

PNEUMATIC CONVEYING

FILQUIP PTY LIMITED



"Specialists in material handling equipment for powders & granules."

PNEUMATIC CONVEYING SYSTEMS



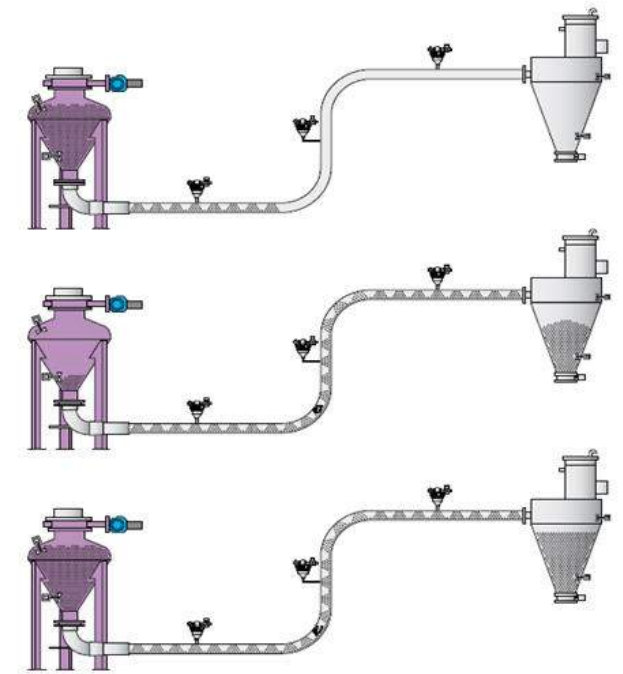
System Type	Air Mover	Velocity & Distance	Advantages	Disadvantages
Dense Phase Conveying	Compressed Air Up to 6 bar	4 – 8 m/s Up to 500m	<ul style="list-style-type: none"> • Good for abrasive materials (low pipeline wear). • Good for fragile materials (minimal particle breakage). • Good for mixed materials (minimal mix separation). • Lower Energy consumption (kW electricity per T conveyed). • Lower maintenance costs (only one moving part). • Capable of starting with a full pipeline of product. 	<ul style="list-style-type: none"> • Higher capital cost. • Not suitable for products that grip, mesh and bind (Rubber, Fibreglass strands etc). • Hard to fit under existing silos (taller systems than rotary valves).
Lean Phase Conveying	Positive Pressure Blower Up to 1 Bar	15 – 25 m/s Up to 150m	<ul style="list-style-type: none"> • Lower Capital Cost. • Low head height systems for under existing silos. • Good for conveying from one source to multiple locations. 	<ul style="list-style-type: none"> • Not suitable for abrasive products due to high levels of pipeline wear. • Not suitable for fragile materials. • Not suitable for mixed materials (mixed particles separation). • Not suitable for heat affected products (conveying air can be >80° C). • Higher ongoing running costs (kW electricity per T conveyed). • Higher ongoing maintenance costs (rotary valve wear from air leakage). • Conveying air can be >80 Deg C.
Vacuum Conveying	Vacuum Blower Up to -0.5 Bar	20 – 30 m/s Up to 60m	<ul style="list-style-type: none"> • Lower Capital Cost. • Good for conveying from multiple locations to one location. • Good for use under existing silos (low head height equipment). • Good for Toxic or harmful materials (no system leakage). • Lower Maintenance Costs than Lean Phase Conveying. 	<ul style="list-style-type: none"> • Not suitable for abrasive products due to high levels of pipeline wear. • Not suitable for fragile materials. • Not suitable for mixed materials (Mixed particles separation).
Mobile Vacuum Conveyor	Side channel vacuum blower	18 – 25 m/s Up to 15m	<ul style="list-style-type: none"> • Mobile unit for servicing multiple purposes in the one factory. • Low Capital Cost 	<ul style="list-style-type: none"> • Small throughputs only. • Smaller distances only.

DENSE PHASE CONVEYING



All our dense phase conveying systems come with advanced control technology through the touch screen HMI control panel allowing the user to manage and control each part of the conveying cycle or run in full automatic mode. Individual parameters for the conveying cycle are able to be set to provide a system customized to material conveying characteristics.

