NORGREN

RM/92000/M

Compact Cylinders
Magnetic Piston
Double Acting
∅ 12 to 100 mm

- **Very compact – approximately one third the basic length of a corresponding ISO model**
- **Entirely manufactured from non-corrodible materials**
- **Magnetic piston as standard provides a wide range of control options**



Technical Data

Medium:
Compressed air, filtered, lubricated or non-lubricated

Operation:
Double acting, non-cushioned and magnetic piston

Operating Pressure:
1 to 10 bar

Operating Temperature:
-5°C* to +80°C
*Consult our Technical Service for use below +2°C

Cylinder Diameters:
12, 16, 20, 25, 32, 40, 50, 63, 80, 100 mm

Standard Strokes (short stroke version):

5, 10 mm	∅ 12 to 63 mm
15, 20, 25, 30 mm	∅ 12 to 100 mm
40, 50 mm	∅ 20 to 100 mm

Standard Strokes (long stroke version):

60, 80 mm	∅ 32 to 100 mm
100 mm	∅ 50 to 100 mm

Non-standard Strokes:
Non-standard strokes available

200 mm max.	∅ 16 to 25 mm
250 mm max.	∅ 32 and 40 mm
300 mm max.	∅ 50 to 100 mm

Materials:
Anodised aluminium alloy barrel and end caps, stainless steel (∅ 12 to 40 mm Austenitic, ∅ 50 to 100 mm Martensitic) piston rod, polyurethane and/or nitrile rubber seals

Alternative Cylinders:
See page N **1.5.**141.02

Ordering Information

To order a basic 80 mm bore cylinder with a 50 mm stroke quote: RM/92080/M/50

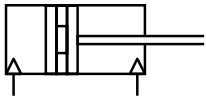
To order a basic 100 mm bore cylinder with a 100 mm stroke quote: RM/92100/M/100

To order mounting brackets refer to appropriate cylinder mounting table.

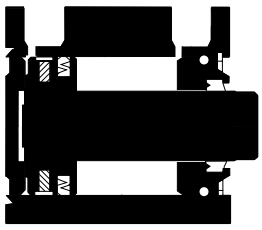
Order magnetically operated switches separately.

Accessories

	See page
Switches M/40, TM/40	N **4.3.**041.01
Switches M/41, M/42	N **4.3.**044.01

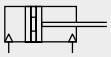
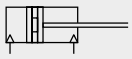
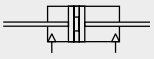
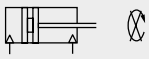


Magnetic piston



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Alternative Cylinders

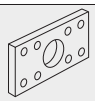
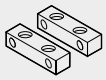
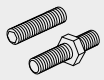
Symbol	Model (magnetic piston)	Description
	TRM/92000/M	Heat resistant seals, 150°C max. (∅ 32 to 100 mm)
	RM/92000/MU	Extended piston rod (max. extended piston rod up to 100 mm)
	RM/92000/JM	Double ended piston rod (∅ 16 to 100 mm) Non-standard strokes available: 5 mm min. ∅ 16 to 40 mm 10 mm min. ∅ 50 to 100 mm Stroke length max., see page N **1.5.**141.01
	RM/92000/N2	Non-rotating piston rod (∅ 16 to 100 mm)
	RM/92000/N4	Guided piston rod (∅ 16 to 100 mm) Non-standard strokes available: 50 mm max. ∅ 16 mm 80 mm max. ∅ 20 and 25 mm 100 mm max. ∅ 32 to 100 mm

For combinations of alternative cylinders consult our Technical Service.

Theoretical Forces • Air Consumption • Torque for Cylinders RM/92000/N2

∅	RM/92000/M Theoretical forces (N) at 6 bar Outstroke	Instroke	RM/92000/M Air consumption (l/cm stroke) Outstroke	Instroke	RM/92000/N2 at 6 bar Model	Torque max. (Nm)
12	68	51	0,008	0,007	-	-
16	121	90	0,014	0,011	RM/92016/N2	0,15
20	188	141	0,022	0,017	RM/92020/N2	0,25
25	295	227	0,035	0,027	RM/92025/N2	0,40
32	483	362	0,056	0,042	RM/92032/N2	0,75
40	754	633	0,088	0,074	RM/92040/N2	0,75
50	1178	990	0,138	0,116	RM/92050/N2	1,50
63	1870	1682	0,218	0,196	RM/92063/N2	1,50
80	3016	2721	0,352	0,318	RM/92080/N2	2,50
100	4712	4418	0,550	0,515	RM/92100/N2	2,50

