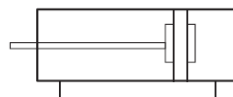


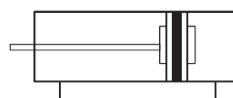
PVRAL Series Mini Type Cylinder



PVRAL

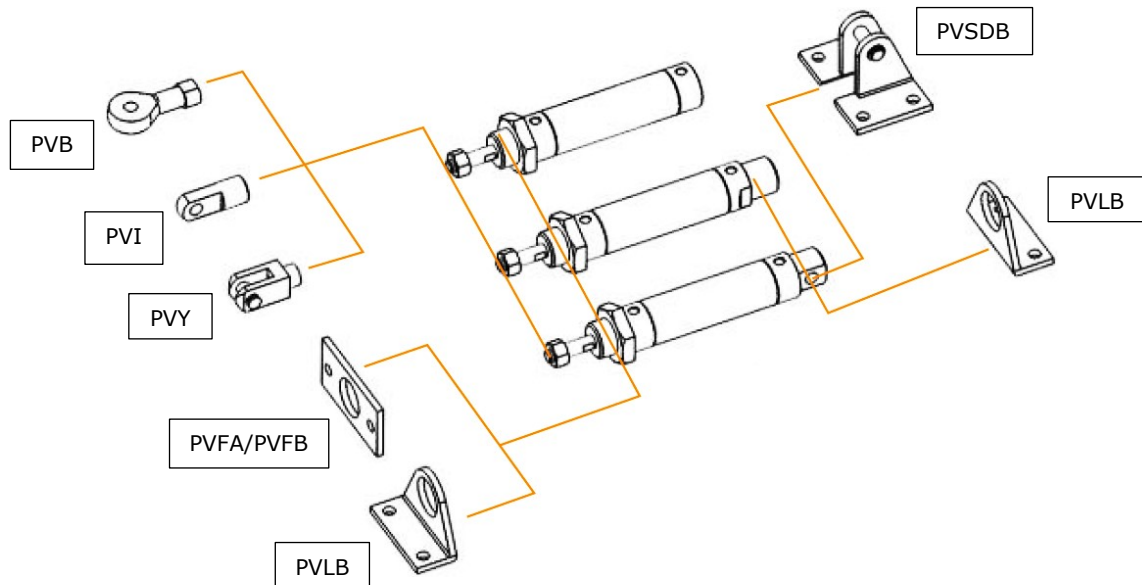


PVRAL-S



P	V	R	A	L	C		16	x	25	-		-	S	-	
Series no.		Cushion		Type No.		Bore	Stroke	Adjustable stroke	Magnet		Tail type				
PVRAL		C: Air cushion Blank: Rubber cushion		Blank: Basic type D: Double shaft J: Double shaft & adjustable stroke SA: Single action extend type SB: Single action return type		16 20 25 32 40	25 50 75 ...	10 20 30 40 50 75 100	Blank: No magnet S: With magnet		Blank: Swiveling tail U: Flat tail CM: Round tail (CM is not available for ø50, ø63 series)				

