

# Bulk Solids Handling & Processing Technology





# **Bulk Solids Handling & Processing Equipment**

WAMGROUP® is the global market leader in Screw Conveyors and holds top-ranking positions in each of its product lines in the field of Bulk Solids Handling & Processing.

[www.wamgroup.com](http://www.wamgroup.com)



WAMGROUP® is the global market leader in Screw Conveyors and amongst the most prominent players in the field of Bulk Solids Handling & Processing Equipment. The company founded in 1968 in Modena, Italy, employs about 2000 people at more than 60 locations in 40 countries.

The Company's comprehensive product range includes equipment for Bulk Solids Handling & Processing, Dust Filtration, Water Treatment and Renewable Energy Generation.

Strongly focused on the requirements of the market, WAMGROUP® aims to produce market-oriented solutions turning them into a particularly user-friendly standard, tailored for a variety of industries. Industrial quality and an excellent price-performance ratio make WAMGROUP® equipment the ideal choice for project engineers and provide customers all over the world with the best deal available on the market.

Uncompromising dedication to R&D is the foundation of the Company's vast product range and leads time and again to the development of highly innovative equipment from standardised modular components.

Highly rationalised and cost-effective CAD/CAM-supported production methods and logistics are constantly improved determining "state of the art" in the industry. Global quality management gives WAMGROUP® customers the assurance that their equipment has been checked and tested in each phase of the manufacturing process.

Currently WAMGROUP® manufactures its product range in four continents and distributes it through its worldwide subsidiary network offering customers professional advice, smooth order management and 'round the clock' spares service.



# PERFECT MATCH BETWEEN PRODUCT AND APPLICATION

WAMGROUP® products are widely used in a vast number of industries like building and construction, food processing, flour and animal feed milling, chemicals and plastics, mining and quarrying, glass processing, and environmental technology, to name but a few.









## **Mechanical Feeding & Conveying**

WAMGROUP® has come to stand for innovation in Bulk Solids Conveying technology and equipment tailored for a number of applications in various industries.

As the world's leading manufacturer of Screw Conveyors, WAMGROUP® boasts vast know-how and expertise in Bucket Elevator and Drag Chain Conveyor technology too.





ES screw feeders in precast concrete plant

## Cement Screw Conveyors and Feeders ES

In five decades the ES-type Screw Conveyor has become the synonym for cement feeding and conveying in concrete batching plants all over the world. During this period, WAM® has supplied more than half a million units. Today it is hardly possible to find a plant manufacturer or concrete producer anywhere in the world who would not appreciate the unrivalled technical features and quality of the ES.

- **Q = 5 ~ 110 t/h** Portland cement
- **Pipe Ø: 114 ~ 323 mm**







TU screw feeders in drymix plant

## Tubular Screw Conveyors TU

The highly versatile modular TU Tubular Screw Conveyor and Feeder system offers a variety of standard solutions for handling of powdery or granular materials. Different models are available in applications such as premixed building materials, glass processing, foundries, and many others.

- Q = 7.5 ~ 100 m<sup>3</sup>/h
- Pipe Ø: 114 ~ 323 mm



## Heavy-Duty Tubular Screw Conveyors TP / TE

TP / TE Tubular Screw Conveyors and Feeders are used for both batch and continuous operation in applications where durability and easy replacement of components that are subject to wear are among the main requirements. Typical applications are in minerals and glass processing, foundries, cement mills, gypsum and lime production, as well as the mining industry.

- Pipe Ø: 219 ~ 660 mm
- Durable heavy-duty design



## Tubular Trough Screw Conveyors & Feeders CA0

Modular CA0 Tubular Screw Conveyors and Feeders are suitable for applications that require minimised material residue and maximum preservation of particle size of the material handled.

- Flight Ø: 100 ~ 350 mm
- Light-duty design





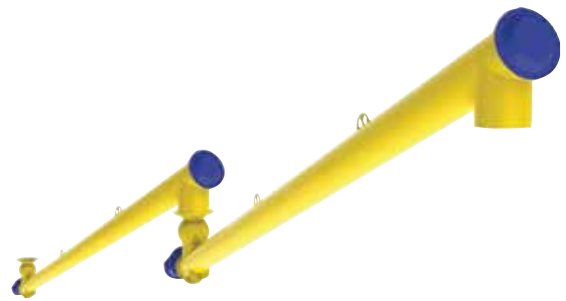


THF screw conveyors in asphalt plant

### Filler Dust Screw Feeders & Conveyors THF / TCF

THF / TCF Screw Feeders and Conveyors for Filler Dust are designed to match the main requirements of the asphalt industry in feeding and conveying both hot and cold filler dust in asphalt plants, at one end from the central dust filter and, at the other end, from the storage silos to the weigh hopper of the mixing plant.

- $Q = 7.5 \sim 100 \text{ m}^3/\text{h}$
- Pipe  $\varnothing = 114 \sim 323 \text{ mm}$







CAP trough screw conveyor in drymix building materials processing plant

## Trough Screw Conveyors MSC

MSC Trough Screw Conveyors are designed for handling powdery or granular materials in flour mills. Their features, special finishing grade, and the vast range of options and accessories perfectly match the requirements of the flour milling industry.

- $Q_{max.} = 105 \text{ t/h}$  cereals / flour
- Flight  $\varnothing = 150 \sim 400 \text{ mm}$



## Trough Screw Conveyors CA Screw Feeders SU

The modular CA Trough Screw Conveyor system offers numerous solutions for conveying powdery or granular materials.

