

Premair Square Compact



10 Bore Sizes 12mm thru 100mm

- NPT Ports
- Stainless Steel Rod
- Space Saving Design
- Buna Seals Standard
- Light Weight Aluminium Body
- Female Rod Threads Standard

Low-profile, aluminum cylinders are designed for compact, spacesaving applications. All models have magnetic pistons and are switch-ready for accurate position sensing. Low-profile, solid state switches slide into machined grooves located on the cylinder body. Stainless steel piston rods are hard chrome plated for superior wear and corrosion resistance. Piston is attached to rod with a flat head screw to minimize pounding and vibration. Mounting through holes are threaded for easy mounting hardware installation.

Ratings

- Fluid AIR
- Max. Operating Pressure 140 PSI
- Min. Operating Pressure 7 PSI
- Ambient and Fluid Temperature . . . 15-140 F (-10 - 60 C)
- Lubrication Not Required
- Cushion None
- Rod End Thread Female (standard)
- Stroke Tolerance 0.039 in (+10/-0mm)
- Mounting Through Hole (Standard)
- Piston Speed 2-20inch/sec (50-500mm/sec)

Cylinder Force

Bore Size	Operating Pressure PSI			Bore Size	Operating Pressure PSI		
	50	75	100		50	75	100
012 (1/2 nom)	8.7	13.1	17.5	040 (1 1/2 nom.)	97.4	146	195
	6.6	9.8	13.1		81.8	123	164
016 (5/8 nom)	15.6	23.4	31.2	050 (2 nom)	152	228	304
	11.7	17.5	23.4		128	192	256
020 (3/4 nom)	24.3	36.5	48.6	063 (2 1/2 nom)	242	362	483
	18.2	27.3	36.5		217	326	434
025 (1 nom)	38	57	76	080 (3 1/4 nom)	390	584	779
	29.3	43.9	58.5		352	527	703
032 (1 1/4 nom)	62.3	93.5	125	100 (4 nom)	609	913	1217
	46.8	70.1	93.5		554	831	1108

Basic Cylinder Weights (lbs)

Bore (in)	Stroke(inch)											
	5 (.20)	10 (.39)	15 (.59)	20 (.79)	25 (.98)	30 (1.18)	35 (1.38)	40 (1.57)	45 (1.77)	50 (1.97)	75 (2.95)	100 (3.94)
1/2	0.110	0.126	0.141	0.157	0.172	0.187	-	-	-	-	-	-
5/8	0.157	0.181	0.207	0.232	0.256	0.280	-	-	-	-	-	-
3/4	0.229	0.271	0.315	0.359	0.406	0.450	0.494	0.540	0.584	0.631	-	-
1	0.284	0.331	0.395	0.423	0.472	0.518	0.564	0.613	0.657	0.706	-	-
1-1/4	0.571	0.598	0.624	0.650	0.701	0.750	0.800	0.851	0.902	0.961	1.22	1.47
1-1/2	0.752	0.805	0.858	0.908	0.953	0.997	1.05	1.09	1.14	1.2	1.44	1.68
2	-	1.10	1.17	1.25	1.34	1.43	1.5	1.58	1.66	1.78	2.18	2.5
2-1/2	-	1.60	1.69	1.78	1.87	1.97	2.06	2.15	2.23	2.38	2.84	3.29
3-1/4	-	3.53	3.74	4.0	4.16	4.36	4.57	4.78	4.99	5.28	6.31	7.33
4	-	5.55	5.68	5.81	6.05	6.29	6.52	6.75	6.97	7.31	8.45	9.59

Ordering Include dashes. Dashes are significant.

