



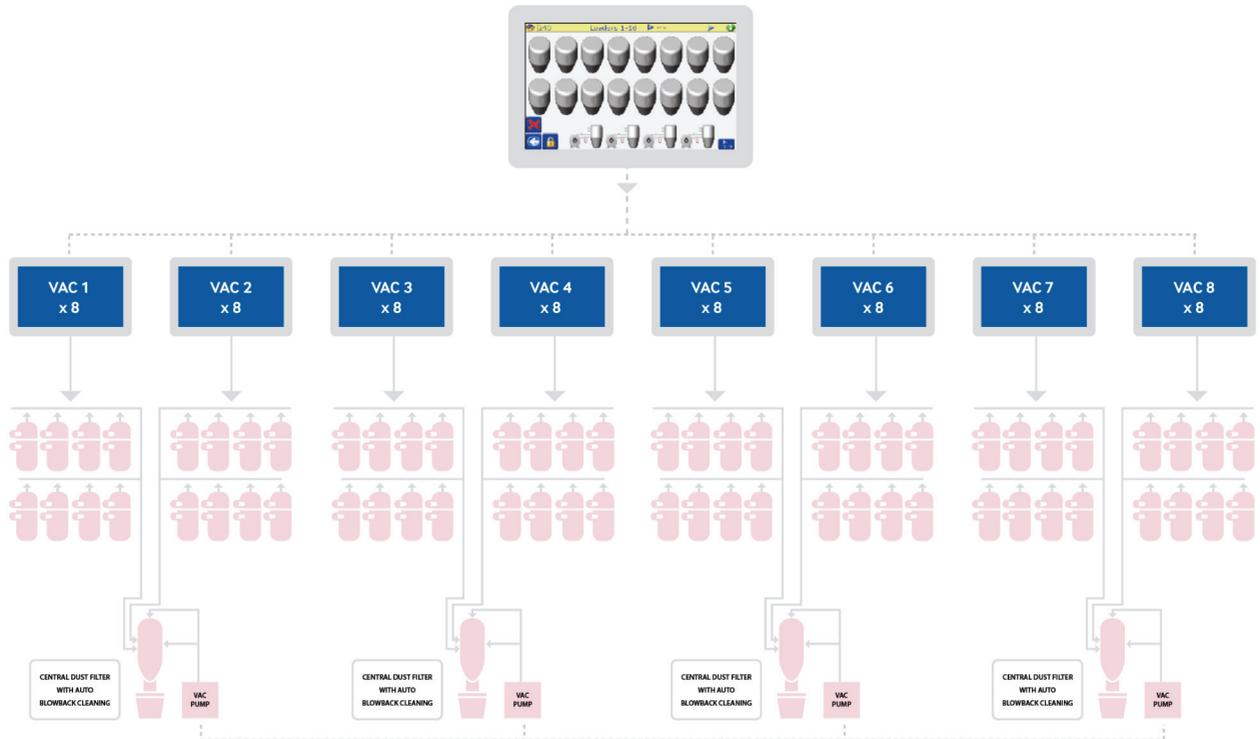
Central Conveying Solutions

Your Partner in Conveying, Treatment & Storage Solutions



CENTRAL VACUUM CONVEYING

Smart HMI, multi-protocol connectivity and modular expansion via VAC-8 receiver modules



Central Vacuum Loading System

The central control panel communicates to TSM VAC8 remote I/O modules that supervise up to eight vacuum receivers each and all associated pumps and controls. Additional VAC8 modules can be connected simply allowing multiples of 8 receivers to be connected to the system.



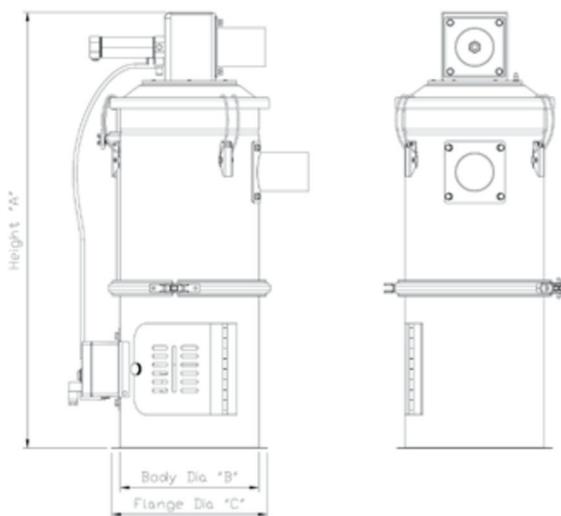
SYSTEM CAPABILITIES	MIN	MAX
Pump(s)	1	4
Vacuum Breaker Valve(s)	1	4
Central Dust Filter(s)	1	4
Vacuum Receivers	1	64
Vacuum Receivers Per Pump	1	64
VAC8s per System	1	8

VACUUM RECEIVERS

Collects material transported through vacuum lines and feeds it to process hoppers. Available in multiple sizes to suit different throughputs.

