STNC®

Designed with new seal material and buffer structure, with a simple structure, light weight,low starting pressure, running balance, good sealing performance, long life, easy maintenance, etc., are widely used in light industry, chemical industry, gold, mechanical, electronics and other industries automation equipment, there are a varieties of components options to attend different installation requirements.

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 calculation of the cylinder output

$$F = P X A$$

F：cylinder theoretical output

P：Working pressure

A：Piston force area

Theoretical force sheet

Cylinder inside diamater		32		40		50		63		80		100		125		160		200		250		320	
External diameterof piston rad		12		16		20		20		25		25		32		40		40		50		60	
Action Type		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action	
		Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	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	122.7	114.6	201.0	188.4	314	301	490.6	471	803	775
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	122	114	210	188	314	301	490.6	471	803	775
	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	245	229	402	377	628	603	982	942	1608	1551
	3	24.12	20.70	37.68	31.65	58.89	49.47	93.51	84.09	150.78	186.08	235.59	220.86	368	344	603	565	942	904	1473	1413	2411	2327
	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	491	458	804	754	1257	1206	1963	1884	3215	3102
	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	615	573	1005	942	1570	1507	2454	2355	4019	3878
	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	736	688	1206	1130	1885	1808	2945	2826	4823	4654
	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	859	802	1407	1319	2199	2110	3436	3297	5627	5429
	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	982	917	1608	1507	2513	2411	3927	3768	6430	6205
	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	1104	1031	1809	1696	2826	2713	4418	4239	7233	6980

TGD Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Ordering Code

TGD — 50 × 50 —— S —— LB

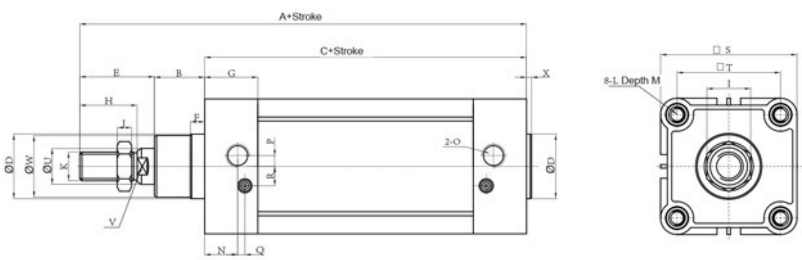
- TGD: Series
- 50: Bore
- 50: Stroke
- S: The Code name of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - FB: Back port be fixed(Back flange)
  - CA: Back port be fixed(pivot type)
  - CB: Back port be fixed(clevis type)

Standard Specification

Bore (mm)	32	40	50	63	80	100	125
Action	Double action type						
Applicable medium	Air						
Pressure range	0.1～0.9 MPa						
Proof pressure	1.35 MPa						
Temperature range	−10 ～60˚C						
Speed range	50～800 mm/s						
Cushion type	Adjustable cushion						
Cushion stroke(mm)	24 mm				32 mm		38 mm
Prot Size	G1/8	G1/4		G3/8		G1/2	

Figure Dimension

Φ32 — Φ125



Theoretical Force Sheet

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	142	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	162	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	178	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	193	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	216	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	232	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	279	46	160	60	73	11	45	54	40	13.5	M27×2	M12

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	X
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28	4
40	9.5	17.5	G1/4	7	3	7	54	38	16	14	33	4
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38	4
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40	4
80	11.5	24	G3/8	10	5	12	95	72	25	22	43	4
100	11.5	26	G1/2	10	5	14	115	89	25	22	47	4
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	6

STNC®

TGDD Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Ordering Code

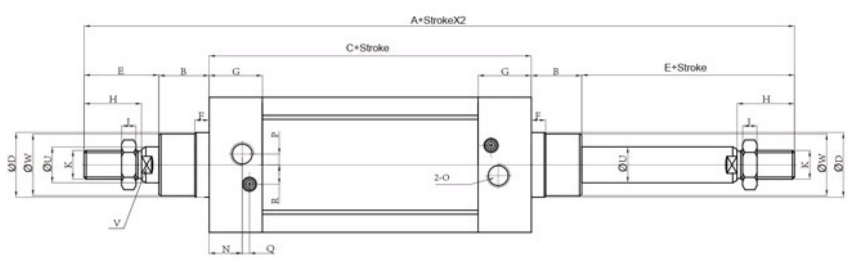
TGDD — 50 × 50 —— S — LB

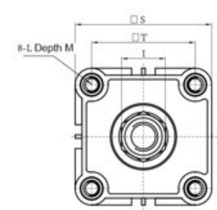
- TGDD: Series
- 50: Bore
- 50: Stroke
- S: The Code of magnet
  - S：With magnet
  - Blank：Without magnet
- LB: Fix type：
  - Blank：Basic type
  - LB：Front and back be fixed
  - FA：Front port be fixed(front flange)

Standard Specification

Bore (mm)	32	40	50	63	80	100	125
Action	Double action type						
Applicable medium	Air						
Pressure range	0.1～0.9 MPa						
Proof pressure	1.35 MPa						
Temperature range	−10 ～60˚C						
Speed range	50～800 mm/s						
Cushion type	Adjustable cushion						
Cushion stroke(mm)	24 mm				32 mm		38 mm
Prot Size	G1/8	G1/4		G3/8		G1/2	

Figure Dimension





Theoretical Force Sheet

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	190	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	216	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	247	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	261	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	303	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	324	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	352	46	160	60	73	11	45	54	40	13.5	M27×2	M12

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28
40	9.5	17.5	G1/4	7	3	7	54	38	16	14	33
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40
80	11.5	24	G3/8	10	5	12	95	72	25	22	43
100	11.5	26	G1/2	10	5	14	115	89	25	22	47
125	12	22.3	G1/2	13	8	16	142	110	32	27	58

TGDJ Series Compact Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Ordering Code

TGDJ — 50 × 50 —— S —— LB

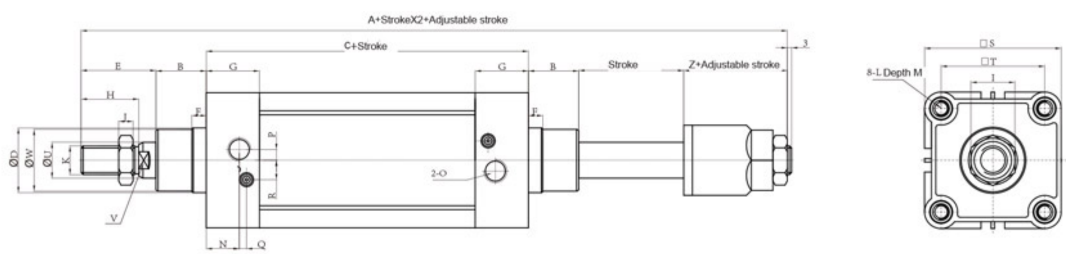
- TGDJ: Series
- 50: Bore
- 50: Stroke
- S: The Code name of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)

Standard Specification

Bore (mm)	32	40	50	63	80	100	125
Action	Double action type						
Applicable medium	Air						
Pressure range	0.1～0.9 MPa						
Proof pressure	1.35 MPa						
Temperature range	−10 ～60°C						
Speed range	50～800 mm/s						
Cushion type	Adjustable cushion						
Cushion stroke(mm)	24 mm				32 mm		38 mm
Prot Size	G1/8	G1/4		G3/8		G1/2	

Figure Dimension

Φ32 — Φ125



Theoretical Force Sheet

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	185	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	210	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	236	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	250	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	290	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	311	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	–	46	160	60	73	11	45	54	40	13.5	M27×2	M12

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	Z
32	9.5	15	G1/8	5	3	6.5	45	32.5	12	10	28	28
40	9.5	17.5	G1/4	7	3	7	52	38	16	13	33	28
50	9.5	21	G1/4	7	3	9	65	46.5	20	17	38	31
63	9.5	23	G3/8	8	5	9	76	56.5	20	17	40	31
80	11.5	24	G3/8	10	5	12	94	72	25	22	43	39
100	11.5	26	G1/2	10	5	14	112	89	25	22	47	39
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	–

TGI Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

TGI63X100

TGI200X300

Character

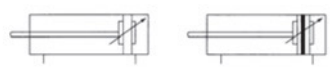
Without lubricating: Needn' t lubricating on piston rod for using oiled axletree.

Durability: With oxidative steel tube, cover deal with electrophoresis, it is not only anticorrosive, durable and wear-resistant, but also has compact shape.

Kinds of mounting: Have kinds of accessories to choose.

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

Graphics Sign



Ordering Code

TGI — 50 X 50 — S — LB

- TGI: Serier
- 50 X 50: Bore X Stroke
- S: The Code of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - FB: Back port be fixed(Back flange)
  - CA: Back port be fixed(pivot type)
  - CB: Back port be fixed(clevis type)

Ordering example

1)Bore:50mm, Stroke:50mm, CA installation, Code: TGI50×50—CA

2)Bore:32mm, Stroke:100mm, LB installation, Code: TGI32×100—LB

Standard Specification

Bore (mm)	32	40	50	63	80	100	125	160	200
Action	Double action type								
Applicable medium	Air								
Pressure range	0.1～1.0 MPa								
Proof pressure	1.5 MPa								
Temperature range	−10 ～60℃								
Speed range	50～500 mm/s								
Cushion type	Adjustable cushion								
Cushion stroke(mm)	24 mm					32 mm			
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4	

TGI Series Standard Cylinder

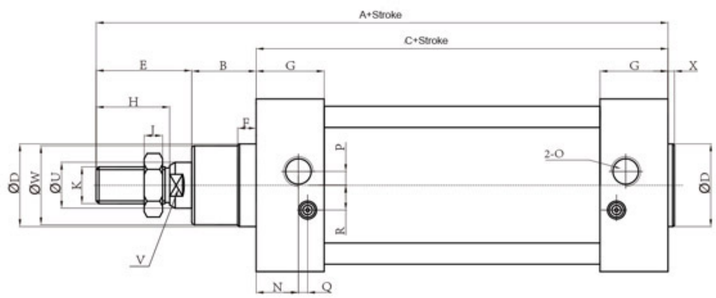
According ISO6431、ISO15552 Standard、VDMA24562

■ Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1000	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	1200	2000
50	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	2000
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
80	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

■ Figure Dimension

Φ32 — Φ200



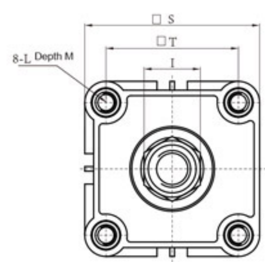


Figure Dimension(mm)

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	142	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	162	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	178	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	193	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	216	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	232	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	279	46	160	60	73	11	45	54	40	13.5	M27×2	M12
160	332	60	180	65	92	10	50	72	–	–	M36×2	M16
200	347	70	180	75	97	10	50	72	–	–	M36×2	M16

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	X
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28	4
40	9.5	17.5	G1/4	7	3	7	54	38	16	13	33	4
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38	4
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40	4
80	11	24	G3/8	10	5	12	95	72	25	22	43	4
100	11	26	G1/2	10	5	14	115	89	25	22	47	4
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	6
160	–	25	G3/4	–	–	–	179	140	40	36	–	6
200	–	25	G3/4	–	–	–	221	175	40	36	–	6

STNC®

TGID Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Product characteristics

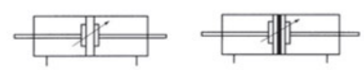
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

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

TGID — 50 X 50 — S — LB

- TGID: Serier
- 50 X 50: Bore X Stroke
- S: The Code name of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - TC: Trunion type

Ordering example

1)Bore:63mm, Stroke:50mm, LB installation, Code: TGID63×50—LB

2)Bore:32mm, Stroke:100mm, FA installation, Code: TGID32×100—FA

Standard Specification

Bore (mm)	32	40	50	63	80	100	125	160	200
Action	Double action type								
Applicable medium	Air								
Pressure range	0.1～1.0 MPa								
Proof pressure	1.5 MPa								
Temperature range	−10～60°C								
Speed range	50～500 mm/s								
Cushion type	Adjustable cushion								
Cushion stroke(mm)	24 mm					32 mm			
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4	

TGID Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. 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	300	400
100	25 50 75 80 100 125 150 160 175 200 250 300	300	400
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

Figure Dimension

Φ32 — Φ200

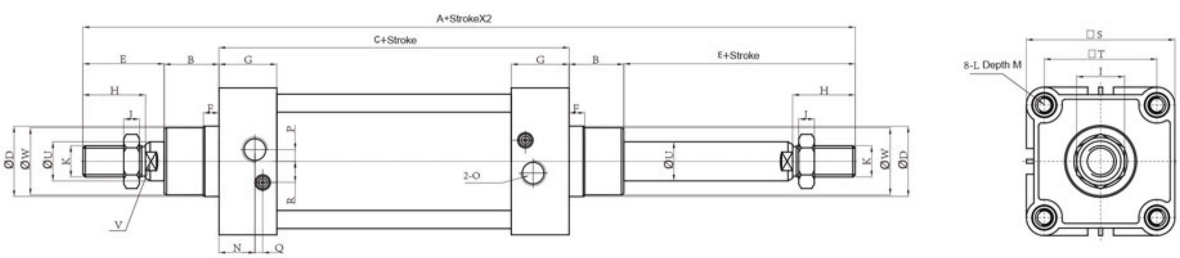


Figure Dimension(mm)

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	190	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	216	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	247	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	261	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	303	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	324	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	352	46	160	60	73	11	45	54	40	13.5	M27×2	M12
160	484	60	180	65	92	10	50	72	—	—	M36×2	M16
200	514	70	180	75	96	10	50	72	—	—	M36×2	M16

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28
40	9.5	17.5	G1/4	7	3	7	54	38	16	13	33
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40
80	11	24	G3/8	10	5	12	95	72	25	22	43
100	11	26	G1/2	10	5	14	115	89	25	22	47
125	12	22.3	G1/2	13	8	16	142	110	32	27	58
160	—	25	G3/4	—	—	—	195	140	40	36	—
200	—	25	G3/4	—	—	—	238	175	40	36	—

TGIJ Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Product characteristics

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

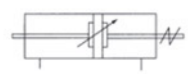
Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

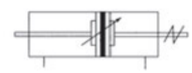
Kinds of mounting: Have kinds of auxiliary components to choose.

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

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

Graphics Sign





Ordering Code

TGIJ — 50 X 50 — 25 — S — LB

- TGIJ: Series
- 50 X 50: Bore X Stroke
- 25: Adjustable stroke type
  - 25: 25mm
  - 50: 50mm
  - 75: 75mm
- S: The Code of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - TC : Trunion type

Ordering example

1)Bore: 50mm, Stroke: 50mm, adjustable stroke: 25, LB installation, Code : TGIJ50×50–25–LB

2)Bore: 32mm, Stroke: 100mm, adjustable stroke: 25, FA installation, Code : TGIJ32×100–25–FA

Standard Specification

Bore (mm)	32	40	50	63	80	100	125	160	200
Action	Double action type								
Applicable medium	Air								
Pressure range	0.1～1.0 MPa								
Proof pressure	1.5 MPa								
Temperature range	–10 ～60°C								
Speed range	50～500 mm/s								
Cushion type	Adjustable cushion								
Cushion stroke(mm)	24 mm					32 mm			
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4	

TGIJ Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

■ Stroke

Bore (mm)	Standard Stroke	Max、Stroke	Permissible、Stroke
32	25 50 75 80 100 125 150 160 175 200	200	300
40	25 50 75 80 100 125 150 160 175 200	200	300
50	25 50 75 80 100 125 150 160 175 200	200	300
63	25 50 75 80 100 125 150 160 175 200	200	300
80	25 50 75 80 100 125 150 160 175 200 250 300	300	400
100	25 50 75 80 100 125 150 160 175 200 250 300	300	400
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

■ Figure Dimension

Φ32 — Φ200

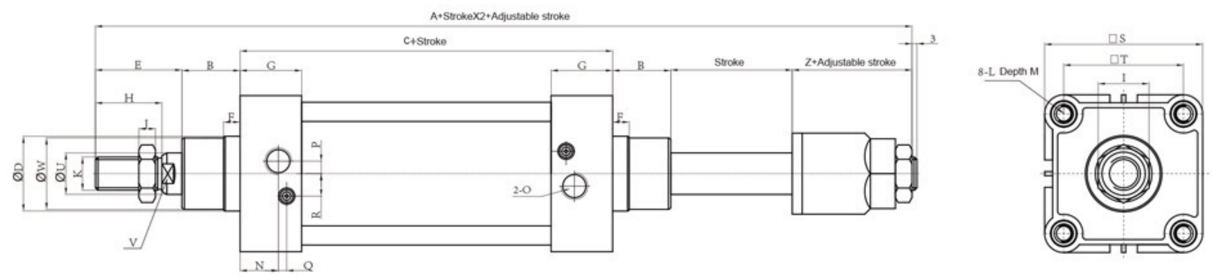


Figure Dimension(mm)

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	185	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	210	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	236	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	250	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	290	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	311	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	—	46	160	60	73	11	45	54	40	13.5	M27×2	M12
160	—	60	180	65	92	10	50	72	—	—	M36×2	M16
200	—	70	180	75	96	10	50	72	—	—	M36×2	M16

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	Z
32	9.5	15	G1/8	5	3	6.5	45	32.5	12	10	28	28
40	9.5	17.5	G1/4	7	3	7	52	38	16	13	33	28
50	9.5	21	G1/4	7	3	9	65	46.5	20	17	38	31
63	9.5	23	G3/8	8	5	9	76	56.5	20	17	40	31
80	11	24	G3/8	10	5	12	94	72	25	22	43	39
100	11	26	G1/2	10	5	14	112	89	25	22	47	39
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	—
160	14	25	G3/4	14	—	—	195	140	40	36	—	—
200	14	25	G3/4	14	—	—	238	175	40	36	—	—

STNC

TGG Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

TGG80X100

TGG320X500

Product characteristics

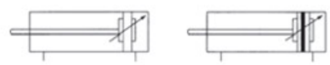
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

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

TGG — 50 X 50 — S — LB

- TGG: Serier
- 50 X 50: Bore X Stroke
- S: The Code name of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - FB: Back port be fixed(Back flange)
  - CA: Back port be fixed(pivot type)
  - CB: Back port be fixed(clevis type)
  - TC: Trunion type

Ordering example

1)Bore:50mm, Stroke:50mm, CA installation, Code: TGG50×50—CA

2)Bore:32mm, Stroke:100mm, LB installation, Code: TGG32×100—LB

Standard Specification

Bore(mm)	32	40	50	63	80	100	125	160	200	250	320
Action	Double Action Type										
Applicable	Air										
Pressure Range	0.1 ~ 0.9 MPa										
Proof Pressure	1.35MPa										
Temperature Range	-10 ~ 60℃										
Speed Range	50 ~ 800mm/s										
Cushion Type	Adjustable Cushion										
Cushion Stroke	24mm						32mm			60mm	65mm
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4			G1

TGG Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Stroke

Bore (mm)	Standard Stroke	Max.Stroke	Premissible.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
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
320	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000

Figure Dimension

Φ32 — Φ320

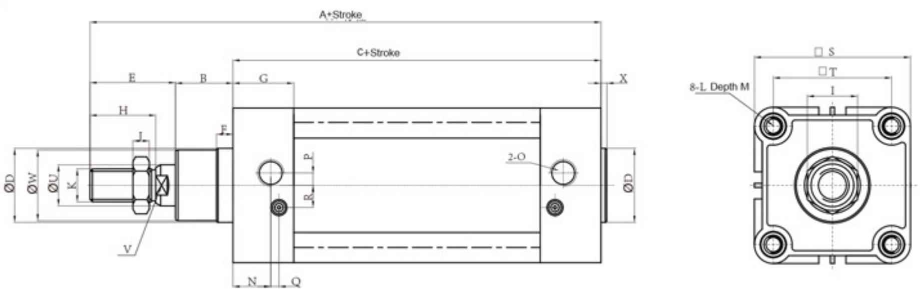


Figure Dimension(mm)

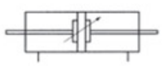
Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	142	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	162	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	178	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	193	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	216	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	232	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	279	46	160	60	73	11	44.7	54	40	13.5	M27×2	M12
160	332	60	180	65	92	10	50	72	–	–	M36×2	M16
200	347	70	180	75	97	10	50	72	–	–	M36×2	M16
250	389	80	200	90	109	15	60	84	–	20	M42×2	M20
320	430	90	220	112	120	13	65	90	–	30	M48×2	M24

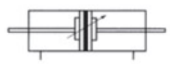
Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	X
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28	4
40	9.5	17.5	G1/4	7	3	7	54	38	16	13	33	4
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38	4
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40	4
80	11	24	G3/8	10	5	12	95	72	25	22	43	4
100	11	26	G1/2	10	5	14	115	89	25	22	47	4
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	6
160	14	25	G3/4	–	–	–	179	140	40	36	–	6
200	14	25	G3/4	–	–	–	221	175	40	36	–	6
250	21	30	G3/4	20	10	25	275	220	50	44	90	10
320	21	38.5	G1	17	7	37.5	343	270	60	55	100	10

TGGD Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

■ Graphics Sign





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.

Ordering Code

TGGD — 50 X 50 — S — LB

- TGGD: Serier
- 50 X 50: Bore X Stroke
- S: The Code name of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank: Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - TC : Trunion type

■ Ordering example

1)Bore:50mm, Stroke:50mm, FA installation, Code : TGGD50×50—FA

2)Bore:32mm, Stroke:100mm, LB installation, Code : TGGD32×100—LB

■ Standard Specification

Bore(mm)	32	40	50	63	80	100	125	160	200	250	320
Action	Double Action Type										
Applicable	Air										
Pressure Range	0.1 ~0.9 MPa										
Proof Pressure	1.35MPa										
Temperature Range	−10 ~60℃										
Speed Range	50 ~ 800mm/s										
Cushion Type	Adjustable Cushion										
Cushion Stroke	24mm						32mm			60mm	65mm
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4			G1

■ 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	300	400
100	25 50 75 80 100 125 150 160 175 200 250 300	300	400
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
320	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000

Figure Dimension

Φ32 — Φ320

TGGD Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

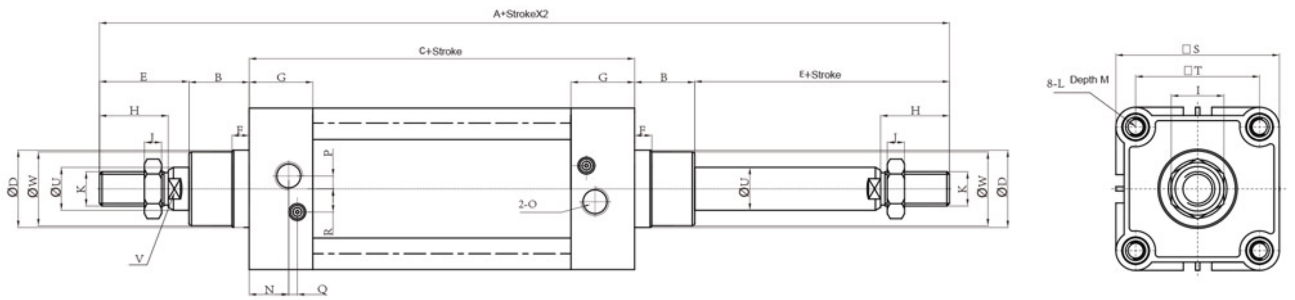


Figure Dimension(mm)

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	190	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	216	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	247	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	261	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	303	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	324	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	352	46	160	60	73	11	44.7	54	40	13.5	M27×2	M12
160	484	60	180	65	92	10	50	72	–	–	M36×2	M16
200	514	70	180	75	96	10	50	72	–	–	M36×2	M16
250	578	80	200	90	109	15	60	84	–	20	M42×2	M20
320	640	90	220	112	120	13	65	90	–	30	M48×2	M24

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28
40	9.5	17.5	G1/4	7	3	7	54	38	16	13	33
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40
80	11	24	G3/8	10	5	12	95	72	25	22	43
100	11	26	G1/2	10	5	14	115	89	25	22	47
125	12	22.3	G1/2	13	8	16	142	110	32	27	58
160	14	25	G3/4	–	–	–	179	140	40	36	–
200	14	25	G3/4	–	–	–	221	175	40	36	–
250	21	30	G3/4	20	10	25	275	220	50	44	90
320	21	38.5	G1	17	7	37.5	343	270	60	55	100

TGGJ Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

Product characteristics

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

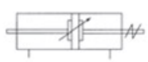
Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

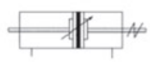
Kinds of mounting: Have kinds of auxiliary components to choose.

