

Conforms to ISO 21287

Magnetic piston as standard

Low friction, long life seals

Switches can be mounted flush with the profile



Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

RA/192000/M
Double acting, magnetic piston, male piston rod thread, buffer cushioning
RA/192000/MX
Double acting, magnetic piston, female piston rod thread, buffer cushioning

Operating pressure:

29 to 145 psi (2 to 10 bar)

Operating temperature:

14°F to 176°F (-10°C to +80°C) max.

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

Materials

Profile barrel: anodised aluminum
End covers: pressure diecast aluminum
Piston rod: stainless steel
Piston rod seals: polyurethane
Piston seals: nitrile rubber
O-rings: nitrile rubber

Standard models

Ø	Piston rod Ø	Port size	Models Female thread	Male thread	Accessories Reed switch with integral 5m cable	Banjo flow control	Straight fitting Tube diameter in bold	Elbow fitting	Service kit
									
20	10	M5	RA/192020/MX/*	RA/192020/M/*	M/50/LSU/5V	C0K510405	C02250405	C02470405	QM/192020/00
25	10	M5	RA/192025/MX/*	RA/192025/M/*	M/50/LSU/5V	C0K510405	C02250405	C02470405	QM/192025/00
32	12	G1/8	RA/192032/MX/*	RA/192032/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192032/00
40	16	G1/8	RA/192040/MX/*	RA/192040/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192040/00
50	20	G1/8	RA/192050/MX/*	RA/192050/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192050/00
63	20	G1/8	RA/192063/MX/*	RA/192063/M/*	M/50/LSU/5V	C0K510618	C02250618	C02470618	QM/192063/00
80	25	G1/8	RA/192080/MX/*	RA/192080/M/*	M/50/LSU/5V	C0K510818	C02250818	C02470818	QM/192080/00
100	25	G1/8	RA/192100/MX/*	RA/192100/M/*	M/50/LSU/5V	C0K510818	C02250818	C02470818	QM/192100/00
125	32	G1/4	RA/192125/MX/*	RA/192125/M/*	M/50/LSU/5V	C0K510828	C02250828	C02470828	QM/192125/00

*Insert stroke length in mm

Standard strokes

Ø	5	10	15	20	25	30	40	50	60	80	100
20	•	•	•	•	•	•	•	•			
25	•	•	•	•	•	•	•	•			
32	•	•	•	•	•	•	•	•			
40	•	•	•	•	•	•	•	•	•	•	•
50		•	•	•	•	•	•	•	•	•	•
63		•	•	•	•	•	•	•	•	•	•
80			•	•	•	•	•	•	•	•	•
100				•	•	•	•	•	•	•	•
125					•	•	•	•	•	•	•

Options selector

★★A/192★★★/★★★/★★★

Special variants	Substitute
High temperature version: 302°F (150°C) max.	T

Piston rod materials	Substitute
Non-chrome plated stainless steel	R

Cylinder diameters (mm)	Substitute
20	020
25	025
32	032
40	040
50	050
63	063
80	080
100	100
125	125

Note: If option is not required, disregard option position within part number eg. RA/192100/M/100. For combinations of cylinder variants consult our technical service.