SU-type Screw Feeders match the shape of the silo outlet. The trough section is coupled to a tubular section for efficiently feeding material towards further processing.

- Flight  $\varnothing = 100 \sim 600 \text{ mm}$





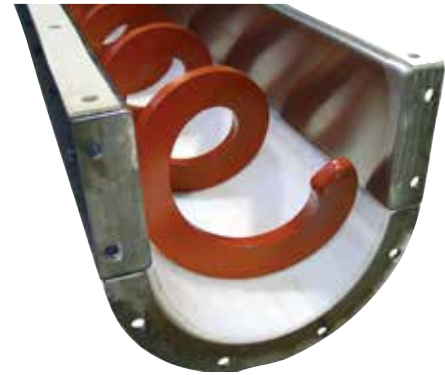


SSC shaftless screw conveyors for dewatered sludge

## Shaftless Screw Conveyors SSC

SSC Shaftless Screw Conveyors offer large volume capacity and the possibility of handling particularly difficult materials. They are designed for conveying irregularly shaped screened solids, sludge, creams or pastes.

- $Q_{max.} = 60 \text{ m}^3/\text{h}$  sludge     $25 \text{ m}^3/\text{h}$  screened solid waste
- Flight  $\varnothing = 150 \sim 600 \text{ mm}$







VE vertical screw lift systems in paint processing plant

## Vertical Screw Conveyors VE / VEX / VEZ

VE Vertical Screw Lift Systems are the most economical and space saving solution for transferring powders or granular materials from a lower to a higher level. They excel through high volumetric efficiency and excellent mechanical features.

- $Q_{max.} = 95 \text{ m}^3/\text{h}$  Portland cement
- Pipe  $\varnothing = 114 \sim 323 \text{ mm}$
- Lifting height  $\leq 20 \text{ m}$







TX screw feeders in pasta processing plant

## Stainless Steel Tubular Screw Feeders & Conveyors TX

TX Stainless Steel Tubular Screw Conveyors and Feeders are suitable for applications in which any contamination of the material handled has to be avoided and where absolute cleanliness and perfect resistance to corrosion are required.

- Flight  $\varnothing = 100 \sim 500$  mm
- Air or gas-purged shaft seals



## Food-grade Stainless Steel Tubular Screw Feeders TXF

Compliant with Regulation (EC) No. 1935/2004 on materials intended to come into contact with food, the TXF Stainless Steel Tubular Screw Feeder is the state-of-the-art solution for the food industry.

- Food-grade (EC) 1935 / 2004-certified
- Smoothed surfaces for minimum material residue







CX trough screw conveyors in instant soup production

## Stainless Steel Trough Screw Conveyors CX

CX Trough Screw Conveyors are suitable for applications in which any contamination of the material handled has to be avoided and where absolute cleanliness and perfect resistance to corrosion are required.

- Flight  $\varnothing$  = 100 ~ 600 mm



## EASYCLEAN™ Minimum Residue Tubular Screw Feeders

Its particular design features and total absence of internal nuts and bolts make the EASYCLEAN™ Screw Feeder suitable for handling powders or granular materials in the food industry, as well as in plastics and chemicals processing.

- Pipe  $\varnothing$  = 114 ~ 323 mm  
- Minimum residue design







EHN bucket elevator for aggregates in concrete plant

## High capacity Bucket Elevators EC

EC-type Bucket Elevators are the ideal solution for vertical elevation of cereals and similar materials. They are especially designed for the application in areas subject to the European Explosion Protection Directive, ATEX.

- High capacity vertical conveying
- Self-cleaning foot section
- ATEX II 3D T4-compliant



## Bucket Elevators for Processing Industries EI

EI-type Bucket Elevators are designed for vertical elevation of fine aggregates and minerals. Manufactured from standardised modular components, they operate at low speed.

- Easy on-site assembly and maintenance
- Reliable in operation
- Durable



## High Capacity Bucket Elevators EF

EF-type Bucket Elevators are specialised for conveying flour and similar materials. They are designed for the application in areas subject to the European Explosion Protection Directive, ATEX.

- High throughput rates
- Self-cleaning foot section
- ATEX II 3D T4-compliant



## Heavy-Duty Bucket Elevators EHN

EHN-type Bucket Elevators are specialised for vertical elevation of aggregates and minerals in continuous heavy-duty applications. Especially designed to operate at low speed, EHN are manufactured from standardised modular components.

- High capacity vertical conveying
- Extra heavy-duty design
- Highly reliable and durable



## Drag Chain Conveyors TCG

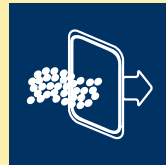
Specialised for conveying cereals, flour or similar materials, TCG Drag Chain Conveyors enable material discharge at different points through intermediate outlet spouts equipped with electrically operated slide valves especially designed for this purpose.

- Cost-effective long distance conveying
- Reliable and durable









## Dust Filtration

As the world's leading manufacturer of Silo Venting Filters, WAMGROUP® boasts vast know-how and expertise in Dust Collectors for both venting and suction applications, as well as Fume Dust Filters for sheet metal cutting machines.





## SILOTOP® zero Silo Venting Filters

With tens of thousands of filters working worldwide, since first going into production back in 1998, SILOTOP® has become the world's favourite solution for bin and silo venting.

