

Paint & Varnish Processing

Heavy-duty tubular Screw Conveyors TP-TE

1



Description ▼

TP and TE Tubular Screw Feeders are manufactured in carbon steel with a suitable surface finishing. They are made up from a tubular trough that is equipped with at least one inlet and one outlet spout, a welded flange at each tube end, helicoid screw flighting welded on a centre 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 machine. Furthermore, TU Tubular Screw Feeders are equipped with a gear motor that suits the application.

Function ▼

TP / TE Tubular Screw Conveyors are used for both batch and continuous operation in applications where durability and easy replacement of those conveyor components that are subject to wear are among the main requirements.



Application ▼

TP and TE screw conveyors are the perfect solution to:

- Transfer sand from screens to storage silos;
- Feed sand and other additives from silos to the weigh hopper
- Feed and transfer drymix material from the mixer to the storage or dosing system

Benefits ▼

- ✓ **Modular design offers a great variety of options suitable for numerous applications;**
- ✓ **High manufacturing reliability and less maintenance frequency;**
- ✓ **High feeding accuracy;**
- ✓ **Easy maintenance**
- ✓ **Durable components for abrasive materials.**

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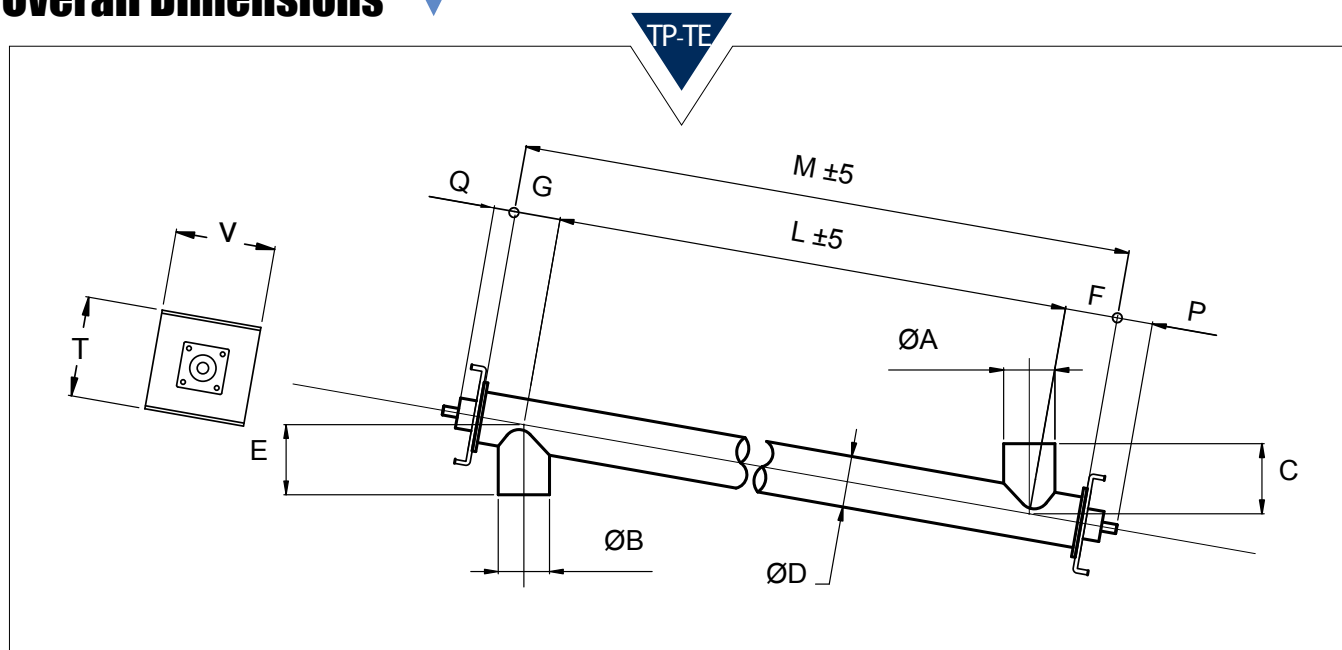
Heavy-duty tubular Screw Conveyors TP-TE



Technical Features / Performance ▼

- ▶ Outside Tube Ø: from 114 to 558 mm
- ▶ Flight in wear-resistant material and increased thickness
- ▶ Robust mechanical components
- ▶ Shoe inlet spouts
- ▶ Square, tapered or cylindrical inlet
- ▶ Optimised feed rates

