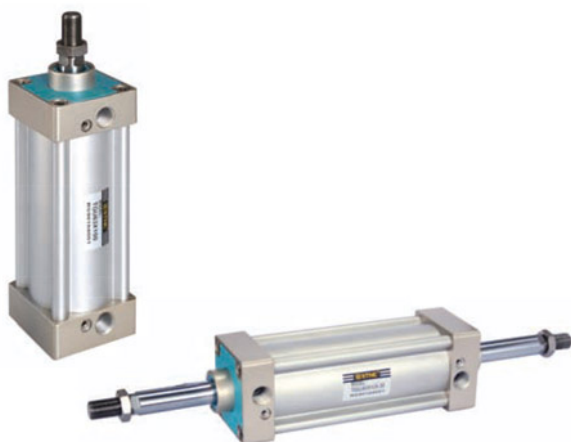


TGU Series Standard Cylinder



● Calculation of cylinder theoretical force

$$F = P \times A$$

F: Theoretical force

P: Pressure

A: Piston area

● Standard cylinder

It is designed in using new seal material and buffer, with simple structure, light, low pressure in starting, stable operation, good seal, long service life, easy maintenance and operation. It is widely used in the automatic equipment of light industry, chemical industry, metallurgy, machinery, textile industry, electronic industry and etc. There are many kinds of accessories to choose for different mounting.

● Cylinder installation instructions

- 1、 Before installation, be sure if the cylinder was not damaged during transportation. Check if connecting parts were loose, etc.
- 2、 When installation, the cylinder piston rod shall not withstand eccentric or radial loads, the load must be consistent with the direction of piston rod axis.
- 3、 When cylinder installation, especially for long stroke cylinder, it must use level instrument for three-point position calibration.
- 4、 Before the pipe connects into air intake, it should clear pipe' s burrs, pipeline without corrosion, after cleaning up and checked, can be installation.
- 5、 Speed adjustment: firstly adjusting speed control valve (one-way throttle) in the middle, gradually adjusting the output pressure of regulator, when cylinder speed is close to pre-determine speed, it can ascertain working pressure, and then using speed control valve for fine tuning. Finally adjusting the buffer speed (usually adjustable needle is adjusted at the factory)
- 6、 After cylinder installation, in working pressure range, to operate 2-3 times without load, checking the cylinder before if is working normally.
- 7、 At high temperature or corrosive conditions, it should use the appropriate temperature or corrosion resistance cylinders
- 8、 In the occasions of humidity, dust or water drop, oil, dust, welding slag, the cylinder should be protected with devices.
- 9、 In low-temperature environment, it should take antifreeze measure to prevent water freezing of the system.
- 10、 If the cylinder is not used for a long time, pay attention to the surface oxidation, the intake and exhaust ports should be added plug dust protection.

■ Theoretical force sheet

Cylinder inside diameter		32		40		50		63		80		100	
External diameter of piston rod		12		16		20		20		25		25	
Action Type		Double action		Double action		Double action		Double action		Double action		Double action	
		Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk
Compression area cm ²		8.04	6.90	12.56	10.55	19.63	16.49	31.17	28.03	50.26	45.36	78.53	73.62
Air pressure Kgf/cm ²	1	08.04	06.90	12.56	10.55	19.63	16.49	31.17	28.03	50.26	45.36	78.53	73.62
	2	16.08	13.80	25.12	21.10	39.26	32.98	62.34	56.06	100.52	90.72	157.06	147.24
	3	24.12	20.70	37.68	31.65	58.89	49.47	93.51	84.09	150.78	136.08	235.59	220.86
	4	32.16	27.60	50.24	42.20	78.52	65.96	124.68	112.12	201.04	181.44	314.12	294.48
	5	40.20	34.50	62.80	52.75	98.15	82.45	155.85	140.15	251.30	226.80	392.65	368.10
	6	48.24	41.40	75.36	63.30	117.78	98.94	187.02	168.18	301.56	272.16	471.18	441.72
	7	56.28	48.30	87.92	73.85	137.41	115.43	218.19	196.21	351.82	317.52	549.71	515.34
	8	64.32	55.20	100.48	84.40	157.04	131.92	249.36	224.24	402.08	362.88	628.24	588.96
	9	72.36	62.10	113.04	94.95	176.67	148.41	280.53	252.27	452.34	408.24	706.77	662.58

TGU Series Standard Cylinder



● Product characteristics

Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

Kinds of mounting: Have kinds of auxiliary components to choose.

With magnet: With permanent magnet on piston, it can touch the magnet switch to track cylinder's action.