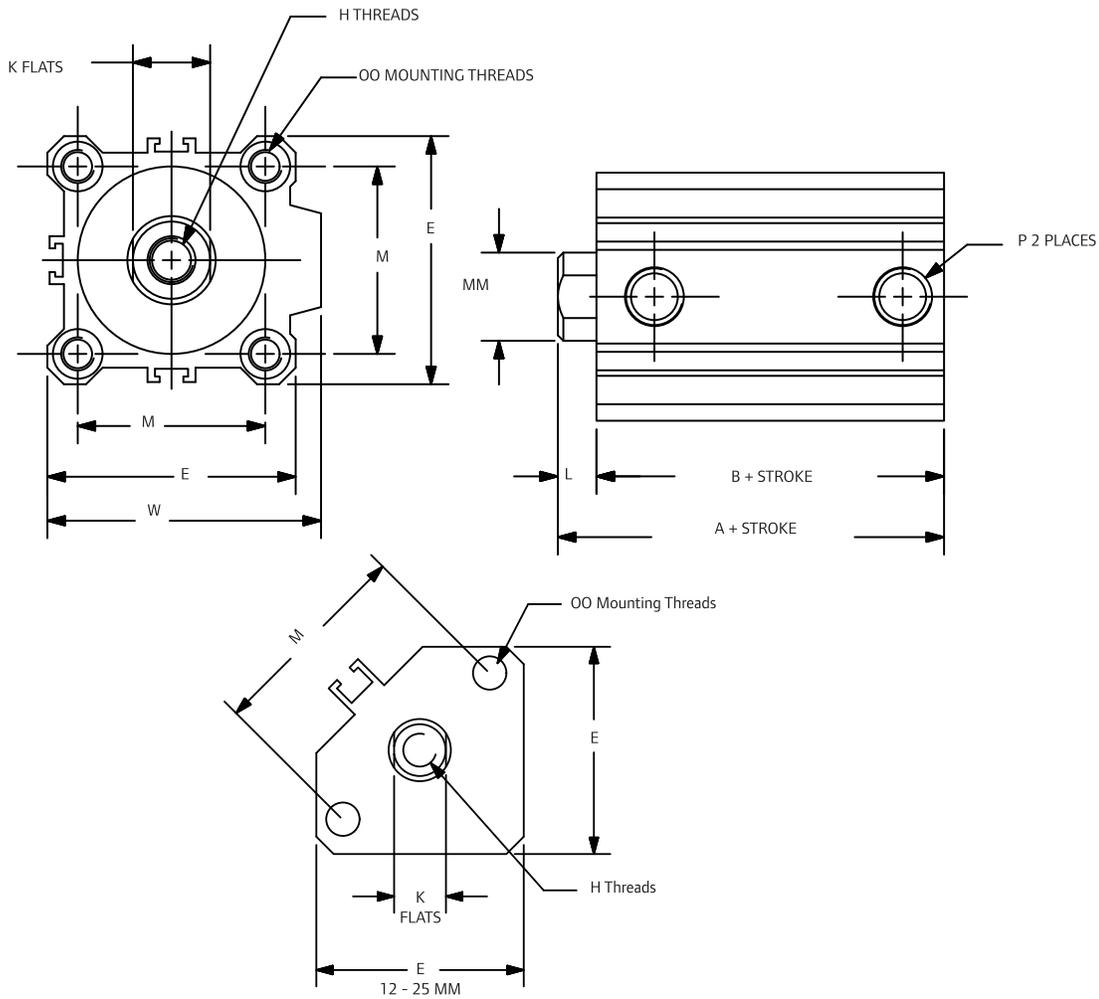
Position	1	2	3	4		5	6	7	8	9		10
Example:	M	D	S	XX	-	A	A	A	D	N	-	XXX

Position 1 Series	Position 2 Type	Position 3 Rod Type	Position 4 Metric Bore Size	Position 5 Mounting Option	Position 6 Seats/Bumpers	Position 7 Rod Options	Position 8 Magnetic Piston	Position 9 Port/Rod Thread	Position 10 Metric Stroke
M - Premair Metric	D - Double Acting	S - Single Acting, (Standard)	12 - 12mm 16 - 16mm 20 - 20mm 25 - 25mm 32 - 32mm 40 - 40mm 50 - 50mm 63 - 63mm 80 - 80mm 100 - 100mm	A - Threaded Thru Hole (Standard)	A - Buna	A - None, Standard Female Rod Thread	D - Magnetic	N - NPT ports inch rod threads	005 - 5mm (3/16") 010 - 10mm (25/64") 015 - 15mm (19/32") 020 - 20mm (25/32") 025 - 25mm (1") 030 - 30mm 1-11/64") 050 - 50mm (1-31/32") 075 - 75mm (2-61/64") 100 - 100mm (3-15/16")