Overall Dimensions ▼



TYPE	114 (*) mm	139 (*) mm	168 (*) mm	219 mm	273 mm	323 mm	406 mm	457 mm	558 mm	660 mm
OA	114	139	168	219	273	323	406	457	558	660
OB	114	139	168	219	273	323	406	457	558	660
C	see technical catalogue									
OD	114	139	168	219	273	323	406	457	558	660
E	see technical catalogue									
F	140	140	160	180	220	220	270	280	340	430
G	120	120	140	160	180	220	280	320	360	450
L	see technical catalogue									
M	L + F + G									
P	156	156	182	182	225	233	233	267	310	310
Q	114	114	124	124	143	151	151	162	180	180
T	280	280	280	355	410	465	535	590	740	900
V	265	265	265	315	365	435	485	540	655	755

(*) Available only as TP version

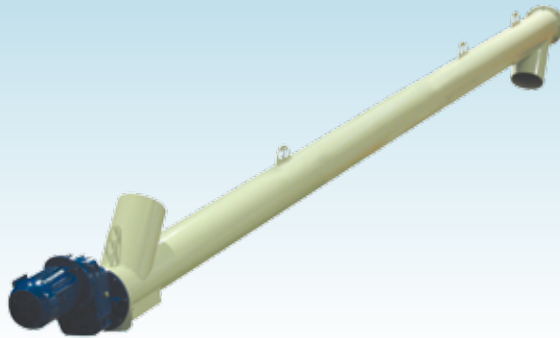
Dimensions in mm

This datasheet might not show the complete range but only the models specialised for the application.

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Tubular Screw Feeders TU/TS

2



Description ▼

TU Screw Feeders are manufactured in carbon steel with a suitable surface finishing. They are made up from a tubular trough that is equipped with at least one inlet and one outlet spout, a welded flange at each tube end, helicoid screw flighting welded on a centre 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 machine. Furthermore, TU Tubular Screw Feeders are equipped with a gear motor that suits the application.

Function ▼

TU Tubular Screw Feeders are highly versatile and offer a variety of standard solutions for handling powdery materials. Depending on the characteristics of the material, different feeder models are available in concrete production for handling microsilica (silica fume).



Application ▼

To feed raw material from a silo into a separate weigh hopper the TU-type Screw Feeder should be installed at a fairly flat angle. It is advisable to avoid intermediate bearings when planning the plant layout.

Benefits ▼

- ✓ Small diameter, great efficiency, high throughput rates;
- ✓ Modular design offering great variety of options suitable for numerous applications;
- ✓ Easy installation;
- ✓ Durable;
- ✓ Optimum price-performance ratio.

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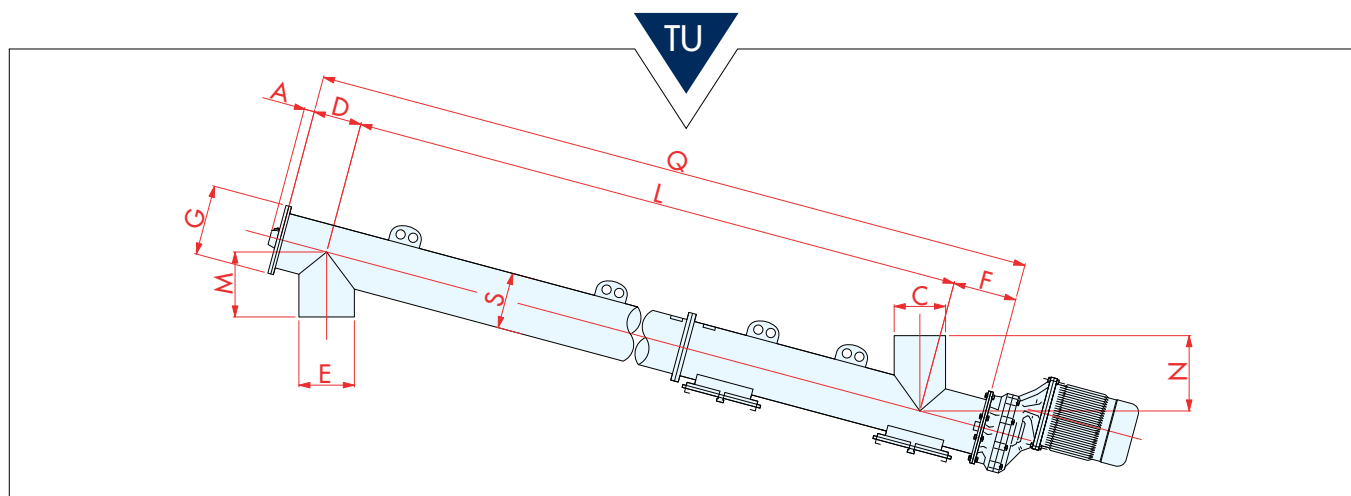
Tubular Screw Feeders TU/TS