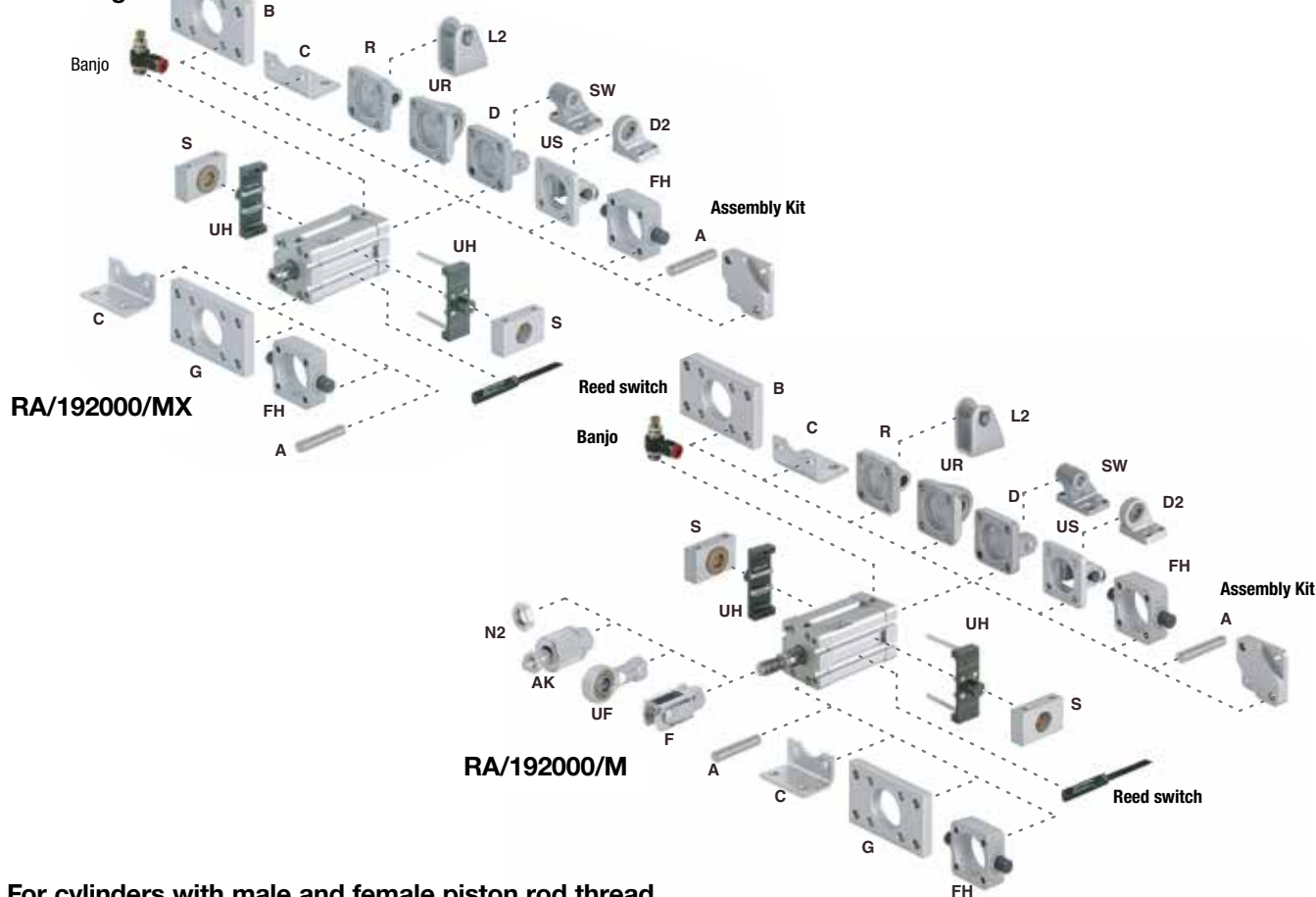
Please note that heat resistant seals are not available for all variants.

This options selector explains only the cylinder variants.

Strokes (mm)		
Ø 20 and 25	min. 5	max. 200
Ø 32 and 40	min. 5	max. 300
Ø 50 and 63	min. 10	max. 400
Ø 80 ... 125	min. 15	max. 500

Piston rod thread	Substitute
Female	X
Male	None

Variants (magnetic piston)	Substitute
Standard	M
Double ended piston rod	JM
Non-rotating piston rod (internal)	N2
Guiding	N4
Special wiper/seal	W2
Locking unit	L4
External guiding	N6
Extended piston rod	MU
RA/192***/MU*/***/****	→ Extension (mm)
low friction	X4
Tandem cylinder	TM
Multi-positon cylinder	SM
RA/192***/SM*/***/****	→ Rear cylinder stroke
	→ Front cylinder stroke

