



PIONEER



PNEUMATIC



CYLINDER



Air Cylinder SU Non-Tie-Rod Cylinder

Specification

Bore mm	32.40.50.63.80.100.125.160.200
Working Medium	Air
Motion Pattern	Double Acting
Fixed Type	Basic/LB/FA/CA/CB/TC/TC-M
Operating Pressure	1.0 - 9.0 bar
Pressure Resistance	13.5 bar
Temperature	0 - 70 Deg C
Cushion	Air Cushion
Operating Speed	50 ~ 800 mm/s
Lubrication	Not required*

*In case lubrication Require, please use turbine.no.1oil ISO VG32



Strokes

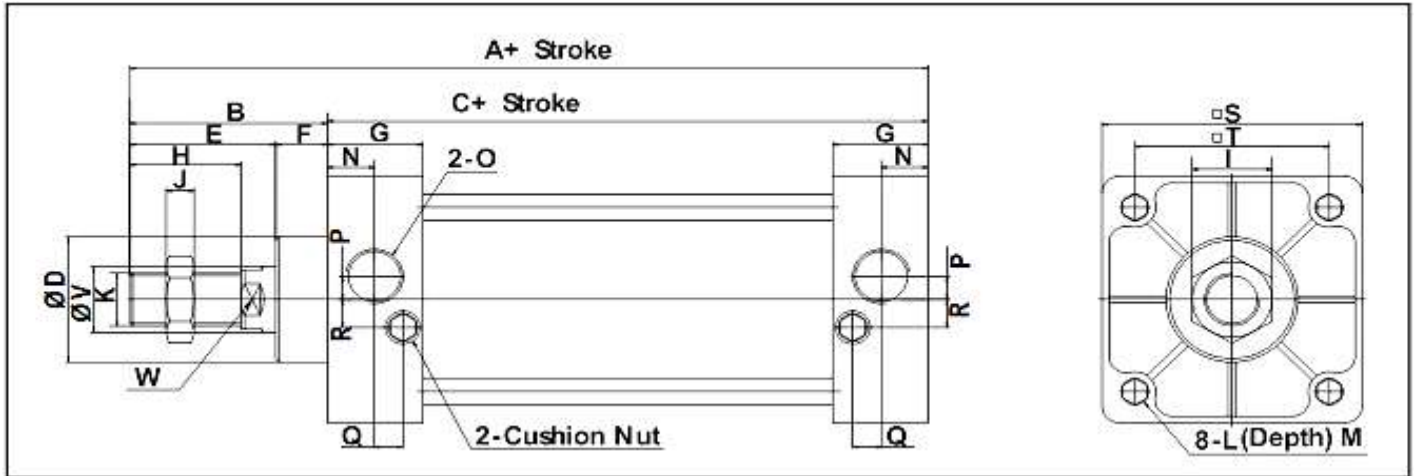
Bore	Standard	Maximum stroke	Possible Stroke
32	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1000mm	2000mm
40	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1200mm	2000mm
50	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1200mm	2000mm
63	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1500mm	2000mm
80	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1500mm	2000mm
100	25•40•50•80•100•125•150•200•250•300•400•500	Upto 1500mm	2000mm

Theoretical Force

Bore (mm)	Piston Rod Dia (mm)	Action	Pressed Area (cm ²)	Operating Pressure(Kgf/cm ²)					
				3	4	5	6	7	8
32	12	Push	8.04	24.12	32.13	40.20	48.24	56.28	64.32
		Pull	6.91	20.70	27.60	34.50	41.50	48.30	55.20
40	16	Push	12.56	37.68	50.24	62.80	75.36	87.92	100.48
		Pull	10.56	31.65	42.20	52.75	63.30	73.85	84.40
50	20	Push	19.63	56.89	78.52	98.15	117.78	137.41	157.04
		Pull	16.49	49.47	65.96	82.45	98.94	115.43	131.92
63	20	Push	31.16	93.51	124.68	155.85	187.02	218.19	249.36
		Pull	28.02	84.09	112.12	140.15	168.18	196.21	224.24
80	25	Push	50.24	150.78	201.04	251.30	301.56	351.82	402.08
		Pull	45.34	136.08	181.44	226.80	272.16	317.52	362.88
100	25	Push	78.5	235.59	314.12	392.65	471.18	549.71	628.24
		Pull	73.6	220.86	294.48	368.10	441.72	515.34	588.96

