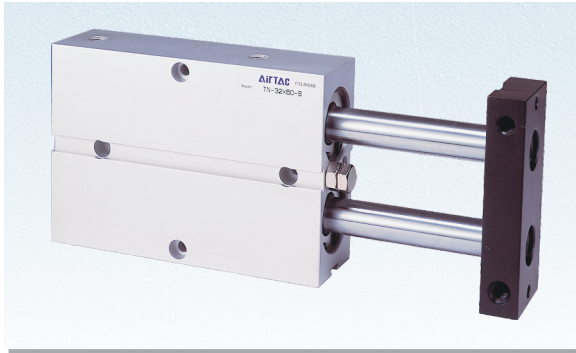


# Twin-rod cylinder



## TN Series



### Symbol



### Product feature

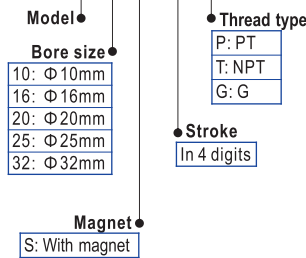
1. Enterprises standard is implemented.
2. Embedded installation and fixation mode saves the installation space.
3. It is good resistance to bending and twisting moments.
4. Mounting holes on three sides facilitates multi-position mounting.
5. Bumper in front of the barrel can adjust the stroke of cylinder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

### Ordering code

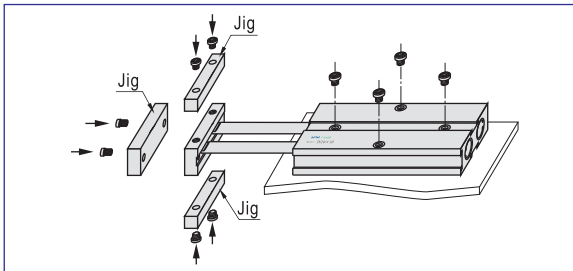
Model can be changed Ordering code. Example:  
 Production type: TN  
 Bore size: 32mm  
 Stroke: 175mm  
 Magnet: With magnet  
 Thread type: NPT

Model: TN -32 x 175-S-T

Ordering code: TN 32 S 0175 T



### How to mount



### 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	0.1~1.0MPa(14~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature °C	-20~70				
Speed range mm/s	30~500				
Adjustable stroke mm	-10~0				
Stroke tolerance	+1.0 0				
Cushion type	Bumper				
Non-rotating tolerance ①	±0.4°				±0.3°
Port size ②	M5 x 0.8				1/8"

① Retract position.

② PT thread, NPT thread and G thread are available. Add) Refer to P403-426 for detail of sensor switch.

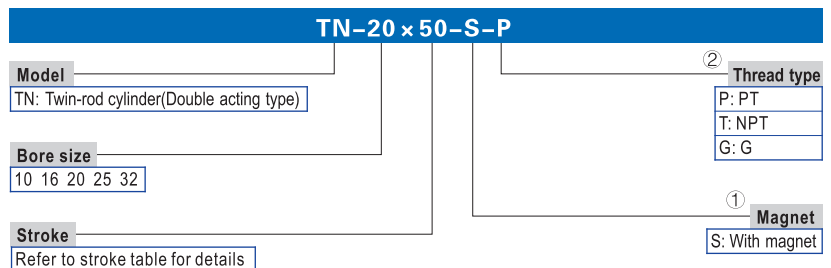
### Stroke

Bore size (mm)	Standard stroke (mm)													Max. 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) 1. Please contact the company for other special strokes.

2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

### Explain of model



① TN Series are all with magnet.

② When the thread is standard, the code is blank.

