APS

Non-contact Gripper

Feature

- Without vacuum ejector: A positive pressure is applied through form adequate. The exhaust of this air goes trough of low pressure and gets a vacuum aspiring any kind of workpieces.
- Contactless handling: This contactless handling is due to the pressure between the gripper and workpieces.
- Convenience: The body contains screw holes for locking, easily to replaced.

Specification

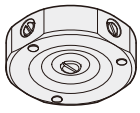
Item \ Model		APS-20	APS-40	APS-60
Fluid		Air		
Operating pressure	MPa	0.1 ~ 0.7		
Ambient and operating temperature	℃	5 ~ 60		
Piping port size		M3	M5	M5
Air consumption Note	L/min	80	110	190
Lifting force Note	N	1	2	4.6
Weight	g	15	70	135
Body material		Aluminum alloy and stainless steel		

Note: REMARKS: Above result according to below testing condition
1. Operating pressure: 0.5 Mpa
2. Testing tool :
(A) APS-20 tested with “PU 0425” PU Tube * 1M
(B) APS-40 tested with “PU 0640” PU Tube * 1M
(C) APS-60 tested with “PU 0640” PU Tube * 1M

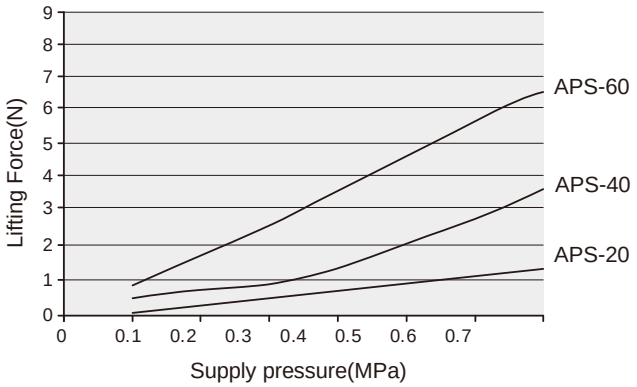
Code of order

APS 20 - T
1 2

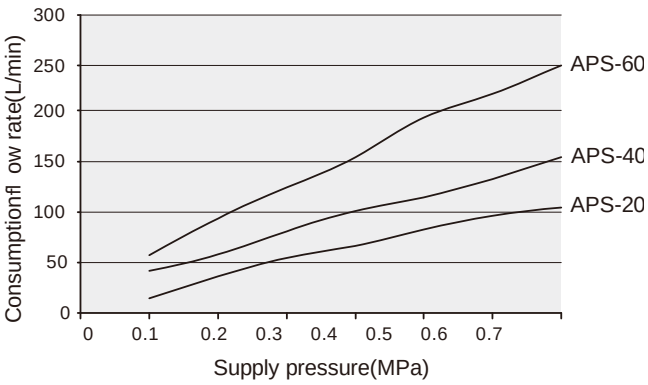
1 Mark	Model
20	20 series
40	40 series
60	60s eries