Model	TVR-6	TVR-10	TVR-15	TVR-35	TVR-50	TVR-85	TVR-115
Capacity (lt/cuft)	6/0.2	10/0.35	15/0.5	35/1.2	50/1.7	85/3.0	115/4.0
Height 'A' (mm/')	585/23.0	715/28.2	640/25.2	942/37.1	1142/45.0	1247/49.1	1412/55.6
Body Dia 'B' (mm/')	227/9	227/9	300/11.8	300/11.8	300/11.8	500/19.7	500/19.7
Flange Dia 'C' (mm/')	254/10	254/10	327/12.9	327/12.9	327/12.9	327/12.9	327/12.9
Weight (kg/lb)	8.9/19.6	10.0/21.9	11.6/25.6	14.0/30.9	16.4/36.2	18.8/41.5	21.7/47.8
Line Size Adaptors*	51/63/76mm 2.0/2.5/3.0ins						

* More Line Size adaptor options available on request



FEATURES

- Capacities from 0.2 cu.ft. to 3.0 cu.ft.
- Stainless Steel Construction
- Automatic blowback at the start of every cycle
- Sequencing valve in the lid
- Material check valves available for common material lines.
- Access door in base of receiver for cleaning. Not necessary to remove the receiver from hopper.



VACUUM PUMP

Versatile pumps for vacuum, pressure and push/pull conveying

TSM's positive-displacement pumps supply the suction or pressure needed to move resin through central, pressure and rail-car unloading systems. Designed for throughputs from 500 lb/hr up to 50,000 lb/hr, they are available in vacuum, pressure and push/pull configurations and come standard with an inlet safety filter, exhaust silencer and liquid-filled vacuum gauge for reliable, quiet operation



FEATURES

- Vacuum, pressure, or push/pull pumps available
- Central, pressure and rail car unloading systems
- 500-50,000 lbs/hr capacities
- Positive displacement pump
- Inlet safety filter standard
- Exhaust silencer as standard
- Liquid filled vacuum gauge standard

OPTIONS

- 2 to 100HP, TEFC, or Explosion Proof
- Line sizes from 1.5" to 8" diameter
- Soundproof enclosures available
- Vacuum and pressure safety relief valves and switches

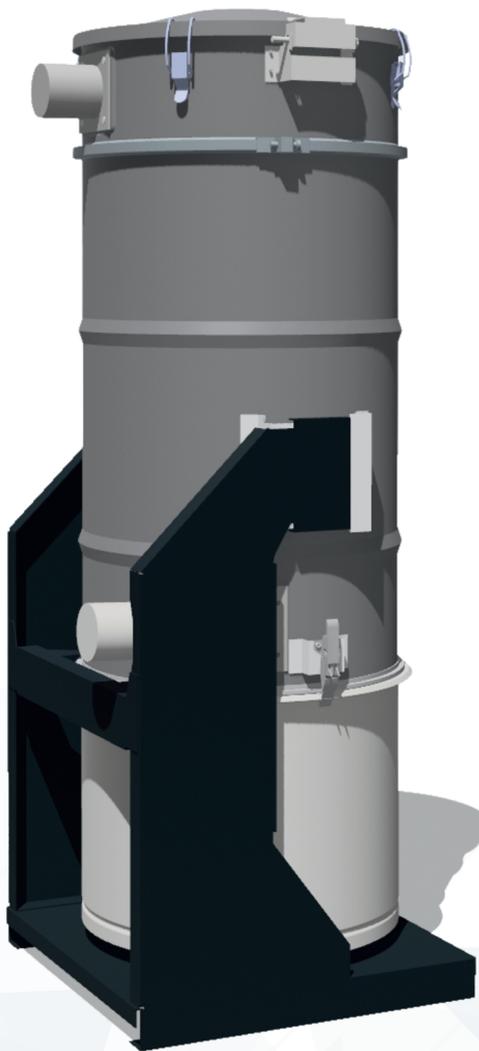
BENEFITS

- High-volume conveying with efficient operation
- Simple installation and operator-friendly design
- Easy expansion and customization as your production grows
- Reliable performance with in-line protection and optional sound enclosures
- Automatic loading capability to reduce manual labor

