



Vacuum Cylinder Provides Sequential Actuation, Simplifies Pneumatic Circuits

Challenge:

A customer in the packaging industry was looking for a way to simplify his pneumatic pick and place process by reducing the amount of cylinders being used in the application.

Solution:

Bimba's "Customs" engineers developed a vacuum cylinder that simplifies the pneumatic circuit by providing sequential actuation all from a single vacuum generator. The cylinder operates when vacuum is applied to a single port on the rod guide. When vacuum is applied to the actuator, the vacuum cylinder will extend, make contact, grab, and retract with the part. To release the part, simply turn off the vacuum generator.



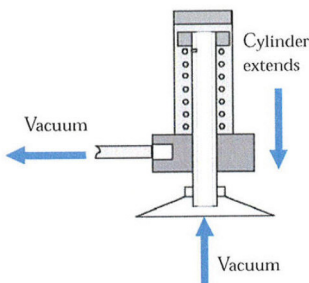
Benefits:

- Simplifies pneumatic circuit.
- Eliminates weight on end of arm tooling.
- Less actuators required for multi-motion.

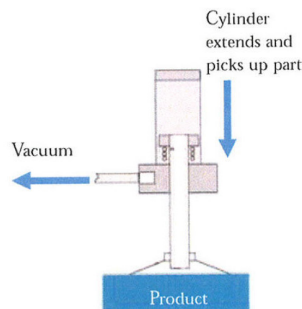
Other Applications:

- Sprue Picker
- Sheet Feeding
- Pick and Place

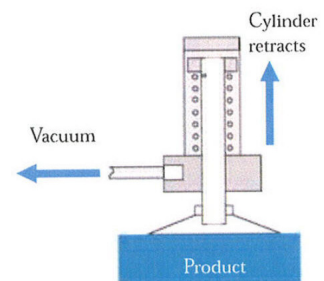
Orificed communicator hole restricts flow which causes rod to extend due to higher vacuum on the bottom side of the piston.



With the air passage closed off, vacuum is equal throughout the cylinder.



With equal vacuum in cylinder, the larger piston area and spring takes over to retract the rod.



Contact Bimba at [1-800-44-BIMBA](tel:1-800-44-BIMBA) or cs@bimba.com