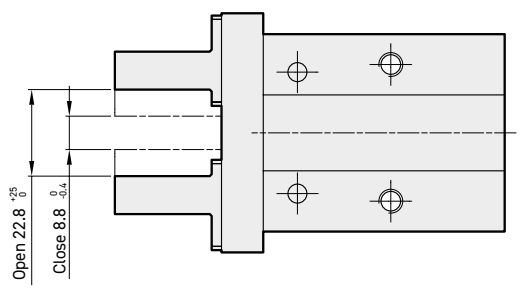
Note. Through-hole mounting is not possible when using the auto switch at the square groove.



*( ) for long stroke value.

Finger position – Narrow type

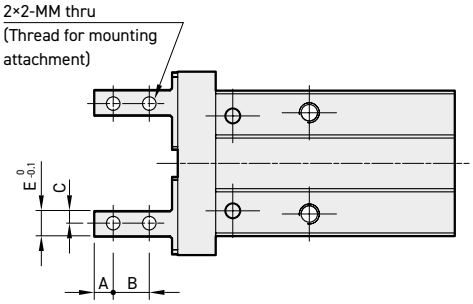
MCHC(L)-25-N



MCHC Finger option ø6~ø25

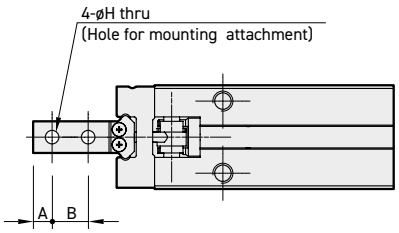
PARALLEL GRIPPER (2-Finger)

MCHC*-1, N1 Side tapped mounting



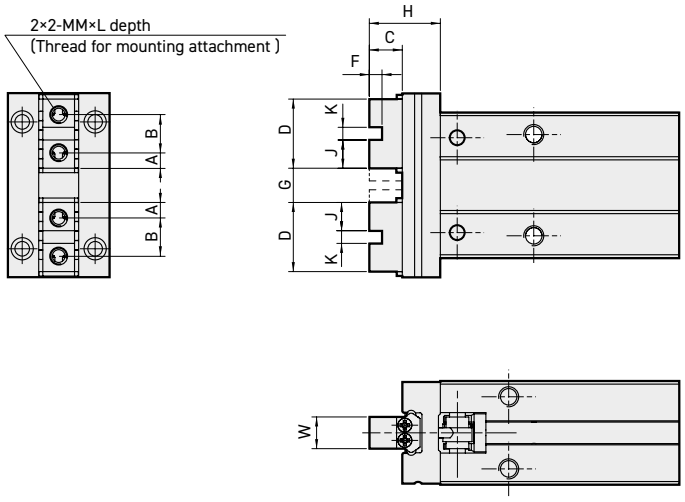
Code / Tube I.D.	A	B	C	E	MM
6	2.5	5	2	4	M2×0.4
10	3	5.7	2	4	M2.5×0.45
16	4	7	2.5	5	M3×0.5
20	5	9	4	8	M4×0.7
25	6	12	5	10	M5×0.8

MCHC*-2, N2 Through hole type



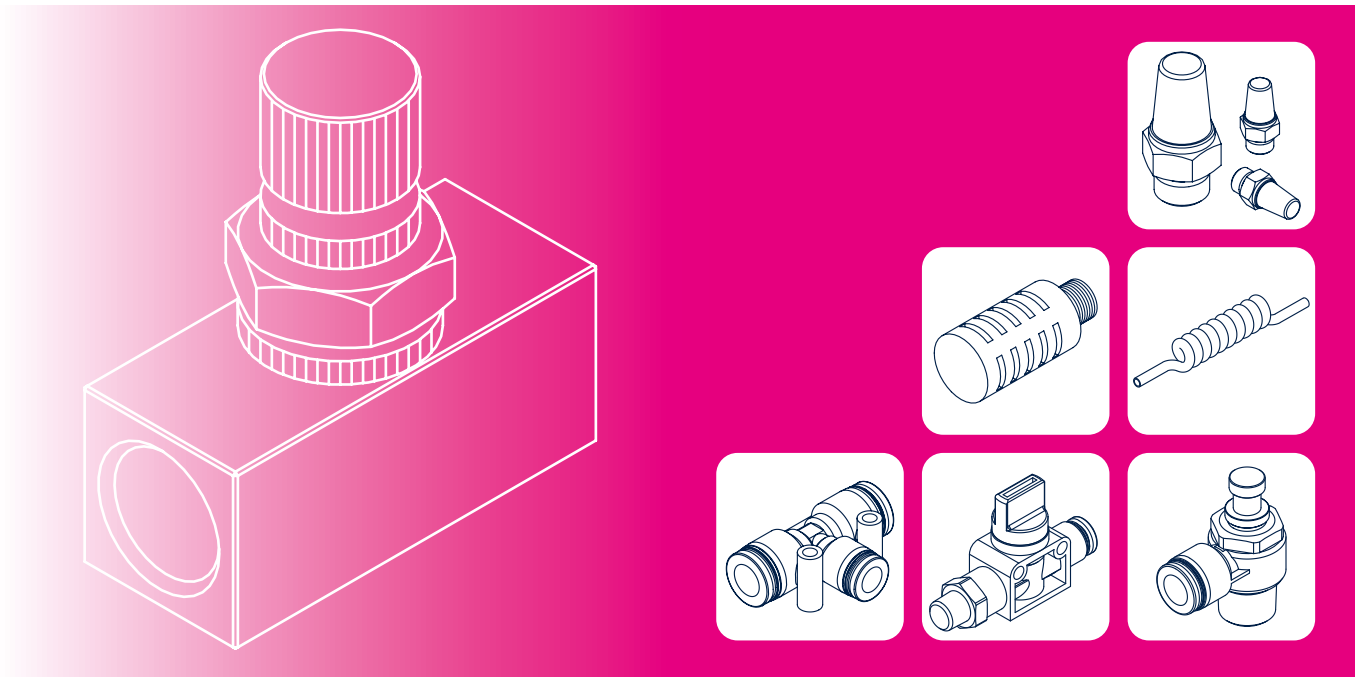
Code / Tube I.D.	A	B	H
6	2.5	5	ø2.4
10	3	5.7	ø2.9
16	4	7	ø3.4
20	5	9	ø4.5
25	6	12	ø5.5

MCHC*-3 Flat type



Code / Tube I.D.	A	B	C	D	F	G Open	G Closed	H	J	K	MM	L	W
10	2.45	6	5.2	10.9	2	5.4 +2.2 0	1.4 0 -0.2	11.2	4.45	2H9 +0.025 0	M2.5×0.45	5	5 0 -0.05
16	3.05	8	8.3	14.1	2.5	7.4 +2.2 0	1.4 0 -0.2	15.8	5.8	2.5H9 +0.025 0	M3×0.5	6	8 0 -0.05
20	3.95	10	10.5	17.9	3	11.6 +2.3 0	1.6 0 -0.2	20	7.45	3H9 +0.025 0	M4×0.7	8	10 0 -0.05
25	4.90	12	13.1	21.8	4	16 +2.5 0	2 0 -0.2	24.1	8.9	4H9 +0.03 0	M5×0.8	10	12 0 -0.05

ANCILLARY EQUIPMENT



PU TUBE
STANDARD UM p.186

PISCO Fittings
Push In Fittings p.187-189

SILENCER
MSLE p.190
MSL p.191
MJBV p.191

SILENCER THROTTLE VALVE
MSLC2 ..... p.191
MJBV p.191

FLOW CONTROL VALVE
MSC100 ..... p.192
MSC200 ..... p.192
MSC300 ..... p.192
MSC400 ..... p.192
MSC500 ..... p.192

QUICK EXHAUST VALVE
MVQE p.193

SHUTTLE VALVE
MVAS p.194

PILOT CHECK VALVE
MPC p.195

SHOCK ABSORBERS
MAC p.196-201

SENSOR SWITCHES
RCA/RNA/RPA p.202
RCI/RNI/RPI p.203
RCM/RNM/RPM p.204
AL39 ..... p.205

UM* SERIES

PU TUBE

Specification

Model	UM*
Medium	Air
Max. pressure range	116 psi (0.8 MPa)(65%RH at 20°C) (*1)
Working vacuum	−29.5in.Hg (−100 kPa)
Ambient temperature	−5~+140°F(−15~+60°C) (No freezing)

* 1. Max. pressure range is the value at 65% RH at 20°C.
When using on other temperatures. please take enough safety value judging from the burst pressure curve on the left.
When the tube is applied to moving parts with vibration and bend, the temperature might rise due to self-heat generation due to molecule heat generation and lead to breakage of the tube.