- **High Product conveyed to Air used ratio = Energy saving and Cost saving.**
- **Less moving parts = Reduced maintenance and costs.**
- **Lower velocity conveying = Lower pipe wear = Reduced maintenance/costs.**
- **High Internal cleaning = Increased efficiency.**
- **Completely closed system = Increased safety.**
- **Reduced product stratification and bend impacts = Perfect for mixed and fragile materials.**



DENSE PHASE CONVEYING

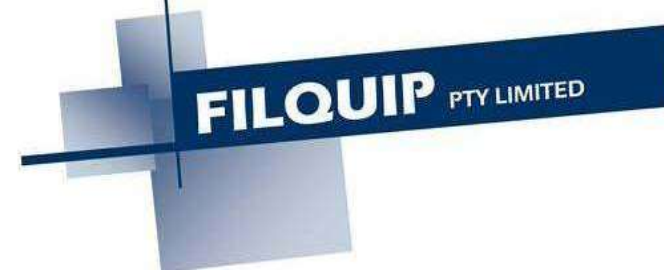
FILQUIP PTY LIMITED

Filquip has partnered with European manufacturer Air-Tec Systems to deliver dense phase conveying transporters which guarantee reliability and safety when conveying of abrasives, mixtures and foods, as well as fragile, toxic, plastic and lumpy materials. All our designs are registered and certified with the government to Australian pressure vessel standard (AS1210).

Filquip can provide dense phase conveying systems that can convey from small batches to throughputs greater than 100 m³ product / hour at distances in excess of 500 meters.



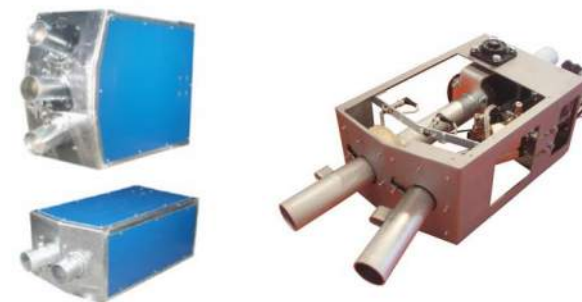
DENSE PHASE DIVERTERS



DEV Dense Phase Diverter Valves

The Air-Tec DEV diverter valves are certified for pressure up to 6 bar and available in 2 way and 3 way versions.

- Available in sizes from 2" to 6" with contact parts in carbon steel or AISI 304.
- Suitable for handling materials of any size including with abrasive or fragile materials, as well as those that tend to clog.
- An inflatable seal placed on the head of the oscillating tube is deflated when the tube changes its position and inflates again after the pipe has reached the desired position which is controlled by limit switches.



Tee-Top Valve End Receivers (Full Pipeline Systems)

The valve receiver (Tee Top) allows pneumatic conveying of a product to multiple inline destinations with one single pipeline.

Can be installed directly on Silos or Hoppers along the dense phase route, or positioned at the end of the line to direct the flow of product to the desired location. Pneumatically actuated and available with feedback limit switch.



COMPRESSED AIR PACKAGES

FILQUIP PTY LIMITED

SENATOR Compressors

The Senator value range of compressed air packages is the benchmark in affordable compressors without sacrificing performance, reliability or quality.

The range includes combination packages, standard compressors and variable speed units with a performance class range of 4 kW to 75 kW.



ALMIG Compressors

Filquip is an Authorised Distributor of German Manufactured ALMIG Compressor Systems.

The ALMIG COMBI Air Compressor Packages provide a small footprint All-In-One Compressor and Air treatment system. With a performance class range of 5.5 kW to 22 kW the COMBI system includes the compressor, air-receiver, refrigeration drier inline pre-filter and inline post filter all in the one simple to locate and install housing.

ALMIG also has the G-Drive and V-Drive series of compressors which have a performance class range of 30 kW to 75 kW.



DUST COLLECTORS / SEPARATORS



WAMFlo Dust Collector / Dust Separator

The WAMFlo dust collector is a flanged round dust collector designed to control emissions of any kind of dust in virtually all industrial sectors.