Mountings

For cylinders with male and female piston rod thread

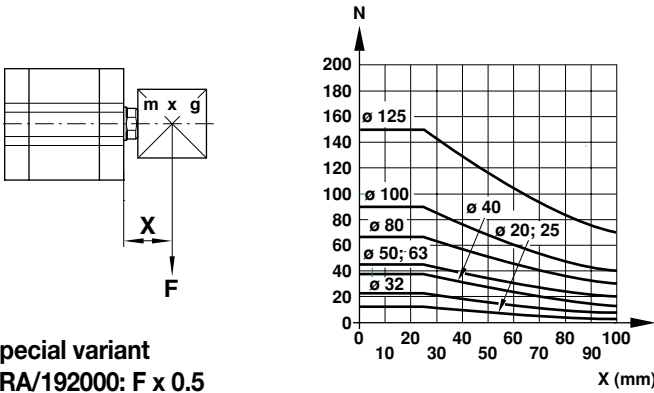
Ø	A	B, G	C	D	D2	FH	L2
20	–	QA/192020/22	QM/192020/21	–	–	–	QM/8020/44
25	–	QA/192025/22	QM/192025/21	–	–	–	QM/8020/44
32	QM/8032/35	QA/8032/22	QA/192032/21	QA/8032/23	QA/8032/42	QA/8032/34	–
40	QM/8032/35	QA/8040/22	QA/192040/21	QA/8040/23	QA/8040/42	QA/8040/34	–
50	QM/8050/35	QA/8050/22	QA/192050/21	QA/8050/23	QA/8050/42	QA/8050/34	–
63	QM/8050/35	QA/8063/22	QA/192063/21	QA/8063/23	QA/8063/42	QA/8063/34	–
80	QM/8080/35	QA/8080/22	QA/192080/21	QA/8080/23	QA/8080/42	QA/8080/34	–
100	QM/8080/35	QA/8100/22	QA/192100/21	QA/8100/23	QA/8100/42	QA/8100/34	–
125	QM/8125/35	QA/8125/22	QM/8125/21	QM/8125/23	QA/8125/42	QA/8125/34	–
Ø	R	S	SW	UH	UR	US	Assembly Kit
20	QM/192020/27	–	–	–	–	–	QA/192020/55
25	QM/192025/27	–	–	–	–	–	QA/192025/55
32	QA/8032/27	QA/8032/41	M/P19493	PQA/182032/40	QA/8032/33	M/P40310	QA/192032/55
40	QA/8040/27	QA/8040/41	M/P19494	PQA/182040/40	QA/8040/33	M/P40311	QA/192040/55
50	QA/8050/27	QA/8040/41	M/P19495	PQA/182050/40	QA/8050/33	M/P40312	QA/192050/55
63	QA/8063/27	QA/8063/41	M/P19496	PQA/182063/40	QA/8063/33	M/P40313	QA/192063/55
80	QA/8080/27	QA/8063/41	M/P19497	PQA/182080/40	QA/8080/33	M/P40314	QA/192080/55
100	QA/8100/27	QA/8100/41	M/P19498	PQA/182100/40	QA/8100/33	M/P40315	QA/192100/55
125	QM/8125/27	QA/8100/41	M/P19499	PQA/182125/40	QM/8125/33	M/P71355	QA/192125/55

For cylinders with male piston rod thread

Ø	AK	F	N2	UF
20	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
25	QM/8020/38	QM/8020/25	M/P1501/60	QM/8020/32
32	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
40	QM/8025/38	QM/8025/25	M/P1501/89	QM/8025/32
50	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32
63	QM/8040/38	QM/8040/25	M/P1501/90	QM/8040/32
80	QM/8050/38	QM/8050/25	M/P1501/91	QM/8050/32
100	QM/8050/38	QM/8050/25	M/P1501/91	QM/8050/32
125	QM/8125/38	QM/8125/25	M/P1501/105	QM/8125/32

For mounting dimensions see ISO Mountings and Accessories section

RA/192000/M.
RA/192000/N2. – Cylinder with non-rotating piston rod
 Side load



Special variant
 TRA/192000: F x 0.5

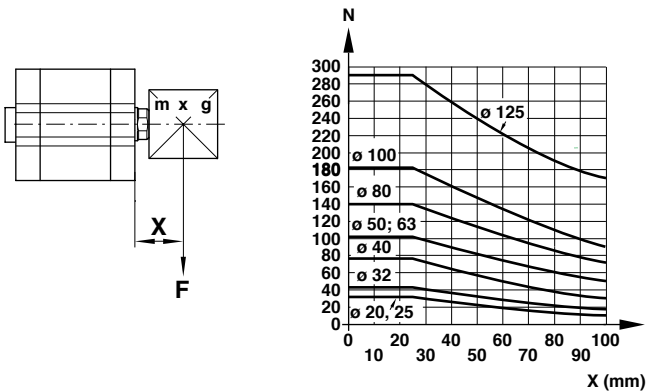
For RA/192000/M.