Optional Accessories

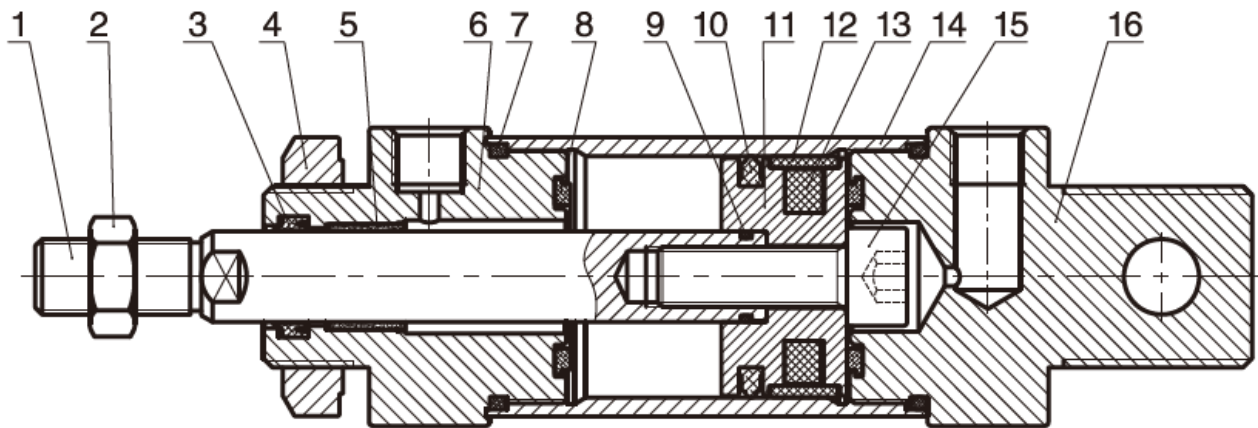


Specifications

Bore size (mm)	16	20	25	32	40	50	63
Acting type	Single acting / Double acting						
Working medium	Clean air (After 40 µm filtration)						
Working pressure (bar)	2 ~ 7 (Single acting)	2 ~ 10 (Single acting) / 1 ~ 10 (Double acting)					
	1 ~ 7 (Double acting)						
Guaranteed pressure (bar)	15						
Working temperature (°C)	-20 ~ 80 (No freezing)						
Speed range (mm/s)	Single acting: 50 ~ 800 Double acting: 30 ~ 800						
Cushion type	Rubber cushion (Standard) / Air cushion						
Barrel material	Aluminum alloy						
Mounting type	PVLB PVLA PVSDB						
Port size	M5x0.8	G1/8				G1/4	

	Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
Single acting	16 ~ 20	25 50 75 100	100
	25 ~ 63	25 50 75 100 125 150	150
Double acting	16	25 50 75 80 100 125 150 160 175 299 250 300	800
	20 ~ 40	25 50 75 80 100 125 150 160 175 299 250 300 350 400 450 500	800

Internal Structure

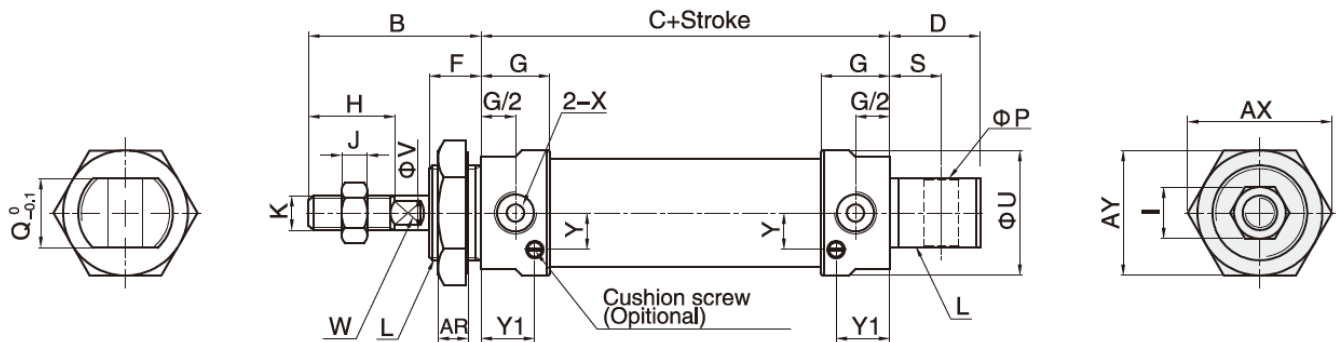


No.	Part name	Material
1	Piston rod	S45C hard chrome carbon steel
2	Nut	Carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	O-ring	NBR
8	Anti-bump cushion	TPU
9	O-ring	NBR
10	Piston seal	NBR
11	Piston	Aluminum alloy
12	Wear ring	PTFE
13	Magnet	Plastic
14	Barrel	Aluminum alloy
15	Hexagon screw	Carbon steel
16	Rear cover	Aluminum alloy