Weights of Cylinders and Mountings (kg)

∅	RM/92000/M Weight at 0 mm	Weight per 25 mm	RM/92000/N4 Weight at 0 mm	Weight per 25 mm	 Style 'B', 'G'	 Style 'C'	 Style 'F'	 Nut	 Stud or Adaptor	 Assembly kit
12	0,060	0,040	-	-	0,020	0,020	0,010	0,001	0,001	0,020
16	0,080	0,040	0,110	0,050	0,020	0,020	0,010	0,001	0,002	0,022
20	0,100	0,060	0,130	0,070	0,020	0,020	0,010	0,001	0,003	0,026
25	0,150	0,070	0,170	0,100	0,040	0,040	0,010	0,002	0,005	0,035
32	0,250	0,120	0,280	0,130	0,060	0,040	0,020	0,003	0,010	0,045
40	0,380	0,150	0,440	0,150	0,150	0,100	0,020	0,003	0,010	0,120
50	0,450	0,180	0,500	0,200	0,170	0,110	0,040	-	0,020	0,125
63	0,820	0,260	0,900	0,300	0,330	0,130	0,090	-	0,035	0,270
80	1,200	0,330	1,350	0,350	0,410	0,180	0,220	-	0,075	0,290
100	1,830	0,420	2,200	0,600	0,720	0,480	0,220	-	0,075	0,535

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under **'Technical Data'**.

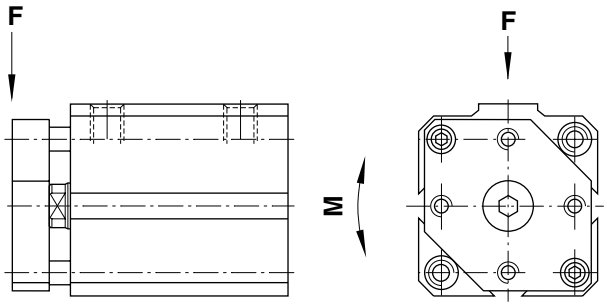
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

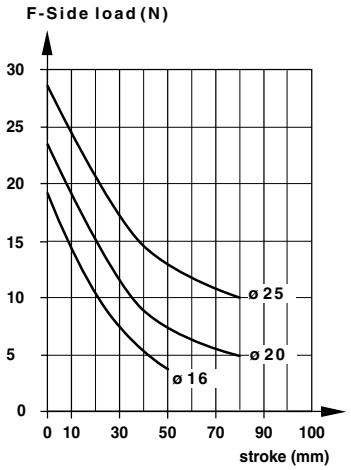
Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

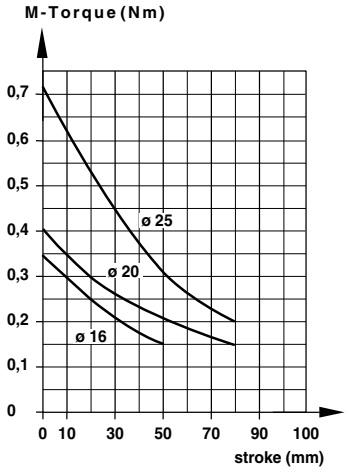
The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

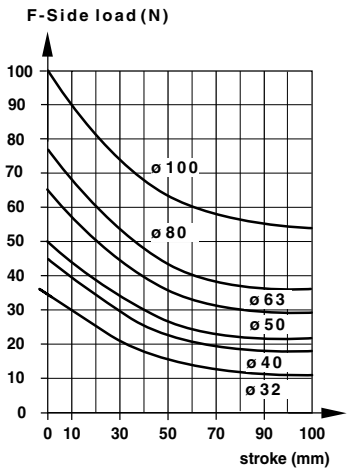
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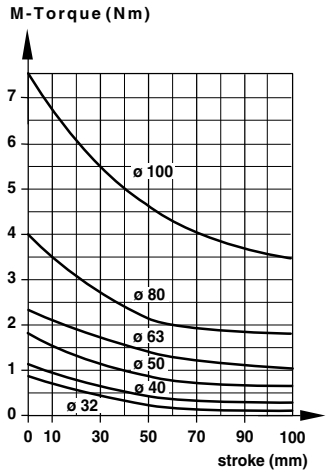
Guided Piston Rod RM/92000/N4
Permissible Load and Torque