Ø	Energy (J) max.
20	0.2
25	0.3
32	0.45
40	0.75
50	1.1
63	1.3
80	1.9
100	2.3
125	3.0

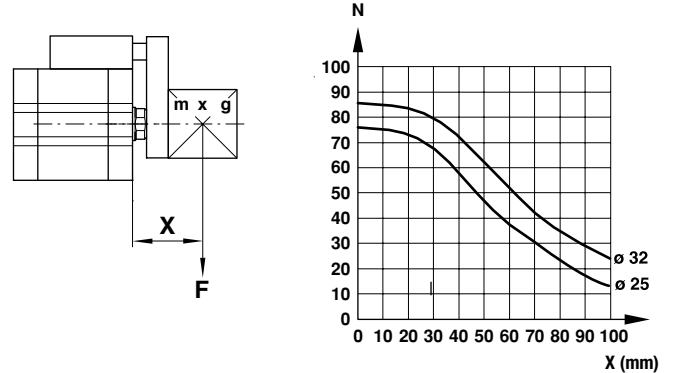
For RA/192000/N2

Models	Ø	Torque max. (Nm)
DA/192020/N2	20	0.15
DA/192025/N2	25	0.25
DA/192032/N2	32	0.40
DA/192040/N2	40	0.75
DA/192050/N2	50	1.5
DA/192063/N2	63	1.5
DA/192080/N2	80	2.5
DA/192100/N2	100	2.5

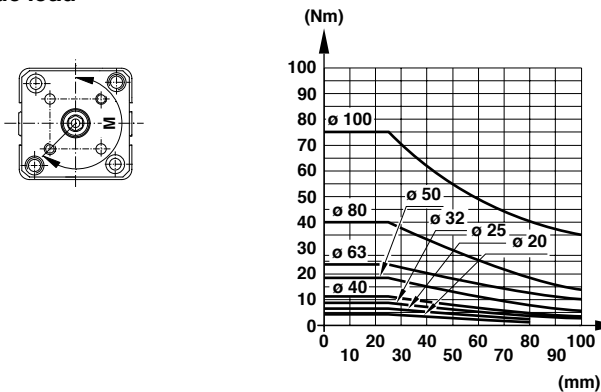
RA/192000/JM – Cylinder with double ended piston rod
 Side load



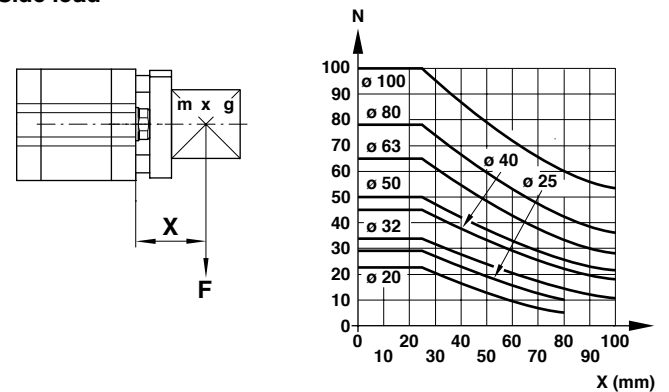
RA/192000/N6 – Cylinder with external guiding
 Side load

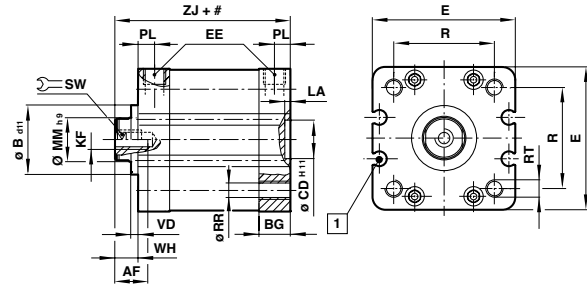


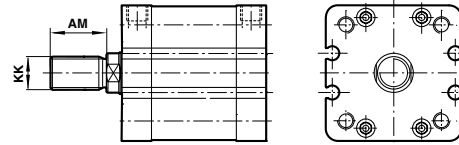
RA/192000/N4 – Cylinder with guiding
 Side load