UM	Outer Diameter (mm)	Inner Diameter (mm)	Roll Size (metres)	Colour	Unit Price
UM0425-100-BU	4	2.5	100	Blue	£43.64
UM0640-100-BU	6	4	100	Blue	£70.31
UM0850-100-BU	8	5	100	Blue	£130.92
UM1065-100-BU	10	6.5	100	Blue	£196.38
UM1280-100-BU	12	8	100	Blue	£261.83
UM0425-100-B	4	2.5	100	Black	£43.64
UM0640-100-B	6	4	100	Black	£70.31
UM0850-100-B	8	5	100	Black	£130.92
UM1065-100-B	10	6.5	100	Black	£196.38
UM1280-100-B	12	8	100	Black	£261.83
UM0425-100-R	4	2.5	100	Red	£43.64
UM0640-100-R	6	4	100	Red	£70.31
UM0850-100-R	8	5	100	Red	£130.92
UM1065-100-R	10	6.5	100	Red	£196.38
UM1280-100-R	12	8	100	Red	£261.83
UM0425-100-T	4	2.5	100	Transparent	£43.64
UM0640-100-T	6	4	100	Transparent	£70.31
UM0850-100-T	8	5	100	Transparent	£130.92
UM1065-100-T	10	6.5	100	Transparent	£196.38
UM1280-100-T	12	8	100	Transparent	£261.83
UM0425-100-CB	4	2.5	100	Transparent Blue	£43.64
UM0640-100-CB	6	4	100	Transparent Blue	£70.31
UM0850-100-CB	8	5	100	Transparent Blue	£130.92
UM1065-100-CB	10	6.5	100	Transparent Blue	£196.38
UM1280-100-CB	12	8	100	Transparent Blue	£261.83

Other colours available.
Other tubing available including: anti-static, nylon, antispatter

PISCO Fittings

Straight Stud

PC	Thread	Outlet Size (mm)	Unit Price
PC4-M5	M5x0.8	4	£1.62
PC4-01	1/8 inch	4	£1.33
PC4-02	1/4 inch	4	£3.68
PC6-01	1/8 inch	6	£1.30
PC6-02	1/4 inch	6	£1.37
PC6-M5	M5x0.8	6	£1.68
PC6-M6	M6x1	6	£3.82
PC6-03	3/8 inch	6	£2.64
PC8-01	1/8 inch	8	£1.51
PC8-02	1/4 inch	8	£1.58
PC8-03	3/8 inch	8	£1.76
PC10-01	1/8 inch	10	£3.82
PC10-02	1/4 inch	10	£1.83
PC10-03	3/8 inch	10	£1.90
PC12-02	1/4 inch	12	£4.74
PC12-03	3/8 inch	12	£2.34
PC12-04	1/2 inch	12	£2.73
PC16-03	3/8 inch	16	£11.33
PC16-04	1/2 inch	16	£11.60

Stud Elbow

PL	Thread	Outlet Size (mm)	Unit Price
PL4-M5	M5x0.8	4	£2.27
PL4-01	1/8 inch	4	£1.87
PL4-02	1/4 inch	4	£4.08
PL6-M5	M5x0.8	6	£2.30
PL6-M6	M6x1	6	£4.82
PL6-01	1/8 inch	6	£1.90
PL6-02	1/4 inch	6	£2.08
PL6-03	3/8 inch	6	£4.87
PL8-01	1/8 inch	8	£2.27
PL8-02	1/4 inch	8	£2.41
PL8-03	3/8 inch	8	£2.45
PL10-01	1/8 inch	10	£6.32
PL10-02	1/4 inch	10	£3.09
PL10-03	3/8 inch	10	£3.12
PL12-02	1/4 inch	12	£7.64
PL12-03	3/8 inch	12	£3.78
PL12-04	1/2 inch	12	£4.14
PL16-03	3/8 inch	16	£16.34
PL16-04	1/2 inch	16	£16.86

Round Straight Stud

POC	Thread	Outlet Size (mm)	Unit Price
POC4-M5	M5x0.8	4	£3.16
POC4-01	1/8 inch	4	£2.89
POC6-M5	M5x0.8	6	£3.29
POC6-01	1/8 inch	6	£3.16
POC8-01	1/8 inch	8	£3.42

Female Straight

PCF	Thread	Outlet Size (mm)	Unit Price
PCF4-01	1/8 inch	4	£3.42
PCF6-01	1/8 inch	6	£3.68
PCF6-02	1/4 inch	6	£4.48
PCF8-01	1/8 inch	8	£3.95
PCF8-02	1/4 inch	8	£4.74

Banjo Compact Elbow

PH	Thread	Outlet Size (mm)	Unit Price
PH6-01	1/8 inch	6	£2.27
PH6-02	1/4 inch	6	£2.73

Equal Push-In Elbow

PV	Outlet Size (mm)	Unit Price
PV4	4	£2.08
PV6	6	£2.18
PV8	8	£2.41
PV10	10	£3.30
PV12	12	£3.55

Stem Elbow

PLJ	Outlet Size (mm)	Unit Price
PLJ4	4	£2.74
PLJ6	6	£3.15
PLJ8	8	£3.46
PLJ10	10	£4.06
PLJ12	12	£4.77

Stem Reducing Elbow

PLGJ	Inlet Size (mm)	Outlet Size (mm)	Unit Price
PLGJ6-4	6	4	£3.15
PLGJ8-6	8	6	£3.46

PISCO Fittings

Equal Tee

PE	Outlet Size (mm)	Unit Price
PE4	4	£2.73
PE6	6	£2.76
PE8	8	£3.12
PE10	10	£3.55
PE12	12	£5.02
PE16	16	£18.18

Equal Y

PY	Outlet Size (mm)	Unit Price
PY4	4	£2.92
PY6	6	£3.09
PY8	8	£3.23
PY10	10	£3.73
PY12	12	£5.02

Reducing Tee

PEG	Inlet Size (mm)	Outlet Size (mm)	Unit Price
PEG6-4	6	4	£5.67
PEG8-6	8	6	£6.45

Branch Tee

PB	Thread	Outlet Size (mm)	Unit Price
PB6-01	1/8 inch	6	£2.95
PB8-02	1/4 inch	8	£3.41

Blanking Plug

PP	Outlet Size (mm)	Unit Price
PP4	4	£1.86
PP6	6	£1.86
PP8	8	£2.04
PP10	10	£2.41
PP12	12	£2.78

Reducing Straight

PG	Inlet Size (mm)	Outlet Size (mm)	Unit Price
PG6-4	6	4	£2.18
PG8-6	8	6	£2.41
PG10-8	10	8	£3.09
PG12-8	12	8	£6.86
PG12-10	12	10	£3.30

Equal Stem Connector

PIJ	Outlet Size (mm)	Unit Price
PIJ4	4	£2.11
PIJ6	6	£2.38
PIJ8	8	£2.64
PIJ10	10	£2.89
PIJ12	12	£3.68

Stem Reducer

PGJ	Inlet Size (mm)	Outlet Size (mm)	Unit Price
PGJ6-4	6	4	£3.82
PGJ8-4	8	4	£3.95
PGJ8-6	8	6	£3.95
PGJ10-6	10	6	£4.22
PGJ10-8	10	8	£4.74
PGJ12-8	12	8	£5.00
PGJ12-10	12	10	£5.27
PGJ16-10	16	10	£8.95

Female Bulkhead

PB	Thread	Outlet Size (mm)	Unit Price
PMF6-01	1/8 inch	6	£6.06

Bulkhead

PMP	Outlet Size (mm)	Unit Price
PMP4	4	£3.95
PMP6	6	£4.22
PMP8	8	£4.48
PMP10	10	£5.54
PMP12	12	£7.38

Bulkhead Union

PM	Outlet Size (mm)	Unit Price
PM4	4	£5.67
PM6	6	£5.85
PM8	8	£6.26
PM10	10	£7.71
PM12	12	£10.54

PISCO Fittings

In Line Check Valve

CVU	Outlet Size (mm)	Unit Price
CVU4-4	4	£21.07

Line Reg (Inc Gauge)

RVUM	Inlet Size (mm)	Outlet Size (mm)	Unit Price
RVUM6-6	6	6	£60.33
RVUM8-6	8	6	£66.52
RVUM8-8	8	8	£66.52

Banjo Flow Control (M/O)

JSC-A	Thread	Outlet Size (mm)	Unit Price
JSC4-M5A	M5x0.8	4	£6.15
JSC4-01A	1/8 inch	4	£8.08
JSC6-M5A	M5x0.8	6	£7.44
JSC6-01A	1/8 inch	6	£8.74
JSC6-02A	1/4 inch	6	£9.37
JSC6-03A	3/8 inch	6	£12.07
JSC8-01A	1/8 inch	8	£9.37
JSC8-02A	1/4 inch	8	£10.02
JSC8-03A	3/8 inch	8	£12.71
JSC8-04A	3/8 inch	8	£27.66
JSC10-02AT	1/4 inch	10	£11.32
JSC10-03AT	3/8 inch	10	£12.60
JSC10-04A	3/8 inch	10	£14.37
JSC12-03AT	3/8 inch	12	£13.90
JSC12-04AT	3/8 inch	12	£14.56

In Line Flow Control

JSMU	Outlet Size (mm)	Unit Price
JSMU4	4	£10.01
JSMU6	6	£14.23
JSMU8	8	£16.34
JSMU10	10	£20.55
JSMU12	12	£23.72

Banjo Flow Control (M/O)

JSC-B	Thread	Outlet Size (mm)	Unit Price
JSC4-01B	1/8 inch	4	£6.15
JSC6-01B	1/8 inch	6	£8.08

Throttle (Needle) Valve

ET	Thread	Unit Price
ETM5	M5x0.8	£11.19
ET01	1/8 inch	£9.88
ET02	1/4 inch	£13.82
ET03	3/8 inch	£16.47
ET04	1/2 inch	£15.81

Banjo Flow Control (M/O)

HV	Outlet Size (mm)	Unit Price
HV6-6	6	£15.81
HV8-8	8	£17.12
HV10-10	10	£18.44
HV12-12	12	£19.75

MSLE SERIES

PLASTIC SILENCER

Features

- Porous polyethylene moulded body allows high flow with low noise.
- Wide range of connecting threads available to screw into exhaust port of control valve.
- High noise reduction.

