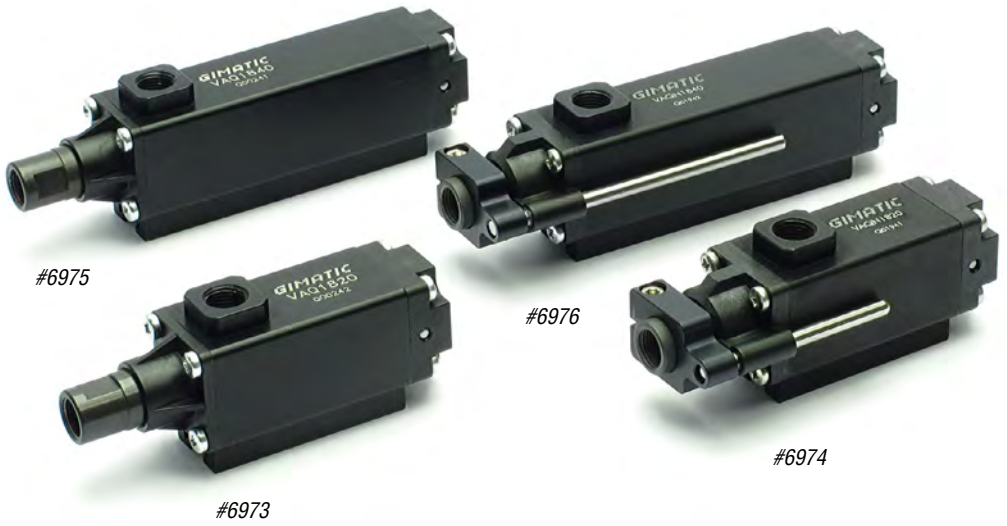
Vacuum Suspensions – VAQ

- Operated by vacuum only.
- The extension and the retraction movements are automatically actuated.
- The stroke is self-adjusting.
- Temperature range from 50° to 104°F.



#6975

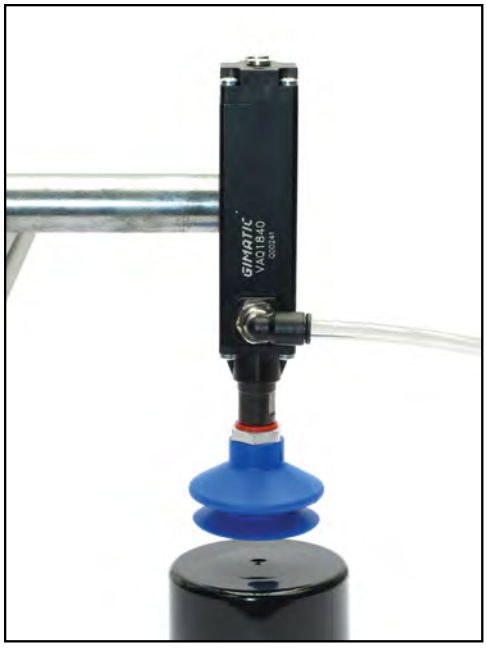
#6976

#6974

#6973

Quick#	Part#	Price	Style	Total Stroke	Stroke with Full Force	Max. Vertical Load	MIn. Vacuum Flow	Min. Vacuum Level	Weight
6973	VAQ1820	$99.00	Rotating	25mm	20mm	500g	1.06 SCFM	30%	90g
6975	VAQ1840	$107.00		55mm	40mm				125g
6974	VAQN1820	$129.00	Non-Rotating	25mm	20mm				105g
6976	VAQN1840	$140.00		55mm	40mm				145g

Use Quick#s for easy online ordering.

