

05

FOUK-TR

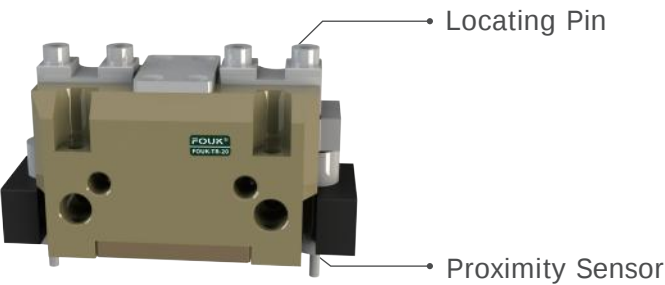
PARALLEL GRIPPER

■ Technical Parameter

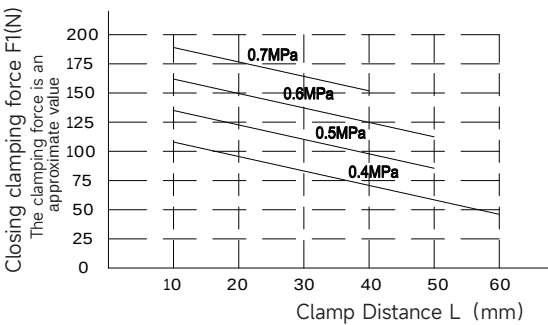
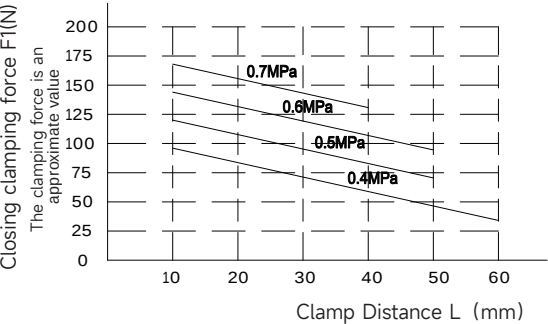
Product Code		Single Stroke(mm)	Open Gripping Force(N)	Close Gripping Force(N)	Workpiece Weight(kg)	Weight(kg)	Page
TR20-51	M	4	27*P	24*P	0.6	0.15	63
TR28-64	M	6	52*P	48*P	1.4	0.3	65
TR30-80	M	8	62*P	55*P	2.2	0.5	67
	S	5.5	88*P	79*P	3	0.5	69
TR46-101	M	10	140*P	124*P	4	0.8	71
	S	6.5	196*P	174*P	6	0.75	73
TR57-125	M	13	224*P	206*P	6	1.35	75
	S	9	314*P	288*P	8.5	1.3	77
TR73-162	M	16	360*P	330*P	10	2.6	79
	S	11	510*P	470*P	14	2.5	81
TR102-200	M	25	660*P	616*P	17	5.3	83
	S	15.5	1050*P	985*P	26	5.2	85
TR115-240	M	29	834*P	790*P	25	7.6	87
	S	18	1300*P	1230*P	38	7.4	89
TR148-300	M	34	1360*P	1300*P	40	15.8	91
	S	21	2050*P	1950*P	60	15.6	93
TR181-410	M	45	2050*P	1950*P	75	29	95
	S	28	3100*P	2950*P	105	28	97

M: Standard version, S: Stroke shorten , Increased clamping force

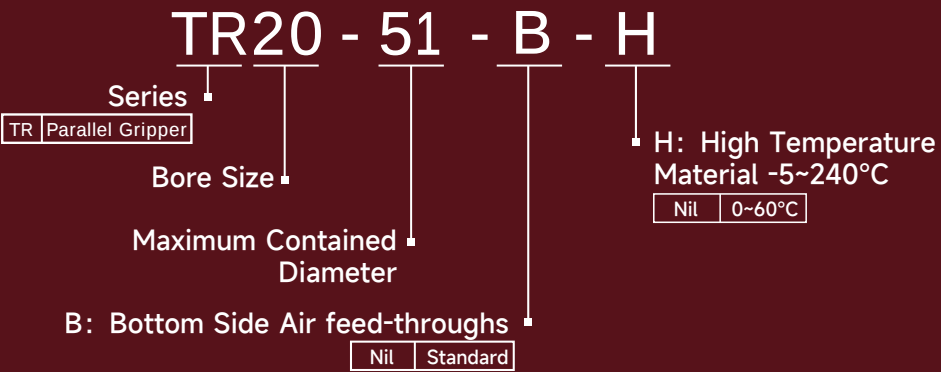
P: Air Pressure [bar]



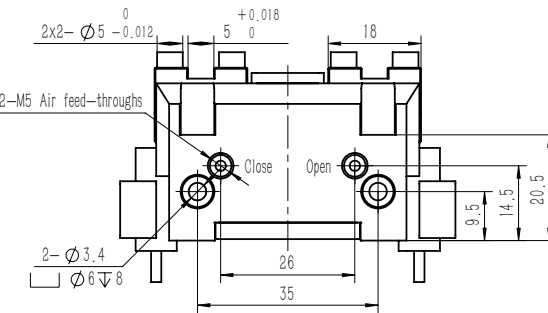
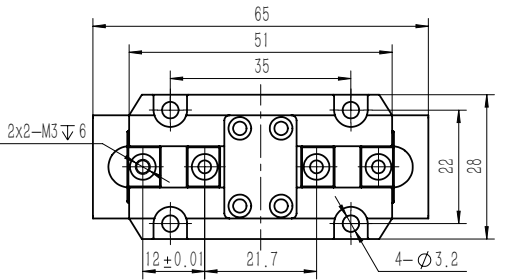
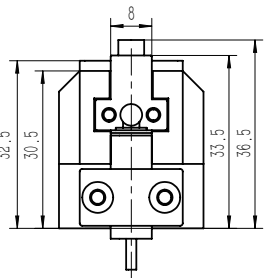
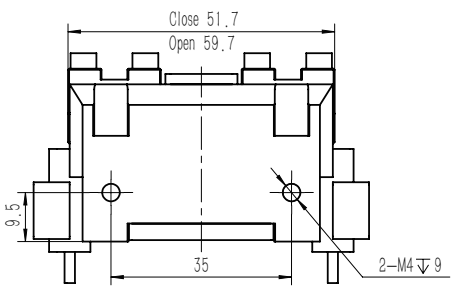
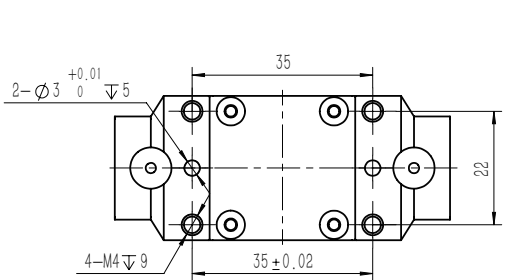
■ Clamping force TR20-51



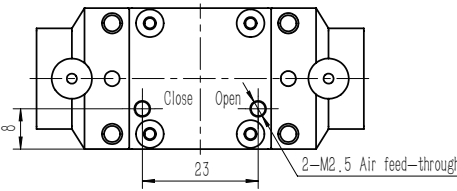
Note: The standard version of the product does not include proximity sensor, which are options.



TR20-51



Bottom Port Dimension (B)



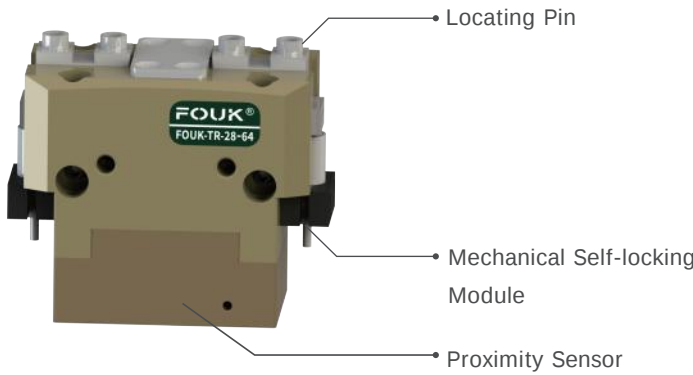
Recommended connecting flange size, $\phi 5.5 \pm 0.4$, seal ring $\phi 2.5 \times 1.5$

■ Technical parameter

Product properties	TR20-51	Unit
Single stroke	4	mm
Weight	0.15	kg
Max. clamp pistance	60	mm
Fitting size	M5	
Girpping force: open/close	27*P/24*P	N
Workpiece weight	0.6	kg

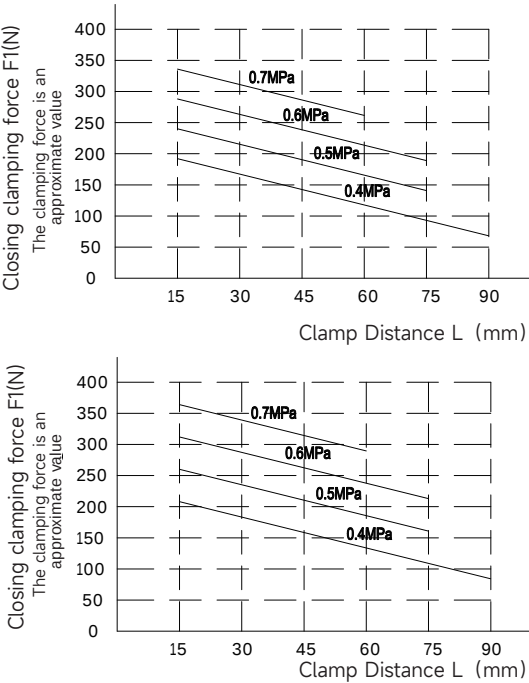
Product properties	TR20-51	Unit
Continuation max frequency	50	cpm
Repeat accuracy	±0.02	mm
Air pressure	4~7	bar
Ambient temperature	0~60	°C
IP grade	45	

P: Air Pressure [bar]



Note: The standard version of the product does not include mechanical self-locking module, and proximity sensor, which are options.

■ Clamping force TR28-64



TR28 - 64 - B - NO - H

Series: TR Parallel Gripper

Bore Size: 64

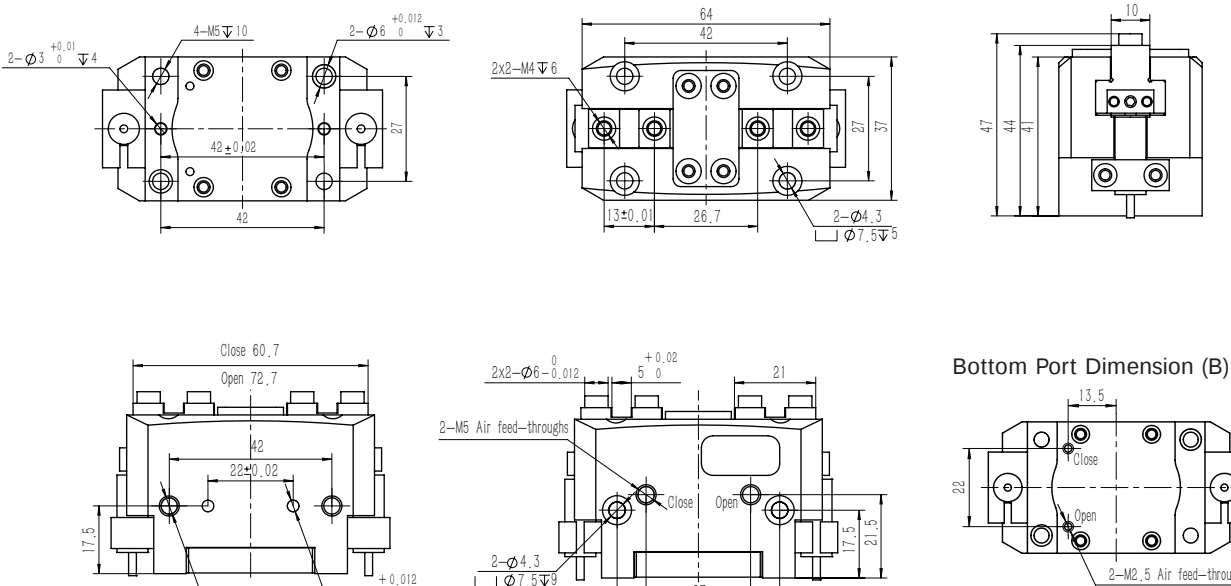
Maximum Contained Diameter: B

B: Bottom Side Air feed-throughs: Nil Standard

Self-locking Form: NO Open Lock, NC Close Lock

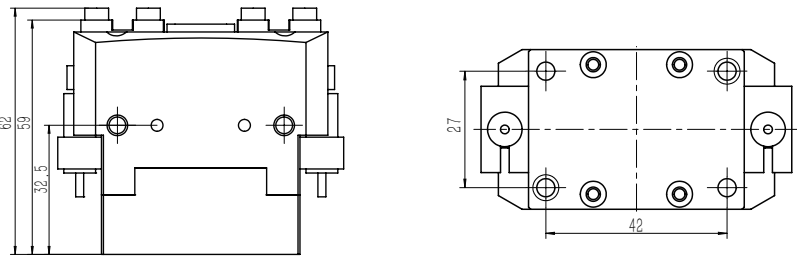
H: High Temperature Material -5~240°C: Nil 0~60°C

TR28-64



Recommended connecting flange size, $\phi 5 \pm 0.5$, seal ring $\phi 3 \times 1$.

TR28-64-NO/NC Self-locking type



Accessory description:

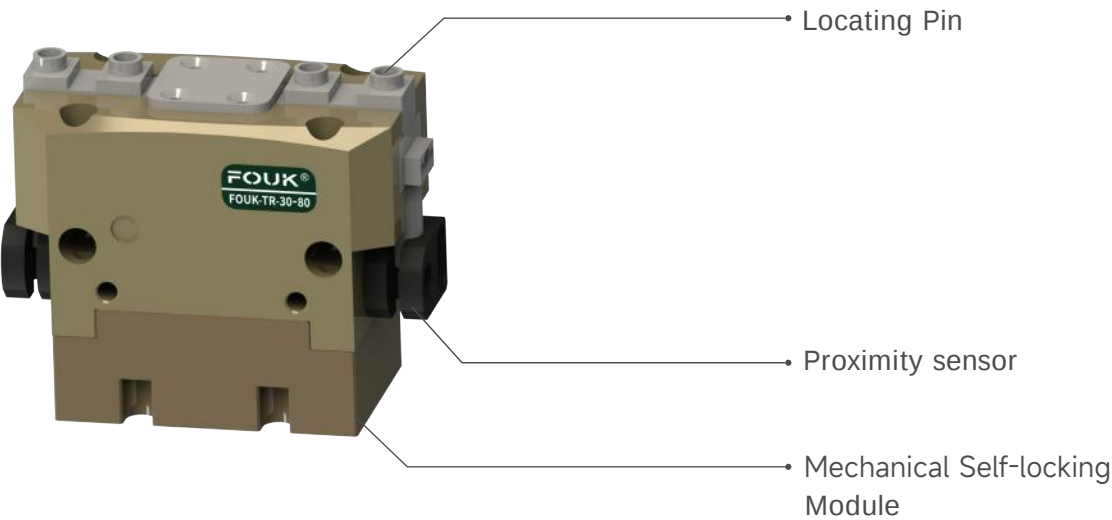
TR28 series optional open/-close self-locking module with spring-loaded locking force range of 90~140N can maintain clamping status even under low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

■ Technical Parameter

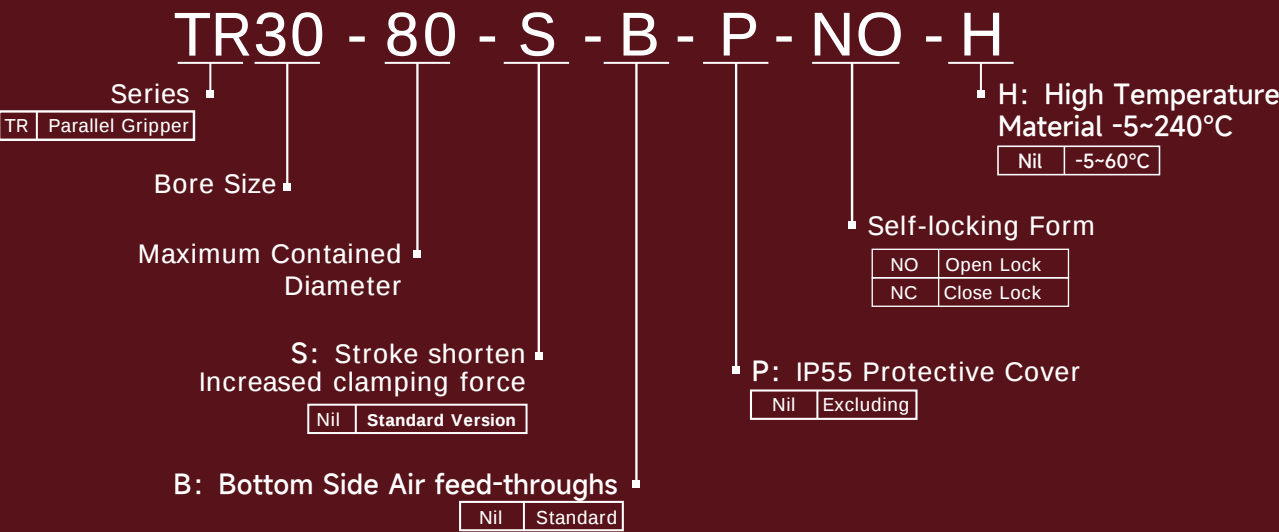
Product properties	TR28-64	Unit
Single stroke	6	mm
Weight	0.3	kg
Max. clamp pistance	90	mm
Fitting size	M5	
Girpping force: open/close	52*P/48*P	N
Workpiece weight	1.4	kg