Air Cylinder

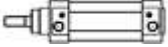
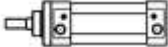
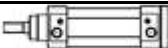


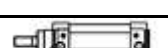
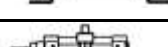

Dimensional Drawing



Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
32	140	47	93	28	32	15	27.5	22	17	6	M10x1.25	M6x1	9.5	13.5	G1/8
40	142	49	93	32	34	15	27.5	24	17	7	M12x1.25	M6x1	9.5	13.5	G1/4
50	150	57	93	38	42	15	27.5	32	23	8	M16x1.5	M6x1	9.5	13.5	G1/4
63	153	57	96	38	42	15	27.5	32	23	8	M16x1.5	M8x1.25	9.5	13.5	G3/8
80	183	75	108	47	54	21	33	40	26	10	M20x1.5	M10x1.5	11.5	16.5	G3/8
100	189	75	114	47	54	21	33	40	26	10	M20x1.5	M10x1.5	11.5	16.5	G1/2

Bore	P	Q	R	S	T	V	W
32	3.5	7.5	7	45	33	12	10
40	6	8	9	50	37	16	14
50	8.5	8.2	9	62	47	20	17
63	7	8.2	8.5	75	56	20	17
80	10	9.5	14	94	70	25	22
100	11	9.5	14	112	84	25	22

Air Cylinder

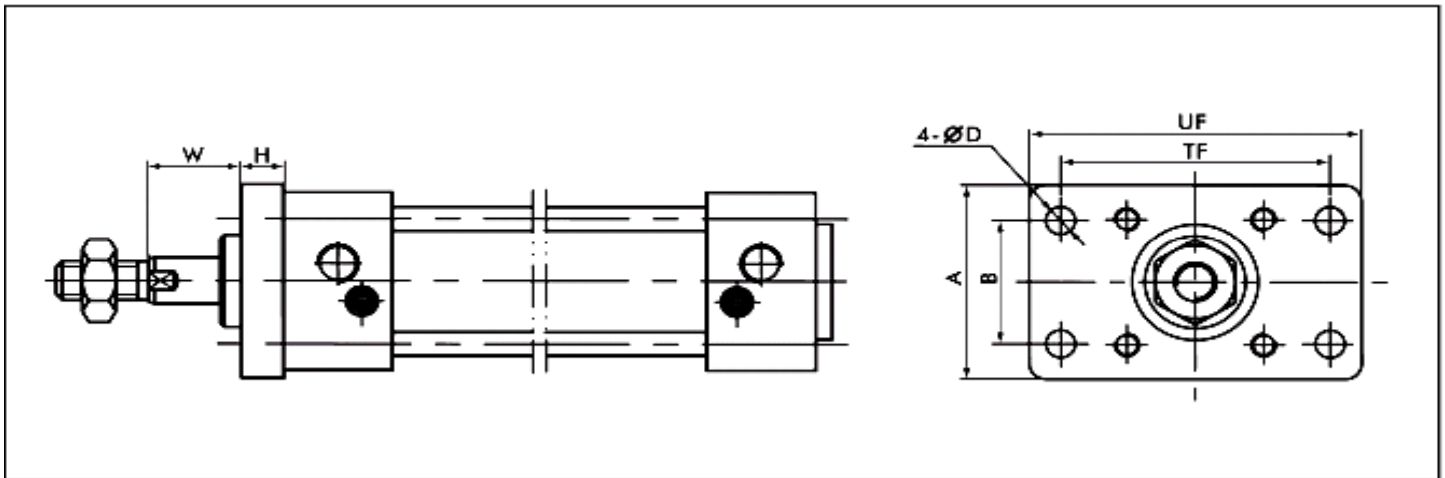
Mounting Type		Drawing
SD Bore:32~100	Standard	
FA Bore:32~100	Front Flange	
FB Bore:32~100	Rear Flange	
CA Bore:32~100	One Ear Clevis	
CB Bore:32~100	Two Ear Clevis	
LB Bore:32~100	Foot Mounting	
TC Bore:32~100	Intermediate Trunnion	
Y Bore:32~100	Rod Clevis	