- Dust emission < 1mg/Nm<sup>3</sup>
- Absolute EPA-CLASS filter media POLYPLEAT™ elements
- Maintenance height ≤ 1100 mm



## DUSTSHAKE™ Polygonal Venting Filters with Shaker Cleaning

If compressed air is unavailable, the shaker-cleaned DUSTSHAKE™ Silo Venting Filter represents a reliable and economic solution.

- High quality filter media ensuring efficient dust filtration
- Maintenance-friendly





## HOPPERTOP™ **zero** Weigh Hopper Venting Filters HOPPERJET™ **zero** Hopper Venting Filters

HOPPERTOP™ is the perfect solution for weigh hopper venting in concrete batching plants combining small footprint with pulse jet filter media cleaning technology.

HOPPERJET™ combines requirements of a compact filter for hopper venting with advanced dust filtration technology resulting in low emission values.

- High filtration efficiency
- Small footprint







## WAMFLO® Food Flanged Round Dust Collectors

WAMFLO® Food Dust Collectors perfectly meet the requirements of the latest quality standards of the food industry.

- Food-grade (EC) No. 1935 / 2004-certified
- Effortless intuitive installation
- Minimised plant downtime due to quick and easy maintenance
- ATEX versions available



## WAMFLO® zero Flanged Round Dust Collectors

The WAMFLO® Dust Collector range reflects decades of experience in dust filtration technology.

Since going into production, tens of thousands of units have left the Group's manufacturing plants all over the world. In diverse configurations, WAMFLO® has proved to be suitable for a variety of applications in virtually all industries.

- Advanced dust filtration technology
- Low dust emission
- Industrial design
- ATEX versions available



## WAMFLO® Vibrated zero Silo Venting Filters

The WAMFLO® Vibrated Dust Collector range is the result of WAM®'s decades of experience in dust filtration technology.

- Easy to install or retrofit
- Low dust emission
- Industrially manufactured





## WAMAIR® zero Polygonal Dust Collectors

The polygonally shaped WAMAIR® is the most versatile and compact dust collector range for industrial applications available on the world market.

- Filter surface: 3 ~54 m<sup>2</sup>
- Dust emission < 1mg/Nm<sup>3</sup>
- ATEX versions available



## WAMAIR® Vacuum Insertable Negative Pressure Dust Collectors

WAMAIR® Vacuum is the ideal Dust Collector for negative pressure pneumatic conveying applications.

- Up to -0.6 bar
- High filtration efficiency
- Sturdy design
- ATEX versions available



## DRYBATCH™ Concrete Plant Dust Collectors

The DRYBATCH™ Dust Collector perfectly matches the requirement of dust-free truck mixer loading in dry-batch concrete plants.

- Filtration surface area: 54 m<sup>2</sup>
- Max. air volume: 6,000 Nm<sup>3</sup>/h







## TECU™ zero Fume Dust Filters

The TECU™ filter has been designed for suction and collection of fume dust generated by sheet metal cutting machines.

- Operator not in contact with dust
- Clean work environment
- No plant downtime







## RECOFIL™ Pneumatic Conveying System for Automatic Recovery of Dust from Fume Filters

RECOFIL™ is the result of decades of experience in dust filtration. It is the ideal solution to match market needs in terms of quality, maintenance, safety, environmental protection and price.

- Zero labour for filter emptying required
- No health hazards
- Reduced running costs and quick return on investment



## EASYFILL™ FIBC Filling System

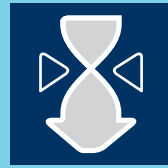
The EASYFILL™ FIBC Filling System simultaneously collects dust from up to four filters equipped with the unique RECOFIL™ Recovery System.

- Perfectly clean work environment
- No health hazards
- Significant cost savings in dust disposal









# Flow Interception

WAMGROUP® is the world's leading manufacturer of dustproof Butterfly Valves and Slide Valves along with a vast actuator range manufactured in-house.





## Butterfly Valves VFS

With way over a million units operating worldwide, VFS Butterfly Valves for powdery and granular materials are amongst WAMGROUP®'s most industrialised products.

- Few easy-to-replace components
- Ex-stock delivery from WAM® warehouses worldwide
- ATEX versions available



## Fit-Frame Butterfly Valves VFP

Due to the low-profile design of this butterfly valve type, material residue between valve and any downstream feeding device is drastically reduced.

- Minimum contamination due to "FIT-FRAME" design
- Increased flow rates
- Compact design, low overall dimensions
- ATEX versions available



## Butterfly Valves VW

VW Butterfly Valves consist of a one-piece body manufactured from die-cast aluminium, a steel disc with integrated shafts and an elastomer seal. The universal connection to different flange sizes enables a variety of configurations.

- Few components
- Interchangeable discs and replaceable seal
- Highly abrasion-resistant



## Silo Closure Butterfly Valves VFF

Fitted beneath silos, hoppers or bins, VFF Butterfly Valves are used in all types of building material processing plants where interception of gravity-fed dry materials is required.

