



Your single-source supplier of pneumatic conveying, bulk bagging, and industrial automation components.  
*Fast Quotes - Excellent Pricing - Prompt Delivery*

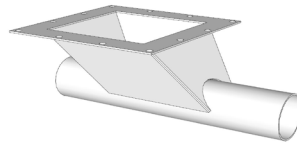
**Cam and Groove Couplings**



**Compression Couplings**



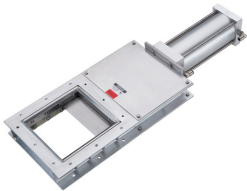
**Blow-Thru Adapter**



**Railcar Hopper Adapter Pan**



**Knife Gate**



**Butterfly Valves**



**Diverter Valves**



**Railcar Boot-lift**



**Industrial Filters**



**Convey Line**



**Angel Hair Trap**



**USS EZ-SLEEVE  
Railcar Outlet Adapter**



**Cyclone Separator**



**Bins - Hoppers - Silos**



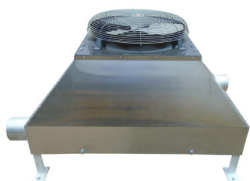
**Blower Package**



**Bin Vent**



**Aftercooler**



**Electrical Components**



**Lump Breaker**



**Shot Box**



### Cam and Groove Couplings



Cam and Groove Couplings are an elegant solution for connecting hoses to pneumatic conveying systems.

- Easy to install
- Sizes 1/2" through 6"
- Construction Material: stainless steel 316 and aluminum
- Gasket materials: black and white neoprene, silicone and others

To order: please specify the size, construction material, and gasket material. to install

### Compression Couplings

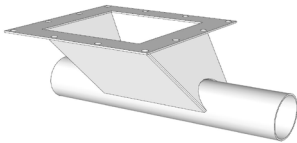


Compression Couplings are used for joining pipe and tubing for pneumatic conveying systems.

- Easy to install
- Pipe and tube sizes 1/2" through 48"
- Standard construction material is heavy gauge zinc-plated steel
- Also available in stainless steel and aluminum
- Gasket materials: black and white neoprene, silicone and others
- Static conductive grounding strip is standard

To order: please specify the size, construction material, and gasket material.

### Blow-Thru Adapter



A USS Blow Thru Adapter introduces material from the discharge outlet of a rotary valve into the pipeline of a pneumatic conveying system.

Available in a wide range of tube and pipe sizes.

- | Connection Fittings: | Construction Materials: |
|----------------------|-------------------------|
| • Plain End          | • Painted Carbon Steel  |
| • Flanged            | • Stainless Steel       |
| • Custom             | • Aluminum              |

To order: please specify the rotary valve discharge flange dimensions, construction material, and fitting types.

### Railcar Hopper Adapter Pan



Our railcar/truck adapter pans clamp on and you're ready to go.

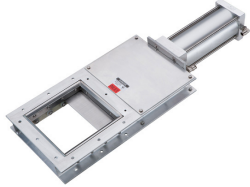
For hopper cars without a pneumatic hookup our gate adapter pan easily clamps on tight.

The operator then connects the pneumatic hose, opens the gate, and the material falls into the pan to be carried away by air.

Our hopper adapter pans are made from aluminum for lightness and safety and can be made to fit any hopper flange size.

To order: please contact US Systems with hopper flange dimensions, connection type and diameter, and material to be conveyed through the pan.

### Knife Gate



The Knife Gate Valve is designed for positive shut-off of all free-flowing bulk material. Often used under silos, bins, dust collector hoppers, feeders, and other conveying equipment to shut off flow.

Knife gate valves are great for dry powders, plastic pellets, granules, and slurry in addition to viscous, corrosive, and abrasive media.

Construction materials: Mild steel, 304SS, 316SS, AR steel

To order: please specify the size, shape (round or square), construction material, and actuation type: manual or pneumatic cylinder.