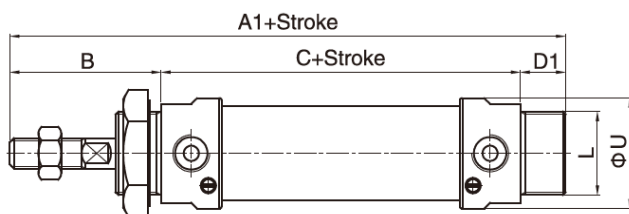
Main Dimension

PVRAL $\varnothing 16 - \varnothing 63$

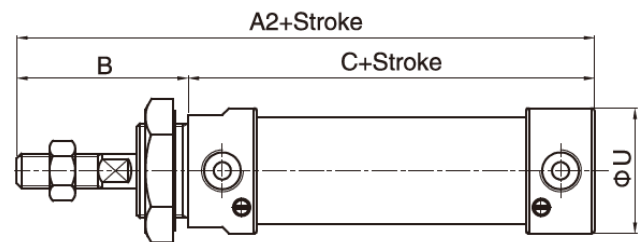
CA Type



CM Type



U Type

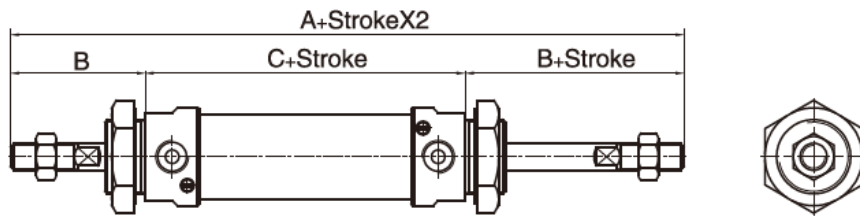


(mm)

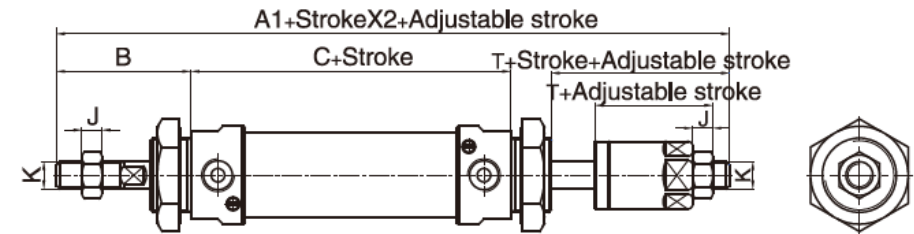
Bore	A1	A2	B	C	D	D1	F	G	H	I	J	K
16	102	92	36	56	14	10	14	11	16	10	5	M6x1.0
20	122	110	40	70	21	12	12	16	20	12	6	M8x1.25
25	128	114	44	70	21	14	14	16	22	17	6	M10x1.25
32	128	114	44	70	27	14	14	16	22	17	6	M10x1.25
40	152	138	46	92	27	14	14	22	24	17	7	M12x1.25
50	-	146	54	92	27	-	22	22	24	19	8	M14x1.5
63	-	146	54	92	27	-	22	22	24	19	8	M14x1.5

Bore	L	P	Q	S	U	W	X	AR	AX	AY	Y	Y1
16	M16x1.5	6	12	7	20	5	M5x0.8	6	25	22	6.3	8
20	M22x1.5	8	16	12	29	6	1/8"	7	33	29	8.5	12.5
25	M22x1.5	8	16	12	34	8	1/8"	7	33	29	10	12.5
32	M24x2.0	10	16	15	39.5	10	1/8"	8	37	32	12	12
40	M30x2.0	12	20	15	49.5	14	1/4"	9	47	41	16	18
50	M36x2.0	12	20	16	55	18	1/4"	11	53	48	13.6	14
63	M36x2.0	12	20	16	69	18	1/4"	11	53	48	19.8	14

PVRAL-D $\varnothing 16 - \varnothing 40$



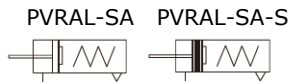
PVRAL-J $\varnothing 16 - \varnothing 40$