- Special dust-tight seal geometry
- Abrasion-resistant
- Ex-stock delivery from WAM® warehouses

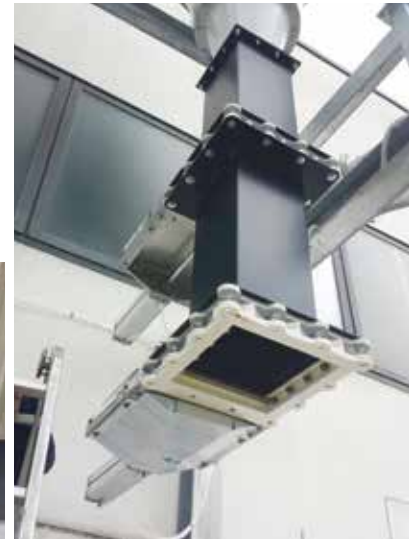
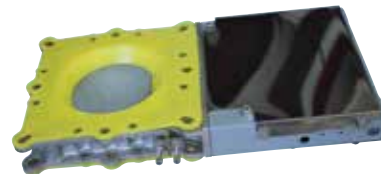




## Low Profile Slide Valves VIB

The wide use of WAM®'s special SINT® engineering polymer and an innovative design geometry make these Low Profile aluminium Slides Valves the ideal solution for intercepting the flow of powders, flakes or granular materials in gravity or conveying applications. A food-grade version in compliance with (EC) No. 1935/2004 matches requirements from the high end of the industry.

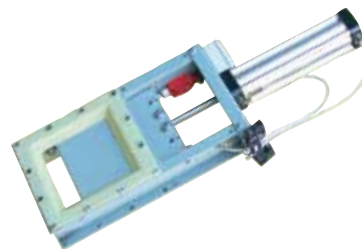
- Standard sizes: 150 ~ 400 mm
- PATENTED dust-proof, friction-free design
- ATEX versions available



## Slide Valves VL

VL-type Slide Valves are equipped with an integrated SINT® polymer seal ensuring dustproof operation. The valves are optionally equipped with hand wheel, pneumatic or electric actuator.

- Polymer-coated frame
- Reliable, versatile, durable with powdery or granular materials
- Small number of spare parts

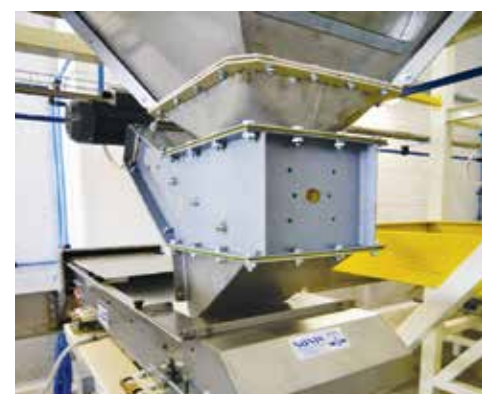
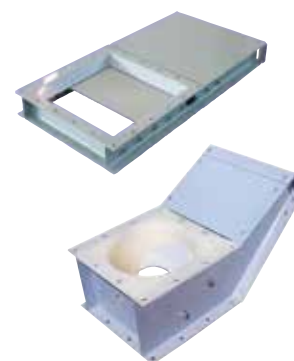


## Slide Valves VG Inclined Feeding Slide Valves VDI

VG Slide Valves are a perfect solution for all heavy-duty applications requiring interception of gravity material flow.

VDI Valves add feeding properties to a simple shutting function.

- Reliable, long-term operation
- Minimised material cross-contamination
- No material spoilage







## Diverter Flap Valves DVA

DVA Diverter Flap Valves ensure efficient flow diversion for powdery or granular materials in a variety of industrial processes.

- Elastic SINT® flap ensuring material flow is diverted without particle breakdown, grinding or jamming
- Minimised maintenance and easy access for part replacement
- Ex-stock delivery



## Ball Segment Valves VSS

Ball Segment Valves offer an unobstructed cross section when open. Free material flow is the result. Viewed from the top, no other free-flow valve offers any more compact overall dimensions.

- Full bore-through material flow
- $\varnothing = 150 \sim 300 \text{ mm}$



## Double Flap Valves VLDP

VLDP Double Flap Valves are designed for feeding powders or granules from hoppers or filters. Their low profile design enables installation where space is limited.

- Cross section: 250 x 250 mm
- SINT® polymer-lined and coated





## Valve Actuators

WAM®'s Actuators are designed and optimised for WAMGROUP®'s entire valve range.



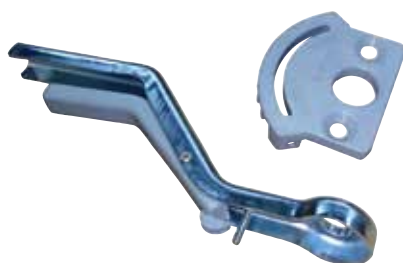
Pneumatic Actuator - CPU



Gear Motor Actuator - AE



Electric Gear Motor Actuator - AR



Manual Lever Actuator - CM51



Electric Gear Motor Actuator - CRG



Hand Wheel Actuator - CMG



Manual Lever Actuator - CM2



Manual Lever Actuator - CM4







## Unloading & Discharging

WAMGROUP® plays a leading role in supplying Bin Activators, Telescopic Loading Spouts, Manual and Automatic Bag Emptying equipment, as well as FIBC Filling and Discharging systems.





### Bin Activators BA

The BA is the ultimate Bin Activator. Industrially manufactured in large series, it excels by its seamless cone and its double-flanged, seamless gasket. Its unique design features ensure perfectly safe operation over time.

$\varnothing_{nom.} = 400 \sim 3,000 \text{ mm}$



### Food-grade Bin Activators BAF

The BAF Bin Activator fully meets the requirements of the food industry. With its hygienic design and finishing, it complies with the (EC) 1935/2004 Directive. It is suitable for a variety of applications in food processing.