CENTRAL DUST FILTER

Protect your pump and keep lines clean

TSM's heavy-duty carbon-steel dust filters are an essential part of any central vacuum system, removing dust and fine particles from the airflow and preventing damage to your vacuum pump. Each filter includes a bag or cartridge element that is top-loaded for easy removal and cleaning. A latched, air-tight collection canister captures fines, while an integrated vacuum-breaker valve equalizes pressure to protect the pump during blow-back cycles



FEATURES

- Heavy duty carbon steel construction
- Bag or cartridge filter units
- Top removal of bags or cartridges
- Latched air-tight 1 cuft collection canister
- Integrated vacuum breaker valve
- Negative pressure blow-back as standard
- 360° orientation of inlet/outlet connection

OPTIONS

- Blow-back with compressed air accumulator
- Line sizes 1 1/2" to 5" diameter
- 24V DC controls (Other options available)
- 2 cuft dust canister
- Works with competitors loading systems

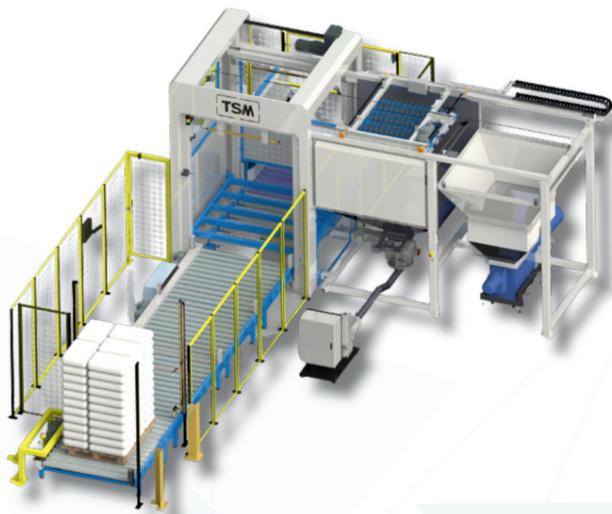
BENEFITS

- Extends pump life by preventing fine dust from entering the vacuum pump
- Reduces downtime and maintenance labor thanks to easy top-loading filter replacement and automatic blow-back
- Flexible installation to fit existing piping layouts with 360° inlet/outlet orientation
- Optional features allow customization to specific material-handling needs

AUTOMATIC DEBAGGING SYSTEM

Streamlined Bulk Material Handling for Efficiency, Safety & Sustainability

TSM Control Systems' Automatic Debagging Machine is a fully automated operating system that specializes in quickly and efficiently emptying bags. It is compatible with all bag materials including plastic, paper, and textile bags, and offers continuous operation thanks to its multiple loading band.



FEATURES

- High throughput – Processes up to 15,000 kg/hr, dramatically boosting productivity.
- Automated operation – Minimizes manual handling and reduces accident risk.
- Cost-efficient – Lower material loss and power consumption cut operating costs.
- Space-saving – Rapid emptying frees up valuable storage space.
- Versatile – Handles different bag types and materials.
- Integrated quality control – Ensures only properly processed material passes through.
- Durable – Robust construction provides reliable, long-term use.
- Available in different capacities.

DESICCANT & HOT-AIR DRYERS

Efficient resin-drying solutions for hygroscopic and non-hygroscopic materials

Different plastics require different drying methods. TSM offers both desiccant and hot-air dryer technologies to ensure your pellets reach the right moisture level before processing. Desiccant dryers dehumidify the air down to very low dew points and are designed for hygroscopic resins, keeping resin consistent and preventing moisture-related defects. Hot-air dryers evaporate surface moisture on non-hygroscopic polymers such as polyethylene and polypropylene and can also pre- or post-dry materials that will be further dried by a desiccant system

FEATURES

- Direct machine mount hot air hopper dryers
- Portable hot air hopper dryers
- Large capacity hoppers
- High range of drying temperatures
- Easy cleaning access
- Exhaust filter

HOT AIR DRYERS



DESICCANT DRYERS



FEATURES

- Centralized desiccant drying systems
- Portable desiccant drying systems
- Desiccant drying hoppers
- Large capacity hoppers
- Up to 180°C drying temperatures
- Down to -50°C dew point
- Full display monitoring system w/ visual and sound alarms

STORAGE SILOS

Bulk Storage Solutions

TSM's **Storage Silos** are available in sizes ranging from 840 to 9,830 cubic feet. The silos are available with two cone angle options; 45° cones are used for free flowing pellets and 60° cones are used for powders and non-free flowing flake or regrind materials. Silos are provided with a 12" diameter opening with an industry standard 16" square mounting flange. The inside of the silos are epoxy coated to prevent material contamination. The exterior of welded silos are primed and enamel coated.