End Connection

Bore	32	40	50	63	80	100
Thread	G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G1/2"

Mounting Dimension

FA (Front Flange)

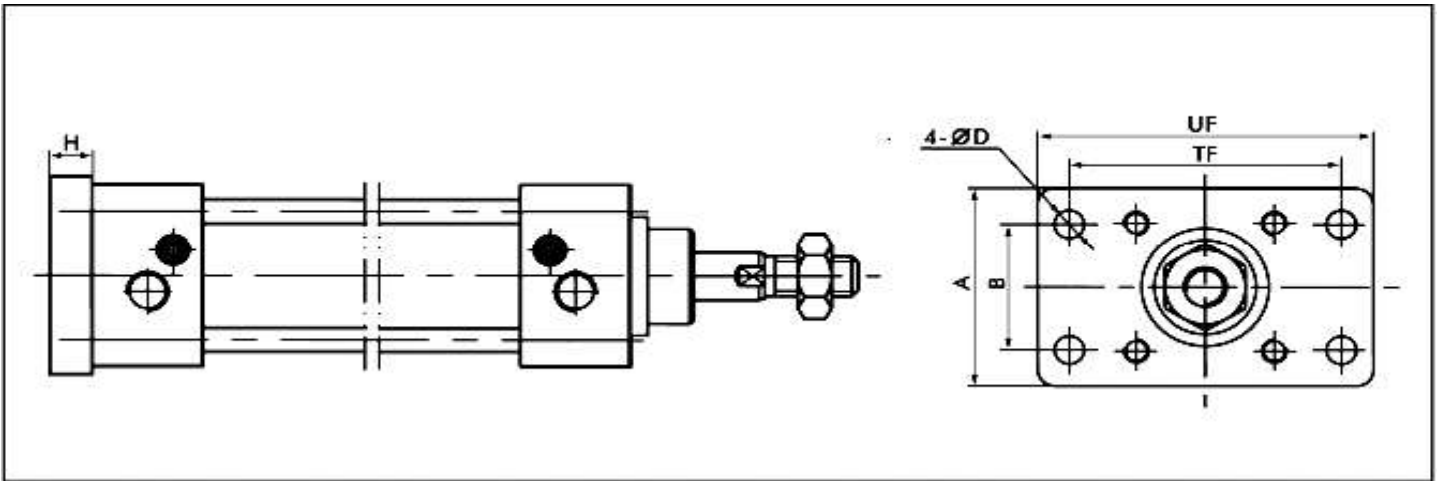


Bore	D	A	B	UF	TF	H	W
32	7	47	33	72	58	10	15
40	7	52	36	84	70	10	15
50	9	65	47	104	86	10	15
63	9	75	56	116	98	10	15
80	11	95	70	143	119	16	19
100	11	115	84	162	138	16	19