- (EC) 1935 / 2004-certified
- Perfectly smooth surfaces for minimum material residue
- Maintenance-friendly design
- ATEX versions available







## Live Bin Bottoms MU

MU Live Bin Bottoms are the ideal solution for discharging particularly difficult materials from polygonal hoppers or silos.

- Flight  $\varnothing_{nom.}$  = 150 ~ 600 mm
- 2 ~ 6 shafts



## Lump Breakers DLP Lump Breaking Feeder Valves LBC

The DLP Lump Breaker is an efficient machine designed for breaking up friable lumps in bulk materials discharged from silos, bins or hoppers.

The LBC-type adds feeding features to the above-mentioned properties.

- Economical lump breaking
- Cutting tools appropriately designed and sized for friable lumps



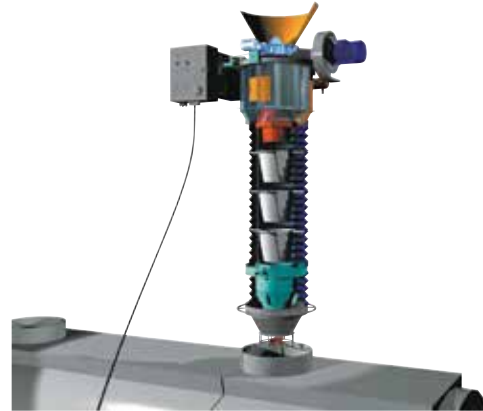




## Tanker Loading Bellows BELLOJET™ With Integrated Dust Filter or With Connection to External Dust Collector

Tanker Loading Bellows are the ideal solution for efficient, dust-free loading of dry, dusty bulk solids into tankers.

- $Q \leq 440 \text{ m}^3/\text{h}$
- Stroke  $\leq 6 \text{ m}$  (without built-in dust collector)
- Weather-proof, durable, highly abrasion and temperature-resistant flexible neoprene chute



## Open Truck Loading Bellows BELLOJET™ With Integrated Dust Filter or With Connection to External Dust Collector

These Loading Bellows models are ideal for efficient loading of dry, dusty bulk solids into open trucks.

- $Q \leq 440 \text{ m}^3/\text{h}$
- Two lifting cables outside material flow



## MINIFILL™ Loading Bellows for IBCs and Drums

MINIFILL™ is the perfect choice where space is limited. The suction fan rate can be increased when operating with very fine dust due to a double bellows chute design.

- Compact overall dimensions
- Stroke: 500, 750, 1000 mm





## Ship and Stockpile Loading Bellows

This type of Loading Bellows ensures efficient, dust-controlled discharging of dry, dusty bulk solids.

- $Q \leq 850 \text{ m}^3/\text{h}$
- Maximum extension: 20 metres



## High Capacity Telescopic Loading Bellows

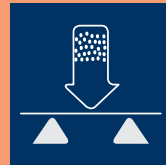
This Loading Bellows model is the perfect solution for high capacity, dust-free loading of large ship loads or stockpiles.

- $Q \leq 1800 \text{ m}^3/\text{h}$
- Maximum extension: 30 metres
- 3 lifting cables outside material flow
- 3 level indicators outside material flow









## **Feeding, Micro-feeding and Metering**

Rotary Feeders (Rotary Valves), Micro-Batch Feeders and Loss-In-Weight Feeders have always played a paramount role in WAMGROUP®'s fifty-year history.





## Drop-through Rotary Valves RV / RVR

RV / RVR Rotary Valves are the ideal solution for controlled discharging and feeding of powdery or granular materials from silos, hoppers, pneumatic conveying systems, bag filter houses, or cyclones.

- $Q_{nom.} = 2 - 5 - 10 - 20$  litres per revolution
- Robust, compact design
- ATEX zone 20/22 available



## Drop-through Rotary Valves RVC

RVC Drop-Through Rotary Valves with oblique V-shaped cross section compartments are a highly efficient solution for accurate feeding of powders or granules in a number of industries.

- $Q_{nom.} = 5 - 10 - 15 - 20 - 35 - 80$  litres per revolution
- High feeding accuracy
- ATEX zone 20/22 available



## Drop-through Rotary Valves for Wood Pellets RWN

RWN Rotary Valves are the perfect solution for controlled discharging and feeding of wood pellets or shavings from silos, hoppers, pneumatic conveying systems, bag filter houses, or cyclones.

- Feed rates: 2.2 ~ 19.5 litres per revolution







## Screw Feeders with Agitator D0

D0 Screw Feeders are suitable for accurately feeding poorly flowing materials with a tendency to forming lumps.

- Robust, compact design
- Easy access to all internal mechanical components



## Micro-Feed Screws SPL

SPL Micro-Feed Screws improve feeding accuracy by continuing to feed material into the outlet of a larger top-mounted screw feeder after that feeder has been turned off.

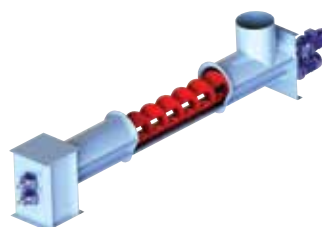
- High feeding accuracy
- Process repeatability
- Less waste material



## Self-cleaning Modular Screw Conveyors SPA

Self-cleaning SPA-type Modular Screw Feeders are suitable for a number of industries where complete cleaning of the trough is required due to frequent product change.