Technical Features / Performance ▼

- ▶ Outside Tube Ø: 219 mm or 273 mm
- ▶ Angle of installation: $\leq 25^\circ$
- ▶ Length centre inlet – centre outlet: ≤ 7.5 m (from 4.5 m with enclosed hanger bearing, type XLY)
- ▶ Direct M-type drive
- ▶ Inlet end bearing seal c/w long-life grease lubrication (PROT 05)

Overall Dimensions ▼



Ø S	219	273
A	40	40
C	on request	
D	160	180
E	on request	
F	180	220
L	on request	
G	275	330
M	on request	
N	see WAM® - standard	
Q	L + D + F	

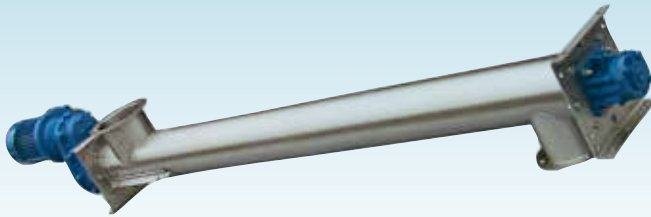
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DS TU/TS-EN September 2015.000

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Stainless Steel Tubular Screw Conveyor TX

3



Function ▼

TX Tubular Screw Feeders are usually installed under a silo or FIBC (Bulk Bag) discharger to feed powdery or granular materials into a weigh hopper. They are suitable for applications in which any contamination of the material handled has to be strictly avoided.



Benefits ▼

- ✓ Comfortable cleaning and maintenance;
- ✓ Minimum residue;
- ✓ High feeding accuracy;
- ✓ Vast range of options and accessories;
- ✓ Attractive price.



Description ▼

TX Tubular Screw Feeders and Conveyors, which are manufactured from stainless steel with a suitable surface finishing grade appropriate for the application in Biscuit (cookies) Processing Plants, are highly versatile. Manufacture of the fabricated components is carried out on machines that guarantee a perfectly smooth surface due to which material residue is reduced to the minimum. The screw conveyors or feeders are made up from a tubular trough which is equipped with an inlet and an outlet spout, an end plate at each tube end, helicoid screw flighting continuously welded on both sides on a centre pipe with a coupling bush at each end, two end bearing assemblies complete with an air or gas-purged, adjustable shaft seal. Furthermore, the screw conveyors or feeders, which for this industry come without intermediate bearings, are equipped with a gear motor suitable for the application.

Application ▼

The application in the photograph shows a TX Screw Feeder installed over a stainless steel hopper for transfer of the material (e.g. calcium carbonate, titanium dioxide, silicate, sulphate) into the process.

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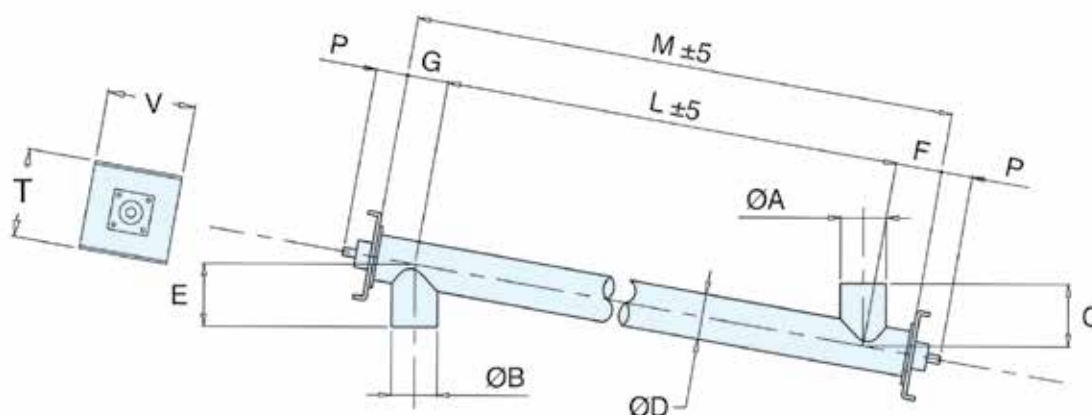
Stainless Steel Tubular Screw Conveyor TX



