

**Bulk Solids Handling &
Processing Technology**

**General Catalog
03-26**



Marcello Marchesini / Vainer Marchesini (WAMGROUP® Chairman & C.E.O.) / Roberto Marchesini / Elena Marchesini

CORPORATE PHILOSOPHY

➤➤ WAMGROUP® aims to be the main global reference point in providing solutions in the areas of Bulk Solids Handling and Processing, Wastewater Treatment and Renewable Energy Generation.

Vision & Mission



➤➤ WAMGROUP® regards honesty and fairness as cornerstones in its relationship with customers, suppliers, business partners, stakeholders and employees.

WAMGROUP® intends to be innovative in the development, industrial manufacturing and distribution of market-oriented equipment through specialized distribution channels.

WAMGROUP® is determined to supply the most comprehensive range of equipment available to deliver the one-stop-solution in the area of Bulk Solids Handling, Air Filtration, Mixing, Waste Water & Sludge Treatment, Renewable Energy Generation and Vibration Technology.

WAMGROUP® will always do its best to offer any customer in any place in the world the highest possible quality product and service at the most competitive price.

Vainer Marchesini
WAMGROUP Chairman & C.E.O.





WAMGROUP®

stands for...



» INNOVATION

Innovation at WAMGROUP plays an important role in overcoming global challenges and it is a key driver to future growth.

RESEARCH AND DEVELOPMENT

- In-house R&D Center
- 115 Inventions
- 148 International Patents
- 10 Testing Facilities Worldwide



» SPECIALIZATION

Technology-driven and Industry-oriented Solutions

INDUSTRIES

- Feed & Food
- Plastics & Chemicals
- Heavy Industries
- Building & Asphalt
- Plants & Machinery

TECHNOLOGIES

- Mixing
- Bulk Solids Feeding & Conveying
- Discharging & Loading
- Air Filtration
- Flow Interception
- Pneumatic Conveying

...and many more



» GLOBAL PRESENCE

More than 60 subsidiaries in the world

INCLUDING

- | | | |
|----------------------------|-----------|------------------|
| - United States of America | - Italy | - China |
| - Central America | - France | - Japan |
| - Brazil | - Germany | - India |
| - Argentina | - Spain | - Thailand |
| - Chile | - Holland | - South Korea |
| - Mexico | - Dubai | ...and many more |
| - Australia | - Morocco | |

» 15 SPECIALIZED BRANDS

Offering an unmatched range of bulk material handling solutions

PRODUCING EQUIPMENT FOR

- | | |
|----------------------------|------------------------|
| - Bulk Solids Handling | - Hydroenergy |
| - Bulk Solids Discharging | - Mechanical Conveying |
| - Mixing Technology | - Pneumatic Conveying |
| - Waste Water Treatment | |
| - Solids-Liquid Separation | |

...and many more



A GLOBAL REACH



60+  **SUBSIDIARIES**
WORLDWIDE

20  **MANUFACTURING**
SITES

15  **SPECIALIZED**
BRANDS

14  **TESTING**
FACILITIES

314  **INTERNATIONAL**
PATENTS

115  **INVENTIONS**

- WAM Adria (Croatia)
- WAM Argentina
- WAM Australia
- WAM Baltic (Estonia)
- WAM B.H.M (Belgium)
- WAM Canada
- WAM Chile
- WAM do Brasil (Brazil)
- WAM Egypt
- WAM Engineering (UK)
- WAM EurAsia (Turkey)
- WAM Finland
- WAM France
- WAM Germany
- WAM Helvetia (Switzerland)
- WAM Holland
- WAM India
- WAM Inc. Georgia (USA)
- WAM Inc. Texas (USA)
- WAM Indonesia
- WAM Italia (Italy)
- WAM Japan
- WAM Korea (South Korea)
- WAM Latin (USA)