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

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

Graphics Sign





Ordering Code

TGGJ — 50 X 50 — 25 — S — LB

- TGGJ: Series
- 50 X 50: Bore X Stroke
- 25: Adjustable stroke type
  - 25:25mm
  - 50:50mm
  - 75:75mm
- S: The Code of magnet
  - S: With magnet
  - Blank: Without magnet
- LB: Fix type:
  - Blank:Basic type
  - LB: Front and back be fixed
  - FA: Front port be fixed(front flange)
  - TC : Trunion type

Ordering example

1)Bore:50mm, Stroke:50mm, adjustable stroke:25, LB installation, Code : TGGJ50×50—25—LB

2)Bore:32mm, Stroke:100mm, adjustable stroke:25, FA installation, Code : TGGJ32×100—25—FA

Standard Specification

Bore(mm)	32	40	50	63	80	100	125	160	200	250	320
Action	Double Action Type										
Applicable	Air										
Pressure Range	0.1 ~0.9 MPa										
Proof Pressure	1.35MPa										
Temperature Range	—10 ~60℃										
Speed Range	50 ~ 800mm/s										
Cushion Type	Adjustable Cushion										
Cushion Stroke	24mm						32mm			60mm	65mm
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4			G1

Stroke

Bore (mm)	Standard Stroke	Max.Stroke	Premissible.Stroke
32	25 50 75 80 100 125 150 160 175 200	200	300
40	25 50 75 80 100 125 150 160 175 200	200	300
50	25 50 75 80 100 125 150 160 175 200	200	300
63	25 50 75 80 100 125 150 160 175 200	200	300
80	25 50 75 80 100 125 150 160 175 200 250 300	300	400
100	25 50 75 80 100 125 150 160 175 200 250 300	300	400
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
320	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000

STNC®

Figure Dimension

Φ32 — Φ320

TGGJ Series Standard Cylinder

According ISO6431、ISO15552 Standard、VDMA24562

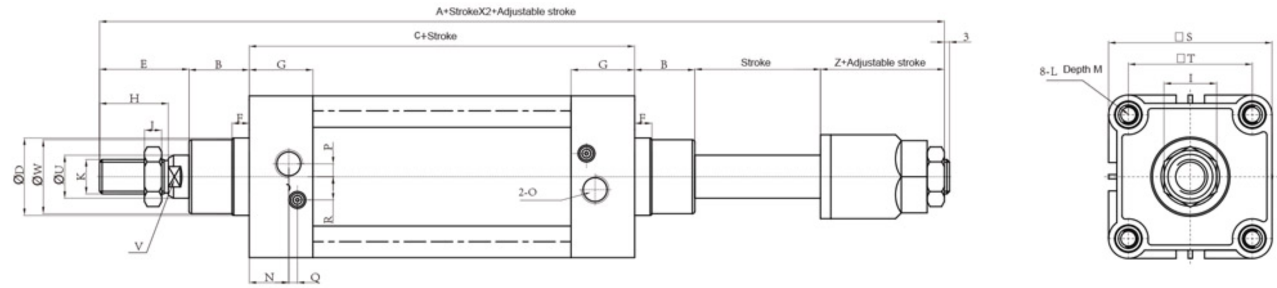


Figure Dimension(mm)

Bore/Code	A	B	C	D	E	F	G	H	I	J	K	L
32	185	16	94	30	32	10	27.5	22	17	6	M10×1.25	M6
40	210	20	108	35	34	10	29.5	24	17	7	M12×1.25	M6
50	236	27	109	40	42	10	32	32	23	8	M16×1.5	M8
63	250	26	125	45	42	10	36	32	23	8	M16×1.5	M8
80	290	35	129	45	52	10	37	40	26	10	M20×1.5	M10
100	311	40	140	55	52	10	39	40	26	10	M20×1.5	M10
125	—	46	160	60	73	11	44.7	54	40	13.5	M27×2	M12
160	—	60	180	65	92	10	50	72	—	—	M36×2	M16
200	—	70	180	75	96	10	50	72	—	—	M36×2	M16
250	—	80	200	90	109	15	60	84	—	20	M42×2	M20
320	—	90	220	112	120	13	65	90	—	30	M48×2	M24

Bore/Code	M	N	O	P	Q	R	S	T	U	V	W	Z
32	9.5	15	G1/8	5	3	6.5	46.5	32.5	12	10	28	28
40	9.5	17.5	G1/4	7	3	7	54	38	16	13	33	28
50	9.5	21	G1/4	7	3	9	64.5	46.5	20	17	38	31
63	9.5	23	G3/8	8	5	9	77	56.5	20	17	40	31
80	11	24	G3/8	10	5	12	95	72	25	22	43	39
100	11	26	G1/2	10	5	14	115	89	25	22	47	39
125	12	22.3	G1/2	13	8	16	142	110	32	27	58	—
160	14	25	G3/4	—	—	—	179	140	40	36	—	—
200	14	25	G3/4	—	—	—	221	175	40	36	—	—
250	21	30	G3/4	20	10	25	275	220	50	44	90	—
320	21	38.5	G1	17	7	37.5	343	270	60	55	100	—

TGC Series Standard Cylinder

● Theoretical calculation of the cylinder output

$$F = P \times A$$

F：cylinder theoretical output

P：Working pressure

A：Piston force area

Designed with new seal material and buffer structure, with a simple structure, light weight,low starting pressure, running balance, good sealing performance, long life, easy maintenance, etc., are widely used in light industry, chemical industry, gold, mechanical, electronics and other industries automation equipment, there are a varieties of components options to attend different installation requirements.

● 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 diamater		32		40		50		63		80		100		125		160		200		250	
External diameterof piston rad		12		16		20		20		25		25		32		40		40		50	
Action Type		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action	
		Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk
Compression area cm²		8.04	6.90	12.56	10.55	19.63	16.49	31.17	28.03	50.26	45.36	78.53	73.62	122.7	114.6	201.0	188.4	314	301	490	410
Air pressure Kgf/cm²	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	122	114	210	188	314	301	490	410
	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	245	229	402	377	628	603	980	820
	3	24.12	20.70	37.68	31.65	58.89	49.47	93.51	84.09	150.78	186.08	235.59	220.86	368	344	603	565	942	904	1470	1230
	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	491	458	804	754	1257	1206	1960	1640
	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	615	573	1005	942	1570	1507	2450	2050
	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	736	688	1206	1130	1885	1808	2940	2460
	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	859	802	1407	1319	2199	2110	3430	2870
	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	982	917	1608	1507	2513	2411	3920	3280
	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	1104	1031	1809	1696	2826	2713	4410	3690

TGC Series Standard Cylinder

Product characteristics

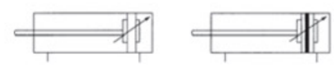
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

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

TGC — 50 X 50 — S — LB

TGC — Series
TGC: Standard double action

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

Ordering example

1) Bore: 50mm, stroke: 50mm, CA installation, Code : TGC50×50-CA
2) Bore: 32mm, stroke: 100mm, LB installation, Code : TGC32×100-LB

Standard Specification

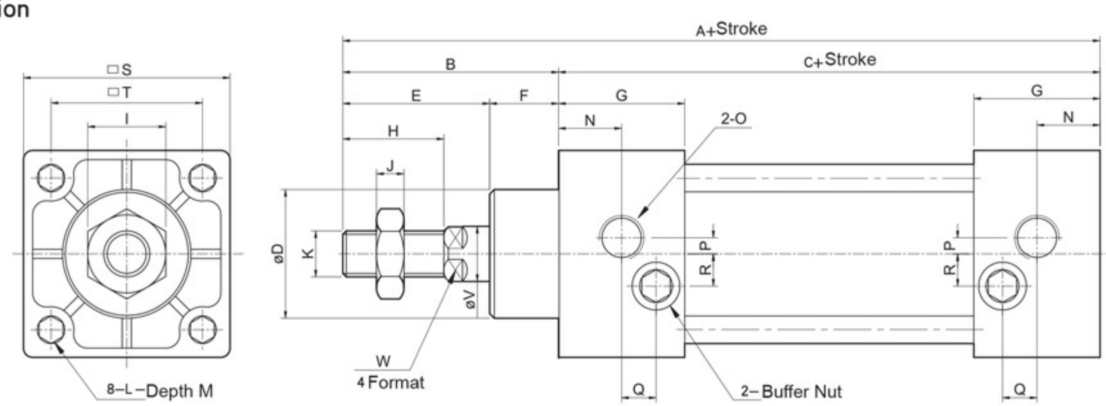
Bore(mm)	32	40	50	63	80	100	125	160	200	250
Action	Double Action Type									
Applicable	Air									
Pressure Range	0.1 ~ 0.9 MPa									
Proof Pressure	1.35MPa									
Temperature Range	-10 ~ 60°C									
Speed Range	50 ~ 800mm/s									
Cushion Type	Adjustable Cushion									
Cushion Stroke	24mm				32mm		35mm		42mm	
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4		G1

Stroke

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

Figure Dimension

● ø32 ~ ø250



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	M10x1.25	M6x1
40	145	49	96	32	34	15	27.5	24	17	7	M12x1.25	M6x1
50	153	57	96	38	42	15	27.5	32	23	8	M16x1.5	M6x1
63	156	57	99	38	42	15	27.5	32	23	8	M16x1.5	M8x1.25
80	188	75	113	47	54	21	33	40	26	10	M20x1.5	M10x1.5
100	191	75	116	47	54	21	33	40	26	10	M20x1.5	M10x1.5
125	205	88	117	52	68	20	38	54	41	13.5	M27x2	M12x1.75
160	245	113	132	62	88	25	38	72	55	18	M36x2	M16x2
200	251	118	133	67	88	30	38	72	55	18	M36x2	M16x2
250	306	141	165	86	106	35	48	84	65	21	M42x2	M20x2.5

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
125	18.5	20	G1/2	14	6.5	14	136	104	32	27
160	18.5	20	G3/4	15	5	15	174	134	40	36
200	18.5	20	G3/4	15	5	15	214	163	40	36
250	21	26	G1	22	8	20	267	202	50	46

TGCD Series Standard Cylinder

Product characteristics

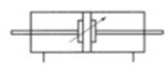
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

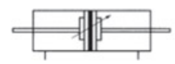
Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

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

TGCD — 50 X 50 — S — LB

- **TGCD**: Series. TGCD: Double-Axis 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; TC: Trunion type

Example

1) Bore: 63mm, stroke: 50mm, LB installation, Code: TGCD63×50-LB
2) Bore: 32mm, stroke: 100mm, FA installation, Code: TGCD32×100-FA

Standard Specification

Bore(mm)	32	40	50	63	80	100	125	160	200	250
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		35mm		42mm	
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4		G1

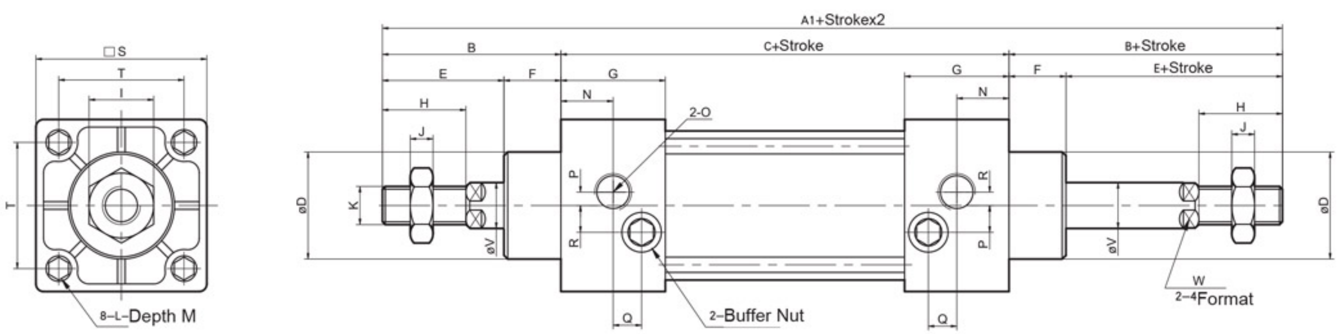
TGCD Series Standard Cylinder

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	300	400
100	25 50 75 80 100 125 150 160 175 200 250 300	300	400
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000
250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500 600 700 800 900 1000	1500	2000

Figure Dimension

● ø32 ~ ø250



Bore	A1	B	C	D	E	F	G	H	I	J	K	L
32	187	47	93	28	32	15	27.5	22	17	6	M10x1.25	M6x1
40	194	49	96	32	34	15	27.5	24	17	7	M12x1.25	M6x1
50	210	57	96	38	42	15	27.5	32	23	8	M16x1.5	M6x1
63	213	57	99	38	42	15	27.5	32	23	8	M16x1.5	M8x1.25
80	263	75	113	47	54	21	33	40	26	10	M20x1.5	M10x1.5
100	266	75	116	47	54	21	33	40	26	10	M20x1.5	M10x1.5
125	293	88	117	52	68	20	38	54	41	13.5	M27x2	M12x1.75
160	358	113	132	62	88	25	38	72	55	18	M36x2	M16x2
200	369	118	133	67	88	30	38	72	55	18	M36x2	M16x2
250	447	141	165	86	106	35	48	84	65	21	M42x2	M20x2.5

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
125	–	–	G1/2	–	–	–	136	104	32	27
160	–	–	G3/4	–	–	–	174	134	40	36
200	–	–	G3/4	–	–	–	214	163	40	36
250	–	–	G1	–	–	–	267	202	50	46

TGCJ Series Standard Cylinder

Product characteristics

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

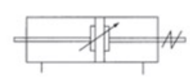
Cushion: Besides mounted cushion, there is adjustable buffer at the terminal of the cylinder to act smoothly.

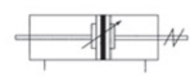
Kinds of mounting: Have kinds of auxiliary components to choose.

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

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

Graphics Sign





Ordering Code

TGCJ — 50 X 50 — 25 — S — LB

- **TGCJ** — Series. TGCJ: Double-Axis double acting adjustable type
- **50 X 50** — Bore size x Stroke
- **25** — Adjustable stroke type: 25: 25mm; 50: 50mm; 75: 75mm
- **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; TC: Trunion type

Example

1) Bore: 50mm, stroke: 50mm, adjustable stroke: 25, LB installation, Code: TGCJ50×50-25-LB
2) Bore: 32mm, stroke: 100mm, adjustable stroke: 25, FA installation, Code: TGCJ32×100-25-FA

Standard Specification

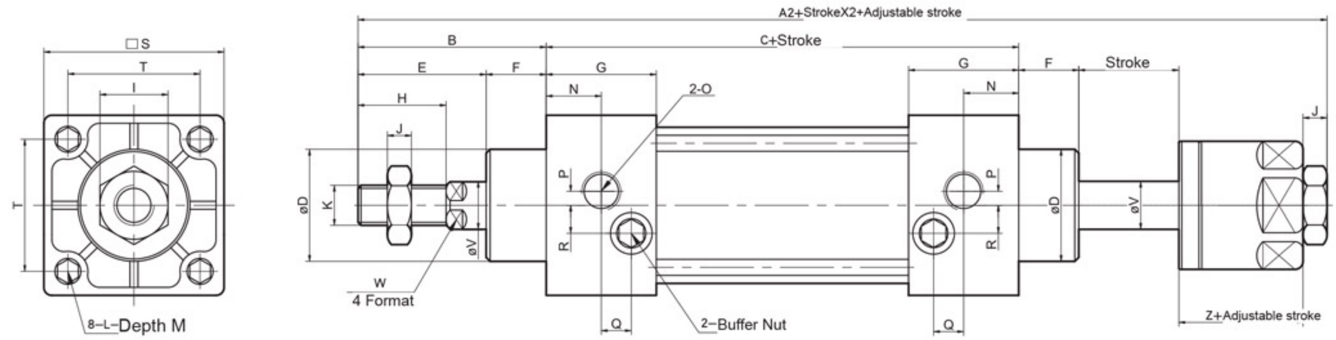
Bore (mm)	32	40	50	63	80	100	125	160	200	250
Action	Double Action Type									
Applicable	Air									
Pressure Range	0.1 ~ 0.9 MPa									
Proof Pressure	1.35MPa									
Temperature Range	-10 ~ 60°C									
Speed Range	50 ~ 800mm/s									
Cushion Type	Adjustable Cushion									
Cushion Stroke	24mm				32mm		35mm		42mm	
Prot Size	G1/8	G1/4		G3/8		G1/2		G3/4		G1

Stroke

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

Figure Dimension

● ø32 ~ ø250



Bore	A2	B	C	D	E	F	G	H	I	J	K	L
32	182	47	93	28	32	15	27.5	22	17	6	M10x1.25	M6x1
40	188	49	96	32	34	15	27.5	24	17	7	M12x1.25	M6x1
50	199	57	96	38	42	15	27.5	32	23	8	M16x1.5	M6x1
63	202	57	99	38	42	15	27.5	32	23	8	M16x1.5	M8x1.25
80	244	75	109	47	54	21	33	40	26	10	M20x1.5	M10x1.5
100	251	75	116	47	54	21	33	40	26	10	M20x1.5	M10x1.5
125	273.5	88	117	52	68	20	38	54	41	13.5	M27x2	M12x1.75
160	328	113	132	62	88	25	38	72	55	18	M36x2	M16x2
200	339	118	133	67	88	30	38	72	55	18	M36x2	M16x2
250	–	141	165	86	106	35	48	84	65	21	M42x2	M20x2.5

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
125	–	–	G1/2	–	–	–	136	104	32	27	35
160	–	–	G3/4	–	–	–	174	134	40	36	40
200	–	–	G3/4	–	–	–	214	163	40	36	40
250	–	–	G1	–	–	–	267	202	50	46	–

TGCT Double Power Cylinder

Product characteristics

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

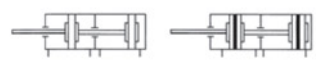
Cushion: Besides mounted cushion, there is adjustable cushion at the terminal of the cylinder to act smoothly.

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.

Optional position: With special structure and system controlling, the piston rod can work by step and has optional working positions in the whole stroke.

Graphics Sign



Ordering Code

TGCT — 50 X 50 X 50 — S — LB — DZ

- TGCT: Series
- 50: Bore
- 50: Stroke1
- 50: Stroke2
- S: Magnetic type
  - No Mark: Without magnet
  - S: With magnet
- LB: Installing way
  - No Mark: Basic type
  - LB: Foot mounting type
- DZ:
  - No Mark: Basic type
  - DZ: 2 stroke

Example

1) Bore: 50mm, stroke1: 50mm, stroke2: 50mm, LB installation, Code: TGCT50×50×50–LB–DZ
2) Bore: 32mm, stroke1: 100mm, stroke2: 150mm, Standard installation, Code: TGCT32×100×150–DZ

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℃					
Speed Range	50 ~ 800mm/s					
Cushion Type	Adjustable Cushion					
Cushion Stroke	24mm				32mm	
Prot Size	G1/8	G1/4		G3/8		G1/2

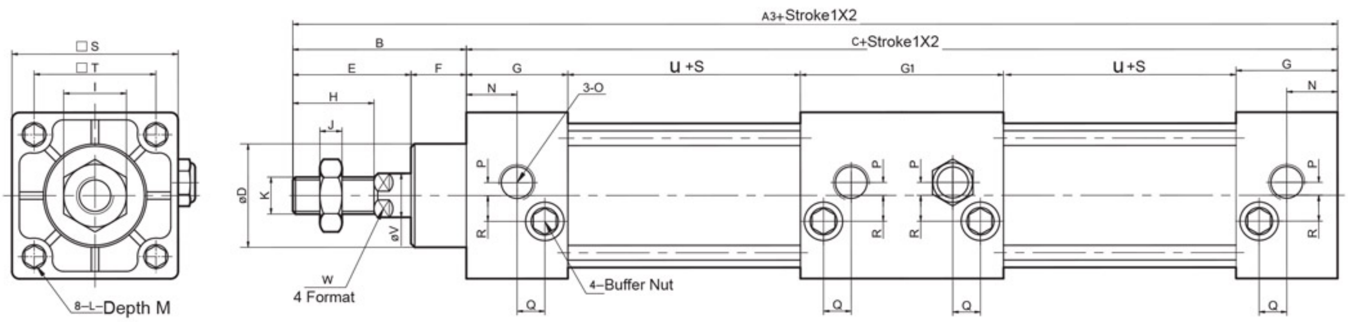
Note: This cyinder can be used in condition that output power be required to raise but cylinder diameter can not beadded cylinder body raising is allowed. (Working stroke of this cylinder only one)

Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Premissible.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	1200	2000
50	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500	1200	2000
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500	1500	2000
80	25 50 75 80 100 125 150 160 175 200 250 300 350 400 500	1500	2000
100		1500	2000

Figure Dimension

● ø32 ~ ø250



Bore	A3	B	C	D	E	F	G	G1	H	I	J	K	L
32	233	47	186	28	32	15	27.5	55	22	17	6	M10x1.25	M6x1
40	241	49	192	32	34	15	27.5	55	24	17	7	M12x1.25	M6x1
50	249	57	192	38	42	15	27.5	55	32	23	8	M16x1.5	M6x1
63	255	57	198	38	42	15	27.5	55	32	23	8	M16x1.5	M8x1.25
80	300	75	225	47	54	21	33	73	40	26	10	M20x1.5	M10x1.5
100	314	75	239	47	54	21	33	73	40	26	10	M20x1.5	M10x1.5

Bore	M	N	O	P	Q	R	S	T	V	U	W
32	9.5	13.7	G1/8	3.5	7.5	7	45	33	12	38	10
40	9.5	13.5	G1/4	6	8.2	9	50	37	16	38	14
50	9.5	13.5	G1/4	7	8.2	9	62	47	20	38	17
63	9.5	13.5	G3/8	7	8.2	8.5	75	56	20	41	17
80	11	16.5	G3/8	10	9.5	14	94	70	25	45	22
100	11	16.5	G1/2	11	9.5	14	112	84	25	47	22

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 diamater		32		40		50		63		80		100	
External diameterof piston rad		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	186.08	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

STNC®

TGU Series Standard Cylinder

Product characteristics

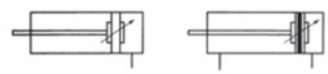
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

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 — 50 X 50 — S — LB

Series
TGU: Standard double acting type

Bore size x Stroke

Magnetic type
No Mark : Without magnet
S: With magnet

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

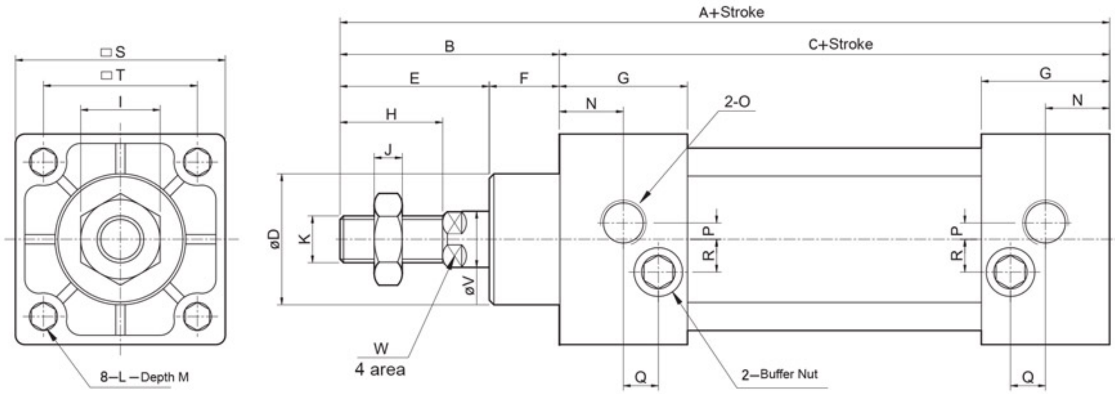
Stroke

Bore (mm)	Standard Stroke	Max.Stroke	Premissible.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

● ø32 ~ ø100



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

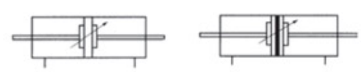
Without lubricating: Needn't lubricating on piston rod for using oiled bearing.

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

TGUD — 50 X 50 — S — LB

- **TGUD** — Series. TGUD: Double-Axis 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; TC: Trunion type

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℃					
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

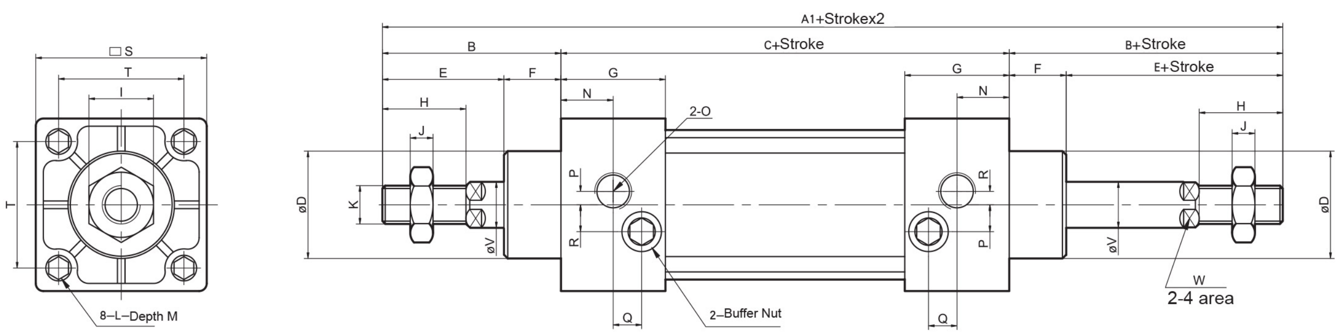
Stroke

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

● ø32 ~ ø100



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

STNC®

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

TGUJ — 50 X 50 — 25 — S — LB

- TGUJ: Series Double–Axis double acting adjustable type
- 50 X 50: Bore size x Stroke
- 25: Adjustable stroke type
  - 25:25mm
  - 50:50mm
  - 75:75mm
- 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
  - TC : Trunion type

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℃					
Speed Range	50 ~ 800mm/s					
Cushion Type	Adjustable Cushion					
Cushion Stroke	24mm				32mm	
Prot Size	G1/8	G1/4		G3/8		G1/2

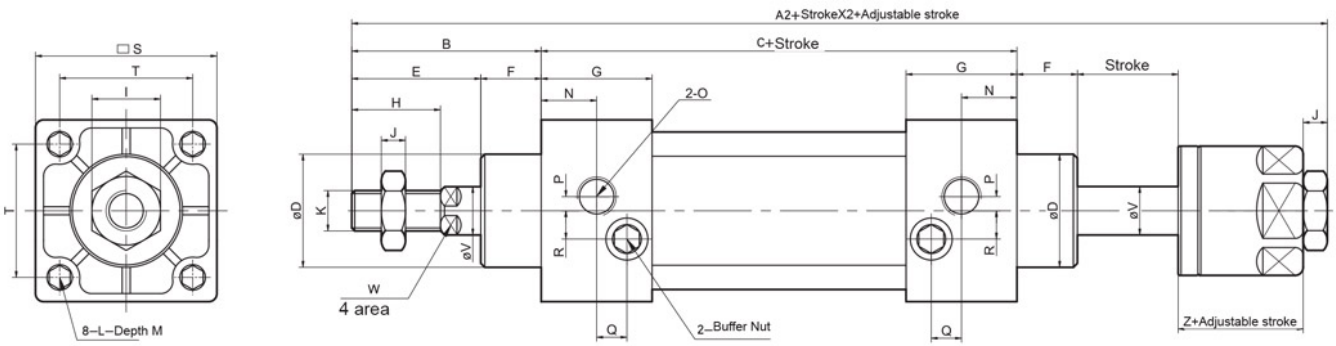
Stroke

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

● ø32 ~ ø100



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

STNC®

STNC®

TGL Series Stainless Steel Cylinder

According：ISO6432

● characteristic

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

Durability: With high-class stainless steel, it is more anticorrosive and durable.