Side load

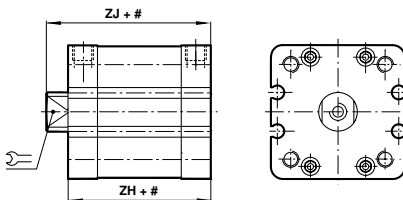
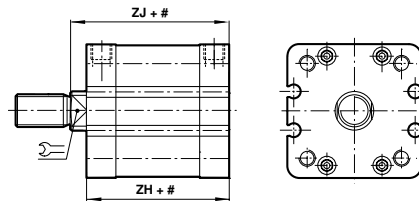


Basic dimensions
RA/192000/MX
With female piston rod thread

1 M/50 switches can be mounted flush with the profile

RA/192000/M
With male piston rod thread


Stroke

Models	Ø	AF	AM	Ø B _{R11}	BG	Ø CR ^{***}	□ E	EE	KF	KK	LA	Ø MM _{h9}
RA/192020/.	20	10	16	—	12	10	37	M 5	M6	M8x1.25	2.5	10
RA/192025/.	25	10	16	—	13	10	41	M 5	M6	M8x1.25	2.5	10
RA/192032/.	32	12	19	—	14.5	14	48	G 1/8	M8	M10x1.25	2.5	12
RA/192040/.	40	12	19	—	14.5	14	54.5	G 1/8	M8	M10x1.25	2.5	16
RA/192050/.	50	16	22	—	14	18	66	G 1/8	M10	M12x1.25	2.5	20
RA/192063/.	63	16	22	—	14	18	76	G 1/8	M10	M12x1.25	2.5	20
RA/192080/.	80	20	28	—	15.5	23	96	G 1/8	M12	M16x1.5	3	25
RA/192100/.	100	20	28	—	21.5	26	116	G 1/8	M12	M16x1.5	3	25
RA/192125/.	125	30	54	60	20.5	28	142	G 1/4	M20	M27x2	3	32
Models	Ø	PL	□ R	Ø RR	RT	SW	VR	WH	ZJ	at 0 mm	per 5 mm	
RA/192020/.	20	7	22	4.3	M5	8	—	6	43	0.26 lb	0.02 lb	
RA/192025/.	25	7	26	4.3	M5	8	—	6	45	0.33 lb	0.02 lb	
RA/192032/.	32	7.5	32.5	5.3	M6	10	—	7	51	0.51 lb	0.04 lb	
RA/192040/.	40	7.5	38	5.3	M6	13	—	7	52	0.66 lb	0.04 lb	
RA/192050/.	50	7.5	46.5	6.8	M8	17	—	8	53	1.01 lb	0.07 lb	
RA/192063/.	63	7.5	56.5	6.8	M8	17	—	8	57	1.54 lb	0.07 lb	
RA/192080/.	80	7.5	72	8.6	M10	22	—	10	64	2.71 lb	0.09 lb	
RA/192100/.	100	10.5	89	8.6	M10	22	—	10	77	4.85 lb	0.11 lb	
RA/192125/.	125	10.5	110	10.6	M12	27	4	18	89	7.94 lb	0.15 lb	

Cylinder variants
RA/192000/N2X – Cylinder with non-rotating piston rod

RA/192000/N2 – Cylinder with non-rotating piston rod


Models	Ø	ZH	ZJ	at 0 mm	per 5 mm
RA/192020/N2.	20	8	47	0.26 lb	0.02 lb
RA/192025/N2.	25	8	49	0.33 lb	0.02 lb
RA/192032/N2.	32	10	54	0.51 lb	0.04 lb
RA/192040/N2.	40	13	55	0.66 lb	0.04 lb
RA/192050/N2.	50	16	55	1.01 lb	0.07 lb
RA/192063/N2.	63	16	59	1.54 lb	0.07 lb
RA/192080/N2.	80	21	64	2.72 lb	0.09 lb
RA/192100/N2.	100	21	77	4.85 lb	0.11 lb