Available models

Bore(mm)	Stroke (mm)	Model number	Bore(mm)	Stroke (mm)	Model number
12	5	MDS12-AAADN-005	40	35	MDS40-AAADN-035
12	10	MDS12-AAADN-010	40	40	MDS40-AAADN-040
12	15	MDS12-AAADN-015	40	45	MDS40-AAADN-045
12	20	MDS12-AAADN-020	40	50	MDS40-AAADN-050
12	25	MDS12-AAADN-025	40	75	MDS40-AAADN-075
12	30	MDS12-AAADN-030	40	100	MDS40-AAADN-100
16	5	MDS16-AAADN-005	50	10	MDS50-AAADN-010
16	10	MDS16-AAADN-010	50	15	MDS50-AAADN-015
16	15	MDS16-AAADN-015	50	20	MDS50-AAADN-020
16	20	MDS16-AAADN-020	50	25	MDS50-AAADN-025
16	25	MDS16-AAADN-025	50	30	MDS50-AAADN-030
16	30	MDS16-AAADN-030	50	35	MDS50-AAADN-035
20	5	MDS20-AAADN-005	50	40	MDS50-AAADN-040
20	10	MDS20-AAADN-010	50	45	MDS50-AAADN-045
20	15	MDS20-AAADN-015	50	50	MDS50-AAADN-050
20	20	MDS20-AAADN-020	50	75	MDS50-AAADN-075
20	25	MDS20-AAADN-025	50	100	MDS50-AAADN-100
20	30	MDS20-AAADN-030	63	10	MDS63-AAADN-010
20	35	MDS20-AAADN-035	63	15	MDS63-AAADN-015
20	40	MDS20-AAADN-040	63	20	MDS63-AAADN-020
20	45	MDS20-AAADN-045	63	25	MDS63-AAADN-025
20	50	MDS20-AAADN-050	63	30	MDS63-AAADN-030
25	5	MDS25-AAADN-005	63	35	MDS63-AAADN-035
25	10	MDS25-AAADN-010	63	40	MDS63-AAADN-040
25	15	MDS25-AAADN-015	63	45	MDS63-AAADN-045
25	20	MDS25-AAADN-020	63	50	MDS63-AAADN-050
25	25	MDS25-AAADN-025	63	75	MDS63-AAADN-075
25	30	MDS25-AAADN-030	63	100	MDS63-AAADN-100
25	35	MDS25-AAADN-035	80	10	MDS80-AAADN-010
25	40	MDS25-AAADN-040	80	15	MDS80-AAADN-015
25	45	MDS25-AAADN-045	80	20	MDS80-AAADN-020
25	50	MDS25-AAADN-050	80	25	MDS80-AAADN-025
32	5	MDS32-AAADN-005	80	30	MDS80-AAADN-030
32	10	MDS32-AAADN-010	80	35	MDS80-AAADN-035
32	15	MDS32-AAADN-015	80	40	MDS80-AAADN-040
32	20	MDS32-AAADN-020	80	45	MDS80-AAADN-045
32	25	MDS32-AAADN-025	80	50	MDS80-AAADN-050
32	30	MDS32-AAADN-030	80	75	MDS80-AAADN-075
32	35	MDS32-AAADN-035	80	100	MDS80-AAADN-100
32	40	MDS32-AAADN-040	10	10	MDS10-AAADN-010
32	45	MDS32-AAADN-045	10	15	MDS10-AAADN-015
32	50	MDS32-AAADN-050	10	20	MDS10-AAADN-020
32	75	MDS32-AAADN-075	10	25	MDS10-AAADN-025
32	100	MDS32-AAADN-100	10	30	MDS10-AAADN-030
40	5	MDS40-AAADN-005	10	35	MDS10-AAADN-035
40	10	MDS40-AAADN-010	10	40	MDS10-AAADN-040
40	15	MDS40-AAADN-015	10	45	MDS10-AAADN-045
40	20	MDS40-AAADN-020	10	50	MDS10-AAADN-050
40	25	MDS40-AAADN-025	10	75	MDS10-AAADN-075
40	30	MDS40-AAADN-030	10	100	MDS10-AAADN-100