Kinds of mounting: Have kinds of auxiliary components to be chosen.

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

● 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 calculation of the cylinder output

$$F = P X A$$

F：cylinder theoretical output

P：Working pressure

A：Piston force area

■ Theoretical force sheet

Cylinder inside diamater		8		10		12		16		20		25		32		40	
External diameterof piston rad		4		4		6		6		8		10					
Action Type		Double action		Double action		Double action		Double action		Double action		Double action		Double action		Double action	
		Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk	Push	Pluk
Compression area cm^2		0.5	0.37	0.78	0.65	1.13	0.85	2.01	1.73	3.14	2.64	4.90	4.12	8.04	6.90	12.56	10.55
Air pressure Kgf/cm^2	1	-	-	-	-	-	-	2.01	1.73	3.14	2.64	4.90	0.12	08.04	06.90	12.56	10.55
	2	-	-	0.16	0.13	2.26	1.7	4.02	3.46	6.28	5.28	9.80	8.24	16.08	13.80	25.12	21.10
	3	0.15	0.11	0.23	0.2	3.4	2.55	6.03	5.19	9.42	7.92	14.70	12.36	24.12	20.70	37.68	31.65
	4	0.2	0.15	0.31	0.26	4.52	3.4	8.04	6.92	12.56	10.56	19.60	16.48	32.16	27.60	50.24	42.20
	5	0.25	0.18	0.39	0.33	5.65	4.25	10.05	8.65	15.70	13.20	24.50	20.60	40.20	34.50	62.80	52.75
	6	0.3	0.22	0.47	0.39	6.78	5.1	12.06	10.39	18.84	15.84	29.40	24.72	48.24	41.40	75.36	63.30
	7	0.35	0.26	0.55	0.46	7.91	5.95	14.07	12.11	21.98	18.48	34.30	28.84	56.28	48.30	87.92	73.85
	8	0.4	0.3	0.62	0.52	9.04	6.8	16.08	13.84	25.12	21.12	39.20	32.96	64.32	55.20	100.48	84.40
	9	0.45	0.33	0.70	0.59	10.17	7.65	18.09	15.57	28.26	23.76	44.10	37.08	72.36	62.10	113.04	94.95

TGL Series Stainless Steel Cylinder

According：ISO6432

• characteristic

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

Durability: With high-class stainless steel, it is more anticorrosive and durable.

Kinds of mounting: Have kinds of auxiliary components to be chosen.

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

Ordering Code

TGL — 20 X 100 — 25 — S — C

Series
- TGL：Double acting
- TGLD：Double acting type
- TGLJ：Double acting adjustable type
- TGSL：Single acting intrude type
- TGTL：Single acting extrude type

Bore X Stroke

Adjustable Stroke
- 25：25mm
- 50：50mm

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

Relax
- No Mark — Rubber relax
- C—Air relax
- ＊ The cylinder longer than 16mm suit air relax

Note：TGL/TGLD/TGSL/TGTL No Option for Adjustable Stroke type。
TGSL/TGTL No Option for Cushion type.

Ordering example

1) Bore：20mm, Stroke：100mm, single clevis air cushion, Code：TGL—20×100—C

Specification

Bore (mm)	8	10	12	16	20	25	32	40
Medium	Air							
Action way	Double Acting Type							
Ensure operatin pressure MPa{kgf/cm2}	1.5{1.53}							
Max pressure MPa{kgf/cm2}	1.0{10.2}							
Min pressure MPa{kgf/cm2}	0.1{1}				0.05{0.5}			
Environment and fluid emperature	−10 ～ 60°C(No Freeze)							
Piston speed	Rubber Cushion (Standard)				Air Cushion (By Yourself)			
Relax	50 ～ 750mm/s							
＊ Lubricate	No							
Power allonled(J)	0.02	0.03	0.04	0.09	0.27	0.4		
Pipe Size	M5×0.8				G1/8			

＊ If Lubrication, please use ISOVG32 No1

Stroke

Bore (mm)	Standard stroke (mm)		Max.Stroke (mm)
	Single acting	Double acting	
8	10,15,20,25,40,50	10,15,20,25,40,50,75,80,100,125,150	150
10	10,15,20,25,40,50	10,15,20,25,40,50,75,80,100,125,150,160,175,200	200
12	10,15,20,25,40,50	10,15,20,25,40,50,75,80,100,125,150,160,175,200,250	250
16	10,15,20,25,40,50,75,80,100	10,15,20,25,40,50,75,80,100,125,150,160,175,200,250,300	300
20	10,15,20,25,40,50,75,80,100	10,15,20,25,40,50,75,80,100,125,150,160,175,200,250,300 350,400,450,500,600	500
25			600
32			600
40			600

TGL Series Stainless Steel Cylinder

Spring Single–acting

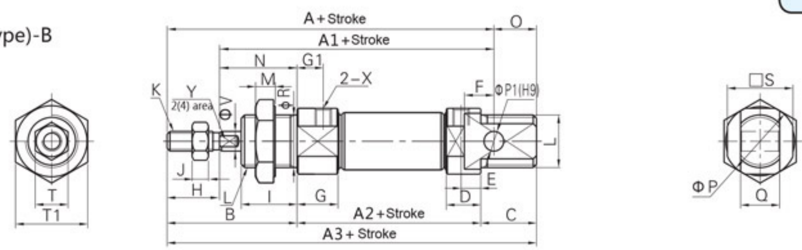
According：ISO6432

Figure Dimension

TGL Type

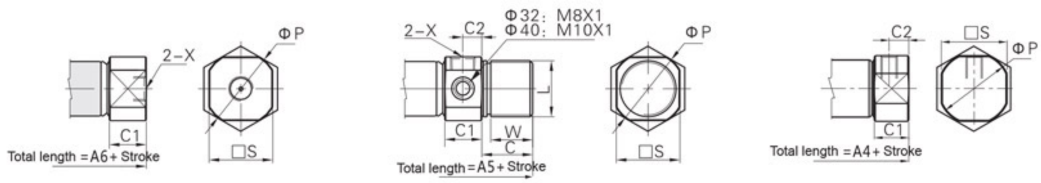
Basic style(pivot type)-B

Falt-end type-U



Round-end type-M

Falt-end type-U

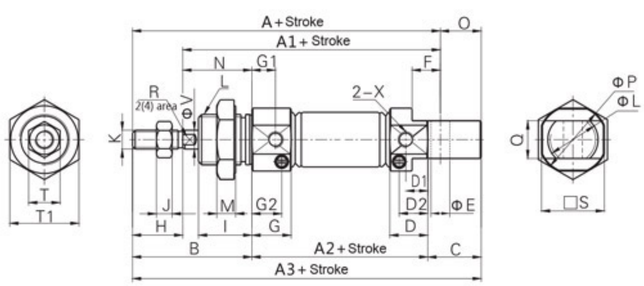


Bore	A	A1	A2	A3	A4	A5	A6	B	C	C1	C2	D	E	F	G	G1	H	I	J	K	L	M	N	O	P	P1	Q	R	S	T	T1	X	V	W	Y
8	76	64	46	86	74	—	—	28	12	10	6	10	4	6	10	6	12	12	3	M4x0.7	M12x1.25	6	16	10	14	4	10	12	15	7	17	M5×0.8	4	—	—
10	76	64	46	86	74	—	—	28	12	10	6	10	4	6	10	6	12	12	3	M4x0.7	M12x1.25	6	16	10	14	4	10	12	15	7	17	M5×0.8	4	—	—
12	91	75	50	105	88	—	—	38	17	10	6	10.5	6	9	10	6	16	17	5	M6x1.0	M16x1.5	6	23	14	18	6	12	16	18	10	23	M5×0.8	6	—	5
16	98	82	56	111	94	111	94	38	17	10	6	10.5	6	9	10	6	16	17	5	M6x1.0	M16x1.5	6	23	13	21	6	12	16	20	10	23	M5×0.8	6	13.5	5
20	115	95	62	126	106	126	106	44	20	14	7.5	14.5	7.5	12	14	7.5	20	20	5	M8x1.25	M22x1.5	7	24	11	27	8	16	22	25	13	32	Rc1/8	8	16.5	6
25	126	104	65	137	114.5	137	115	50	22	15	8	16	8	12	15	8	22	22	6	M10x1.25	M22x1.5	7	28	11	30	8	16	22	30	17	32	Rc1/8	10	18.5	8
32	—	—	—	—	125	140	126	58	14	16	9	—	—	—	16	9	20	30	6	M10x1.25	M30x1.5	7	38	—	38.5	—	—	30	34.5	17	45	Rc1/8	12	10.5	10
40	—	—	—	—	158	174	158	59	16	22	11	—	—	—	22	11	24	35	7	M12x1.25	M38x1.5	8	45	—	47	—	—	38	42.5	17	46	Rc1/4	16	12.5	14

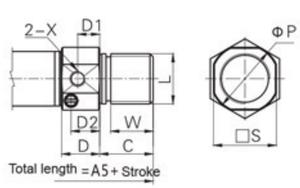
TGL-C Type

Bore: Ø16~Ø25

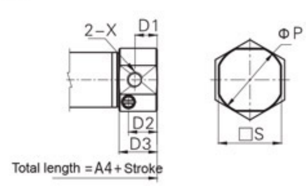
Basic style(pivot type)-B



Round-end type-M



Falt-end type-U



Bore (mm)	A	A1	A2	A3	A4	A5	B	C	D	D1	D2	D3	E	F	G	G1	G2	H	I	J
16	98	82	56	111	94	111	38	17	12.1	6	6	10	6	9	10	7.5	6.8	16	17	5
20	115	95	62	126	106	126	44	20	14.5	7.6	10.5	14	8	12	14	7.5	10.3	20	20	6
25	126	104	65	137	113.5	137	50	22	14.5	8	8	15	8	12	15	8	11.1	22	22	6

Bore (mm)	K	L	M	N	O	P	Q	R	S	T	T1	X	V	W
16	M6×1.0	M16×1.5	6	23	13	21	12	5	20	10	23	M5×0.8	6	13.5
20	M8×1.25	M22×1.5	7	24	11	27	16	6	25	13	32	Rc1/8	8	16.5
25	M10×1.25	M22×1.5	7	28	11	30	16	8	30	17	32	Rc1/8	10	18.5

Figure Dimension

TGL Series Stainless Steel Cylinder

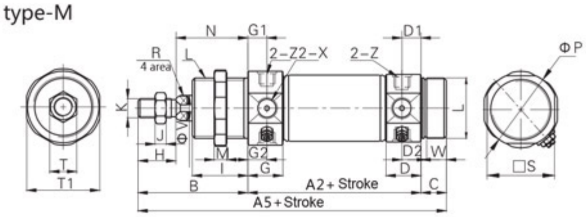
Double Axis Double Acting Type

According：ISO6432

TGL-C Type

Bore: Ø32~Ø40

Round-end type-M

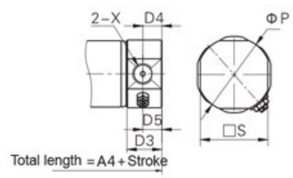


Bore(mm)	A2	A4	A5	B	C	D	D1	D2	D3	D4	D5
32	68	124	140	58	14	16.5	9	11.5	11.1	7.5	11
40	89	157.5	174	69	16	22	12	12	21.5	11.5	14

Bore(mm)	G	G1	G2	H	I	J	K	L	M
32	16	9	11.1	20	30	6	M10×1.25	M30×1.5	7
40	22	11	12	24	35	7	M12×1.25	M38×1.5	8

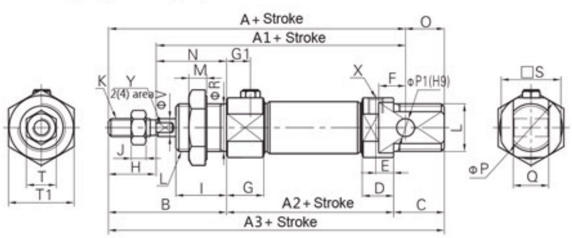
Bore(mm)	N	P	S	T	T1	V	W	X
32	38	38.5	34.5	17	45	12	10.5	Rc1/8
40	45	47	42.5	17	46	16	12.5	Rc1/4

Falt-end type-U



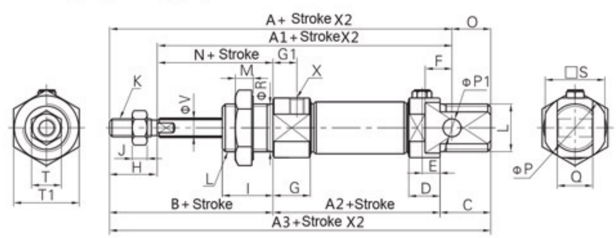
TGSL Type

Basic style(pivot type)-B

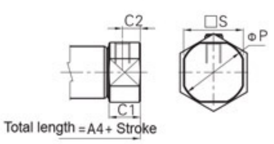


TGTL Type

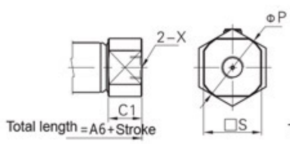
Basic style(pivot type)-B



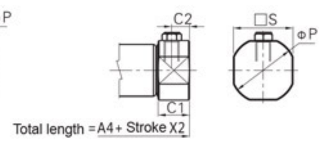
Falt-end type-U



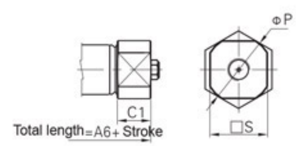
Axial Air-in-R



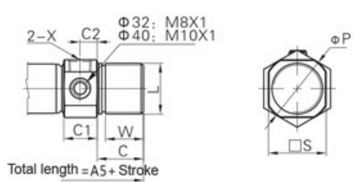
Falt-end type-U



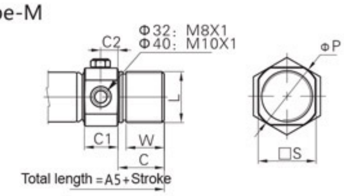
Axial Air-in-R



Round-end type-M



Round-end type-M



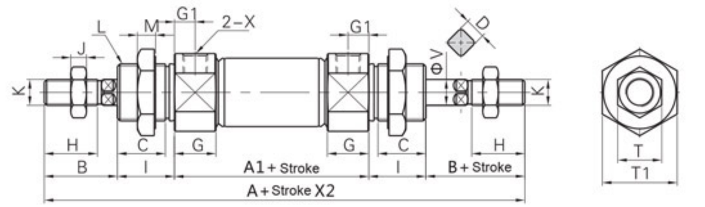
Symbol / Bore	A		A1		A2		A3		A4		A5		A6	
	0~50	51~100	0~50	51~100	0~50	51~100	0~50	51~100	0~50	51~100	0~50	51~100	0~50	51~100
8	101	—	89	—	71	—	111	—	99	—	—	—	—	—
10	101	—	89	—	71	—	111	—	99	—	—	—	—	—
12	116	—	100	—	75	—	130	—	113	—	—	—	—	—
16	123	148	107	132	81	106	136	161	119	144	136	161	119	144
20	140	165	120	145	87	112	151	176	131	156	151	176	131	156
25	151	176	129	154	90	115	162	187	139.5	164.5	162	187	140	165
32	—	—	—	—	—	—	—	—	150	175	165	190	151	176
40	—	—	—	—	—	—	—	—	183	208	199	224	183	208

TGL Series Stainless Steel Cylinder
Adjustable Double Axis Double Acting

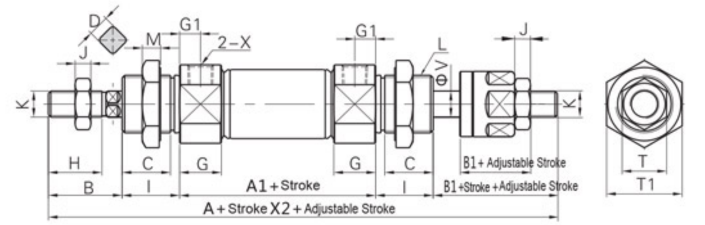
According：ISO6432

Figure Dimension

TGLD Type

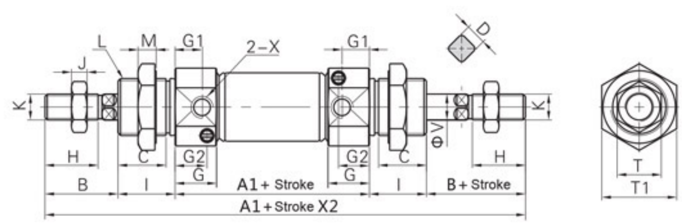


TGLJ Type

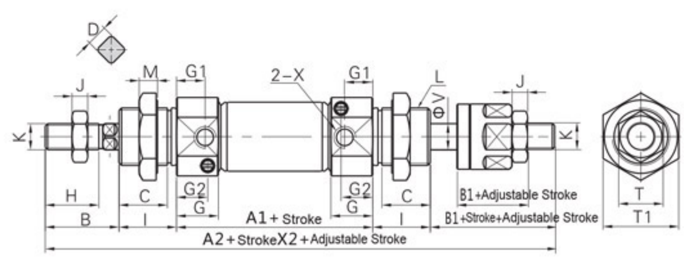


Bore	A	A1	A2	B	B1	C	D	G	G1	H	I	J	K	L	M	T	T1	X	V
8	102	46	101	16	15	9.5	—	10	6	10.5	12	3	M4×0.7	M12×1.25	6	7	17	M5×0.8	4
10	102	46	101	16	15	9.5	—	10	6	10.5	12	3	M4×0.7	M12×1.25	6	7	17	M5×0.8	4
12	126	50	126	21	21	14.5	5 (2 area)	10	6	14	17	5	M6×1.0	M16×1.5	6	10	23	M5×0.8	6
16	132	56	132	21	21	13.5	5 (2 area)	10	6	14.5	17	5	M6×1.0	M16×1.5	6	10	23	M5×0.8	6
20	150	62	156	24	25	16.5	6 (2 area)	14	7	18	20	5	M8×1.25	M22×1.5	7	13	32	Rc1/8	8
25	165	65	164	28	27	18.5	8 (4 area)	15	8	20.5	22	6	M10×1.25	M22×1.5	7	17	32	Rc1/8	10
32	184	68	183	28	27	26.5	10 (4 area)	16	9	17.5	30	6	M10×1.25	M30×1.5	7	17	45	Rc1/8	12
40	227	89	221	34	28	31.5	14 (4 area)	22	11	21	35	7	M12×1.25	M38×1.5	8	17	46	Rc1/4	16

TGLD-C Type



TGLJ-C Type



Bore	A	A1	A2	B	B1	C	D	G	G1	G2	H	I	J	K	L	M	T	T1	X	V
16	132	56	132	21	21	13.5	5 (2 area)	10	6	6.8	14.5	17	5	M6×1.0	M16×1.5	6	10	23	M5×0.8	6
20	150	62	151	24	24	16.5	6 (2 area)	14	7.5	10.3	18	20	5	M8×1.25	M22×1.5	7	13	32	Rc1/8	8
25	165	65	164	28	27	18.5	8 (4 area)	15	8	11.1	20.5	22	6	M10×1.25	M22×1.5	7	17	32	Rc1/8	10
32	184	68	183	28	27	26.5	10 (4 area)	16	9	11.1	17.5	30	6	M10×1.25	M30×1.5	7	17	45	Rc1/8	12
40	227	89	221	34	28	31.5	14 (4 area)	22	11	12	21	35	7	M12×1.25	M38×1.5	8	17	46	Rc1/4	16

TGA Series Stainless Steel Cylinder

● Calulation of theoretical force of cylinder

$$F = P \times A - F_0$$

F: Theoretical force

P: Pressure

A: Pitston area

F0: Regain power of spring

● 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 diamater		16			20			25			32			40		
External diameterof piston rad		6			8			10			12			16		
Action Type		Single action	Double action		Single action	Double action		Single action	Double action		Single action	Double action		Single action	Double action	
			Push	Pluk		Push	Pluk		Push	Pluk		Push	Pluk		Push	Pluk
Compression area cm^2		2.01	2.01	1.81	3.14	3.14	2.64	4.90	4.90	4.12	8.04	8.04	6.90	12.56	12.56	10.55
Air pressure Kgf/cm^2	1	–	02.01	01.81	–	03 14	02.64	–	04 90	04.12	–	08.04	06.90	–	12.56	10.55
	2	–	04.02	03.62	01.57	06.28	05.28	02.45	09.80	08.24	04.02	16.08	13.80	06.28	25.12	21.10
	3	02.01	06.03	05.43	04.71	09.42	07.92	07.35	14.70	12.36	12.06	24.12	20.70	18.84	37.68	31.65
	4	04.02	08.04	07.24	07.85	12.56	10.56	12.25	19.60	16.48	20.10	32.16	27.60	31.40	50.24	42.20
	5	06.03	10.05	09.05	10.99	15.70	13.20	17.15	24.50	20.60	28.14	40.20	34.50	43.96	62.80	52.75
	6	08.04	12.06	10.86	14.13	18.84	15.84	22.05	29.40	24.72	36.18	48.24	41.40	41.40	75.36	63.30
	7	10.04	14.07	12.67	17.27	21.98	18.48	26.95	34.30	28.84	44.22	56.28	48.30	69.08	87.92	73.85
	8	–	–	–	20.41	25.12	21.12	31.85	39.20	32.96	52.26	64.32	55.20	81.64	100.48	84.40
	9	–	–	–	23.55	28.26	23.76	36.75	44.10	37.08	60.30	72.36	62.10	94.20	113.04	94.95

TGA Series Stainless Steel Cylinder

• characteristic

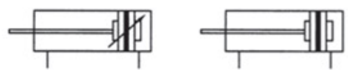
Without lubricating: Needn't lubricating on piston rod for using oiled axletree.

Durability: With high-class stainless steel, it is more anticorrosive and durable.

Kinds of mounting: Have kinds of auxiliary components to be chosen.

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

■ Graphics Sign



● Ordering Code

TGA — U — 20 X 50 — LB

Series
TGA : Double acting type
TGAC : Double acting cushion type

The type of back cover
No Mark: Fishtail type
CM: Rounded type
U: Horizontal type

Bore size x Stroke

Installing way
No Mark: Basic type
LB : Foot mounting type
FA : Front flange mounting type
SDB : Trunion type

■ Example

1) Bore: 20mm, stroke: 50mm, the back cover is fishtail type, with SDB pattern, Code : TGA20×50—SDB

2) Bore: 32mm, stroke: 100mm, Horizontal type back cover, Code : TGM—U—32×100

■ Standard Specification

Bore (mm)		16	20	25	32	40
Action		Double action type				
Applicable medium		Air				
Pressure range		0.1～0.9MPa				
Proof pressure		1.35 MPa				
Temperature range		−10 ～60°C (No Freeze)				
Speed range		50～800 mm/s				
Cushion type	Standard type	Mounted Cushion				
Cushion stroke(mm)	Cushion type	Adjustable cushion				
Prot Size		M5x0.8	G1/8			

TGA Series Stainless Steel Cylinder

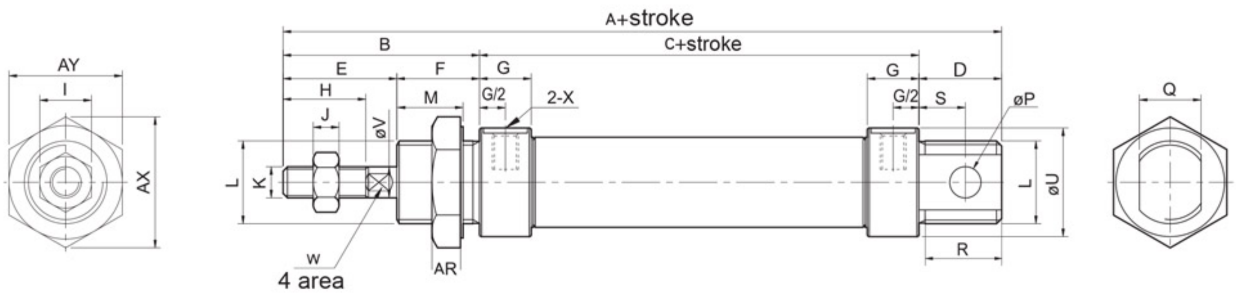
Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
16	25 50 75 80 100 125 150 160 175 200	300	500
20	25 50 75 80 100 125 150 160 175 200 250 300	500	650
25	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	650
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	650
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	650

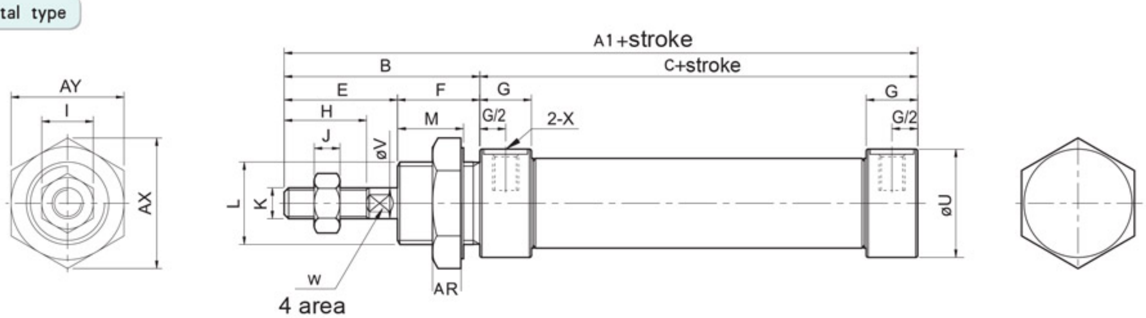
Figure Dimension

- ø16 ~ ø40

Fishtail type



Horizontal type



Bore	A	A1	B	C	D	E	F	G	H	I	J	K
16 ※	114	98	38	60	16	22	16	11.5	16	10	5	M6x1
20	137	116	40	76	21	28	12	16	20	12	6	M8x1.25
25	141	120	44	76	21	30	14	16	22	17	6	M10x1.25
32	147	120	44	76	27	30	14	16	22	17	6	M10x1.25
40	149	122	46	76	27	32	14	16	24	17	7	M12x1.25

Bore	L	M	P	Q	R	S	U	V	W	X	AR	AX	AY
16 ※	M16x1.5	14	6	12	14	9	21	6	5	M5	6	25	22
20	M22x1.5	10	8	16	19	12	27	8	6	G1/8	7	33	29
25	M22x1.5	12	8	16	19	12	30	10	8	G1/8	7	33	29
32	M24x2.0	12	10	16	25	15	38.5	12	10	G1/8	8	37	32
40	M30x2.0	12	12	20	25	15	47	16	14	G1/8	9	47	41

TGA Series Stainless Steel Cylinder

• characteristic

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

Durability: With high-class stainless steel, it is more anticorrosive and durable.