- **Significant noise reduction & high air flow**

  With double layer design, significant noise reduction and high air flow can be achieved at the same time.

- **Easy installation**

  With different adapter, silencers screw directly to the exhaust port.

- **High working pressures**

  Working pressures up to 1 MPa.

- **Chemical resistance**

  High chemical resistance & Rust free.

- **Maintenance free**

  Oil and water are not able to affect polyethylene silencers.

MSLE	Thread	Unit Price
MSLE-01	1/8 inch	£2.51
MSLE-02	1/4 inch	£3.20
MSLE-03	3/8 inch	£3.85
MSLE-04	1/2 inch	£4.76
MSLE-06	3/4 inch	£13.42
MSLE-08	1 inch	£20.00

MSL / MSLC2 / MJBV SERIES

BRASS SILENCER **/ SILENCER THROTTLE** VALVE **/ CHECK** VALVE

Bonnet type brass silencer

MSL-B	Thread	Unit Price
MSL-B-M5	M5	£1.04
MSL-B-01	1/8 inch	£1.45
MSL-B-02	1/4 inch	£1.82
MSL-B-03	3/8 inch	£2.74
MSL-B-04	1/2 inch	£4.73
MSL-B-06	3/4 inch	£9.29
MSL-B-08	1 inch	£14.18

Short type brass silencer

MSLE	Thread	Unit Price
MSL-S-M5	M5	£1.04
MSL-S-01	1/8 inch	£1.45
MSL-S-02	1/4 inch	£1.82
MSL-S-03	3/8 inch	£2.74
MSL-S-04	1/2 inch	£4.73
MSL-S-06	3/4 inch	£9.29
MSL-S-08	1 inch	£14.18

Silencer throttle valve

MSLC2	Thread	Unit Price
MSLC2-01	1/8 inch	£6.35
MSLC2-02	1/4 inch	£8.19
MSLC2-03	3/8 inch	£9.99
MSLC2-04	1/2 inch	£11.83

Operating pressure range: 0.1~0.7 MPa
Proof pressure: 1.5 MPa

Check valve

MJBV	Thread	Unit Price
MJBV-01-G	1/8 inch	£8.00
MJBV-02-G	1/4 inch	£9.99
MJBV-03-G	3/8 inch	£13.24
MJBV-04-G	1/2 inch	£18.62

MSC SERIES

FLOW CONTROL VALVE

Specification

Model	MSC100		MSC200		MSC300		MSC500		MSC600	
Bore No.	M3	M5	6A	8A	10A	15A	15A	20A	20A	25A
Port size	M3×0.5	M5×0.8	Rc1/8	Rc1/4	Rc3/8	Rc1/2	Rc1/2	Rc3/4	Rc3/4	Rc1
Medium	Air		Air				Air			
Operating pressure range	0.1~0.7 MPa		0~1 MPa				0~1 MPa			
Proof pressure	1 MPa		1.5 MPa				1.5 MPa			
Ambient temperature	-5~+60°C (No freezing)		-5~+60°C (No freezing)				-5~+60°C (No freezing)			
Flow (l/min) Free flow	20	80	200	200	400	430	116	154	164	230
Flow (l/min) Controlled flow	20	90	150	100	300	400	106	123	151	258
Number of needle rotations	6	8	8		9		-			
Weight	3 g	34 g	72 g		130 g		406 g	400 g	767 g	721 g

* Supply pressure: 0.5 MPa, Temperature: 20°C

MSC100 and 200

MSC200 and 300

MSC500 and 600

MSC100	Port Size	Unit Price
MSC100-M3	M3×0.5	£19.54
MSC100-M5	M5×0.8	£31.37
MSC200-6A-G	1/8 inch	£10.04
MSC200-8A-G	1/4 inch	£10.04
MSC300-10A-G	3/8 inch	£12.63
MSC300-15A-G	1/2 inch	£12.63
MSC500-15A-G	1/2 inch	£89.10
MSC500-20A-G	3/4 inch	£92.73
MSC600-20A-G	3/4 inch	£121.83
MSC600-25A-G	1 inch	£126.07

MVQE SERIES

QUICK EXHAUST VALVE

Features

- This unit makes it possible to achieve increased piston speeds on the exhaust stroke with single acting and double acting cylinders.

Specification

Model	MVQE
Medium	Air
Operating pressure range	0.1~1 MPa
Proof pressure	1.5 MPa
Ambient temperature	-5~+60°C (No freezing)

Model	Port size	Effective orifice(mm^2)		Weight
		IN→OUT	OUT→EXH	
MVQE-100-6A	Rc1/8	9	19	40 g
MVQE-300-8A	Rc1/4	24	31	100 g
MVQE-300-10A	Rc3/8	25	33	80 g
MVQE-301-10A	Rc3/8	60	70	230 g
MVQE-301-15A	Rc1/2	110	110	212 g
MVQE-400-15A	Rc1/2	46	46	240 g
MVQE-501-20A	Rc3/4	135	180	765 g
MVQE-501-25A	Rc1	176	187	695 g

MVQE	Port Size	Unit Price
MVQE-100-6A-G	M3×0.5	£15.76
MVQE-300-8A-G	1/4 inch	£27.40
MVQE-300-10A-G	3/8 inch	£27.40
MVQE-301-10A-G	3/8 inch	£73.87
MVQE-301-15A-G	1/2 inch	£73.87
MVQE-400-15A-G	1/2 inch	£40.00
MVQE-501-20A-G	3/4 inch	£102.43
MVQE-501-25A-G	1 inch	£102.43

MVAS SERIES

SHUTTLE VALVE

Features

- This valve has two input inlets(E1,E2) and can be controlled in dirfferent position.
  First activated position can get through to output signal(A).

Specification

Model	MVAS	
Bore No.	6A	8A
Port size	Rc1/8	Rc1//4
Medium	Air	
Operating pressure range	0.1~1 MPa	
Proof pressure	1.5 MPa	
Effective orifice	11.5 mm^2	30.5 mm^2
Ambient temperature	-15~+60°C (No freezing)	
Weight	43 g	119 g

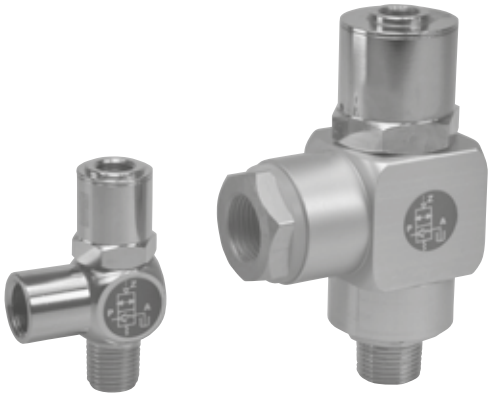
MVAS	Port Size	Unit Price
MVAS-6A-G	1/8 inch	£15.03
MVAS-8A-G	1/4 inch	£21.33

MPC SERIES

PILOT CHECK VALVE

Features

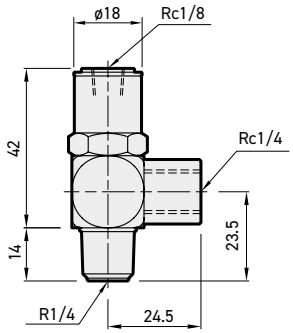
- Maintains pressure in event of air failure.
- Prevents leakage in an air system.
- Enable accurate holding of work-piece.