2 Mark	With bumper pad
None	No bumper pad
T	

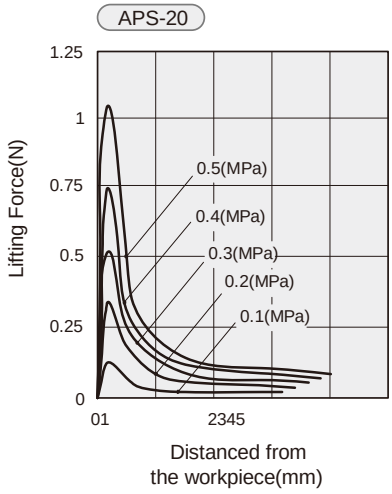
Lifting force

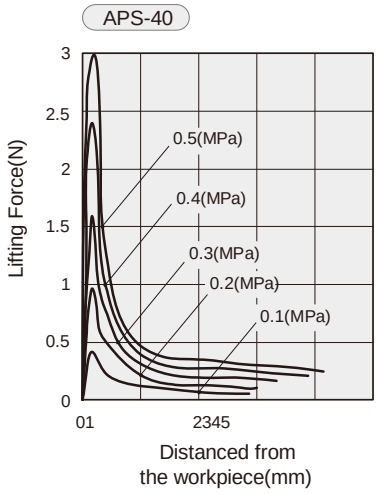


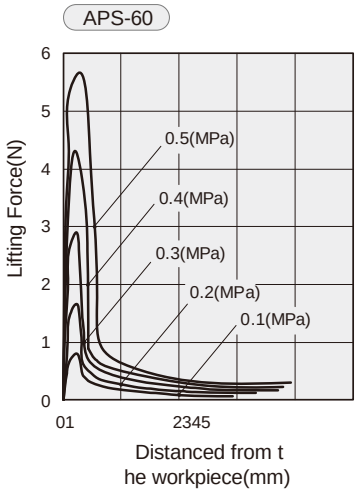
Air consumption



Lifting force-distance from the w orkpiece

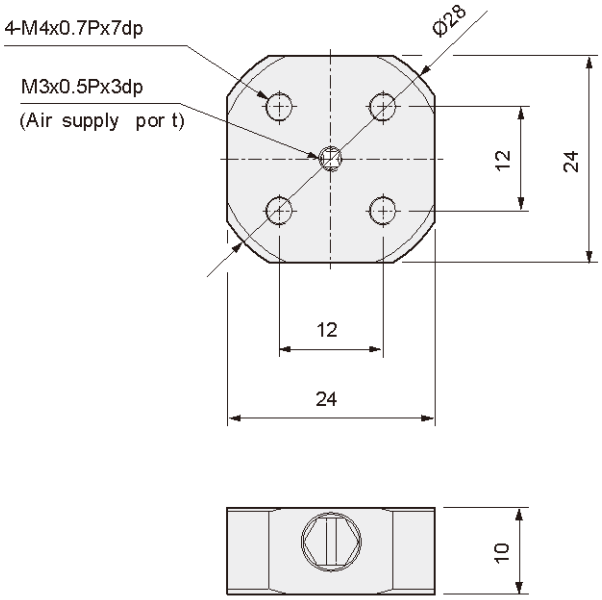




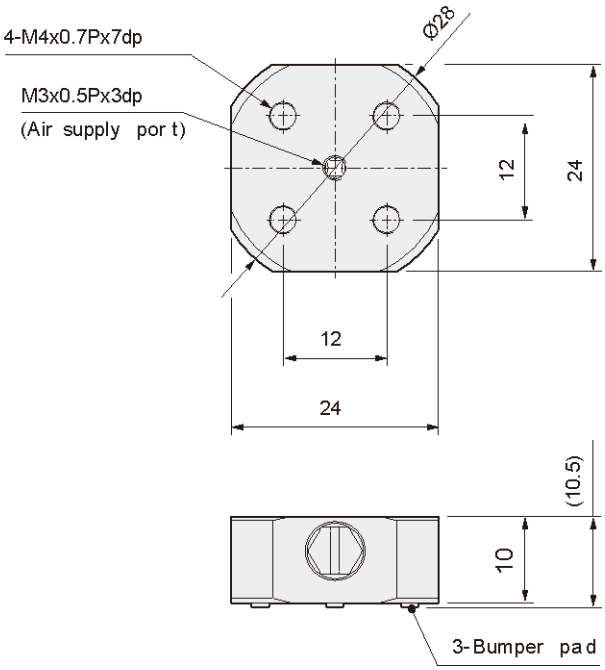