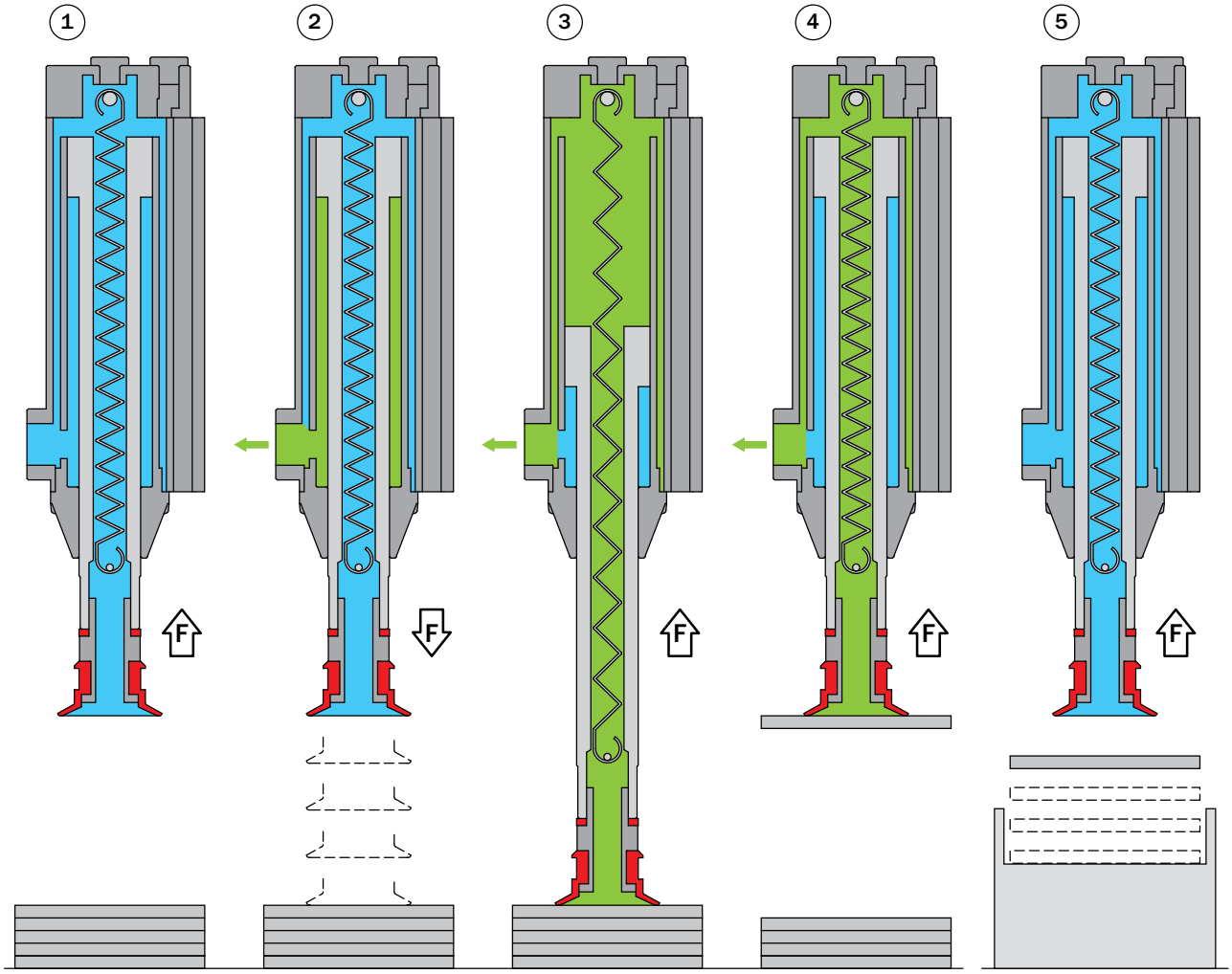


View EMI's video for more information on how the VAQ works!
www.youtube.com/emicorpvideo