Product properties	TR28-64	Unit
Continuation max frequency	45	cpm
Repeat accuracy	± 0.02	mm
Air pressure	4~7	bar
Ambient temperature	0~60	°C
IP grade	45	

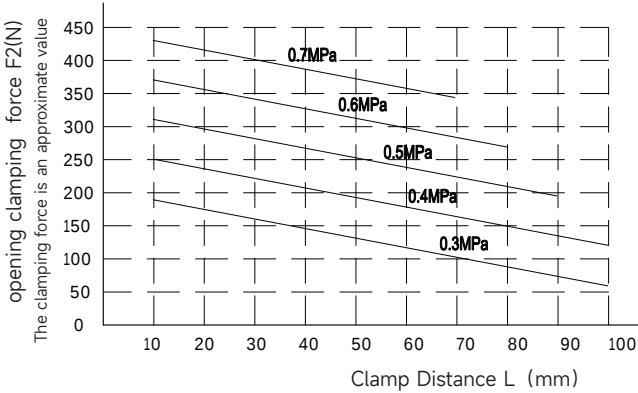
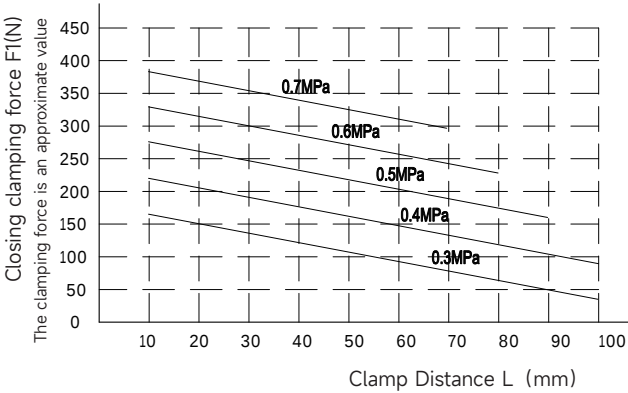
P: Air Pressure [bar]



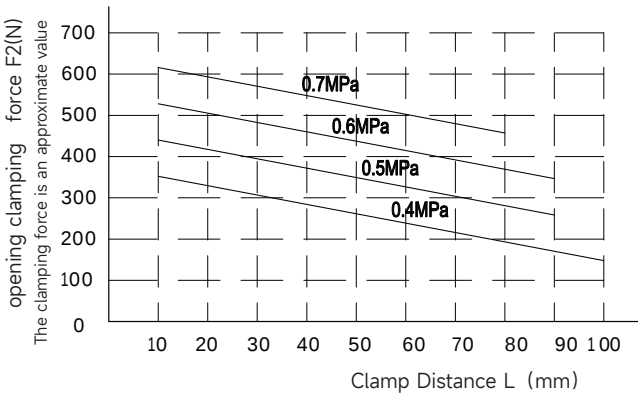
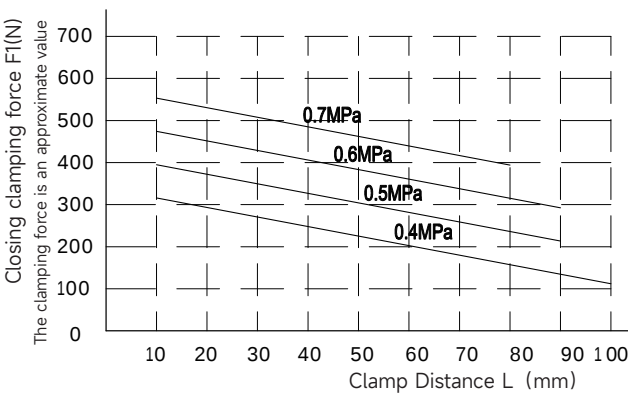
Note: The standard version of the product does not include mechanical self-locking module, and Proximity sensor, which are options.



Clamping force TR30-80



Clamping force TR30-80-S

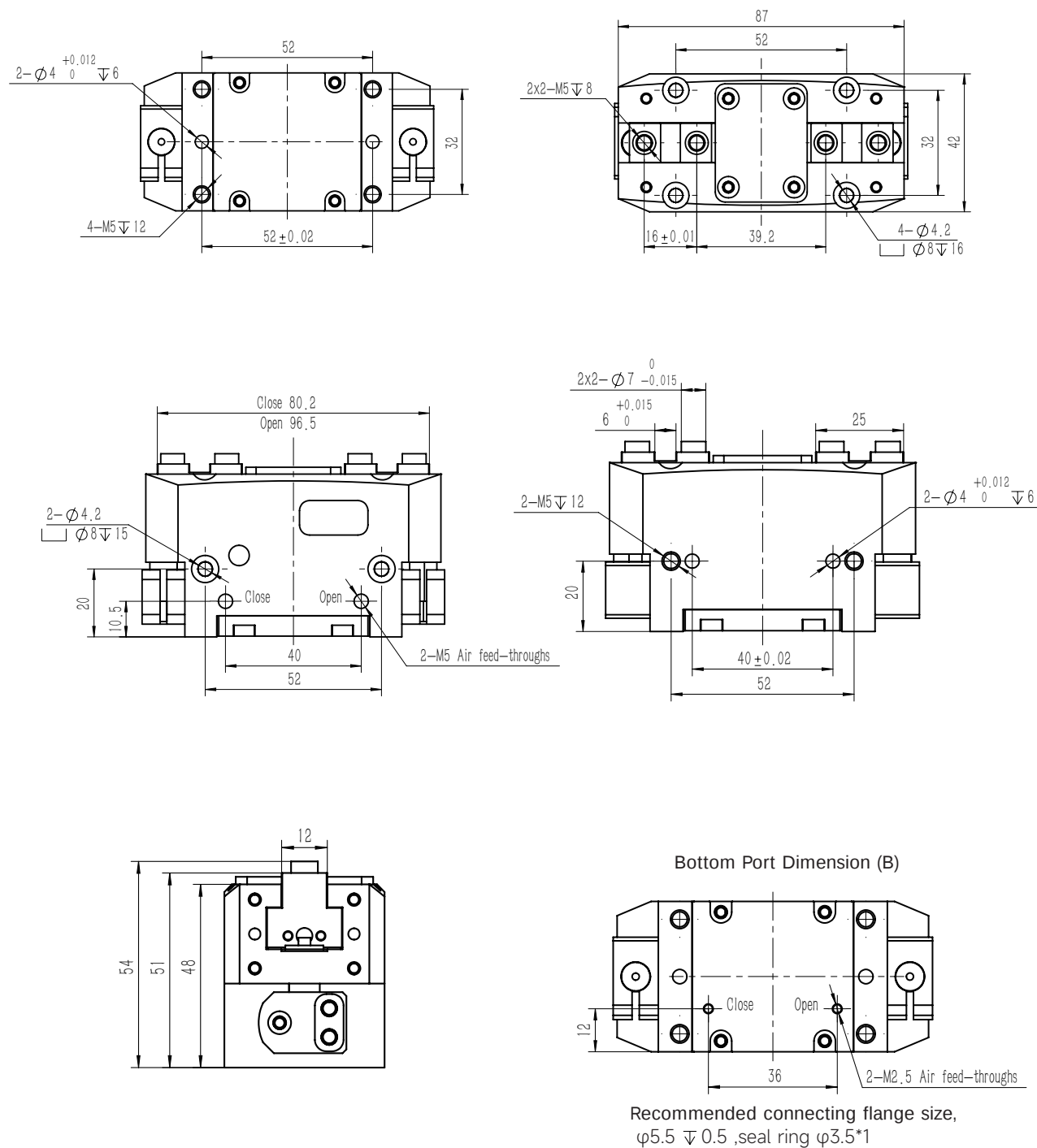


Technical Parameter

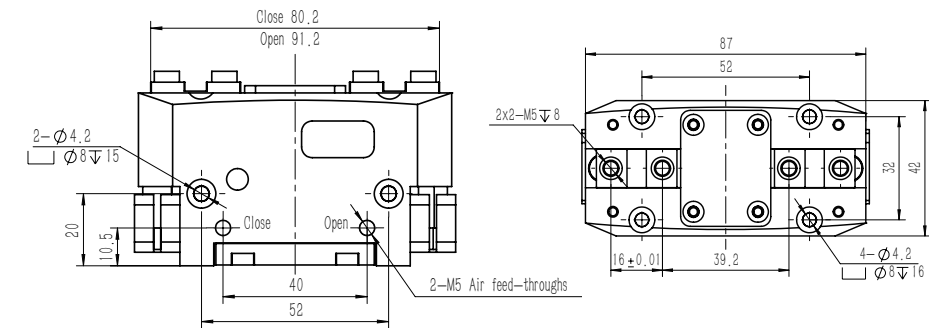
Product properties	TR30-80	TR30-80-NO	TR30-80-NC	TR30-80-S	TR30-80-S-NO	TR30-80-S-NC	Unit
Single stroke	8	8	8	5.5	5.5	5.5	mm
Weight	0.5	0.65	0.6	0.5	0.65	0.6	kg
Max. clamp pistance	100	100	100	100	100	100	mm
Fitting size	M5	M5	M5	M5	M5	M5	
Girpping force: open/close	62*P/55*P	62*P	55*P	88*P/79*P	88*P	79*P	N
Max. locking force		210	210		300	300	N
Min. locking force		130	130		180	180	N
Workpiece weight	2.2	2.2	2.2	3	3	3	kg
Continuation max frequency	45	35	35	45	35	35	cpm
Repeat accuracy	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	mm
Air pressure	4~7	4~7	4~7	4~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

P: Air Pressure [bar]

TR30-80



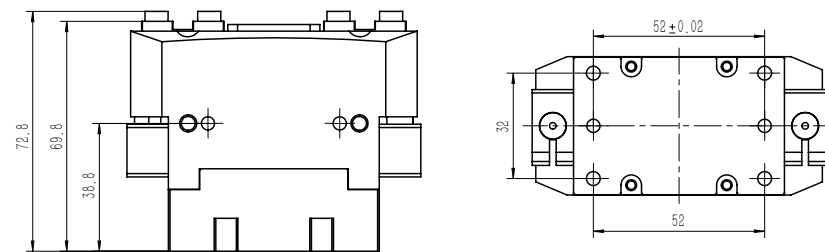
TR30-80-S



Accessory description:

The TR30 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

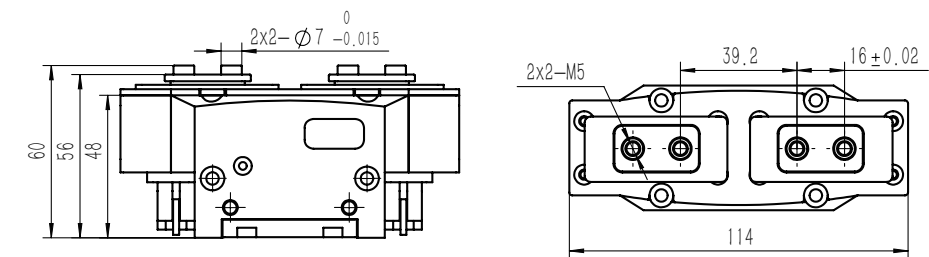
TR30-80-M/S-NO/NC Self-locking type



Accessory description:

TR30 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

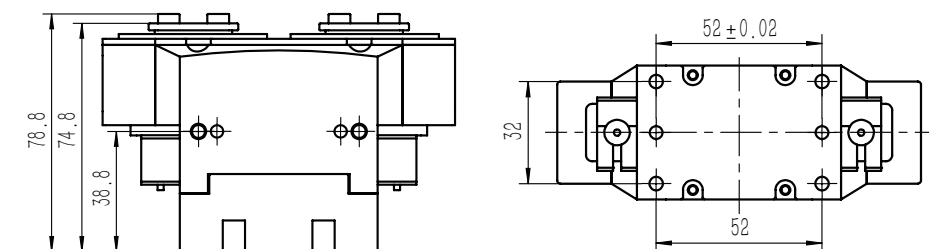
TR30-80-M/S-P Dust proof type



Accessory description:

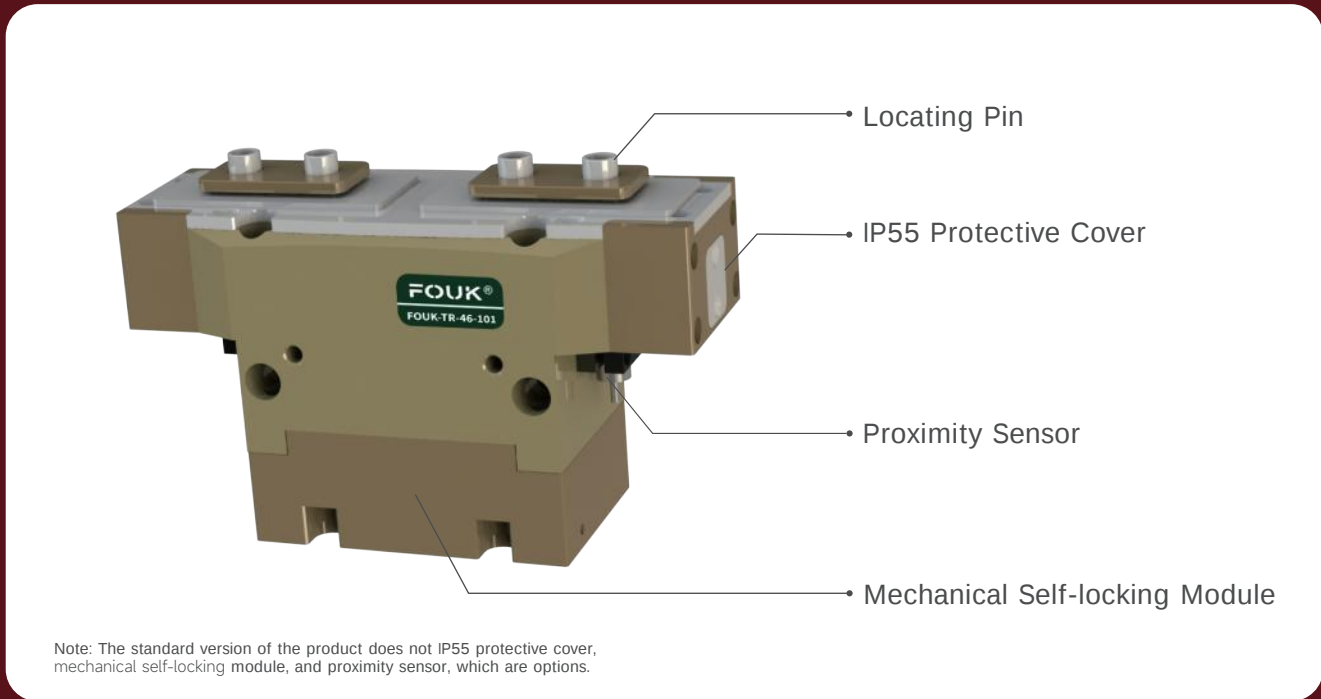
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR30 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR30-80-M/S-P-NO/NC Self-locking Dust proof type

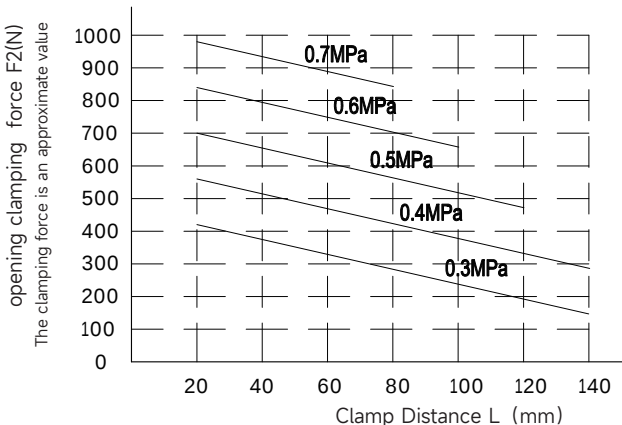
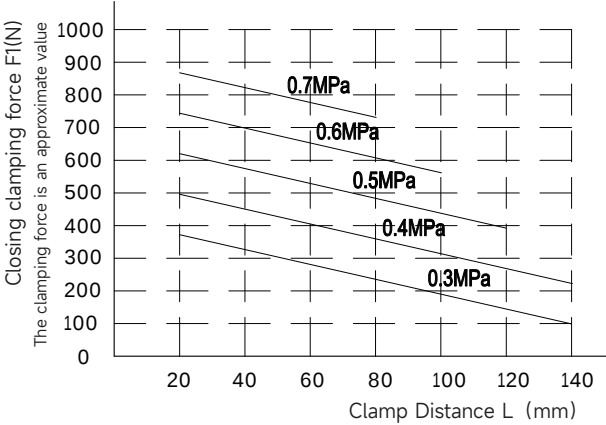


Accessory description:

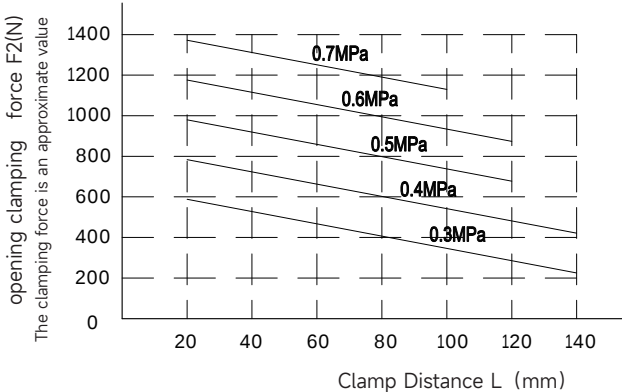
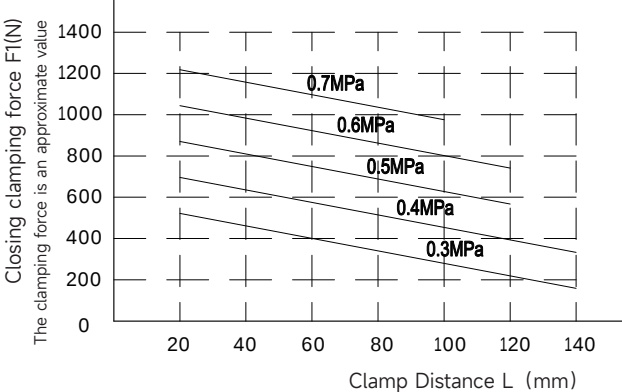
The TR30 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



■ Clamping force TR46-101



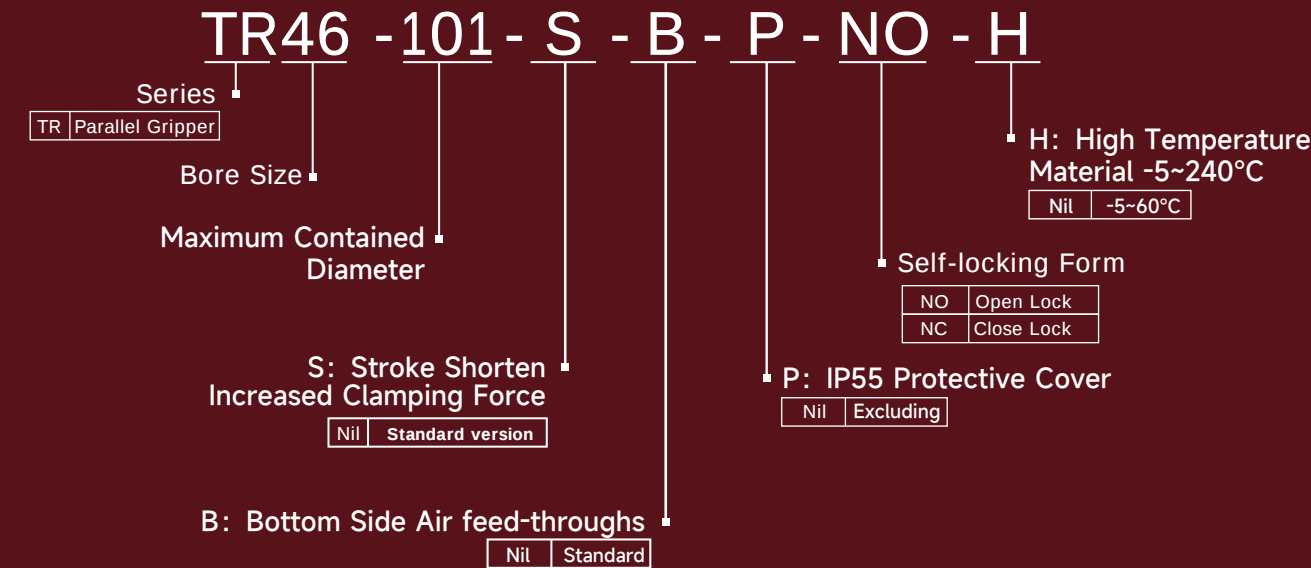
■ Clamping force TR46-101-S



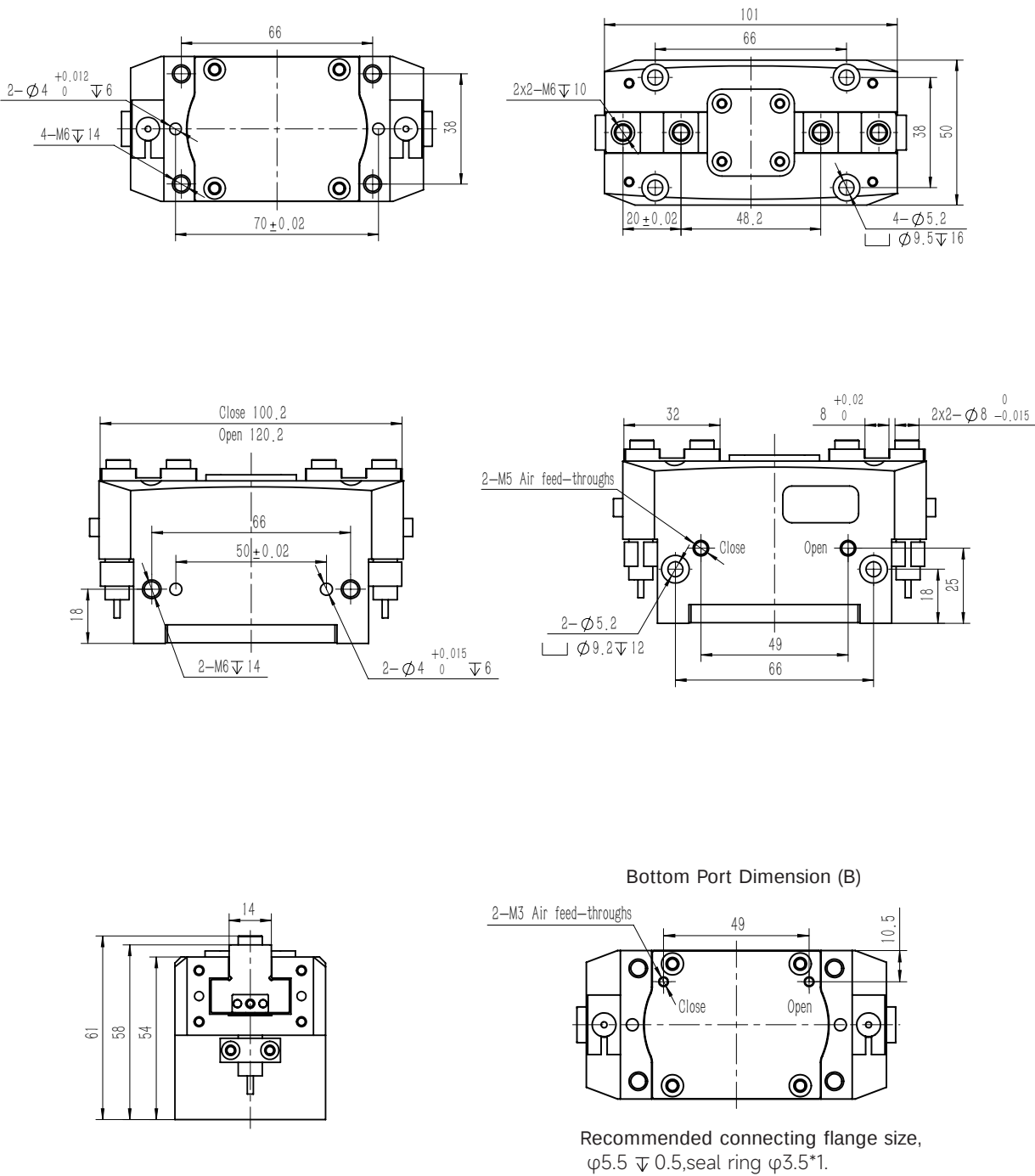
■ Technical Parameter

Product properties	TR46-101	TR46-101-NO	TR46-101-NC	TR46-101-S	TR46-101-S-NO	TR46-101-S-NC	Unit
Single stroke	10	10	10	6.5	6.5	6.5	mm
Weight	0.8	1.05	1.0	0.75	1.05	1.0	kg
Max. clamp pistance	140	140	140	140	140	140	mm
Fitting size	M5	M5	M5	M5	M5	M5	
Girpping force: open/close	140*P/124*P	140*P	124*P	196*P/174*P	196*P	174*P	N
Max. locking force		460	460		650	650	N
Min. locking force		250	250		350	350	N
Workpiece weight	4	4	4	6	6	6	kg
Continuation max frequency	40	30	30	40	30	30	cpm
Repeat accuracy	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

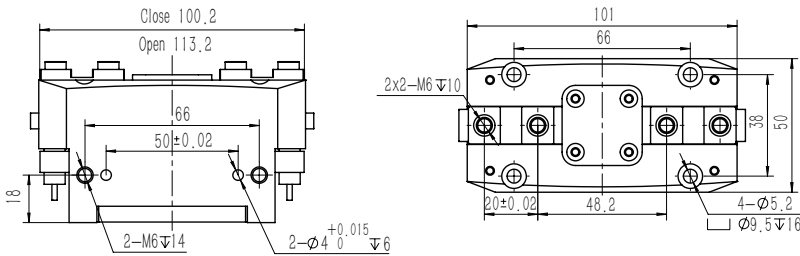
P: Air Pressure [bar]



TR46-101



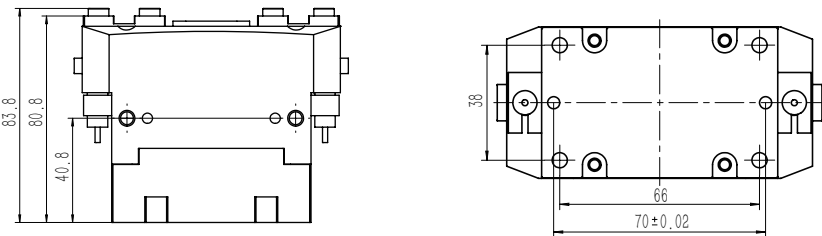
TR46-101-S



Accessory description:

The TR46 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

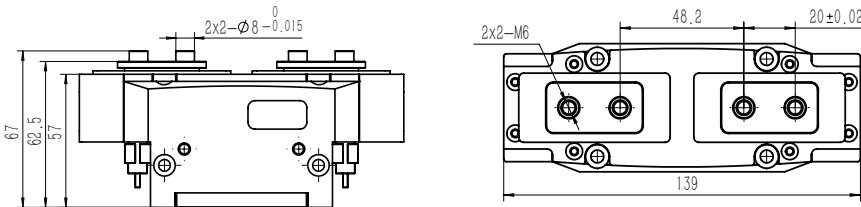
TR46-101-M/S-NO/NC Self-locking type



Accessory description:

TR46 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

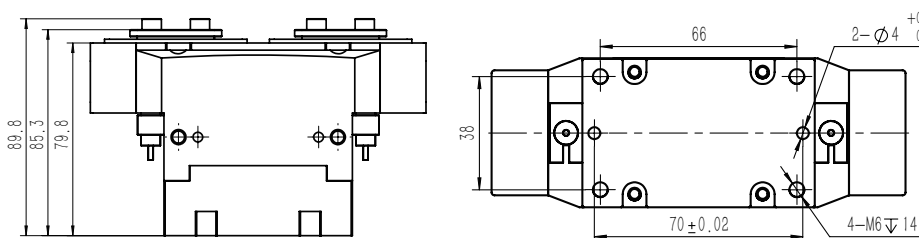
TR46-101-M/S-P Dust proof type



Accessory description:

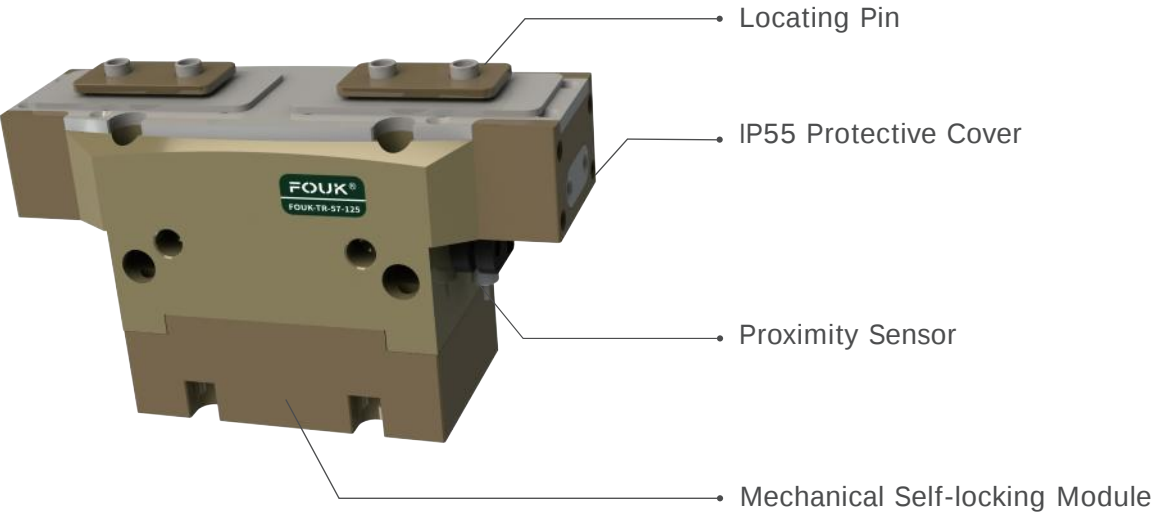
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR46 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR46-101-M/S-P-NO/NC Self-locking Dust proof type



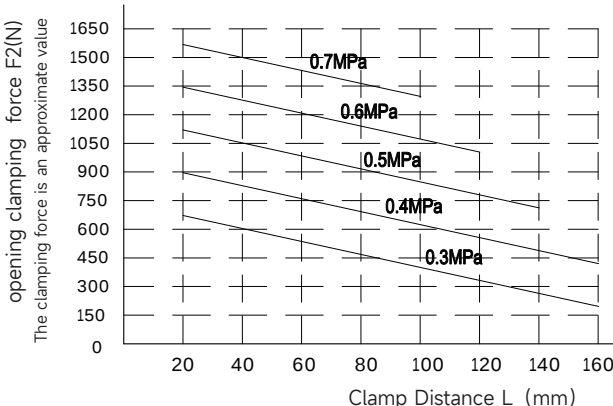
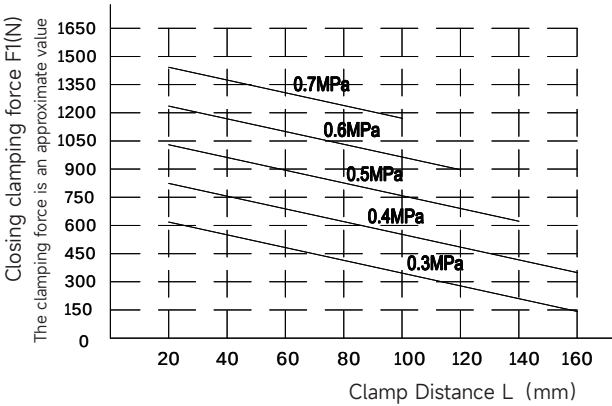
Accessory description:

The TR46 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.

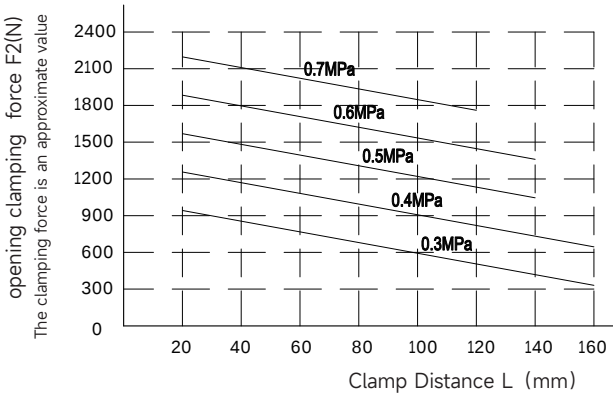
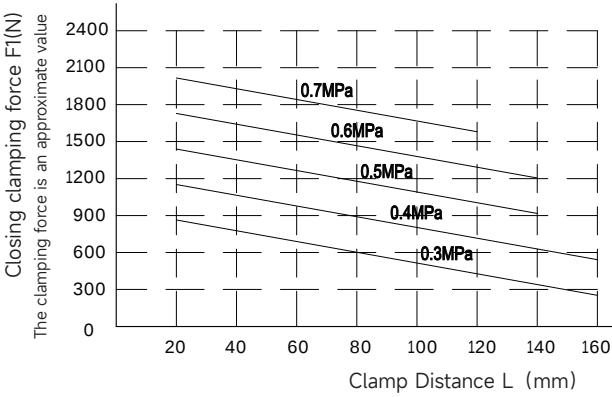


Note: The standard version of the product does not IP55 protective cover, mechanical self-locking module, and proximity sensor, which are options.