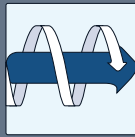
- WAM Malaysia
- WAM Maroc (Morocco)
- WAM Mexico
- WAM Middle East (U.A.E.)
- WAM M.H.E. (New Zealand)
- WAM Polska (Poland)
- WAM Romania Trading
- WAM Scandinavia (Denmark)
- WAM China
- WAM Singapore
- WAM South Africa
- WAM Spain
- WAM Sri Lanka
- WAM Thailand
- WAM Ukraine
- WAM Vietnam
- MAP Germany
- SAVECO Italy
- SAVECO France
- SAVECO Germany
- SAVECO Ibérica (Spain)
- SAVECO Middle East (U.A.E.)
- SAVECO North America

WITH LOCAL CARE



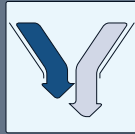
- WAM Industriale (Italy)
- CHIOR (Italy)
- FLITECH (Italy)
- MVM (Italy)
- TOREX (Italy)
- RONCUZZI (Italy)
- SAVI (Italy)
- TECNO CM (Italy)
- WAM do Brasil Industrial (Brazil)
- WAM EurAsia (Turkey)
- WAM USA - Georgia Division
- WAM USA - Texas Division
- WAM India
- WAM Product (Croatia)
- WAM Romania
- WAM Wuxi (P.R.C.)
- SILOFAB (Turkey)
- TOREX (Malta)
- TECNO CM (Romania)

PRODUCT RANGE



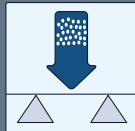
Bulk Solids Conveying

» 7 - 8



Bulk Solids Discharging

» 9 - 11



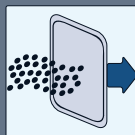
Bulk Solids Feeding & Metering

» 12



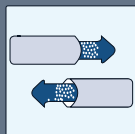
Bulk Solids Flow Interception

» 13



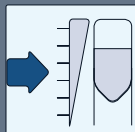
Air Filtration

» 14 - 15



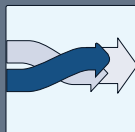
Pneumatic Conveying

» 16 - 18



Silo Safety Components

» 19 - 20



Mixing-Conditioning-Agglomerating-Granulating

» 21 - 23



BULK SOLIDS CONVEYING

CEMA Type Screw Conveyors

Screw conveyors are used in many industries to transport and distribute flowable bulk solid materials. With certain modifications and/or variations in the mechanical arrangement, screws may also be used to mix, blend, or agitate. Current U.S. industry standards cover 6", 9", 12", 14", 16", 18", 20" and 24" diameter conveyor sizes with U-trough. Standard shaft sizes are 1-1/2", 2", 2-7/16", 3" and 3-7/16" diameters, with 2-bolt drilling. Other non-standard screw sizes, shaft dimensions and flared housings available.



6 inch to 24 inch diameter / 4 cfm - 53 cfm

Tubular Screw Feeders - TU

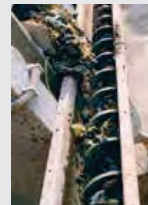
WAM Screw Conveyors and Feeders are manufactured in carbon steel or stainless steel with a variety of surface treatments. They are made up from a tubular trough that is equipped with at least one inlet and outlet spout, a welded flange at each tube end, helicoid screw flighting welded on a center pipe with a coupling bush at each end, two end bearing assemblies complete with self-adjusting shaft sealing unit, a number of intermediate hanger bearings depending on the overall length of the screw conveyor. Furthermore, WAM Tubular Screw Conveyors are equipped with a gear motor that suits the application.



6 inch to 24 inch diameter / 4.4 cfm - 110 cfm

Shaftless Spiral Conveyors - SSC

WAM's Shaftless Screw or Spiral Conveyor is an alternative concept to the traditional shafted screw conveyor. Material is conveyed by an extra-heavy-duty shaftless screw that slides on a low-friction, wear-resistant liner inside the conveyor trough housing. The U-troughs are manufactured in carbon steel or in 304 L / 316 L stainless steel, including an appropriate surface treatment.



6 inch to 24 inch diameter / at 0 deg. 0.7 cfm - 21 cfm

Shaftless spirals

WAM Inc. manufactures extra-heavy-duty spirals not only for their Shaftless Conveyors but also as components. They are manufactured in a variety of diameters, as single or double spiral, made out of special carbon steel or stainless steel



6 inch to 30 inch diameter



WAM's Vertical shafted and shaftless Screw Lift System consists of a Horizontal Screw Feeder and a Vertical Screw Conveyor. The Horizontal Screw Feeder, which may feed material from a silo or hopper or simply convey it being fed by an upstream feeding device, consists of a U-shape or tubular trough in carbon steel with appropriate surface finishing. The Horizontal Screw Feeder is equipped with one or more intermediate hanger bearings should its overall length require any. Furthermore, it is equipped with a drive unit suitable for the application.