Technical Features / Performance ▼

- ▶ All fabricated parts manufactured from stainless steel
- ▶ Air or gas-purged shaft seals for maximum material protection against contamination
- ▶ Easily accessible inspection hatches
- ▶ Modular design
- ▶ ATEX

Overall Dimensions ▼



Type	80	100	120	150	200	250	300
Ø A	89	114	139	168	219	273	323
Ø B	89	114	139	168	219	273	323
C	1)						
Ø D	89	114	139	168	219	273	323
E	1)						
F	140	140	140	160	180	220	220
G	120	120	120	140	160	180	220
L	2)						
M	L + F + G						
P	114	114	114	124	124	124	124

1) See inlet/outlet spouts in catalogue

2) Rounded up to 10 mm

Dimensions in mm

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Vertical Screw Lift Systems VE

4



Function ▼

The VE Vertical Screw Lift System consists of two units: a Horizontal Screw Feeder which receives material from a silo, hopper, or another feeder or conveyor, and a Vertical Screw Conveyor that lifts the material to a certain level. Material may be discharged into a weigh hopper, into one or more bins or silos, or into another conveyor or conveying system. Fabricated components, screws, and bearing assemblies have been specially designed for this system to facilitate maintenance. The VE Vertical Screw Lift System, which excels through high volumetric efficiency and excellent mechanical features, was patented in various countries in the 1980s.



Benefits ▼

In comparison with bucket elevators or pneumatic conveying systems, the VE Vertical Screw Lift System has the smallest overall dimensions, is easier to maintain, requires the smallest number of spare parts, and offers the best price-performance ratio.



Description ▼

The VE Vertical 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. In any case the outlet zone consists of a short tubular section flanged at a right angle on the bottom section of the Vertical Screw Conveyor. A flange is welded at each end of the Horizontal Screw Feeder. The trough / tube contains a rotating screw with shaft coupling bushes at each end that are connected with the shafts of the two end bearing assemblies. 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. The Vertical Screw Conveyor consists of a tubular housing complete with a tangential inlet in the bottom section which connects with the outlet of the Horizontal Screw Feeder, an inclined outlet spout in the top section, end flanges welded on each conveyor tube section, a rotating screw in one or more sections with shaft coupling bush at each end, a base bearing assembly complete with slide bush, and a number of intermediate hanger bearings should the overall height of the conveyor require any. The top-mounted drive unit with integrated end bearing assembly (from which the screw is suspended) and self-adjusting shaft sealing unit is suitable for the application. The VE Vertical Screw Lift System is available in a medium-heavy-duty version only.

Application ▼

The application in the photographs shows an arrangement with FIBC discharger, a standard length horizontal screw feeder and a vertical screw conveyor. The picture on the left shows filling of a single silo, whereas the picture on the right shows an installation with a pneumatically operated diverter valve for filling of two silos.