Dimensions

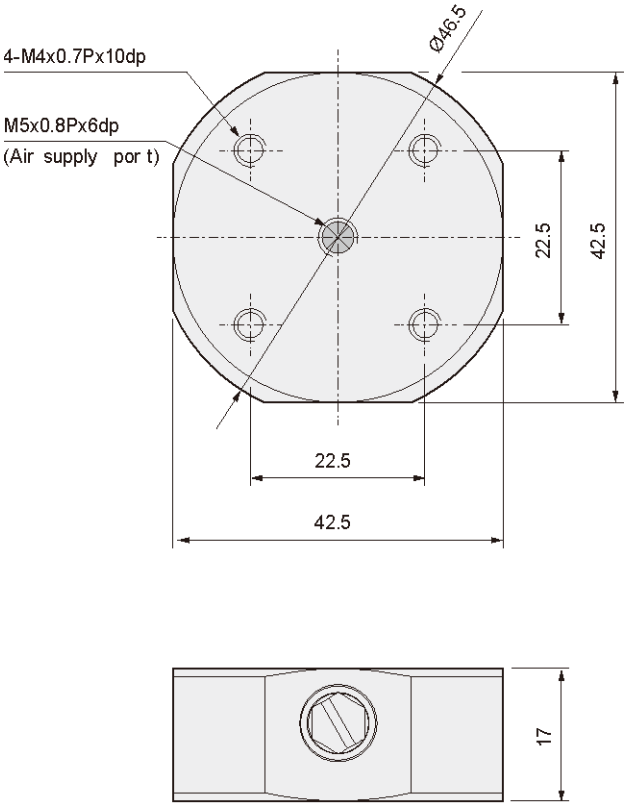
APS- 20 Flat type



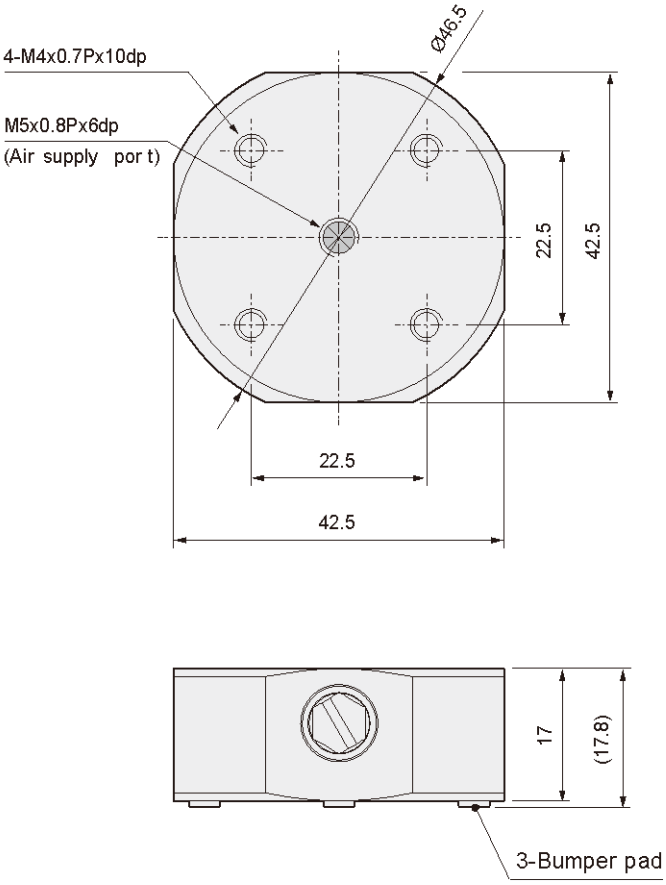
APS- 20 -T Bumper pad type



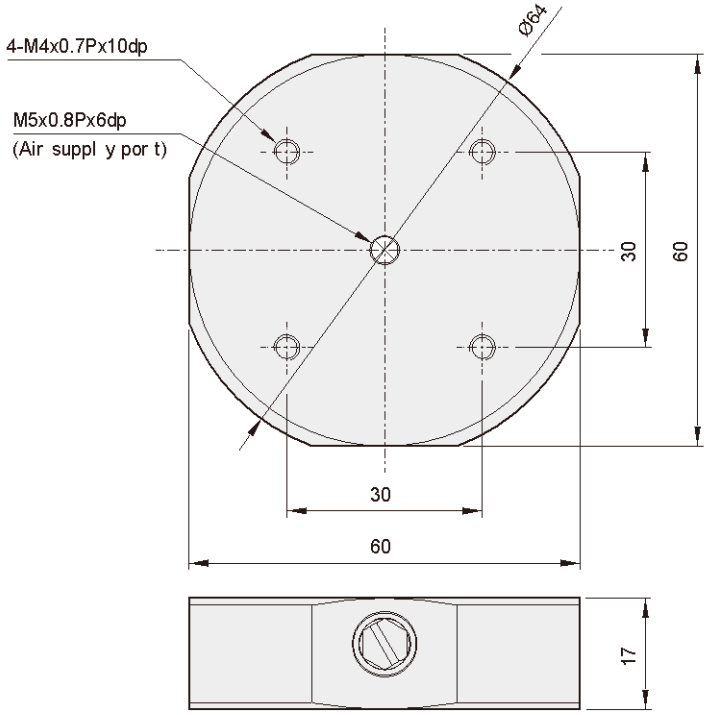
APS- 40 Flat type



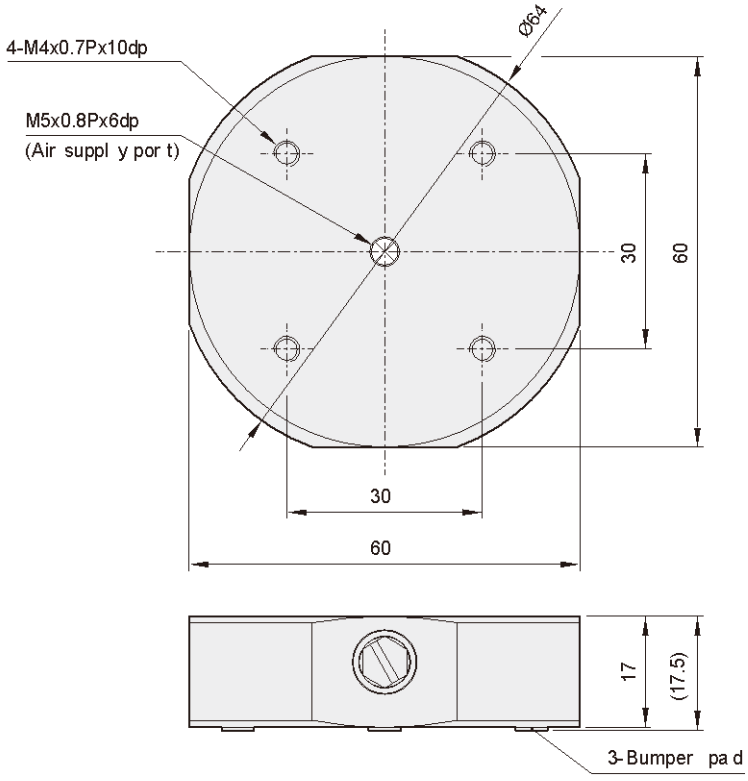
APS- 40 -T Bumper pad



APS-60 Flat type

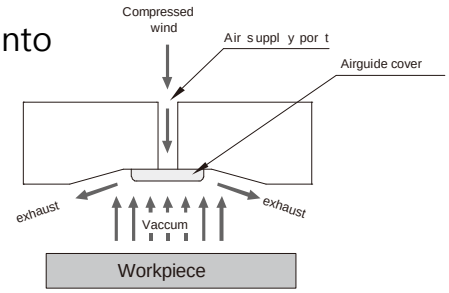