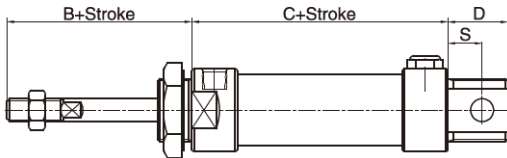
(mm)

Bore	A	A1	B	C	J	K	T
16	128	127	36	56	5	M6x1.0	21
20	150	147	40	70	6	M8x1.25	25
25	158	155	44	70	6	M10x1.25	27
32	158	155	44	70	6	M10x1.25	27
40	184	180	46	92	7	M12x1.25	28

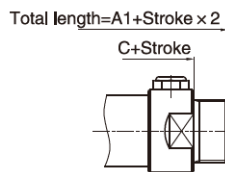
PVRAL-SA $\varnothing 16 - \varnothing 40$



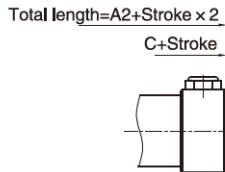
CA Type



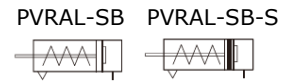
CM Type



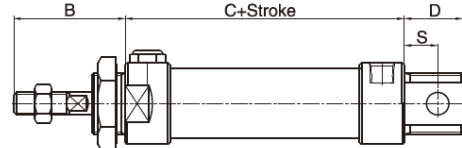
U Type



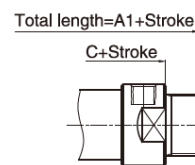
PVRAL-SB $\varnothing 16 - \varnothing 40$



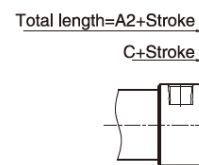
CA Type



CM Type



U Type

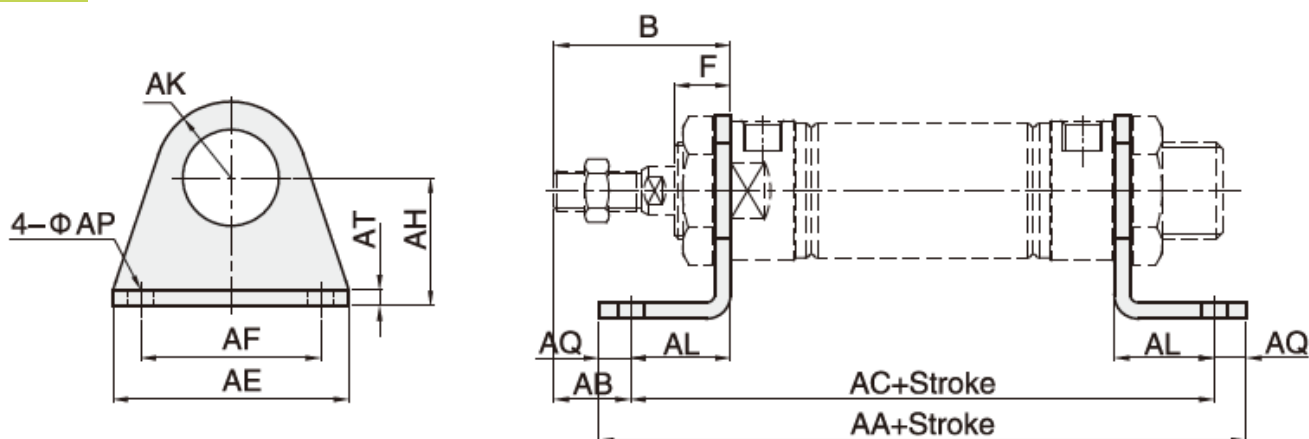


(mm)

Bore	A1			A2			C			B	D	S
	0 - 50	51 - 100	101-150	0 - 50	51 - 100	101-150	0 - 50	51 - 100	101-150			
16	127	152	-	117	142	-	81	106	-	36	14	7
20	147	172	197	135	160	185	95	120	145	40	21	12
25	153	178	203	139	164	189	95	120	145	44	21	12
32	153	178	203	139	164	189	95	120	145	44	27	15
40	177	202	227	163	188	213	117	142	167	46	27	15