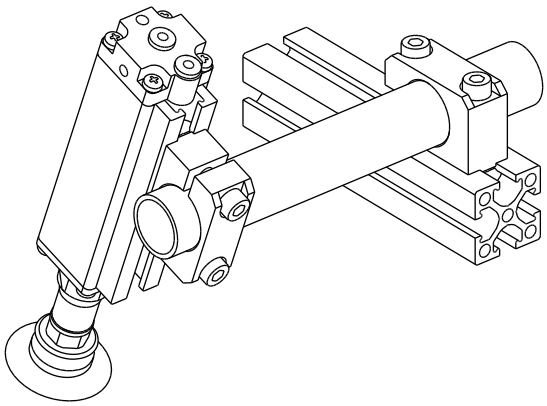
Vacuum Suspensions – VAQ

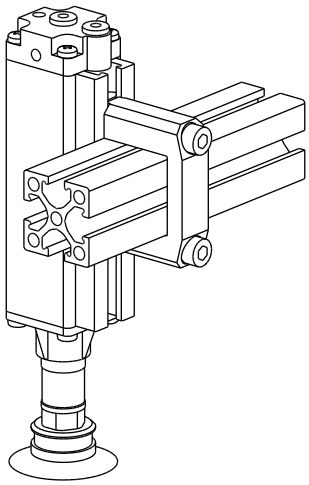
Working Principle:

1. Without vacuum, the rod is retracted by the spring force.
2. When vacuum is applied, the pressure under the piston is lower than the pressure over the piston and the rod travels forward.
3. The pressures invert as soon as the vacuum cup makes contact with an object.
4. Thus the rod retracts immediately, lifting the object.
5. When the vacuum is removed, the object is released, but the spring holds the rod retraced. (Accurately, instead of removing vacuum, a pressure impulse can be provided by the air port over the piston.)