Air Cylinder

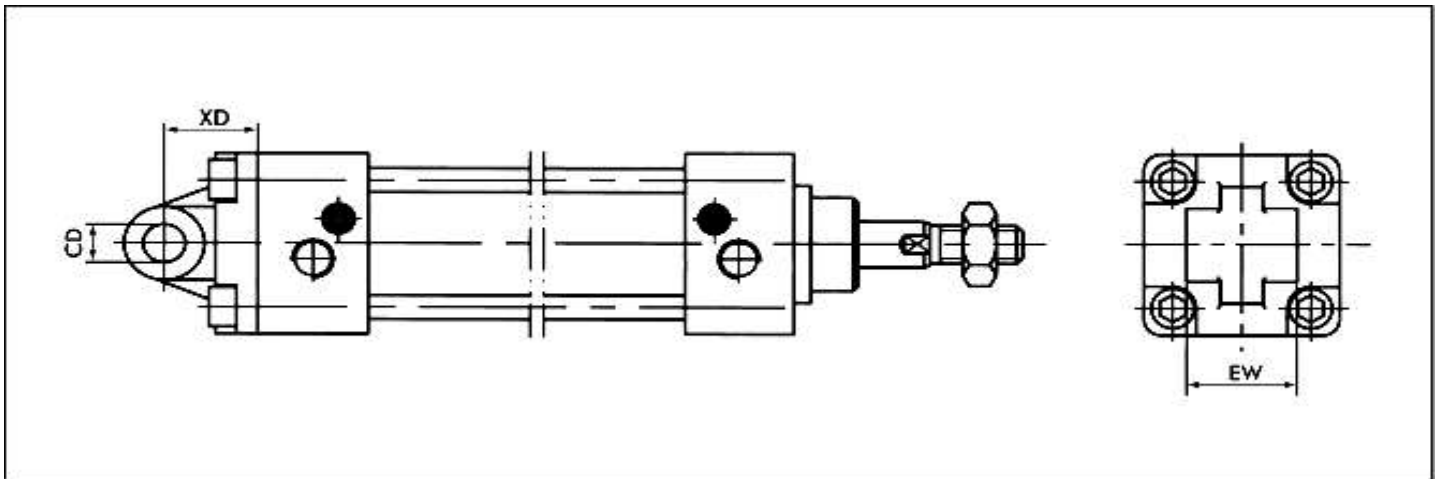
Mounting Dimension

FB (Rear Flange)



Bore	D	A	B	UF	TF	H
32	7	47	33	72	58	10
40	7	52	36	84	70	10
50	9	65	47	104	86	10
63	9	75	56	116	98	10
80	11	95	70	143	119	16
100	11	115	84	162	138	16

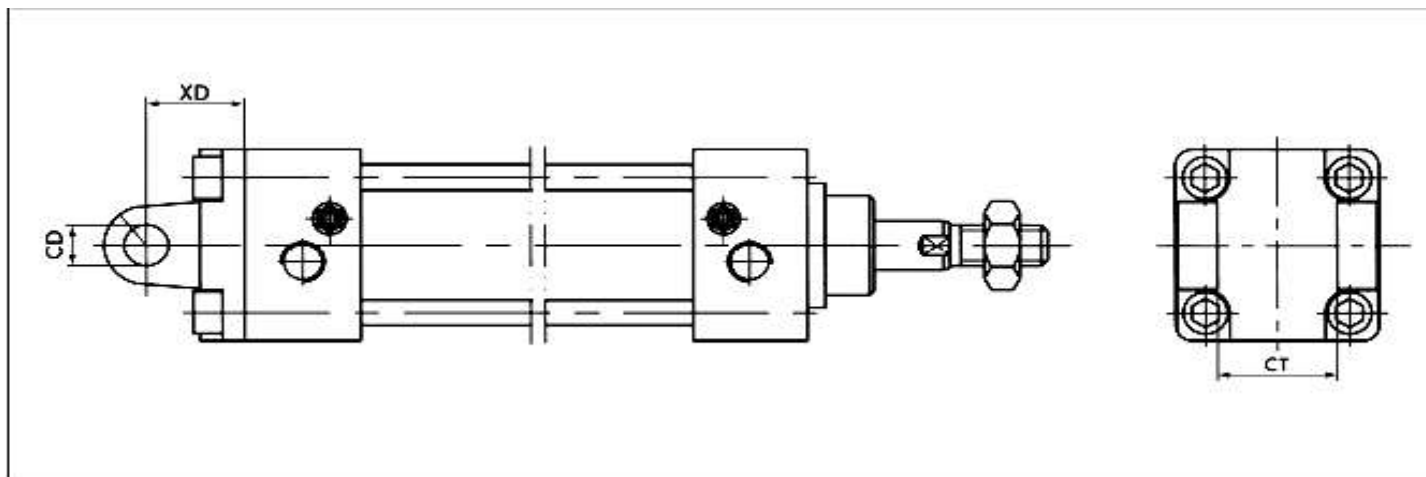
CA (One Ear Clevis)