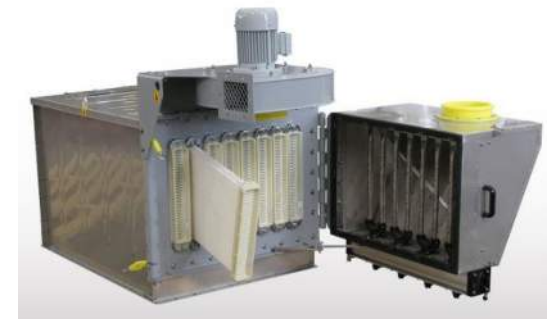
- Filtration surface areas from 2m² to 44m².
- Range of bag and cartridge filter options in a robust SS304 body.
- Available in ATEX/IECEX versions for use in hazardous areas.
- The WAMFlo dust collector has maintenance free automatic reverse air jet cleaning of the filters to return the separated dust to the silo.



WAMAir Dust Collector / Dust Separator

The WAMAir polygonal dust collector is a flanged dust collector designed to control the emission of any kind of dust in virtually all industrial sectors.

- Air volumes up to 9,000m³/hr with Filtration surface areas from 3m² to 70m².
- Optional vertical or horizontal cartridge or bag filter elements in a robust SS304 body.
- Available in ATEX/IECEX versions for use in hazardous areas.
- The WAMAir dust collector has maintenance free automatic reverse air jet cleaning of the filters to return the separated dust to the silo.

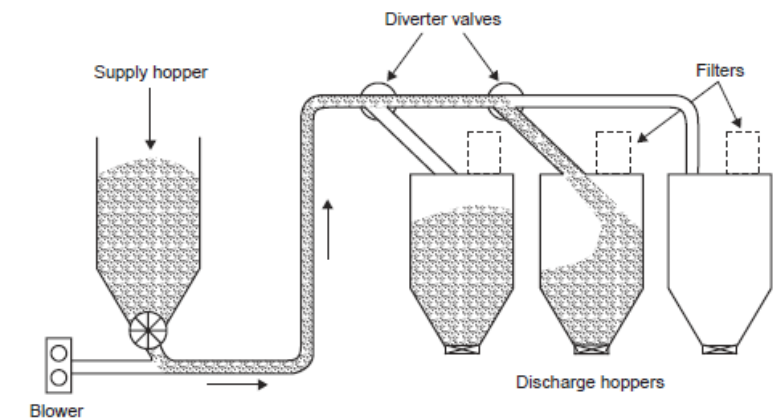


LEAN PHASE CONVEYING (BLOWER)



Filquip designs and supplies lean phase pneumatic conveyor systems for conveying non-abrasive products using a rotary valve to meter product into a conveying air-stream created by a blower. The conveying pipeline delivers product to a receival hopper which is vented through a dust collector. We have provided systems for conveying many products including PE Beads, Diatomaceous Earth, Grains, Seeds, Sugar, Cement, Lime, Bentonite, PVC and many more.

Our systems can convey product from Silos, Hoppers, Bulk Bag Unloaders and Delivery Trucks to any location required for your process.



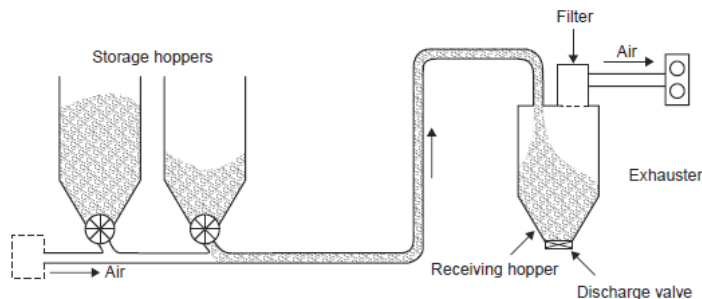
VACUUM CONVEYING SYSTEMS



Filquip designs and supplies vacuum conveying systems transferring non-abrasive powders, granules, flakes, pellets, seeds and crystalline products distances up to 60m.

Some of the advantages of Vacuum Conveying Systems include:

- They do not suffer from air leakage through the rotary valve feeder into the system (Less feeder wear and maintenance).
- They are ideal for products that tend to pack or plug under positive pressure.
- They are NFPA recommended for food processing facilities with organic materials and combustible dusts.
- Vacuum conveying systems when correctly sized and applied use significantly less electrical energy to operate compared with a positive pressure lean phase system.



