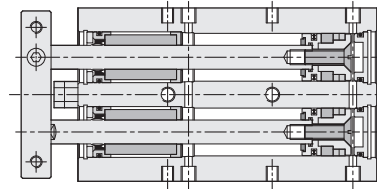
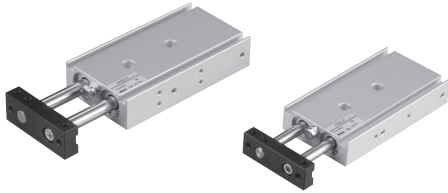


TDXU series Dual Rod Cylinder (Linear bushing)

Product features

CHELIC

Internal structure



Theoretical force

Unit: kgf

Bore size (mm)	Piston rod dia (mm)	Piston 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%)

Specification

Item	Bore size (mm)	Ø16	Ø20	Ø25
Action		Double acting		
Fluid		Air		
Pressure range	kgf/cm ² (kPa)	1 ~ 8.5 (100 ~ 850)		
Max. operating pressure	kgf/cm ² (kPa)	9 (900)		
Ambient and fluid temperature	°C	0 ~ 60		
Piston speed	mm/s	50 ~ 700		
Stroke adjusting range		-5 ~ 0		
Port size		M5×0.8	PT 1/8	
Sensing device		With magnet		

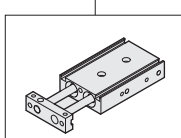
Standard stroke

Unit: mm

Bore size	Stroke
Ø16	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 75, 80, 90, 100, 125, 150
Ø20	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 75, 80, 90, 100, 125, 150
Ø25	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 75, 80, 90, 100, 125, 150

Code of order

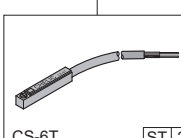
TDXU (Model) × **16** (Bore size) × **50** (Stroke) - **ST** (Sensor switch) **2** (Quantity of sensor switch)



U: Linear bearing guide

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 mark (CS-6T)
[2]: Quantity of sensor switch
1 = 1 PCS
2 = 2 PCS

TD

TDX

TDXU

STU

STM

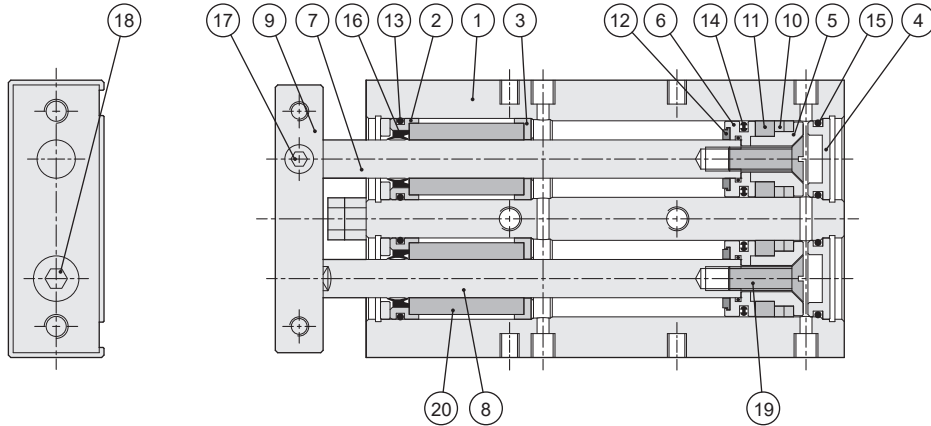
STX

TDXU series Dual Rod Cylinder (Linear bushing)

Product features

CHELIC

Internal structure



Components and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Wear ring	Teflon
02	Front bush	Aluminum alloy	12	Cushion gasket	Rubber
03	End bush	Aluminum alloy	13	Front cover O-Ring	NBR
04	Rear cover	Aluminum alloy	14	Piston Packing	NBR
05	Magnet cover	Copper alloy	15	Rear cover O-ring	NBR
06	Piston	Copper alloy	16	Shaft packing	NBR
07	Shaft	Bearing steel	17	Shaft screw	Alloy steel
08	Guide rod	Bearing steel	18	Guide rod screw	Alloy steel
09	Slider	Aluminum alloy	19	Piston rod screw	Alloy steel
10	Magnet	Rare earth metals	20	Linear bearing	

