

Tri-rod cylinder

TCL,TCM Series



Specification

Bore size(mm)	6	10	12	16	20	25	32	40	50	63	80	100
Acting type	Double acting											
Fluid	Air(to be filtered by 40 μm filter element)											
Operating pressure	0.15~0.7MPa(23~100psi)						0.1~1.0MPa(14~145psi)					
Proof pressure	1.05MPa(152psi)						1.5MPa(215psi)					
Temperature °C	-20~70											
Speed range mm/s	50~500						30~500			50~400		
Stroke tolerance	0~100 ^{+1.0} ₀ >100 ^{+1.5} ₀											
Cushion type	Bumper											
Non-rotating tolerance ①	Linear bearing	-	± 0.08°	± 0.07°	± 0.06°	± 0.05°	± 0.04°	± 0.05°	± 0.06°	± 0.05°	± 0.04°	± 0.05°
① Bronze bearing		± 1.0°	± 0.10°	± 0.09°	± 0.08°	± 0.06°	± 0.05°	± 0.05°	± 0.06°	± 0.05°	± 0.05°	± 0.05°
Port size ②	M3 × 0.5	M5 × 0.8	1/8"	1/4"	3/8"							

① Retract position.

② PT thread, G thread and NPT thread are available. Add) Refer to P457~480 for detail of sensor switch.

Stroke

Bore size (mm)	Standard stroke (mm)											Max. stroke					
6	5	10	15	20									20				
10	5	10	15	20	25	30						30					
12	10	20	25	30	40	50	60	70	80	90	100	125	150	150			
16	10	20	25	30	40	50	60	70	80	90	100	125	150	175	200	200	
20, 25	20	25	30	40	50	60	70	80	90	100	125	150	175	200	225	250	250
32, 40, 50, 63, 80, 100	25	30	40	50	60	70	80	90	100	125	150	175	200	225	250	250	

Note) If non-standard stroke is ordered, backing plate will be added in the cylinder of standard stroke if the gap of the standard stroke and non-standard stroke is 1mm (Φ12~Φ32) or 5mm (Φ40~Φ63). For example, the non-standard stroke cylinder with a stroke of 28mm is transformed from the standard cylinder whose standard stroke is 30mm through adding a pad and their shape and dimension are the same.

Ordering code

TC M 50 × 50 S □

- Model**: TC: Tri-rod cylinder(Double acting type)
- Bearing type**:

Bearing type	Adapt bore size
L: Linear bearing	12~100
M: Bronze bearing	6~100
- Thread type** ①:

Blank	PT
G	G
T	NPT
- Magnet**:

S	With magnet
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- Bore size**: 6 10 12 16 20 25 32 40 50 63 80 100
- Stroke**: Refer to stroke table for details

① When the thread is standard, the code is blank. Add) TC Series are all with magnet.

How to mount

Fixation of screw on top surface(Φ6~Φ100)

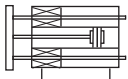
Fixation of screw at bottom surface(Φ12~Φ100)

Fixation of T slot at bottom(Φ12~Φ100)

Fixation of screw at back side(Φ6~Φ100)

Bore size\Item	A	D(Min)	
		TCM	TCL
6	20.5	X	-
10	23	X	-
12	41	8	
16	46	10	
20	54	12	
25	64	14	
32	78	18	
40	86	18	
50	110	22	
63	124	22	
80	156	30	25
100	188	32	30

Symbol



Product feature

- JIS standard is implemented.
- Two guides of special bearing steel and linear bearing or bronze bearing guide are used to prevent rotating. They can bear high torque and radial load.
 - ★ Note: Steel ball linear bearing: It is suitable for elevation action of cylinder or the situation requiring high precision and high bearing ability, especially for the situation requiring low friction action process.
 - Bronze sliding bearing: it is suitable for the action that has radial load resistance. Compared with normal cylinder of same use, the horizontal impact resistance is doubled and it has stronger torsion rigidity.
- Drive unit and guide unit are in the same barrel that no additional accessories are needed with minimal space required. The air intake is optional and it is convenient to install.
- The bottom, back side and fixing plate of main body respectively has two exact orientation orifices (See ΦPA orifice and the orifice in XX point), which can provide orientation installation with high precision for the special situation.
- Options of switch mounting with provision 4 mounting slots.
- Special design of main body provides multi-mount;