- Easy maintenance
- High feeding accuracy
- Low residue







### Micro-batch Feeders with Agitator MBF

MBF Micro-Batch Feeders are particularly suitable for feeding poorly flowing powders and granular materials which tend to clog. A comprehensive modular system design ensures the right solution for virtually all user requirements.

- Q = 0.05 ~ 66 l/min
- High accuracy feeding
- ATEX versions available



### High Efficiency Micro-batch Feeders MBH

High efficiency MBH Micro-batch Feeders have been successfully operating in the following bulk handling industries: food, building, plastics, chemicals, packaging and environmental technology.

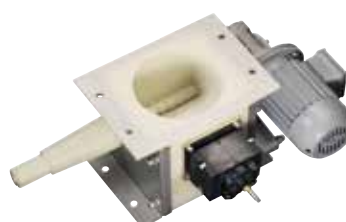
- Minimum residue
- Low energy consumption
- High metering accuracy



### FLEXFLO™ Micro-batch Feeders MBW

MBW Micro-Batch Feeders are particularly suitable for feeding free or moderately flowing materials which do not tend to pack under pressure in a variety of industries, among which plastics processing, animal feed milling, as well as waste water and drinking water treatment.

- Q = 0.03 ~ 13 l/min
- Highly accurate feeding

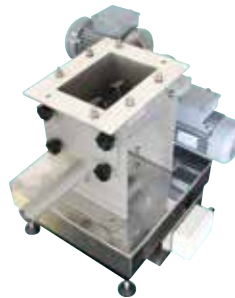






## Loss-In-Weight Feeding System MBF / MBH + BE

The Loss-In-Weight Feeding System is made up of a Micro-batch Feeder with a food-grade body manufactured from stainless steel and SINT® engineering polymer, a stainless steel feeder pipe and drive guard and platform scales on a microprocessor-controlled load cell.



- Simple automation of feeding processes
- Sturdy chassis
- Versatile in use

## Loss-In-Weight Screw Feeders DCC

DCC Loss-In-Weight Screw Feeders offer exceptional operating versatility due to highly precise metering performance and excellent user-friendliness.



- $Q = 3.7 \sim 245 \text{ kg/h}$  with bulk density =  $1 \text{ t/m}^3$
- Metering accuracy:  $0.5 \leq 1.0\%$

## Double Dump Valves VDC

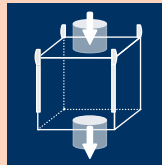
VDC Double Dump Valves are the perfect solution for controlled discharging of large particle size or particularly high temperature materials from silos, bins or hoppers in heavy-duty applications in virtually all industries.



- $Q = 1.2 \sim 18 \text{ m}^3/\text{h}$
- Temperature<sub>max.</sub> =  $600 \text{ }^\circ\text{C}$







## Bag Filling & Emptying

WAMGROUP® provides a large number of solutions for both Manual and Automatic Bag Opening and bag disposal.

The product range also includes both Filling and Discharging systems for Flexible Intermediate Bulk Containers in a variety of configurations.





### FIBC Dischargers SBB

SBB-type FIBC Dischargers ensure economical dust-free discharging of bulk solids from bulk bags.

- Dust-free, economical discharging even with caking powders



### FIBC Filling Systems RBB

RBB-type Filling Stations make filling of FIBCs simple and dust-free.

- Max. FIBC size: 1100 x 1100 x 2000 mm
- Dust-free filling even with caking powders



### EASYFILL™ FIBC Filling System

EASYFILL™, a special FIBC Filling Station, can collect simultaneously dust from up to four filters equipped with the unique RECOFIL™ Recovery System.

- No health hazards
- Important cost savings in dust disposal







## Manual Bag Openers RSM

Produced in large series, the RSM Manual Bag Opener shows an industrial design as a result of in-depth assessment of user requirements in a number of industries.

- Compact overall dimensions and particularly user-friendly design
- Easy and quick access to internal parts
- Built-in fan-operated, air jet-cleaned, maintenance-friendly dust collector



## Automatic Bag Splitters RSA

The RSA Automatic Bag Splitter provides the best value for money. The machine offers cutting edge technology with few moving components and a simple operating principle.

- Simple operating principle
- Easy and quick access to internal parts for cleaning
- Unique price-performance ratio









# **Level & Pressure Monitoring Silo Safety**

Level and Pressure Monitoring along with Silo Safety equipment and accessories occupy a prominent place in WAMGROUP®'s vast product range.





## Bin Level Indicators ILT

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



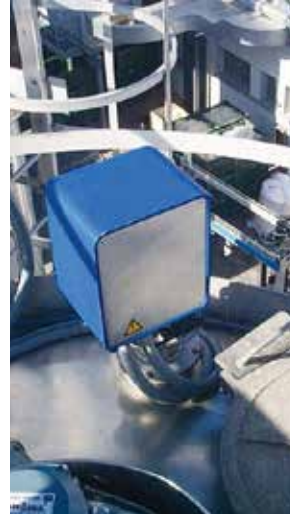
- Multivoltage design
- All contact parts in stainless steel
- High or low process temperature options
- ATEX 20/21 version available

## Continuous Level Measurement System ILS

### Bin Level Indicators ILV

ILS is a highly efficient Continuous Level Measurement System for all kinds of powdery or granular materials stored in silos or containers.

The ILV device is used for level monitoring in all types of bins or silos and for a variety of powders and granular materials.



- Highly accurate easy-to-understand high-tech measurement
- Appropriate for all types of bulk solids

## Electronic Pressure Meter IPE Pressure Switch IPM

The IPE-type Electronic Pressure Meter efficiently supervises the pressure rising inside bins or silos during filling and purging of tankers.

