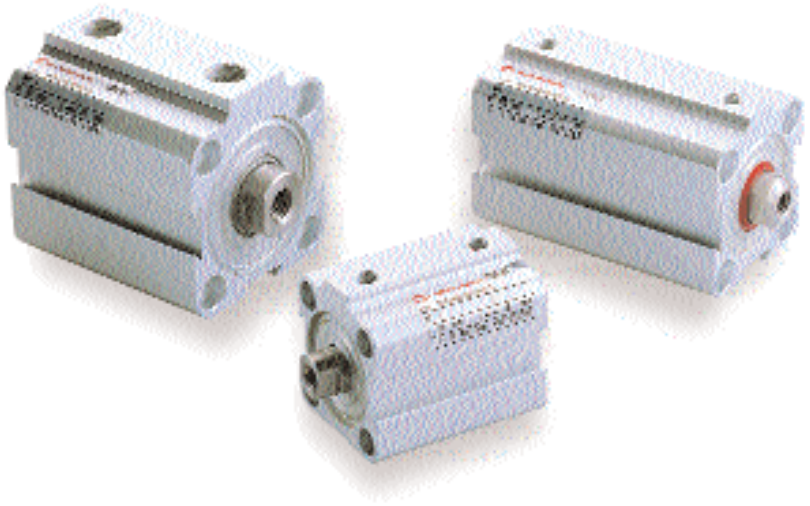
Actuators

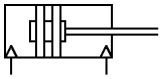
Short stroke cylinders

RM/92000/M

Double acting

Ø 12 to 100 mm





One third the basic length of a corresponding ISO/VDMA model

Low friction, long life seal design

Fully non-corrodible specification

Non-lube operation

Optional non-rotating or guided piston rod

Standard magnetic piston for full control system versatility

Technical data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting, magnetic piston buffer cushioning

Operating pressure:

1 to 10 bar

Operating temperature:

-10°C to +80°C

Consult our Technical Service for use below +2°C

Strokes:

Standard, see table

Non-standard up to

Ø 16 to 25 mm : 200 mm

Ø 32 and 40 mm : 250 mm

Ø 50 to 100 mm : 300 mm

Materials

Barrel & end caps: anodised aluminium alloy

Piston rod: stainless steel (Ø 12 to 40 mm Austenitic, Ø 50 to 100 mm Martensitic)

Seals: polyurethane and/or nitrile rubber

Standard models

Ø	Piston rod Ø	Port size	Magnetic Standard	Guided	Service kit	Magnetic Non-rotating	Service kit
12	6	M5	RM/92012/M/*	–	–	–	–
16	8	M5	RM/92016/M/*	RM/92016/N4/*	–	RM/92016/N2/*	–
20	10	M5	RM/92020/M/*	RM/92020/N4/*	–	RM/92020/N2/*	–
25	12	M5	RM/92025/M/*	RM/92025/N4/*	–	RM/92025/N2/*	–
32	16	G1/8	RM/92032/M/*	RM/92032/N4/*	–	RM/92032/N2/*	–
40	16	G1/8	RM/92040/M/*	RM/92040/N4/*	–	RM/92040/N2/*	–
50	20	G1/8	RM/92050/M/*	RM/92050/N4/*	QM/92050/00	RM/92050/N2/*	QM/92050/N2/00
63	20	G1/4	RM/92063/M/*	RM/92063/N4/*	QM/92063/00	RM/92063/N2/*	QM/92063/N2/00
80	25	G1/4	RM/92080/M/*	RM/92080/N4/*	QM/92080/00	RM/92080/N2/*	QM/92080/N2/00
100	25	G1/4	RM/92100/M/*	RM/92100/N4/*	QM/92100/00	RM/92100/N2/*	QM/92100/N2/00

*Insert stroke length in mm.