Kinds of mounting: Have kinds of auxiliary components to be chosen.

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

■ Graphics Sign

● Ordering Code

TGAD — 20 X 50 — LB

Type
TGAD: Double action type
TGACD: Biaxial complex pneumatic buffer type

Bore size x Stroke

Installing way
No Mark: Basic type
LB: Foot mounting type
FA: Front flange mounting type

■ Example

1) Bore: 20mm, Stroke: 50mm, LB installation, Code: TGAD20×50–LB

2) Bore: 32mm, Stroke: 100mm, FA installation, Code: TGAD32×100–FA

■ Standard Specification

Bore (mm)		16	20	25	32	40
Action		Double action type				
Applicable medium		Air				
Pressure range		0.1～0.9MPa				
Proof pressure		1.35MPa				
Temperature range		−10 ～60°C				
Speed range		30～800 mm/s				
Cushion type	Standard type	Bumper				
Cushion stroke(mm)	cushion type	–	Adjustable cushion			
Prot Size		M5x0.8	G1/8			

TGA Series Stainless Steel Cylinder

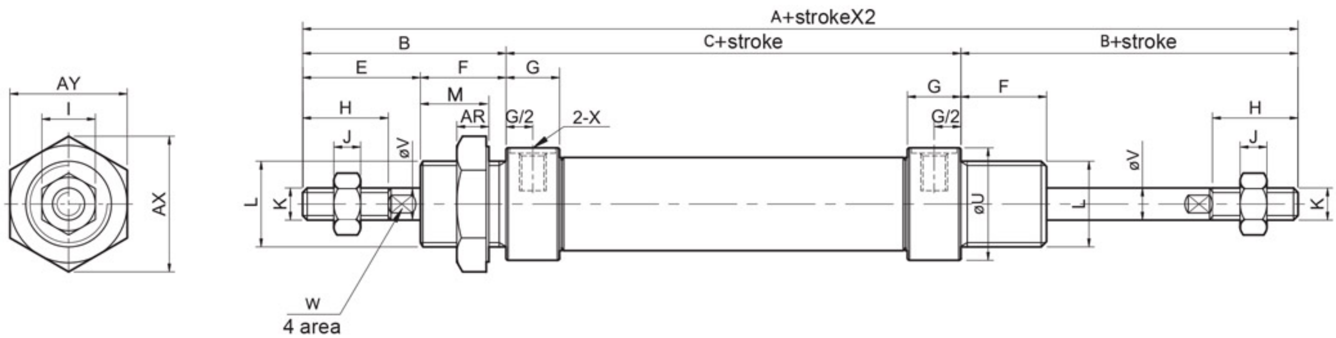
Double Axis Type

Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible Stroke
16	25 50 75 80 125 150 160	150	200
20	25 50 75 80 125 150 160 175 200	200	300
25	25 50 75 80 125 150 160 175 200 250	250	300
32	25 50 75 80 125 150 160 175 200 250	250	300
40	25 50 75 80 125 150 160 175 200 250	250	300

Figure Dimension

● ø16 ~ ø40



Bore	A	B	C	E	F	G	H	I	J	K	L
16	136	38	60	22	16	11.5	16	10	5	M6x1	M16x1.5
20	156	40	76	28	12	16	20	12	6	M8x1.25	M22x1.5
25	164	44	76	30	14	16	22	17	6	M10x1.25	M22x1.5
32	164	44	76	30	14	16	22	17	6	M10x1.25	M24x2.0
40	168	46	76	32	14	16	24	17	7	M12x1.25	M30x2.0

Bore	M	U	V	W	X	AR	AX	AY
16	14	21	6	5	M5	6	25	22
20	10	27	8	6	G1/8	7	33	29
25	12	30	10	8	G1/8	7	33	29
32	12	38.5	12	10	G1/8	8	37	32
40	12	47	16	14	G1/8	9	47	41

STNC®

TGA Series Stainless Steel Cylinder

Double Axis Adjustable Type

● characteristic

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

Durability: With high-class stainless steel, it is more anticorrosive and durable.

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.

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

■ Graphics Sign

● Ordering Code

TGAJ — 20 X 50 — 25 — LB

- **Series** (TGAJ)
  - TGAJ: Double acting adjustable type
  - TGACJ: Double acting adjustable cushion type
- **Bore size X Stroke** (20 X 50)
- **Adjustable Stroke** (25)
  - 25: 25mm
  - 50: 50mm
  - 75: 75mm
- **Installing way** (LB)
  - No Mark: Basic type
  - LB: Foot mounting type
  - FA: Front flange mounting type

■ Example

1) Bore: 20mm, Stroke: 50mm, adjustable Stroke: 25, LB installation, Code: TGAJ20×50–25–LB

2) Bore: 32mm, Stroke: 100mm, adjustable Stroke: 25, FA installation, Code: TGACJ32×100–25–FA

■ Standard Specification

Bore (mm)		16	20	25	32	40
Action		Double action type				
Applicable medium		Air				
Pressure range		0.1～0.9MPa				
Proof pressure		1.35 MPa				
Temperature range		−10～60℃				
Speed range		30～800 mm/s				
Cushion type	Standard type	Bumper				
	cushion type	Adjustable cushion				
Prot Size		M5x0.8	G1/8			

TGA Series Stainless Steel Cylinder

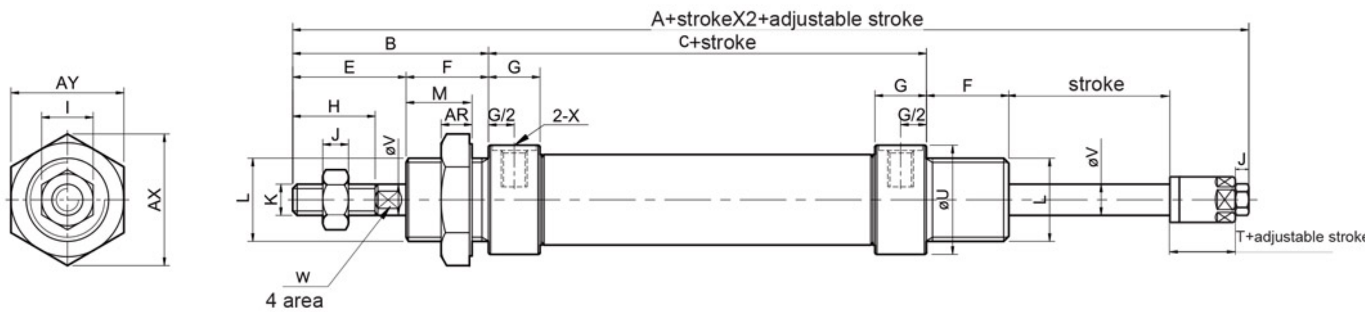
Double Axis Adjustable Type

■ Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
16	25 50 75 80 125 150	150	200
20	25 50 75 80 125 150 160 175 200	200	300
25	25 50 75 80 125 150 160 175 200 250	250	300
32	25 50 75 80 125 150 160 175 200 250	250	300
40	25 50 75 80 125 150 160 175 200 250	250	300

■ Figure Dimension

● ø16 ~ ø40



Bore	A	B	C	E	F	G	H	I	J	K	L
16	135	38	60	22	16	15	16	10	5	M6x1	M16x1.5
20	153	40	76	28	12	16	20	12	6	M8x1.25	M22x1.5
25	161	44	76	30	14	16	22	17	6	M10x1.25	M22x1.5
32	161	44	76	30	14	16	22	17	6	M10x1.25	M24x2.0
40	164	46	76	32	14	16	24	17	7	M12x1.25	M30x2.0

Bore	M	T	U	V	W	X	AR	AX	AY
16	14	16	21	6	5	M5	6	25	22
20	10	19	27	8	6	G1/8	7	33	29
25	12	21	30	10	8	G1/8	7	33	29
32	12	21	38.5	12	10	G1/8	8	37	32
40	12	21	47	16	14	G1/8	9	47	41

STNC®

TGA Series Stainless Steel Cylinder

Single Acting Type

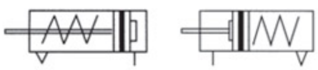
Product characteristic

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

Durability: With high-class stainless steel, it is more anticorrosive and durable.

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

TGSA — U — 20 X 50 — LB

- TGSA: Series
  - TGSA: Single acting extrusion type
- U: The type of back cover
  - No Mark: Fishtail type
  - U: Horizontal type
- 20 X 50: Bore size X Stroke
- LB: Installing way
  - No Mark: Basic type
  - LB: Foot mounting type
  - FA: Front flange mounting type
  - SDB: Trunnion type

Example

1) Bore: 20mm, Stroke: 50mm, LB installation, Code: TGSA20×50—LB
2) Bore: 32mm, Stroke: 100mm, FA installation, Code: TGSA32×100—FA

Standard Specification

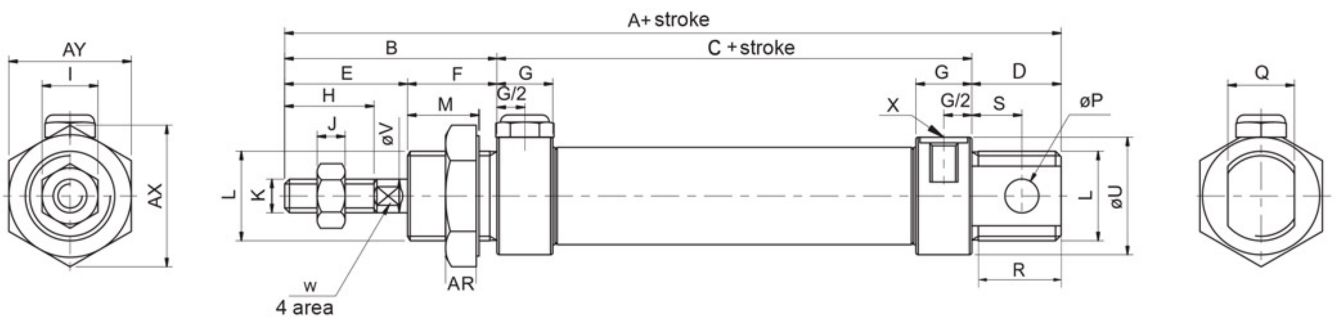
Bore (mm)	16	20	25	32	40
Action	Double action type				
Applicable medium	Air				
Pressure range	0.2～0.9MPa				
Proof pressure	1.35MPa				
Temperature range	−10～60°C				
Speed range	30～800 mm/s				
Cushion type	Adjustable cushion				
Prot Size	M5x0.8	G1/8			

Stroke

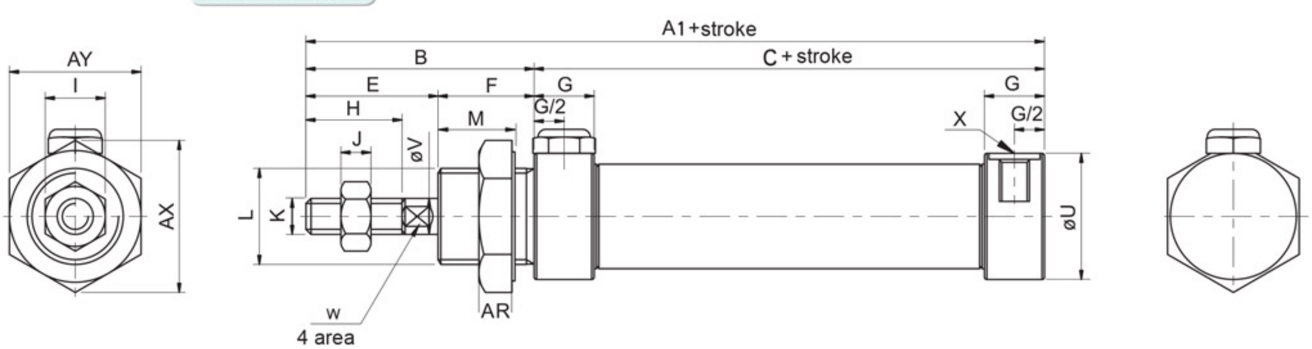
Bore (mm)	Standard Stroke	Max. Stroke
16	25 50 75	100
20	25 50 75 100	100
25	25 50 75 100	100
32	25 50 75 100	100
40	25 50 75 100	100

Figure Dimension

Fishtail type



Horizontal type



Type / Bore	A 0–50	A 51–100	A1 0–50	A1 51–100	B	C 0–50	C 51–100	D	E	F	G	H	I	J	K
16	114	139	98	123	38	60	85	16	22	16	15	16	10	5	M6x1
20	137	162	116	141	40	76	101	21	28	12	16	20	12	6	M8x1.25
25	141	166	120	145	44	76	101	21	30	14	16	22	17	6	M10x1.25
32	147	172	120	145	44	76	101	27	30	14	16	22	17	6	M10x1.25
40	149	174	122	147	46	76	101	27	32	14	16	24	17	7	M12x1.25

Bore	L	M	P	Q	S	R	U	V	W	X	AR	AX	AY
16	M16x1.5	14	6	12	9	14	21	6	5	M5x0.8	6	25	22
20	M22x1.5	10	8	16	12	19	27	8	6	G1/8	7	33	29
25	M22x1.5	12	8	16	12	19	30	10	8	G1/8	7	33	29
32	M24x2.0	12	10	16	15	25	38.5	12	10	G1/8	8	37	32
40	M30x2.0	12	12	20	15	25	47	16	14	G1/8	9	47	41

TGM Series Aluminium Cylinder

Calculation of theoretical force of cylinder

$$F = P \times A - F_0$$

F: Theoretical force
P: Pressure
A: Piston area

Aluminum barrel slim cylinder

It is made in aluminum barrel, light and small. The cylinder wall is treated with hard anodic oxidation. It uses new seal material and can automatically compensate the abrasion surface of seal, with good resistance to abrasion and long service life. There are different installing accessories to choose.

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 diamater		20			25			32			40		
External diameterof piston rad		8			10			12			16		
Action Type		Single action	Double action		Single action	Double action		Single action	Double action		Single action	Double action	
			Push	Pluk		Push	Pluk		Push	Pluk		Push	Pluk
Compression area cm^2		3.14	3.14	2.64	4.90	4.90	4.12	8.04	8.04	6.90	12.56	12.56	10.55
Air pressure Kgf/cm^2	1	–	03.14	02.64	–	04.90	04.12	–	08.04	06.90	03.75	12.56	10.55
	2	01.26	06.28	05.28	21.10	09.80	32.98	07.66	16.08	13.80	16.31	25.12	21.10
	3	04.40	09.42	07.92	31.65	14.70	12.36	15.70	24.12	20.70	28.87	37.68	31.65
	4	07.54	12.56	10.56	42.20	19.60	16.48	23.74	32.16	27.60	4 143	50.24	42.20
	5	10.68	15.70	13.20	52.75	24.50	20.60	31.78	40.20	34.50	53.99	62.80	52.75
	6	13.82	18.84	15.84	63.30	29.40	24.72	39.82	48.24	41.40	66.55	75.36	63.30
	7	16.96	21.98	18.48	73.85	34.30	28.84	47.86	56.28	48.30	79.11	87.92	73.85
	8	21.10	25.12	21.12	84.40	39.20	32.96	55.90	64.32	55.20	91.67	100.48	84.40
	9	23.24	28.26	23.76	94.95	44.10	37.08	63.94	72.36	62.10	104.23	113.04	94.95

TGM Series Aluminium Cylinder

Aluminum barrel slim cylinder

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

Durability: With oxidative steel tube, cover deal with electrophoresis, it is not only anticorrosive, durable and wear-resistant, but also has compact shape.

Kinds of mounting: Have kinds of installing accessories to choose.

Graphics Sign

Ordering Code

TGM — U — 20 X 50 — S — LB

- **TGM** — Series
  - TGM: Double acting type
- **U** — Back cover type
  - No Mark: Fishtail type
  - U: Horizontal type
  - CM: Rounded type
- **20 X 50** — Bore sizeX Stroke
- **S** — Magnet code
  - No Mark: Without magnet
  - S: With magnet
- **LB** — Installing way
  - No Mark: Basic type
  - LB: Foot mounting type
  - FA: Front flange mounting type
  - SDB: Trunnion type

Example

1) Bore: 20mm, Stroke: 50mm, Fishtail type back cover installation, SDB pattern, Code: TGM-CA-20×50-SDB
2) Bore: 32mm, Stroke: 100mm, Horizontal back cover and is aluminium slim cylinder, Code: TGM-U-32×100

Standard Specification

Bore (mm)	20	25	32	40
Action	Double action type			
Applicable medium	Air			
Pressure range	0.1~0.9MPa			
Proof pressure	1.35 MPa			
Temperature range	-10~60°C			
Speed range	30~800 mm/s			
Prot Size	G1/8			G1/4

TGM Series Aluminium Cylinder

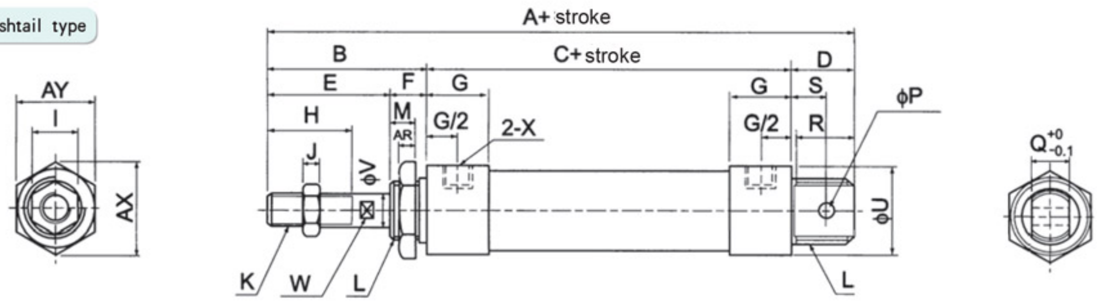
■ Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
20	25 50 75 80 100 125 150 160 175 200 250 300	500	800
25	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	800	1200
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	800	1200
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1200	1500

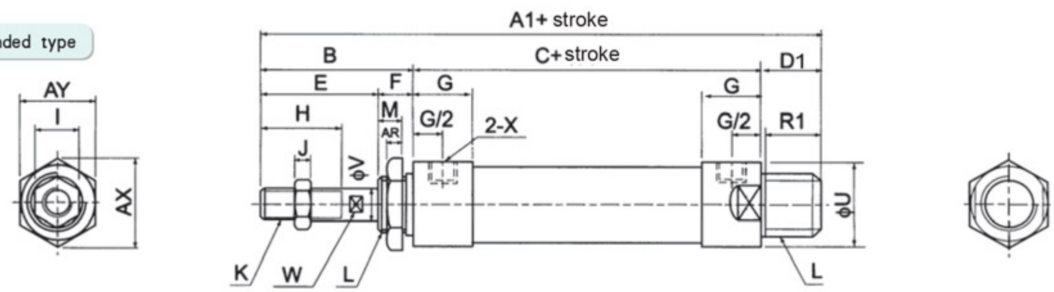
* Special stroke please contact with us

■ Figure Dimension ● ø20 ~ ø40

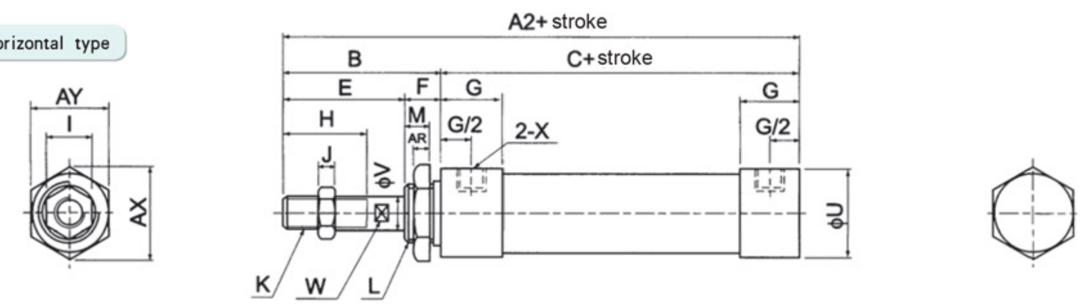
● Fishtail type



● Rounded type



● Horizontal type



Bore	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
20	131	122	110	40	70	21	12	28	12	16	20	12	6	M8x1.25
25	135	128	114	44	70	21	14	30	14	16	22	17	6	M10x1.25
32	141	128	114	44	70	27	14	30	14	16	22	17	6	M10x1.25
40	165	152	138	46	92	27	14	32	14	22	24	17	7	M12x1.25

Bore	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M22x1.5	10	8	16	19	10	12	27	8	6	G1/8	7	33	29
25	M22x1.5	12	8	16	19	12	12	31.5	10	8	G1/8	7	33	29
32	M24x2.0	12	10	16	25	12	15	38.5	12	10	G1/8	8	37	32
40	M30x2.0	12	12	20	25	12	15	47	16	14	G1/4	9	47	41

TGM Series Aluminium Cylinder

Double Axis Type

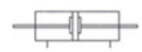
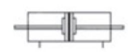
Product characteristic

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

Durability: With oxidative steel tube, cover deal with electrophoresis, it is not only anticorrosive, durable and wear-resistant, but also has compact shape.

Kinds of mounting: Have kinds of installing accessories to choose.

Graphics Sign

Ordering Code

TGMD — 20 X 50 — S — LB

Series
TGMD: Double acting type

Bore size X Stroke

Magnet code
No Mark: Without magnet
S: With magnet

Installing way
No Mark: Basic type
LB: Foot mounting type
FA: Front flange mounting type

Example

1) Bore: 20mm, stroke: 50mm, LB installation, Code: TGMD20×50-LB

Standard Specification

Bore (mm)	20	25	32	40
Action	Double action type			
Applicable medium	Air			
Pressure range	0.1~0.9MPa			
Proof pressure	1.35MPa			
Temperature range	-10~60°C			
Speed range	50~800 mm/s			
Prot Size	G1/8			G1/4

TGM Series Aluminium Cylinder

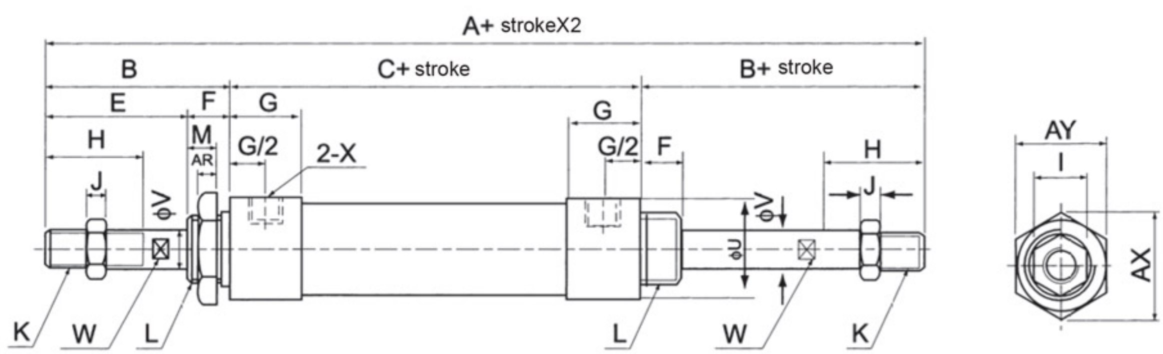
Double Axis Type

■ Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
20	25 50 75 80 100 125 150 160 175 200	200	300
25	25 50 75 80 100 125 150 160 175 200 250	250	300
32	25 50 75 80 100 125 150 160 175 200 250	250	300
40	25 50 75 80 100 125 150 160 175 200 250	250	300

■ Figure Dimension

● ø20 ~ ø40



Bore (mm)	A	B	C	E	F	G	H	I	J	K	L	M	U	V	W	X	AR	AX	AY
20	150	40	70	28	12	16	20	12	6	M8x1.25	M22x1.5	10	29	8	6	G1/8	7	33	29
25	158	44	70	30	14	16	22	17	6	M10x1.25	M22x1.5	12	34	10	8	G1/8	7	33	29
32	158	44	70	30	14	16	22	17	6	M10x1.25	M24x2.0	12	39.5	12	10	G1/8	8	37	32
40	184	46	92	32	14	22	24	17	7	M12x1.25	M30x2.0	12	49.5	16	14	G1/4	9	47	41

TGM Series Aluminium Cylinder

Double Axis Adjustable Type

Product characteristic

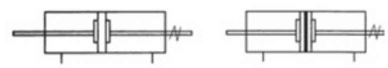
Without lubricating: Needn't lubricating on piston rod for using oiled axletree.

