

Custom Airveying Box Fill System



Product Information

Currently we offers two different Air Conveying Systems, which safely transport small plastic parts collected in a custom hopper under an IMM (Injection Molding Machine), through flexible or hard wall piping to the desired destination(s), where they are decelerated and presented to any Manual or Automatic Box, Bag or Tote Fill System.

The first is a Positive Pressure Conveyor (PPC), which uses high pressure ambient air to effectively “blow” the parts and is recommended when compressed air is not consistently available.

The second is a Vacuum Pressure Conveyor (VPC), which utilizes a line vacuum to create negative pressure used to “pull” the parts and requires compressed air.

Both systems are illustrated in the MAC Automation Fall 2001 Catalog on Pages 4 & 5 as a Quick Change Rail System (QCRS) interchangeable component. Both systems will require a QCRS, which will mount directly under the press, normally 300 Ton capacity and less.

These systems are designed specifically for the plastics industry and are typically used in cellular manufacturing applications with a total line run of 30 feet or less. Sizing of system is directly related to part weight, shape, total distance of the run, etc. In order to provide a specific quote, MAC will require parts for testing, a schematic of the proposed run, detailing horizontal sections and vertical rises, as well as required or desired radii for turns.

PPC - Positive Pressure Conveyor

Dayton Blowers: This Air Conveying System uses a high pressure direct drive blower comprised of a welded 16-gauge steel housing and die-cast aluminum radial blade wheels. The radial blade wheels are available in sizes 8-15/16 to 12-1/2”. Motor sizes available are 1/3 HP, 1 HP, 3 HP and electrical requirements vary from 115/230 1 phase to 230/460 3 phase, depending on the motor selected. All models are intended to be used with either 4” or 6” diameter clear, hard wall, Butyrate Tubing. Throat control gates are used to control air-flow and are included along with a safety intake grate over the blower. Filtered sound enclosures are an available option. Four models are available or consult the factory for additional sizes.

Chicago Blowers: This Air Conveying System uses a high pressure direct drive blower comprised of a cast aluminum housing and cast aluminum radial blade wheel. The radial blade wheel is 10-5/8 x 2-7/8” in size. Motor sizes available are 3/4 HP, 1 HP, 2 HP, 3 HP and electrical requirements vary from 115/230 1 phase to 230/460 3 phase, depending on the motor selected. All models are intended to be used with either 4” or 6” diameter clear, hard wall, Butyrate Tubing. Performance is rated at 366 CFM @ 6” SP @ 3450 RPM @ 0.66 BHP @ 70 deg. F @ 0.075 Density @ Sea Level. Seven models are available or consult the factory for additional sizes.

VPC - Vacuum Pressure Conveyor

This Air Conveying System utilizes a line vacuum with a compressed air line attached. The line vacuum creates a forward moving air stream. This type of accelerating device can also be used in series to move fairly long distances. There are three different models offered. Material of construction is Aluminum or 304 Stainless Steel. Diameters available are: 2", 3" & 4". The diameter required is dependent on the part size and volume moving through the air stream. The line vacuums are rated at 80 PSIG, but we normally find that for most manufacturing cellular distances and lightweight parts with good shapes, that 40 PSIG is closer to the usable average. VPC model numbers include the air control kit (containing filter/regulator/5' of hose and fittings)

AVAILABLE OPTION: An air operated solenoid valve is available to turn the compressed air on or shut it off in between molding cycle. This is suggested on machines that use long cycle times.