■ Graphics Sign



● Ordering Code

TGU
Series
TGU: Standard
double acting type

50 X 50
Bore size x Stroke

S
Magnetic type
No Mark: Without magnet
S: With magnet

LB
Installing way
No Mark: Basic type
LB: Foot mounting type
FA: Front flange mounting type
FB: Rear-flange mounting type
CA: Pivot type
CB: Black flange mounting type
TC: Trunion type

■ Example

- 1) Bore: 50mm, stroke: 50mm, LB installation, Code: TGU50×50-LB
- 2) Bore: 32mm, stroke: 100mm, LA installation, Code: TGU32×100-FA

■ Standard Specification

Bore(mm)	32	40	50	63	80	100
Action	Double Action Type					
Applicable	Air					
Pressure Range	0.1 ~ 0.9 MPa					
Proof Pressure	1.35MPa					
Temperature Range	-10 ~ 60°C					
Speed Range	50 ~ 800mm/s					
Cushion Type	Adjustable Cushion					
Cushion Stroke	24mm				32mm	
Prot Size	G1/8	G1/4		G3/8		G1/2

TGU Series Standard Cylinder

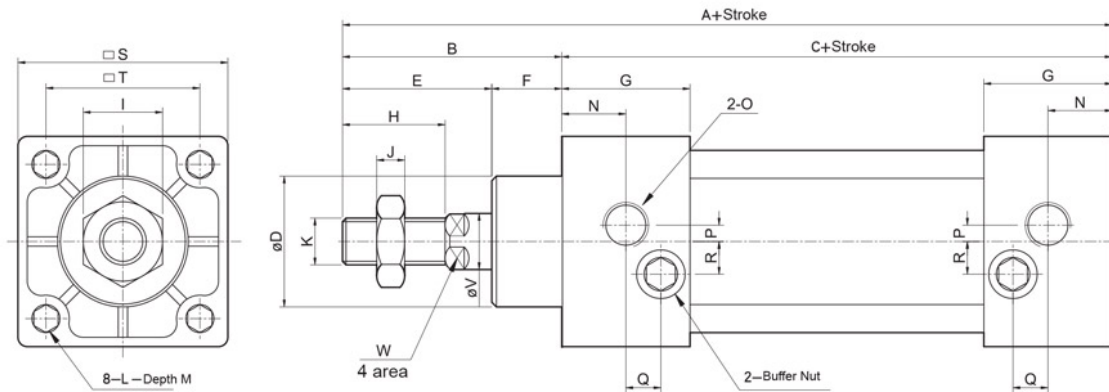
Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible Stroke
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500	1000	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800	1200	2000
50	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1200	2000
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
80	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000

* Special stroke please contact with us

Figure Dimension

● $\phi 32 \sim \phi 100$



Bore	A	B	C	D	E	F	G	H	I	J	K	L
32	140	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6
40	145	49	96	32	34	15	27.5	24	17	7	M12×1.25	M6
50	153	57	96	38	42	15	27.5	32	23	8	M16×1.5	M8
63	156	57	99	38	42	15	27.5	32	23	8	M16×1.5	M8
80	184	75	109	47	54	21	33	40	26	10	M20×1.5	M10
100	191	75	116	47	54	21	33	40	26	10	M20×1.5	M10

Bore	M	N	O	P	Q	R	S	T	V	W
32	9.5	13.7	G1/8	3.5	7.5	7	45	33	12	10
40	9.5	13.5	G1/4	6	8.2	9	50	37	16	14
50	9.5	13.5	G1/4	7	8.2	9	62	47	20	17
63	9.5	13.5	G3/8	7	8.2	8.5	75	56	20	17
80	11	16.5	G3/8	10	9.5	14	94	70	25	22
100	11	16.5	G1/2	11	9.5	14	112	84	25	22

TGUD Series Standard Cylinder



● Product characteristics

Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

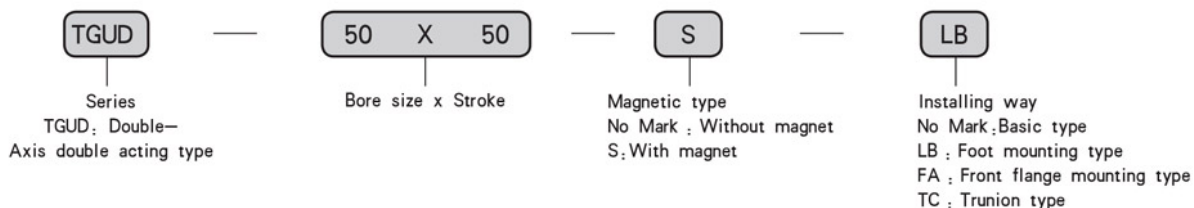
Kinds of mounting: Have kinds of auxiliary components to choose.