Durability: With oxidative steel tube, cover deal with electrophoresis, it is not only anticorrosive, durable and wear-resistant, but also has compact shape.

Kinds of mounting: Have kinds of accessories to choose.

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

Graphics Sign



Ordering Code

TGMJ — 20 X 50 — 30 — S — LB

- TGMJ: Series — TGMJ: Double acting adjustable type
- 20 X 50: Bore size X Stroke
- 30: Adjustable stroke — 25: 25mm; 50: 50mm; 75: 75mm
- S: Magnet code — No Mark: Without magnet; S: With magnet
- LB: Installing way — No Mark: Basic type; LB: Foot mounting type; FA: Front flange mounting type

Example

1) Bore: 20mm, stroke: 50mm, adjustable stroke: 25, LB installation, Code: TGMJ20×50—LB

Standard Specification

Bore (mm)	20	25	32	40
Action	Double action type			
Applicable medium	Air			
Pressure range	0.1～0.9MPa			
Proof pressure	1.35MPa			
Temperature range	−10～60°C			
Speed range	50～800 mm/s			
Prot Size	G1/8			G1/4

TGM Series Aluminium Cylinder

Double Axis Adjustable Type

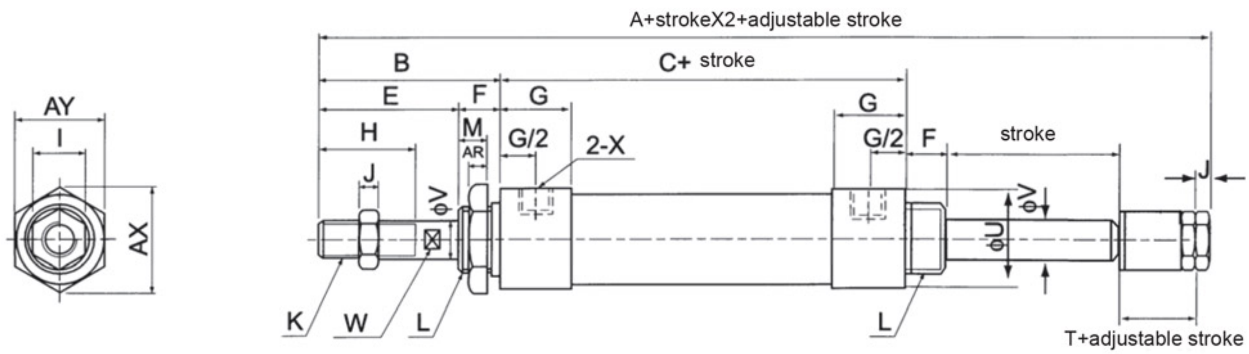
Stroke

Bore (mm)	Standard Stroke	Max. Stroke	Permissible. Stroke
20	25 50 75 80 100 125 150 160 175 200	200	300
25	25 50 75 80 100 125 150 160 175 200 250	250	300
32	25 50 75 80 100 125 150 160 175 200 250	250	300
40	25 50 75 80 100 125 150 160 175 200 250	250	300

* Special stroke please contact with us

Figure Dimension

● ø20 ~ ø40



Bore (mm)	A	B	C	E	F	G	H	I	J	K	L	M	T	U	V	W	X	AR	AX	AY
20	147	40	70	28	12	16	20	12	6	M8x1.25	M22x1.5	10	19	29	8	6	G1/8	7	33	29
25	155	44	70	30	14	16	22	17	6	M10x1.25	M22x1.5	12	21	34	10	8	G1/8	7	33	29
32	155	44	70	30	14	16	22	17	6	M10x1.25	M24x2.0	12	21	39.5	12	10	G1/8	8	37	32
40	180	46	92	32	14	22	24	17	7	M12x1.25	M30x2.0	12	21	49.5	16	14	G1/4	9	47	41

TGM Series Aluminium Cylinder

Single Acting Type

Product characteristic

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

Durability: With oxidative steel tube, cover deal with electrophoresis, it is not only anticorrosive, durable and wear-resistant, but also has compact shape.

Kinds of mounting: Have kinds of installing accessories to choose.

Graphics Sign

Ordering Code

TGSM — CA — 20 X 50 — S — LB

- TGSM: Series — MSAL: Single acting type
- CA: Back cover type — No Mark: ; CA: Fishtail type; CM: Rounded type; U: Horizontal type
- 20 X 50: Bore size X Stroke
- S: Magnet code — No Mark: Without magnet; S: With magnet
- LB: Installing way — No Mark: Basic type; LB: Foot mounting type; FA: Front flange mounting type; SDB: Trunnion type

Example

1) Bore: 20mm, stroke: 50mm, Back cover type Fishtail type, with runnion SDB, Code: TGSM—CA—20×50—SDB

2) Bore: 32mm, stroke: 100mm, Back cover type is Horizontal type, Code: TGSM—U—32×100

Stroke

Bore (mm)	Standard Stroke	Max. Stroke
20	25 50 75 100	100
25	25 50 75 100	100
32	25 50 75 100	100
40	25 50 75 100	100

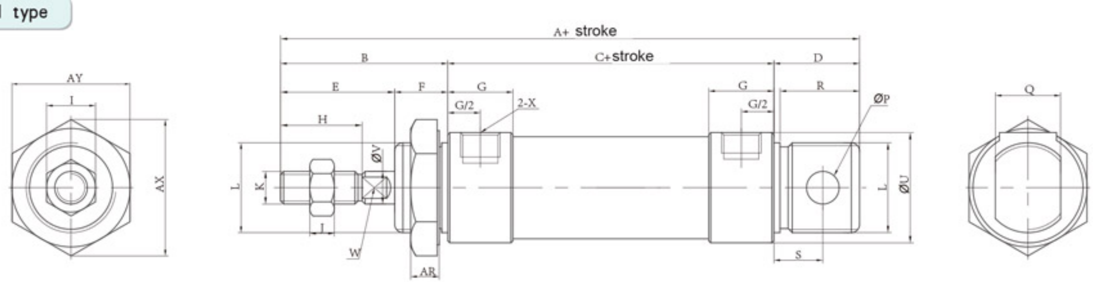
Standard Specification

Bore (mm)	20	25	32	40
Action	Double action type			
Applicable medium	Air			
Pressure range	0.2～0.9MPa			
Proof pressure	1.35MPa			
Temperature range	−10～60°C			
Speed range	50～800 mm/s			
Prot Size	G1/8 Adjustable cushion			G1/4

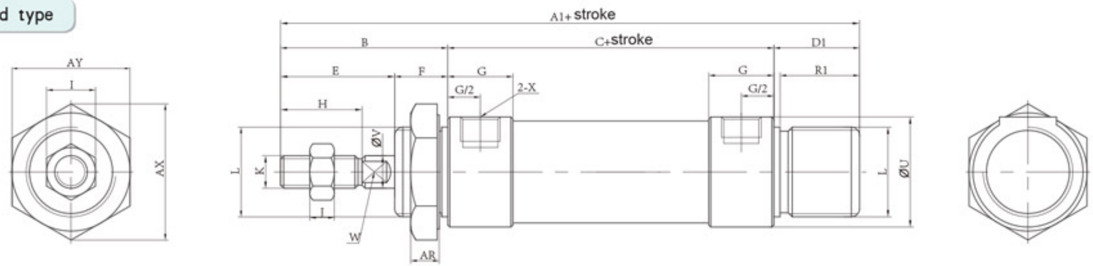
Figure Dimension

● ø20 ~ ø40

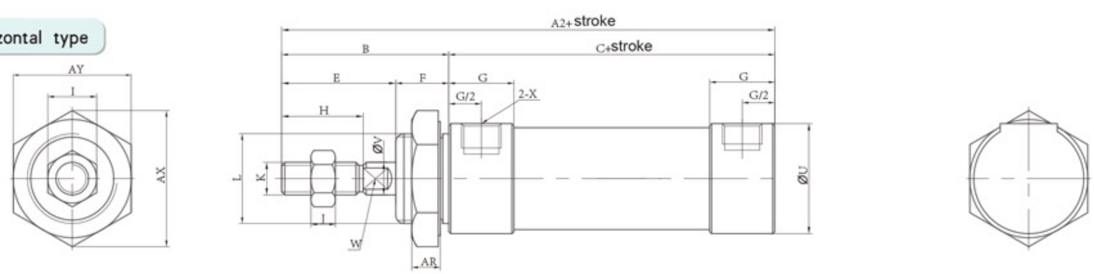
● Fishtail type



● Rounded type



● Horizontal type



Bore	A		A1		A2		B	C		D	D1	E	F	G	H	I	J
	0–50	51–100	0–50	51–100	0–50	51–100		0–50	51–100								
20	131	156	122	147	110	135	40	70	95	21	12	28	12	16	20	12	6
25	135	160	128	153	114	139	44	70	95	21	14	30	14	16	22	17	6
32	141	166	128	153	114	139	44	70	95	27	14	30	14	16	22	17	6
40	165	190	152	177	138	163	46	92	117	27	14	32	14	22	24	17	7

Bore	K	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M8X1.25	M22X1.5	10	8	16	19	10	12	29	8	6	G1/8	7	33	29
25	M10X1.25	M22X1.5	12	8	16	19	12	12	34	10	8	G1/8	7	33	29
32	M10X1.25	M24X2.0	12	10	16	25	12	15	39.5	12	10	G1/8	8	37	32
40	M12X1.25	M30X2.0	12	12	20	25	12	15	49.5	16	14	G1/4	9	47	41

Needle Type Cylinder (Single Acting)

(φ6—φ15)

Standard Specification

Bore (mm)	6	10	15
Fluid	Air		
Acting	Single act—Spring Draw		
Proof pressure	10.5MPa{1.05kgf/cm2}		
Max. pressure	7MPa{0.7kgf/cm2}		
Min. pressure	2MPa{0.2kgf/cm2}	1.5MPa{0.15kgf/cm2}	
Environment and fluid temperature	5—60℃		
Cushion	No		
Stroke toleranle	+1.0, 0		
* Lubrication	No need		
Prot Size	M5×0.8(Panel mounting)		

* Lubricate please use ISOVG32

■ Order example

1) Panel mounting: No thread, Bore: 6, Stroke: 10,
Code: CJPB6—10—B

2) Built—in type: thread, Bore: 10, Stroke: 15,
Code: CJPS10—15

Ordering Code

Panel Mounting: CJPB [10]—[15]—[ ]

Built—in Type: CJPS [6]—[5]—[B]

Bore
6—φ6mm
10—φ10mm
15—φ15mm

Stroke

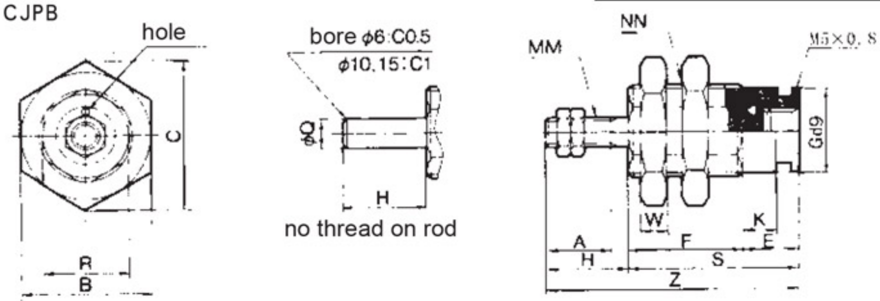
Rod end thread
No: Thread
B: No thread

Stroke/Spring Force

Bore (mm)	Stroke(mm)	Retractable postion	Extended postion
6	5,10,15	150	400
10	5,10,15	250	610
16	5,10,15	450	1100

Figure Dimension(mm)

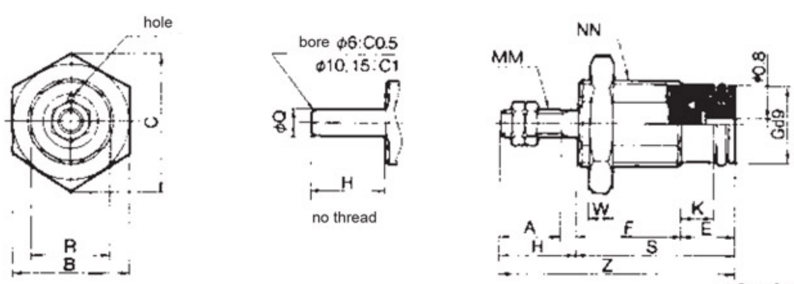
Panel mounting CJPB



st: Bore Stroke(mm)

Bore(mm)	A	B	C	E	S 5st	S 10st	S 15st	φG	H	K	MM	NN	R	S 5st	S 10st	S 15st	W	Z 5st	Z 10st	Z 15st	Q
6	7	12	13.9	6	12.5	19.5	26.5	8.5	9	3.5	M3×0.5	M10×1.0	9	18.5	22.5	32.5	3	27.5	34.5	41.5	3
10	10	19	22	6	14.5	21	28	12	12	3.5	M4×0.7	M15×1.5	13	20.5	27	34	3	32.5	39	46	5
15	12	27	31	7	16.5	22.5	29	19	14	4.2	M5×0.8	M22×1.5	20	23.5	29.5	36	4	37.5	43.5	50	6

Panel mounting CJPS



st: Bore Stroke(mm)

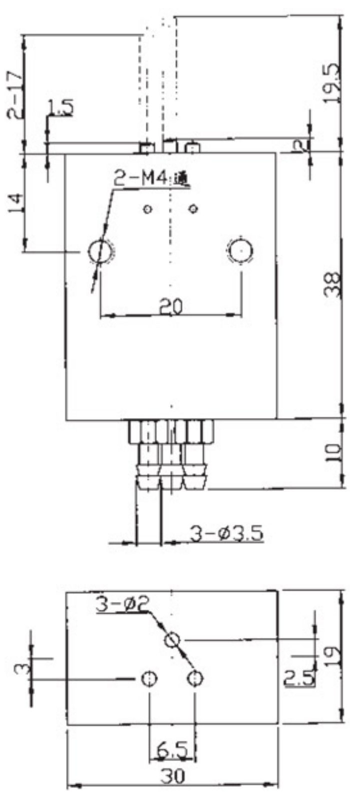
Bore(mm)	A	B	C	E	S 5st	S 10st	S 15st	φG	H	K	MM	NN	R	S 5st	S 10st	S 15st	W	Z 5st	Z 10st	Z 15st	Q
6	7	12	13.9	6	12.5	19.5	26.5	8.5	9	3.5	M3×0.5	M10×1.0	9	18.5	22.5	32.5	3	27.5	34.5	41.5	3
10	10	19	22	6	14.5	21	28	12	12	3.5	M4×0.7	M15×1.5	13	20.5	27	34	3	32.5	39	46	5
15	12	27	31	7	16.5	22.5	29	19	14	4.2	M5×0.8	M22×1.5	20	23.5	29.5	36	4	37.5	43.5	50	6

THZ4–3

● Product characteristic

Used in textile industry, can work with our company's combined valves

■ Figure Dimension

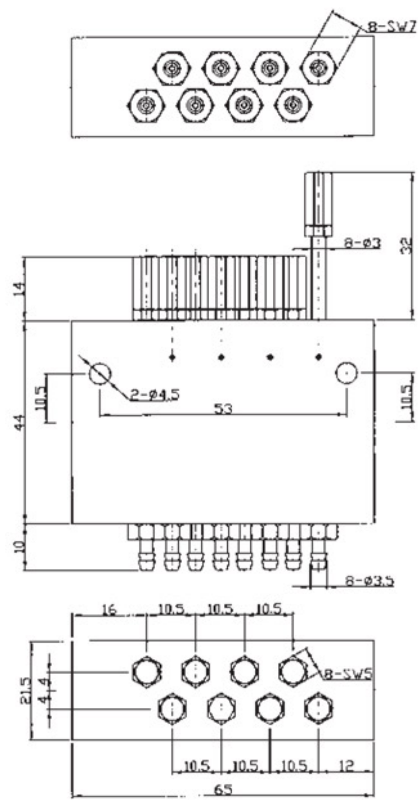


THZ6X18–8

● Product characteristic

Used in textile industry, can work with our company's combined valves

■ Figure Dimension



STNC®

Characteristic

It is a kind of compact cylinder type, with small axial size. less space, light structure and handsome shape. All kinds of fi xtue and special machinery can be compactly designed with it. It can bear large transverse load and can be installed directly without accessories.

Theoretical Force Sheet

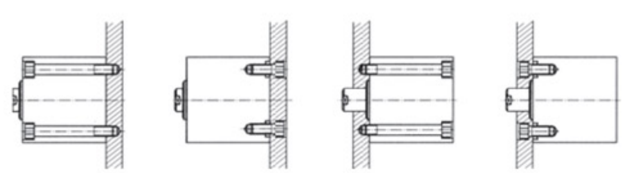
Cylinder inside diamater	External diameter of piston rad	Action Type		Compression area cm^2	Air pressure Kgf/cm^2						
					1.0	2.0	3.0	4.0	5.0	6.0	7.0
12	6	Extrusion Single action		1.13	–	0.70	1.83	2.96	4.09	5.22	6.35
		Single action drawing–in		0.85	–	0.14	0.99	1.84	2.69	3.54	4.39
		Double action	Push	1.13	–	2.26	3.39	4.52	5.65	6.78	7.91
			Pluk	0.85	–	1.70	2.55	3.40	4.25	5.10	5.95
16	6	Extrusion Single action		2.01	–	1.36	3.37	5.38	7.39	9.40	11.41
		Single action drawing–in		1.73	–	0.80	2.53	4.26	5.99	7.72	9.45
		Double action	Push	2.01	–	4.02	6.03	8.04	10.05	12.06	14.07
			Pluk	1.73	–	3.46	5.19	6.92	8.65	10.38	12.11
20	8	Extrusion Single action		3.14	–	2.87	6.01	9.15	12.29	15.43	18.57
		Single action drawing–in		2.64	–	1.87	4.51	7.15	9.79	12.43	15.07
		Double action	Push	3.14	–	6.28	9.42	12.56	15.70	18.84	21.98
			Pluk	2.64	–	5.28	7.92	10.56	13.20	15.84	18.48
25	10	Extrusion Single action		4.90	–	5.80	10.70	15.60	20.50	25.40	30.30
		Single action drawing–in		4.12	–	4.24	8.36	12.48	16.60	20.72	24.84
		Double action	Push	4.90	–	9.80	14.70	19.60	24.50	29.40	34.30
			Pluk	4.12	–	8.24	12.36	16.48	20.60	24.72	28.84
32	12	Extrusion Single action		8.04	–	11.21	19.25	27.29	35.33	43.37	51.41
		Single action drawing–in		6.90	–	8.93	15.83	22.73	29.63	36.53	43.43
		Double action	Push	8.04	–	16.08	24.12	32.16	40.20	48.24	56.28
			Pluk	6.90	–	13.80	20.70	27.60	34.50	41.40	48.30
40	16	Extrusion Single action		12.56	–	20.08	32.64	45.20	57.76	70.32	82.88
		Single action drawing–in		10.55	–	16.06	26.61	37.16	47.71	58.26	68.81
		Double action	Push	12.56	12.56	25.12	37.68	50.24	62.80	75.36	87.92
			Pluk	10.55	10.55	21.10	31.65	42.20	52.75	63.30	73.85
50	20	Double action	Push	19.63	19.63	39.26	58.89	78.52	98.15	117.78	137.41
			Pluk	16.49	16.49	32.98	49.47	65.96	82.45	98.94	115.43
63	20	Double action	Push	31.17	31.17	62.34	93.51	124.68	155.85	187.02	218.19
			Pluk	28.03	28.03	56.06	84.09	112.12	140.15	168.18	196.21
80	25	Double action	Push	50.26	50.26	100.52	150.78	201.04	251.30	301.56	351.82
			Pluk	45.36	45.36	90.72	136.08	181.44	226.80	272.16	317.52
100	32	Double action	Push	78.53	78.53	157.06	235.59	314.12	392.65	471.18	549.71
			Pluk	70.49	70.49	140.98	211.47	281.96	352.45	422.94	493.43

Calculation of cylinder' s theoretic force

$$F = P \times A - F_0$$

F: Theoretical force
P: Pressure
A: Piston area
F0: Regain power of spring

Mounting Type



TGN/SDA Series Compact Cylinder

Characteristic

Thin and light: In possession of the precision of action and service life, the length is only 1/2 ~ 1/3 of normal cylinder.

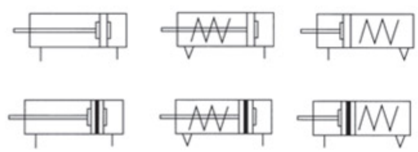
Easy to install: With the embedding type of mounting, need nothing and save room.

Easy to maintain: With simple design to assemble, install and repair easily.

Magnet switch: Around the body, leave room for the magnet switch in advance to install and adjust the magnet position more easily.

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

Graphics Sign



Ordering Code

TGN — S — 20 X 30 — B

Series
TGN: Double acting type
TGTN: Extrusion type
TGSN: Drawing in type

Magnetic type
No Mark: Without magnet
S: With magnet

Bore size X Stroke

Installing way
No Mark: Female thread
B: Male thread
N: Non–thread

Example

1) Bore: 20mm, stroke: 30mm, With magnet, Code: TGN–S–20×30–B
2) Bore: 32mm, stroke: 10mm, no thread, Code: TGN–32×10–N

Specification

Bore (mm)		12	16	20	25	32	40	50	63	80	100
Action		Double acting type									
		Extrusion Single acting type Single acting drawing–in type						–			
Applicable medium		Air									
Pressure range	Double acting type	0.1~0.9 MPa									
	Single acting type	0.2~0.9 MPa						–			
Proof pressure		1.35 MPa									
Temperature range		–10~60°C (No Freeze)									
Speed range	Double acting type	30~500 mm/s						30~350 mm/s		30~250 mm/s	
	Single acting type	100~500 mm/s						–			
Cushion type		Mounted Cushion									
Port size		M5x0.8				G1/8		G1/4		G3/8	

■ Stroke

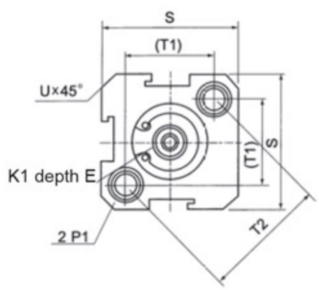
Bore (mm)		12 16	20	25		32 40 50 63 80 100	
Double acting type	Without magnet	5～60mm 5mm /grade	5～85mm 5mm /grade	5～90mm 5mm /grade	100～110mm 10mm /grade	5～90mm 5mm /grade	100～130mm 10mm /grade
	With magnet	5～50mm 5mm /grade	5～75mm 5mm /grade	5～90mm 5mm /grade	100mm	5～90mm 5mm /grade	100～120mm 10mm /grade
Single acting type	Without magnet	5～30mm 5mm /grade	5～30mm 5mm /grade	5～30mm 5mm /grade		5～30mm 5mm /grade	–
	With magnet	5～30mm 5mm /grade	5～30mm 5mm /grade	5～30mm 5mm /grade		5～30mm 5mm /grade	–
Max. stroke		60mm	100mm	120mm		130mm	

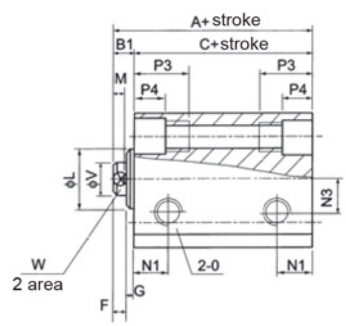
＊ Special stroke please contact with as

■ Figure Dimension

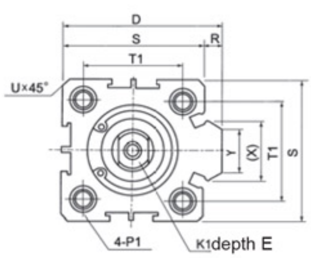
● TGN、TGNS

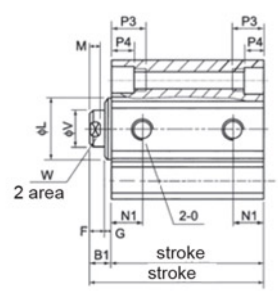
● ø12 ～ ø16





● ø20 ～ ø100





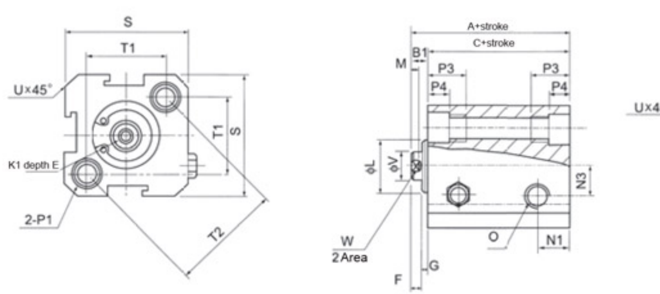
Type	Without magnet			With magnet			D	E		F	G	K1	L	M	N1
Bore	A	B1	C	A	B1	C		Stroke≤10	Stroke>10						
12	22	5	17	32	5	27	–	6		4	1	M3x0.5	10	2.8	6.3
16	24	5.5	18.5	34	5.5	28.5	–	6		4	1.5	M3x0.5	11	2.8	7.3
20	25	5.5	19.5	35	5.5	29.5	36	8		4	1.5	M4x0.7	13	2.8	7.5
25	27	6	21	37	6	31	42	10		4	2	M5x0.8	17	2.8	8
32	31.5	7	24.5	41.5	7	34.5	50	12		4	3	M6x1	20	2.8	9
40	33	7	26	43	7	36	58.5	12		4	3	M8x1.25	28	2.8	10
50	37	9	28	47	9	38	71.5	15		5	4	M10x1.5	38	2.8	10.5
63	41	9	32	51	9	42	84.5	15		5	4	M10x1.5	40	2.8	11.8
80	52	11	41	62	11	51	104	15	20	6	5	M14x1.5	45	4	14.5
100	63	12	51	73	12	61	124	18	20	7	5	M18x1.5	55	4	20.5