Bore	XD	CD	CB	DJ
32	34	12H9	16	13
40	34	14H9	20	13
50	34	14H9	20	15
63	34	14H9	20	15
80	48	20H9	32	21
100	48	20H9	32	21

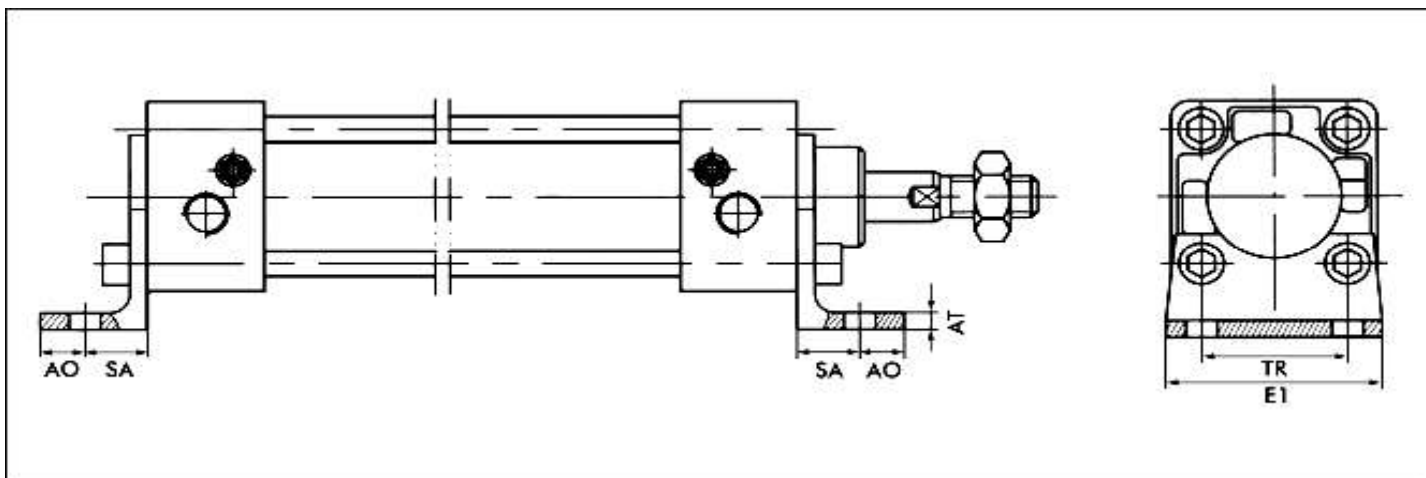
Mounting Dimension

CB (Two Ear Clevis)



Bore	XD	CD	CB	DJ
32	19	12H9	32	13
40	19	14H9	44	13
50	19	14H9	52	15
63	19	14H9	52	15
80	32	20H9	64	21
100	32	20H9	64	21

LB – Foot Mounting

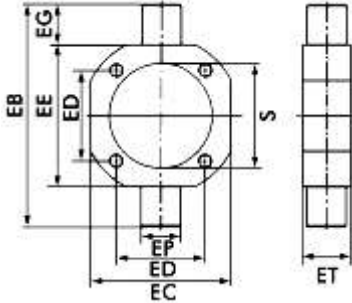


Bore	AH	E1	TR	SA	A0	AT
32	28	50	33	20.5	9.5	3.2
40	30	57	36	23.5	14.5	3.2
50	36.5	68	47	28	12	3.2
63	41	80	56	31	13	3.2
80	49	97	70	30	16	4
100	57	112	84	30	18	4

Air Cylinder

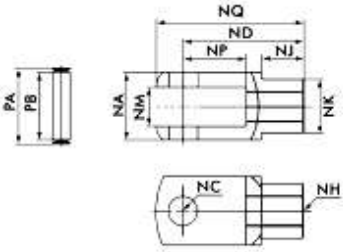
Mounting Dimension

TC – Trunnion Centre Mounting



Bore	EB	EC	ED	EE	EG	EP	ET	S
32	-	-	-	-	-	-	-	-
40	113	63	37	63	25	25	30	45.5
50	126	76	47	76	25	25	30	55.5
63	138	88	56	88	25	25	30	68.5
80	164	114	70	114	25	25	30	87.5
100	182	132	84	132	25	25	30	107.5