APS-60-T Bumper pad type

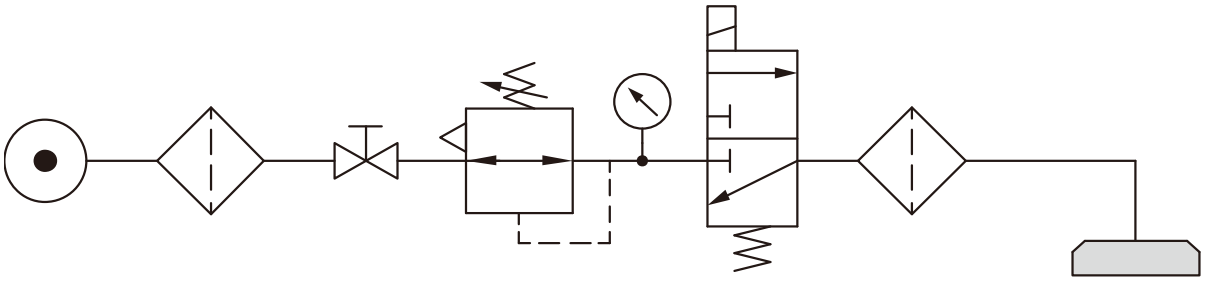


Operating

By compressing the wind from supply port and flow into gripper body, the air lead from body through cap to exhaust the wind between workpiece then create vacuum in the center to pick workpiece without touching; this operating called Bernoulli Type.