＊ Note : for stroke more than 30, parameter A above adds 10 additionally

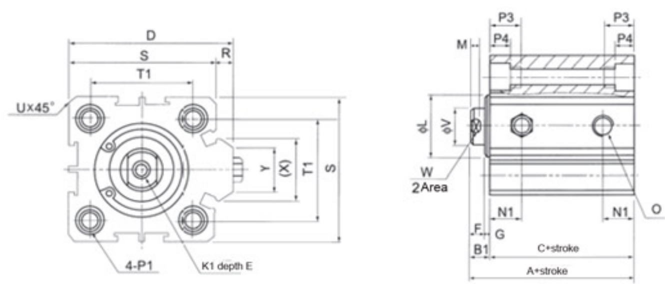
Bore	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	6.5	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	–	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	–	M5x0.8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	15	5.5	2	40	28	–	3.1	10	8	12	10
32	–	G1/8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	–	G1/8	Double side:Φ10 Cog M8x1.25 Through hole:Φ6.5	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	–	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	–	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20
80	–	G3/8	Double side:Φ14 Cog M12x1.75 Through hole:Φ9.2	25	10.5	10	94	74	–	3.65	25	22	36	26
100	–	G3/8	Double side:Φ17.5 Cog M14x2 Through hole:Φ11.3	30	13	10	114	90	–	3.65	32	27	35	26

TGSN、TGSNS

ø12 ~ ø16



ø20 ~ ø63



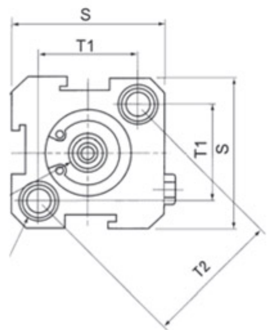
Type	without magnet type					within magnet type					D	E	F	G	K1	L	M	N1	N3
Bore Stroke	A		B1	C		A		B1	C										
	≤10	>10		≤10	>10	≤10	>10		≤10	>10									
12	32	42	5	27	37	42	52	5	37	47	–	6	4	1	M3x0.5	10	2.8	6.3	6
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	–	6	4	1.5	M3x0.5	11	2.8	7.3	6.5
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	1.5	M4x0.7	13	2.8	7.5	–
25	37	47	6	31	41	47	57	6	41	51	42	10	4	2	M5x0.8	17	2.8	8	–
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	3	M6x1	20	2.8	9	–
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	3	M8x1.25	28	2.8	10	–
50	47	57	9	38	48	57	67	9	48	58	71.5	15	5	4	M10X1.5	38	2.8	10.5	–
63	51	61	9	42	52	61	71	9	52	62	84.5	15	5	4	M10X1.5	40	2.8	11.8	–

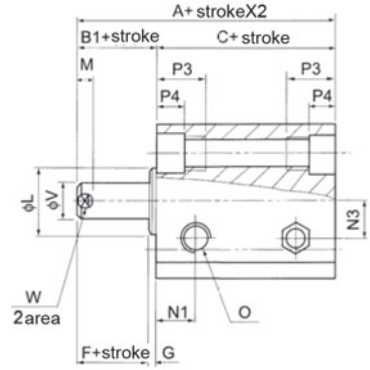
Bore	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	M5x0.8	double side: ø6.5 tooth: M5x0.8 through hole: ø4.2	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	M5x0.8	double side: ø6.5 tooth: M5x0.8 through hole: ø4.2	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	M5x0.8	double side: ø6.5 tooth: M5x0.8 through hole: ø4.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	M5x0.8	double side: ø8.2 tooth: M6x1.0 through hole: ø4.6	15	5.5	2	40	28	–	3.1	10	8	12	10
32	G1/8	double side: ø8.2 tooth: M6x1.0 through hole: ø4.6	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	G1/8	double side: ø10 tooth: M8x1.25 through hole: ø6.5	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	G1/4	double side: ø11 tooth: M8x1.25 through hole: ø6.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	G1/4	double side: ø11 tooth: M8x1.25 through hole: ø6.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20

* Note: for stroke more than 30, parameter A above adds 10 additionally

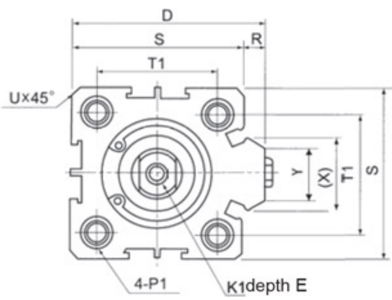
TGTN、TGTNS

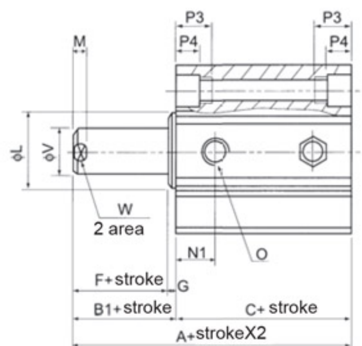
● ø12 ~ ø16





● ø20 ~ ø63





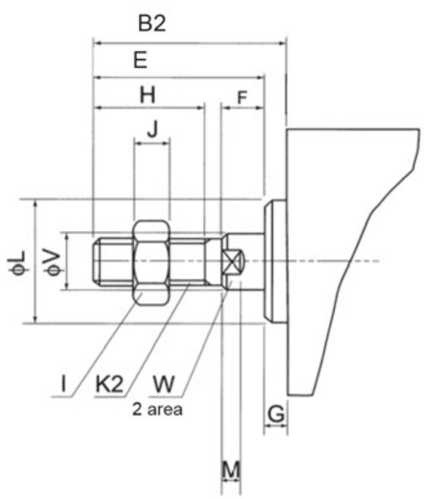
Type	without magnet type					within magnet type					D	E	F	G	K1	L	M	N1	N3
Bore Stroke	A		B1	C		A		B1	C										
	≤10	>10		≤10	>10	≤10	>10		≤10	>10									
12	32	42	5	27	37	42	52	5	37	47	–	6	4	1	M3x0.5	10	2.8	6.3	6
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	–	6	4	1.5	M3x0.5	11	2.8	7.3	6.5
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	1.5	M4x0.7	13	2.8	7.5	–
25	37	47	6	31	41	47	57	6	41	51	42	10	4	2	M5x0.8	17	2.8	8	–
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	3	M6x1	20	2.8	9	–
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	3	M8x1.25	28	2.8	10	–
50	47	57	9	38	48	57	67	9	48	58	71.5	15	5	4	M10X1.5	38	2.8	10.5	–
63	51	61	9	42	52	61	71	9	52	62	84.5	15	5	4	M10X1.5	40	2.8	11.8	–

Bore	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	M5x0.8	double side：ø6.5 tooth: M5x0.8 through hole：ø4.2	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	M5x0.8	double side：ø6.5 tooth: M5x0.8 through hole：ø4.2	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	M5x0.8	double side：ø6.5 tooth: M5x0.8 through hole：ø4.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	M5x0.8	double side：ø8.2 tooth: M6x1.0 through hole：ø4.6	15	5.5	2	40	28	–	3.1	10	8	12	10
32	G1/8	double side：ø8.2 tooth: M6x1.0 through hole：ø4.6	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	G1/8	double side：ø10 tooth: M8x1.25 through hole：ø6.5	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	G1/4	double side：ø11 tooth: M8x1.25 through hole：ø6.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	G1/4	double side：ø11 tooth: M8x1.25 through hole：ø6.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20

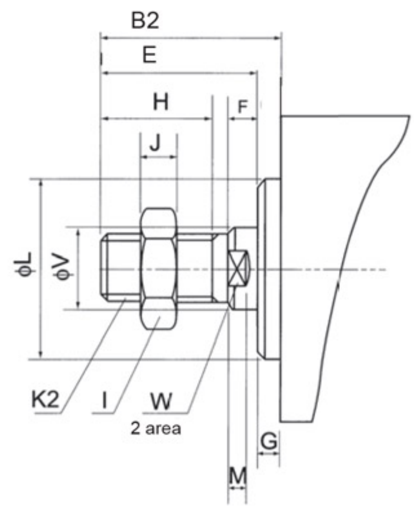
* Note：for stroke more than 30, parameter A above adds 10 additionally

Figure Dimension

ø12 ~ ø16



ø20 ~ ø100



Bore (mm)	B2	E	F	G	H	I	J	K2	L	M	V	W
12	17	16	4	1	10	8	4	M5x0.8	10	2.8	6	5
16	17.5	16	4	1.5	10	8	4	M5x0.8	11	2.8	6	5
20	20.5	19	4	1.5	13	10	5	M6x1.0	13	2.8	8	6
25	23	21	4	2	15	12	6	M8x1.25	17	2.8	10	8
32	25	22	4	3	15	17	6	M10x1.25	20	2.8	12	10
40	35	32	4	3	25	19	8	M14x1.5	28	2.8	16	14
50	37	33	5	4	25	27	11	M18x1.5	38	2.8	20	17
63	37	33	5	4	25	27	11	M18x1.5	40	2.8	20	17
80	44	39	6	5	30	32	13	M22x1.5	45	4	25	22
100	50	45	7	5	35	36	13	M26x1.5	55	4	32	27

STNC®

TGN/SDA Series Compact Cylinder

Double Rod Type

Characteristic

Thin and light: In possession of the precision of action and service life, the length is only 1/2 ~ 1/3 of normal cylinder.

Easy to install: With the embedding type of mounting, need nothing and save room.

Easy to maintain: With simple design to assemble, install and repair easily.

Magnet switch: Around the body, leave room for the magnet switch in advance to install and adjust the magnet position more easily.

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

Graphics Sign

Ordering Code

TGND — S — 20 X 30 — B

TGND	S	20 X 30	B
Series TGND: Double axis double acting type	Magnetic type No Mark: Without magnet S: With magnet	Bore size X Stroke	Installing way No Mark: Female thread B: Male thread N: Non-thread

Standard Specification

Bore(mm)	12	16	20	25	32	40	50	63	80	100
Action	Double Action Type									
Applicable	Air									
Pressure Range	0.1~0.9Mpa									
Proof Pressure	1.35Mpa									
Temperature Range	−10~60°C									
Speed Range	30~500mm/s						30~350mm/s		30~250mm/s	
Cushion Type	Mounted Cushion									
Prot Size	M5x0.8				G1/8		G1/4		G3/8	

Stroke

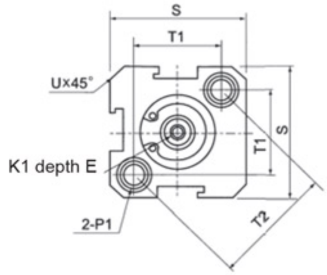
Bore mm	12 16	20	25		32 40 50	63 80 100
Without magnet	5~60 mm 5 mm/grade	5~85 mm 5 mm/grade	5~90 mm 5 mm/grade	100~110 mm 5 mm/grade	5~90 mm 5 mm/grade	100~130 mm 10 mm/grade
With magnet	5~50 mm 5 mm/grade	5~75 mm 5 mm/grade	5~90 mm 5 mm/grade	100 mm	5~90mm 5 mm/grade	100~120 mm 10 mm/grade
Max.stroke	60 mm	100 mm	120 mm		130 mm	

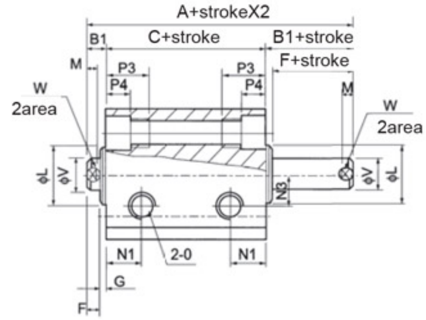
* special stroke, please contact with us

Figure Dimension

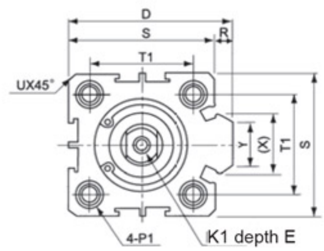
TGND、TGNDS

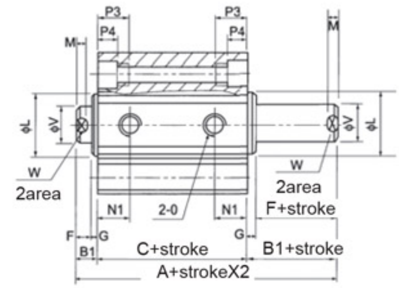
ø12 ~ ø16





ø20 ~ ø100





Type	Without magnet			With magnet			D	Stroke≤10	Stroke>10	F	G	K1	L	M	N1
Bore	A	B1	C	A	B1	C		E							
12	27	5	17	37	5	27	—	6		4	1	M3x0.5	10	2.8	6.3
16	29.5	5.5	18.5	39.5	5.5	28.5	—	6		4	1.5	M3x0.5	11	2.8	7.3
20	30.5	5.5	19.5	40.5	5.5	29.5	36	8(when stroke is 5, the value is 6.5)		4	1.5	M4x0.7	14	2.8	7.5
25	33	6	21	43	6	31	42	10(when stroke is 5, the value is 6.5)		4	2	M5x0.8	16	2.8	8
32	38.5	7	24.5	48.5	7	34.5	50	8	12	4	3	M6x1	20	2.8	9
40	40	7	26	50	7	36	58.5	9	12	4	3	M8x1.25	26	2.8	10
50	46	9	28	56	9	38	71.5	11	15	5	4	M10x1.5	33	2.8	10.5
63	50	9	32	60	9	42	84.5	11	15	5	4	M10x1.5	35	2.8	11.8
80	63	11	41	73	11	51	104	14	20	6	5	M14x1.5	45	4	14.5
100	75	12	51	85	12	61	124	18	20	7	5	M18x1.5	55	4	20.5

Bore	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	—	25	16.2	23	1.6	6	5	—	—
16	6.5	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	—	29	19.8	28	1.6	6	5	—	—
20	—	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	14	4.5	2	34	24	—	2.1	8	6	11.3	10
25	—	M5x0.8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	15	5.5	2	40	28	—	3.1	10	8	12	10
32	—	G1/8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	16	5.5	6	44	34	—	2.15	12	10	18.3	15
40	—	G1/8	Double side:Φ10 Cog M8x1.25 Through hole:Φ6.5	20	7.5	6.5	52	40	—	2.25	16	14	21.3	16
50	—	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	62	48	—	4.15	20	17	30	20
63	—	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	75	60	—	3.15	20	17	28.7	20
80	—	G3/8	Double side:Φ14 Cog M12x1.75 Through hole:Φ9.2	25	10.5	10	94	74	—	3.65	25	22	36	26
100	—	G3/8	Double side:Φ17.5 Cog M14x2 Through hole:Φ11.3	30	13	10	114	90	—	3.65	32	27	35	26

* Note: for stroke more than 30, parameter A above adds 10 additionally

* Special stroke please contact with us

TGN/SDA Series Compact Cylinder

Adjustable Type

Characteristic

Thin and light: In possession of the precision of action and service life, the length is only 1/2 ~ 1/3 of normal cylinder.

Easy to install: With the embedding type of mounting, need nothing and save room.

Easy to maintain: With simple design to assemble, install and repair easily.

Magnet switch: Around the body, leave room for the magnet switch in advance to install and adjust the magnet position more easily.

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

Graphics Sign

Ordering Code

TGNJ — S — 20 X 30 — 10 — B

- TGNJ: Series. TGNJ: Double axis double acting adjustable stroke type
- S: Magnetic type. No Mark: Without magnet; S: With magnet
- 20 X 30: Bore size X Stroke
- 10: Adjustable stroke type
- B: Installing way. No Mark: Female thread; B: Male thread; N: Non-thread

Example

1) Bore:20mm, stroke:30mm, adjustable stroke:10, With magnet, Code: TGNJ-S-20×30-10-B

2) Bore:32mm, stroke:100mm, adjustable stroke:10, no thead, Code: TGNJ-32×100-10-N

Specification

Bore(mm)	12	16	20	25	32	40	50	63	80	100
Action	Double acting type									
Applicable medium	Air									
Pressure range	0.1~0.9 MPa									
Proof pressure	1.35 MPa									
Temperature range	-10~60°C (No Freeze)									
Speed range	30~500 mm/s						30~350 mm/s		30~250 mm/s	
Cushion type	Mounted Cushion									
Port size	M5x0.8				G1/8		G1/4		G3/8	

Stroke

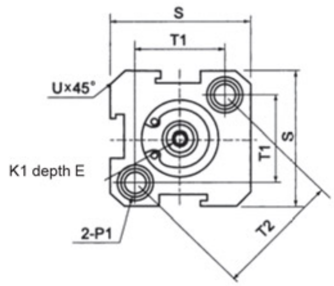
Bore(mm)	12 16	20	25		32 40 50 63 80 100	
Without magnet	5~60mm 5mm/grade	5~85mm 5mm/grade	5~90mm 5mm/grade	100~110mm 10mm/grade	5~90mm 5mm/grade	100~130mm 10mm/grade
With magnet	5~50mm 5mm/grade	5~75mm 5mm/grade	5~90mm 5mm/grade	100mm	5~90mm 5mm/grade	100~120mm 10mm/grade
Max.stroke	60mm	100mm	120mm		130mm	

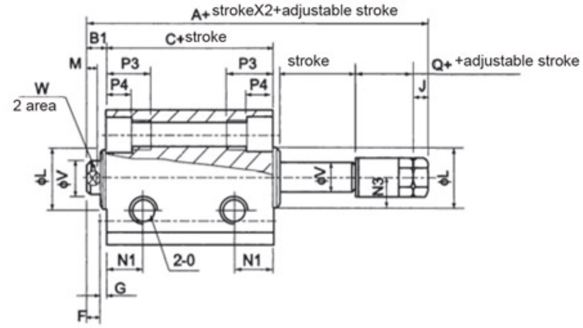
* Special stroke please contact with us

Figure Dimension

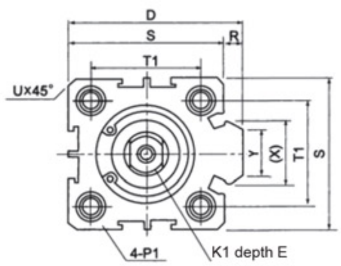
TGNJ、TGNJS

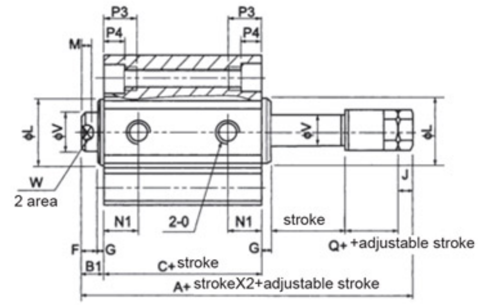
● ø12 ~ ø16





● ø20 ~ ø100





Type	Without magnet			With magnet			D	Stroke≤10	Stroke>10	F	G	K1	L	M	N1
Bore	A	B1	C	A	B1	C		E							
12	27	5	17	37	5	27	–	6		4	1	M3x0.5	10	2.8	6.3
16	29.5	5.5	18.5	39.5	5.5	28.5	–	6		4	1.5	M3x0.5	11	2.8	7.3
20	30.5	5.5	19.5	40.5	5.5	29.5	36	8(when stroke is 5, the value is 6.5)		4	1.5	M4x0.7	14	2.8	7.5
25	33	6	21	43	6	31	42	10(when stroke is 5, the value is 6.5)		4	2	M5x0.8	16	2.8	8
32	38.5	7	24.5	48.5	7	34.5	50	8	12	4	3	M6x1	20	2.8	9
40	40	7	26	50	7	36	58.5	9	12	4	3	M8x1.25	26	2.8	10
50	46	9	28	56	9	38	71.5	11	15	5	4	M10x1.5	33	2.8	10.5
63	50	9	32	60	9	42	84.5	11	15	5	4	M10x1.5	35	2.8	11.8
80	63	11	41	73	11	51	104	14	20	6	5	M14x1.5	45	4	14.5
100	75	12	51	85	12	61	124	18	20	7	5	M18x1.5	55	4	20.5

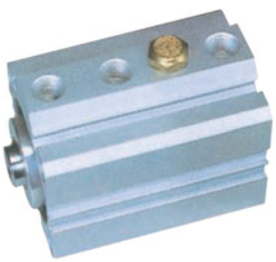
Bore	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	6.5	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	–	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	–	M5x0.8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	15	5.5	2	40	28	–	3.1	10	8	12	10
32	–	G1/8	Double side:Φ8.2 Cog M5x1.0 Through hole:Φ4.6	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	–	G1/8	Double side:Φ10 Cog M8x1.25 Through hole:Φ6.5	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	–	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	–	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20
80	–	G3/8	Double side:Φ14 Cog M12x1.75 Through hole:Φ9.2	25	10.5	10	94	74	–	3.65	25	22	36	26
100	–	G3/8	Double side:Φ17.5 Cog M14x2 Through hole:Φ11.3	30	13	10	114	90	–	3.65	32	27	35	26

* Note: for stroke more than 30, parameter A above adds 10 additionally

STNC®

TGN Series Compact Cylinder

Multi-stroke Type



Characteristic

Thin and light: In possession of the precision of action and service life, the length is only 1/2 ~ 1/3 of normal cylinder.

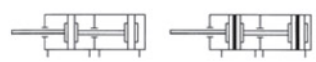
Easy to install: With the embedding type of mounting, need nothing and save room.

Easy to maintain: With simple design to assemble, install and repair easily.

Magnet switch: Around the body, leave room for the magnet switch in advance to install and adjust the magnet position more easily.

Optional Position: With two cylinders linked and different valve to control, cylinder has optional working positions in the stroke.

Graphics Sign



Ordering Code

TGNT — S — 20 X 30 X 10 — B

- TGNT: Series. TGNT: Optional position double acting type
- S: Magnetic type. No Mark: Without magnet; S: With magnet
- 20: Bore
- 30: Stroke 1
- 10: Stroke 2
- B: Installing way. No Mark: Female thread; B: Male thread; N: Non-thread

Example

1) Bore: 20mm, stroke 1: 30mm, stroke 2: 10mm, with magnet the pistonrod with malescrew, high pressure cylinder,

Code: TGNT—S—20×30×10—B

Ordering the increased strength type,please mark it.