Y – Road Clevis



Bore	PA	PB	NA	NK	NP	NJ	ND	NQ	NM	NC	NH
32	26.2	20	19	18	20	12	40	52	10	10	M10 x1.25
40	32.8	26.5	25.4	23	24	20	48	62	12	12	M12 x1.25
50	39.3	33	32	30	32	22	64	83	16	16	M16 x 1.5
63	39.3	33	32	30	32	22	64	83	16	16	M16 x 1.5
80	53.3	45	44.4	39	40	30	80	105	20	20	M20 x 1.5
100	53.3	45	44.4	39	40	30	80	105	20	20	M20 x 1.5

Y

LB

CB

FA & FB

CA



Air Cylinder

Air Cylinder MAL –Round Profile Aluminum Mini Cylinder



Specification

Bore	16 . 25
Fluid	Air
Acting Type	Double Acting
Type	Magnetic
Working Pressure	0.5 ~ 9.9 Kgf/cm ²
Max. Working Pressure	15 Kgf/cm ²
Temperature	-5 ~ + 80° X
Cushion	Air Cushion
Piston Speed	50 ~ 500 mm/s
Lubrication	Not required*

*In case lubrication Require, please use turbine.no.1oil ISO VG32

Stroke

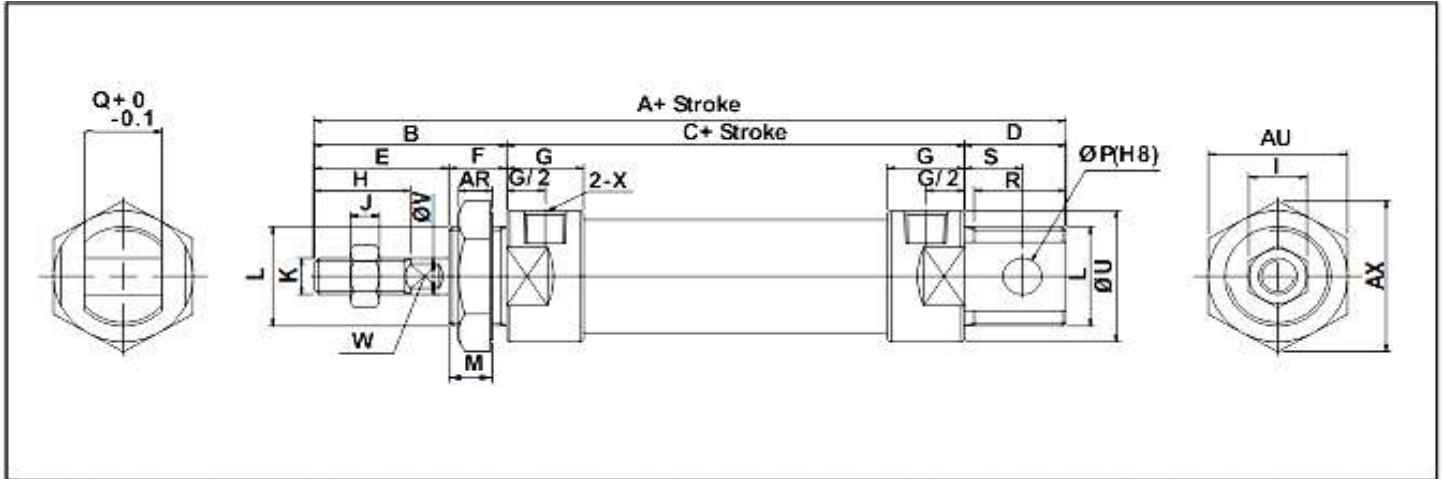
Bore	Standard	Maximum stroke	Possible Stroke
16	10•25•40•50•80•100•125•150•200•250•300	Upto 300mm	500mm
25	25•40•50•80•100•125•150•200•250•300•400•500	Upto 500mm	650mm