Mounting Examples

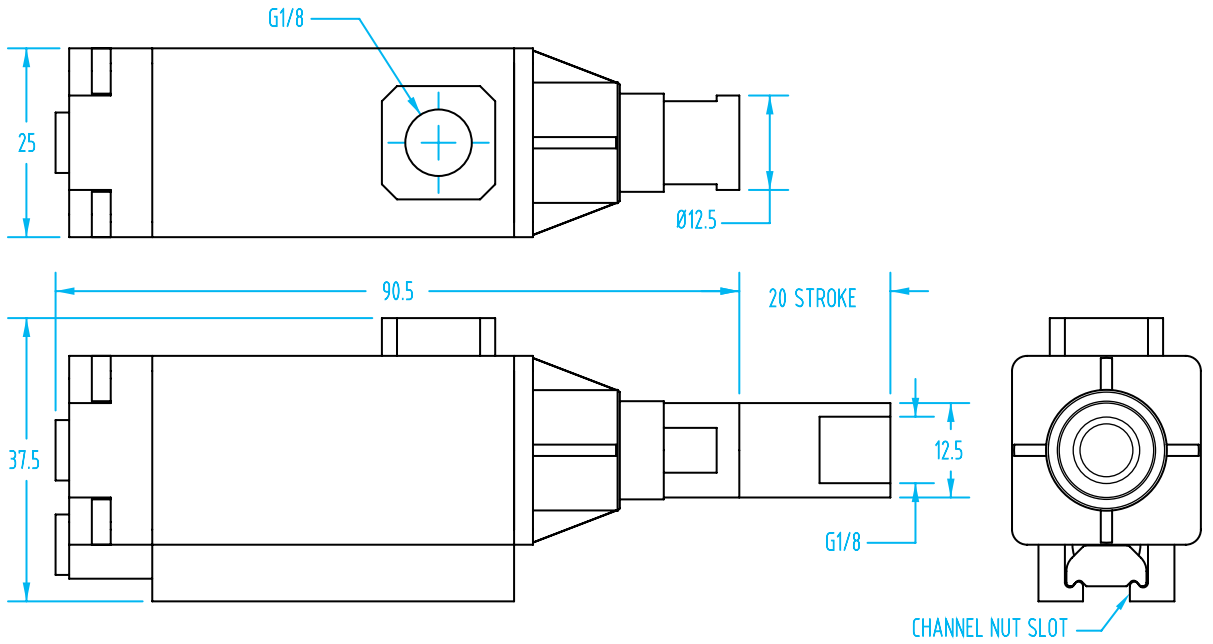




Vacuum Suspensions – VAQ

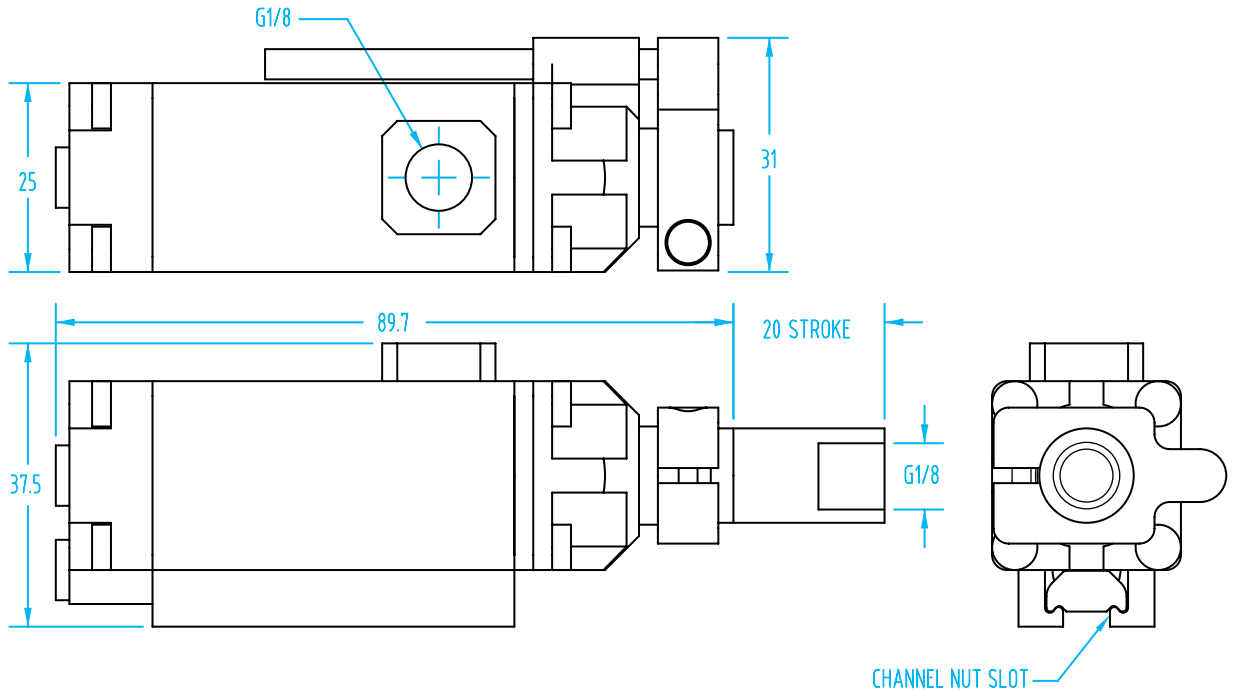
(Dimensioned drawings shown full scale)