TSM's **Storage Silos** are shipped to the customers site on a dedicated truck. A crane is used to set the silo in place on the customer poured concrete pad. Once all the accessories are connected, the silo will be ready for immediate use. Please call your local TSM representative to set up an appointment to discuss all your bulk storage and handling needs.



ADDITIONAL OPTIONS

Comprehensive accessories & unloading options to enhance conveying, treatment & storage across all applications

TSM is one of the world's leading providers of Conveying, treatment & storage solutions, whether that is the case for; Blown Film, Cast Extrusion, Sheet Extrusion, Extrusion Coating, Bopp Extrusion, Wire & Cable Extrusion, Compounding Line, Multifilament Line (Fiber), Pipe & Profile Extrusion, Blow Molding & ISBM and Injection Molding.



**Angel Hair Traps /
Filters**



Hydraulic Dumpers



Drawer Magnets



Blowers & Cyclones



Air locks



Gaylord / Box Tilters



**Tubing / Piping
Systems**



**Vacuum Take
Off Boxes**



**Automatic Manifold
Tables**

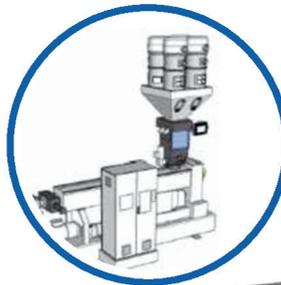
COMPLETE TURNKEY SOLUTIONS

Employing a highly trained and engaged workforce, proven technology and world class partners TSM has the knowledge and experience in Plastics processing to deliver full turnkey solutions from Silo to machine allowing our clients to focus on what they do best. From concept through realisation TSM is with you all the way to ensure all project objectives are fully delivered. The strength and depth of TSM's process knowledge gained on similar projects worldwide ensures we can bring best in class solutions to our customers.

1 Gravimetric Blending

OptiMix range of blenders provide superior accuracy, blend ratios and mixing homogeneity. OptiMix blenders utilize TSM's patented technologies in slide valve design and reverse flight auger mixing. OptiMix range can accommodate throughputs up to 3,000kg/hr (6,600lbs/hr).

- High accuracy dispensing to 0.01% of batch
- Superior weighing and patented mixing
- Throughput and weight / length extrusion control options
- Material usage / inventory statistics
- Extrusion control accuracy up to +/- 0.5% of target setpoint



2 Vacuum Receivers

- 0.2 to 6 cuft capacities
- Stainless steel contact surfaces
- Dedicated and common material line
- High heat optional
- Modular construction for maximum flexibility