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%)

Packing and O-ring part list

Unit: mm

Item	Piston packing	Shaft packing	Front cover O-ring	Rear cover O-ring
Bore size / Quantity	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

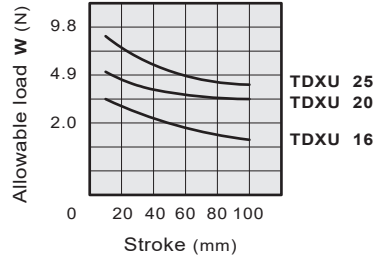
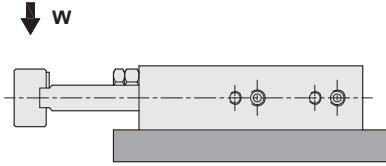
Note: The piston packing and shaft packing are from MITSUBISHI, SAKAGAMI or the same good level of quality material.

TDXU series Dual Rod Cylinder (Linear bushing)

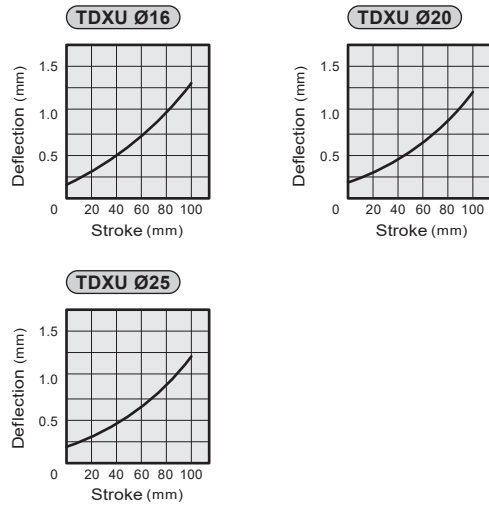
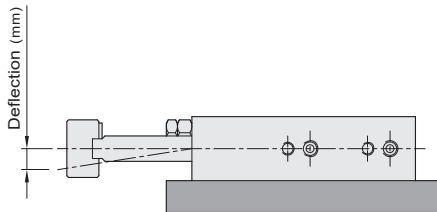
Design and Installation

CHELIC

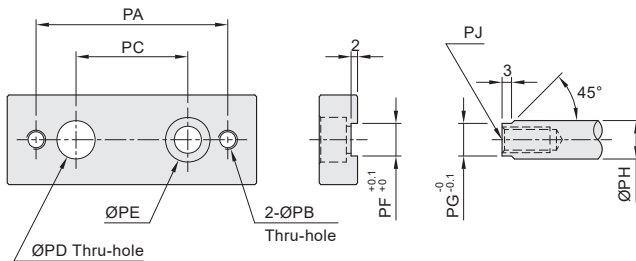
Allowable load



Allowable deflection



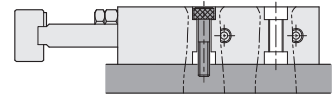
Dimension for end rod



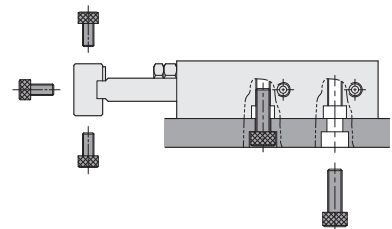
Mark Bore size	PA	PB	PC	PD	PE	PF	PG	PH	PJ
Ø16	45	M5×0.8p	25	8	Ø5.5 Thru hole, Hole Ø9×5.5 dp	6.2	6.2	8	M5×0.8p dp 12
Ø20	50	M5×0.8p	28	10	Ø6.5 Thru hole, Hole Ø11×6.5 dp	8.2	8.2	10	M6×1.0p dp 15
Ø25	60	M6×1.0p	35	12	Ø8.5 Thru hole, Hole Ø14×8.5 dp	10.2	10.2	12	M8×1.25p dp 15