Order magnetically operated switches separately, see page 199

Cylinder sizing and speed control see page 6

Standard strokes

Ø	5	10	15	20	25	30	40	50	60	80	100
12	❍	❍	❍	❍	❍	❍					
16	❍	❍	●	❍	●	❍					
20	❍	●	❍	●	●	❍	❍	❍			
25	❍	●	●	●	●	❍	❍	●			
32	❍	●	●	●	●	●	❍	●	●	❍	
40	●	●	●	❍	●	❍	❍	●	❍	❍	
50	❍	❍	❍	❍	●	●	❍	●	❍	●	❍
63	❍	❍	❍	❍	●	❍	❍	●	❍	❍	❍
80			❍	❍	❍	❍	❍	❍	❍	●	❍
100			❍	❍	❍	●	❍	❍	❍	❍	❍

● Indicates stocked stroke lengths of standard models highlighted in table above.

Options selector

★RM/92★★★/★★/★★★

Special variants #	Substitute
Heat resistant seals, 150°C max.	T

#Ø 32 to 100 mm bore.

Cylinder diameters (mm)	Substitute
12	012
16	016
20	020
25	025
32	032
40	040
50	050
63	063
80	080
100	100

Strokes (mm)	
Ø 16 ... 25 mm	max. 200
Ø 32 ... 40 mm	max. 250
Ø 50 ... 100 mm	max. 300

Variants (magnetic piston)	Substitute
Standard	M
Non rotating piston rod	N2
Guided piston rod	N4
Double ended piston rod	JM
Extended piston rod	MU
RM/92***/MU/***/*** → Extension (mm)	

Note: Disregard option positions not used.

For combinations of cylinder variants consult our Technical Service.

Short stroke cylinders

RM/92000/M

Double acting

Ø 12 to 100 mm

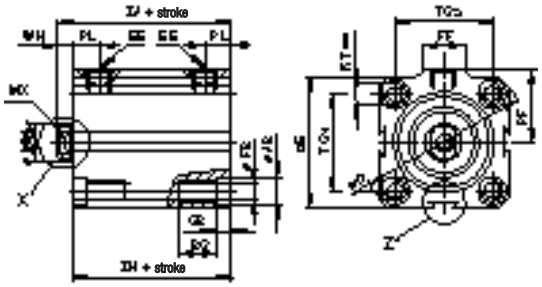
Mountings

Ø	B & G	C	F	Nut	Stud*	Adapter*	Assembly kit
							
12	QM/90012/22	QM/90012/21	QM/57008/25	M/P1500/111	M/P1710/18	–	QM/92012/55
16	QM/90016/22	QM/90016/21	QM/8010/25	M/P1501/80	M/P1710/19	–	QM/92016/55
20	QM/90020/22	QM/90020/21	QM/92020/25	M/P1501/109	M/P1710/20	–	QM/92020/55
25	QM/90025/22	QM/90025/21	QM/57016/25	M/P1501/79	M/P1710/21	–	QM/92025/55
32	QM/90032/22	QM/90032/21	QM/57020/25	M/P1501/60	M/P1710/22	–	QM/92032/55
40	QM/90040/22	QM/90040/21	QM/57020/25	M/P1501/60	M/P1710/22	–	QM/92040/55
50	QM/90050/22	QM/90050/21	QM/57025/25	–	–	M/P71470/1	QM/92050/55
63	QM/90063/22	QM/90063/21	QM/57040/25	–	–	M/P71470/2	QM/92063/55
80	QM/90080/22	QM/90080/21	QM/57063/25	–	–	M/P71470/3	QM/92080/55
100	QM/90100/22	QM/90100/21	QM/57063/25	–	–	M/P71470/3	QM/92100/55

* For attaching F mounting to female piston rod thread. Please see page 45 for details of mountings.

Standard cylinders

RM/92000/M



*** Only the 4 front holes are tapped on stroke lengths of less than:
Ø 25 and 32 mm: 5 mm, Ø 40 and 63 mm: 15 mm (.../N2: 5 mm),
Ø 50 and 80 mm: 10 mm, Ø 100 mm: 25 mm (.../N2: 15 mm).
Note: Ø 12 to 20 mm feature only two side dovetails.