3 Extrusion Control

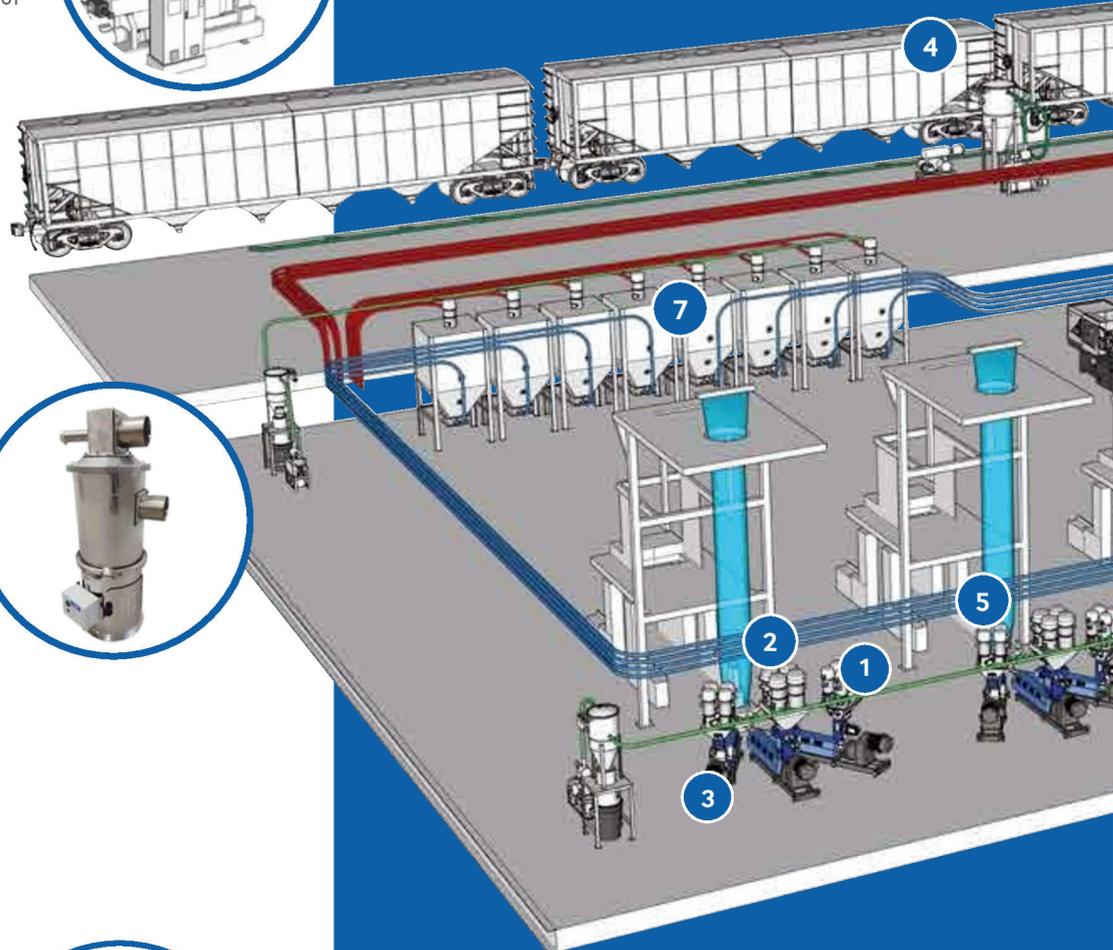
TSM has continually invested in best in class extrusion control technologies, which allow's TSM to bring to market the fastest and most accurate control technologies available on the market. Incorporated as standard in the OptiX extrusion control blender, producers can choose from: Throughput Control varying the extruder speed to control output rate. Weight per Length Control maintains product yield by adjusting the Extruder or Extruder and/or Haul-off speeds simultaneously.

- Improved quality
- Fast start up
- Reduce material usage
- Less waste
- Simple intuitive operator interface
- Comprehensive reporting
- Compensates for bulk density variations
- Tighter tolerances achievable



4 Railcar Unloading

- Modular or Push-Pull Systems
- Cyclone & Filter Receivers
- Custom Manifolds
- Transfer Stations
- Rotary Airlocks
- Rates 5,000-100,000 Lb/hr



5

Air Ring and Automatic Thickness Control

TSM Control Systems, presents the SmartLip One Air Ring, a next-generation solution for blown film control. With a single air inlet and integrated insulation, it boosts output, improves thickness tolerances, cuts condensation, and lowers pressure use. Its advanced chamber and flow design deliver superior bubble stability, backed by fluidic research, rigorous testing, and customer input.

6 Custom Silos

- Bulk Material Storage for storage of Shipped Resin
- 40,000 Lb up to 250,000 Lb
- Welded, Bolted or Corrugated Silos
- Carbon Steel Stainless Steel or Aluminum
- Standard Cone Design 45 & 60 Degree
- Point Level Sensors, High & Low Level Alarms
- Full Installation Services
- 10 Degree Top Slope
- Continuous Level Sensors
- Angel Hair Traps
- Load Cells
- Vacuum Take-Off Boxes
- Magnets
- Air Pads

7 Surge Bins

- Custom capacities
- Aluminium, Stainless Steel & Carbon Steel
- Standard Cone Design 45 & 60 Degree
- Point Level Sensors, High & Low Level Alarms
- Angel Hair Traps
- Vacuum Take-Off Boxes
- Magnets
- Air Pads



8 Pneumatic Conveying

- Vacuum & Material Lines
- Aluminum, Stainless Steel & Carbon Steel
- Tubing 1" to 14" OD
- Elbows, Laterals, Wyes, Couplers, etc.
- Anti-Static Flexible Hose 1" to 10" ID
- Dedicated and Common Material Lines
- Sizing & Installation
- Custom Manifolds