Premair Square Compact



Dimensions mm (inch)											
BORE mm (Nom. in)	A	B	E	H (inch)	K	L	M	MM	OO	P (NPT)	W
12 (1/2)	31.5 (1.24)	28.0 (1.10)	25 (0.98)	8-32	5 (0.20)	3.5 (0.14)	22 (0.87)	6 (0.236)	6.5(0.26)	10-32	23(0.90)
16 (5/8)	34.0 (1.34)	30.5 (1.20)	29 (1.14)	8-32	6 (0.24)	3.5 (0.14)	28 (1.10)	8 (0.315)	6.5(0.26)	10-32	27.2(1.07)
20 (3.4)	36.0 (1.42)	31.5 (1.24)	36 (1.42)	10-32	8 (.031)	4.5 (0.18)	36 (1.42)	10 (0.394)	9(0.35)	10-32	31.2(1.23)
25 (1)	37.5 (1.48)	32.5 (1.28)	40 (1.57)	1/4-28	10 (0.39)	5 (0.20)	40 (1.57)	12 (0.472)	9(0.35)	10-32	36.9(1.45)
32 (1-1/4)	40.0 (1.57)	33.0 (1.30)	44.5 (1.75)	5/16- 24	14 (0.55)	7 (0.28)	34 (1.34)	16 (0.630)	9(0.35)	1/8	49.3(1.94)
40 (1-1/2)	46.5 (1.83)	39.5 (1.56)	52 (2.05)	3/8-24	14 (0.55)	7 (0.28)	40 (1.57)	16 (0.630)	9(0.35)	1/8	57(2.24)
50 (2)	48.5 (1.91)	40.5 (1.59)	63.7 (2.51)	1/2-20	17 (0.67)	8 (0.31)	50 (1.97)	20 (0.787)	11(0.43)	1/4	70.6(2.78)
63 (2-1/2)	54.0 (2.13)	46.0 (1.81)	76.7 (3.02)	1/2-20	17 (0.67)	8 (0.31)	60 (2.36)	20 (0.787)	14(0.55)	1/4	83.6(3.29)
80 (3-1/4)	63.5 (2.50)	53.5 (2.11)	97.8 (3.85)	5/8-18	22 (0.87)	10 (0.39)	77 (3.03)	25 (0.984)	17.5(0.69)	3/8	104(4.09)
100 (4)	75.0 (2.95)	63.0 (2.48)	115.3 (4.54)	3/4-16	27 (1.06)	12 (0.47)	94 (3.70)	30 (1.181)	17.5(0.69)	3/8	121.9(4.80)

Premair Square Compact



Flange Mount

Bore mm (in)	Part Number
12 (1/2)	114815-12
16 (5/8)	114815-16
20 (3/4)	114815-20
25 (1)	114815-25
32 (1-1/4)	114815-32
40 (1-1/2)	114815-40
50 (2)	114815-50
63 (2-1/2)	114815-63
80 (3-1/4)	114815-80
100 (4)	114815-100



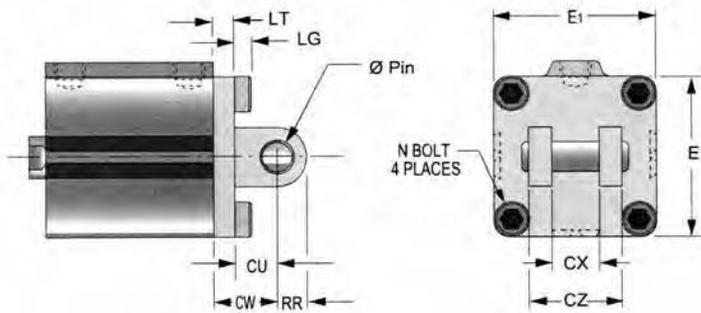
Foot Mount

Bore mm (in)	Part Number
12 (1/2)	114816-12
16 (5/8)	114816-16
20 (3/4)	114816-20
25 (1)	114816-25
32 (1-1/4)	114816-32
40 (1-1/2)	114816-40
50 (2)	114816-50
63 (2-1/2)	114816-63
80 (3-1/4)	114816-80
100 (4)	114816-100