#6973



Non-Rotating Version

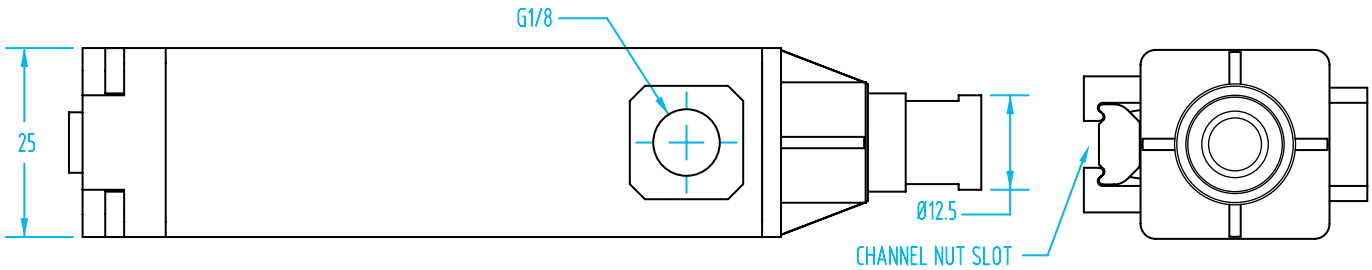
#6974

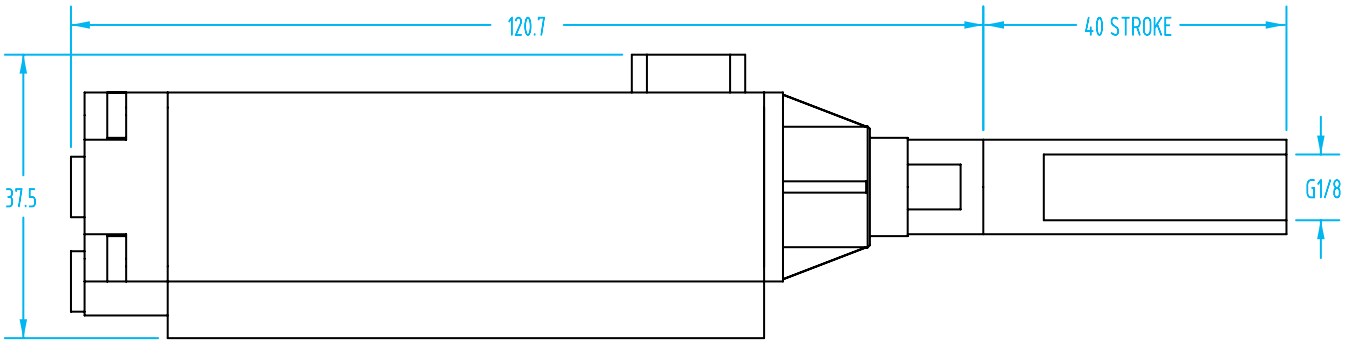


Vacuum Suspensions – VAQ

(Dimensioned drawings shown full scale)