The IPM-type Pressure Switch signals excess pressure inside bins or silos during filling and purging of tankers using a membrane switch. It is also used as a level indicator inside hoppers.



- Self-cleaning wear and temperature-resistant membrane
- Assembly fittings included



## Silo Safety System KCS

Damage to a silo or its accessories is most likely during filling operation from the tanker due to the risk of overfilling or excess pressurisation. The KCS system prevents both anomalies avoiding damage to silo, venting filter and other accessories. It also drastically reduces the risk of dust emission into the atmosphere.

- Avoiding harm to people and damage to silo and accessories
- Reducing risk of air pollution
- Eliminating risk of filling the wrong silo



## Spring-loaded Pressure Relief Valves VCP / VCP-D

With hundreds of thousands installed worldwide, VCP Pressure Relief Valves have given evidence of being totally reliable under most different conditions. For applications in the food industry, a version compliant with European Regulation (EC) No. 1935/2004 is available.

- Lightweight design
- Easy to fit and maintain



## Membrane Pressure Relief Valves VHS / VHS-C

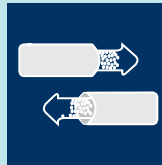
Pressure Relief Valves are the last safety net when abnormal pressure conditions endanger the silo structure. Even though, ideally a Pressure Relief Valve should never have to go into action, it must be efficient and reliable when needed.

- High safety level thanks to conveyed flow and reduced emissions
- Lightweight, corrosion-free









## Pneumatic Conveying

WAMGROUP® boasts a vast range of specialised system components for pneumatic conveying of powders and granules including Rotary Feeders, Diverter Valves, Pinch Valves and Pipe Elbows.





### EXTRABEND® Anti-Wear Pipe Elbows

### EXTRACURVE™ Wide Radius Anti-Wear Pipe Elbows

Different types of Pipe Elbows manufactured from innovative, highly wear-resistant SINT® engineering polymer occupy an important place in the product range.

- SINT® engineering polymer ensures conveying of material without particle breakdown, grinding or jamming
- No risk of clogging
- Self-cleaning and durable



### Pinch Valves VM / VMM

VM / VMM-type Pinch Valves are used for interception of material flow in pneumatic conveying systems, or other pipelines. Moreover, they can be installed as a locking device for silo filling pipes.

- Passage Ø VM: 13 ~ 200 mm
- Passage Ø VMM: 40, 50, 65, 80, 100, 125, 150, 200 mm
- Operating temperature: -20 ~ +80 °C



### Pipe Couplings GT

GT Couplings are designed to join together two plain pipe ends on the same horizontal axis in a safe, quick and rigid way.

- Quick and easy to install
- Suitable for all pipe thicknesses
- Can be rotated to provide easy access to nuts and bolts





## Flap Diverter Valves VAB

VAB Two-Way Flap Type Diverter Valves meet the requirement of pneumatic conveying plants in re-routing powders, pellets or granules from one discharge point to another, with minimum pressure drop and high sealing efficiency.



- Smooth internal surface (no dead spots)
- Easy maintenance (few components)
- Lightweight and compact overall dimensions
- ATEX versions available



## Diverter Valves for Pneumatic Conveying Lines VAD

VAD-type Diverter Valves are the ideal solution for handling any type of material in powdery or granular form in pneumatic conveying lines.



- Compact overall dimensions
- Lightweight design
- Maintenance-friendly
- ATEX versions available



## Drum Diverter Valves VAR

VAR Drum Diverter Valves are the perfect solution for diverting or converting any type of powdery or granular material in pneumatic conveying ducts.



- Static or inflatable seals
- Minimum pressure drop due to special design features
- Contamination-free conveying
- ATEX versions available



## Plug Diverter Valves VAS

The design of the VAS Plug Diverter Valve enables application in any conveying direction. Its technical features make it particularly suitable for applications in the flour milling industry.



- Diversion angle = 60°
- Sliding seal
- Adjustable from diverter to converter
- ATEX versions available



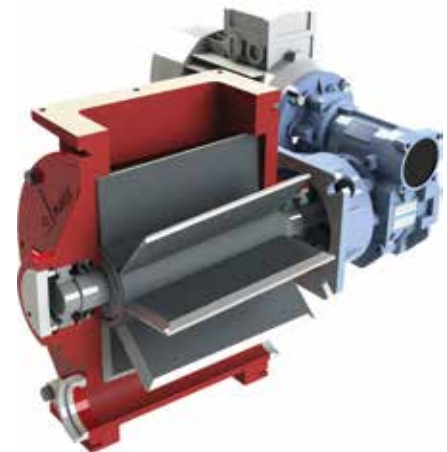




## Blow-through Rotary Valves RVS

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. RVS Blow-through Rotary Valves are the ideal solution for feeding powdery or granular materials into a pneumatic conveying system.

- $Q_{nom.} = 5 \sim 80$  litres per revolution
- Robust, compact design
- High feeding accuracy







**RECOFIL™**  
**Pneumatic Conveying System for Automatic Recovery of Dust from Fume Filters**

RECOFIL™ is the result of many years of experience in dust filtration. It is the perfect solution to match market needs in terms of quality, maintenance, safety, environmental protection and price.