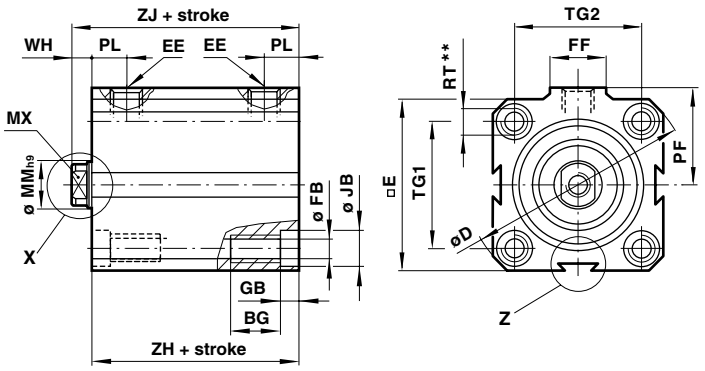




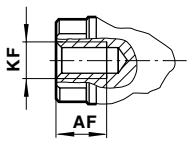
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Basic Dimensions RM/92000/M

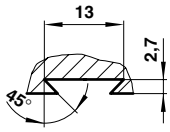
(∅ 12 to 100 mm)



Section X

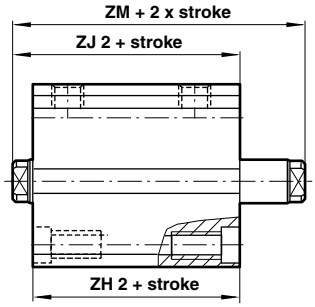


Section Z



Double ended piston rod RM/92000/JM

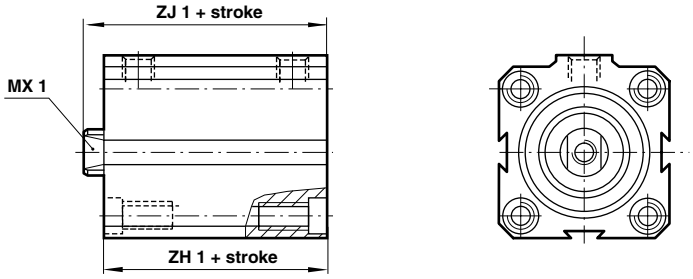
(∅ 16 to 100 mm)



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

Non-rotating piston rod RM/92000/N2

(∅ 16 to 100 mm)