WAM Bucket Elevators have been specifically developed for vertical elevation of calcium carbonate, lime, limestone, sludge, sand and similar dry, powdery, non-abrasive, non-packing materials that have a particle size between 0.04 and 0.1 inch and a slide angle of less than 40 degrees. Bucket Elevators are manufactured from extra-thick, hot galvanised carbon steel and stainless steel.

MU Live Bin Bottoms are equipped with a modular trough which encloses up to 6 shafted helicoid flight or paddle screws, flanged external, fully protected end bearing assemblies complete with manually adjustable packing gland and shaft seal, a rectangular outlet spout covering the entire width of the unit, bolted end plates, splined shaft couplings for medium-heavy-duty, flanged shaft couplings for heavy-duty version. They are manufactured in stainless steel and mild steel.

Concrete Reclaiming Screw for the recycling of left-over concrete. Separation of aggregates and water so the aggregates can be re-used in the production of fresh concrete.



BULK SOLIDS CONVEYING

Vertical Screw Conveyors - VE



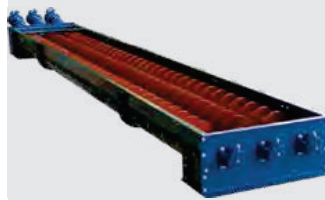
6 inch to 24 inch diameter / $Q_{max} = 56 \text{ cfm}$

Bucket Elevators



$Q_{max} = 15,000 \text{ cfh}$

Live Bin Bottoms



6 inch to 24 inch diameter

CONSEP™ 5000 - Concrete Reclaimer



$Q_{max} = 12 \text{ cfm}$



BULK SOLIDS DISCHARGING

Vibratory Bin Dischargers - BA

The BA Bin Discharger is a device of tapered conical shape that due to vibration facilitates material flow from hoppers or silos. It consists of a seamless carbon or stainless steel cone manufactured on a sheet metal lathe, a seamless SINT™ engineering polymer seal with integrated upper and lower flange, suspensions for connection of the Bin Discharger with the silo, as well as one or two electric vibrators.



$D_{nom.} = 16 \text{ in} \sim 10 \text{ ft} / Q = 3 \sim 190 \text{ cfm}$

BELLOJET™ ZA / ZC - Tanker Loading Spouts

BELLOJET™ Loading Spouts are suitable for continuous loading at a maximum flow rate of 147 cfm of bulk material.

BELLOJET™ Loading Spouts come with a dust collector integrated in the upper head, equipped with a 3HP fan which increases the efficiency of the filtering elements.

At the lower end BELLOJET™ Loading Spouts are equipped with a sealing cone for tanker loading to prevent dust emission.



$Q \leq 150 \text{ cfm} / \text{Stroke} \leq 15 \text{ ft}$

Open Truck Loading Spouts - ZH

The ZG/ZH Type Loading Spouts are constructed for the use of filling open trucks or railcars. Available in different construction materials with a selection of bellow materials. Can be equipped with manual handle winch or electric winch, with or without integrated fan and dust collector. A skirt at the discharge prevents uncontrolled dust flow.



$Q \leq 260 \text{ cfm} / \text{Stroke} \leq 20 \text{ ft}$



BULK SOLIDS DISCHARGING

Ship and Stockpile Loaders - ZX



Loading spout for larger capacities and longer elevation lengths to fill ships or piling up material on an open deposit. Elevation with electric winch, with connection flange for dust collector. A skirt at the discharge prevents uncontrolled dust flow

$Q \leq 1,060 \text{ cfm}$ / Stroke $\leq 100 \text{ ft}$

MINIFILL™ - Drum Loaders



Double wall loading spout with 2 pneumatic cylinders to fill IBCs and Drums dust free. The pneumatic cylinders are available with a stroke of 20, 30 or 40 inches. With pipe connection for the use with a fan and dust collector.