With magnet: With permanent magnet on piston, it can touch the magnet switch to track cylinder's action.

■ Graphics Sign



● Ordering Code



■ Example

- 1) Bore: 50mm, stroke: 50mm, LB installation, Code: TGUD50×50—LB
- 2) Bore: 32mm, stroke: 100mm, FA installation, Code: TGUD32×100—FA

■ Standard Specification

Bore(mm)	32	40	50	63	80	100
Action	Double Action Type					
Applicable	Air					
Pressure Range	0.1 ~ 0.9 MPa					
Proof Pressure	1.35MPa					
Temperature Range	-10 ~ 60°C					
Speed Range	50 ~ 800mm/s					
Cushion Type	Adjustable Cushion					
Cushion Stroke	24mm				32mm	
Prot Size	G1/8	G1/4		G3/8		G1/2

TGUD Series Standard Cylinder

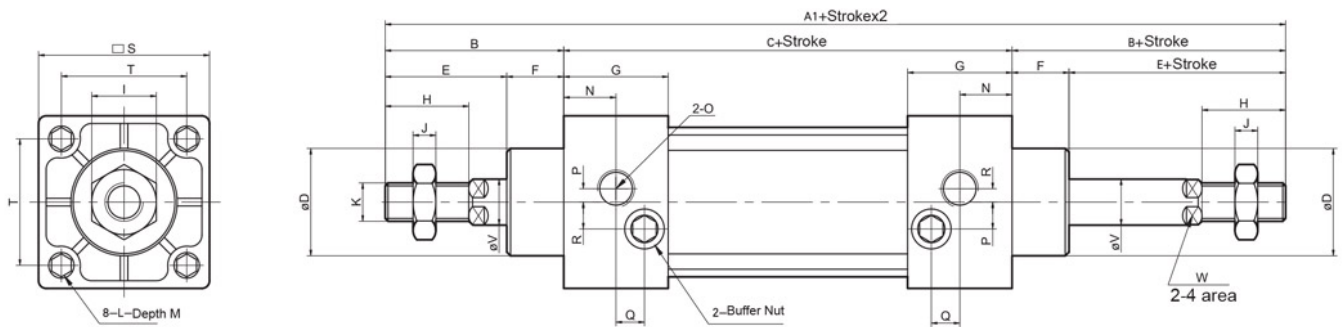
Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Premissible, Stroke
32	25 50 75 80 100 125 150 160 175 200 250 300	200	300
40	25 50 75 80 100 125 150 160 175 200 250 300	200	300
50	25 50 75 80 100 125 150 160 175 200 250 300	200	300
63	25 50 75 80 100 125 150 160 175 200 250 300	200	300
80	25 50 75 80 100 125 150 160 175 200 250 300	200	300
100	25 50 75 80 100 125 150 160 175 200 250 300	200	300

* Special stroke please contact with us

Figure Dimension

● $\varnothing 32 \sim \varnothing 100$



Bore	A	B	C	D	E	F	G	H	I	J	K	L
32	187	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6
40	194	49	96	32	34	15	27.5	24	17	7	M12×1.25	M6
50	210	57	96	38	42	15	27.5	32	23	8	M16×1.5	M8
63	213	57	99	38	42	15	27.5	32	23	8	M16×1.5	M8
80	259	75	109	47	54	21	33	40	26	10	M20×1.5	M10
100	266	75	116	47	54	21	33	40	26	10	M20×1.5	M10

Bore	M	N	O	P	Q	R	S	T	V	W
32	9.5	13.7	G1/8	3.5	7.5	7	45	33	12	10
40	9.5	13.5	G1/4	6	8.2	9	50	37	16	14
50	9.5	13.5	G1/4	7	8.2	9	62	47	20	17
63	9.5	13.5	G3/8	7	8.2	8.5	75	56	20	17
80	11	16.5	G3/8	10	9.5	14	94	70	25	22
100	11	16.5	G1/2	11	9.5	14	112	84	25	22

TGUJ Series Standard Cylinder



● Product characteristics

Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

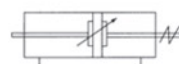
Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

Kinds of mounting: many kinds of accessories to choose.

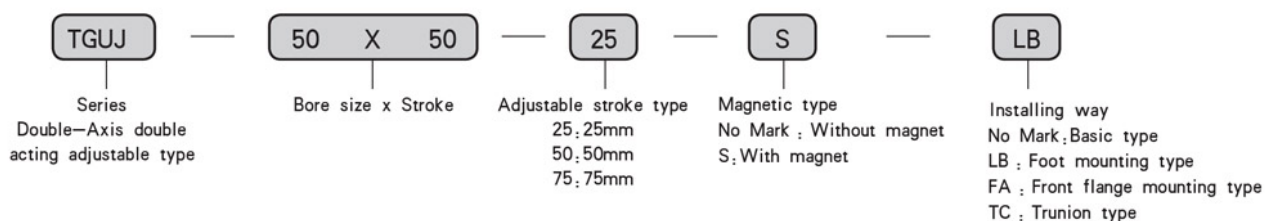
With magnet: With permanent magnet on piston, it can touch the magnet switch to track cylinder's action.