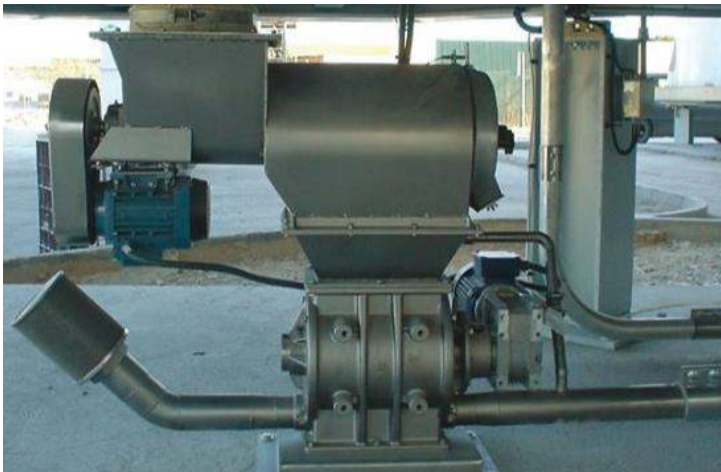
ROTARY VALVES



Filquip supplies a range of TOREX rotary valves to volumetrically control the feed of the material into the positive pressure or vacuum conveying air-stream. Rotary valves are also used to provide an airlock on the receiver hopper or silo.

Available in:

- Drop-Through or Blow-Through options.
- Optional Cast iron, Stainless Steel 304 & 316, Chrome Bore, Teflon and Nickel plated.
- Capacities of 2, 5, 10, 20, 35 & 80 L/Revolution at speeds of 10, 20 or 30 RPM.
- Working Temperatures from -40°C to 150°C.



DIVERTER VALVES



	VAB Flap Diverter (22.5 Deg)	VAD Oscillating Diverter (30 Deg)	VAR Drum Diverter (30 Deg)	VAS Plug Diverter (60 Deg)
Material of Construction	Cast Aluminium Alloy Body	Cast Aluminium Alloy Body	Cast Aluminium Alloy Body Optional Stainless Steel 304	Cast Aluminium Alloy Body
Seal	Flexible	Rigid	Static or Inflatable Seals	Rigid
Operating Temperature	-20° C to +80° C	-20° C to +80° C	-25° C to +80° C	-10° C to +80° C
Operating Pressure	-0.3 Bar Vacuum to +2.0 Bar Pressure	-0.5 Bar Vacuum to +2.5 Bar Pressure	-0.5 Bar Vacuum to +3.5 Bar Pressure	-0.5 Bar Vacuum to +1.0 Bar Pressure
Diameters / Bores (mm)	50, 65, 80, 100, 125, 150, 200	50, 80, 100	50, 65, 80, 100, 125, 150, 175, 200	50, 65, 80, 100, 125, 150, 200
Actuation	Pneumatic, Electrical or Manual	Pneumatic, Electrical or Manual	Pneumatic	Pneumatic
Abrasive Applications	Not Recommended	Not Recommended	Suitable	Not Recommended
Granule Applications	Suitable	Suitable	Suitable	Not Recommended
Converging Applications	Suitable	Not Recommended	Suitable	Not Recommended
Fine Dust Applications	Suitable	Suitable	Suitable	Suitable



WEAR BENDS & ELBOWS



EBM ExtraBend Short Radius Wear Elbows

The EBM series short radius wear bends use a special flow geometry to enable product conveying with minimum wear.

- Sizing in 2", 3" and 4" pipe diameters.
- Rated for -0.5 Bar Vacuum to +1.5 Bar Positive Pressure and Temperatures -20° C to +80° C
- Considerable reduction of flow resistance, saving energy.
- Lightweight elasticity of SINT bend material minimises particle breakdown, grinding and jamming.
- Food grade version available.



EWM ExtraCurve Long Radius Wear Bends

EWM long radius wear bends with are made from wear resistance SINT polymer cast around a helicoid spring. Their symmetric nature allows then the be mounted in reverse when wearing.

- Sizing in 2", 3" and 4" pipe diameters.
- Rated for -0.5 Bar Vacuum to +1.5 Bar Positive Pressure and Temperatures -20° C to +80° C
- Flexible and lightweight with a wide material impact zone.
- Food grade version available.



PIPE & TUBE COUPLINGS/CLAMPS



Filquip stocks a large range of Eurac pipe and tube couplings in galvanised steel and stainless steel.

