

Twin-rod cylinder



TN Series



Symbol



Product feature

1. Enterprises standard is implemented.
2. Embedded installation and fixation mode saves the installation space.
3. It is good resistance to bending and twisting moments.
4. Mounting holes on three sides facilitates multi-position mounting.
5. Bumper in front of the barrel can adjust the stroke of cylinder and relieve impact.
6. Standard configuration of this series has magnet and the type without magnet is not available.

Ordering code

TN 20 × 50 S □

① ② ③ ④ ⑤

① Model	② Bore size	③ Stroke	④ Magnet [Note1]	⑤ Thread type [Note 2]
TN: Twin-rod cylinder (Double acting type)	10 16 20 25 32	Refer to stroke table for details	S: With magnet	Blank: PT G: G T: NPT

[Note1] TN Series are all with magnet. [Note2] When the thread is standard, the code is blank.

Specification

Bore size(mm)	10	16	20	25	32
Acting type	Double acting				
Fluid	Air(to be filtered by 40 μm filter element)				
Operating pressure	0.15~1.0MPa(22~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature °C	-20~70				
Speed range mm/s	30~500				
Adjustable stroke mm	-10~0				
Stroke tolerance	≤100 $^{+1.0}_0$ >100 $^{+1.5}_0$				
Cushion type	Bumper				
Non-rotating tolerance [Note1]	±0.4°		±0.3°		
Port size [Note2]	M5 × 0.8				1/8"

[Note1] Retract position.

[Note2]PT thread, G thread and NPT thread are available.

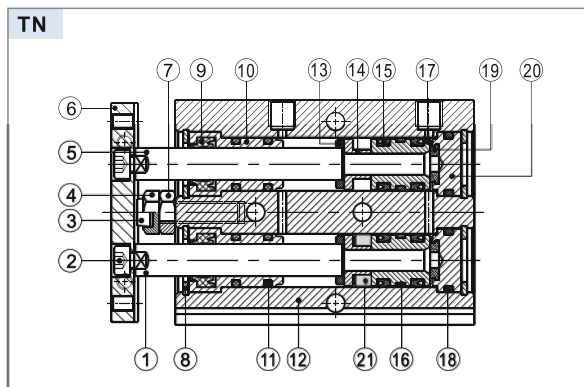
Add) Refer to P313 for detail of sensor switch.

Stroke

Bore size (mm)	Standard stroke (mm)										Max.std stroke				
10	10	20	30	40	50	60	70	80	90	100	100				
16	10	20	30	40	50	60	70	80	90	100	125	150	175	200	200
20	10	20	30	40	50	60	70	80	90	100	125	150	175	200	200
25	10	20	30	40	50	60	70	80	90	100	125	150	175	200	200
32	10	20	30	40	50	60	70	80	90	100	125	150	175	200	200

[Note] When the stroke less then or equal to 100mm, The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 35mm stroke cylinder has the same dimensions of 40 std. stroke cylinder.

Inner structure and material of major parts



NO.	Item	Material	NO.	Item	Material
1	Piston rod B	Φ32 S45C	12	Body	Aluminum alloy
		Other SUS304	13	Bumper	TPU
2	Screw	Carbon steel	14	Magnet holder	Φ10 SUS303
3	Bumper	POM			Other Aluminum alloy
4	Adjustable nut	Carbon steel	15	Piston seal	NBR
5	Piston rod A	S45C	16	Wear ring	Wear resistant material
6	Fixing plate	Free cutting	17	Piston	Φ10 SUS303
7	Screw	Carbon steel			Other Aluminum alloy
8	C clip	Spring steel	18	Seal ring	NBR
9	Wiper seal	NBR	19	Bumper	TPU
10	Front cover	Aluminum alloy	20	Back cover	Aluminum alloy
11	O-ring	NBR	21	Magnet	Sintered metal(Neodymium-iron-boron)