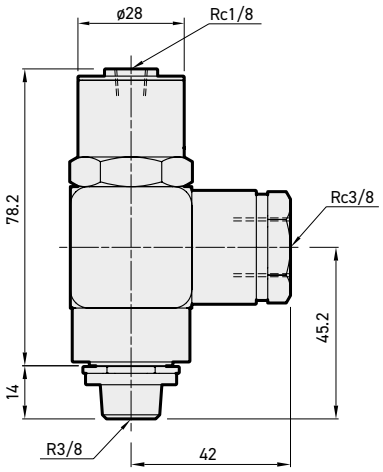
Specification

Order no.	Pressure (MPa)	Operation temperature (°C)	Orifice (mm^2)	Operation time (times/min)	Weight (g)	List Price
MPC-02	0.05~0.95	-10~70 (No freezing)	24	60	100	£38.77
MPC-04	0.05~0.95	-10~70 (No freezing)	79	40	340	£73.98

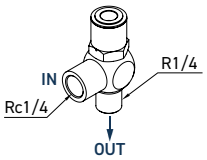
MPC-02



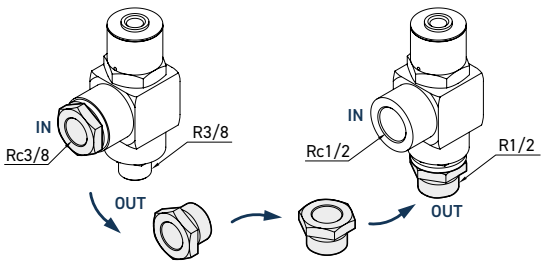
MPC-04

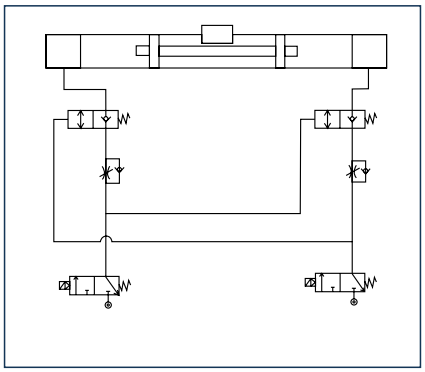


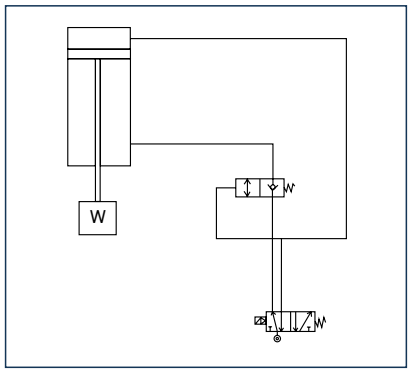
MPC-02

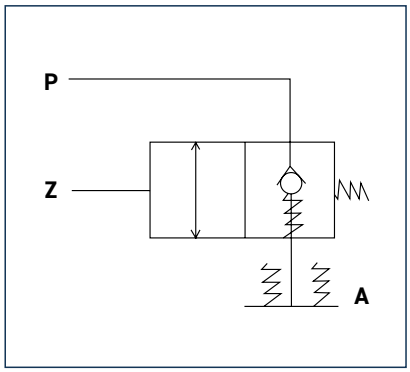


MPC-04









MAC SERIES

SHOCK ABSORBERS

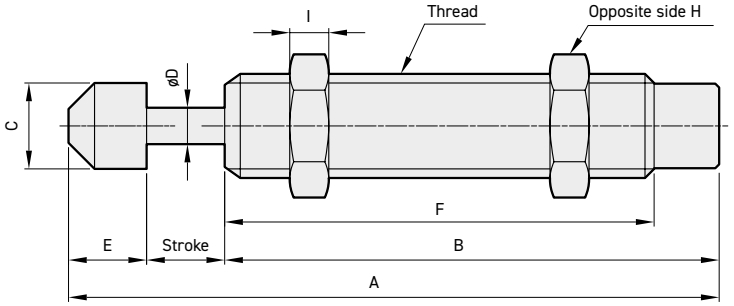
MAC series

Mini type - M8, M10, M12

Our miniature shock absorbers MAC Series- M8, M10, M12 provide great effect for shock impact and come to stop smoothly and are Ideal for light loads.

Specification

Model	Stroke (mm)	Max. Nm per cycle (Nm)	Max. Nm per hour (Nm)	Max. effective mass (kg)	Max. impact speed (m/s)	Without impact head	With impact head	Operating temp. (°C) (No freezing)	Stop collar (SC)	List Price
MAC-0806-1	6	2	8800	0.5	2.0	○	○	-10~+80	SC-08	£54.55
MAC-0806-2	6	2	8800	2	1.0	○	○	-10~+80	SC-08	£54.55
MAC-0806-3	6	2	8800	6	0.5	○	○	-10~+80	SC-08	£54.55
MAC-1005-1	5	3	10800	1	3.0	○	○	-10~+80	SC-10	£54.55
MAC-1005-2	5	3	10800	3	1.5	○	○	-10~+80	SC-10	£54.55
MAC-1005-3	5	3	10800	7	0.8	○	○	-10~+80	SC-10	£54.55
MAC-1008-1	8	4	15200	2	3.0	○	○	-10~+80	SC-10	£54.55
MAC-1008-2	8	4	15200	4	1.5	○	○	-10~+80	SC-10	£54.55
MAC-1008-3	8	4	15200	9	0.8	○	○	-10~+80	SC-10	£54.55
MAC-1210-1	10	5	17640	5	3.0	○	○	-10~+80	SC-12	£70.94
MAC-1210-2	10	5	17640	10	1.5	○	○	-10~+80	SC-12	£70.94
MAC-1210-3	10	5	17640	30	0.8	○	○	-10~+80	SC-12	£70.94

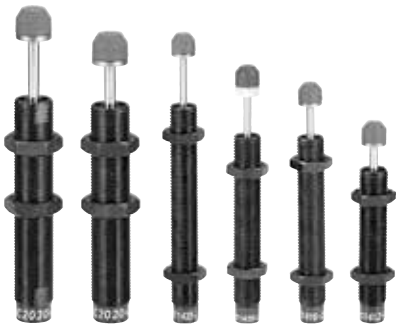


Dimensions

Model	Thread	Stroke (mm)	A	B	C	D	E	F	H	I	Weight (g)
MAC-0806-1	M8×1.0/0.75	6	50	38	6.6	3	6	33	11	3	11
MAC-0806-2	M8×1.0/0.75	6	50	38	6.6	3	6	33	11	3	11
MAC-0806-3	M8×1.0	6	50	38	6.6	3	6	33	11	3	11
MAC-1005-1	M10×1.0	5	38.7	27.7	8.6	2.8	6	22.9	12.7	3	14
MAC-1005-2	M10×1.0	5	38.7	27.7	8.6	2.8	6	22.9	12.7	3	14
MAC-1005-3	M10×1.0	5	38.7	27.7	8.6	2.8	6	22.9	12.7	3	14
MAC-1008-1	M10×1.0	8	57	43	8.6	3	6	38	12.7	3	20
MAC-1008-2	M10×1.0	8	57	43	8.6	3	6	38	12.7	3	20
MAC-1008-3	M10×1.0	8	57	43	8.6	3	6	38	12.7	3	20
MAC-1210-1	M12×1.0	10	69.5	50	10.3	3	9.5	45.5	14	4	31.5
MAC-1210-2	M12×1.0	10	69.5	50	10.3	3	9.5	45.5	14	4	31.5
MAC-1210-3	M12×1.0	10	69.5	50	10.3	3	9.5	45.5	14	4	31.5

MAC SERIES

SHOCK ABSORBERS



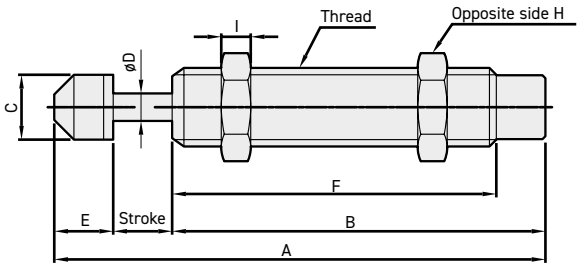
MAC series

Porous fixed type - M14, M20

MAC series is of fixed structure. Through special design and experimented oil hole and arrange method, linear deceleration on the object in motion is achieved. From high speed light load to low speed heavy load, appropriate energy can be absorbed without any adjustment. After the load is removed, reset spring will push the axie center to its original location. For MAC series, it has three models of high speed, medium speed and low speed to satisfy your different needs.