Ø	AF	BG	Ø D	❑ E	EE	Ø FB	FF	GB	Ø JB	KF	Ø MM h9	MX (AF)
12	6	9	32,5	25	M 5	3,3	10	3,5	6	M 3	6	5
16	7	9	36,5	28	M 5	3,3	10	3,5	6	M 4	8	6
20	8	9	41,5	32	M 5	3,3	10	3,5	6	M 5	10	8
25	9	12	48	37	M 5	4,2	10	4,5	7,5	M 6	12	10
32	12	12	58	45	G 1/8	4,2	18	4,5	7,5	M 8	16	13
40	12	16	71,5	55	G 1/8	6,8	18	6,5	10,5	M 8	16	13
50	14	16	81	63	G 1/8	6,8	18	6,5	10,5	M 10	20	17
63	16	20	104	80	G 1/4	8,5	22	8,5	13,5	M 12	20	17
80	22	20	120	94	G 1/4	8,5	22	8,5	13,5	M 16	25	22
100	22	25	148,5	116,5	G 1/4	10,2	22	10,5	16,5	M 16	25	22
Ø	**MX1 (AF)**	**PF**	**PL**	**RT**	**TG1**	**TG2**	**WH**	**ZH**	**ZJ**	**kg at 0 mm**	**kg per 2,5 mm**	
12	–	15	7	M 4	17	13	4,5	24 (34)	28,5 (38,5)	0,06	0,04	
16	6	17	7,5	M 4	20	20	5,5	24,5 (34,5)	30 (40)	0,08	0,04	
20	8	19,5	7,5	M 4	23	23	6	26 (36)	32 (42)	0,10	0,06	
25	10	22	8	M 5	27	27	6,5	28,5 (38,5)	35 (45)	0,15	0,07	
32	13	27,5	9	M 5	33	33	6,5	29 (39)	35,5 (45,5)	0,25	0,12	
40	13	31,5	10	M 8	41	41	6,5	31,5 (41,5)	38 (48)	0,38	0,15	
50	16	37	10,5	M 8	48	48	8	35 (45)	43 (53)	0,45	0,18	
63	16	48	13	M 10	61	61	8	42,5 (52,5)	50,5 (60,5)	0,82	0,26	
80	21	57	14,5	M 10	73	73	9	47 (57)	56 (66)	1,20	0,33	
100	21	67	16	M 12	90,5	90,5	10	48,5 (58,5)	58,5 (68,5)	1,83	0,42	

( ) = for stroke > 50 mm.

Short stroke cylinders

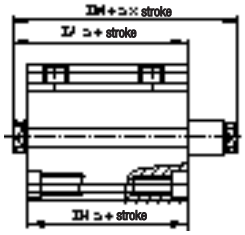
RM/92000/M

Double acting

Ø 12 to 100 mm

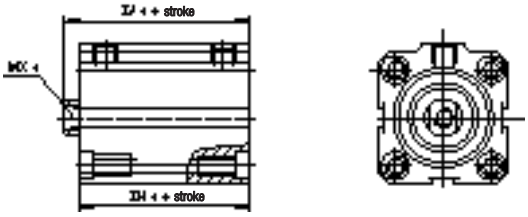
Cylinder variants

RM/92000/JM – Cylinders with double ended piston rod



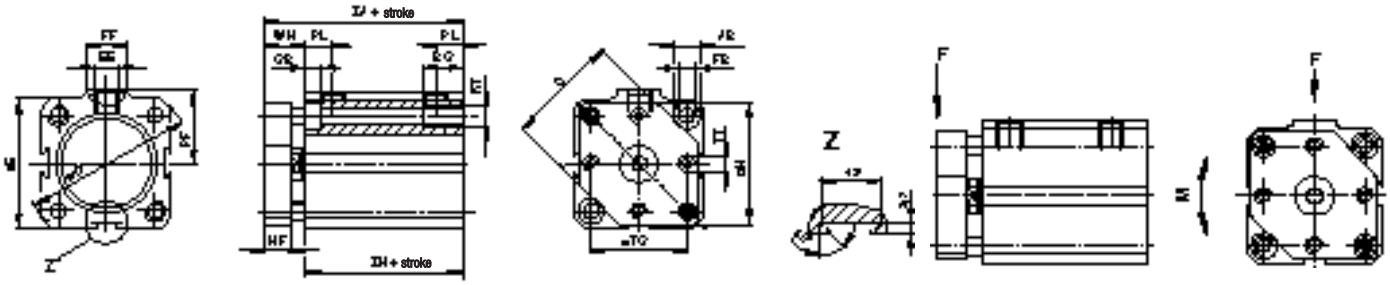
Ø	ZH2	ZJ2	ZM
16	29,5	35	41
20	31,5	37,5	44
25	34,5	41	48
32	36,5	43	50
40	39,5	46	53
50	42	50	59
63	52	60	69
80	56	65	74
100	58	68	78