Main Dimension

PVLB



(mm)

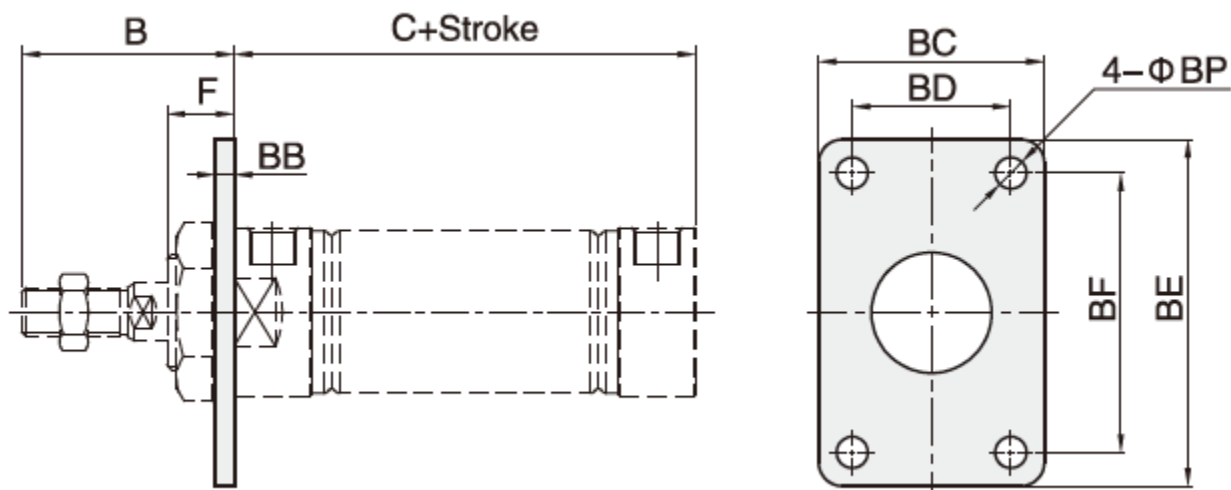
Model	B		F		AA		AA (PVRAL-SB)		
	PVRAL	PVRA	PVRAL	PVRA	PVRAL	PVRA	0 - 50	51 - 100	101 - 150
PVLB-PVRA-16	36	38	14	16	96	100	121	146	-
PVLB-PVRA-20	40	40	12	12	118	124	143	168	193
PVLB-PVRA-25	44	44	14	14	118	124	143	168	193
PVLB-PVRA-32	44	44	14	14	138	144	163	188	213
PVLB-PVRA-40	46	46	14	14	162	146	187	212	237

Model	AA (PVRA-SB)			AB		AC	
	0 - 50	51 - 100	101 - 150	PVRAL	PVRA	PVRAL	PVRA
PVLB-PVRA-16	125	150	-	22	24	84	88
PVLB-PVRA-20	149	174	199	24	24	102	108
PVLB-PVRA-25	149	174	199	28	28	102	108
PVLB-PVRA-32	169	194	219	18	18	122	128
PVLB-PVRA-40	171	196	221	19	19	146	130

Model	AC (PVRAL-SB)			AC (PVRA-SB)			AE
	0 - 50	51 - 100	101 - 150	0 - 50	51 - 100	101 - 150	
PVLB-PVRA-16	109	134	-	113	138	-	44
PVLB-PVRA-20	127	152	177	133	158	183	54
PVLB-PVRA-25	127	152	177	133	158	183	54
PVLB-PVRA-32	147	172	197	153	178	203	59
PVLB-PVRA-40	171	196	221	155	180	205	64

Model	AF	AH	AK	AL	AP	AQ	AT
PVLB-PVRA-16	32	20	14	14	5.5	6	3
PVLB-PVRA-20	40	25	17	16	6.5	8	3
PVLB-PVRA-25	40	25	17	16	6.5	8	3
PVLB-PVRA-32	45	32	19	26	6.5	8	3
PVLB-PVRA-40	50	36	23	27	6.5	8	3

