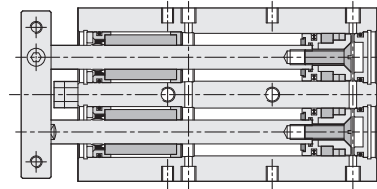
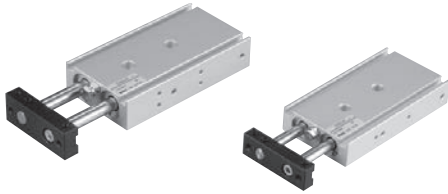


TDXU series - Dual rod cylinder (Linear bearing)

Operating specification and Ordering expression

CHELIC PNEUMATIC

Internal structure



TD
Dual Rod
Cylinder

TDX
Dual Rod
Cylinder

TDXU
Dual Rod
Cylinder

Unit : kgf

Theoretical force

Bore size (mm)	Piston rod dia (mm)	Action	Piston area cm ²	Air pressure (kgf/cm ²)						
				1	2	3	4	5	6	7
16	8	Push	4.0	4.0	8.0	12.0	16.0	20.1	24.1	28.1
		Pull	3.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0
20	10	Push	6.2	6.2	12.5	18.8	25.1	31.4	37.6	43.9
		Pull	4.7	4.7	9.4	14.1	18.8	23.5	28.2	32.9
25	12	Push	9.8	9.8	19.6	29.4	39.2	49.1	58.8	68.5
		Pull	7.5	7.5	15.1	22.6	30.2	37.7	45.3	52.8

Note : Above are theoretical data : please take into consideration the frictional resistance and the mechanical efficiency of value should be added calculation before using. (About 70%~80%)

STU
Dual Rod
Cylinder

STM
Dual Rod
Cylinder

STX
Dual Rod
Cylinder

Specification

Item	Bore size (mm)	Ø16	Ø20	Ø25
Operation		Double acting		
Fluid		Air		
Pressure range	kgf / cm ² (kpa)	1 ~ 8.5 (100 ~ 850)		
Max. service pressure	kgf / cm ² (kpa)	9 (900)		
Operating ambient temperature range	°C	0 ~ 60		
Range of service speed	mm/sec	50 ~ 700		
Stroke adjusting range		-5 ~ 0		
Port size		M5x0.8	Rc 1/8"	
Sensor device		With magnet		

Standard stroke

Unit : mm

Bore size	Stroke
Ø16	10、15、20、25、30、40、45、50、60、70、75、80、90、100、125、150
Ø20	10、15、20、25、30、40、45、50、60、70、75、80、90、100、125、150
Ø25	10、15、20、25、30、40、45、50、60、70、75、80、90、100、125、150

How to order

TDXU × **16** × **50** - **ST** **2**
 Model Bore size Stroke Sensor switch

U

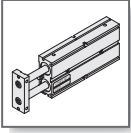
16 - Ø16 mm
 20 - Ø20 mm
 25 - Ø25 mm

Ø16 - 10~150
 Ø20 - 10~150
 Ø25 - 10~150

CS-6T ST 2

None : Without sensor switch
 [ST] : Sensor switch code (CS-6T)
 [2] : Number of sensor switch
 1 = 1 PCS
 2 = 2 PCS

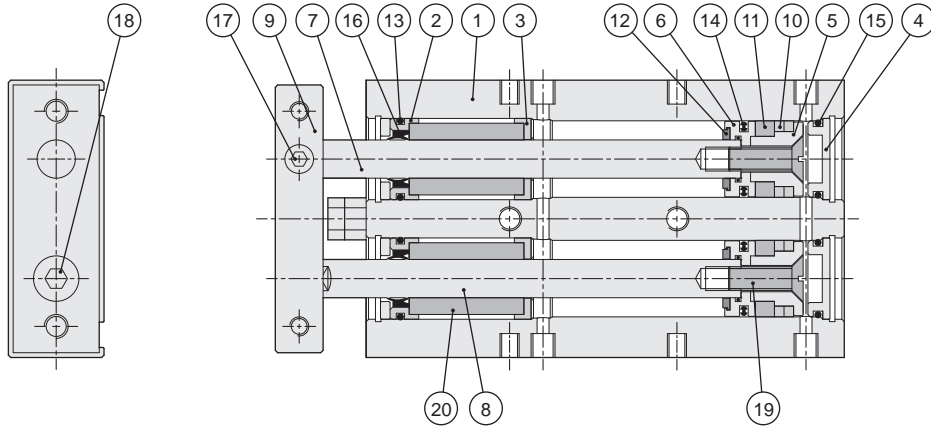
U: Linear bearing guide



TDXU series - Dual rod cylinder (Linear bearing)