Specification

Model	Stroke (mm)	Max. Nm per cycle (Nm)	Max. Nm per hour (Nm)	Max. effective mass (kg)	Max. impact speed (m/s)	Without impact head	With impact head	Operating temp. (°C) (No freezing)	Stop collar (SC)	List Price
MAC-1412-1	12	15	30000	8	3.0	○	○	-10~+80	SC-14	£87.28
MAC-1412-2	12	15	30000	50	1.5	○	○	-10~+80	SC-14	£87.28
MAC-1412-3	12	15	30000	100	0.8	○	○	-10~+80	SC-14	£87.28
MAC-1416-1	16	20	35000	10	3.0	○	○	-10~+80	SC-14	£87.28
MAC-1416-2	16	20	35000	70	1.5	○	○	-10~+80	SC-14	£87.28
MAC-1416-3	16	20	35000	150	0.8	○	○	-10~+80	SC-14	£87.28
MAC-1420-1	20	20	35000	10	3.0	○	○	-10~+80	SC-14	£100.03
MAC-1420-2	20	20	35000	70	1.5	○	○	-10~+80	SC-14	£100.03
MAC-1420-3	20	20	35000	150	0.8	○	○	-10~+80	SC-14	£100.03
MAC-2020-1	20	40	40000	30	3.5	○	○	-10~+80	SC-20	£100.03
MAC-2020-2	20	40	40000	200	2.0	○	○	-10~+80	SC-20	£100.03
MAC-2020-3	20	40	40000	700	1.0	○	○	-10~+80	SC-20	£100.03
MAC-2030-1	30	50	48000	30	3.5	○	○	-10~+80	SC-20	£109.10
MAC-2030-2	30	50	48000	200	2.0	○	○	-10~+80	SC-20	£109.10
MAC-2030-3	30	50	48000	700	1.0	○	○	-10~+80	SC-20	£109.10



Dimensions

Model	Thread	Stroke (mm)	A	B	C	D	E	F	H	I	Weight (g)
MAC-1412-1	M14×1.0/1.5	12	99.2	76	12	4	11.2	67	19	5	80
MAC-1412-2	M14×1.0/1.5	12	99.2	76	12	4	11.2	67	19	5	80
MAC-1412-3	M14×1.0/1.5	12	99.2	76	12	4	11.2	67	19	5	80
MAC-1416-1	M14×1.0/1.5	16	122.2	95	12	4	11.2	86	19	5	85
MAC-1416-2	M14×1.0/1.5	16	122.2	95	12	4	11.2	86	19	5	85
MAC-1416-3	M14×1.0/1.5	16	122.2	95	12	4	11.2	86	19	5	85
MAC-1420-1	M14×1.5	20	126.2	95	12	4	11.2	86	19	5	95
MAC-1420-2	M14×1.5	20	126.2	95	12	4	11.2	86	19	5	95
MAC-1420-3	M14×1.5	20	126.2	95	12	4	11.2	86	19	5	95
MAC-1425-1	M14×1.0/1.5	25	146.2	110	12	4	11.2	101	19	5	105
MAC-1425-2	M14×1.0/1.5	25	146.2	110	12	4	11.2	101	19	5	105
MAC-1425-3	M14×1.0/1.5	25	146.2	110	12	4	11.2	101	19	5	105
MAC-2020-1	M20×1.5/2.0	20	145.3	110	17.8	6	15.3	101	26	7	215
MAC-2020-2	M20×1.5	20	145.3	110	17.8	6	15.3	101	26	7	215
MAC-2020-3	M20×1.5	20	145.3	110	17.8	6	15.3	101	26	7	215
MAC-2030-1	M20×1.5/2.0	30	158.3	113	17.8	6	15.3	104	26	7	220
MAC-2030-2	M20×1.5/2.0	30	158.3	113	17.8	6	15.3	104	26	7	220
MAC-2030-3	M20×1.5	30	158.3	113	17.8	6	15.3	104	26	7	220

MAC SERIES

SHOCK ABSORBERS

MAC series

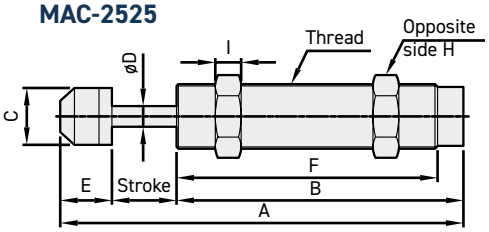
Porous fixed type - M20, M25

Model M20, M25 are applicable for high impact and high effectiveness.

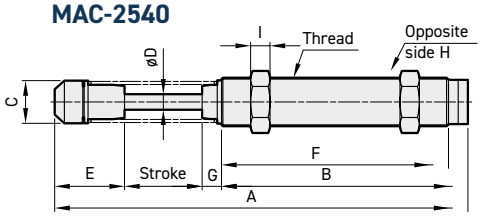
Specification

Model	Stroke (mm)	Max. Nm per cycle (Nm)	Max. Nm per hour (Nm)	Max. effective mass (kg)	Max. impact speed (m/s)	Without impact head	With impact head	Operating temp. (℃) (No freezing)	Stop collar (SC)	List Price
MAC-2050-1	50	60	60000	60	3.5	○	○	-10~+80	SC-20	£145.46
MAC-2050-2	50	60	60000	400	2.0	○	○	-10~+80	SC-20	£145.46
MAC-2050-3	50	60	60000	1200	1.0	○	○	-10~+80	SC-20	£145.46
MAC-2525-1	25	80	54000	200	4.0	○	○	-10~+80	SC-25	£134.55
MAC-2525-2	25	80	54000	800	2.5	○	○	-10~+80	SC-25	£134.55
MAC-2525-3	25	80	54000	1500	1.0	○	○	-10~+80	SC-25	£134.55
MAC-2540-1	40	120	75000	300	4.0	—	○	-10~+80	SC-25	£145.46
MAC-2540-2	40	120	75000	1200	2.5	—	○	-10~+80	SC-25	£145.46
MAC-2540-3	40	120	75000	2000	1.0	—	○	-10~+80	SC-25	£145.46
MAC-2550-1	50	135	90000	200	4.0	○	○	-10~+80	SC-25	£254.56
MAC-2550-2	50	135	90000	900	2.5	○	○	-10~+80	SC-25	£254.56
MAC-2550-3	50	135	90000	1680	1.0	○	○	-10~+80	SC-25	£254.56
MAC-2580-1	80	150	120000	150	4.0	○	○	-10~+80	SC-25	£272.74
MAC-2580-2	80	150	120000	600	2.5	○	○	-10~+80	SC-25	£272.74
MAC-2580-3	80	150	120000	1200	1.0	○	○	-10~+80	SC-25	£272.74

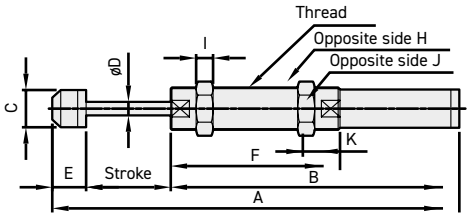
MAC-2050
MAC-2525



MAC-2540



MAC-2550
MAC-2580



Dimensions

Model	Thread	Stroke (mm)	A	B	C	D	E	F	G	H	I	J	K	Weight (g)
MAC-2050-1	M20×1.5/2.0	50	232.8	167	17.8	6	15.8	158	—	26	7	—	—	300
MAC-2050-2	M20×1.5	50	232.8	167	17.8	6	15.8	158	—	26	7	—	—	300
MAC-2050-3	M20×1.5	50	232.8	167	17.8	6	15.8	158	—	26	7	—	—	300
MAC-2525-1	M25×1.5/2.0	25	155	111	22	8	19	101	—	32	9	—	—	330
MAC-2525-2	M25×1.5/2.0	25	155	111	22	8	19	101	—	32	9	—	—	330
MAC-2525-3	M25×1.5/2.0	25	155	111	22	8	19	101	—	32	9	—	—	330
MAC-2540-1	M25×1.5/2.0	40	214	127	22	8	37	117	10	32	9	—	—	430
MAC-2540-2	M25×1.5/2.0	40	214	127	22	8	37	117	10	32	9	—	—	430
MAC-2540-3	M25×1.5/2.0	40	214	127	22	8	37	117	10	32	9	—	—	430
MAC-2550-1	M25×1.5/2.0	50	239.5	170.5	22	8	19	100	—	32	9	22.8	11	435
MAC-2550-2	M25×1.5/2.0	50	239.5	170.5	22	8	19	100	—	32	9	22.8	11	435
MAC-2550-3	M25×1.5/2.0	50	239.5	170.5	22	8	19	100	—	32	9	22.8	11	435
MAC-2580-1	M25×1.5/2.0	80	336	237	22	8	19	100	—	32	9	22.8	11	535
MAC-2580-2	M25×1.5/2.0	80	336	237	22	8	19	100	—	32	9	22.8	11	535
MAC-2580-3	M25×1.5/2.0	80	336	237	22	8	19	100	—	32	9	22.8	11	535

MAC SERIES

SHOCK ABSORBERS

MAC series

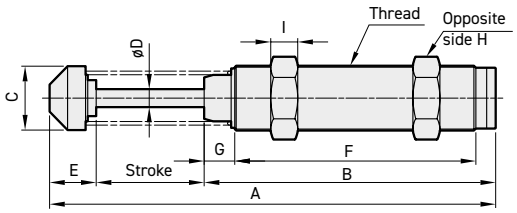
Porous fixed type - M36

MAC series is self-compensating, and ideal for energy absorption in high speed, medium speed and low speed impact. MAC series can stop moving objects smoothly and quietly.