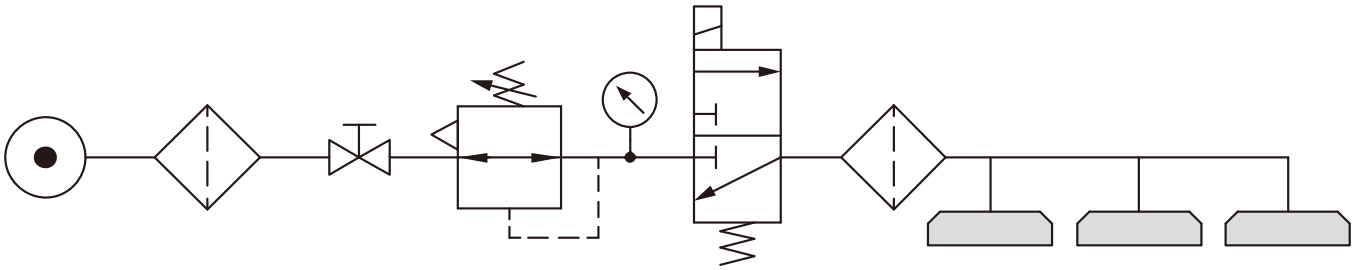


Selection examples-For small workpiece



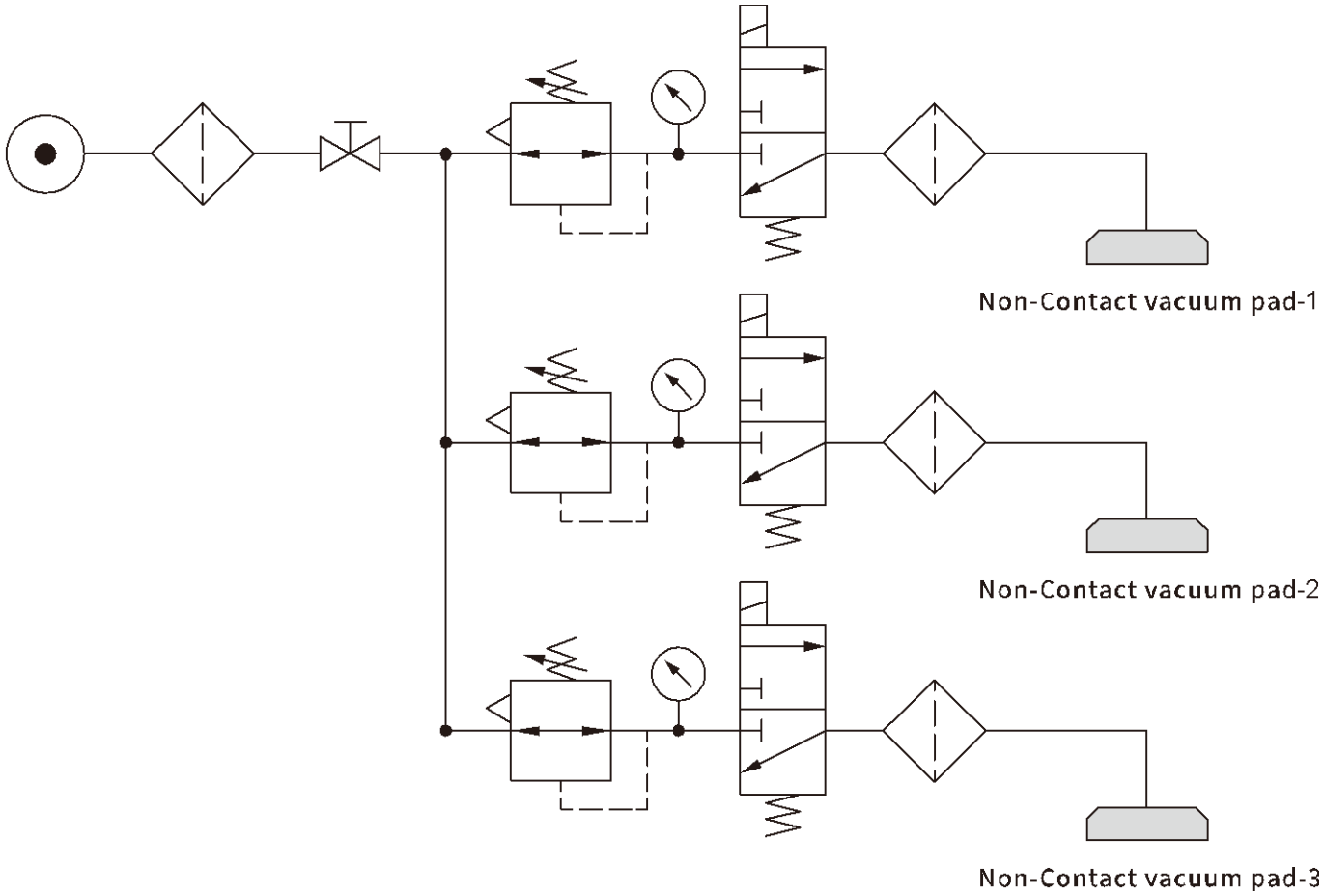
Non-Contact vacuum pad

Selection examples(series)-For large workpiece



Non-Contact vacuum pad*3

Selection examples(parallel)-For small and many workpieces



※ Note: workpiece quantity should be considered with its weight and the air compressor working performance.

Specific product precautions

■ Precautions for S elections or determine the layout

- Should prevent non-contact gripper from huge impact and avoid a pplying in violent environment. Do not expose grippers at outdoors or under the corrosion chemical working environment .
- Determine the position of the non-contact gripper and taking account the balance of the workpiece.
- A fixture/jig application should be considered when using no bumper gripper so that to avoid workpiece slipping/falling during movement.
- The initial speed while starting should not be fast to avoid workpiece slipping.
- Using a non-contact gripper that area should less than the workpiece. If the area of the gripper bigger than the workpiece, a vacuum zone will not occur, so the lifting force will not be generated.
- The basic mounting direction of the gripper is horizontal. If the gripper is mounted obliquely or vertically, the lifting force and safety factor should be considered.
- Filter modularized is recommended and suggested to be setting before gripper to give clean air and making sure the flow rate stable.