Components and Material list

CHELIC PNEUMATIC



Component and Material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Wearing ring	Teflon
02	Front bush	Aluminum alloy	12	Cushion rubber lining	Rubber
03	End bush	Aluminum alloy	13	Front cover O-Ring	NBR
04	End cover	Aluminum alloy	14	Piston packing	NBR
05	Magnet cover	Copper alloy	15	End cover O-Ring	NBR
06	Piston	Copper alloy	16	Rod packing	NBR
07	Rod	Bearing steel	17	Screw	Alloy steel
08	Minor rod	Bearing steel	18	Screw	Alloy steel
09	Plate	Aluminum alloy	19	Screw	Alloy steel
10	Magnet	Rare earth metals	20	Linear bearing	

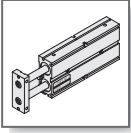
Note : Above are theoretical date : please take into consideration the frictional resistance and the mechanical efficiency of value should be added calculation before using. (About 70%~80%)

Packing and O-Ring

Unit : mm

Item	Piston packing	Rod packing	Front cover O-ring	End cover O-ring
Bore size	2	2	2	2
Ø16	COP-16	PDU-8	Ø14.5 × Ø1.5	Ø13.2 × Ø1.5
Ø20	COP-20	PDU-10	Ø18 × Ø1.5	Ø17.5 × Ø1.5
Ø25	COP-25	PDU-12	Ø21.8 × Ø2.4	Ø20.8 × Ø2.0

Note : Piston packing and rod packing all adopt imports. (Mitsubishi, Sakagami and same grade)

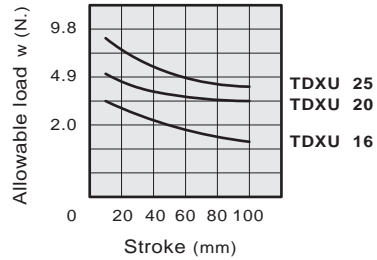
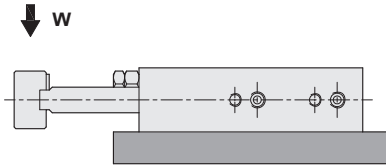


TDXU series - Dual rod cylinder (Linear bearing)

Design and Installation reference

CHELIC PNEUMATIC

Allowable load

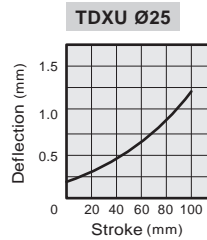
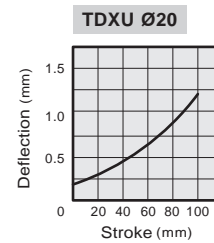
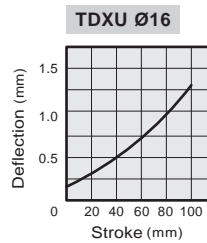
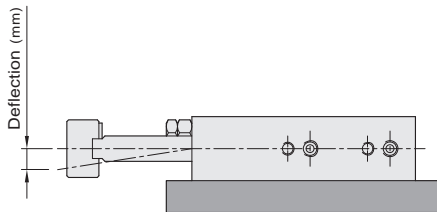