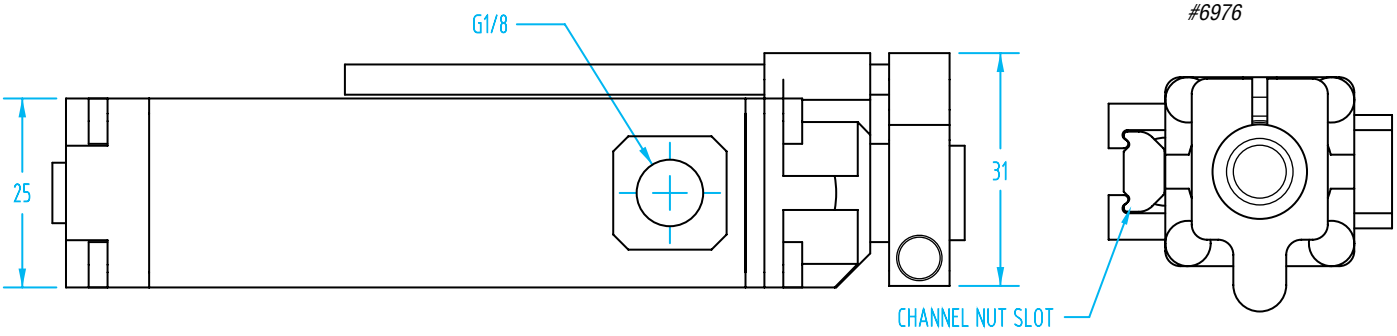
#6975

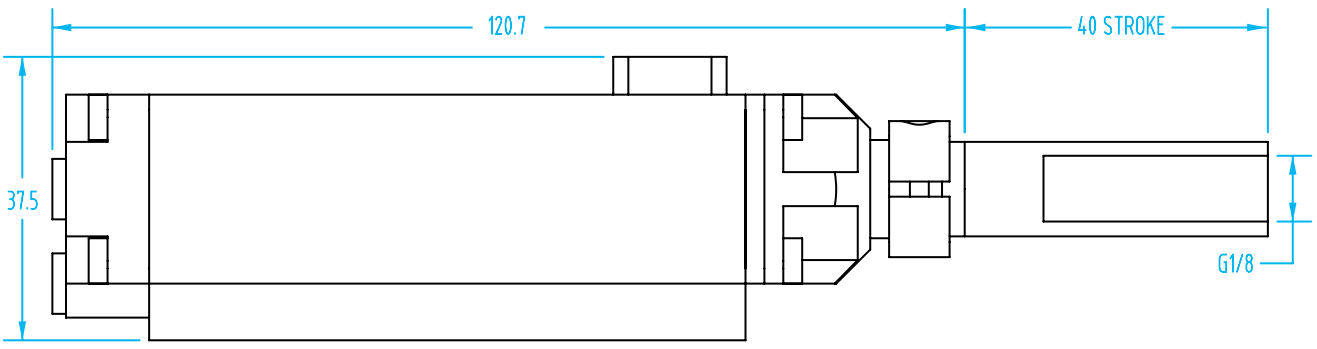




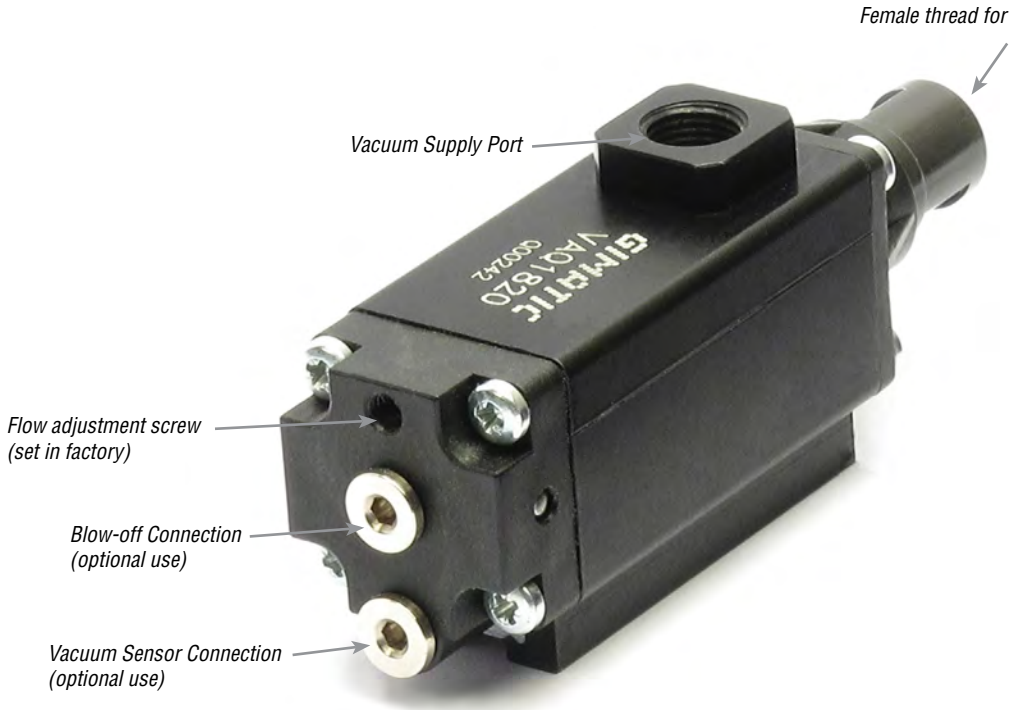
Non-Rotating Version

#6976





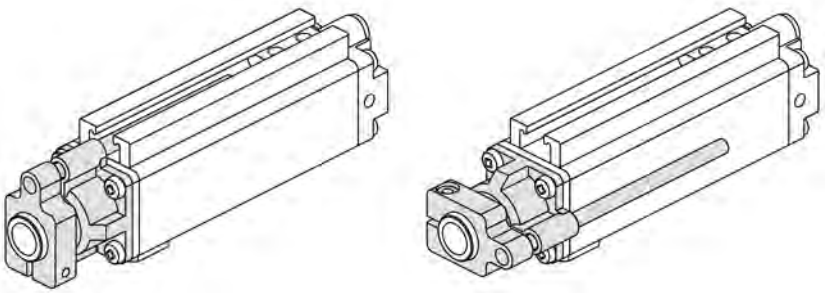
Vacuum Suspensions – VAQ



Fittings Available on page 1043

Mounting Examples

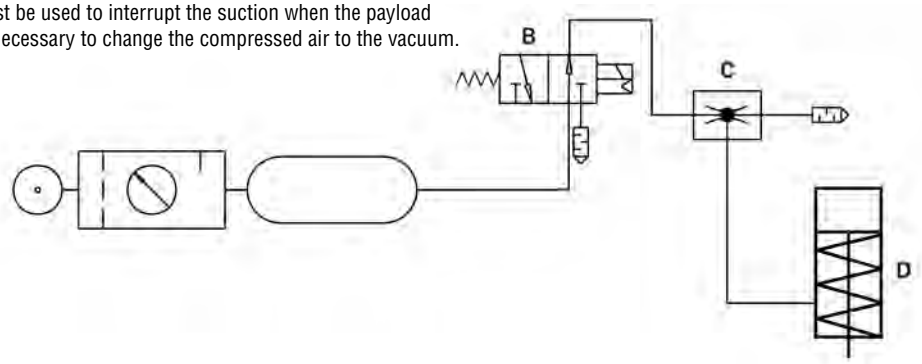
The non-rotation assembly can be positioned on 3 sides.



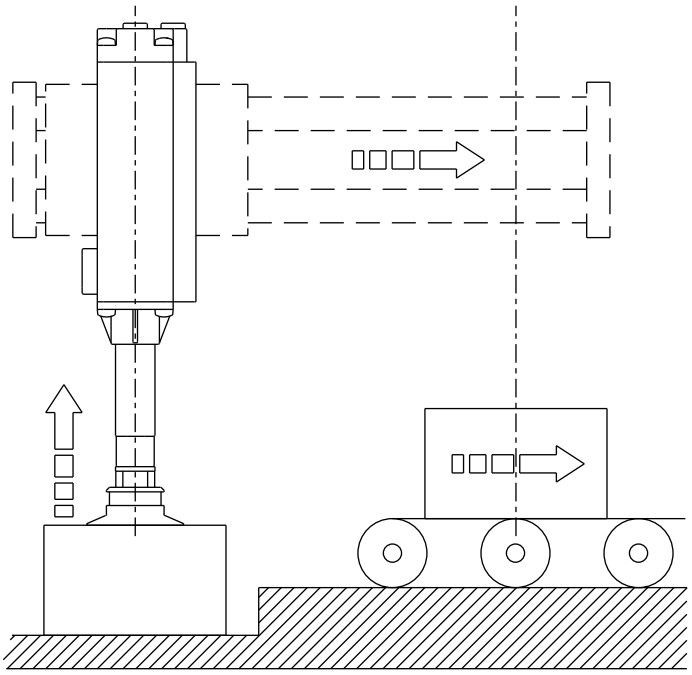
Vacuum Suspensions – VAQ

Pneumatic circuit:

To command the actuator (D), a 3/2 valve (B) must be used to interrupt the suction when the payload must be released and a vacuum generator (C) is necessary to change the compressed air to the vacuum.



Application Example: Pick & Placing at different levels.



Warning!: When using multiple VAQ on a single vacuum circuit, each VAQ will increase the vacuum losses, which increases the minimum flow rate required to operate properly. As a result it is recommended to use only 1 vacuum circuit per VAQ.

Minimum Flow Rate for proper operation is 1.06 SCFM (see vacuum generator chart on page 1023 for options.