$Q \leq 150 \text{ cfm}$ / Stroke $\leq 20''$, $30''$, $40''$

Manual Bag Dump Stations - RSM



Available in carbon steel and stainless, with or without integrated dust collector and suction fan. Station can have a product collecting hopper underneath or a flat bottom with a sweeper arm for applications which require a reduced height of the station

Max. bag size = $3\frac{1}{2} \text{ ft}$ Integrated dust collector

Bulk Bag Unloading Station - SBB



Available in carbon steel or stainless, as unit to be loaded with fork lift /crane or with rail arm and hoist for those situations where the bulk bag needs to be picked up directly from the floor.

Max. FIBC size = $3\frac{1}{2} \times 3\frac{1}{2} \times 6\frac{1}{2} \text{ ft}$



BULK SOLIDS FILLING

FIBC Filling Systems (Big-bags) - RBB

RBB-type FIBC Filling Stations enable efficient filling of bulk bags. The empty FIBC is attached to the four stretchers in the upper corners of the frame. Then the bag inlet is pulled over the loading spout of the station. Filling starts as soon as the seal around the bag inlet is inflated. Once the FIBC is filled up it is lifted by a forklift truck, removed from the steel frame and transferred to its further destination.



Max. FIBC size = 3½ x 3½ x 6½ ft



BULK SOLIDS FEEDING & METERING

Micro-Batch Feeders with Agitator - MBF

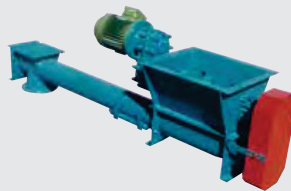
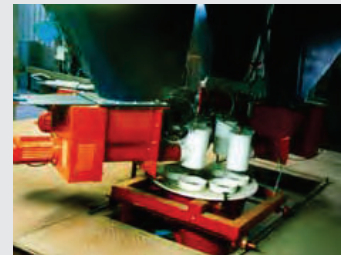
The MBF Micro-Batch Feeder for continuous volumetric feeding of powdery or granular materials consists of a steel-reinforced SINT™ engineering polymer body (optionally body entirely manufactured in stainless steel), a horizontally mounted rotating agitator tool, a feeder screw beneath the agitator tool, a feeder pipe enclosing the protruding feeder screw, one drive unit each for agitator and feeder screw. MBF series Micro-Batch Feeders are supplied in food-grade versions with FDA-approval on request.



Q = 0.18 ~ 2.33 cfm

Screw Feeders with Agitator - D0

D0 Screw Feeders are mild steel and SS-type Screw Feeders which are equipped with an additional inlet hopper including an agitator tool for better material discharge into the feeder inlet.



Ø = 4½" ~ 9" / Prevention of bridging

Drop-Through Rotary Valves - RV / RVR

RV Drop-Through Rotary Valves with square inlet and RVR with a circular inlet consist of a tubular cast iron or stainless steel casing, a horizontally mounted rotor with a certain number of V-shaped cross section compartments, a drive unit and a casing cover opposite the drive end.



Nom. sizes 6" to 20"



BULK SOLIDS FLOW INTERCEPTION

Butterfly Valves - VFS

VFS Butterfly Valves consist of two high-pressure die-cast semi-bodies manufactured from aluminium alloy, a swivel disc in SINT™ polymer composite or cast iron, and a pre-stressed elastomer seal. For the food industry a version with stainless steel disc and an FDA-approved integral seal is available.



$\emptyset_{nom.} = 4'' - 16''$ / Max. pressure: 3 psi

SINT™ Slide Gates - VL

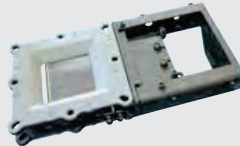
VL-type Slide Gates consist of a two-piece carbon or stainless steel frame, which is partly coated with WAM's unique SINT™ engineering polymer composite, and a sliding blade manufactured either in the same material or in carbon or stainless steel. The use of SINT™ engineering polymer composites considerably increases resistance to abrasion compared to traditional valves.