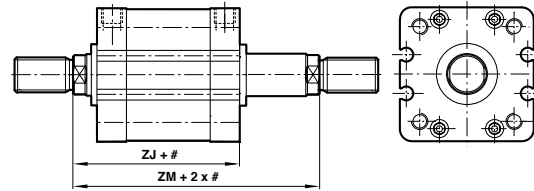
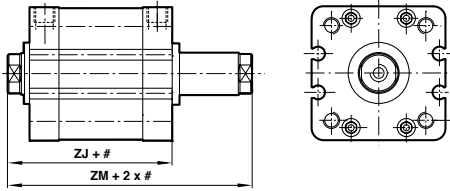
Stroke

Note: The basic length of the RA/192000/N2 version is slightly longer than the standard

Dimensions in mm

RA/192000/JMX – Cylinder with double ended piston rod

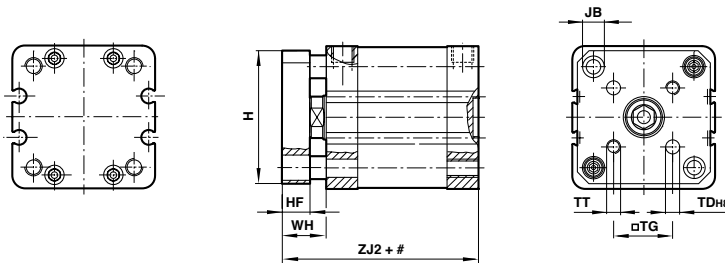
RA/192000/JM – Cylinder with double ended piston rod



Stroke

Models	Ø	ZJ	ZM	at 0 mm	per 5 mm
RA/192020/JM.	20	43	49	0.33 lb	0.02 lb
RA/192025/JM.	25	45	51	0.40 lb	0.02 lb
RA/192032/JM.	32	51	58	0.62 lb	0.04 lb
RA/192040/JM.	40	52	59	0.77 lb	0.04 lb
RA/192050/JM.	50	53	61	1.15 lb	0.07 lb
RA/192063/JM.	63	57	65	1.68 lb	0.07 lb
RA/192080/JM.	80	64	74	2.87 lb	0.09 lb
RA/192100/JM.	100	77	87	5.07 lb	0.11 lb
RA/192125/JM.	125	89	107	8.27 lb	0.15 lb