Standard Specification

Bore(mm)	12	16	20	25	32	40	50	63	80	100
Action	Double Action Type									
Applicable	Air									
Pressure Range	0.1~0.9Mpa									
Proof Pressure	1.35Mpa									
Temperature Range	-10~60°C									
Speed Range	30~500mm/s						30~350mm/s		30~250mm/s	
Cushion Type	Mounted Cushion									
Prot Size	M5x0.8				G1/8		G1/4		G3/8	

Stroke

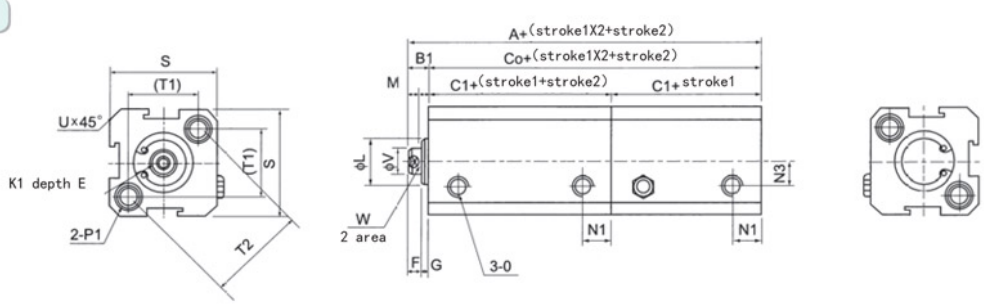
Bore mm	12 16	20	25		32 40 50	63 80 100
Without magnet	5~60 mm 5 mm/grade	5~85 mm 5 mm/grade	5~90 mm 5 mm/grade	100~110 mm 5 mm/grade	5~90 mm 5 mm/grade	100~130 mm 10 mm/grade
With magnet	5~50 mm 5 mm/grade	5~75 mm 5 mm/grade	5~90 mm 5 mm/grade	100 mm	5~90mm 5 mm/grade	100~120 mm 10 mm/grade
Max.stroke	60 mm	100 mm	120 mm		130 mm	

* special stroke, please contact with us

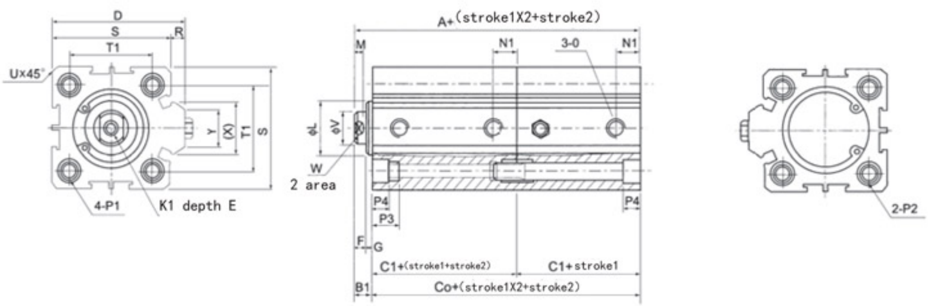
Figure Dimension

TGNT、TGNTS

ø12 ~ ø16



ø20 ~ ø100



Type / Bore	Without magnet A	Without magnet B1	Without magnet C0	Without magnet C1	With magnet A	With magnet B1	With magnet C0	With magnet C1	D	E Stroke ≤10	E Stroke >10	F	G	K1	L	M	N1	N3
12	39	5	34	17	59	5	54	27	–	6		4	1	M3x0.5	10	2.8	6.3	6
16	42.5	5.5	37	18.5	62.5	5.5	57	28.5	–	6		4	1.5	M3x0.5	11	2.8	7.3	6.5
20	44.5	5.5	39	19.5	64.5	5.5	59	29.5	36	8		4	1.5	M4x0.7	14	2.8	7.5	–
25	48	6	42	21	68	6	62	31	42	10		4	2	M5x0.8	16	2.8	8	–
32	56	7	49	24.5	76	7	69	34.5	50	12		4	3	M6x1	20	2.8	9	–
40	59	7	52	26	79	7	72	36	58.5	12		4	3	M8x1.25	26	2.8	10	–
50	65	9	5	28	85	9	76	38	71.5	15		5	4	M10x1.5	33	2.8	10.5	–
63	73	9	64	32	93	9	84	42	84.5	15		5	4	M10x1.5	35	2.8	11.8	–
80	93	11	82	41	113	11	102	51	104	15	20	6	5	M14x1.5	45	4	14.5	–
100	114	12	102	51	134	12	122	61	124	18	20	7	5	M18x1.5	55	4	20.5	–

Bore	O	P1	P2	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	M5x0.8	ø6.5Cog M5x0.8 Through hole:: ø4.2	-	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	M5x0.8	ø6.5Cog M5x0.8 Through hole:: ø4.2	-	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	Double side:Φ6.5 Through hole:Φ5.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	M5x0.8	Double side:Φ8.2 Cog M6x1.0 Through hole:Φ4.6	Double side:Φ8.2 Through hole:Φ6.2	15	5.5	2	40	28	–	3.1	10	8	12	10
32	G1/8	Double side:Φ8.2 Cog M6x1.0 Through hole:Φ4.6	Double side:Φ8.2 Through hole:Φ6.2	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	G1/8	Double side:Φ10 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ10 Through hole:Φ8.2	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ11 Through hole:Φ8.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ11 Through hole:Φ8.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20
80	G3/8	Double side:Φ14 Cog M12x1.75 Through hole:Φ9.2	Double side:Φ14 Through hole:Φ12.3	25	10.5	10	94	74	–	3.65	25	22	36	26
100	G3/8	Double side:Φ17.5 Cog M14x2 Through hole:Φ11.3	Double side:Φ17.5 Through hole:Φ14.2	30	13	10	114	90	–	3.65	32	27	35	26

* Note: for stroke more than 30, parameter A above adds 10 additionally

STNC®

TGN Series Compact Cylinder

Multi-stroke Type

Characteristic

Thin and light: In possession of the precision of action and service life, the length is only 1/2 ~ 1/3 of normal cylinder.

Easy to install: With the embedding type of mounting, need nothing and save room.

Easy to maintain: With simple design to assemble, install and repair easily.

Magnet switch: Around the body, leave room for the magnet switch in advance to install and adjust the magnet position more easily.

Optional Position: With two cylinders linked and different valve to control, cylinder has optional working positions in the stroke.

Graphics Sign

Ordering Code

TGNW — S — 20 X 30 X 10 — B

- TGNW: Series — TGNW: Double axis optional position double acting type
- S: Magnetic type — No Mark: Without magnet; S: With magnet
- 20: Bore Size
- 30: Stroke1
- 10: Stroke2
- B: Installing way — No Mark: Female thread; B: Male thread; N: Non-thread

Example

1) Bore: 20mm, stroke1: 30mm, stroke2: 10mm, male thread, magnet type
   Code: TGNW-S-20×30×10-B

Specification

Bore(mm)	12	16	20	25	32	40	50	63	80	100
Action	Double acting type									
Applicable medium	Air									
Pressure range	0.1~0.9 MPa									
Proof pressure	1.35 MPa									
Temperature range	-10~60°C (No Freeze)									
Speed range	30~500 mm/s						30~350 mm/s		30~250 mm/s	
Cushion type	Mounted Cushion									
Port size	M5x0.8				G1/8		G1/4		G3/8	

Stroke

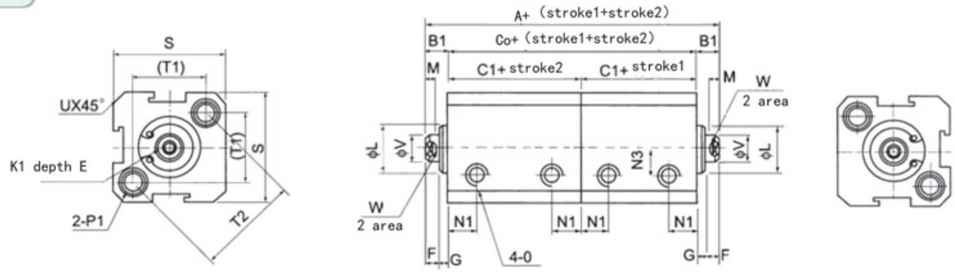
Bore(mm)	12 16	20	25		32 40 50 63 80 100	
Without magnet	5~60mm 5mm/grade	5~85mm 5mm/grade	5~90mm 5mm/grade	100~110mm 10mm/grade	5~90mm 5mm/grade	100~130mm 10mm/grade
With magnet	5~50mm 5mm/grade	5~75mm 5mm/grade	5~90mm 5mm/grade	100mm	5~90mm 5mm/grade	100~120mm 10mm/grade
Max.stroke	60mm	100mm	120mm		130mm	

Multi-stroke Type

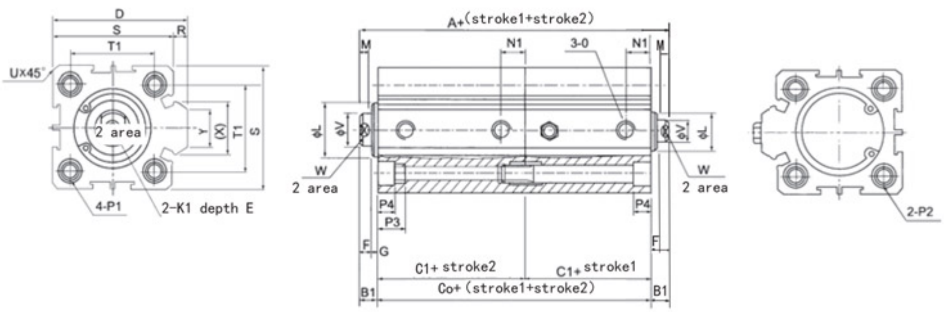
Figure Dimension

TGNW、TGNWS

● ø12 ~ ø16



● ø20 ~ ø100



Type / Bore	Without magnet A	Without magnet B1	Without magnet C0	Without magnet C1	With magnet A	With magnet B1	With magnet C0	With magnet C1	D	E Stroke≤10	E Stroke>10	F	G	K1	L	M	N1	N3
12	44	5	34	17	64	5	54	27	–	6		4	1	M3x0.5	10	2.8	6.3	6
16	48	5.5	37	18.5	68	5.5	57	28.5	–	6		4	1.5	M3x0.5	11	2.8	7.3	6.5
20	50	5.5	39	19.5	70	5.5	59	29.5	36	8		4	1.5	M4x0.7	14	2.8	7.5	–
25	54	6	42	21	74	6	62	31	42	10		4	2	M5x0.8	16	2.8	8	–
32	63	7	49	24.5	83	7	69	34.5	50	12		4	3	M6x1	20	2.8	9	–
40	66	7	52	26	86	7	72	36	58.5	12		4	3	M8x1.25	26	2.8	10	–
50	74	9	56	28	94	9	76	38	71.5	15		5	4	M10x1.5	33	2.8	10.5	–
63	82	9	64	32	102	9	84	42	84.5	15		5	4	M10x1.5	35	2.8	11.8	–
80	104	11	82	41	124	11	102	51	104	15	20	6	5	M14x1.5	45	4	14.5	–
100	126	12	102	51	146	12	122	61	124	18	20	7	5	M18x1.5	55	4	20.5	–

Bore	O	P1	P2	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	M5x0.8	ø6.5Cog M5x0.8 Through hole:: ø4.2	-	12	4.5	–	25	16.2	23	1.6	6	5	–	–
16	M5x0.8	ø6.5Cog M5x0.8 Through hole:: ø4.2	-	12	4.5	–	29	19.8	28	1.6	6	5	–	–
20	M5x0.8	Double side:Φ6.5 Cog M5x0.8 Through hole:Φ4.2	Double side:Φ6.5 Through hole:Φ5.2	14	4.5	2	34	24	–	2.1	8	6	11.3	10
25	M5x0.8	Double side:Φ8.2 Cog M6x1.0 Through hole:Φ4.6	Double side:Φ8.2 Through hole:Φ6.2	15	5.5	2	40	28	–	3.1	10	8	12	10
32	G1/8	Double side:Φ8.2 Cog M6x1.0 Through hole:Φ4.6	Double side:Φ8.2 Through hole:Φ6.2	16	5.5	6	44	34	–	2.15	12	10	18.3	15
40	G1/8	Double side:Φ10 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ10 Through hole:Φ8.2	20	7.5	6.5	52	40	–	2.25	16	14	21.3	16
50	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ11 Through hole:Φ8.5	25	8.5	9.5	62	48	–	4.15	20	17	30	20
63	G1/4	Double side:Φ11 Cog M8x1.25 Through hole:Φ6.5	Double side:Φ11 Through hole:Φ8.5	25	8.5	9.5	75	60	–	3.15	20	17	28.7	20
80	G3/8	Double side:Φ14 Cog M12x1.75 Through hole:Φ9.2	Double side:Φ14 Through hole:Φ12.3	25	10.5	10	94	74	–	3.65	25	22	36	26
100	G3/8	Double side:Φ17.5 Cog M14x2 Through hole:Φ11.3	Double side:Φ17.5 Through hole:Φ14.2	30	13	10	114	90	–	3.65	32	27	35	26

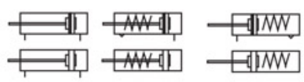
* Note: for stroke more than 30, parameter A above adds 10 additionally

CQ2/CDQ2 Series Compact Cylinder

Characteristic

ϕ12—ϕ100

Axial small size, compact structure, beautiful appearance, can be installed directly



Ordering Code

C **D** Q 2 **B** **20** — **50** **D** **C**

- D: magnet; blank: without magnet
- Mounting: B-Through; A-Both ends female hread
- Bore: 12—ϕ 12mm, 16—ϕ 16mm, 20—ϕ 20mm, 25—ϕ 25mm, 32—ϕ 32mm, 40—ϕ 40mm, 50—ϕ 50mm, 63—ϕ 63mm, 80—ϕ 80mm, 100—ϕ 100mm
- Stroke
- Acting: D: Double acting; S: Single acting(Spring Draw); T: Single acting(Spring Extrude)
- Banel: Choose by nourself; No Mark: Female thread; C-Cushion; M-Rod end male thread; * Single acting Bore can't have Cushion

* Biggest bore diameter for Single acting cylinder: Φ50mm

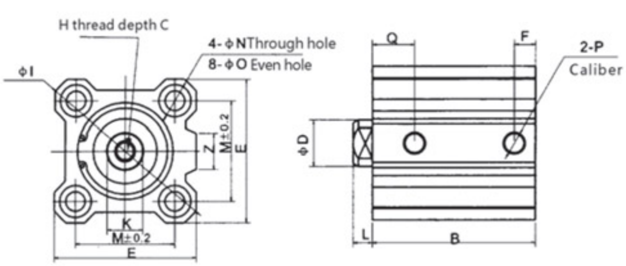
Standard Specification

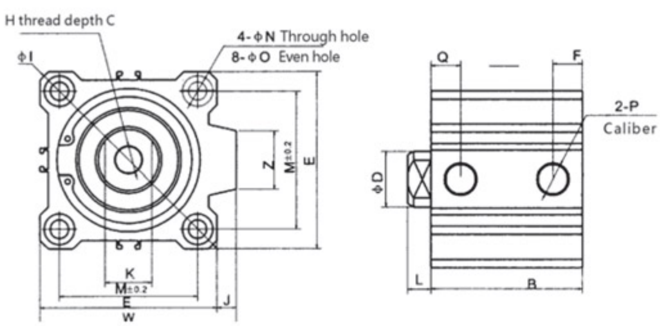
Bore (mm)	12	16	20	25	32	40	50	63	80	100
Action	Double acting, Single acting: Spring Draw								Spring Extrude	
Applicable medium	Air									
Highest pressure	0.05~1.0 Mpa									
Proof pressure	1.5 Mpa									
Environment and fluid temperature	−10~60°C									
Speed Range	50~500mm/s									
Cushion Type	Mounted Cushion									
Mounting	Through hole(Standard), Both ends female hread(Choose by nomself)									
Pipe Size	M5x0.8				G1/8		G1/4		G3/8	

Stroke

Bore (mm)	Standard Stroke	
	Double Action	Single Action
12/16	5,10,15,20,25,30	5,10
20/25	5,10,15,20,25,30,35,40,45,50	5,10
32/40	5,10,15,20,25,30,35,40,45,50, 60,70,75,80,90,100	5,10
50	5,10,15,20,25,30,35,40,45,50, 60,70,75,80,90,100	10~20
63/80/100	5,10,15,20,25,30,35,40,45,50, 60,70,75,80,90,100	–

Figure Dimension





CQ2/CDQ2 Series Compact Cylinder

Double Act Cylinder Demension

Type	Note 1)Stroke(mm)	B	ϕD	E	F	H	C	ϕI	J	K	L	M	ϕN	ϕO	P	Q	W	Z
CQ2B12-□D	5–30	17+st	6	25	5	M3X0.5	6	32	–	5	3.5	15.5	3.5	6.5depth3.5	M5X0.8	7.5	–	–
CQ2B16-□D	5–30	18.5+st	8	29	5.5	M4X0.7	8	38	–	5	3.5	20	3.5	6.5depth3.5	M5X0.8	8	–	10
CQ2B20-□D	5–50	19.5+st	10	36	5.5	M5X0.8	7	47	–	6	4.5	25.5	5.5	9depth7	M5X0.8	9	–	10
CQ2B25-□D	5–50	22.5+st	12	40	5.5	M6X1.0	12	52	–	8	5	28	5.5	9depth7	M5X0.8	11	–	10
CQ2B32-□D	5 / 10–50	23+st	16	45	5.5 / 7.5	M8X1.25	13	60	4.5	10	7	34	5.5	9depth7	M5X0.8 / 1/8	11.5 / 10.5	49.5	18
CQ2B40-□D	5–50	29.5+st	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9depth7	1/8	11	57	18
CQ2B50-□D	10–50	30.5+st	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11depth8	1/4	10.5	71	22
CQ2B63-□D	10–50	36+st	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14depth10.5	1/4	15	84	22
CQ2B80-□D	10–50	43.5+st	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5depth13.5	3/8	16	104	26
CQ2B100-□D	10–50	53+st	32	117	13	M20X2.5	27	156	6.5	27	12	94	11	17.5depth13.5	3/8	23	123.5	26

Note 2) Long Stroke

Type	Stroke(mm)	B	F	P	Q
32	75,100	33	7.5	1/8	10.5
40	75,100	39.5	8	1/8	11
50	75,100	40.5	10.5	1/4	10.5
63	75,100	46	10.5	1/4	15
80	75,100	53.5	12.5	3/8	16
100	75,100	63	13	3/8	23

Note 1) Standard Stroke is per 5mm apart

Note 2) The strokes between 55mm and 100mm, please add the plate

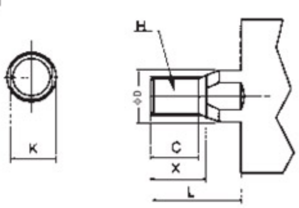
Note 3) If no special demands through hole and both ends temale thread have the same size.

Single Act Cylinder Demension

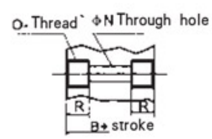
Type	B			ϕD	E	B		H	C	ϕI	J	K	L	M	ϕN	ϕO	P			Q		W	Z
	5st	10st	20st			5st	10st										5st	10st	20st	5st	10st		
CQ2B12-□D	22	27	–	6	25	5	5	M3X0.5	6	32	–	5	3.5	15.5	3.5	6.5depth3.5	M5X0.8		–	7.5	7.5	–	–
CQ2B16-□D	23.5	28.5	–	6	29	5.5	5.5	M4X0.7	8	38	–	5	3.5	20	3.5	6.5depth3.5	M5X0.8		–	8	8	–	10
CQ2B20-□D	24.5	29.5	–	8	36	5.5	5.5	M5X0.8	7	47	–	6	4.5	25.5	5.5	9depth7	M5X0.8		–	9	9	–	10
CQ2B25-□D	27.5	32.5	–	10	40	5.5	5.5	M6X1.0	12	52	–	8	5	28	5.5	9depth7	M5X0.8		–	11	11	–	10
CQ2B32-□D	28	33	–	12	45	5.5	5.5	M8X1.25	13	60	4.5	10	7	34	5.5	9depth7	M5x0.8	1/8	–	11.5	11.5	49.5	18
CQ2B40-□D	34.5	39.5	–	16	52	8	8	M8X1.25	13	69	5	14	7	40	5.5	9depth7	1/8		–	11	11	57	18
CQ2B50-□D	–	40.5	50.5	20	64	10.5	10.5	M10X1.5	15	86	7	17	8	50	6.6	11depth8	–	1/4		10.5	10.5	71	22

st=Stroke

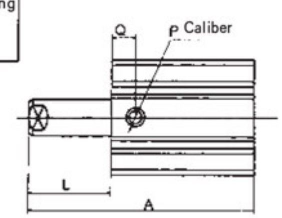
Piston rod thread



Double fermale installing/CQ2A



Single acting spring push out 12– 50



Piston rod male thread

Bore (mm)	C	X	ϕD	H	L	K
12	9	10.5	6	M5X0.8	14	5
16	10	12	8	M6X1.0	15.5	5
20	12	14	10	M8X1.25	18.5	6
25	15	17.5	12	M10X1.5	22.5	8
32	20.5	23.5	16	M14X1.5	28.5	10
40	20.5	23.5	16	M14X1.5	28.5	14
50	26	28.5	20	M18X1.5	33.5	17
63	26	28.5	20	M18X1.5	33.5	17
80	32.5	35.5	25	M22X1.5	43.5	22
100	32.5	35.5	32	M26X1.5	43.5	27

Note 3) Both ends female hread

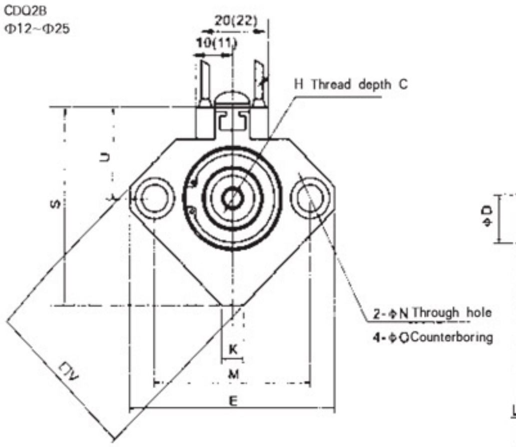
Bore (mm)	O	R
12	M4X0.7	7
16	M4X0.7	7
20	M6X1.0	10
25	M6X1.0	10
32	M6X1.0	10
40	M6X1.0	10
50	M8X1.25	14
63	M10X1.5	18
80	M12X1.75	22
100	M12X1.75	22

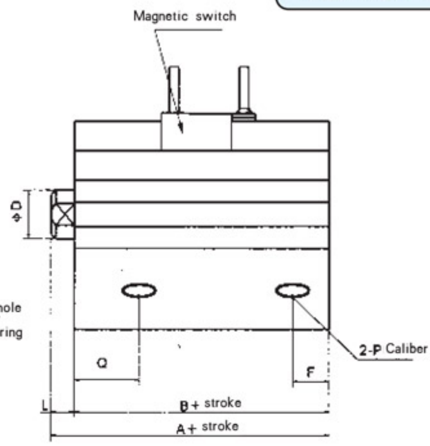
Double acting cylinder demension

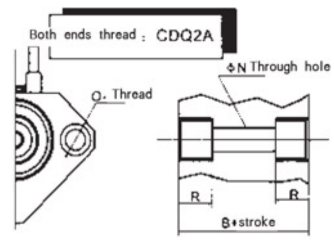
Bore	A			L		
(mm)	5st	10st	20st	5st	10st	20st
12	30.5	40.5	–	8.5	13.5	–
16	32	42	–	8.5	13.5	–
20	34	44	–	9.5	14.5	–
25	37.5	47.5	–	10	15	–
32	40	50	–	12	17	–
40	46.5	56.5	–	12	17	–
50	–	58.5	78.5	–	18	28

CQ2/CDQ2 Series Compact Cylinder

CDQ2B
Φ12~Φ25



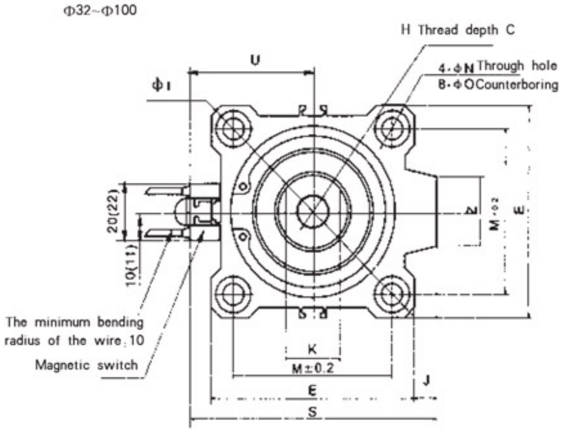


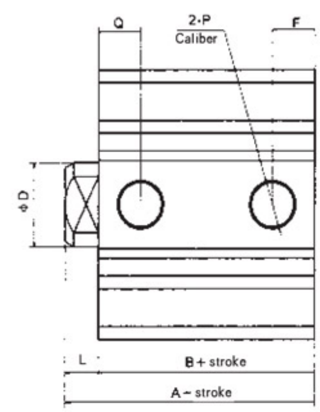


Note 3) Both ends female hread

Bore (mm)	O	R
12	M4X0.7	7
16	M4X0.7	7
20	M6X1.0	10
25	M6X1.0	10
32	M6X1.0	10
40	M6X1.0	10
50	M8X1.25	14
63	M10X1.5	18
80	M12X1.75	22
100	M12X1.75	22

Φ32~Φ100





Note 2) Long Stroke

Type	Stroke(mm)	B	F	P	Q
32	75,100	33	7.5	1/8	10.5
40	75,100	39.5	8	1/8	11
50	75,100	40.5	10.5	1/4	10.5
63	75,100	46	10.5	1/4	15
80	75,100	53.5	12.5	3/8	16
100	75,100	63	13	3/8	23

*the above dimensions are just for D-A.7,D-8A magnet switches.

* ( ) : the dimensions in the bracket is D-F79L,D-J79L magnet switch

Note 1) Standard Stroke is per 5mm apart

Note 2) The strokes between 55mm and 100mm, please add the plate

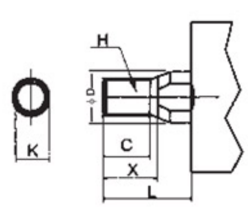
Note 3) If no special demands through hole and both ends temale thread have the same size.