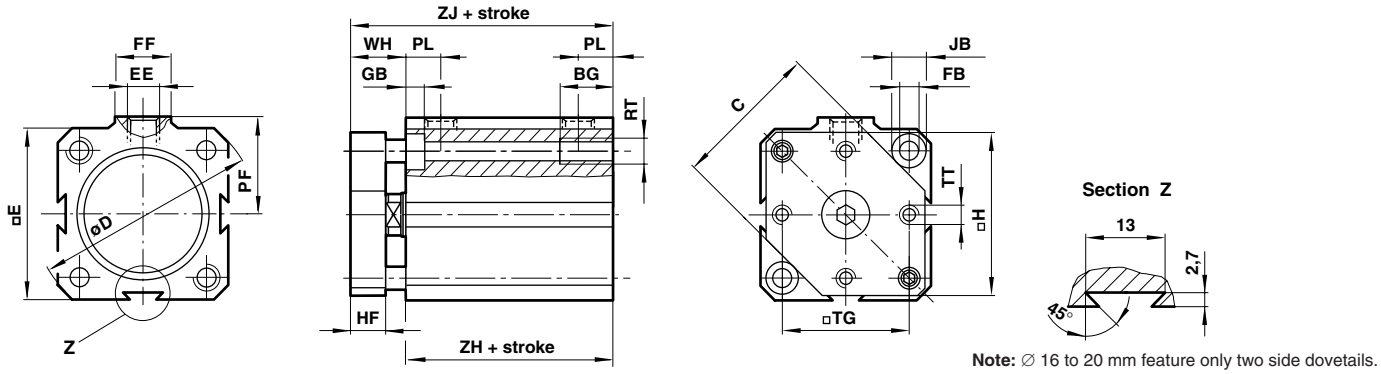


Model	92012	92016	92020	92025	92032	92040	92050	92063	92080	92100
∅	12	16	20	25	32	40	50	63	80	100
AF	6	7	8	9	12	12	14	16	22	22
BG	9	9	9	12	12	16	16	20	20	25
∅ D	32,5	36,5	41,5	48	58	71,5	81	104	120	148,5
❑ E	25	28	32	37	45	55	63	80	94	116,5
EE	M 5	M 5	M 5	M 5	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4
∅ FB	3,3	3,3	3,3	4,2	4,2	6,8	6,8	8,5	8,5	10,2
FF	10	10	10	10	18	18	18	22	22	22
GB	3,5	3,5	3,5	4,5	4,5	6,5	6,5	8,5	8,5	10,5
∅ JB	6	6	6	7,5	7,5	10,5	10,5	13,5	13,5	16,5
KF	M 3	M 4	M 5	M 6	M 8	M 8	M 10	M 12	M 16	M 16
∅ MM h9	6	8	10	12	16	16	20	20	25	25
MX (AF)	5	6	8	10	13	13	17	17	22	22
MX 1 (AF)	-	6	8	10	13	13	16	16	21	21
PF	15	17	19,5	22	27,5	31,5	37	48	57	67
PL	7	7,5	7,5	8	9	10	10,5	13	14,5	16
RT	M 4	M 4	M 4	M 5	M 5	M 8	M 8	M 10	M 10	M 12
TG 1	17	20	23	27	33	41	48	61	73	90,5
TG 2	13	20	23	27	33	41	48	61	73	90,5
WH	4,5	5,5	6	6,5	6,5	6,5	8	8	9	10
ZH	24 (34)	24,5 (34,5)	26 (36)	28,5 (38,5)	29 (39)	31,5 (41,5)	35 (45)	42,5 (52,5)	47 (57)	48,5 (58,5)
ZH 1	-	34,5	36	38,5	39	41,5	45	52,5	57	58,5
ZH 2	-	29,5	31,5	34,5	36,5	39,5	42	52	56	58
ZJ	28,5 (38,5)	30 (40)	32 (42)	35 (45)	35,5 (45,5)	38 (48)	43 (53)	50,5 (60,5)	56 (66)	58,5 (68,5)
ZJ 1	-	40	42	45	45,5	48	53	60,5	66	68,5
ZJ 2	-	35	37,5	41	43	46	50	60	65	68
ZM	-	41	44	48	50	53	59	69	74	78

( ) = for stroke > 50 mm

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RM/92000/N4 Guided Piston Rod

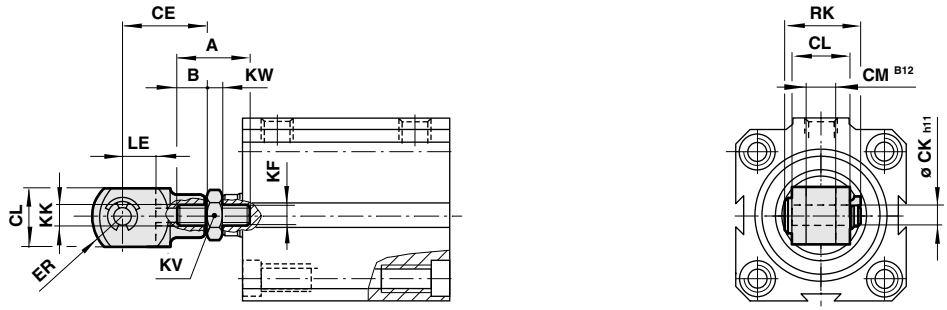


Note: ∅ 16 to 20 mm feature only two side dovetails.

Model	92016	92020	92025	92032	92040	92050	92063	92080	92100
∅	16	20	25	32	40	50	63	80	100
BG	9	9	12	12	16	16	20	20	25
C	21	25	29,5	38	46,5	56,5	71	89	110
∅ D	36,5	41,5	48	58	71,5	81	104	120	148,5
❑ E	28	32	37	45	55	63	80	94	116,5
EE	M 5	M 5	M 5	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4
∅ FB	3,3	3,3	4,2	4,2	6,8	6,8	8,5	8,5	10,2
FF	10	10	10	18	18	18	22	22	22
GB	3,5	3,5	4,5	4,5	6,5	6,5	8,5	8,5	10,5
❑ H	26,5	30	35	43	52	60	76	90	113
HF	6	8	8	10	10	12	12	16	20
∅ JB	6	6	7,5	7,5	10,5	10,5	13,5	13,5	16,5
PF	17	19,5	22	27,5	31,5	37	48	57	67
PL	7,5	7,5	8	9	10	10,5	13	14,5	16
RT	M 4	M 4	M 5	M 5	M 8	M 8	M 10	M 10	M 12
❑ TG	20	23	27	33	41	48	61	73	90,5
TT	M 3	M 3	M 4	M 4	M 5	M 6	M 8	M 10	M 12
WH	11,5	14	14,5	16,5	16,5	20	20	25	30
ZH	24,5	26 (36)	28,5 (38,5)	29 (39)	31,5 (41,5)	35 (45)	42,5 (52,5)	47 (57)	48,5 (58,5)
ZJ	36	40 (50)	43 (53)	45,5 (55,5)	48 (58)	55 (65)	62,5 (72,5)	72 (82)	78,5 (88,5)