Clamping force TR57-125



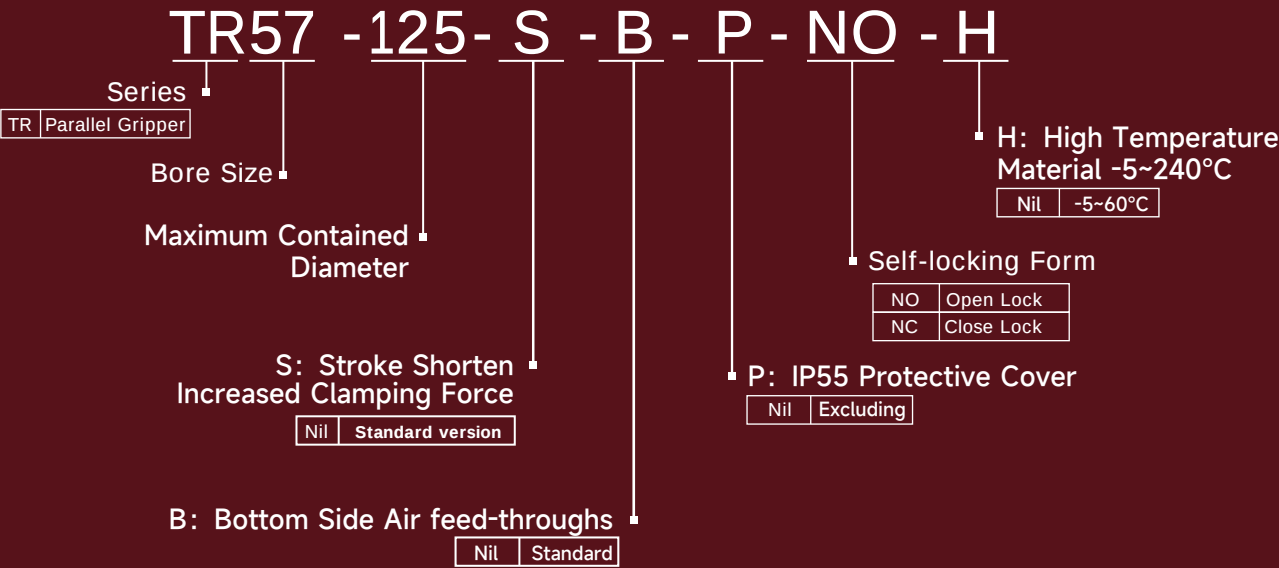
Clamping force TR57-125-S



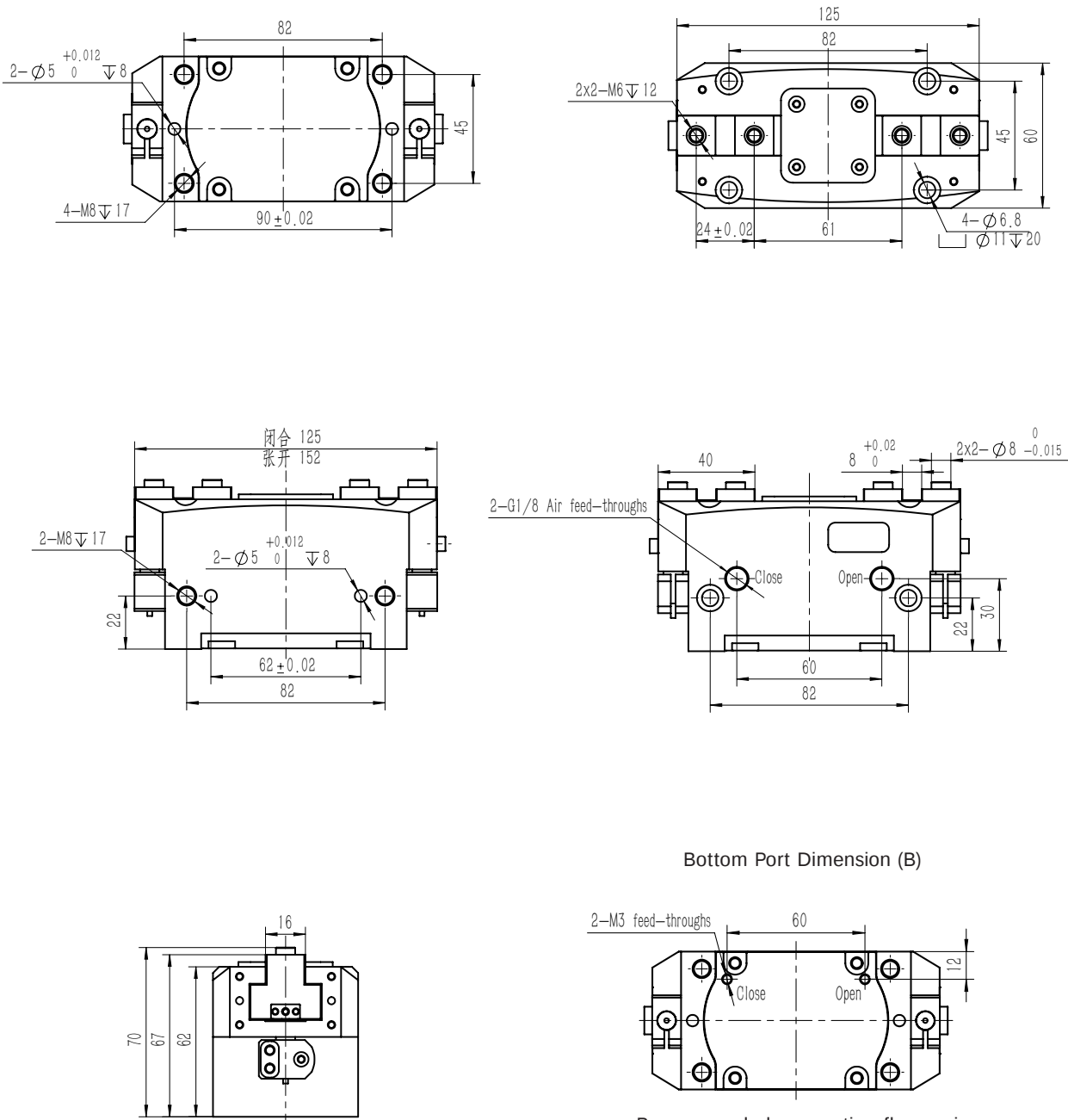
Technical parameter

Product properties	TR57-125	TR57-125-NO	TR57-125-NC	TR57-125-S	TR57-125-S-NO	TR57-125-S-NC	Unit
Single stroke	13	13	13	9	9	9	mm
Weight	1.35	1.8	1.7	1.3	1.8	1.7	kg
Max. clamp pistonce	160	160	160	160	160	160	mm
Fitting size	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
Girpping force: open/close	224*P/206*P	224*P	206*P	314*P/288*P	314*P	288*P	N
Max. locking force		690	690		970	970	N
Min. locking force		380	380		530	530	N
Workpiece weight	6	6	6	8.5	8.5	8.5	kg
Continuation max frequency	35	25	25	35	25	25	cpm
Repeat accuracy	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

P: Air Pressure [bar]



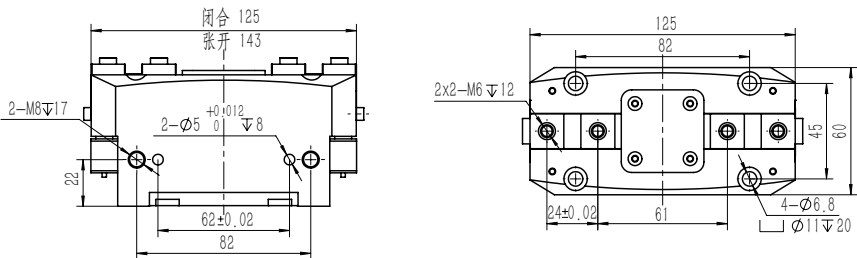
TR57-125



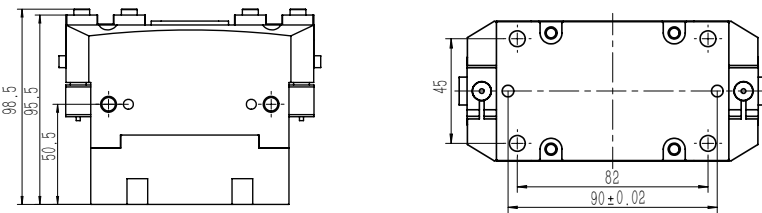
Bottom Port Dimension (B)

Recommended connecting flange size, φ5.5 ± 0.4 ,seal ring φ3.5*1.

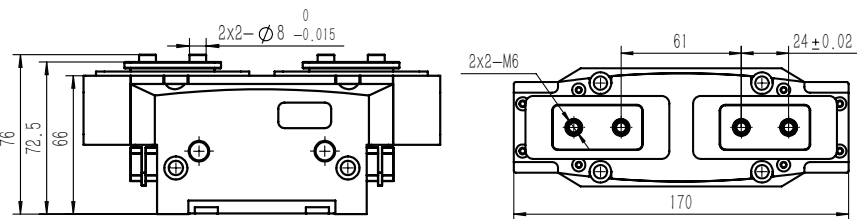
TR57-125-S



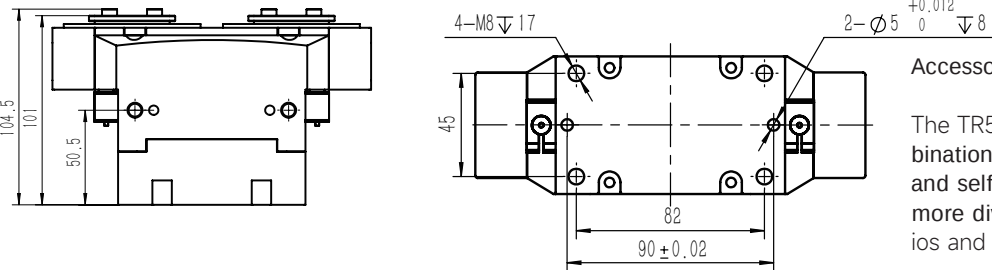
TR57-125-M/S-NO/NC 自锁款



TR57-125-M/S-P 防尘款



TR57-125-M/S-P-NO/NC 自锁防尘款



Accessory description:

The TR57 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

Accessory description:

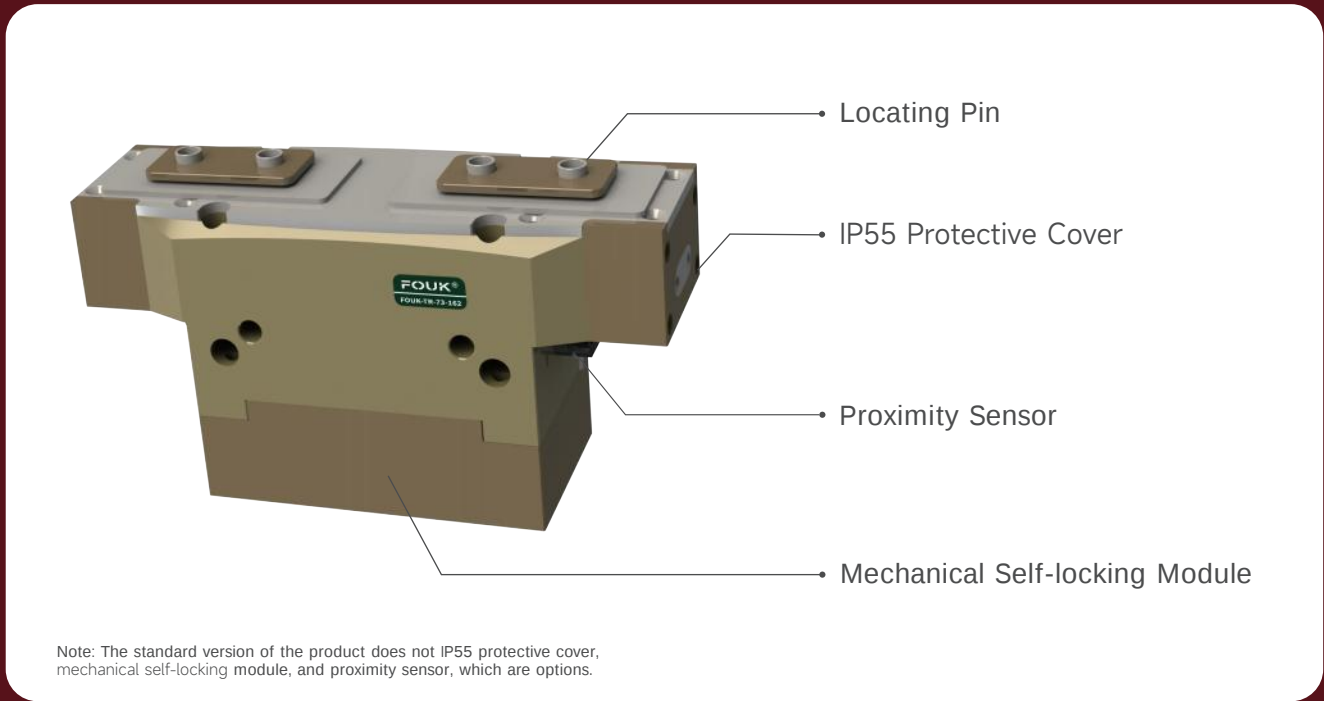
TR57 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

Accessory description:

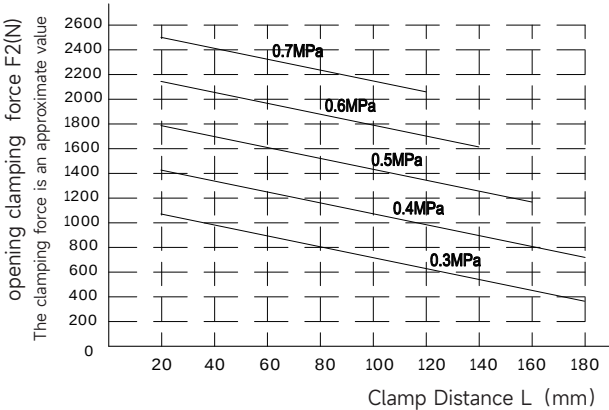
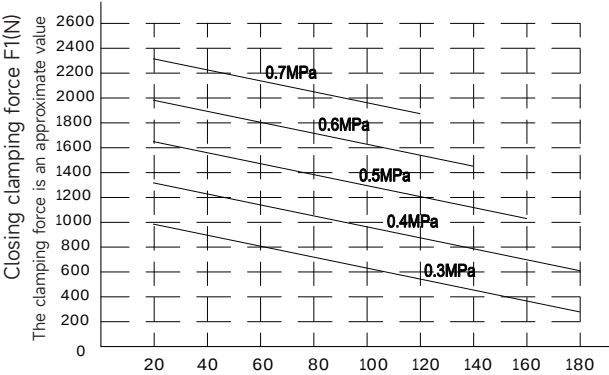
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR57 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

Accessory description:

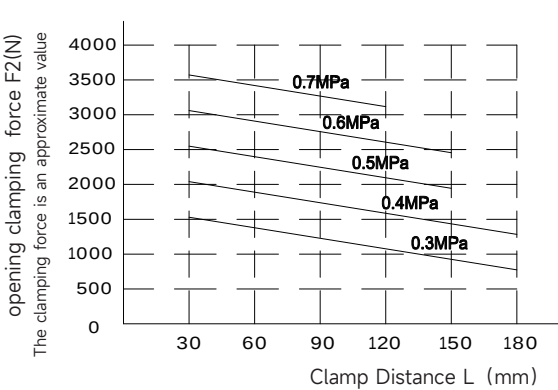
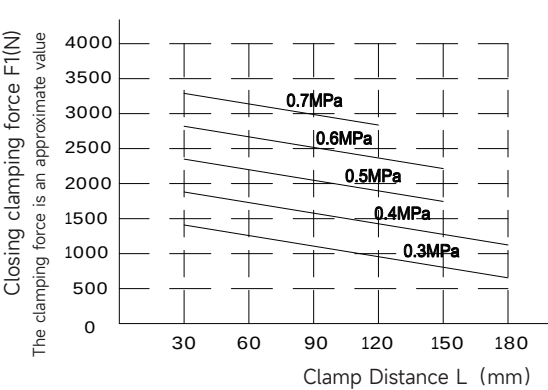
The TR57 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