Specification

Model	Stroke (mm)	Max. Nm per cycle (Nm)	Max. Nm per hour (Nm)	Max. effective mass (kg)	Max. impact speed (m/s)	Without impact head	With impact head	Operating temp. (°C) (No freezing)	Stop collar (SC)	List Price
MAC-3660-1	60	250	120000	400	4.0	—	○	-10~+80	SC-36	£263.68
MAC-3660-2	60	250	120000	1500	2.5	—	○	-10~+80	SC-36	£263.68
MAC-3660-3	60	250	120000	2400	1.0	—	○	-10~+80	SC-36	£263.68

MAC-3660

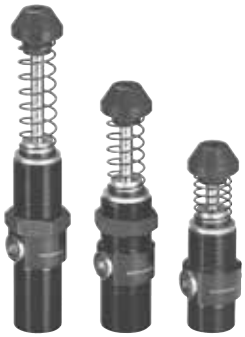


Dimensions

Model	Thread	Stroke (mm)	A	B	C	D	E	F	G	H	I	Weight (g)
MAC-3660-1	M36×1.5	60	248	162	35.5	10	26	134	17	46	15	1030
MAC-3660-2	M36×1.5	60	248	162	35.5	10	26	134	17	46	15	1030
MAC-3660-3	M36×1.5	60	248	162	35.5	10	26	134	17	46	15	1030

MAD SERIES

ADJUSTABLE SHOCK ABSORBERS

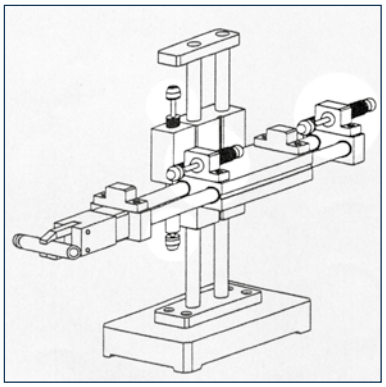


Specification

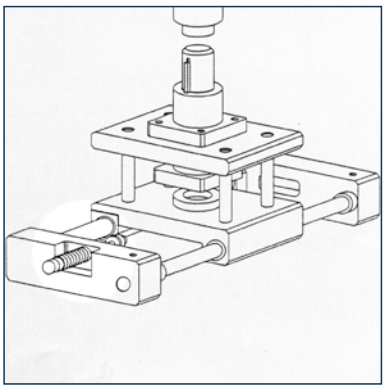
Model	Stroke (mm)	Max. Nm per cycle (Nm)	Max. Nm per hour (Nm)	Max. effective mass (kg)	Max. impact speed (m/s)	Without impact head	With impact head	Operating temp. (°C) (No freezing)	Stop collar (SC)	Flange (F)	List Price
MAD-1410	10	20	25000	80	3.0	○	○	-10~+80	SC-14	—	£107.27
MAD-1415	15	24	26000	100	3.0	○	○	-10~+80	SC-14	—	£107.27
MAD-1425	25	28	27500	140	3.0	○	○	-10~+80	SC-14	—	£107.27
MAD-1612	12	22	27500	130	3.0	○	○	-10~+80	□	—	£119.19
MAD-2016	16	28	27500	200	3.0	○	○	-10~+80	SC-20	—	£119.19
MAD-2020	20	34	29000	298	3.5	○	○	-10~+80	SC-20	—	£149.01
MAD-2025	25	39	30000	312	3.5	○	○	-10~+80	SC-20	—	£149.01
MAD-2050	50	69	52000	420	3.5	○	○	-10~+80	SC-20	—	£158.92
MAD-2525	25	85	54000	400	3.5	○	○	-10~+80	SC-25	—	£158.92
MAD-2530	30	95	60000	480	3.5	○	○	-10~+80	SC-25	—	£158.92
MAD-2540	40	100	80000	700	3.5	×	○	-10~+80	SC-25	—	£158.92
MAD-2550	50	120	90000	720	4.0	○	○	-10~+80	SC-25	—	£158.92
MAD-2580	80	150	120000	800	4.0	○	○	-10~+80	SC-25	—	£158.92
MAD-2725	25	85	54000	400	3.5	○	○	-10~+80	SC-27	—	£158.92
MAD-3625	25	150	81000	1400	3.0	×	○	-10~+80	SC-36	F36	£288.07
MAD-3650	50	300	100000	2400	3.0	×	○	-10~+80	SC-36	F36	£288.07
MAD-4225	25	260	125000	3000	3.5	×	○	-10~+80	—	F42	£464.84
MAD-4250	50	500	150000	4000	4.5	×	○	-10~+80	—	F42	£544.30
MAD-4275	75	750	180000	6000	4.5	×	○	-10~+80	—	F42	£570.94
MAD-64050	50	1200	150500	12727	1.5	×	○	-10~+80	—	F64	£1,260.01
MAD-64100	100	2400	200000	18181	1.5	×	○	-10~+80	—	F64	£1,377.45
MAD-64150	150	3600	250000	23636	1.5	×	○	-10~+80	—	F64	£1,571.54

Application example

Pick and place robot



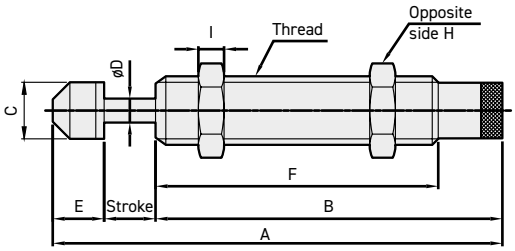
Press feed



MAD series

Adjustable

MAD series is of adjustable structure. When facing with different loads and different impact speeds, the adjustment knobs can be adjusted to appropriate scale to absorb perfectly the energy generated by the object. As compared to MAC series MAD series has higher energy absorption and wider applicable scope.

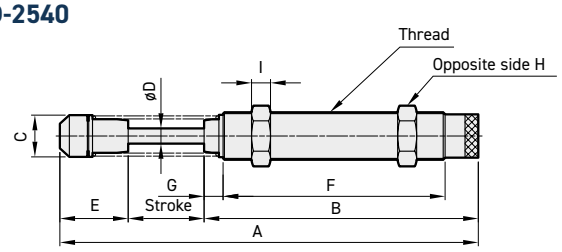


Dimensions

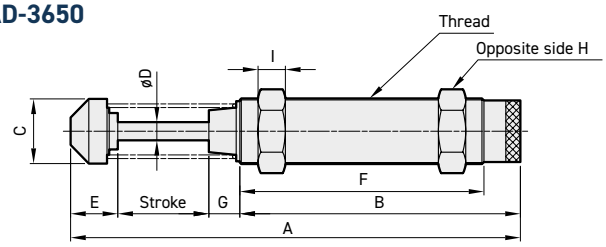
Model	Thread	Stroke (mm)	A	B	C	D	E	F	H	I	J	K	Weight (g)
MAD-1410	M14×1.0/1.5	10	109.7	88.5	12	4	11.2	72.5	19	5	-	-	90
MAD-1415	M14×1.0/1.5	15	128.2	102	12	4	11.2	86	19	5	-	-	120
MAD-1425	M14×1.0/1.5	25	153.2	117	12	4	11.2	101	19	5	-	-	194
MAD-1612	M16×1.0/1.5	12	99.0	76.5	14	4	11.2	54.9	19	6	-	-	200
MAD-2016	M20×1.5/2.0	16	148.3	117	17.8	6	15.3	101	26	7	-	-	230
MAD-2020	M20×1.5	20	152.3	117	17.8	6	15.3	101	26	7	-	-	235
MAD-2025	M20×1.5	25	157.3	117	17.8	6	15.3	101	26	7	-	-	240
MAD-2050	M20×1.5	50	239.3	174	17.8	6	15.3	158	26	7	-	-	330
MAD-2525	M25×1.5/2.0	25	162.5	118.5	22	8	19	101	32	9	-	-	350
MAD-2530	M25×1.5/2.0	30	167.5	118.5	22	8	19	101	32	9	-	-	365
MAD-2725	M27×1.5/3.0	25	162.5	118.5	22	8	19	101	32	9	-	-	403

Dimensions

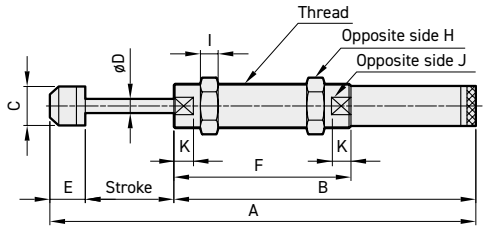
MAD-2540



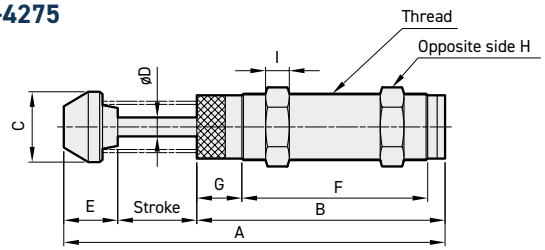
MAD-3625
MAD-3650



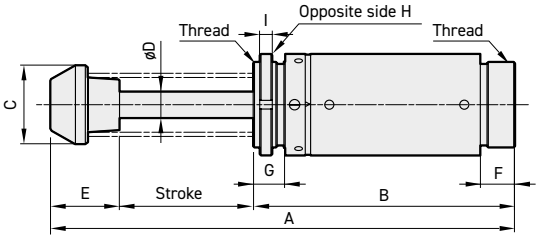
MAD-2550
MAD-2580



MAD-4225
MAD-4250
MAD-4275



MAD-64050
MAD-64100
MAD-64150



Dimensions

Model	Thread	Stroke (mm)	A	B	C	D	E	F	G	H	I	J	K	Weight (g)
MAD-2540	M25×1.5/2.0	40	221.5	144.5	22	8	37	117	10	32	9	-	-	455
MAD-2550	M25×1.5/2.0	50	247	178	22	8	19	100	-	32	9	22.8	11	455
MAD-2580	M25×1.5/2.0	80	343.5	244.5	22	8	19	100	-	32	9	22.8	11	585
MAD-3625	M36×1.5	25	184	133	35.5	10	26	103	10	46	15	-	-	955
MAD-3650	M36×1.5	50	247	171	35.5	10	26	134	17	46	15	-	-	1100
MAD-4225	M42×1.5	25	186.5	127.5	44.5	12	34	88	28.5	50	15	-	-	1280
MAD-4250	M42×1.5	50	241	157	44.5	12	34	117.5	28.5	50	15	-	-	1490
MAD-4275	M42×1.5	75	301.5	187.5	44.5	12	39	148	28.5	50	15	-	-	1710
MAD-64050	M64×2.0	50	247.8	146	59	20	51.8	26	24	76.2	9.4	-	-	4115
MAD-64100	M64×2.0	100	347.8	196	59	20	51.8	26	24	76.2	9.4	-	-	5280
MAD-64150	M64×2.0	150	467.8	256	59	20	61.8	26	24	76.2	9.4	-	-	6785