### Butterfly Valves

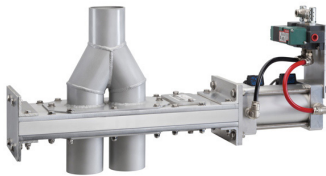


Butterfly valves are used in pneumatic conveying applications for shutting off and regulating the flow of air and material.

- 2" to 12"
- Wafer Style
- Lug Style
- Cartridge Seat
- Thin Profile Disc
- ISO mounting and Shaft
- Rated to 50 psi, 200 psi, 285 psi
- Vacuum Rated to 29.92" of Mercury Gauge

To order: please specify the diameter, body type (SS or Carbon Steel), connection type (wafer, lug, semi-lug), and seat material (Viton – heat rated or Buna N – non-heat-rated).

### Diverter Valves



The Pneumatic Conveying Diverter Valve is used to reroute product from one convey line to another.

Construction Material: The body is available in cast iron, cast aluminum or cast stainless steel.

An internal flap plate is fabricated of mild steel or stainless steel, with a polyurethane rubber wiper seal.

To order: please specify the size and number of inlet and outlets, the material of the internal flap, and the construction material.

### Railcar Boot-lift



The Boot-Lift Railcar Connector improves the speed and safety of connecting a hopper car to under-track systems, without workers crawling under the car and without losing material to wind or contamination.

- Boot prevents material loss, air pollution, and contamination.
- Boots are automatically connected.
- Connector rises as railcar empties.
- Unit uses only 1 cfm at 90 psi (28 l/min. at 6.2 bar).
- Adapter plates allow interchangeability.
- All assemblies include the appropriate control console

Air Requirements: 1 cfm (0.47 L/sec) at 90 psi (6.2 bar). Air line should include filter, regulator, and lubricator.

To order: please specify type of material that will flow through the boot-lift, if the material is food-grade, type of railcar (single, double, or round gate), and gate flange dimensions.



### Industrial Filters



Pneumatic conveying and industrial dust collectors use various types of filters depending on the application. We provide virtually any filter you need.

- Medias include PTFE, Polyester, Cotton, and more.
- Filter bags/cages
- Pleated cartridges
- All filters are EPA-compliant

To order: Please specify the media type, shape, and length of filter you need.  
Industrial Dust Filter Cartridges

### Convey Line



US Systems provides pneumatic conveying pipe and tubing for your conveying needs.

- Straight-lengths
- Internal spiral-grooved pipe and tube
- Shot peened pipe
- Standard short and long-radius elbows
- Wearback elbows
- Ceramic-backed elbows
- Welded fabrications
- Stainless Steel and Carbon Steel available
- Custom Wye's and laterals

To order: please specify the type of line you need, length, material, diameter, and any customization needed.

### Angel Hair Trap



It sounds pretty, but there's nothing pretty about having angel hair in your conveying system.

Angel hair traps are designed to trap "angel hair", "streamers" or "snake skins" common in the conveying of plastic materials at the base of a silo or storage bin.

Two different styles are available – either Drawer or In-Line to fit your vacuum or pressure conveying systems needs.

To order: please specify the type (drawer or in-line) and inlet/outlet dimensions. Please let us know about your application.

### USS EZ-SLEEVE Railcar Outlet Adapter



Camlocks are OUT...the USS Urethane Connection Adapter is IN!

This specially-designed adapter is the perfect way to attach a pneumatic conveying line to a PD railcar. It's fast, safe, and easy to use.

A USS flexible Urethane Sleeve Adapter's rugged and durable design is perfect for use with even the most abrasive materials for lasting use. Operators enjoy the ease of connecting and disconnecting the sleeve to pneumatic connections on trucks, railcars, and more. The translucent nature of the adapter often allows the operator to see material flowing through the system.

Please give us a call regarding your specific application and we'll send one right away.

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### Cyclone Separator



We manufacture standard cyclones and engineer solutions to your most difficult problems. If you're scratching your head about something give USS a call.