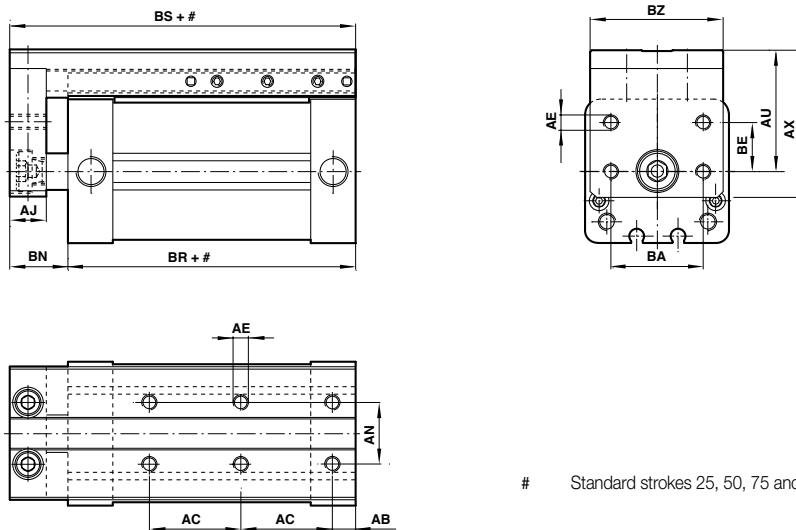
RA/192000/N4 – Cylinder with guiding



Stroke

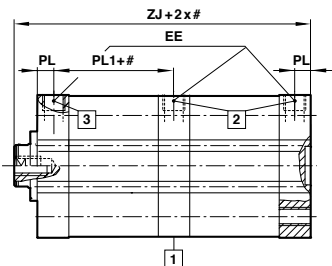
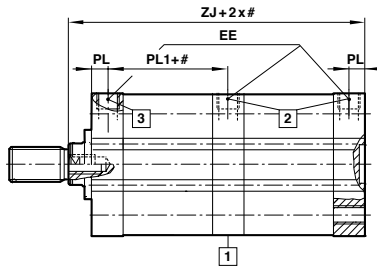
Models	Ø	H	HF	Ø JB	Ø TRH8	□ TG	TT	WH	ZJ2	at 0 mm	per 5 mm
RA/192020/N4	20	34	8	7.5	4	12	M4	14	51	0.37 lb	0.02 lb
RA/192025/N4	25	38	8	7.5	5	15.6	M5	14	53	0.51 lb	0.02 lb
RA/192032/N4	32	45	10	9	5	19.8	M5	17	61	0.73 lb	0.04 lb
RA/192040/N4	40	51	10	9	5	23.3	M5	17	62	0.99 lb	0.04 lb
RA/192050/N4	50	62.5	12	11	6	29.7	M6	20	65	1.43 lb	0.07 lb
RA/192063/N4	63	72	12	11	6	35.4	M6	20	69	2.09 lb	0.07 lb
RA/192080/N4	80	92	15	15	8	46	M8	25	79	3.75 lb	0.09 lb
RA/192100/N4	100	112	15	15	10	56.5	M10	25	92	6.83 lb	0.11 lb

Dimensions in mm

RA/192000/N6 – Cylinder with external guiding


Standard strokes 25, 50, 75 and 100 mm only

Models	Ø	AB	AC	AE	AJ	AN	AU	AX	BA	BE	BN	BR	BS	BZ	at 0 mm	per 5 mm
RA/192025/N6	25	7.5	30	M5	12	20	37.5	44	30	16	18	39	57	43.5	0.68 lb	0.20 lb
RA/192032/N6	32	7.5	30	M5	12	20	40.5	48.5	30	16	19	44	63	43.5	0.97 lb	0.26 lb

RA/192000/TMX – Tandem cylinder with female piston rod thread

RA/192000/TM – Tandem cylinder with male piston rod thread


Models	Ø	EE	PL	PL1	ZJ	at 0 mm	per 5 mm
RA/192020/TM.	20	M5	7	25.5	68	0.46 lb	0.02 lb
RA/192025/TM.	25	M5	7	26.5	71	0.57 lb	0.02 lb
RA/192032/TM.	32	G 1/8	7.5	30	81	0.86 lb	0.04 lb
RA/192040/TM.	40	G 1/8	7.5	31	83	1.12 lb	0.04 lb
RA/192050/TM.	50	G 1/8	7.5	31	85	1.72 lb	0.07 lb
RA/192063/TM.	63	G 1/8	7.5	36	94	2.67 lb	0.07 lb
RA/192080/TM.	80	G 1/8	7.5	40	104	4.65 lb	0.09 lb
RA/192100/TM.	100	G 1/8	10.5	45.5	122	8.11 lb	0.11 lb

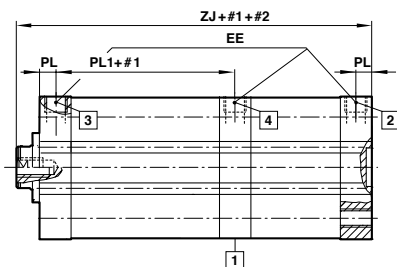
1 Exhaust port Note: Do not cover this area!

Stroke

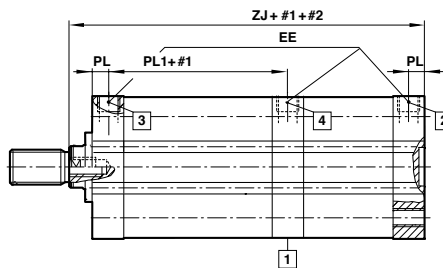
2 Pressure »outstroke«

3 Pressure »instroke«

RA/192000/SMX – Multi position cylinder
 with female piston rod thread



RA/192000/SM – Multi position cylinder
 with male piston rod thread

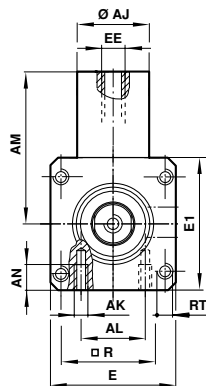
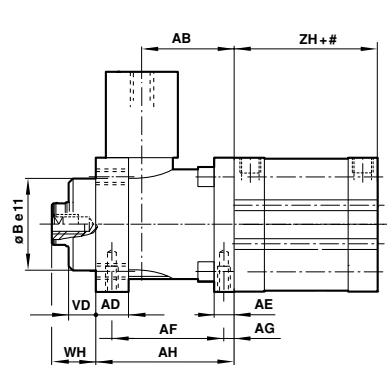