- For the workpiece which is either thin, or has holes, or has concave/convex or soft workpiece, that the area of workpiece should be full acknowledged before using the grippers.

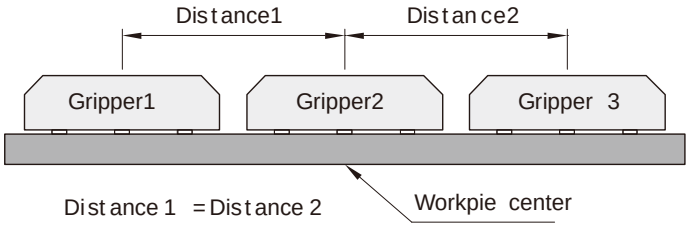


Fig.1

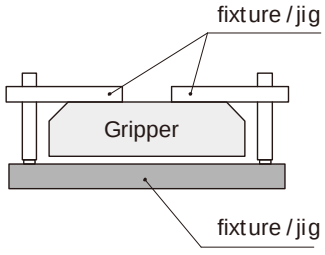


Fig.2

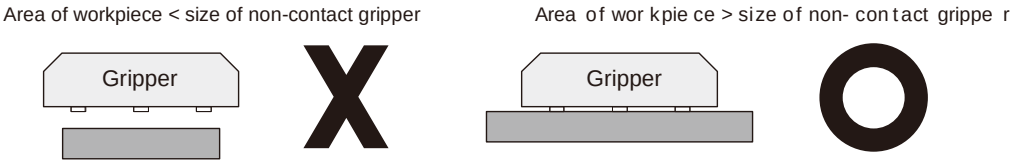


Fig.3

Precautions for assembly

- While setting grippers, the direction of air source should be along with gripper. Opposite the direction of air source is not applicable.
- The substance and tap seal are not allowed to be existed while setting the piping; Loctite liquid should not leak into gripper to cause non functioning or reducing the air flow rate.
- The piping (for connecting the gripper) should not exceed 1 meter or should not apply curly piping to reducing flow rate and causing low lifting.

Precautions for u sing

- While starting to use the non-contact gripper, please make sure the working pressure has reached to setting requirement.
- Please make sure all the electricity and air supply are shot-down before processing maintenance. It is to avoid injurying or product defective while disassembly the device.
- High chemical cleaner is not suggestible for cleaning. Only warm water with neutral and mild detergent with cotton paper for cleaning is applicable.
- After maintenance, please make sure all the parts/screws are in position and fixed before starting the air supply to non-contact grippers.