- Sizing from 38.1mm to 300mm in diameter (Including standard sizes 48.3, 50.8, 60.3, 635., 76.1, 88.9, 101.6, 114.3, 152.4, 168.3, 219.1, 250 and 300 mm and many in between).
- Suitable for positive pressure and vacuum conveying operations.
- High working pressures (Pressure Graphs for each size available).
- Available in a galvanised body with stainless steel contact parts or in full 304 stainless steel.
- NBR seals supplied as standard, other options includes FDA approved food grade, Viton and Silicon seals.



SIGHT GLASSES & GLASS BENDS



Filquip carries a range of stocked sizes of borosilicate sight glasses and wear bends.

The transparency of the borosilicate glass allows simple visual checks of the material flowing through the pipes or bends.

With Electrostatic Protection from its Copper Conductive Strip and Food Grade properties (think Pyrex Glass) they are well suited to a handling wide range of products.

- Borosilicate Glass has up to 10 times the abrasion resistance of Stainless Steel which makes them very effective wear bends.
- Available in multiple tube and pipe diameters including 38, 40, 45, 50, 60, 63.5, 65, 70, 76, 80, 84, 88.9, 101.6, 104 and 114mm.
- Available in Straight Lengths, 45 Deg Bends or 90 Deg Bends.
- Suitable for Pressures -0.5 Bar Vacuum to +1.1 Bar Positive Pressure.



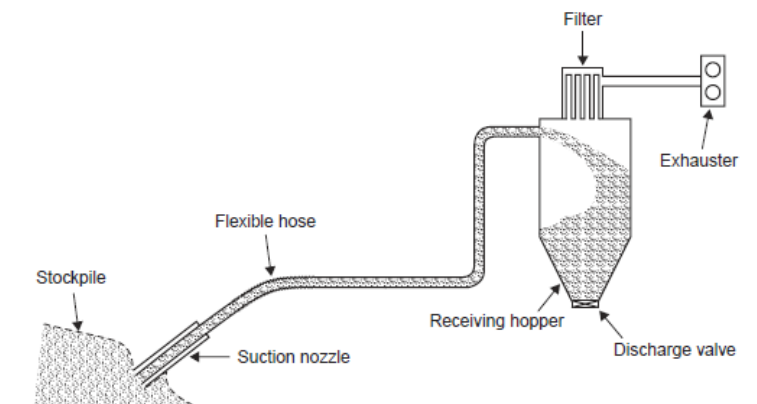
MOBILE VACUUM CONVEYOR

FILQUIP PTY LIMITED

Filquip supplies mobile and small batch vacuum conveying systems for moving products from chutes and bags using a wand or pipe connection.

The use of a mobile vacuum system to unload bags of product into a factory process mitigates the risks of injuries from incorrect manual handling techniques or from staff lifting bags of product that are too heavy.

The unit is supplied complete with an in-built dust separator filter that has automated reverse pulse cleaning. The system is manufactured from polished stainless steel with food grade suction hose, to provide a complete solution for moving materials around your facility.



FILQUIP PRODUCT RANGES

FILQUIP PTY LIMITED



Materials Handling Equipment

- Silo/Hopper filling systems
- Silo/Hopper discharging equipment
- Dust collection
- Screw conveyors
- Bucket elevators
- Rotary valves
- Bulk bag unloaders and much more equipment



Industrial Filtration and Filter Replacements

- Dust collectors
- Dust collector bags
- Dust collector cartridges
- Panel filters, HVAC, Spray booth and Bulk media
- Air slide replacement matting
- Blower inlet filter cartridges
- Liquid filter bags, Vessels and much more equipment



Water & Waste Water Equipment

- Chemical dosing (PAC, Polymer, Lime, Zeolite)
- Primary screens
- Grit separation
- Washer compactors
- Solids / liquids separators
- Shaftless screw conveyors (Sludge handling)
- Concrete reclamation Equipment and much more equipment



Flow Aids – Vibration and Aeration

- Electric vibrators (AC and DC)
- Pneumatic vibrators
- Shock hammers
- Air blast cannons
- Hydraulic vibrators
- Fluidisers and aerators
- Concrete consolidators and pokers and much more equipment



Pneumatic Conveying

- Lean phase conveying
- Dense phase conveying
- Vacuum conveying and Industrial vacuum systems
- Diverter valves
- Air slides
- Wear bends and Elbows
- Pipe couplings