Clamping force TR73-162



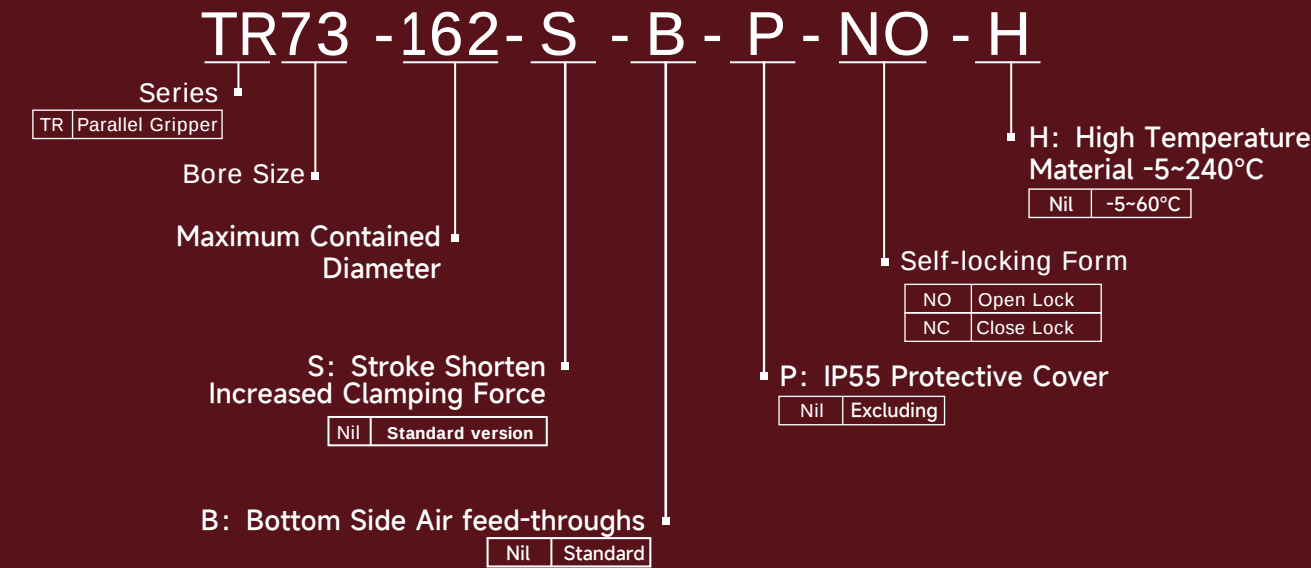
Clamping force TR73-162-S



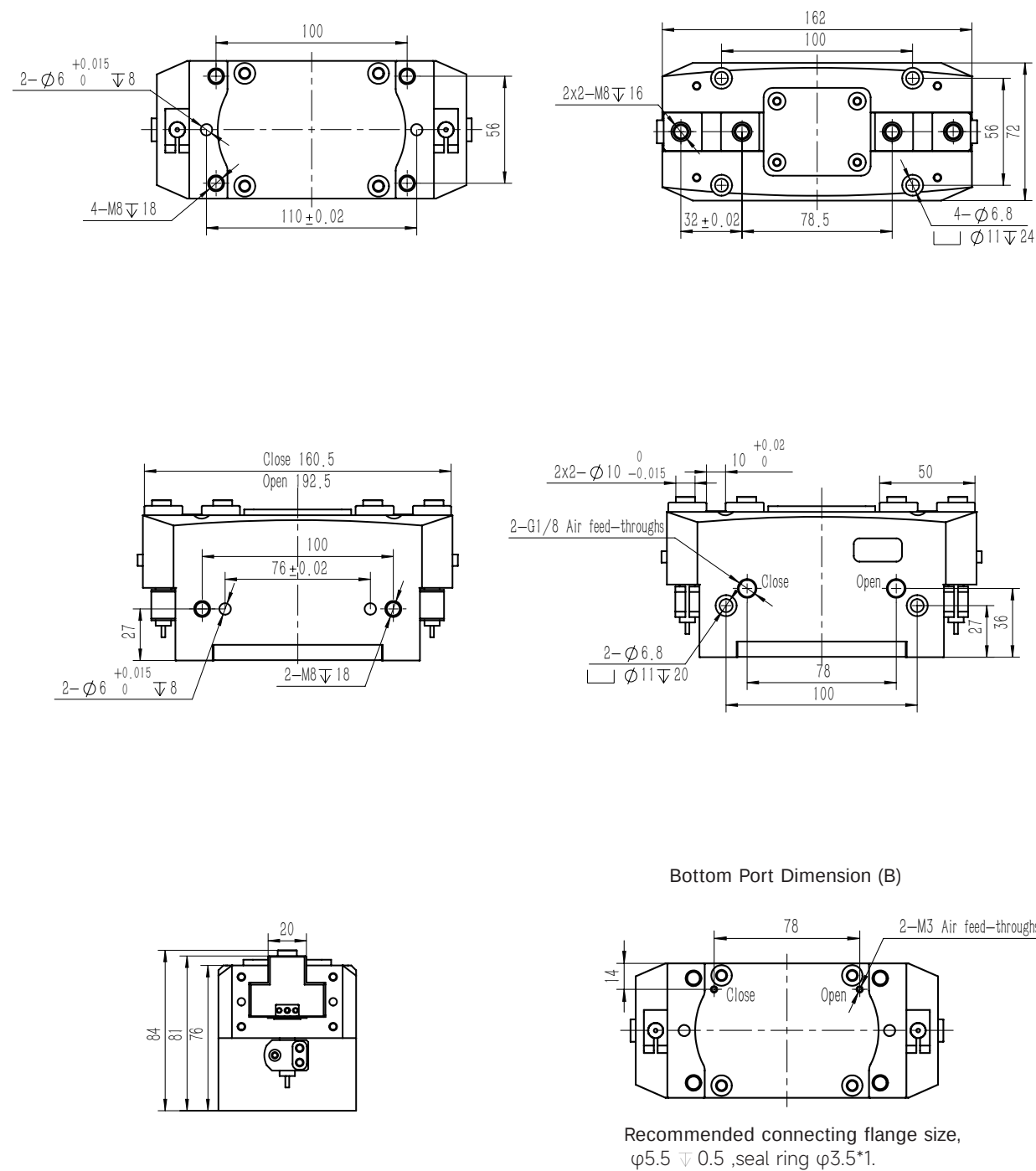
Technical Parameter

Product properties	TR73-162	TR73-162-NO	TR73-162-NC	TR73-162-S	TR73-162-S-NO	TR73-162-S-NC	Unit
Single stroke	16	16	16	11	11	11	mm
Weight	2.6	3.5	3.3	2.5	3.5	3.3	kg
Max. clamp pistonce	180	180	180	180	180	180	mm
Fitting size	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
Girpping force: open/close	360*P/330*P	360*P	330*P	510*P/470*P	510*P	470*P	N
Max. locking force		1100	1100		1550	1550	N
Min. locking force		600	600		850	850	N
Workpiece weight	10	10	10	14	14	14	kg
Continuation max frequency	25	20	20	25	20	20	cpm
Repeat accuracy	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

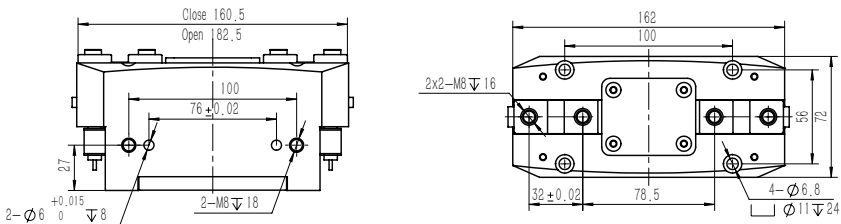
P: Air Pressure [bar]



TR73-162



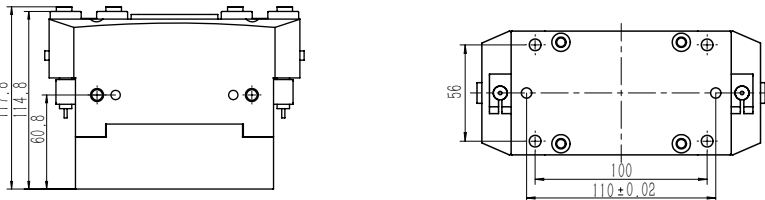
TR73-162-S



Accessory description:

The TR73 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

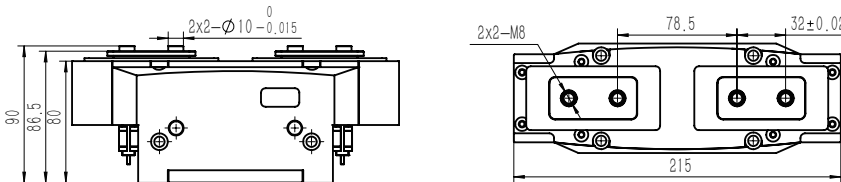
TR73-162-M/S-NO/NC Self-locking type



Accessory description:

TR73 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

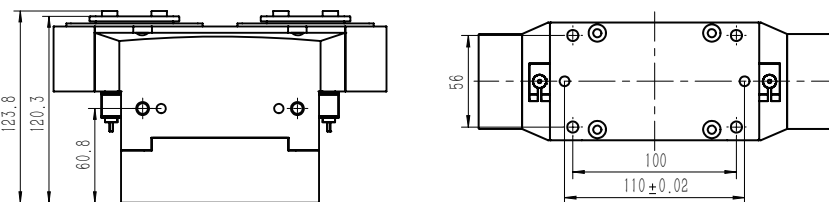
TR73-162-M/S-P Dust proof type



Accessory description:

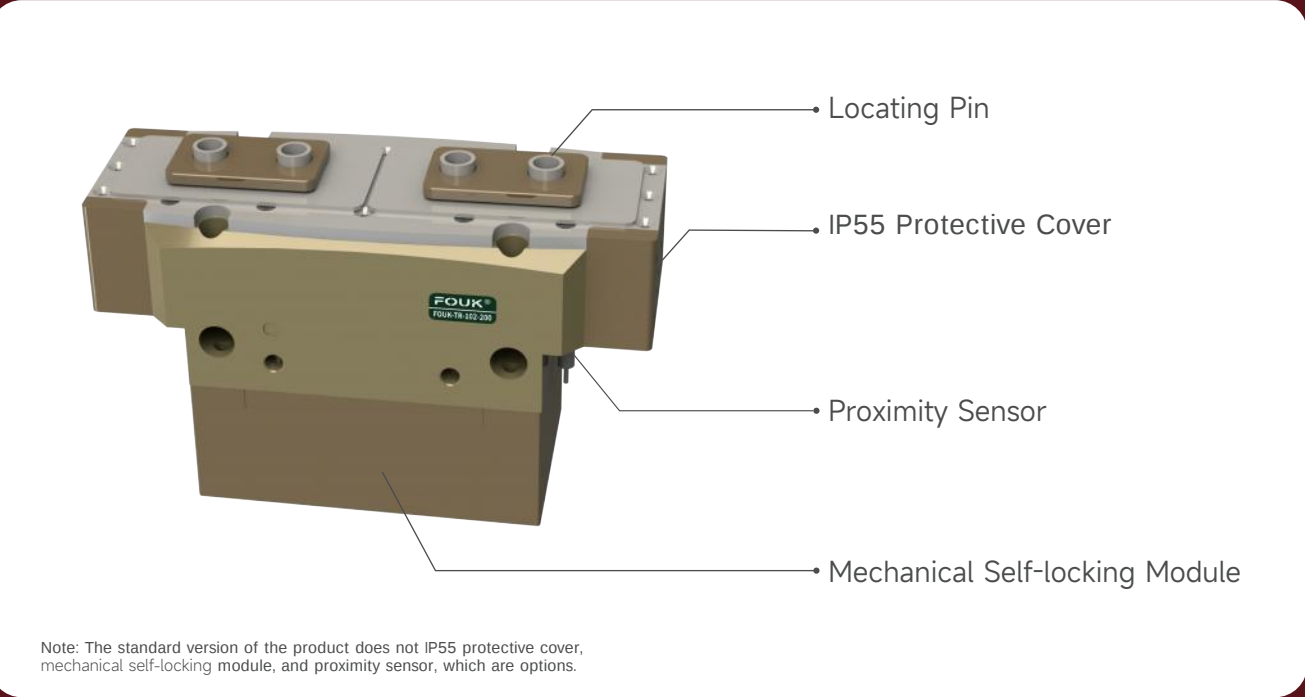
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR73 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR73-162-M/S-P-NO/NC Self-locking Dust proof type

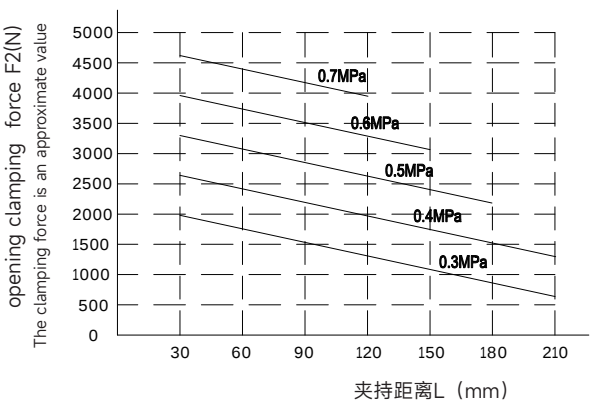
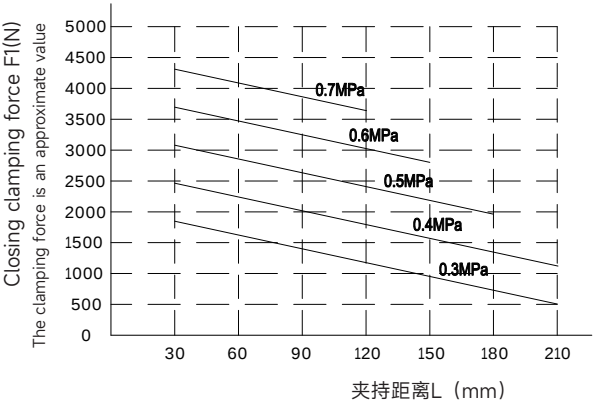


Accessory description:

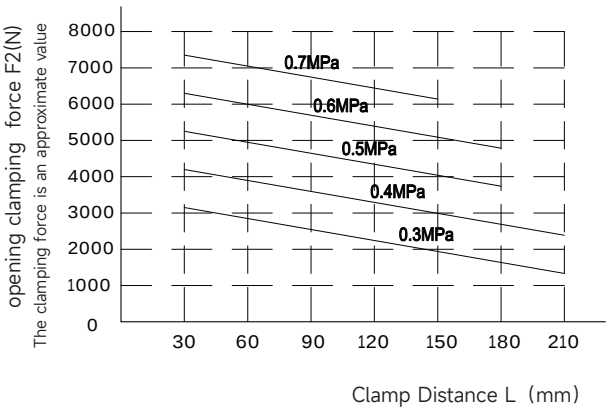
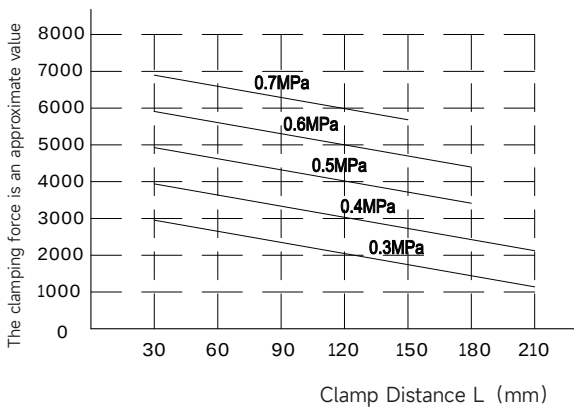
The TR73 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



Clamping force TR102-200



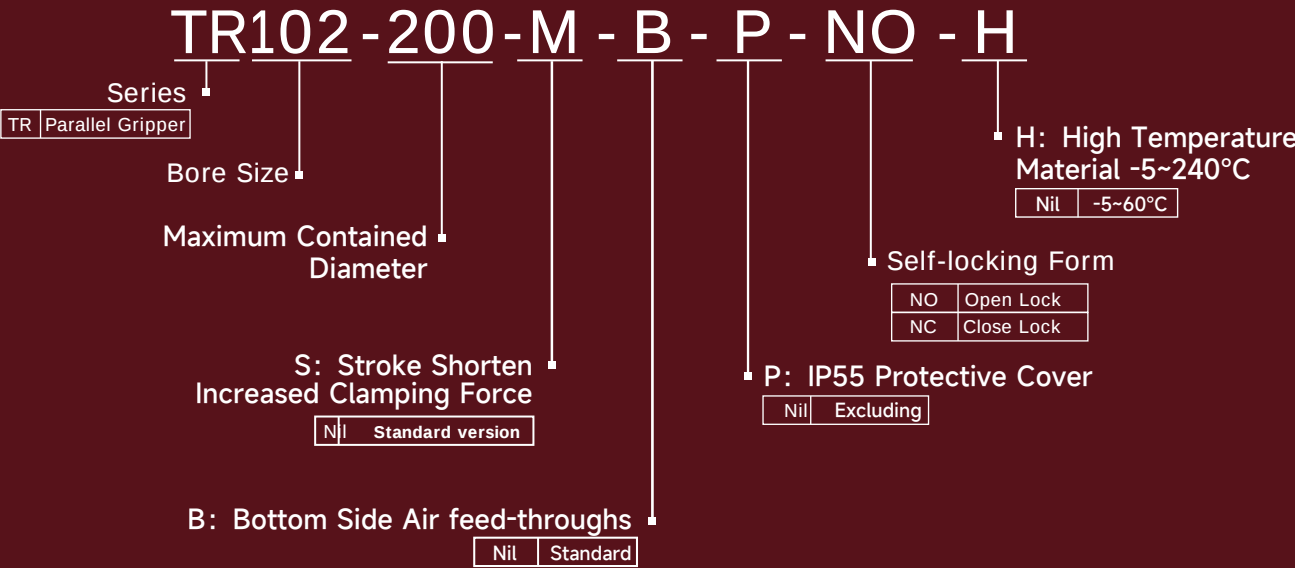
Clamping force TR102-200-S



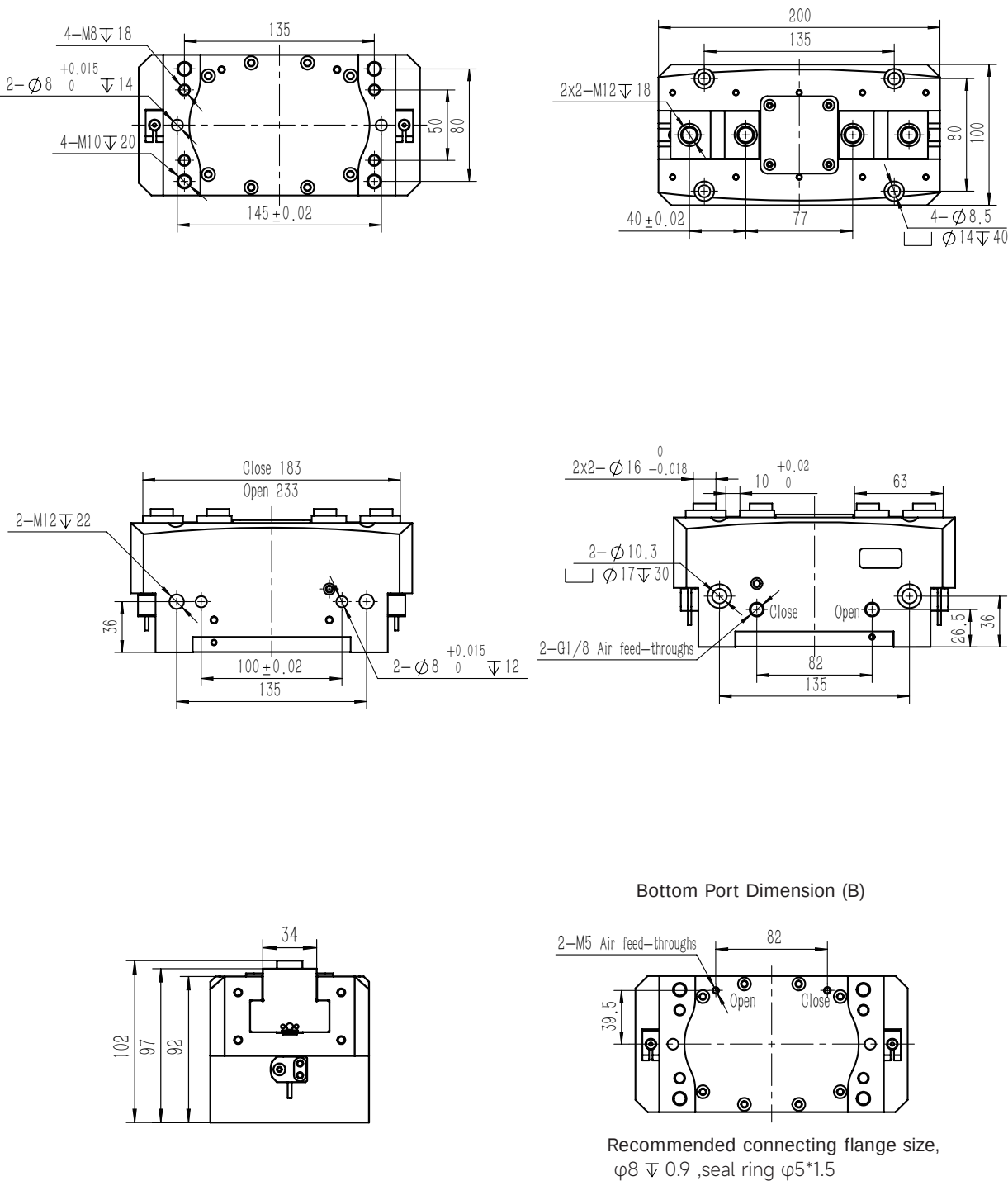
Technical Parameter

Product properties	TR102-200	TR102-200-NO	TR102-200-NC	TR102-200-S	TR102-200-S-NO	TR102-200-S-NC	Unit
Single stroke	25	25	25	15.5	15.5	15.5	mm
Weight	5.3	7.4	7.1	5.2	7.4	7.1	kg
Max. clamp pistance	210	210	210	210	210	210	mm
Fitting size	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
Girpping force: open/close	660*P/616*P	660*P	616*P	1050*P/985*P	1050*P	985*P	N
Max. locking force		1700	1700		2550	2550	N
Min. locking force		920	920		1350	1350	N
Workpiece weight	17	17	17	26	26	26	kg
Continuation max frequency	20	15	15	20	15	15	cpm
Repeat accuracy	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