Adjustable stroke: Attached with adjustable nut, cylinder can adjust the stroke within its stroke range.

■ Graphics Sign



● Ordering Code



■ Example

- 1) Bore: 50mm, stroke: 50mm, adjustable stroke: 25, LB installation, Code : TGUJ50×50—25—LB
- 2) Bore: 32mm, stroke: 100mm, adjustable stroke: 25, FA installation, Code : TGUJ32×100—25—FA

■ Standard Specification

Bore(mm)	32	40	50	63	80	100
Action	Double Action Type					
Applicable	Air					
Pressure Range	0.1 ~ 0.9 MPa					
Proof Pressure	1.35MPa					
Temperature Range	-10 ~ 60°C					
Speed Range	50 ~ 800mm/s					
Cushion Type	Adjustable Cushion					
Cushion Stroke	24mm				32mm	
Prot Size	G1/8	G1/4		G3/8		G1/2

TGUJ Series Standard Cylinder

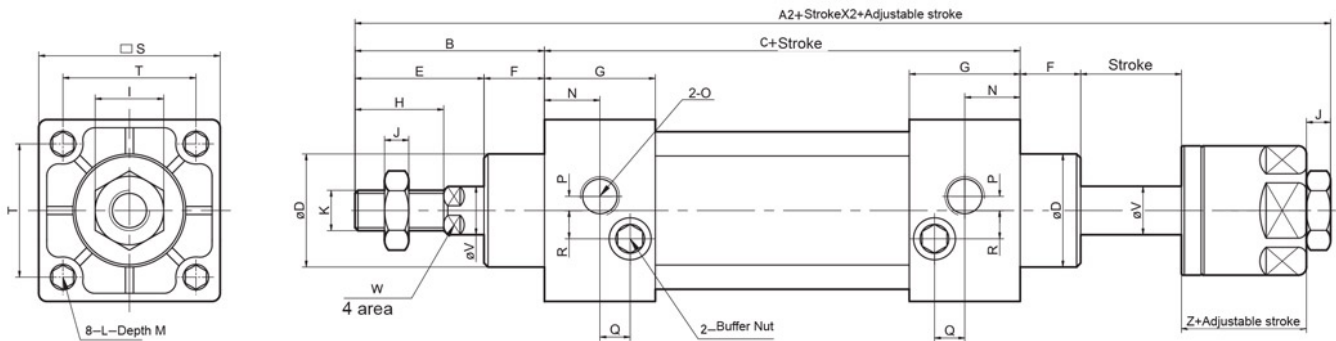
Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Premissible, Stroke
32	25 50 75 80 100 125 150 160 175 200 250 300	200	300
40	25 50 75 80 100 125 150 160 175 200 250 300	200	300
50	25 50 75 80 100 125 150 160 175 200 250 300	200	300
63	25 50 75 80 100 125 150 160 175 200 250 300	200	300
80	25 50 75 80 100 125 150 160 175 200 250 300	200	300
100	25 50 75 80 100 125 150 160 175 200 250 300	200	300

* Special stroke please contact with us

Figure Dimension

● $\phi 32 \sim \phi 100$



Bore	A	B	C	D	E	F	G	H	I	J	K	L
32	182	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6
40	188	49	96	32	34	15	27.5	24	17	7	M12×1.25	M6
50	199	57	96	38	42	15	27.5	32	23	8	M16×1.5	M8
63	202	57	99	38	42	15	27.5	32	23	8	M16×1.5	M8
80	244	75	109	47	54	21	33	40	26	10	M20×1.5	M10
100	251	75	116	47	54	21	33	40	26	10	M20×1.5	M10

Bore	M	N	O	P	Q	R	S	T	V	W	Z
32	9.5	13.7	G1/8	3.5	7.5	7	45	33	12	10	21
40	9.5	13.5	G1/4	6	8.2	9	50	37	16	14	21
50	9.5	13.5	G1/4	7	8.2	9	62	47	20	17	23
63	9.5	13.5	G3/8	7	8.2	8.5	75	56	20	17	23
80	11	16.5	G3/8	10	9.5	14	94	70	25	22	29
100	11	16.5	G1/2	11	9.5	14	112	84	25	22	29