( ) = for stroke > 50 mm

Piston Rod Clevis Mounting Style 'F'

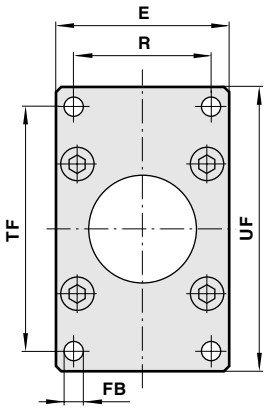


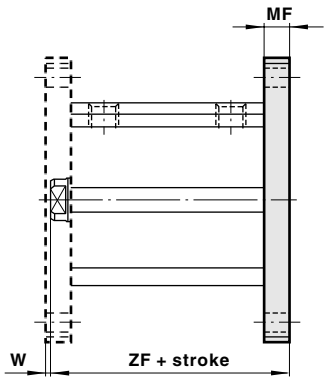
Model 'F'	QM/57008/25	QM/8010/25	QM/92020/25	QM/57016/25	QM/57020/25	QM/57025/25	QM/57040/25	QM/57063/25
Stud	M/P1710/18	M/P1710/19	M/P1710/20	M/P1710/21	M/P1710/22	-	-	-
Nut	M/P1500/111	M/P1501/80	M/P1501/109	M/P1501/79	M/P1501/60	-	-	-
Adaptor	-	-	-	-	-	M/P71470/1	M/P71470/2	M/P71470/3
∅	12	16	20	25	32 and 40	50	63	80 and 100
A	12	16	20	25	25	29	35	45
B	-	-	-	-	-	12	15	20
CE	11	16	20	20	24	26	40	56
∅ CK h11	3 h9	4	5	5	6	8	10	14
❑ CL	6	8	10	10	12	14	20	27
CM B12	3	4	5	5	6	7	10	14
ER	4,5	6,5	8	8	9,5	11,5	16	21
KF	M 3	M 4	M 5	M 6	M 8	M 10	M 12	M 16
KK	M 3	M 4	M 5	M 6	M 8	M 10 x 1,25	M 12 x 1,25	M 16 x 1,5
KV (A/F)	6	7	8	10	13	12	13	17
KW	2	2	2,5	3	4	5	5	5
LE	5	8	10	10	12	12	20	28
RK	10	11,5	14,5	14,5	17,5	20,5	29	36,5

To order a piston rod clevis mounting style 'F' complete: ∅ 12 to 40 mm= Model 'F' plus Stud and Nut, ∅ 50 to 100 mm= Model 'F' plus Adaptor.

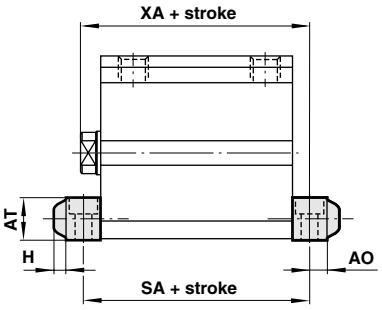
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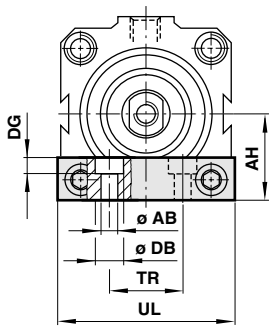
Rear Flange Mounting Style ‘B’
Front Flange Mounting Style ‘G’





Foot Mounting Style ‘C’