A US Systems Cyclone uses vortex separation to remove particles from air. Air and material discharges into the cyclone at a high speed from a pneumatic conveying system.

The material drags downward in a spiral along the walls by gravity as the air flows upward toward the cyclone outlet.

Cyclones can be made from stainless steel, aluminum, or painted carbon steel. We can easily custom-engineer the perfect solution for your material and conveying needs.

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### Bins - Hoppers - Silos



The most important consideration in the design and implementation of a bulk material vessel is the material itself.

Every material has different properties of cohesion that are considered and a solution applied that allows for the best flow possible. We get it right the first time, saving you time, money, and aspirin.

A poorly-designed hopper can cause a lot of problems and headaches that no one has the time to deal with.

Through scientific evaluation and best-practice design principles we will get it right the first time – ensuring that your material flows as it should so you can move on to more pressing concerns.

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### Blower Package



Our Blower Packages are customized to save on energy costs and built to last.

We know that our clients are going to rely on our blower packages to keep their operations running for the long haul. We engineer them to size them right and manufacture them to last. USS equipment built decades ago are still out there running processes today.

US Systems motor-blower packages are designed, manufactured, and assembled in our shop from premium materials and components that will exceed operating conditions for continuous service. We provide skid-mounted packages for applications where portability is desired.

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### Bin Vent



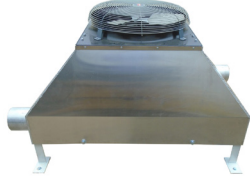
We design and manufacture dust filters for use with any material in any climate. Scratching your head? US Systems creates solutions for difficult applications. Give us a call about your specific application and we'll help.

When material and convey air discharges into a silo, the air must be allowed to escape. For dusty material that air must be filtered before venting to atmosphere. That's where a baghouse with Pulse Jet Filter comes in.

The industrial-duty filters are long-lasting, simple to maintain, and easy to replace.

US Systems provides rugged, long-lasting filter media specified for your material. We continue supporting your system by making it easy to reorder filter media when needed.

### Aftercooler



An important but little-known fact about pneumatic conveying is that the temperature of air rises 15 degrees for every PSI the air is compressed. Any good designer will understand where the heat is in the system and mitigate it if needed.

If the material conveyed is reactive to the heat we may need to mitigate the heat before the material is exposed to it.

One way to mitigate the heat is with an aftercooler.

To order: please specify the inlet and outlet type and sizes and the required airflow.

We offer a wide range of electrical components used to control and automate industrial processes.

### Electrical Components



- Pushbuttons
- Lights
- Switches
- Level indicators
- Photoeyes
- Proximity Switches
- Relays
- Terminal blocks
- Motor Drives
- Transformers
- PLCs
- and more

To order: please specify the size, type, or any other information of the component needed.

### Lump Breaker



The USS Lump Breaker consists of a square cross-section casing with upper and lower flange, two horizontal rotating shafts equipped with chopping knives, a grid to hold back lumps, four end bearing assemblies with integrated adjustable shaft seal, an appropriately sized drive unit complete with power transmission.

The USS Lump Breaker is the ideal device for breaking up material lumps that have formed during handling or processing but are soft enough to be broken up.

Quick rotation of special chopping knives through a fixed grid does the job. The presence of two rotor shafts results in high throughput rates.

To order: please specify the material, size, and flange dimensions for the inlet and outlet.

### Shot Box



Material usually needs to take a turn before entering a silo or bin. The end of a pneumatic conveying run is where the material is flowing at the highest velocity.

Abrasive material can easily wear out components at the end of the line. To mitigate this damage we employ a "Shot Box."

A shot box is a large box where the air and material expand before entering the silo. This expansion causes the air and material to slow the velocity it is traveling at.

This causes less abrasion, and the flanged wall of the shot box where material may abrade it can be easily and cheaply replaced to keep you moving.

To order: please specify the inlet and outlet type and any flange dimensions. Usually, the outlet connection to the silo is flanged and the inlet connection is a stub used with a compression coupling.