Double acting cylinder demension

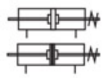
Type	Note 1)Stroke(mm)	A	B	ΦD	E	F	H	C	ΦI	J	K	L	M	ΦN	ΦO	P	Q	S	U	V	Z
CDQ2B12	5-30	31.5	28	6	25	5	M3X0.5	6	32	–	5	3.5	15.5	3.5	6.5depth3.5	M5X0.8	11	35.5	19.5	25	–
CDQ2B16	5-30	34	30.5	8	29	5.5	M4X0.7	8	38	–	5	3.5	20	3.5	6.5depth3.5	M5X0.8	10	41.5	22.5	29	–
CDQ2B20	5-50	36	31.5	10	36	5.5	M5X0.8	7	47	–	6	4.5	25.5	5.5	9depth7	M5X0.8	10.5	48	24.5	36	–
CDQ2B25	5-50	37.5	32.5	12	40	5.5	M6X1.0	12	52	–	8	5	28	5.5	9depth7	M5X0.8	11	53.5	27.5	40	–
CDQ2B32	5-50	40	33	16	45		M8X1.25	13	60	4.5	10	7	34	5.5	9depth7	1/8	10.5	58.5	31.5	–	18
CDQ2B40	5-50	46.5	39.5	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9depth7	1/8	11	66	35	–	18
CDQ2B50	10-50	48.5	40.5	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11depth8	1/4	10.5	80	41	–	22
CDQ2B63	10-50	54	46	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14depth10.5	1/4	15	93	47.5	–	22
CDQ2B80	10-50	63.5	53.5	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5depth13.5	3/8	16	112.5	57.5	–	26
CDQ2B100	10-50	75	63	32	117	13	M20X2.5	27	156	6.5	27	12	94	11	17.5depth13.5	3/8	23	132.5	67.5	–	26

Rod end male thread

Bore (mm)	C	X	ΦD	H	L	K
12	9	10.5	6	M5X0.8	14	5
16	10	12	8	M6X1	15.5	5
20	12	14	10	M8X1.25	18.5	6
25	15	17.5	12	M10X1.25	22.5	8
32	20.5	23.5	16	M14X1.5	28.5	10
40	20.5	23.5	16	M14X1.5	28.5	14
50	26	28.5	20	M18X1.5	33.5	17
63	26	28.5	20	M18X1.5	33.5	17
80	32.5	35.5	25	M22X1.5	43.5	22
100	32.5	35.5	32	M26X1.5	43.5	27



CQ2/CDQ2 Series Compact Cylinder



Adjustable stroke

Ordering Code

CQ2 [B] [20] — [50] [D] — XC9

- B: Mounting, B-Through
- 20: Bore
- 50: Stroke
- D: Acting, D: Double acting

Standard Specification

Bore (mm)	12	16	20	25	32	40	50	63	80	100
Applicable medium	Air									
Action	Double acting									
Proof pressure	1.5MPa(15.3kgf/cm2)									
Highest pressure	1.0MPa(10.2kgf/cm2)									
	5 ~ 60 ℃									
Rod end thread	Female thread (Standard), Male thread(Choose by nomself)									
Cushion	No									
Stroke tolerance	+1.0, 0									
*Lubrication	No need									
Mounting	Through hole(Standard), Both ends female hread(Choose by nomself)									
Pipe Size	M5×0.8				1/8		1/4		3/8	

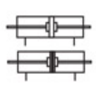
* If lubricating please use ISO VG032

Stroke/Magnetic Switch

Bore (mm)	Standard Stroke	
	Double Acting	adjustable stroke
12	5,10,15, 20,25,30	5,10
16		
20	5,10,15,20,25, 30,35,40,45,50	
25		
32	5,10,15,20,25, 30,35,40,45,50, 75,100	
40		
50	10,15,20, 25,30,35, 40,45,50, 75,100	
63		
80		
100		

Note 1)Sensor switch specification the same with sensor switch serive

CQ2WB Series



Double rod

Ordering Code

CQ2W [B] [20] — [50] [D]

- B: Mounting, B-Through
- 20: Bore
- 50: Stroke
- D: Acting, D: Double acting

Standard Specification

Bore (mm)	12	16	20	25	32	40	50	63	80	100
Applicable medium	Air									
Action	Double acting									
Proof pressure	1.5MPa(15.3kgf/cm2)									
Highest pressure	1.0MPa(10.2kgf/cm2)									
	5 ~ 60 ℃									
Rod end thread	Female thread (Standard), Male thread(Choose by nomself)									
Cushion	No									
Stroke tolerance	+1.0, 0									
*Lubrication	No need									
Mounting	Through hole(Standard), Both ends female hread(Choose by nomself)									
Pipe Size	M5×0.8				1/8		1/4		3/8	

* If lubricating please use ISO VG032

Stroke/Magnetic Switch

Bore (mm)	Standard Stroke
	Double Acting
12	5,10,15, 20,25,30
16	
20	5,10,15,20,25, 30,35,40,45,50
25	
32	5,10,15,20,25, 30,35,40,45,50, 75,100
40	
50	10,15,20, 25,30,35, 40,45,50, 75,100
63	
80	
100	

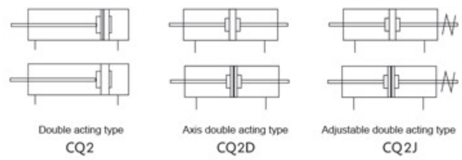
Note 1)Sensor switch specification the same with sensor switch serive

CQ2/CDQ2 Series Compact Cylinder (Big Bore)

Characteristic

Axial small size, compact structure, beautiful appearance, can be installed directly

Graphics Sign



Ordering Code

C [D] Q2 [D] B [125] — [100] — [15] — C [M]

- **D** — Magnet: Blank: without magnet; D: magnet
- **D** — Series: Blank: Single rod; D: double rod; J: adjustable stroke
- **B** — The through hole and both ends of the screw all can install.
- **125** — Bore: 125 : ϕ125mm; 140 : ϕ140mm; 160 : ϕ160mm
- **100** — Stroke
- **15** — Adjust stroke: 10: 10mm; 20: 20mm; 30: 30mm; 40: 40mm; 50: 50mm; 75: 75mm; 100: 100mm
- **C** — Rubber buffer
- **M** — Mounting: Blank : through; M: both ends female hread

Standard Specification

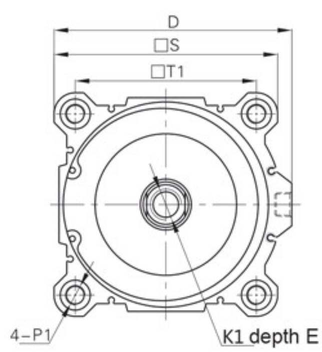
Bore (mm)	125	140	160
Fluid	Air		
Action type	Double action		
Withstanding pressure	1.5MPa		
Proof pressure	0.05 ~ 1.0MPa		
Temperature range	-10 ~ 60℃		
Speed range	Internal thread (standard), the external thread (optional)		
Cylinder Material	Aluminum		
Installation	through hole (standard) within two ends of thread (optional)		
Port size	G3/8		

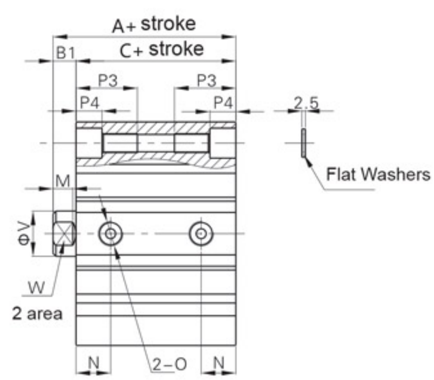
Standard Stroke

Bore (mm)	Standard Stroke
125	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300
140	
160	

Figure Dimension (CQ2)

Φ125-Φ160



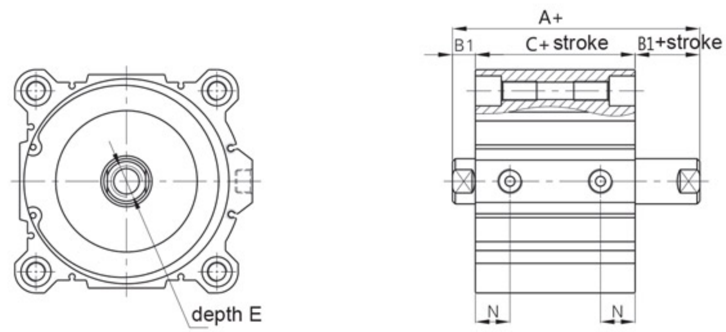


Bore	A	B1	C	D	E		K1	M	N	O	S	P1	P3	P4	T1	V	W
					St≤10	St≤10											
125	99	16	83	153	22.5	30	M22X2.5	12	24.5	G3/8	142	Double side:Ø21.2 cog:M14×2.0 through hole:Ø12.3	43.4	18.4	114	32	27
140	99	16	83	168	22.5	30	M22X2.5	12	24.5	G3/8	158	Double side:Ø21.2 cog:M14×2.0 through hole:Ø12.3	43.4	18.4	128	32	27
160	108	17	91	188	26.5	30	M24X3.0	14	27.5	G3/8	178	Double side:Ø24.2 cog:M16×2.0 through hole:Ø14.3	49.2	21.2	144	40	36

It must install plane gasket when you use through hole to install the compact cylinder

■ Figure Dimension (CQ2D)

Φ125-Φ160

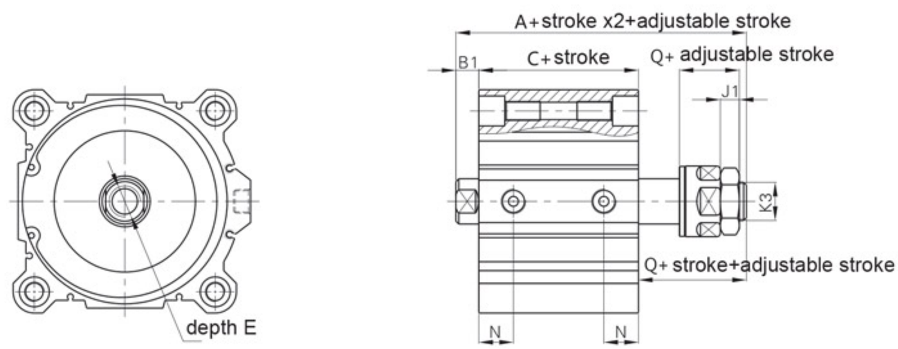


Bore	A	B1	C	E		N
				St≤10	St≤10	
125	115	16	83	22.5	30	24.5
140	115	16	83	22.5	30	24.5
160	125	17	91	26.5	30	27.5

Note: does not indicate the same size as the standard size.

■ Figure Dimension (CQ2J)

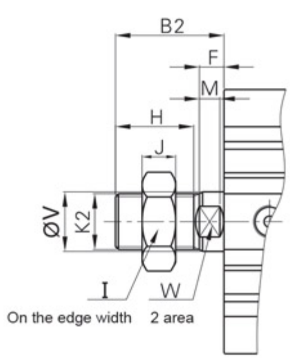
Φ125-Φ160



Bore	A	B1	C	E		N	Q	J1	K3
				St≤10	St≤10				
125	140.8	16	83	22.5	30	24.5	42.5	13.5	M27X2.0
140	140.8	16	83	22.5	30	24.5	42.5	13.5	M27X2.0
160	175.3	17	91	26.5	30	27.5	68	18	M36X2.0

Note: does not indicate the same size as the standard size.

● End Rod male thread



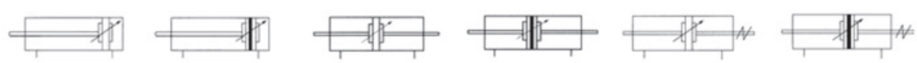
Bore	B2	F	H	I	J	K2	M	V	W
125	58	13	42	46	18	M30X1.5	9	32	27
140	58	13	42	46	18	M30X1.5	9	32	27
160	64	14	47	55	21	M36X1.5	11	40	36

ADVU Series Compact Cylinder

Product characteristics

Cylinder bore and front cover are threaded connection, with good strength, easy maintenance; hard oxidation process has been done after roll extrusion of inner diameter of cylinder bore assure the good resistance and durability; the piston seal adopts with shaped two-way seal design, has the features of compacted size and oil storing.

Graphics Sign



Ordering Code

ADVU — 20 X 30 B — LB

- 20: Bore
- 30: Stroke
- B: Blank: female thread; B: male thread; N: no teeth
- LB: Fix type: blank: without installation accessories; FA: front port be fixed; CA: back port be fixed (pivot type); CB: back port be fixed (clevis type); LB: front and back be fixed

Ordering example

1) Bore: 20mm, Stroke: 50mm, LB installation, Code: ADVU—20×50—LB

Standard Specification

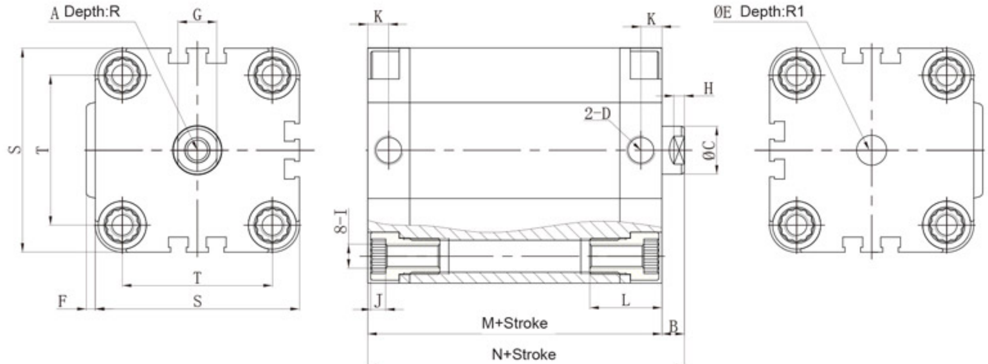
Bore(mm)	12	16	20	25	32	40	50	63	80	100
Fluid	Air									
Action type	Double action、single action、spring draw/spring extrude									
Max. pressure	1.5MPa									
Pressure (Double acting)	0.1–1.0MPa									
Pressure (Single acting)	0.2–1.0MPa									
Temperature range	−10 ~ 60℃									
Cushion type	fender									
Piston speed	Double action 30 ~ 500mm/s single action 50 ~ 500mm/s									
Port size	M5X0.8				G1/8					G1/4

Stroke

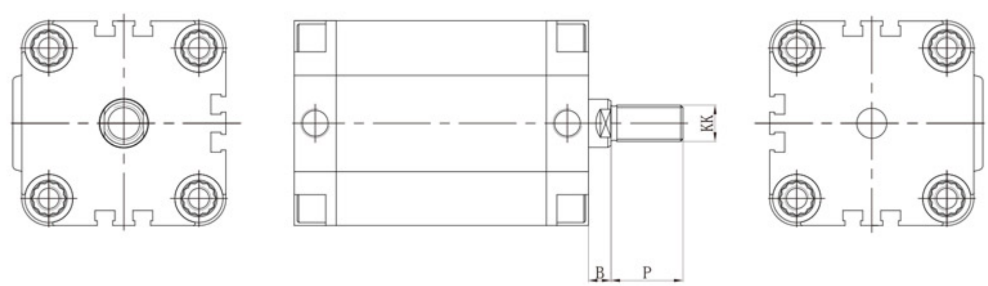
Bore(mm)		standard stroke (mm)	Max stroke	Allow stroke
12	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	200	200
16	Single acting	5 10		
20	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	200	200
25	Single acting	5 10 15 20 25		
32 40	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	300	300
50 63	Single acting	5 10 15 20 25		
80 100	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	400	400

Figure Dimension

Female thread



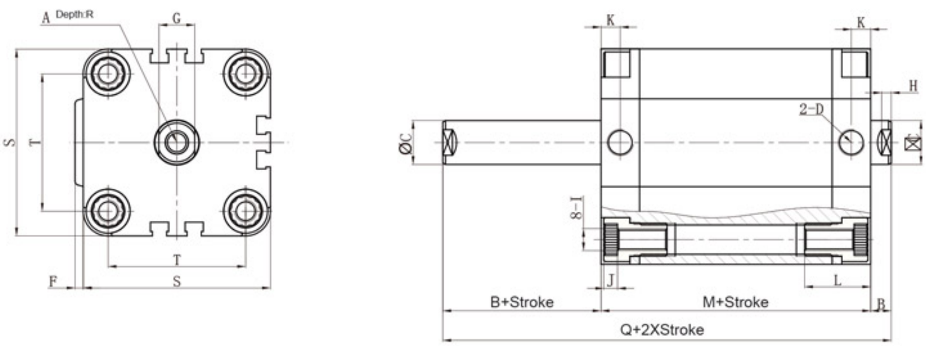
Male thread



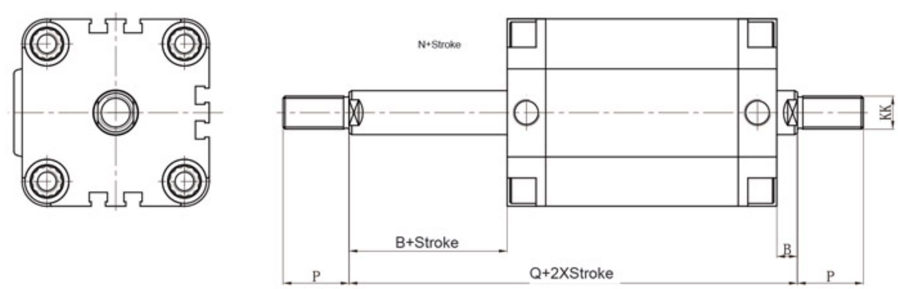
Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	S	T	KK	P	R	R1
16	M4	4.5	8	M5	6	1	7	2.5	M4	4	7.5	18	38	42.5	29	18	M8	16	12	4
20	M5	4.5	10	M5	6	1.5	8	3	M5	4.5	7	19	38	42.5	36	22	M10×1.25	22	13	4
25	M5	5.5	10	M5	6	1.5	8	3	M5	4.5	7.5	19	39.5	45	40	26	M10×1.25	22	13	4
32	M6	6	12	G1/8	6	2	10	3.5	M6	5.5	7.5	22	44.5	50.5	50	32	M10×1.25	22	13	4
40	M6	6.5	12	G1/8	8	2.5	10	3.5	M6	5.5	7.5	22	45.5	52	60	42	M10×1.25	22	13	5
50	M8	7.5	16	G1/8	10	3	13	3.5	M8	6	8	22.5	45.5	53	68	50	M12×1.25	24	16	5
63	M8	7.5	16	G1/8	10	4	13	3.5	M10	7.5	8	26	50	57.5	87	62	M12×1.25	24	16	5
80	M10	8	20	G1/8	10	4	17	5	M10	7.5	8	26	56	64	107	82	M16×1.5	32	17	5
100	M10	10	25	G1/4	–	–	22	–	M10	–	–	–	66.5	76.5	128	103	M20×1.5	–	–	–

Figure Dimension

Female thread



Male thread



Bore	A	B	C	D	F	G	H	I	J	K	L	M	N	S	T	KK	P	R	Q
16	M4	4.5	8	M5	1	7	2.5	M4	4	7.5	18	38	42.5	29	18	M8	16	12	47
20	M5	4.5	10	M5	1.5	8	3	M5	4.5	7	19	38	42.5	36	22	M10×1.25	22	13	47
25	M5	5.5	10	M5	1.5	8	3	M5	4.5	7.5	19	39.5	45	40	26	M10×1.25	22	13	50.5
32	M6	6	12	G1/8	2	10	3.5	M6	5.5	7.5	22	44.5	50.5	50	32	M10×1.25	22	13	56.5
40	M6	6.5	12	G1/8	2.5	10	3.5	M6	5.5	7.5	22	45.5	52	60	42	M10×1.25	22	13	58.5
50	M8	7.5	16	G1/8	3	13	3.5	M8	6	8	22.5	45.5	53	68	50	M12×1.25	24	16	60.5
63	M8	7.5	16	G1/8	4	13	3.5	M10	7.5	8	26	50	57.5	87	62	M12×1.25	24	16	65
80	M10	8	20	G1/8	4	17	5	M10	7.5	8	26	56	64	107	82	M16×1.5	32	17	72
100	M10	10	25	G1/4	–	22	–	M10	–	–	–	66.5	76.5	128	103	M20×1.5	40	–	–

ACP Series Compact Cylinder

Implement the standard：ISO21287

● Product characteristics

Cylinder bore and front cover are threaded connection, with good strength, easy maintenance; hard oxidation process has been done after roll extrusion of inner diameter of cylinder bore assure the good resistance and durability; the piston seal adopts with shaped two-way seal design, has the features of compacted size and oil storing.

● Ordering Code

ACP — 20 X 30 B — LB

- ACP：Double acting type
- ACPD：Axis double acting type
- ACPJ：Adjustable double acting type

Bore Stroke

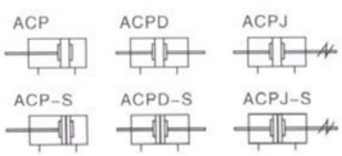
- blank：female thread
- B：male thread
- N：no teeth

fix type：
- blank：without installation accessories
- FA：front port be fixed
- CA：back port be fixed (pivot type)
- CB：back port be fixed (clevis type)
- LB：front and back be fixed

■ Ordering example

1) Required bore 20mm, stroke 50mm, LB, how to order：ACP—20×50—LB

■ Graphics Sign



■ Technical parameters

Bore(mm)	20	25	32	40	50	63	80	100
Fluid	Air							
Action type	Double action、single action、spring draw/spring extrude							
Max.pressure	1.5MPa							
Pressure (Double acting)	0.1—1.0MPa							
Pressure (Single acting)	0.2—1.0MPa							
Temperature range	−10 ~ 60℃							
Cushion type	fender							
Piston speed	Double action 30 ~ 500mm/s single action 50 ~ 500mm/s							
Port size	M5×0.8		G1/8					G1/4

* If lubricating please use ISOVG32

■ Stroke

Bore(mm)		Standard Stroke (mm)	Max Stroke	Allow Stroke
20 25	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	200	200
	Single acting	5 10 15 20 25	25	—
32 40 50 63	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	300	300
	Single acting	5 10 15 20 25	25	—
80 100	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	400	400
	Single acting	5 10 15 20 25	25	—

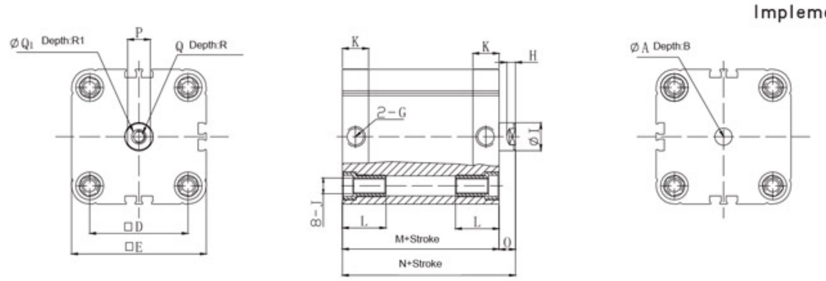
ACP Series Compact Cylinder

Implement the standard：ISO21287

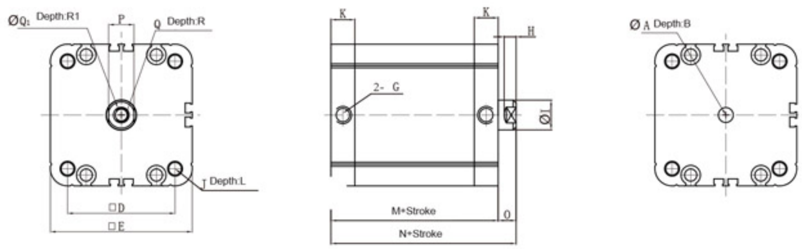
Figure Dimension

Female thread

ϕ32—63



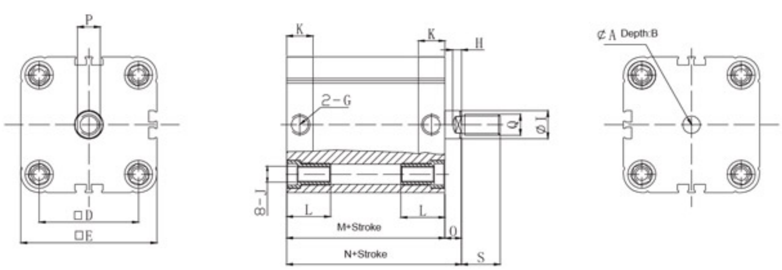
ϕ80—100



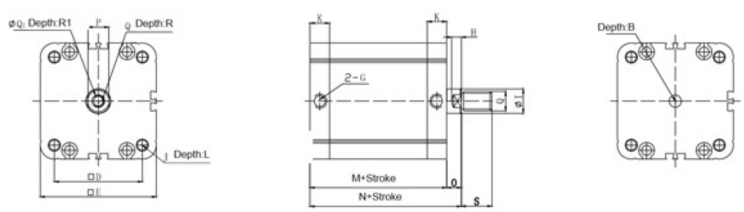
symbols / Bore	A	B	D	E	G	H	I	J	K	L	M	N	O	P	Q	Q1	R	R1
32	6	4	32.5	46.5	G1/8	4.5	12	M6	13.5	25	44.5	51	6.5	10	M6	6.5	14	2.5
40	8	5	38	54	G1/8	4.5	12	M6	13.5	25	45.5	52	6.5	10	M6	6.5	14	2.5
50	10	5	46.5	64.5	G1/8	5	16	M8	13.5	25	45.5	53	7.5	13	M8	8.5	16	3.5
63	10	5	56.5	77	G1/8	5	16	M8	15	25	50	57.5	7.5	13	M8	8.5	16	3.5
80	10	5	72	95	G1/8	8	20	M10	16	19	55	65	10	17	M10	10.5	20	4.5
100	10	5	89	115	G1/4	10	25	M10	19	19	67	77	10	22	M12	12.5	24	6

Male thread

ϕ32—63

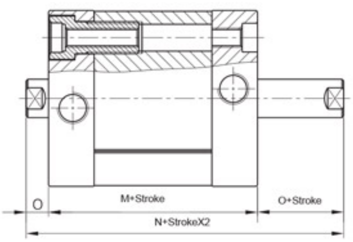


ϕ80—100

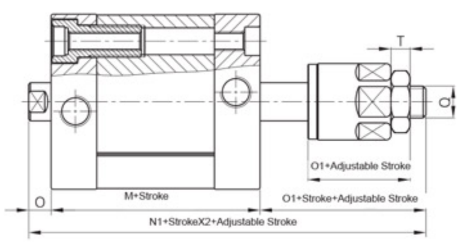


symbols / Bore	A	B	D	E	G	H	I	J	K	L	M	N	O	P	Q	S
32	6	4	32.5	46.5	G1/8	4.5	12	M6	13.5	25	44.5	51	6.5	10	M10X1.25	19
40	8	5	38	54	G1/8	4.5	12	M6	13.5	25	45.5	52	6.5	10	M10X1.25	19
50	10	5	46.5	64.5	G1/8	5	16	M8	13.5	25	45.5	53	7.5	13	M12X1.25	22
63	10	5	56.5	77	G1/8	5	16	M8	15	25	50	57.5	7.5	13	M12X1.25	22
80	10	5	72	95	G1/8	8	20	M10	16	19	55	65	10	17	M16X1.5	28
100	10	5	89	115	G1/4	10	25	M10	19	19	67	77	10	22	M16X1.5	28

Double axises



Adjustable Stroke



symbols / Bore	M	N	N1	O	O1	T	Q
32	44.5	58	78	7	27	6	M10X1.25
40	45.5	59.5	79.5	7	27	6	M10X1.25
50	45.5	61.5	81.5	8	28	7	M12X1.25
63	50	65	85	8	28	7	M12X1.25
80	55	72	92	9	29	8	M16X1.5
100	67	85	105	9	29	8	M16X1.5