- Zero labour for filter emptying required
- No health hazards
- Reduced running costs and quick return on investment



**POWPUMP™ Powder Injector for Pneumatic Conveying**

The POWPUMP™ Powder Injector is used in concrete batching plants to transfer cement supplied in FIBCs to large storage silos.

- No countercurrent air leakages
- High efficiency with caking and abrasive powders
- Easy to move from one silo to another



**BLOBOY® Pneumatic Conveying System for Dry Premixed Building Materials**

The BLOBOY® Pneumatic Conveying System for dry premixed building materials is the ideal solution for transferring dry-mixed material from the silo to the mixer.

- Fully automatic work cycle
- Continuous operation
- Easy to install and maintain









# **Mixing Conditioning Agglomerating Granulating**

Since the early 1980s, WAMGROUP® has played a worldwide leading role in supplying a wide range of Industrial Mixers and Conditioners in a variety of configurations.





Stock cube ingredients

### Batch-Type Single Shaft Mixers WBH

The WBH Batch-type Horizontal Single Shaft Mixer is the ideal machine to obtain highest quality mixtures in perfectly reproducible batches. In nearly four decades, MAP® has supplied thousands of mixers to a large variety of industries worldwide. Mixing tests for customers are performed in the Group's own laboratories worldwide.

- High quality mixes in short mixing time
- Excellent reproducibility of batches
- Profound know-how in various mixing applications







## Batch-type Single Shaft Mixers with Bomb-Bay Discharge WBHP / WBHT

In addition to the features of the standard WBH mixers, the WBHP and WBHT types ensure instant product discharge with residue of less than 0.1% depending on the product mixed. A bomb-bay discharge is mandatory when discharge time has to be reduced to the minimum.

- Highest level of productivity due to short discharge time
- Material residue inside the mixing drum of less than 0.1%
- Reliable, durable dust-tight bomb-bay door







25,000-litre lime slaker

### Continuous Single Shaft Mixers WAH

The WAH Continuous Horizontal Single Shaft Mixer is the ideal machine to obtain highest quality mixtures. Mixing with WAH is quick though gentle. In various applications all over the world WAH stands for total reliability and durability.

- High mixing homogeneity
- Consistent quality of the mixture
- Solid know-how in a variety of mixing applications



The flush discharge option enables gradual variation of the material level inside the mixing drum even during operation. In this way, retention time can be increased or decreased in order to optimise the quality of the mixture.







Food processing

## Tubular Batch-type Ribbon Blenders WBN Batch-type Ribbon Blenders WBR

Batch-type Ribbon Blenders with a slowly turning single shaft double counter-pitch ribbon screw, are the ideal machines to obtain high quality mixtures with fragile materials, at the same time preserving the physical properties of the product.

- Gentle damage-free product treatment
- High mixture homogeneity
- Excellent reproducibility of batches







### DUSTFIX™ Dust Conditioners

In terms of function and economy, the DUSTFIX™ Dust Conditioner is the ideal machine for the evacuation, conditioning and disposal of dusts in basically all industries. Due to its particular technical features, its innovative design and extremely short processing time, DUSTFIX™ enables dust-free discharging on open trucks or belt conveyors.

- Easy to fit and retrofit
- Self-cleaning
- Quick return on investment



### Continuous Twin Shaft Paddle Mixers MESC / MESC-UM

The MESC-type Twin Shaft Paddle Mixer (MESC-UM as conditioner with liquid injection) ranges amongst the most efficient yet economical mixer types when it comes to conditioning dust or inerting sludge.

- Low maintenance costs
- Mixing know-how and test facilities







### WETMIX™ Mortar Mixers

WETMIX™ is a continuous building site mixer for dry premixed mortars or plasters which can be easily handled by a single person. The mixer is flood-fed from a silo or hopper.

- Constant mortar/plaster quality over time
- Resistance to wear more than double than with mild steel mixers
- Easy and quick routine maintenance







## Laboratory Mixers MLH

MLH is a highly versatile, efficient yet affordable laboratory mixer. University researchers and R&D staff of test laboratories from virtually all industries enjoy the vast possibilities of testing process feasibility.

- Quick mixing results
- Excellent reproducibility of batches
- All components easily accessible and replaceable





## WAMGROUP® Test Laboratory Network

Our state-of-the-art test laboratories include equipment and accessories which enable us to perform mixing, as well as feeding and metering tests with a variety of bulk materials. The experimental arrangements provide maximum simulation of industrial processes. Test procedures follow the logic of real applications in genuine operating conditions.

- Performance comparison of several machines
- Minimising of business decision risks
- Developing and testing of innovative products
- First-hand product mixing tests and analyses
- Identifying optimum process technology and machine configuration

### TEST PROFILES

- Bulk Solids Characterization
- Dry Mixing
- Dry Mixing + Liquid Additives
- Agglomerating
- Crumbling
- Volumetric Feeding / Weigh Feeding of Dry Solids











## Concrete Recycling

WAMGROUP® has developed a range of innovative machines for reclaiming aggregates from truck mixers and concrete pumps in concrete plants. These machines excel by their high efficiency and ease of maintenance.





## CONSEP™ Concrete Recycling System

CONSEP™ is an innovative Concrete Recycling System used in ready-mixed concrete plants for reclaiming concrete washed out from truck mixers, as well as in precast concrete plants for the recovery of concrete from moulds. CONSEP™ is the answer to the latest environmental standards concrete manufacturers need to comply with today.

- Quick Return-On-Investment
- Excellent solids-liquid separation and washing of aggregates
- Low running costs