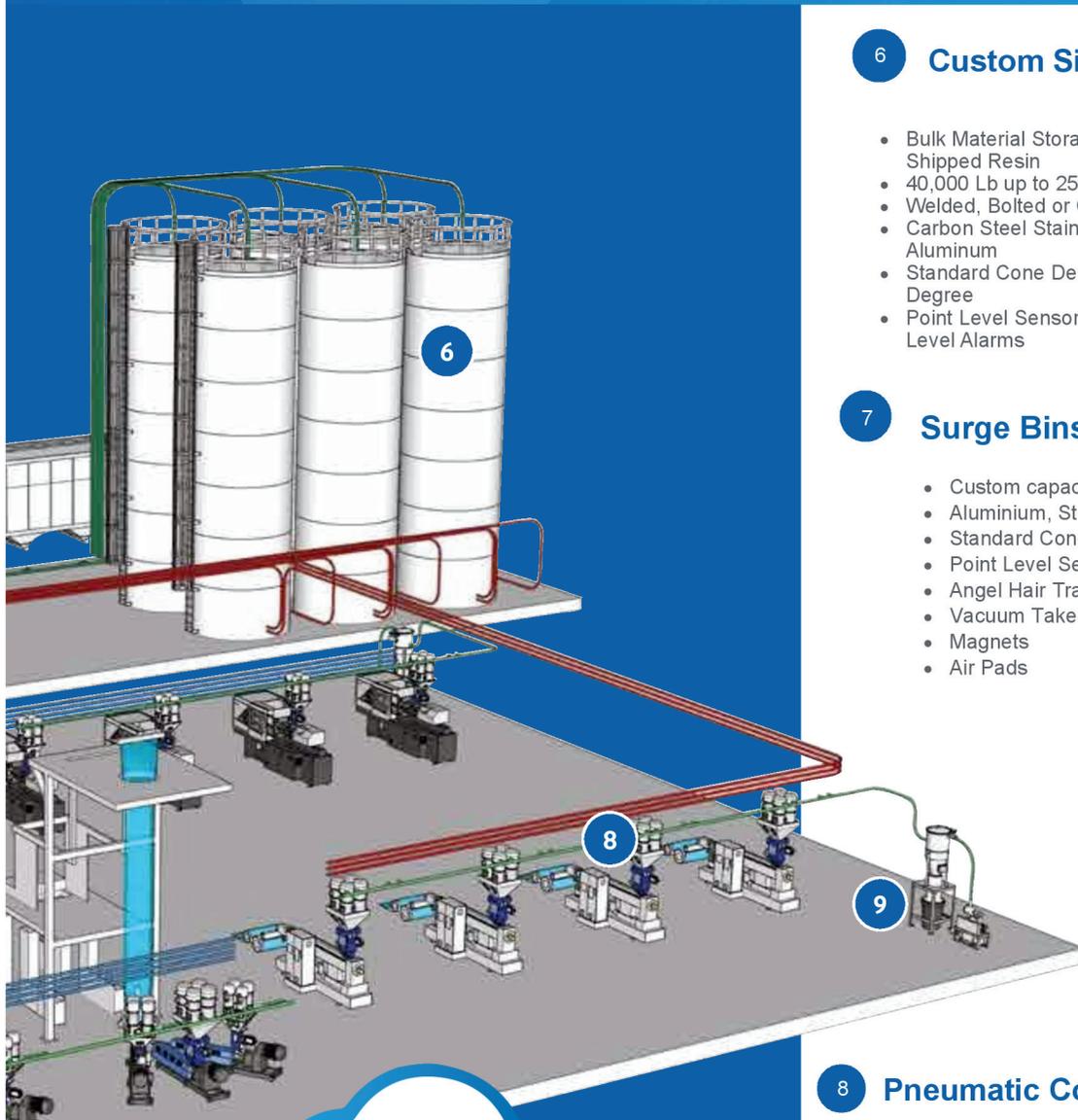
9 Positive Displacement Pump Packages

- Vacuum & pressure pumps available
- 3 - 60 HP TEFC MOTORS
- 500 - 50,000 Lb/hr capacities
- Positive displacement lobe blower
- Inlet safety filter standard
- Exhaust filter and silencer standard
- Liquid filled vacuum gauge standard
- Optional sound enclosures
- Central dust collection
- Pump, filter & material lines sized for application



insight

EMPOWERING PERFORMANCE





Solutions Through Partnership

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