Mounting type

- Top mounting type



- Base and front plate mounting type



TD

TDX

TDXU

STU

STM

STX

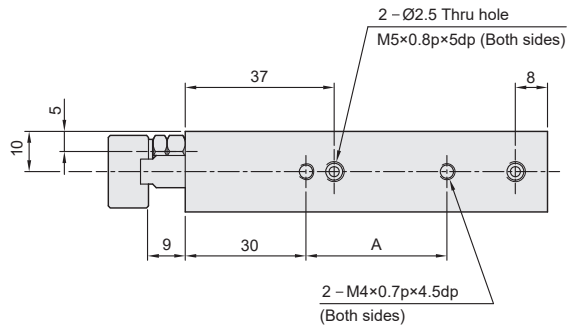
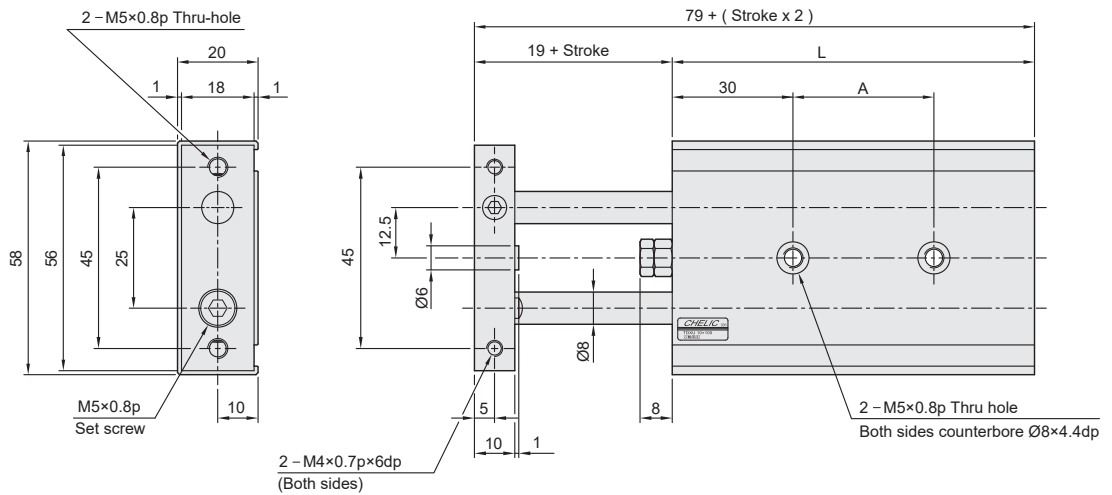
TDXU series Dual Rod Cylinder (Linear bushing)