Theoretical Force

Bore (mm)	Piston Rod Dia (mm)	Action	Pressed Area (cm ²)	Operating Pressure(Kgf/cm ²)					
				3	4	5	6	7	8
16	6	Push	2.01	6.03	8.04	10.05	12.06	14.07	-
		Pull	1.81	5.43	7.24	9.05	10.86	12.67	-
25	10	Push	4.90	14.70	19.60	24.50	29.40	34.30	39.20
		Pull	4.12	12.36	16.48	20.60	24.72	28.84	32.96

Air Cylinder

Dimensional Drawing



Bore	A	B	C	D	E	F	G	H	I	J	K	L
16	104	38	52	15	24	14	11	16	10	5	M6x1	M16x1.5
25	135	44	70	21	30	14	16	22	17	6	M10x1.25	M22x1.5

Bore	M	P	Q	R	S	U	V	W	X	AR	AX	AU
16	8	6	12	13	6	20	6	/	M5	7	24	27.5
25	12	8	16	19	12	34	10	8	G1/8	7	33	29

Air Cylinder

Air Cylinder Thin Type Compact Cylinder



Specification

Bore	12.16.20.25.32.40.50.63.80.100
Fluid	Air
Acting Type	Double Acting
Type	Magnetic
Working Pressure	0.5 ~ 9.9 Kgf/cm ²
Max. Working Pressure	10.5 Kgf/cm ²
Temperature	-5 ~ + 80° X
Cushion	Air Cushion
Piston Speed	50 ~ 800 mm/s-30~350-30~250
Lubrication	Not required*

Stroke

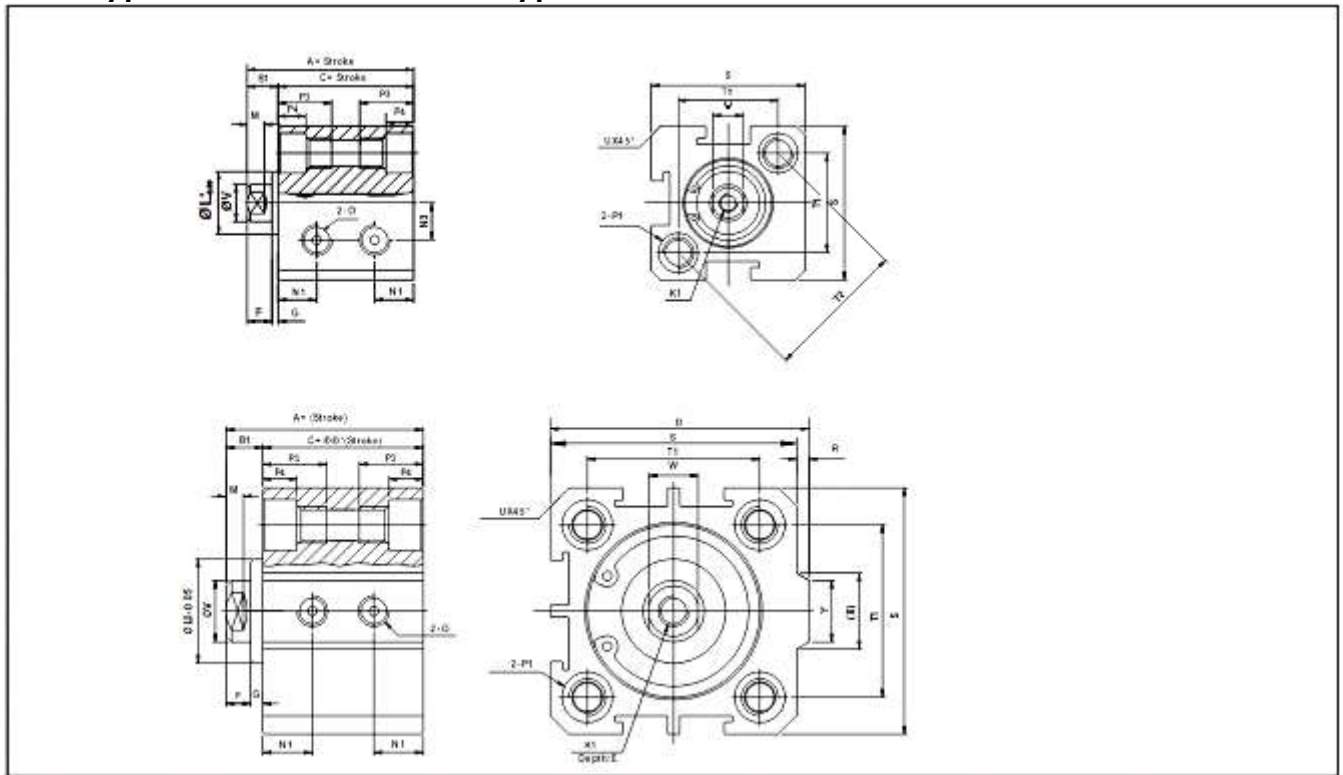
Bore	Standard	Maximum stroke	Possible Stroke
12	5•10•15•20•25•30•40	Upto 60mm	60mm
16	5•10•15•20•25•30•40	Upto 60mm	60mm
20	5•10•15•20•25•30•40•50	Upto 100mm	100mm
25	5•10•15•20•25•30•40•50	Upto 120mm	120mm
32	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm
40	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm
50	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm
63	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm
80	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm
100	5•10•15•20•25•30•40•50•60•80	Upto 130mm	130mm