RM/92000/N2 – Cylinders with non-rotating piston rod



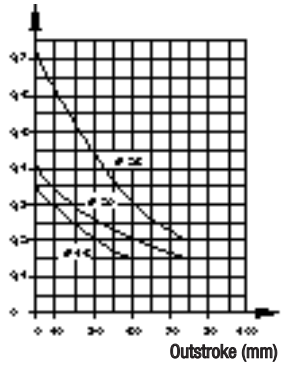
Ø	MX1 (A/F)	ZH1	ZJ1	Torque max. (Nm)
16	6	34,5	40	0,15
20	8	36	42	0,25
25	10	38	45	0,40
32	13	39	45,5	0,75
40	13	41,5	48	0,75
50	16	45	53	1,50
63	16	52,5	60,5	1,50
80	21	57	66	2,50
100	21	58,5	68,5	2,50

RM/92000/N4 – Cylinders with guided piston rod

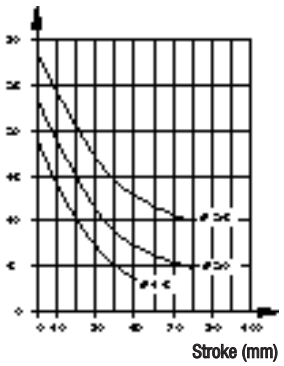


Permissible load and torque

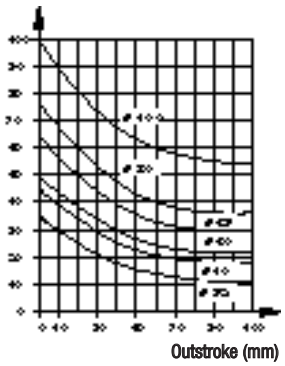
F – Side load (N)



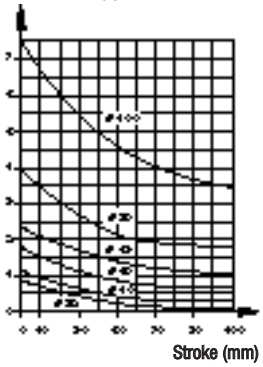
M – Torque (Nm)



F – Side load (N)



F – Side load (N)



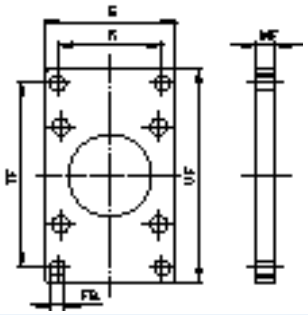
Ø	BG	C	Ø D	□ E	EE	Ø FB	FF	GB	□ H	HF	Ø JB	PF	PL	RT	TG	TT	WH	ZH	ZJ
16	9	21	36,5	28	M 5	3,3	10	3,5	26,5	6	6	17	7,5	M 4	20	M 3	11,5	24,5	36
20	9	25	41,5	32	M 5	3,3	10	3,5	30	8	6	19,5	7,5	M 4	23	M 3	14	26 (36)	40 (50)
25	12	29,5	48	37	M 5	4,2	10	4,5	35	8	7,5	22	8	M 5	27	M 4	14,5	28,5 (38,5)	43 (53)
32	12	38	58	45	G 1/8	4,2	18	4,5	43	10	7,5	27,5	9	M 5	33	M 4	16,5	29 (39)	45,5 (55,5)
40	16	46,5	71,5	55	G 1/8	6,8	18	6,5	52	10	10,5	31,5	10	M 8	41	M 5	16,5	31,5 (41,5)	48 (58)
50	16	56,5	81	63	G 1/8	6,8	18	6,5	60	12	10,5	37	10,5	M 8	48	M 6	20	35 (45)	55 (65)
63	20	71	104	80	G 1/4	8,5	22	8,5	76	12	13,5	48	13	M 10	61	M 8	20	42,5 (52,5)	62,5 (72,5)
80	20	89	120	94	G 1/4	8,5	22	8,5	90	16	13,5	57	14,5	M 10	73	M 10	25	47 (57)	72 (82)
100	25	110	148,5	116,5	G 1/4	10,2	22	10,5	113	20	16,5	67	16	M 12	90,5	M 12	30	48,5 (58,5)	78,5 (88,5)

( ) = for stroke > 50 mm.