Nom. sizes 6" - 16"

Low Profile Slide Gates - VIB

Special low profile slide gates made of cast aluminum. Polymer inlet section in food grade or standard quality available, as well different materials for the knife plate. In combination with WAM actuators these gates can be manually, pneumatically or electrically operated.



Nom. sizes 6" - 16"

Valve Actuators

Actuators, available as manual, pneumatic or electric drives are mainly used for WAM Valves, although application to other makes and types of equipment, such as diverter valves, dampers and valves for liquids, is possible.



Compatible with all WAMGROUP® valves



AIR FILTRATION

SILOTOP™ is a cylindrically shaped dust collector for venting of pneumatically filled silos. The stainless steel body contains vertically mounted POLYPLEAT™ filter elements. The air jet cleaning system is integrated in the hinged weather protection cover. Dust separated from the air flow by special POLYPLEAT™ filter elements drops back into the silo after an integrated automatic reverse air jet cleaning system inside the weather protection cover has removed it from the filter elements.

SILOTOP™ - Silo Venting Filters



Filtration surface area: 264 sq ft

WAMFLO™ Dust Collectors are equipped with a cylindrical shape stainless steel body with flanged connection that contains vertically mounted POLYPLEAT™ filter elements. The air jet cleaning system is integrated in the top cover. WAMFLO™ Dust Collectors are available with or without suction fan.

WAMFLO™ - Round Dust Collectors



Filtration surface area: 11 - 517 sq ft

WAMFLO™ Front is with large access door for removal of filter elements from dirty air side.

WAMFLO™ Front - Round Dust Collectors



Filtration surface area: 11-517 sq ft / Air volume: 35-2,650 cfm

WAMAIR™ Dust Collectors consist of a polygonal shape stainless steel casing, horizontally or vertically inserted filter elements, and a reverse air jet cleaning system integrated in the hinged access door. WAMAIR™ Dust Collectors are either built in for venting applications or come as a stand-alone unit with dust collecting hopper. For suction, versions with an integrated fan are available.

WAMAIR™ - Polygonal Dust Collectors



Filtration surface area: 32 - 853 sq ft / Air volume: 147 - 3,830 cfm



AIR FILTRATION

WAMAIR™ Vacuum - Polygonal Dust Collectors

Specialized WAMAIR Dust Collector for pneumatic vacuum transport of powders and granules. Robust housing to stand up for the applied vacuum. Housing made of stainless steel, available with a variety of different filtering media, tailored for the application



- 8.7 psi max. Filtration surface area: 32 ~ 194 sq ft

DRYBATCH™ - Dry-Batch Concrete Plant Dust Collectors

The polygonal shape DRYBATCH™ R01 Dust Collector is equipped with horizontally mounted filter elements, a compressed air jet cleaning system integrated in the access door and a suction fan.

The DRYBATCH™ R01 Dust Collector has been specially designed for dust collection from the truck mixer inlet zone in dry batch plants during filling of the truck mixer. ATEX zone 22 version available.



Air volume: up to 3,500 cfm

HOPPERJET™ - Hopper Venting Filters

HOPPERJET™ is a small footprint venting filter for installation on intermediate storage hoppers or weigh hoppers.

Dust which is separated from the air flow by a single POLYPLEAT™ or bag-type filter element drops back into the hopper after an integrated automatic reverse air jet cleaning system inside the weather protection cover has removed the dust particles from the filter elements.



Filtration surface area: 5.4 / 21.5 sq ft / Air volume: 29 ~ 117 cfm

HOPPERTOP™ - Weigh Hopper Venting Filters

HOPPERTOP™ is a small cylindrical venting filter specifically for installation on weigh hoppers in concrete batching plants.

Dust which is separated from the air flow by a single WAM cartridge filter element drops back into the hopper after an integrated automatic reverse air jet cleaning system inside the weather protection cover has removed the dust particles from the filter elements.



Filtration surface area: 10.8 sq ft / Dust emission: < 10 mg/Nm³



PNEUMATIC CONVEYING

EXTRACURVE™ - Wide Radius Anti-Wear Elbows

EXTRACURVE™ is a wide radius Pipe Elbow that is inserted as a link in pneumatic conveying ducts. The elastic Pipe Elbow is a one-piece SINT™ engineering polymer cast with a helicoid spring core. Its great flexibility and excellent resistance to wear result in doubling of the durability as the Elbow can be simply mounted in reverse position as soon as it shows any signs of wear.