Dimensions

CHELIC

○ TDXU Ø16 ×

 TDXU 16 × ST



○ Dimension

Unit: mm

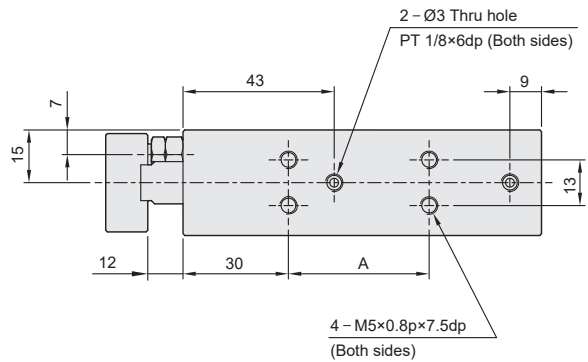
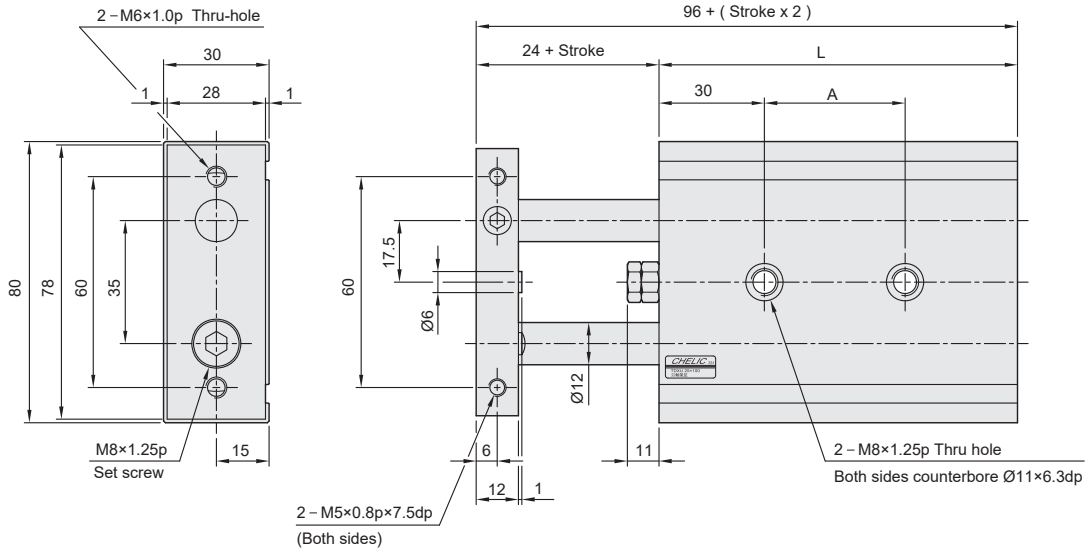
Stroke Mark	10	15	20	25	30	35	40	45	50	60	70	75	80	90	100	125	150
A	25	25	25	25	35	35	35	35	35	45	45	45	45	55	55	75	75
L	70	75	80	85	90	95	100	105	110	120	130	135	140	150	160	185	210

TDXU series Dual Rod Cylinder (Linear bushing)

Dimensions

CHELIC

☉ TDXU Ø25 ×



☉ Dimension

Unit: mm

Stroke Mark	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

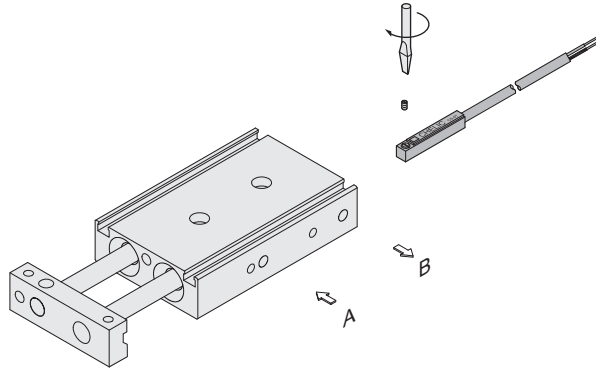
TDX/ TDXU series Dual Rod Cylinder

Mounting type and operation of sensor switch

CHELIC

◉ Sensor switch mounting type

- CS - 6T



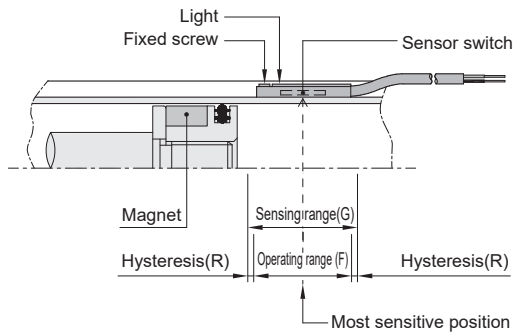
TD

TDX

TDXU

◉ Sensor switch setting and operating range

- CS - 6T



STU

STM

STX

◉ 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. It has 0.5mm differential.

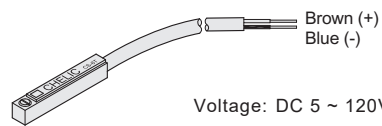
Unit: mm

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

◉ 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)

◉ Sensor switch introduction



Voltage: DC 5 ~ 120V
AC 5 ~ 120V

CS-6T