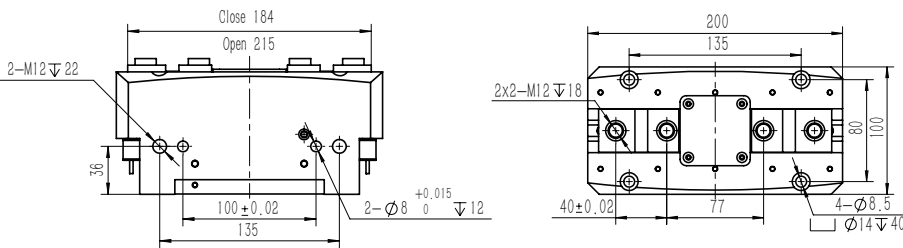
P: Air Pressure [bar]



TR102-200



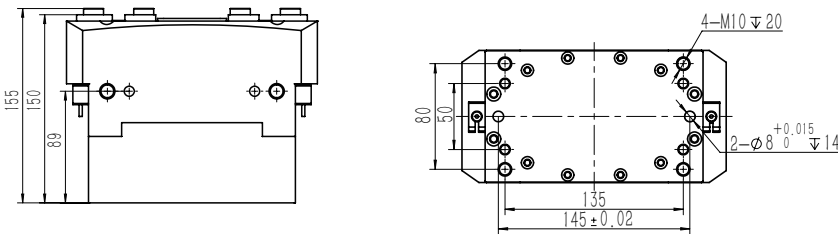
TR102-200-S



Accessory description:

The TR102 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

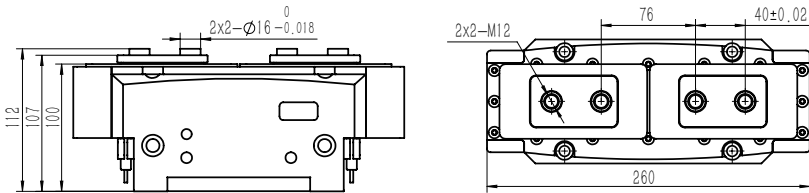
TR102-200-M/S-NO/NC Self-locking type



Accessory description:

TR102 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

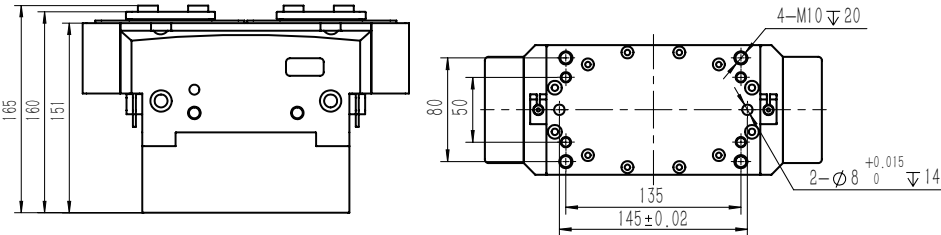
TR102-200-M/S-P Dust proof type



Accessory description:

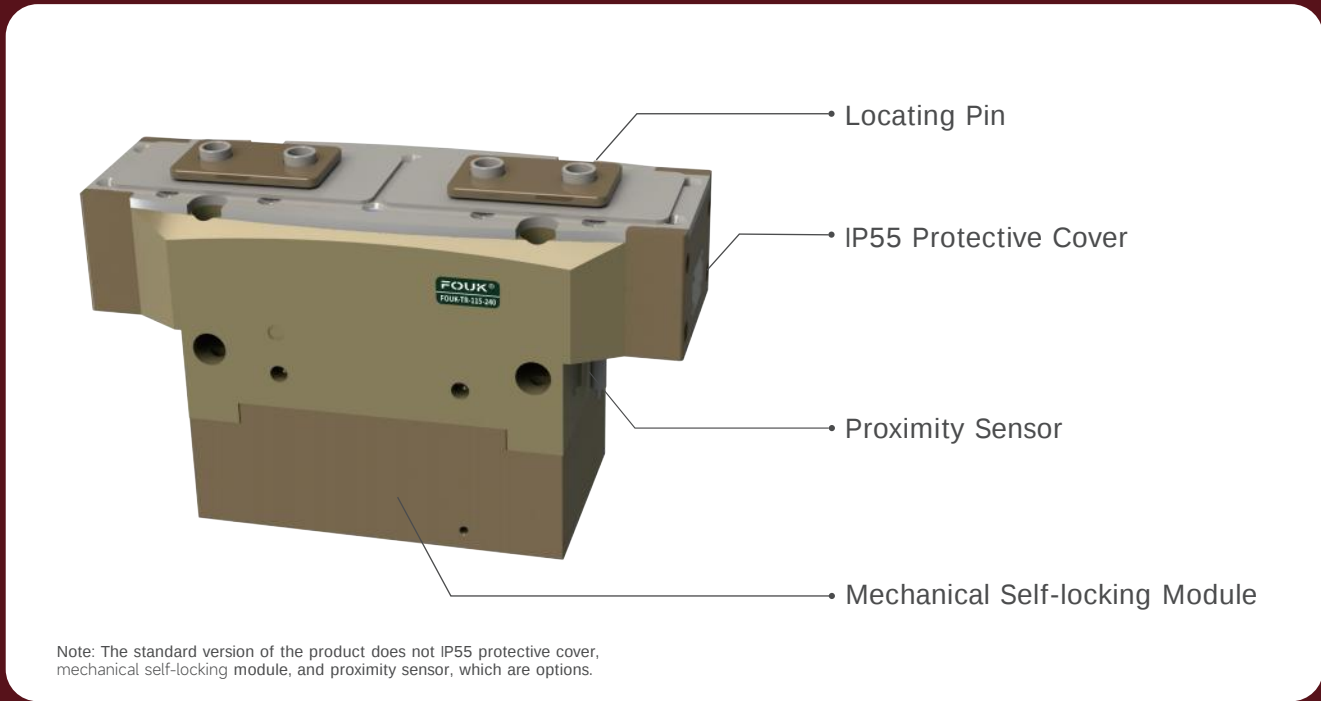
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR102 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR102-200-M/S-P-NO/NC Self-locking Dust proof type

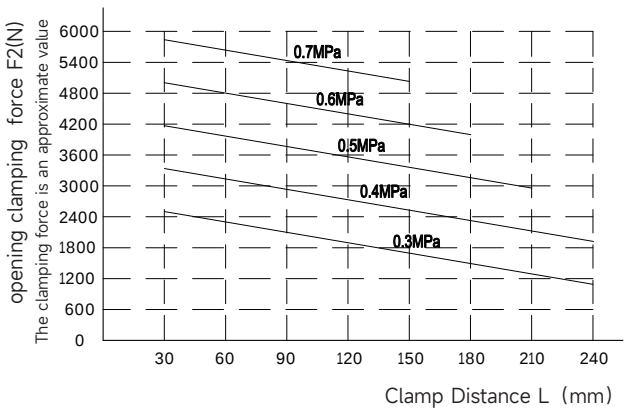
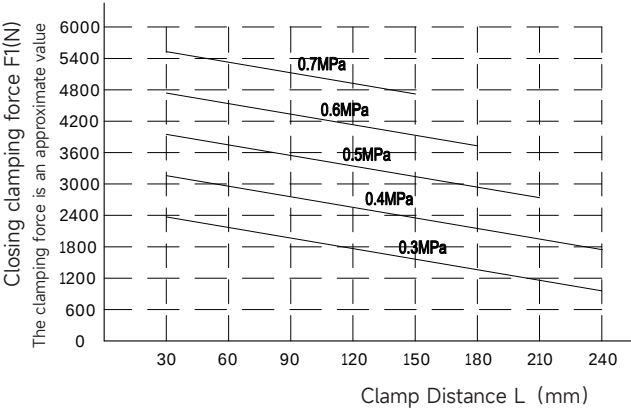


Accessory description:

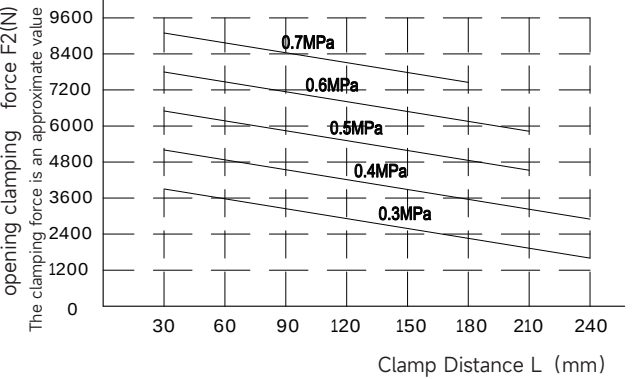
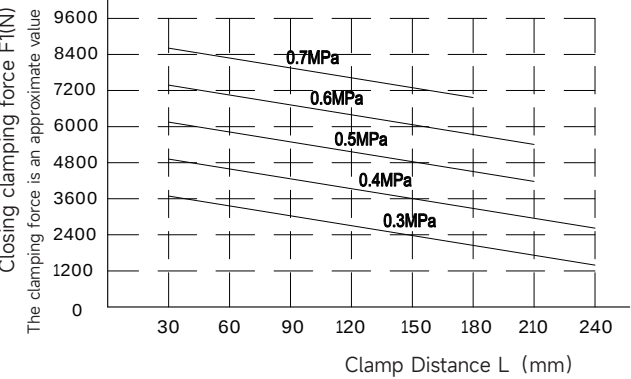
The TR102 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



Clamping force TR115-240



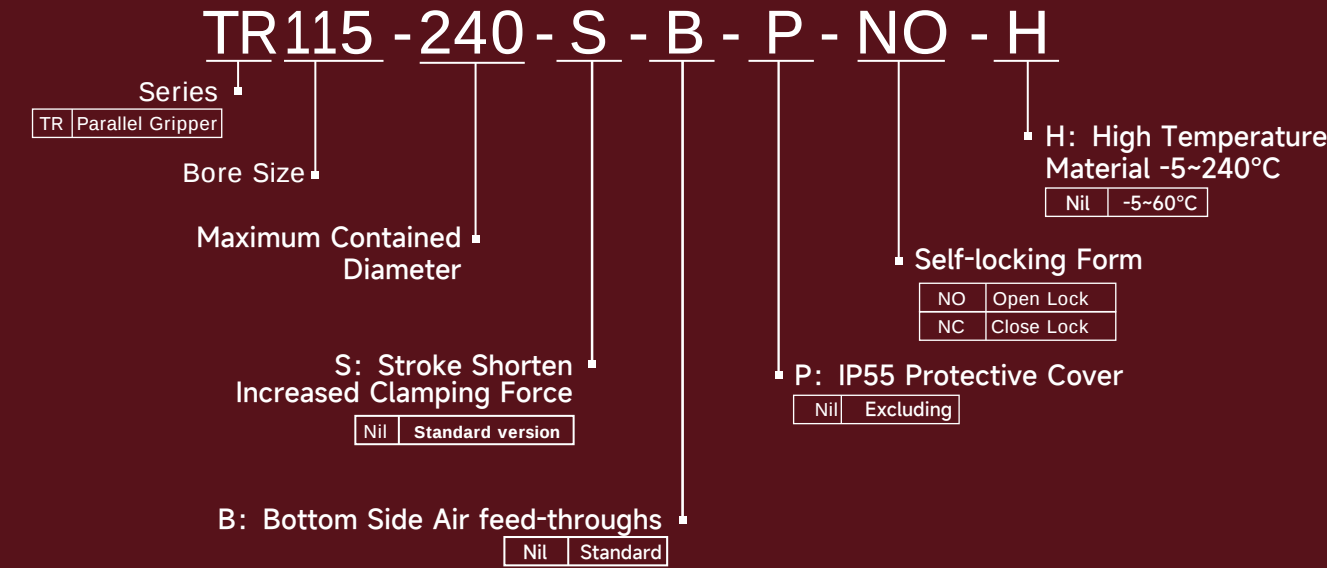
Clamping force TR115-240-S



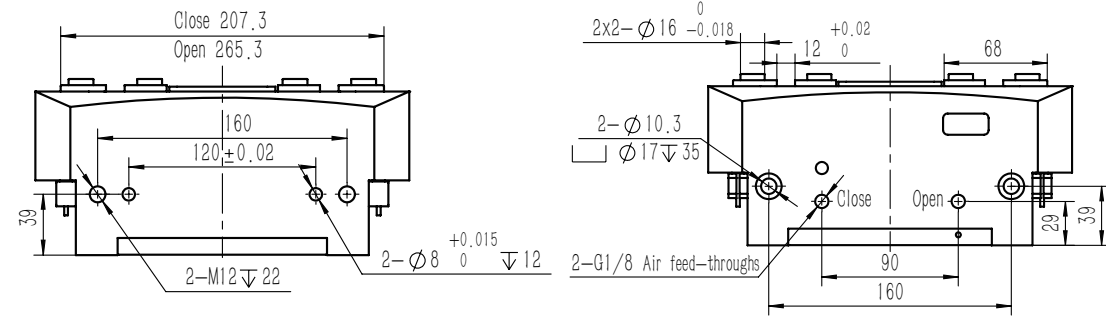
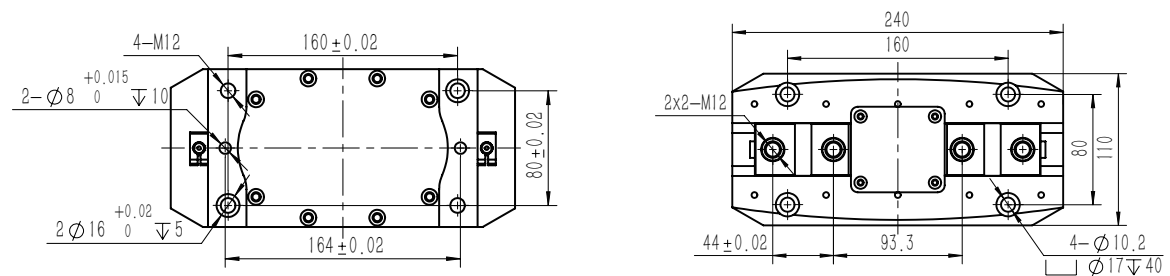
Technical Parameter

Product properties	TR115-240	TR115-240-NO	TR115-240-NC	TR115-240-S	TR115-240-S-NO	TR115-240-S-NC	Unit
Single stroke	29	29	29	18	18	18	mm
Weight	7.6	10.2	9.8	7.4	10.2	9.8	kg
Max. clamp pistonce	240	240	240	240	240	240	mm
Fitting size	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
Girpping force: open/close	834*P/790*P	834*P	790*P	1300*P/1230*P	1300*P	1230*P	N
Max. locking force		1950	1950		2900	2900	N
Min. locking force		1100	1100		1650	1650	N
Workpiece weight	25	25	25	38	38	38	kg
Continuation max frequency	20	15	15	20	15	15	cpm
Repeat accuracy	±0.04	±0.04	±0.04	±0.04	±0.04	±0.04	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