Ø = 2" - 3" - 4" - 5" r = 3 ft / Flexible spring core SINT™ design

EXTRABEND™ - Anti-Wear Elbows

EXTRABEND™ is a short radius Pipe Elbow that is inserted as a link in pneumatic conveying ducts. The Pipe Elbow is a one-piece SINT™ engineering polymer cast. Its special geometry enables the diversion of the conveyed material at minimum wear due to a dead zone at the point of diversion.



Ø = 2" - 3" - 4" - 5" / Anti-wear SINT™ design

Drum-Type Diverter Valves - VAR

The VAR Diverter Valve consists of a cast aluminum casing and cover, an inlet and two outlets. The rotating internal drum optionally closes one of two outlets which are connected with pneumatic conveying ducts. The rotation of the internal drum is activated by means of a pneumatic actuator. Perfect sealing is guaranteed by internal pneumatically inflatable seals. VAR Diverter Valves are suitable for conveying any type of powdery or granular material.



Ø_{nom.} = 3" - 4" - 5" - 6" - 7" - 8" / 51 psi max.



PNEUMATIC CONVEYING

Flap Diverter Valves - VAB

The VAB Flap Diverter Valve uses a swinging flap to divert material from one duct to another. VAB Flap Diverter Valves are fitted on pneumatic conveying ducts whenever it is required to switch the flow of material to different production lines.

The two-way flap type diverter valve is designed to meet the pneumatic conveying industry's requirement to re-route powders, pellets or granules from one discharge point to another with minimum pressure drop and high sealing efficiencies.



$\emptyset_{nom.}$ = 2.5" - 3" - 4" - 5" - 6" - 7" - 8" / 30 psi max.

Diverter Valves for Pneumatic Conveying - VAD

VAD Diverter Valves consist of an aluminum die-cast casing and a swivel flap that closes one duct or the other. The range suits common pipe standards used for pneumatic conveying. Internal sealing of the body is achieved through low friction gaskets. Surface treatment is available to make the valves suitable for operation with different materials.



$\emptyset_{nom.}$ = 2" - 3" - 4" / 360 psi max.

Pinch Valves - VM

The body of the VM Pinch Valve is manufactured in aluminum alloy. The sleeves are made from fabric-reinforced material. The sleeve support bushes are either made from aluminium alloy, hardened carbon steel, or 304/316 stainless steel. VM-type Pinch Valves are used for interception of the material flow in pneumatic conveying systems, or other pipelines. In addition, they can be installed as a locking device for silo filling pipes.



$\emptyset_{nom.}$ = 0.5" ~ 8" / Sleeves in rubber, NBR or EPDM

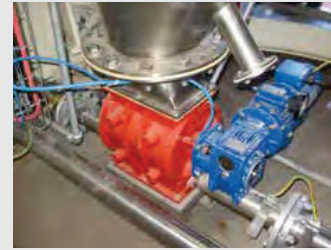


PNEUMATIC CONVEYING

Blow-Through Rotary Valves - RVS

RVS Blow-Through Rotary Valves consist of a tubular cast iron or stainless steel casing, a horizontally mounted rotor with a certain number of oblique V-shaped cross section compartments, a drive unit and a casing cover at each end.

Two compartments at a time of the continuously turning rotor are filled up with material through the inlet at the top of the Rotary Valve.



$Q_{nom.} = 0.17 - 0.3 - 0.5 - 0.7 - 1.3$ cu ft per revolution / ATEX zone 22

Pipe Couplings - GT

The GT Plain Pipe End Couplings consist of two cast iron semi-casings with heavy-duty jaws set into the casing halves to secure the pipes together in a safe, quick and rigid way. The two semi-casings are joined together by strong bolts and nuts positioned on the two ends. The sealing is assured by gaskets made from EPDM or food-grade SILICONE.

GT Couplings are suitable for both mild steel and stainless steel pipes.