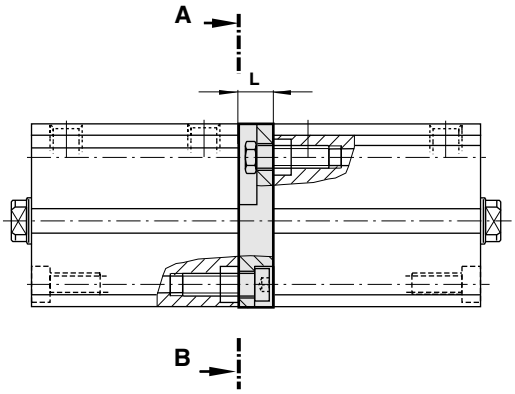




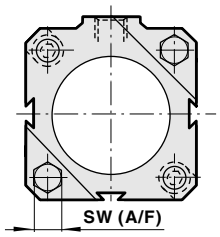
Model ‘B’, ‘G’	QM/90012/22	QM/90016/22	QM/90020/22	QM/90025/22	QM/90032/22	QM/90040/22	QM/90050/22	QM/90063/22	QM/90080/22	QM/90100/22
Model ‘C’	QM/90012/21	QM/90016/21	QM/90020/21	QM/90025/21	QM/90032/21	QM/90040/21	QM/90050/21	QM/90063/21	QM/90080/21	QM/90100/21
∅	12	16	20	25	32	40	50	63	80	100
∅ AB	3,4	3,4	3,4	4,3	4,3	6,4	6,4	8,4	8,4	10,5
AH	13,5	15	16,5	20	23	28,5	32	41,5	49	59,5
AO	4	4	4	5	5	6,5	6,5	8	8	9,5
AT	9,5	9,5	9,5	12,5	12,5	16	16	22	25,5	28,5
∅ DB	6	6	6	7,5	7,5	10,5	10,5	13,5	13,5	16,5
DG	3,5	3,5	3,5	4,5	4,5	6,5	6,5	8,5	8,5	10,5
E	26	30	33	38	46	57	64	81	95	118
H	2	2	2	3	3	4,5	4,5	5,5	5,5	6,5
∅ FB	3,5	3,5	3,5	4,5	4,5	6,5	6,5	8,5	8,5	11
MF	5	5	5	6,5	6,5	9,5	9,5	12,5	12,5	12,5
R	18	22	25	28	36	43	50	63	77	98
TF	38	42	48	54	66	78	90	110	128	156
TR	25	32	35	41	19	21	27	34	44	56
UF	46	50	56	64	76	92	104	128	146	176
UL	33	40	43	51	46	56	64	81	95	118
W	- 0,5	0,5	1	0	0	- 3	- 1	- 4,5	- 3,5	- 2,5
ZF	33,5	35 (45)	37 (47)	41,5 (51,5)	42 (52)	47,5 (57,5)	52,5 (62,5)	63,5 (73,5)	68,5 (78,5)	71,5 (81,5)
SA	32	32,5 (42,5)	34 (44)	38 (48)	38,5 (48,5)	44,5 (54,5)	47,5 (57,5)	58,5 (68,5)	62,5 (72,5)	67,5 (77,5)
XA	32,5	34 (44)	36 (46)	39,5 (49,5)	40 (50)	44,5 (54,5)	49 (59)	58,5 (68,5)	64 (74)	68 (78)

Note: Dimension ‘W’ negative figures indicate that the piston rod is proud of the mounting face.
( ) = for stroke > 50 mm and non-rotating piston rod cylinders RM/92000/N2

Assembly kit



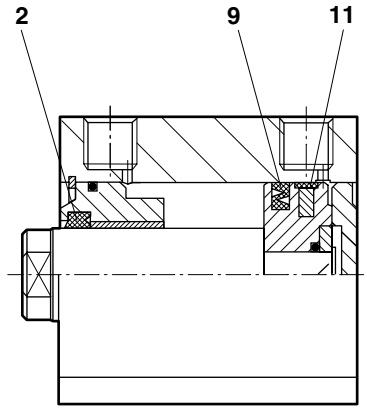
Section **A - B**



Assembly kit	QM/92012/55	QM/92016/55	QM/92020/55	QM/92025/55	QM/92032/55	QM/92040/55	QM/92050/55	QM/92063/55	QM/92080/55	QM/92100/55
∅	12	16	20	25	32	40	50	63	80	100
L	10	10	10	10	10	15	15	20	20	25
SW (A/F)	7	7	7	8	8	13	13	17	17	19

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Spares



Model	Spares kit	Comprising Item	Description	Quantity
RM/92050/M	QM/92050/00	2	Piston rod seal	1
RM/92063/M	QM/92063/0	9	Piston seal	1
RM/92080/M	QM/92080/00	11	Wear ring	1
RM/92100/M	QM/92100/00		Grease	1

Note: Please quote the cylinder number when ordering spare parts. Spares are not available for ∅ 12 to 40 mm models.

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