Pneumatic Conveying
When your application for moving a bulk solid (powder) needs the convenience of a pipeline, probably due to distance and route complexity, dust management, competitive capital cost and low footprint, chances are you need a pneumatic conveying system.

- Larger capacities of up to several hundred tonnes per hour and distances of hundreds of metres.
- Developed and proven over many years, features the unique KBS aeration system that guarantees excellent vessel cleanout and optimum powder conditioning for conveying.
- Optional material contact valves, from the standard POSIFLATE inflatable seat butterfly valve to the high specification CLYDE Dome valve.
- Fully self-contained with all instrumentation, valving and controls, or customised to suit clients own specifications.
- Designed and built by KBS to AS1210 Class 3, or other international codes if required, in painted carbon steel or stainless steel for hygienic applications.
- Air supply is by plant air or our own oil free wing compressors which are uniquely suited to dense phase conveying applications.
Locomotive Sanding Systems

Kockums Bulk Systems has been designing and building locomotive sanding systems since the 90's. They were originally based on our extensive experience in dense phase pneumatic conveying, and this particular application for sanding locomotives called for us to develop a super dense phase low velocity system to prevent damage to the sand.

Container Unloading / “Suck & Blow” Method

- The use of ISO shipping containers for handling bulk solids (powders) is well recognised and accepted these days and protective liners and fluidising systems are readily available.

- The fully contained, site based “suck & blow” method by KBS utilises a version of the dense phase Pneumatic Conveying Vessel (PCV) which vacuums powders from a tilted container and discharges to a destination silo at rates up to 25 t/hr.

- The system utilises a single compressed air source to both generate the vacuum as well as convey the material, and can be specified from either a low pressure or high pressure supply.

- The PCV is portable by forklift and can be moved about the plant to be used for a variety of tasks from general housekeeping and spill clean up to hopper transfers.

- The system has been successfully used with Portland cement, fly ash, starch, magnesium oxide, flour, sugar, amongst others.
Lean Phase Conveying

Positive Pressure & Vacuum Conveying
Convey more difficult materials, continuous conveying, variable flow rates.

Lean phase conveying is typically divided into pressure (blown) and Vacuum (sucked) types, it is often a low capital cost solution when the higher conveying speeds do not cause abrasion or product damage problems.

Pressure systems are typically capable of greater distances & capacities. Whereas vacuum systems are often considered safer with hazardous products, due to their inherent leak containment capability.

- Convey difficult materials that are not conducive to the more efficient dense phase option.
- KBS supplied ‘Roots’ type blowers are typical for these systems and are available in a full range of capacities and options.
- Similarly our range of rotary valve feeders cover basic industrial grade to special wear resistant trim and finishes to bespoke designs for those extraordinary applications handling unusually abrasive materials or large particle sizes.
Wing Compressors

- Particularly suited to dense phase conveying, the unique wing compressor is a strong robust, low speed, oil free compressor rated at 2 BarG, which covers most dense phase applications.

- A quiet compressor which in most cases does not require a sound enclosure, it finds uses in both mobile (road tankers) as well as stationary (power pack electric drive) applications.

- Renowned for low maintenance and long life, it is available in a range of capacities which match all pneumatic conveying pipeline sizes from 50NB to 150NB, and higher by use of multiples.

POSIFLATE Inflatable Seat Butterfly Valve

- Less friction, low torque, less wear, longer life.

- Minimal contact between seat and disc during opening and closing. It automatically compensates for wear when the seat inflates in the closed state against the disc, giving substantially improved wear life.

- The unique design also gives a superior seal by utilizing air pressure to expand the seat against the disc. A smaller actuator can be utilised due to the low torque requirements and the valve opening and closing speed is faster.

CLYDE Dome Valve

- The most effective bulk material handling valve in the world, is offered as a high specification valve for those applications requiring a robust, low wear, full bore designed valve.

- Capable of cutting through static columns of material, available in a wide range of sizes (50 to 500NS), the inflatable seat provides a positive pressure seal. Temperature up to 400°C can be handled with water cooled versions, and a range of material trims available for corrosion, abrasion, adhesion and hygiene requirements.

- Variants for flow diversion, lock hoppers, dump valves and terminal boxes, high pressure versions and other uses are available.

Conveying Bends

- Long radius bend available in standard schedule pipe with options of reinforcing or ceramic construction.
From a project's infancy Kockums can quickly and accurately provide concept designs and budget pricing for capital approval. At this early stage material trials are often undertaken at our Melbourne facility to help confirm solution selection.

Our In-house design engineering team design all equipment in compliance with Australian Standards and meeting our customers expectations. The Kockums Brand is well known for its "built to last" reputation and often unique approach.

Kockums offers installation, commissioning and operator training. Equipment is fully assembled and tested prior to commissioning by experienced engineers to ensure optimum performance and efficiency.

Kockums has a trained service team providing spares and nationwide support to our clients. Every installation requires something different and our partnership program allows us to work with individual customers to determine the most effective level of support.