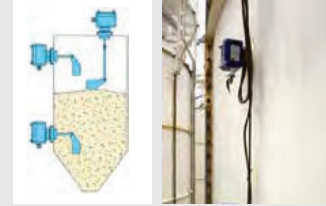
Operating pressure: min. -7.2 PSI / max. 101.5 PSI / sizes 1.5" - 8"



SILO SAFETY COMPONENTS

Rotating Level Indicators - ILT

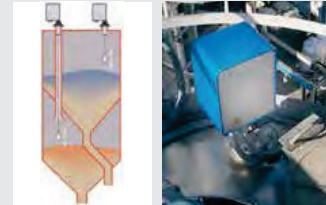
ILT-type Bin Level Indicators have been designed for electric signalling by rotary action of minimum or maximum material level inside bins, hoppers or silos.



Multi-voltage / ATEX II 12 D (dustEx) certificate

Plumb-Bob Style Level Indicators - ILS

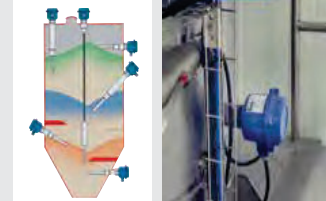
ILS is a Continuous Level Measurement system for any kind of powdery or granular material stored in silos or containers. The feel weight of the ILS-system moves, microprocessor-controlled, down into the container. Upon impact on the bulk material it is pulled back to its upper stop position. By capturing the distance that the feel weight has moved the material level is measured.



Multi-voltage / ATEX II 12 D (dustEx) certificate

Vibrating Level Indicators - ILV

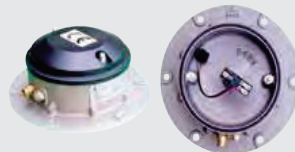
ILV-type Bin Level Indicators have been designed for electric signalling by vibration of a fork of minimum or maximum material level inside bins, hoppers or silos. The ILV device is used for level monitoring in all types of bins or silos and for all kinds of powders or granular materials.



Multi-voltage / ATEX II 12 D (dustEx) certificate

Pressure Switches - IPM / IPE

Membrane pressure switch to detect a dangerous pressure level in silos and vessels. Available as a mechanical switch with a fixed pressure value or as electronic switch with a continuous output signal of 4-20 mA



Pressure reading in real time Microswitch-controlled



SILO SAFETY COMPONENTS

Spring-Loaded Pressure Relief Valves - VCP

VCP Pressure Relief Valves consist of a cylindrical casing with a bottom flange to be connected with a spigot welded on the silo roof, a disc shape inner steel lid for negative pressure operation held in position by a central spring rod, an outside steel ring for excess pressure kept in position by three spring rods, gaskets, and a weather protection cover.



Excess pressure: 0.44 PSI ~ 1.16 PSI / Negative pressure: - 0.07 PSI ~ - 14.5 PSI

Membrane Pressure Relief Valves - VHS

VHS Pressure Relief Valves consist of a cylindrically shaped metal body with clamp connection spigot to the silo, an exhaust outlet spout for duct connection, an elastic diaphragm able to re-establish pressure balance instantaneously, a counterweight kit to keep the Valve closed under normal conditions, and a weather protection cover.



Excess pressure: 0.44 PSI ~ 1.16 PSI / Negative pressure: - 0.07 PSI

Silo Safety Systems - KCS

WAM provides different components to protect a silo from false filling, over pressure and over filling. All these components together with the dust collector can be connected and controlled via the KCS silo controller. Available as electro-mechanical control panel or electronic control unit. A single electronic unit can monitor up to 32 different silos.



Prevents air pollution



MIXING - CONDITIONING AGGLOMERATING - GRANULATING

Single Shaft Batch Mixers - WBH

WBH Horizontal Single Shaft Batch Mixers consist of a mixing drum vessel with an inlet, an outlet with discharge valve and a venting spout, a mixing shaft, two drum closing end plates that carry flanged end bearing assemblies complete with integrated adjustable shaft sealing unit, and a drive unit complete with power transmission. Plow or inclined blade-type shovel tools rotate as mixing tools in a special arrangement on the mixer shaft in a horizontal, cylindrical drum. The result is a turbulence in the mix that constantly involves all the product particles in the mixing process.