Air Cylinder

Dimensional Drawing

Type: VDVU 12~16

Type: VDVU 20~100



Bore	A	B1	C	D	E	F	G	K1	L	M	N1	N3	O
12	32	5	27	-	6	4	1	M3x0.5	10.2	2.8	6.3	6	M5x0.8
16	34	5.5	28.5	-	6	4	1.5	M3x0.5	11	2.8	7.3	6.5	M5x0.8
20	35	5.5	29.5	36	8	4	1.5	M4x0.7	16	2.8	7.5	-	M5x0.8
25	37	6	34	42	10	4	2	M5x0.8	17	2.8	8	-	M5x0.8
32	41.5	7	34.5	50	12	4	3	M6x1	22	2.8	9	-	G1/8
40	43	7	36	58.5	12	4	3	M8x1.25	28	2.8	10	-	G1/8
50	47	9	38	71.5	15	5	4	M10x1.25	38	2.8	10.5	-	G1/4
63	51	9	42	84.5	15	5	4	M10x1.25	40	2.8	11.8	-	G1/4
80	62	11	51	104	15	6	5	M18x1.25	45	4	14.5	-	G3/8
100	73	12	61	124	18	7	5	M18x1.25	55	4	20.5	-	G3/8

Bore	P3	P4	R	S	T1	T2	U	V	W	X	Y	P1
12	12	4.5	-	25	16.2	29	1.6	6	5	-	-	Double Side:6.5/Cog: M5x 0.8 Through hole:4.2
16	12	4.5	-	29	19.8	28	1.6	6	5	-	-	Double Side:6.5/Cog: M5x 0.8 Through hole:4.2
20	14	4.5	2	34	24	-	2.1	8	6	11.3	10	Double Side:6.5/Cog: M5x 0.8 Through hole:4.2
25	15	5.5	2	40	28	-	3.1	10	8	12	10	Double Side:8.2/Cog: M6x 1.0 Through hole:4.6
32	16	5.5	6	44	34	-	2.15	12	10	18.3	15	Double Side:8.2/Cog: M6x 1.0 Through hole:4.6
40	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16	Double Side:10/Cog: M8x 1.25 Through hole:6.5
50	25	8.5	9.5	62	48	-	4.15	20	17	30	20	Double Side:11/Cog: M8x 1.25 Through hole:6.5
63	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20	Double Side:11/Cog: M8x 1.25 Through hole:6.5
80	25	10.5	10	94	74	-	3.65	25	22	36	26	Double Side:14/Cog: M12x 1.75 Through hole:9.2
100	30	13	10	114	90	-	3.65	32	27	35	26	Double Side:17.5/Cog: M12x 1.75 Through hole:11.3