Short stroke cylinder mountings

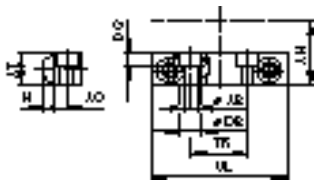
For RM/91000/M, RM/92000/M, RM/93000/M

Front flange – G
Rear flange – B



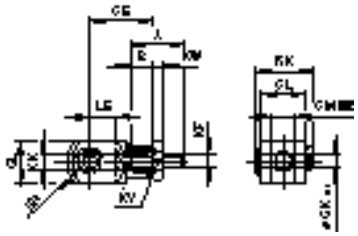
Ø	E	R	Ø FB	MF	TF	UF	kg
12	26	18	3,5	5	38	46	0,02
16	30	22	3,5	5	42	50	0,02
20	33	25	3,5	5	48	56	0,02
25	38	28	4,5	6,5	54	64	0,04
32	46	36	4,5	6,5	66	76	0,06
40	57	43	6,5	9,5	78	92	0,15
50	64	50	6,5	9,5	90	104	0,17
63	81	63	9,5	12,5	110	128	0,33
80	95	77	8,5	12,5	128	146	0,41
100	118	98	11	12,5	156	176	0,72

Foot – C



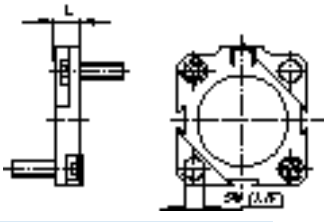
Ø	Ø AB	AH	AO	AT	H	Ø DB	DG	TR	UL	kg
12	3,4	13,5	4	9,5	2	6	3,5	25	33	0,02
16	3,4	15	4	9,5	2	6	3,5	32	40	0,02
20	3,4	16,5	4	9,5	2	6	3,5	35	43	0,02
25	4,3	20	5	12,5	3	7,5	4,5	41	51	0,04
32	4,3	23	5	12,5	3	7,5	4,5	19	46	0,04
40	6,4	28,5	6,5	16	4,5	10,5	6,5	21	56	0,10
50	6,4	32	6,5	16	4,5	10,5	6,5	27	64	0,11
63	8,4	41,5	8	22	5,5	13,5	8,5	34	81	0,13
80	8,4	49	8	25,5	5,5	13,5	8,5	44	95	0,18
100	10,5	59,5	9,	28,5	6,5	16,5	10,5	56	118	0,48

Piston rod clevis – F



Ø	A	B	CE	Ø CK h11	❑ CL	CM B12	ER	KF	KK	KV (A/F)	KW	LE	RK	kg- F	kg - Nut	kg - Stud
12	12	–	11	3 h9	6	3	4,5	M3	M3	6	2	5	10	0,01	0,01	0,01
16	16	–	16	4	8	4	6,5	M4	M4	7	2	8	11,5	0,01	0,01	0,01
20	20	–	20	5	10	5	8	M5	M5	8	2,5	10	14,5	0,01	0,01	0,01
25	25	–	20	5	10	5	8	M6	M6	10	3	10	14,5	0,01	0,01	0,01
32 & 40	25	–	24	6	12	6	9,5	M8	M8	13	4	12	17,5	0,02	0,01	0,01
50	29	12	26	8	14	7	11,5	M10	M10x1,25	12	5	12	20,5	0,04	–	0,02
63	35	15	40	10	20	10	16	M12	M12x1,25	13	5	20	29	0,09	–	0,04
80 &100	45	20	56	14	27	14	21	M16	M16x1,5	17	5	28	36,5	0,22	–	0,08

Assembly kit



Ø	L	SW (A/F)
12	10	7
16	10	7
20	10	7
25	10	8
32	10	8
40	15	13
50	15	13
63	20	17
80	20	17
100	25	19