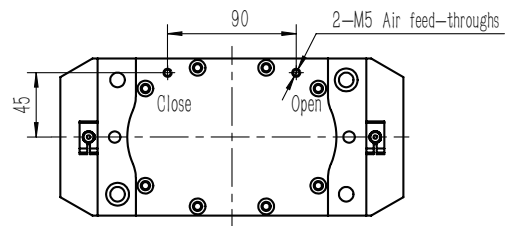
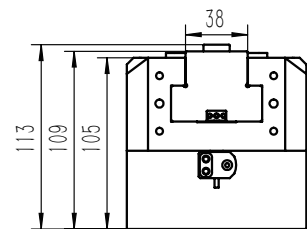
P: Air Pressure [bar]



TR115-240

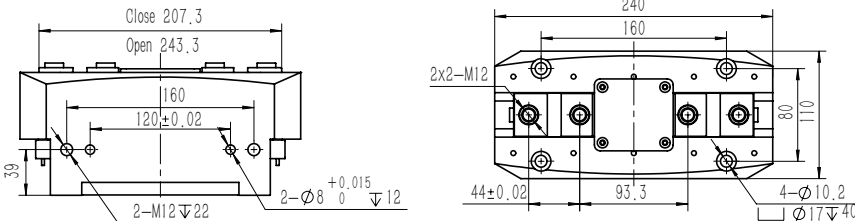


Bottom Port Dimension (B)



Recommended connecting flange size, $\phi 8 \nabla 0.9$, seal ring $\phi 5 \times 1.5$

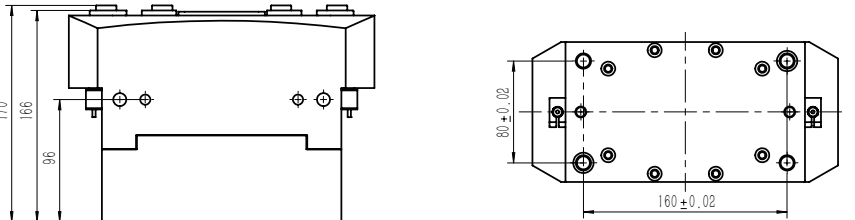
TR115-240-S



Accessory description:

The TR115 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

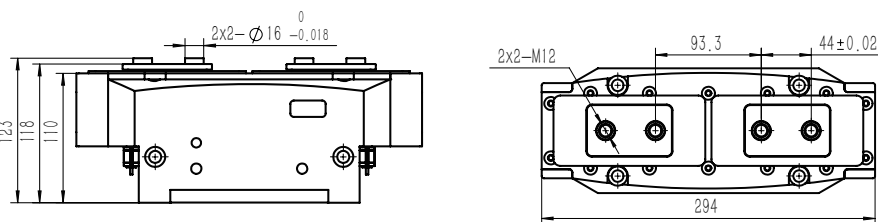
TR115-240-M/S-NO/NC Self-locking type



Accessory description:

TR115 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

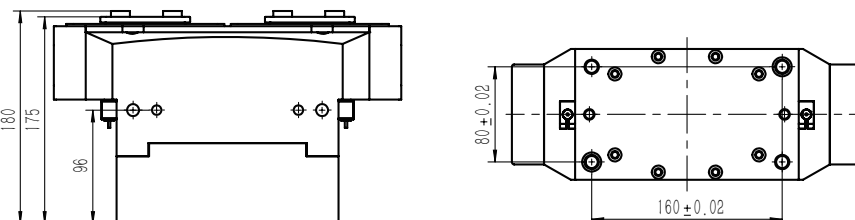
TR115-240-M/S-P Dust proof type



Accessory description:

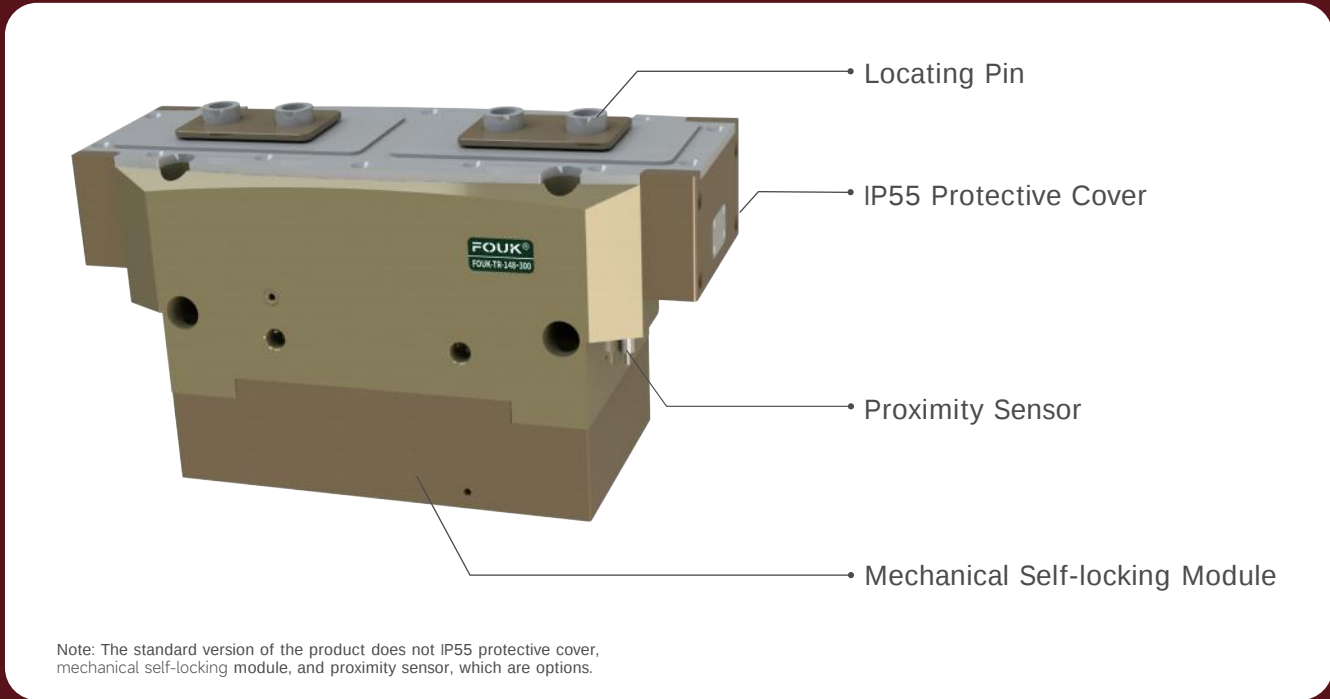
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR115 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR115-240-M/S-P-NO/NC Self-locking Dust proof type

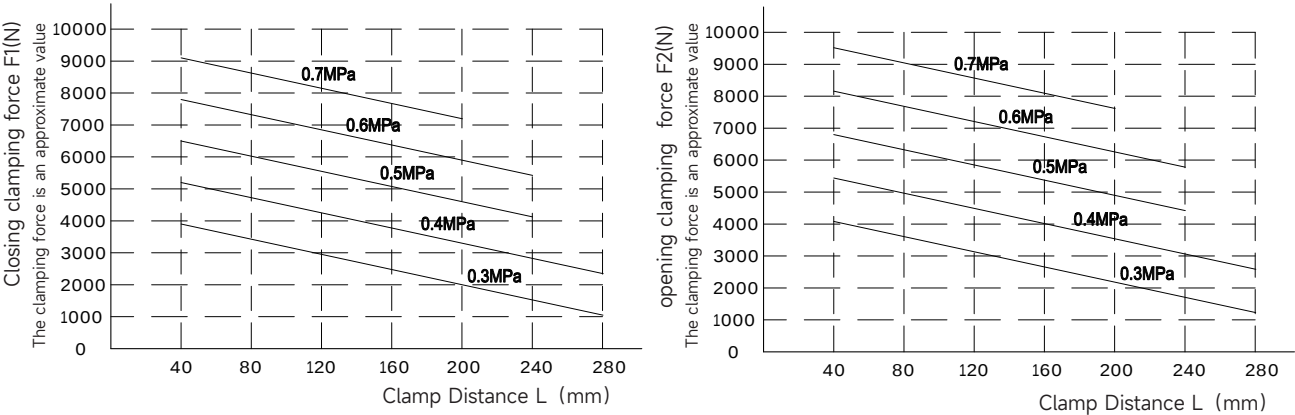


Accessory description:

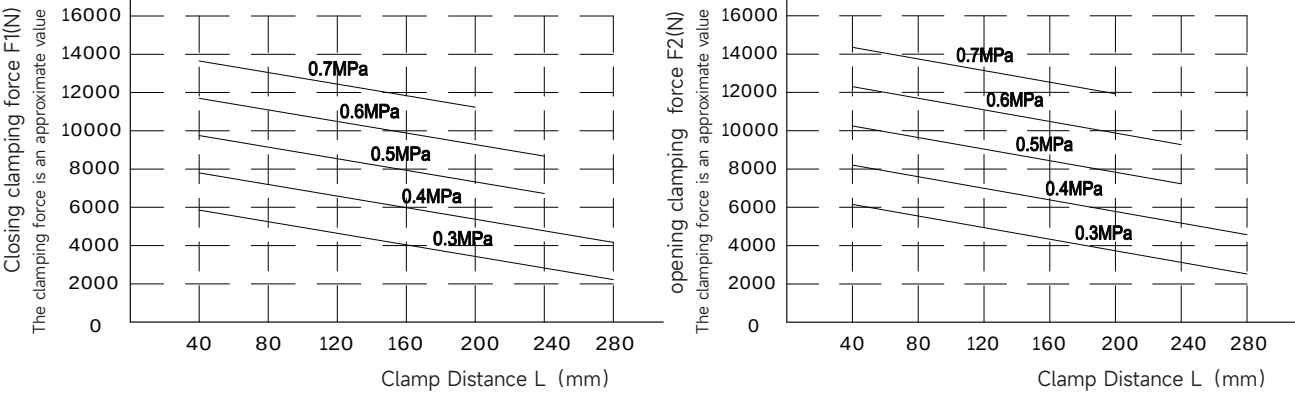
The TR115 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



Clamping force TR148-300



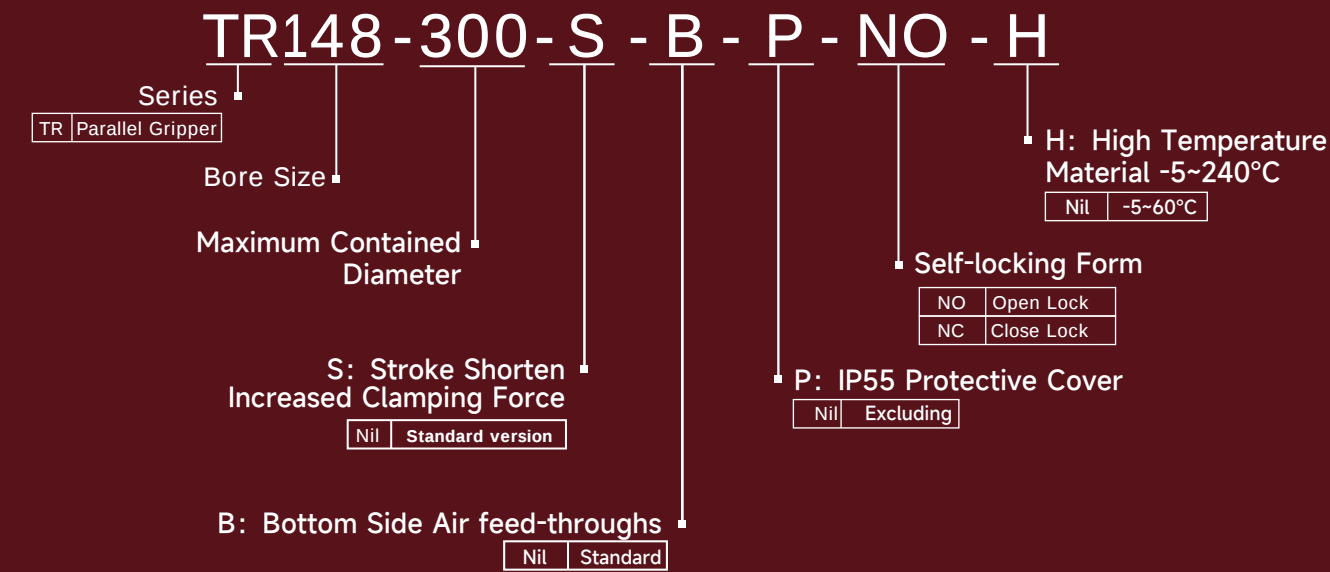
Clamping force TR148-300-S



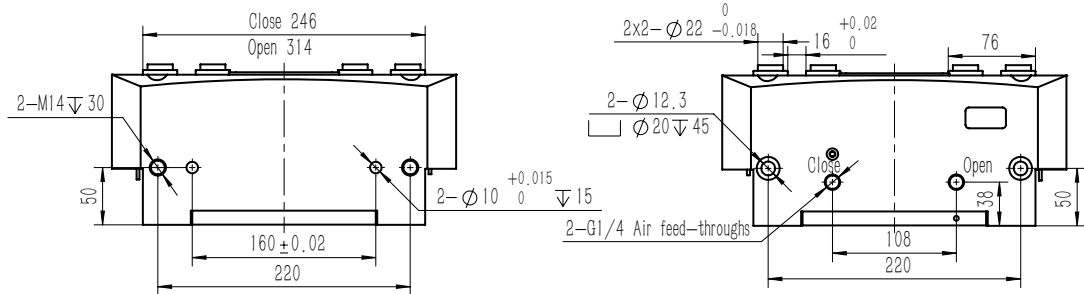
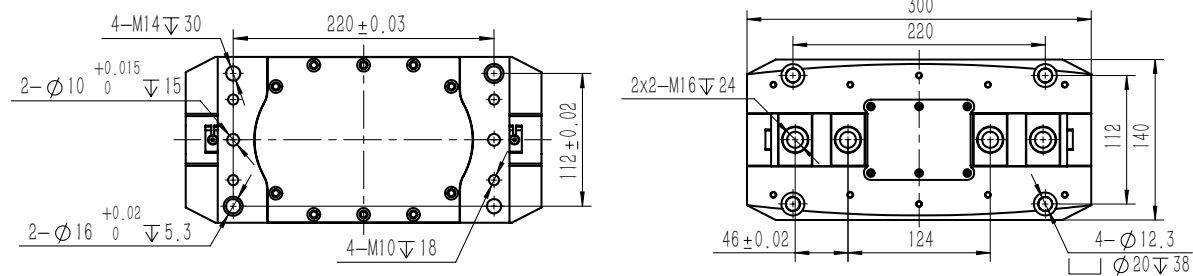
Technical parameter

Product properties	TR148-300	TR148-300-NO	TR148-300-NC	TR148-300-S	TR148-300-S-NO	TR148-300-S-NC	Unit
Single stroke	34	34	34	21	21	21	mm
Weight	15.8	20.2	19.5	15.6	20.2	19.5	kg
Max. clamp pistance	280	280	280	280	280	280	mm
Fitting size	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4	
Girpping force: open/close	1360*P/1300*P	1300*P	1360*P	2050*P/1950*P	2050*P	1950*P	N
Max. locking force		2400	2400		3600	3600	N
Min. locking force		1400	1400		2100	2100	N
Workpiece weight	40	40	40	60	60	60	kg
Continuation max frequency	15	12	12	15	12	12	cpm
Repeat accuracy	±0.04	±0.04	±0.04	±0.04	±0.04	±0.04	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

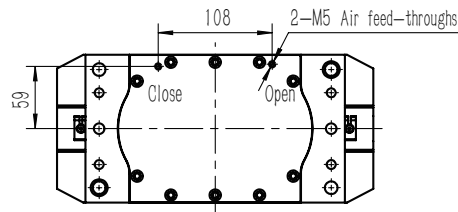
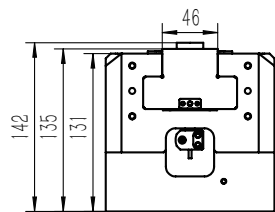
P: Air Pressure [bar]



TR148-300

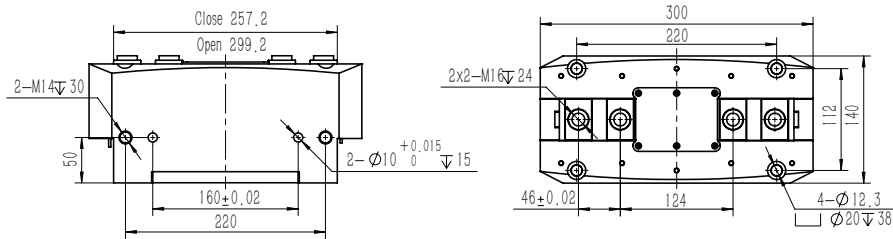


Bottom Port Dimension (B)



Recommended connecting flange size,
φ8 ±0.8 ,seal ring φ5*1.5

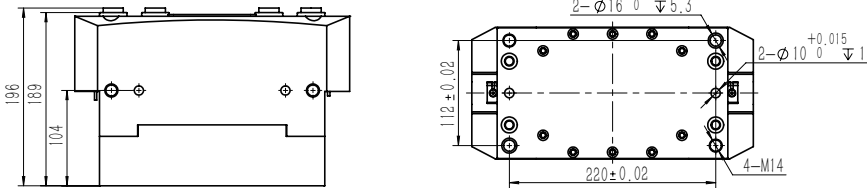
TR148-300-S



Accessory description:

The TR148 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

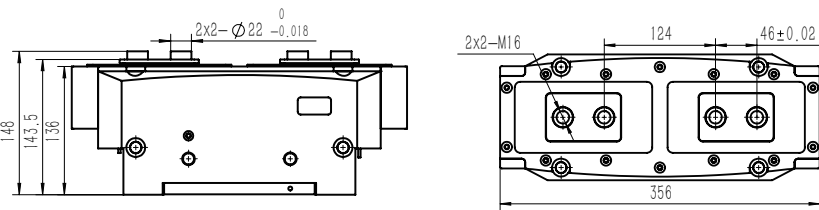
TR148-300-M/S-NO/NC Self-locking type



Accessory description:

TR148 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

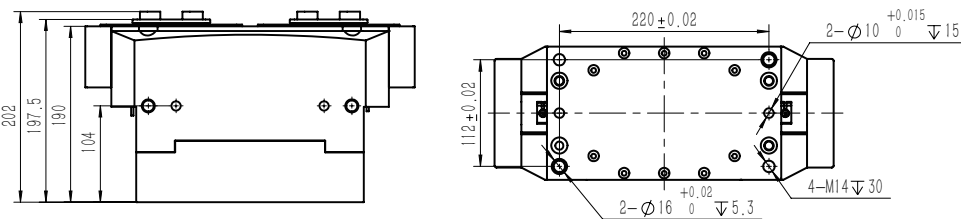
TR148-300-M/S-P Dust proof type



Accessory description:

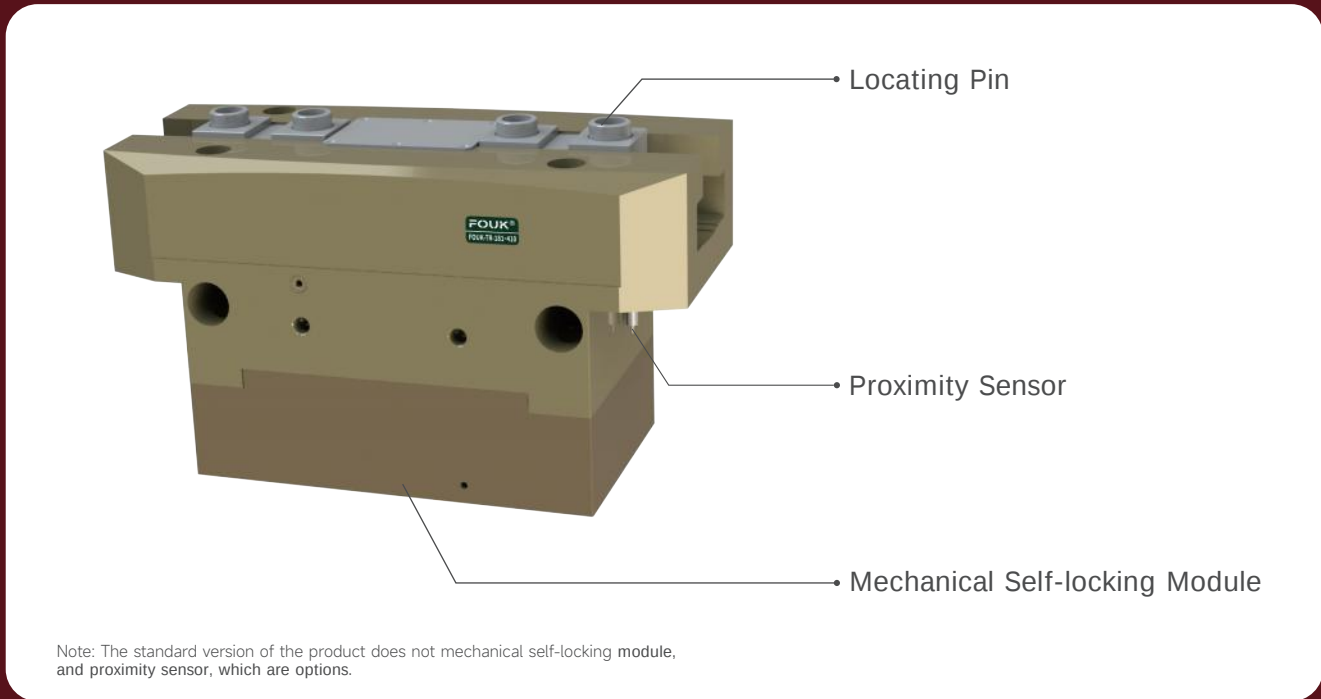
Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR148 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR148-300-M/S-P-NO/NC Self-locking Dust proof type

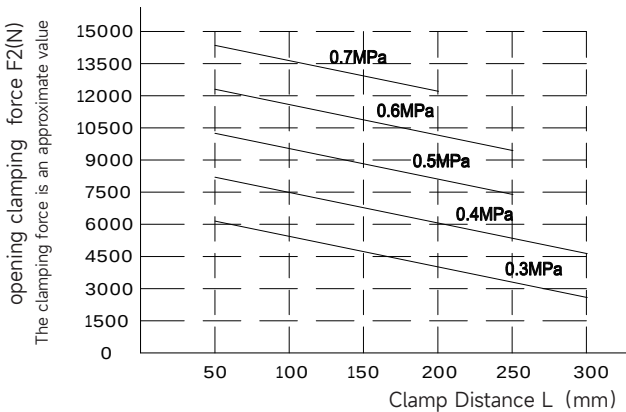
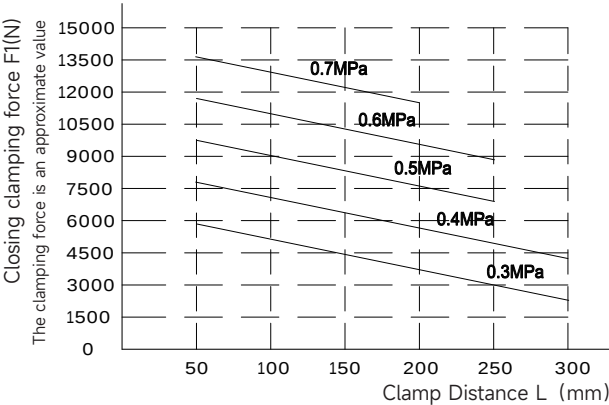


Accessory description:

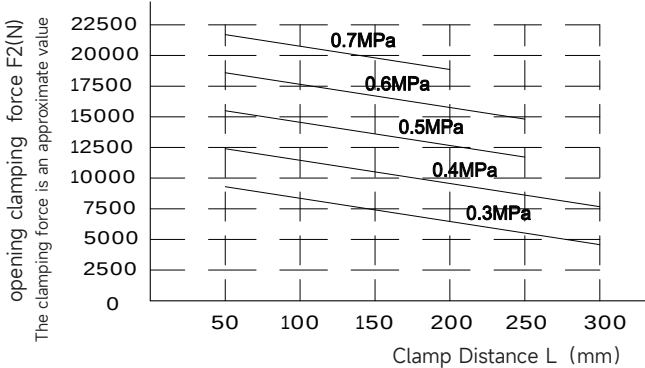
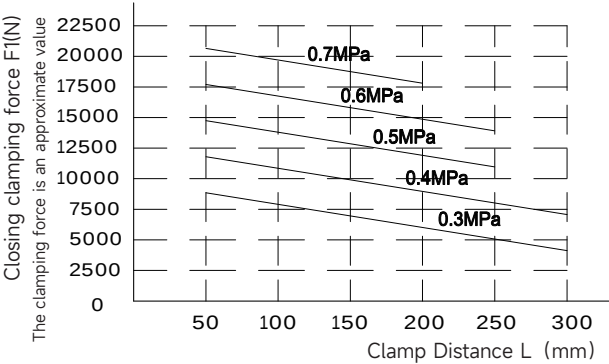
The TR148 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.



Clamping force TR181-410



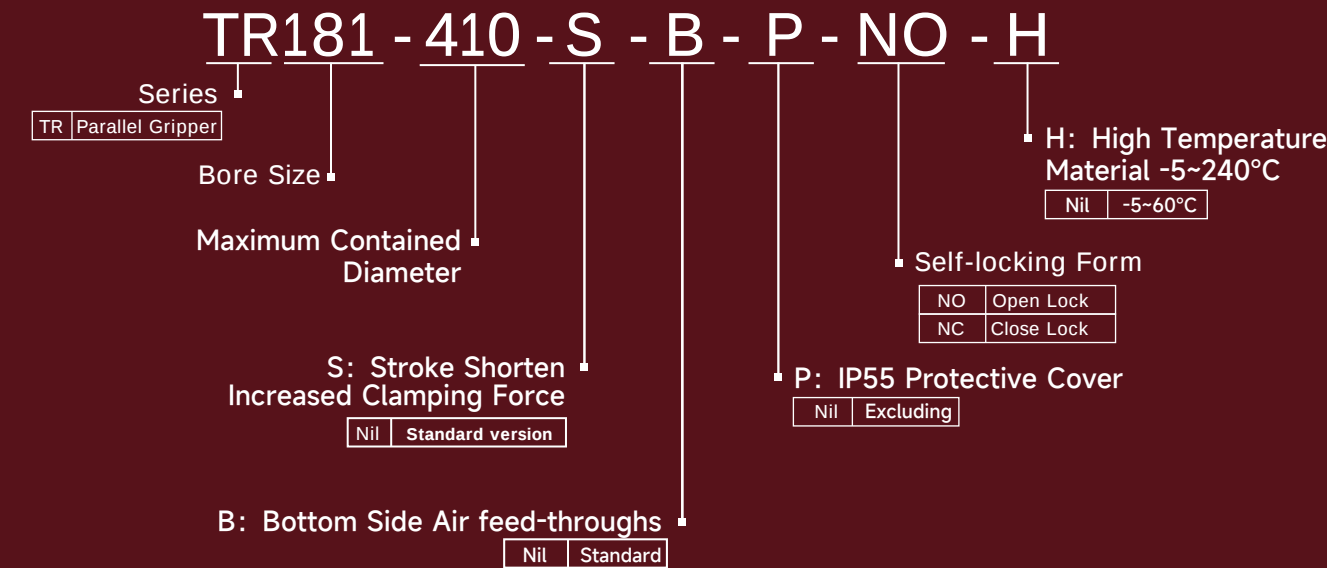
Clamping force TR181-410



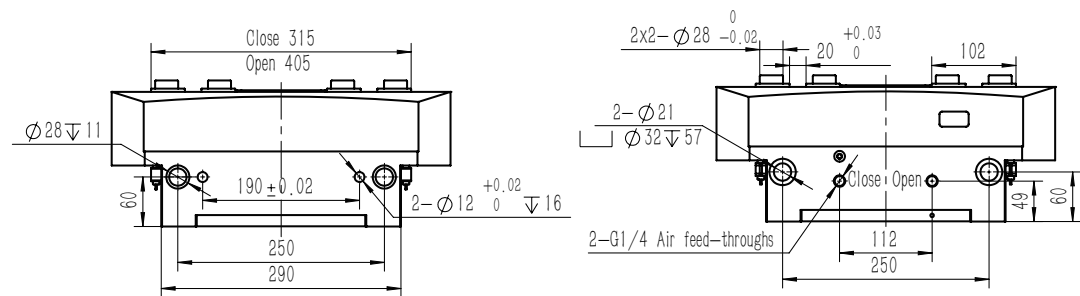
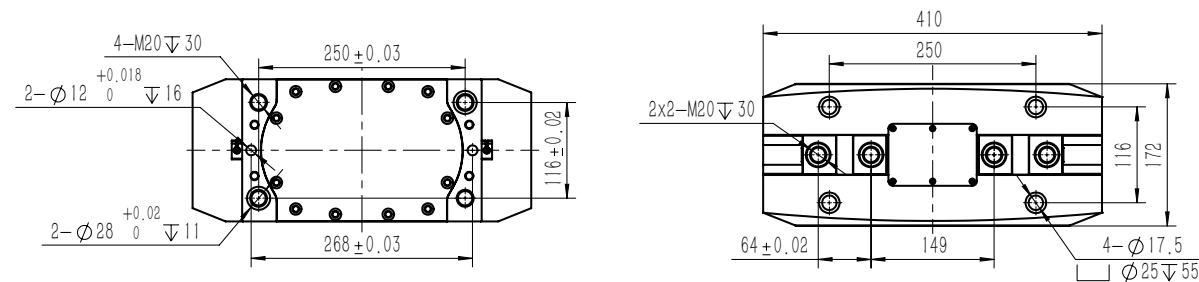
Technical parameter

Product properties	TR181-410	TR181-410-NO	TR181-410-NC	TR181-410-S	TR181-410-S-NO	TR181-410-S-NC	Unit
Single stroke	45	45	45	28	28	28	mm
Weight	29	38	37	28	37.5	36.5	kg
Max. clamp pistonce	300	300	300	300	300	300	mm
Fitting size	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4	
Girpping force: open/close	2050*P/1950*P	2050*P	1950*P	3100*P/2950*P	3100*P	2950*P	N
Max. locking force		3500	3500		5200	5200	N
Min. locking force		1900	1900		2800	2800	N
Workpiece weight	75	75	75	105	105	105	kg
Continuation max frequency	10	8	8	10	8	8	cpm
Repeat accuracy	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05	mm
Air pressure	3~7	4~7	4~7	3~7	4~7	4~7	bar
Ambient temperature	-5~60	-5~60	-5~60	-5~60	-5~60	-5~60	°C
IP grade	45						

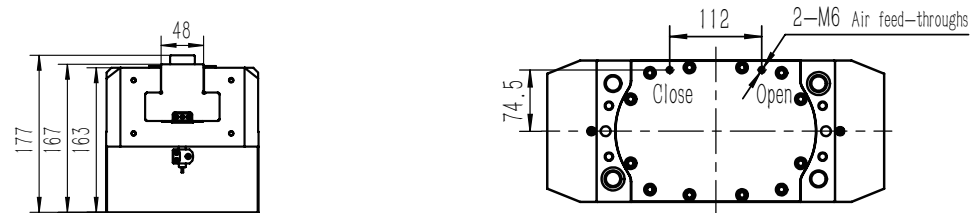
P: Air Pressure [bar]



TR181-410

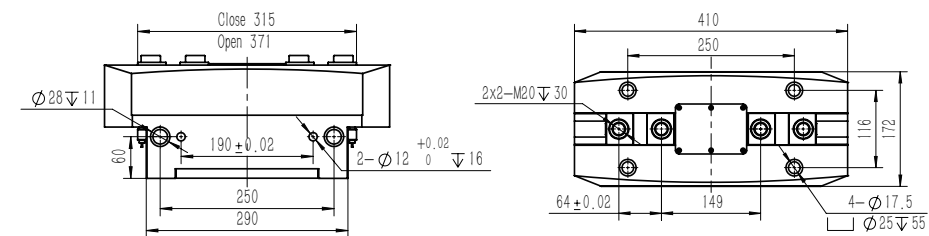


Bottom Port Dimension (B)



Recommended connecting flange size, $\phi 9 \nabla 0.8$, seal ring $\phi 6 \times 1.5$

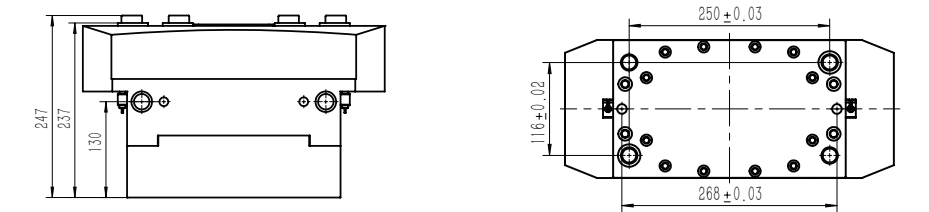
TR181-410-S



Accessory description:

The TR181 has the S series configuration, with stronger clamping force and shorter working stroke than the standard model. It is able to clamp workpieces quickly and stably, providing customers with a new alternative to the standard model.

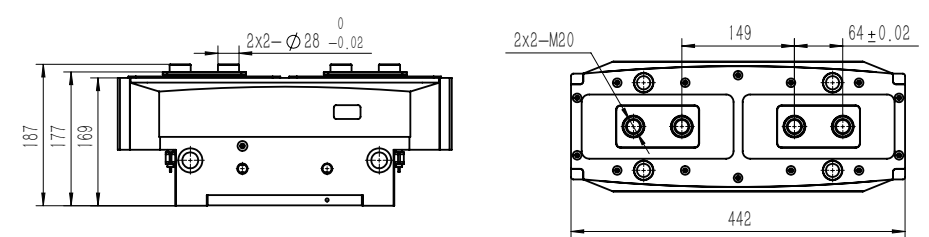
TR181-410-M/S-NO/NC Self-locking type



Accessory description:

TR181 series optional open/close self-locking module can maintain the clamping status even in the case of low air pressure or loss of air supply, providing self-locking function and increasing the stability of clamping action at the same time.

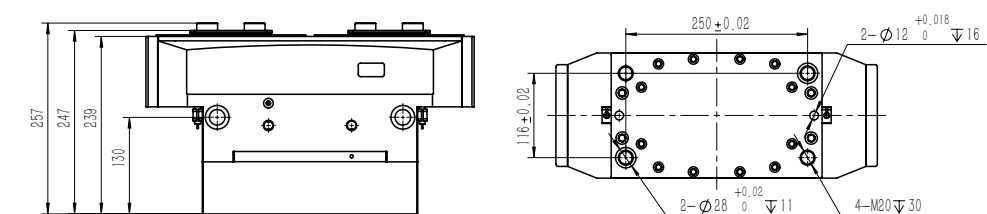
TR181-410-M/S-P Dust proof type



Accessory description:

Considering the diverse and complex working conditions of the gripper, the gripper is required to have better dust-proof performance. The TR181 series is equipped with optional dust-proof unit, and the protection level is upgraded to IP55 to further enhance the performance of the gripper under complex working conditions.

TR181-410-M/S-P-NO/NC Self-locking Dust proof type



Accessory description:

The TR181 series offers a combination of dust-proof module and self-locking module to meet more diverse application scenarios and customer needs.