TD
Dual Rod
Cylinder

TDX
Dual Rod
Cylinder

TDXU
Dual Rod
Cylinder

Allowable deflection

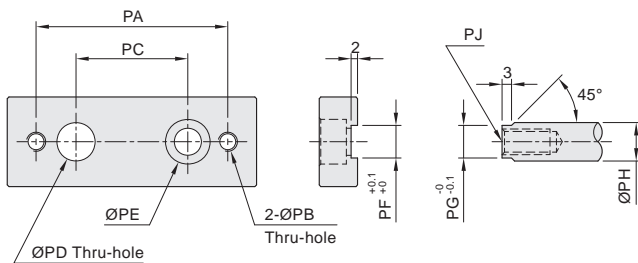


STU
Dual Rod
Cylinder

STM
Dual Rod
Cylinder

STX
Dual Rod
Cylinder

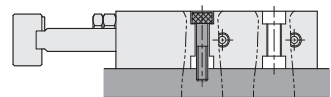
Dimension for end rod



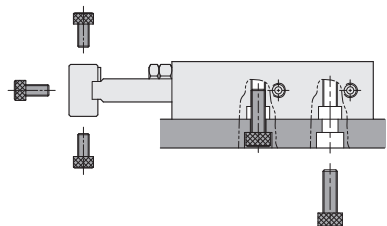
Code Bore Size	PA	PB	PC	PD	PE	PF	PG	PH	PJ
Ø16	45	M5x0.8p	25	8	Ø5.5 Thru hole, Hole Ø9x5.5 dp	6.2	6.2	8	M5x0.8p dp 12
Ø20	50	M5x0.8p	28	10	Ø6.5 Thru hole, Hole Ø11x6.5 dp	8.2	8.2	10	M6x1.0p dp 15
Ø25	60	M6x1.0p	35	12	Ø8.5 Thru hole, Hole Ø14x8.5 dp	10.2	10.2	12	M8x1.25p dp 15

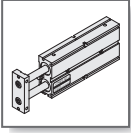
Mounting type

- Top mounting type



- Base and Plate mounting type



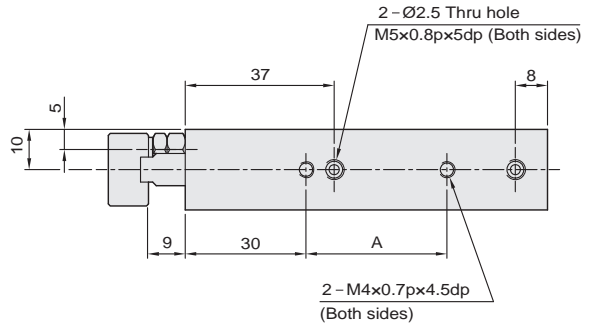
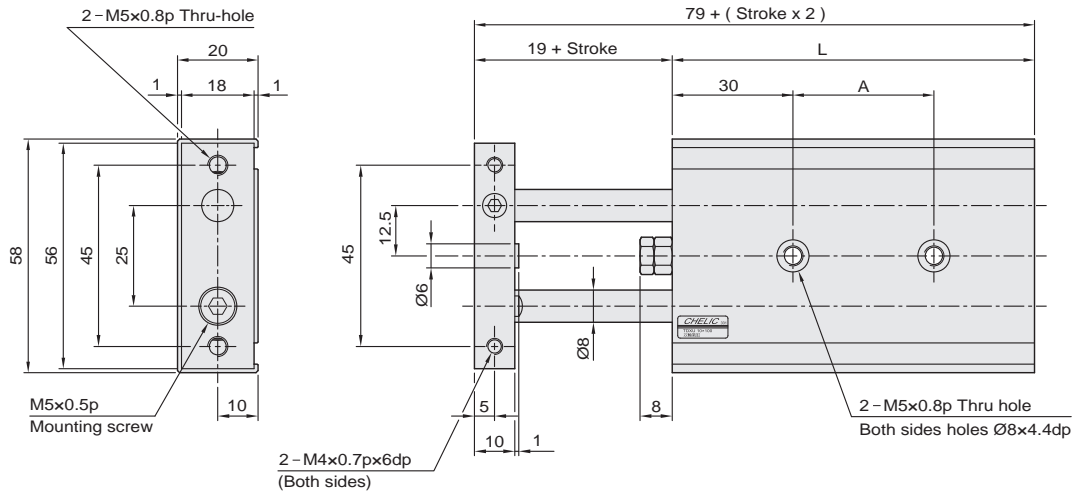


TDXU series - Dual rod cylinder (Linear bearing)

External dimension - Ø16

CHELIC PNEUMATIC

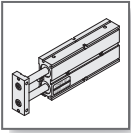
☉ TDXU Ø16 x



☉ Dimension

Unit : mm

Stroke Code	10	15	20	25	30	35	40	45	50	60	70	75	80	90	100	125	150
A	25	25	25	25	35	35	35	35	35	45	45	45	45	55	55	75	75
L	70	75	80	85	90	95	100	105	110	120	130	135	140	150	160	185	210