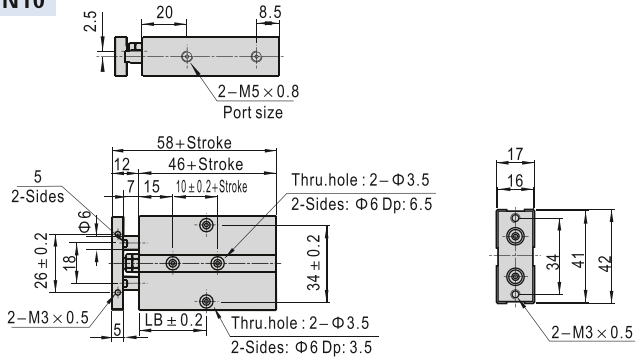
Twin-rod cylinder



TN Series

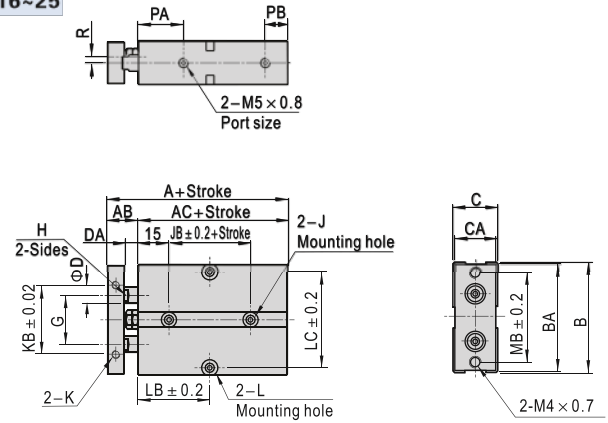
Dimensions

TN10



Item\Stroke	10	20	30	40	50	60	70	80	90	100
LB	30	30	35	40	45	50	55	60	65	70

TN16~25

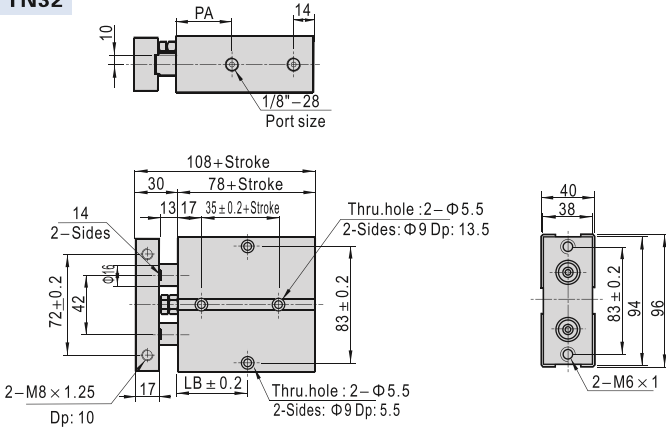


Bore size\Item	A	AB	AC	B	BA	C	CA	D	DA	G	H	J
16	68	15	53	54	53	21	20	8	7	24	6	Both sides: Φ7.5Dp:7.5Thru.hole: Φ4.5
20	78	20	58	62	61	25	24	10	10	28	8	Both sides: Φ7.5Dp:7.5Thru.hole: Φ4.5
25	81	19	62	73	72	30	29	12	9	34	10	Both sides: Φ7.5Dp:7.5Thru.hole: Φ4.5

Bore size\Item	JB	K	KB	PA	PB	L	LC	MB	R
16	20	M4×0.7Dp:5	34	22	11	Both sides: Φ8Dp:4.5Thru.hole: Φ4.5	47	47	3
20	20	M4×0.7Dp:5	44	25	12	Both sides: Φ8Dp:4.5Thru.hole: Φ4.5	55	55	3.5
25	30	M4×0.7Dp:6	56	27	12	Both sides: Φ8Dp:4.5Thru.hole: Φ4.5	66	66	6

Bore size\Item	LB													
Stroke ≤	10	20	30	40	50	60	70	80	90	100	125	150	175	200
16	30	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125
20	35	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125
25	40	40	45	50	55	60	65	70	75	80	92.5	105	117.5	130

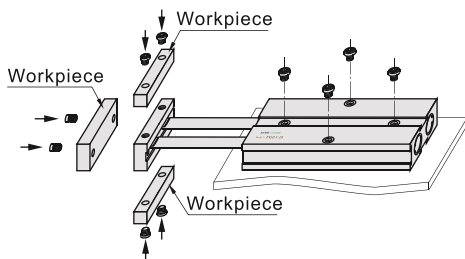
TN32



Item\Stroke	10	20	30	40	50	60	70	80	90	100	125	150	175	200
LB	45	50	55	60	65	70	75	80	85	90	102.5	115	127.5	140
PA	35										40			

Installation and application

1. How to mount workpiece:



2. Max. weight of allowable side-load