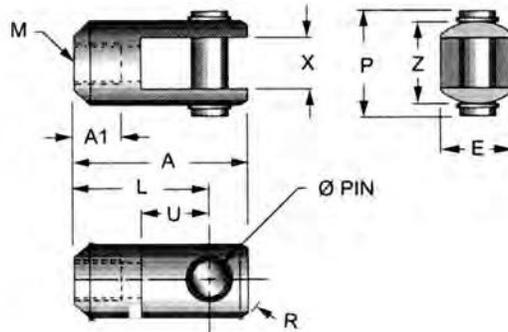
Premair Square Compact

Double Clevis

Dimensions-inch



Bore(in)	Pin (in)	CW	CU	CX	CZ	LT	LG	RR	E1	N(bolt)
12 (1/2)	0.187	0.55	0.28	0.02	0.39	0.20	0.11	0.24	0.98	M4x.07
16 (5/8)	0.187	0.59	0.39	0.03	0.47	0.20	0.11	0.24	1.14	M4x.07
20 (3/4)	0.312	0.71	0.47	0.33	0.63	0.20	0.16	0.35	1.42	M6x1.0
25 (1)	0.375	0.79	0.55	0.41	0.79	0.20	0.16	0.39	1.57	M6x1.0
32 (1-1/4)	0.375	0.79	0.55	0.72	1.42	0.24	0.16	0.39	1.75	M6x1.0
40 (1-1/2)	0.375	0.87	0.55	0.72	1.42	0.31	0.16	0.39	2.05	M6x1.0
50 (2)	0.500	1.10	0.79	0.88	1.73	0.31	0.20	0.55	2.51	M8x1.25
63 (2-1/2)	0.500	1.18	0.79	0.88	1.73	0.39	0.24	0.55	3.02	M10x1.5
80 (3-1/4)	0.750	1.50	1.07	1.11	2.20	0.43	0.28	0.71	3.85	M12x1.75
100 (4)	0.875	1.77	1.22	1.27	2.52	0.55	0.28	0.87	4.54	M12x1.75

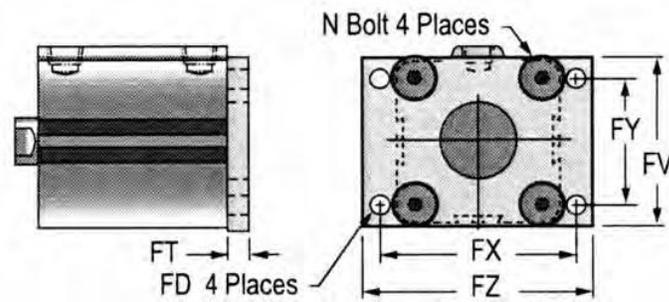


Rod Clevis

Dimensions-inch

Bore mm (in)	L	U	X	Z	P	E	A1	A	R	M (thds) Inch/Metric
12 (1/2)	0.63	0.27	0.21	0.39	0.55	0.39	0.24	0.85	0.25	#8-32 M3x0.5
16 (5/8)	0.83	0.39	0.26	0.47	0.63	0.47	0.24	1.10	0.47	#8-32 M4x0.7
20 (3/4)	0.98	0.45	0.33	0.63	0.83	0.63	0.24	1.34	0.41	#10-32 M5x0.8
25 (1)	1.18	0.55	0.41	0.78	0.98	0.78	0.31	1.61	0.50	1/4-28 M6x1.0
32 (1-1/4)	1.18	0.55	0.72	1.44	1.61	0.87	0.63	1.65	0.47	5/16-24 M8x1.25
40 (1-1/2)	1.18	0.55	0.72	1.44	1.61	0.87	0.63	1.65	0.47	3/8-24 M8x1.25
50 (2)	1.57	0.79	0.88	1.75	1.97	1.10	0.79	2.20	0.63	1/2-20 M10 x 1.5
63(2-1/2)	1.57	0.79	0.88	1.75	1.97	1.10	0.79	2.20	0.63	1/2-20 M10 x 1.5
80 (3-1/4)	1.97	1.06	1.12	2.19	2.46	1.50	0.91	2.80	0.83	5/8-18 M16x2.0
100 (4)	2.17	1.22	1.28	2.50	2.78	1.73	0.95	3.11	0.95	3/4-16 M20x2.5

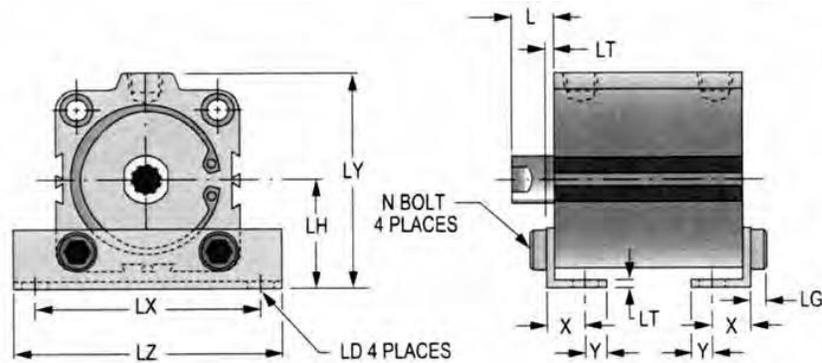
Premair Square Compact



Flange Mount

Dimension (inches)