RCA/ RNA/ RPA SERIES

SENSOR SWITCH

MODEL NO.	DESCRIPTION	UNIT PRICE
RCA-3M	RCA Sensor Switch with 3 metre Cable	£16.58
RCA-5M	RCA Sensor Switch with 5 metre Cable	£18.96
RCA-EQD	RCA Sensor Switch with EQD Lead	£16.47
RNA-3M	RNA Sensor Switch with 3 metre Cable	£33.16
RNA-EQD	RNA Sensor Switch with EQD Lead	£22.72
RPA-3M	RPA Sensor Switch with 3 metre Cable	£23.55
RPA-5M	RPA Sensor Switch with 5 metre Cable	£25.93
RPA-EQD	RPA Sensor Switch with EQD Lead	£39.42

Order example

RCA — □

MODEL
RCA: Reed switch
RNA: NPN
RPA: PNP

WIRE LENGTH
3M: L=3000mm
5M: L=5000mm
EQD: M8, 3 Pin connector

* Special order is available.

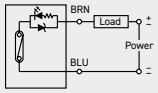
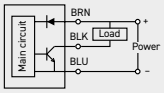
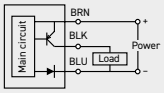
Switch holder / band

HV1

SWITCH HOLDER
HA*: for MCQA, MCQV
HV*: for MCQA, MCQV, MCQV2, MCQV2L, MCBQV, MCBQV2, MCQN

Switch Holder	HV1	HV1	HV2	HV2	HV3	HV3	HV4
	£3.64	£3.64	£4.85	£4.85	£5.47	£5.47	£8.49

Specification

Model	RCA	RNA	RPA
Wiring method	2 wire	3 wire	
Switching logic	SPST N.O.	Solid state output, normally open	
Switch type	Reed switch	NPN current sinking	PNP current sourcing
Operating voltage	5~240V DC/AC	5~30V DC	
Switching current	100mA max.	200mA max.	
Switching rating (*1)	10W max.	6W max.	
Current consumption	–	15 mA@24V DC max.	15 mA@24V DC max.
Voltage drop	3.5V max.	1.5V max.	1.5V max.
Leakage current	–	0.01mA max.	
Indicator	Green LED	Red LED	Green LED
Cable	ø4, 2C, PVC	ø4, 3C, PVC	
Temperature range	-10~+70°C (No freezing)		
Shock (*2)	30G		
Vibration (*3)	9G		
Enclosure classification	IEC 60529 IP67		
Protection circuit (*4)	1	2,3,4	2,3,4
Weight	46 g (2m cable)		
Connect diagram			

*1. Warning: Never exceed rating (watt=voltage×amperage). Permanent damage to sensor will occur.
*2. Sin wave / X.Y.Z. 3 directions / 3 times each direction / 11ms each time.
*3. Double amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X.Y.Z. 3 directions / 1 hour each time.
*4. 1=None / 2=Short-circuit / 3=Power source reverse polarity / 4=Surge suppression

RCI/ RNI/ RPI SERIES

SENSOR SWITCH

MODEL NO.	DESCRIPTION	UNIT PRICE
RCI-3M	RCI Sensor Switch with 3 metre Cable	£18.09
RCI-5M	RCI Sensor Switch with 5 metre Cable	£20.66
RCI-EQD	RCI Sensor Switch with EQD Lead	£20.45
RNI-3M	RNI Sensor Switch with 3 metre Cable	£31.41
RNI-5M	RNI Sensor Switch with 5 metre Cable	£34.86
RNI-QD	RNI Sensor Switch with EQD Lead	£32.92
RPI-3M	RPI Sensor Switch with 3 metre Cable	£31.41
RPI-5M	RPI Sensor Switch with 5 metre Cable	£34.01
RPI-QD	RPI Sensor Switch with EQD Lead	£31.86

Order example

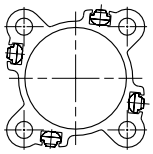
RCI — N — □

MODEL
RCI: Reed Switch
RNI: NPN
RPI: PNP

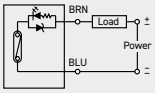
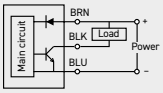
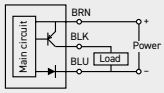
WIRE LENGTH
3M: L=3000mm
5M: L=5000mm
QD: M8, 3 Pin connector
EQD: M8, 3 Pin connect

* Special order is available.

Assembling style

Cylinder type	MCQI2, MCKQI2, MCBQI2, MCJI, MCGI
Mounting clamp	

Specification

Model	RCI	RNI	RPI
Wiring	2 wire	3 wire	
Switching logic	Normal open		
Switch Type	Reed switch	NPN current sinking	PNP current sourcing
Voltage range	5~240V DC/AC	10~30V DC	
Current range	100mA max.	200mA max.	
Contact rating (*1)	10W max.	6W max.	
Current consumption	–	20 mA@24V DC max.	
Voltage drop	3.5V max.	1.5V max.	
Leakage current	–	0.05mA max.	
Indicator	Red LED	Red LED	Yellow LED
Cable	ø3,2C,PUR	ø3,3C,PUR	
Temperature	-10~+70°C (No freezing)		
Shock (*2)	30G	50G	
Vibration (*3)	9G		
Protection classification	IEC 60529 IP67		
Protection circuit (*4)	1	2,3,4	
Weight	23 g (2m cable)		
Connect diagram			

*1. Warning: Never exceed rating (watt=voltage×amperage). Permanent damage to sensor will occur.
*2. Sin wave / X.Y.Z. 3 directions / 3 times each direction / 11ms each time.
*3. Double amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X.Y.Z. 3 directions / 1 hour each time.
*4. 1=None / 2=Short-circuit / 3=Power source reverse polarity / 4=Surge suppression

RCM/ RNM/ RPM SERIES

SENSOR SWITCH

MODEL NO.	DESCRIPTION	UNIT PRICE
RCM-BM-2M-**	Reed Switch With 2 Metre Wire	£18.73
RCM-BM-3M-**	Reed Switch With 3 Metre Wire	£22.92

Order example

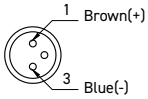
RCM — □ — BM16

- MODEL
  RCM: Reed switch
- WIRE LENGTH
  2M: L=2000mm
  3M: L=3000mm
  QD: M8, 3 Pin connector
  EQD: M8, 3 Pin connector
- SWITCH BAND
  BM
  BMG
- TUBE I.D.
  6, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100

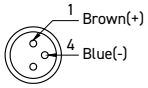
* Special order is available.