### Inner structure and material of major parts

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

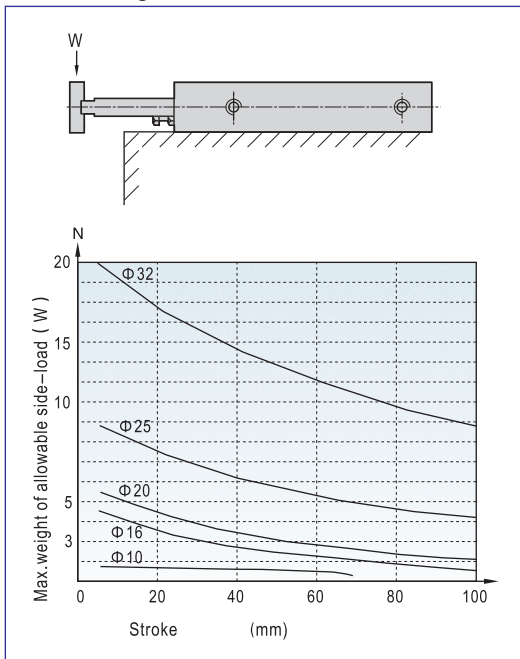


# Twin-rod cylinder

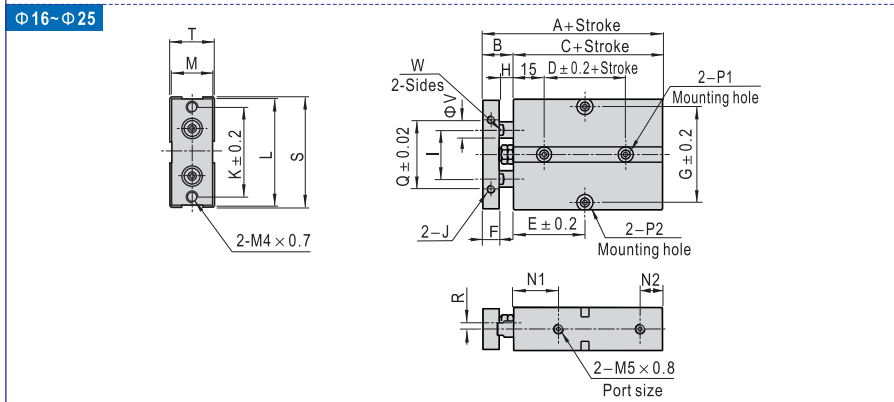
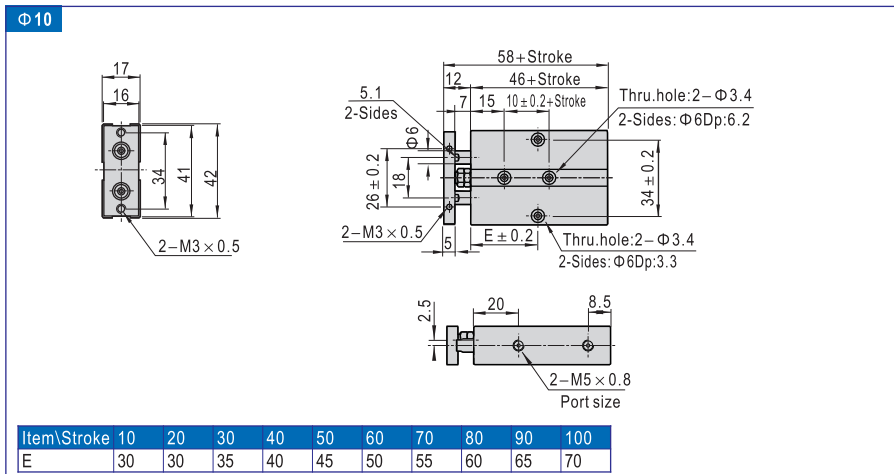


## TN Series

### Max. weight of allowable side-load



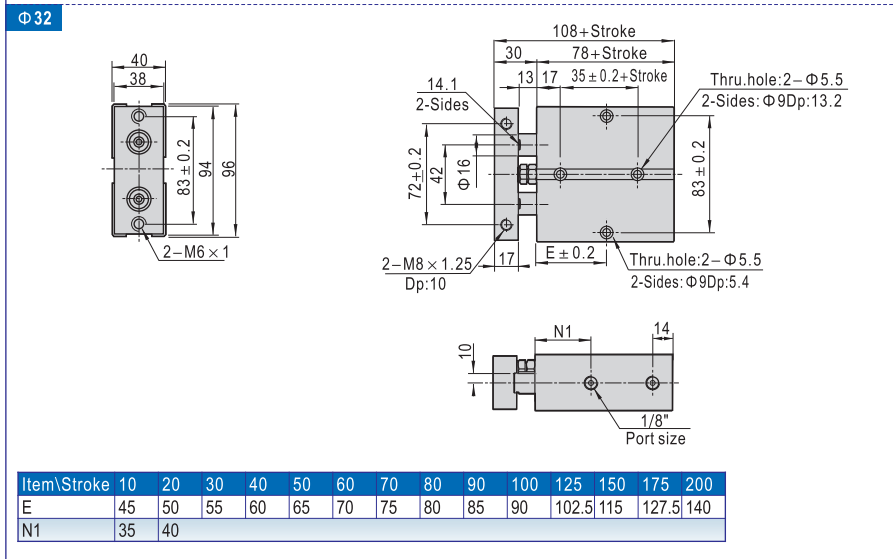
### Dimensions



Bore size\Item	E											F					G	H	I	K							
Stroke ≤	A	B	C	D	10	20	30	40	50	60	70	80	90	100	125	150	175	200	8	10	55	10	55	10	28	55	
16	68	15	53	20	30	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125	8	47	7	24	47				
20	78	20	58	20	35	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125	10	55	10	28	55				
25	81	19	62	30	40	40	45	50	55	60	65	70	75	80	92.5	105	117.5	130	10	66	9	34	66				

Bore size\Item	J	L	M	N1	N2	P1
16	M4×0.7Dp:5	53	20	22	11	2-Sides: Φ7.5Dp:7.2Thru.hole: Φ4.5
20	M4×0.7Dp:5	61	24	25	12	2-Sides: Φ7.5Dp:7.2Thru.hole: Φ4.5
25	M4×0.7Dp:6	72	29	27	12	2-Sides: Φ7.5Dp:7.2Thru.hole: Φ4.5

Bore size\Item	P2	Q	R	S	T	V	W
16	2-Sides: Φ8Dp:4.5Thru.hole: Φ4.5	34	3	54	21	8	6.1
20	2-Sides: Φ8Dp:4.5Thru.hole: Φ4.5	44	3.5	62	25	10	8.1
25	2-Sides: Φ8Dp:4.5Thru.hole: Φ4.5	56	6	73	30	12	10.1



TN, TR