Bore mm (in)	FT	L	N Bolt	FD	FY	FX	FV	FZ
12 (1/2)	0.22	0.31	M4 x 0.7	1.80	-	1.77	0.98	2.17
16 (5/8)	0.22	0.31	M4 x 0.7	1.80	-	1.77	1.18	2.17
20 (3/4)	0.31	0.26	M6 x 1.0	0.26	-	1.89	1.54	2.36
25 (1)	0.31	0.28	M6 x 1.0	0.26	-	2.05	1.65	2.52
32 (1-1/4)	0.31	0.35	M6 x 1.0	0.22	1.34	2.20	1.89	2.56
40 (1-1/2)	0.31	0.35	M6 x 1.0	0.22	1.57	2.44	2.13	2.83
50 (2)	0.35	0.35	M8 x 1.25	0.26	1.97	2.99	2.64	3.50
63 (2-1/2)	0.35	0.35	M10 x 1.50	0.35	2.36	3.62	3.15	4.25
80 (3-1/4)	0.43	0.35	M12 x 1.75	0.43	3.03	4.57	3.90	5.28
100 (4)	0.43	0.43	M12 x 1.75	0.43	3.70	5.35	4.61	6.06



Foot Mount

Dimension (inches)

Bore mm (in)	LD	LH	LX	LY	LZ	L	LT	X	Y	LG
12 (1/2)	0.18	0.67	1.34	1.16	1.73	0.53	0.08	0.31	0.18	0.11
16 (5/8)	0.18	0.75	1.50	1.32	1.89	0.53	0.08	0.31	0.20	0.11
20 (3/4)	0.26	0.94	1.89	1.65	2.44	0.57	0.13	0.36	0.23	0.16
25 (1)	0.26	1.02	2.05	1.81	2.60	0.59	0.13	0.42	0.23	0.16
32 (1-1/4)	0.26	1.18	2.24	2.24	2.80	0.67	0.13	0.44	0.23	0.16
40 (1-1/2)	0.26	1.30	2.52	2.52	3.07	0.67	0.13	0.44	0.28	0.60
50 (2)	0.35	1.54	3.11	3.07	3.74	0.71	0.13	0.58	0.31	0.20
63 (2-1/2)	0.43	1.81	3.74	3.60	4.45	0.71	0.13	0.64	0.35	0.24
80 (3-1/4)	0.51	2.32	4.65	4.49	5.51	0.79	0.18	0.77	0.43	0.28
100 (4)	0.51	2.80	5.39	5.35	6.38	0.87	0.24	0.91	0.49	0.28

Premair Square Compact

Repair Kits (Round and Square Cylinders)

Round

Bore	Buna	Viton	Low Temp	Low Friction	Low Friction + Viton	Low Friction + Low Temp
1-1/8"	RKSC11-B	RKSC11-V	RKSC11-Q	RKSC11-L	RKSC11-N	RKSC11-M
1-1/2"	RKSC15-B	RKSC15-V	RKSC15-Q	RKSC15-L	RKSC15-N	RKSC15-M
2"	RKSC20-B	RKSC20-V	RKSC20-Q	RKSC20-L	RKSC20-N	RKSC20-M
2-1/2"	RKSC25-B	RKSC25-V	RKSC25-Q	RKSC25-L	RKSC25-N	RKSC25-M
3"	RKSC30-B	RKSC30-V	RKSC30-Q	RKSC30-L	RKSC30-N	RKSC30-M
4"	RKSC40-B	RKSC40-V	RKSC40-Q	RKSC40-L	RKSC40-N	RKSC40-M

Square mm(n)

12 (1/2)	RKM012-V
16 (5/8)	RKM016-V
20 (3/4)	RKM020-V
25 (1)	RKM025-V
32 (1-1/4)	RKM032-V
40 (1-1/2)	RKM040-V
50 (2)	RKM050-V
63 (2-1/2)	RKM063-V
80 (3-1/4)	RKM080-V
100 (4)	RKM100-V