Wiring of the QD

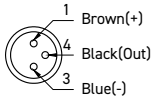
• 2 wire QD wiring



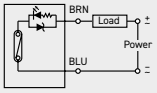
• 2 wire EQD wiring



• 3 wire QD wiring



Specification

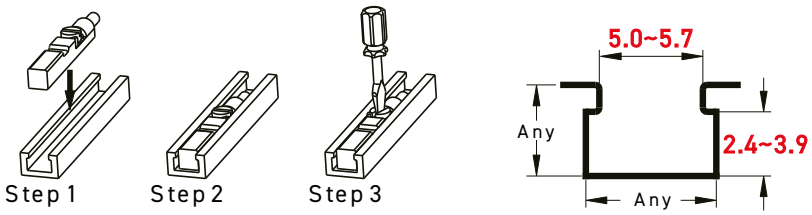
Model	RCM
Wiring method	2 wire
Switching logic	SPST N.O.
Switch Type	Reed switch
Operating voltage	5~240V DC/AC
Switching current	100mA max.
Switching rating (*1)	10W max.
Current consumption	–
Voltage drop	3.5V max.
Leakage current	–
Indicator	Red LED
Cable	ø3.3, 2C, PVC
Temperature range	-10~+70°C (No freezing)
Shock (*2)	30G
Vibration (*3)	9G
Enclosure classification	IEC 60529 IP67
Protection circuit (*4)	1
Weight	33 g (2m cable)
Connect diagram	

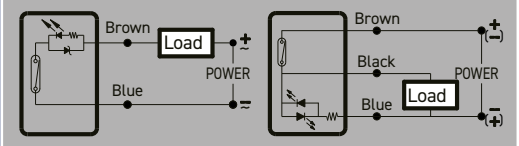
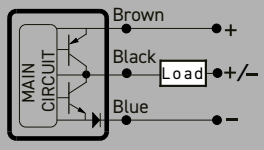
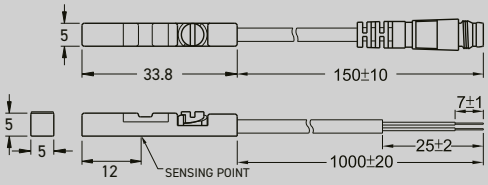
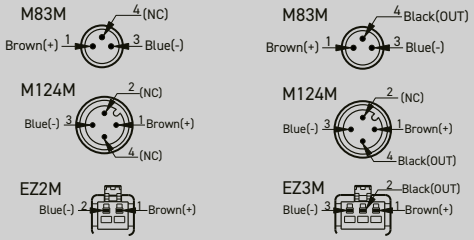
* 1. Warning: Never exceed rating (watt=voltage×amperage). Permanent damage to sensor will occur.
* 2. Sin wave / X.Y.Z. 3 directions / 3 times each direction / 11ms each time.
* 3. Double amplitude 1.5mm/10Hz~55Hz~10Hz(Sweep 1min)/X.Y.Z. 3 directions/1 hour each time.
* 4. 1=None / 2=Short-circuit / 3=Power source reverse polarity / 4=Surge suppression.

AL39 SERIES

SENSOR SWITCH

Magnetic Sensor



Characteristic	AL39-R	AL39-S
Switching Logic	SPST Normally Open	Solid State Output, Normally Open
Sensor Type	Reed Switch	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC
Switching Current	100 mA Max.	100 mA Max.
Switching Rating	10 W Max.	3 W Max.
Current Consumption	—	7.5 mA Max. @ 24V
Voltage Drop	2.5V Max. @ 100mA DC	1 V Max. @ 200 mA DC
Leakage Current	—	0.01 mA Max.
Indicator	Red LED	Red LED
Cable	2.9 , 2C, Grey Oil Resistat PUR	2.9 , 3C, Black Oil Resistat PUR
Sensitivity	35 ~ 45 Gauss	40 ~ 800 Gauss
Switching Frequency	200 Hz	5000 Hz
Temperature range	-10 ~ 70°C	-10 ~ 70°C
Shock	30 G	50 G
Vibration	9 G	9 G
Enclosure Classification	IP 65 (EN60529)	IP 65 (EN60529)
Protection Circuit	—	Power Reverse Polarity; Surge Suppression
CE Certificate NO.	E8N 11 0 4 53334 005	—
3C Certificate NO.	No. : 2 004010305127433	—
CNEx Certificate NO.	CNEx16.2333X(ExnCIICT6GC)	—
Connect Diagram		
	AL-39R AL-39R-QD8 AL-39R-QD12 AL-39R-EZ2M 	M8, M12, EZ QUICK CONNECT 2 wire QD wiring OR (IEC61076-2-101) 3 wire QD wiring 

MODEL NO.	DESCRIPTION	UNIT PRICE
AL-39-R-5M	Reed Switch With 5 Metre Wire	£18.73
AL-39-R-QD	Reed Switch With QD Connector	£22.92
AL-39-S-5M	NPN/PNP Switch With 5 Metre Wire	£29.96
AL-39-S-QD	NPN/PNP Switch With QD Connector	£33.18

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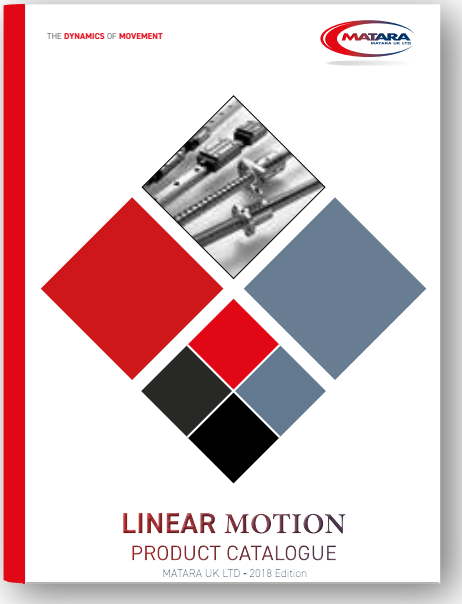
Linear Motion Catalogue



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- *Power Leadscrews*
- *Precision Ball Nuts*
- *Ballscrew End Supports*
- *Large Range Of Linear Rail*
- *Elastomer & Bellow Couplings*

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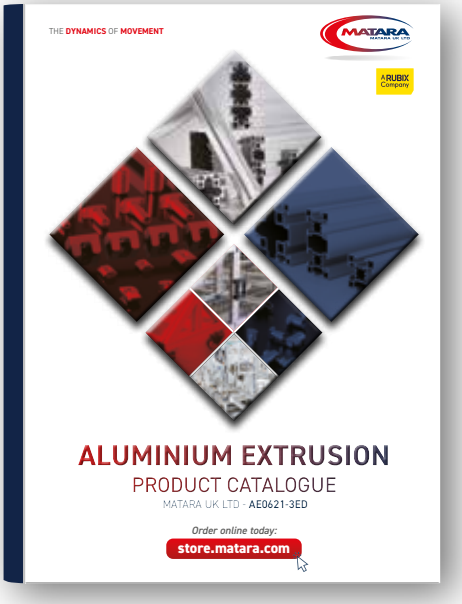
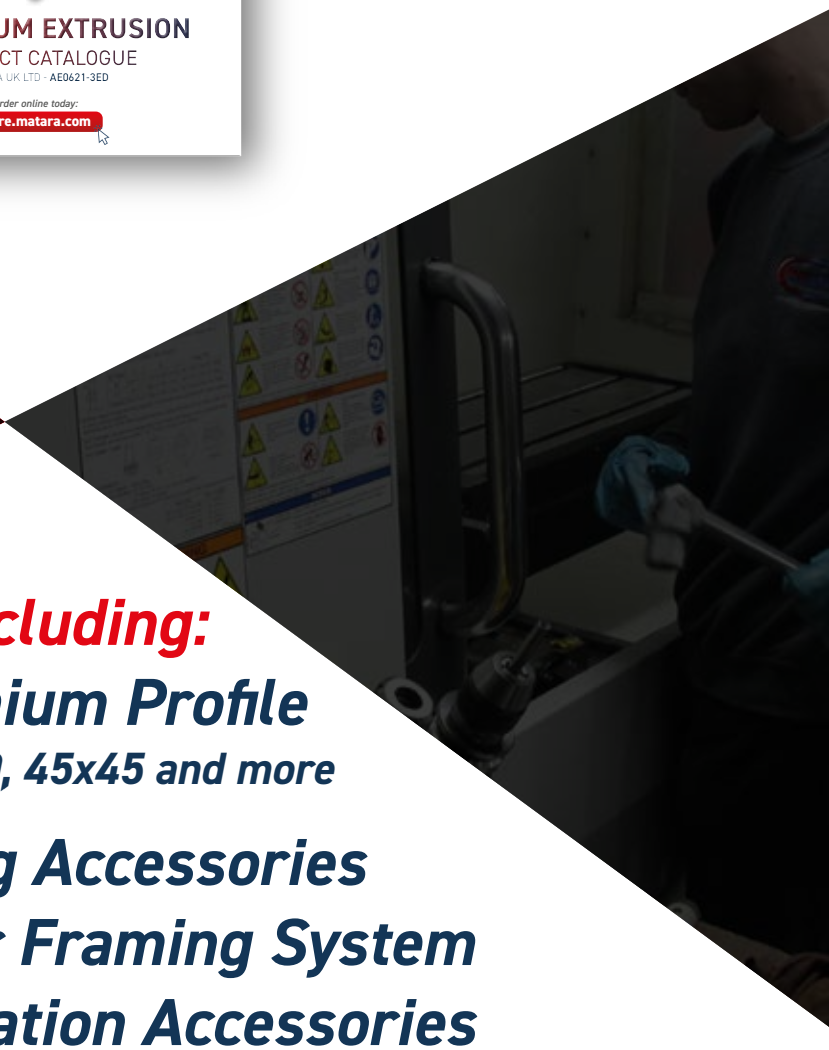
OF **MOVEMENT**

Aluminium Extrusion Catalogue





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- ***Aluminium Profile***
  30x30, 40x40, 45x45 and more
- ***Fastening Accessories***
- ***Lean Tubular Framing System***
- ***Panel Installation Accessories***
- ***Polurethane, MDF and Dibond Panels***

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THE **DYNAMICS** OF **MOVEMENT**