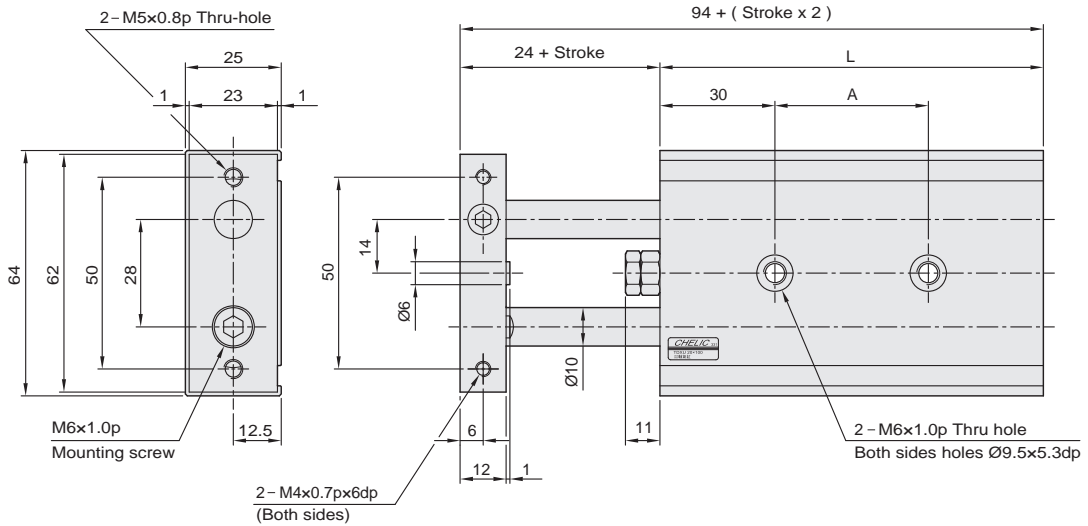
TDXU series - Dual rod cylinder (Linear bearing)

External dimension - Ø20

CHELIC PNEUMATIC

☉ TDXU Ø20 x

 TDXU 20 x ST



TD
Dual Rod
Cylinder

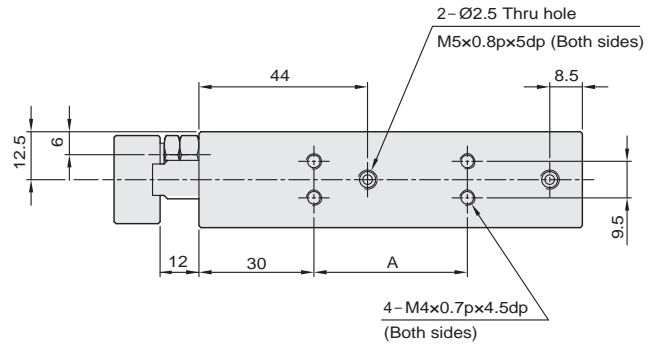
TDX
Dual Rod
Cylinder

TDXU
Dual Rod
Cylinder

STU
Dual Rod
Cylinder

STM
Dual Rod
Cylinder

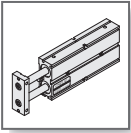
STX
Dual Rod
Cylinder



☉ Dimension

Unit : mm

Stroke Code	10	15	20	25	30	35	40	45	50	60	70	75	80	90	100	125	150
A	30	30	30	30	40	40	40	40	40	60	60	60	60	60	60	80	80
L	80	85	90	95	100	105	110	115	120	130	140	145	150	160	170	195	220

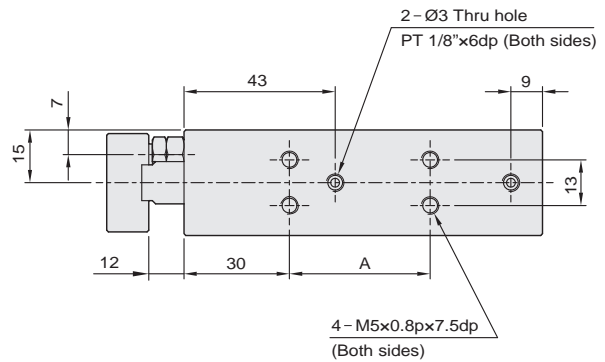
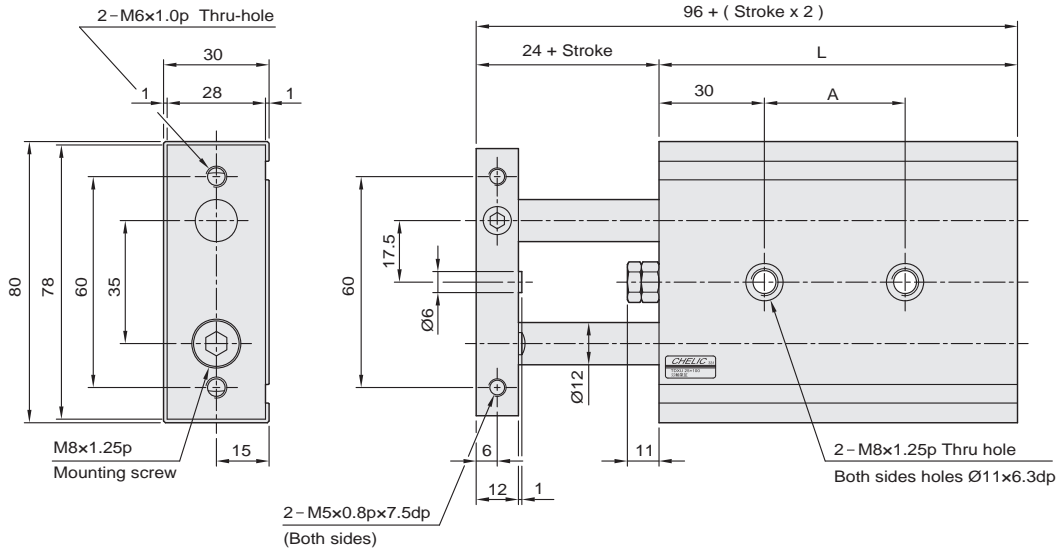