PVFA

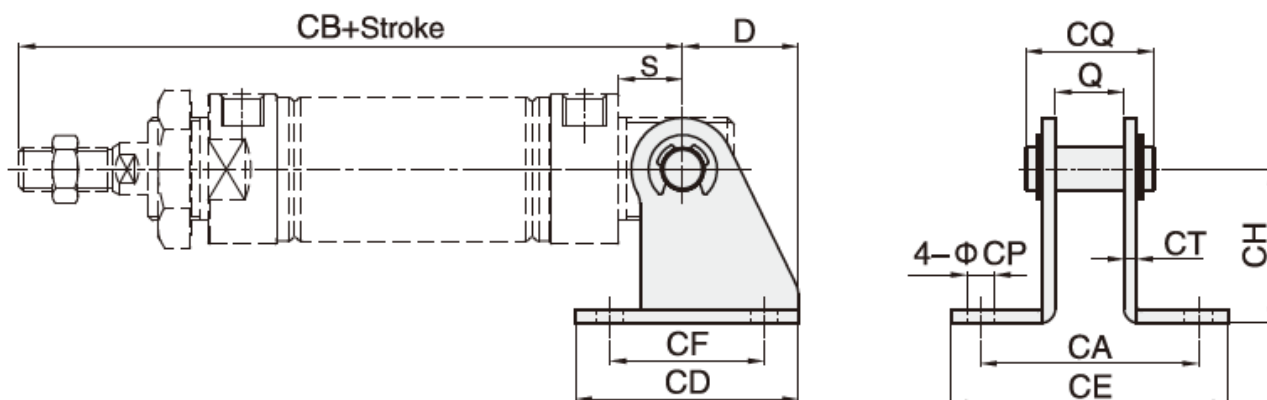


(mm)

Model	B		C		C (PVRAL-SB)			C (PVRA-SB)		
	PVRAL	PVRA	PVRAL	PVRA	0 - 50	51 - 100	101 - 150	0 - 50	51 - 100	101 - 150
PVLB-PVRA-16	36	38	56	60	81	106	-	85	110	-
PVLB-PVRA-20	40	40	70	76	95	120	145	101	126	151
PVLB-PVRA-25	44	44	70	76	95	120	145	101	126	151
PVLB-PVRA-32	44	44	70	76	95	120	145	101	126	151
PVLB-PVRA-40	46	46	92	76	117	142	167	101	126	151

Model	BB	BC	BD	BE	BF	BP	F	
							PVRAL	PVRA
PVLB-PVRA-16	3	26	-	52	40	5.5	14	16
PVLB-PVRA-20	4	33	-	64	50	6.5	12	12
PVLB-PVRA-25	4	33	-	64	50	6.5	14	14
PVLB-PVRA-32	4	47	33	72	58	6.5	14	14
PVLB-PVRA-40	4	50	36	84	70	6.5	14	14

PVSDB



(mm)

Model	D	S		Q	CA	CB		CB (PVRAL-SB)		
		PVRAL	PVRA			PVRAL	PVRA	0 - 50	51 - 100	101 - 150
PVLB-PVRA-16	18	7	9	12.1	42.1	99	107	124	149	-
PVLB-PVRA-20	24.5	12	12	16.1	51.1	122	128	147	172	197
PVLB-PVRA-25	24.5	12	12	16.1	51.1	126	132	151	176	201
PVLB-PVRA-32	27	15	15	16.1	50.1	129	135	154	179	204
PVLB-PVRA-40	27	15	15	20.1	52.1	153	137	178	203	228

Model	CB (PVRA-SB)			CD	CE	CF	CH	CP	CQ	CT
	0 - 50	51 - 100	101 - 150							
PVLB-PVRA-16	132	157	-	36	55.1	24	25.5	5.5	22.5	3
PVLB-PVRA-20	153	178	203	48	66.1	32	32	6.5	27	3
PVLB-PVRA-25	157	182	207	48	66.1	32	32	6.5	27	3
PVLB-PVRA-32	160	185	210	52	65.1	36	35.5	6.5	27.5	3
PVLB-PVRA-40	162	187	212	56	69.1	40	40	6.5	32.5	3