Models	Ø	EE	PL	PL1	ZJ	at 0 mm	per 5 mm
RA/192020/SM.	20	M5	7	25.5	68	0.46 lb	0.02 lb
RA/192025/SM.	25	M5	7	26.5	71	0.57 lb	0.02 lb
RA/192032/SM.	32	G 1/8	7.5	30	81	0.86 lb	0.04 lb
RA/192040/SM.	40	G 1/8	7.5	31	83	1.12 lb	0.04 lb
RA/192050/SM.	50	G 1/8	7.5	31	85	1.72 lb	0.07 lb
RA/192063/SM.	63	G 1/8	7.5	36	94	2.67 lb	0.07 lb
RA/192080/SM.	80	G 1/8	7.5	40	104	4.65 lb	0.09 lb
RA/192100/SM.	100	G 1/8	10.5	45.5	122	8.11 lb	0.11 lb

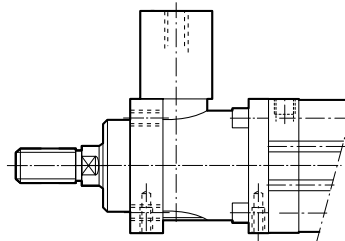
- 1 Exhaust port Note: Do not cover this area!
 - 2 Pressure »outstroke« rear cylinder
 - 3 Pressure »instroke«
 - 4 Pressure »outstroke« front cylinder
- #1 Stroke front cylinder
 #2 Stroke rear cylinder

Note: Stroke (#1) > stroke (#2)

RA/192000/L4X – Cylinder with locking unit
 female piston rod thread



RA/192000/L4 – Cylinder with locking unit
 male piston rod thread



Stroke

Models	Ø	AB	AR	AE	AF	AG	AH	Ø AJ	AK	AL	AM	AN	B e11
RA/192032/L4X	32	32	12	8	40	4.2	48	25	M 5	16	49	8	30
RA/192040/L4X	40	35.5	12	10	46	4.5	55	24	M 5	21	61.5	10	35
RA/192050/L4X	50	49	16	15	54	11.5	70	30	M 6	24	75	12	40
RA/192063/L4X	63	49	15	15	55	7.5	70	38	M 8	32	86	12	45
RA/192080/L4X	80	62	16	16	70	10	90	53	M 8	44	119	16	45
RA/192100/L4X	100	65	18	16	70	10	92	48	M 8	60	119	16	55
RA/192125/L4X	125	85	27	25	95	11	122	65	M 10	75	140	20	60

Models	Ø	E	E 1	EE	R	RT	VR	WH	ZH	Locking forces	at 0 mm	per 5 mm
RA/192032/L4X	32	48	50	M 5	32.5	M 6	10	16	44	600 N	1.17 lb	0.04 lb
RA/192040/L4X	40	56	58	G 1/8	38	M 6	10	18	45	1000 N	1.54 lb	0.04 lb
RA/192050/L4X	50	68	70	G 1/8	46.5	M 8	12	22	45	1500 N	2.78 lb	0.07 lb
RA/192063/L4X	63	82	85	G 1/8	56.5	M 8	12	20	49	2200 N	4.19 lb	0.07 lb
RA/192080/L4X	80	100	105	G 1/8	72	M 10	20	33	54	5000 N	8.47 lb	0.09 lb
RA/192100/L4X	100	120	130	G 1/8	89	M 10	23	38	67	5000 N	13.0 lb	0.11 lb
RA/192125/L4X	125	140	150	G 1/8	110	M 12	32	65	71	7000 N	22.3 lb	0.15 lb