TDXU series - Dual rod cylinder (Linear bearing)

External dimension - Ø25

CHELIC PNEUMATIC

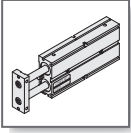
☉ TDXU Ø25 x



☉ Dimension

Unit : mm

Stroke Code	10	15	20	25	30	35	40	45	50	60	70	75	80	90	100	125	150
A	30	30	30	30	40	40	40	40	40	60	60	60	60	60	60	80	80
L	82	87	92	97	102	107	112	117	122	132	142	147	152	162	172	197	222



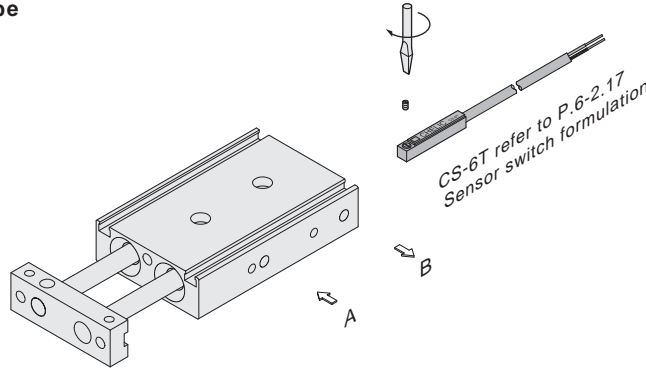
TDX / TDXU series - Dual rod cylinder

Sensor switch installation and Setting

CHELIC PNEUMATIC

1 Sensor switch mounting type

- CS - 6T mounting type



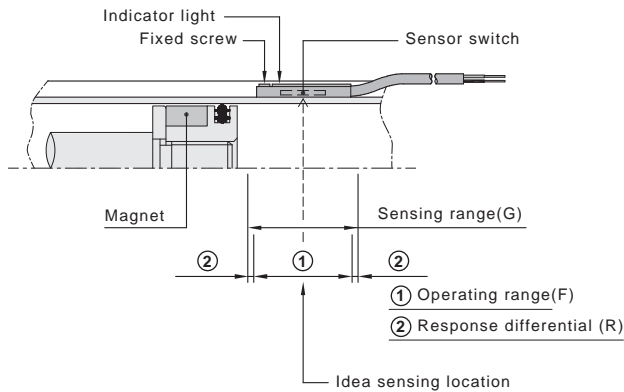
TD
Dual Rod
Cylinder

TDX
Dual Rod
Cylinder

TDXU
Dual Rod
Cylinder

2 Sensor switch setting and Operating range

- CS - 6T



STU
Dual Rod
Cylinder

STM
Dual Rod
Cylinder

STX
Dual Rod
Cylinder

Unit : mm

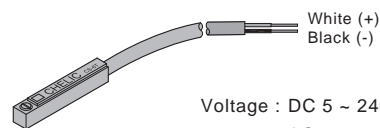
1 Sensing range

Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the sensor switch when it enters the operating range.

Model	CS - 6T	
Bore size	Operating range (F)	Response differential (R)
TDX Ø10	5	1.1
TDX / TDXU Ø16	5	1.1
TDX / TDXU Ø20	8.5	1
TDX / TDXU Ø25	10	1.8

2 Operating range

When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch.
(Please refer to the right table)



CS-6T