Mixing Tools:
Paddles or Plows



Range: from 2.6 to 882 cu ft / Mixing Capacity: from 2 to 20 batches/h

Single Shaft Continuous Mixers - WAH

WAH Continuous Horizontal Single Shaft Mixers consist of a cylindrical mixing drum vessel with an inlet, an outlet at the opposite end and a venting spout, a mixing shaft, two drum closing end plates that carry flanged end bearing assemblies complete with integrated adjustable shaft sealing unit, and a drive unit complete with power transmission.



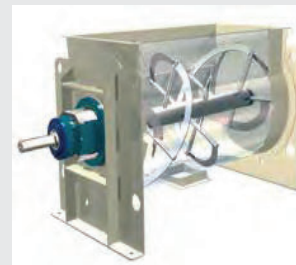
Mixing Tools:
Paddles or Plows



Range: from 2.6 to 882 cu ft

Tubular Trough Batch Ribbon Blenders - WBN

Batch-type WBN Ribbon Blenders consist of a horizontal, single shaft double counter-pitch ribbon screw housed in a tubular mixing drum, a central inlet or a rectangular shape inlet port across the entire length of the mixing drum, an outlet with central discharge port, a venting spout, two drum closing end plates that carry flanged end bearing assemblies complete with integrated adjustable shaft sealing unit, and a drive unit complete with power transmission.



Q = 2.6 ~ 530 cu ft



MIXING - CONDITIONING AGGLOMERATING - GRANULATING

U-Trough Batch Ribbon Blenders - WBR

Batch-type WBR Ribbon Blenders consist of a horizontal, single shaft double counter-pitch ribbon screw housed in a U-shaped trough mixing drum, a central inlet or a rectangular shape inlet port across the entire length of the mixing drum, an outlet with central discharge port, a venting spout, two drum closing end plates that carry flanged end bearing assemblies complete with integrated adjustable shaft sealing unit, and a drive unit complete with power transmission.



Q = 2.6 ~ 310 cu ft

Laboratory Mixers - MLH

MLH is a Laboratory Batch Mixer suitable for applications in the pharmaceutical, food, chemical, biochemical, and powder metallurgy industry. The MLH consists of a stand-alone drive unit with incorporated frequency inverter, an easily replaceable horizontal mixing shaft supported at the drive end only, and an easily replaceable, revolving mixing vessel complete with inlet/outlet. The quick change of drum size combined with a rich basic equipment package ensures the use for a variety of applications.



Available sizes: 1.5 / 3 / 8 / 13 Gal

DUSTFIX™ - Dust Conditioners

The DUSTFIX™ Dust Conditioner consists of a carbon steel tubular casing with SINT™ engineering polymer liner, a combined feeder screw/mixing shaft entirely manufactured in SINT™ engineering polymer, one vertical inlet and a flush outlet in SINT™, a liquid supply point in the conditioning section, a drive unit with integrated adjustable shaft sealing unit.



Q_{max.} = up to 80 t/h



MIXING - CONDITIONING AGGLOMERATING - GRANULATING

Twin Shaft Continuous Paddle Mixers - MESC

MESC-type Twin Shaft Paddle Mixers (MESC-UM as conditioner with liquid injection) are equipped with two parallel counter-rotating intermeshing paddle shafts. The adjustable angle of inclination of the mixing paddles allows perfect adaptation to the different characteristics of the materials and to the requirements of the mixing process.



$Q_{max} = 1.8 \sim 47 \text{ cfm}$

Twin Shaft Batch Mixers - WTS

The WTS is a Twin Shaft Batch Mixer with two parallel drums each with counter-rotating shafts that are equipped with paddles fixed at a pre-determined angle.



$Q = 4.2 \sim 127 \text{ cu ft}$

Wet-Mortar Mixers - WETMIX™

WETMIX™ V05 is a continuous modular building site mixer for dry premixed mortar which can be easily handled by one person only. The mixer is gravity flood-fed by a silo or hopper. Instead of a tubular carbon steel casing, with this model, the SINT® engineering polymer mixing chamber is externally supported by four carbon steel bars which makes the complete mixer lighter and easier to handle.



$1.4 \sim 2.1 \sim 3.5 \text{ cfm}$ / High degree of self-cleaning