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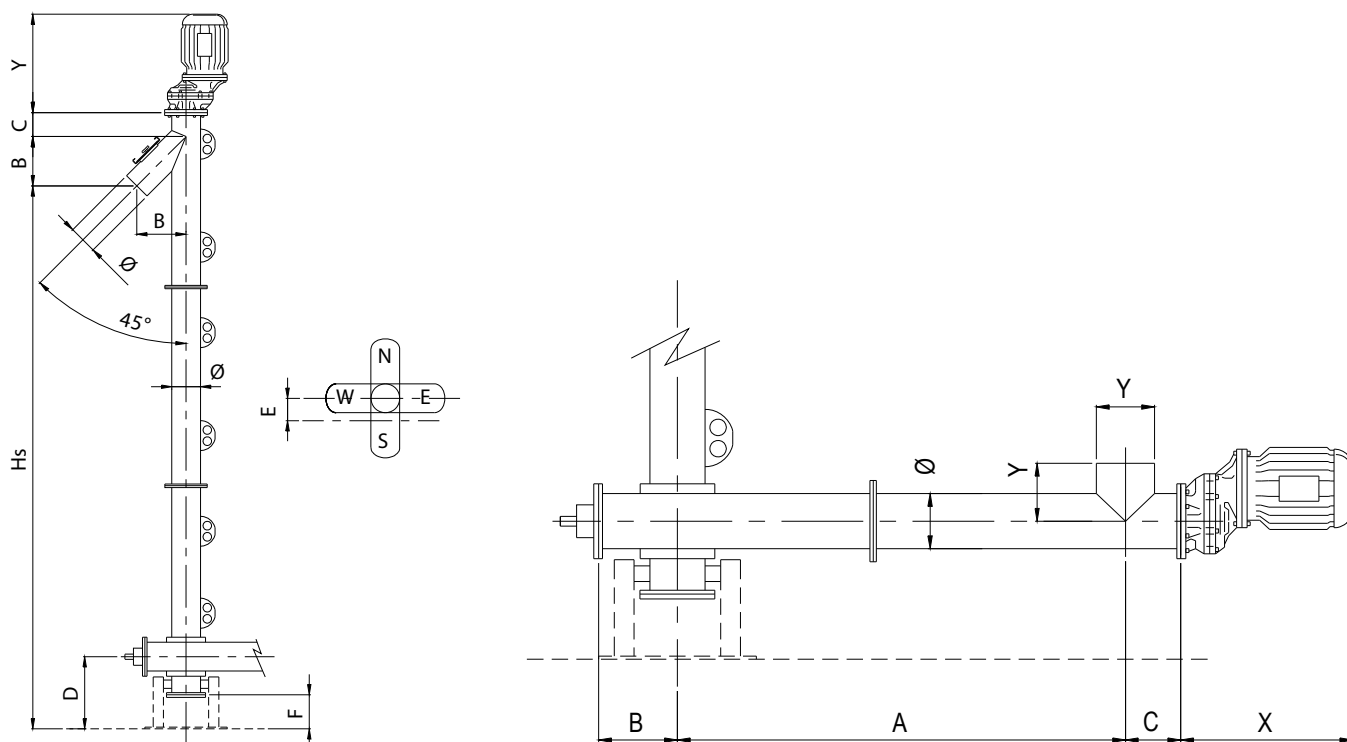
Vertical Screw Lift Systems VE



Technical Features / Performance ▼

- ▶ Small footprint
- ▶ Few parts subject to wear
- ▶ External tube diameter: 114mm (4.5 in), 139mm (5.5 in), 168mm (6.6 in), 193mm (7.6 in), 219mm (8.6 in), 273mm (10.7 in), 323mm (12.7 in)
- ▶ Elevation height in steps of 1 metre (3.3 ft) up to a maximum of 20 metres (65.6 ft)
- ▶ Throughput rates: between 3m³/h (1.8 cfm) and 95m³/h (56 cfm) considering the volumetric efficiency of Portland cement

Overall Dimensions ▼



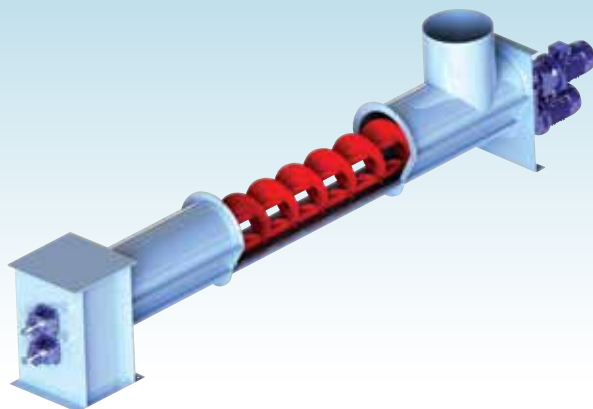
Ø	114	139	168	193	219	273	323
B	212	212	283	283	354	354	354
C	100	100	115	115	130	130	145
D	350	350	440	440	500	500	550
E	70	90	115	125	140	165	220
F	150	150	200	200	200	200	200

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Self-Cleaning Modular Screw Conveyors SPA



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Description ▼

The SPA self-cleaning modular screw conveyors are designed in Carbon Steel with a large range of finishings (RAL) and surface treatment options. It is applicable in sectors where full trough cleaning is required to handle different materials.

An entire range of inlets and outlets is available for the conveying of any kind of materials. There are available drive unit for light, heavy or extra-heavy duty applications. The troughs are fully inspectable for an easy and immediate cleaning.

Function ▼

Thanks to the superimposed design of the two screw conveyors, the residue are also conveyed, which means that no further cleaning required. Moreover, the lower screw conveyor can be used for an accurate feeding by using particular speed configurations.

Application ▼

SPA is the perfect solution for paint processing due to his low powder residue.



Benefits ▼

- ✓ Easy maintenance;
- ✓ High feeding accuracy;
- ✓ Low residue.



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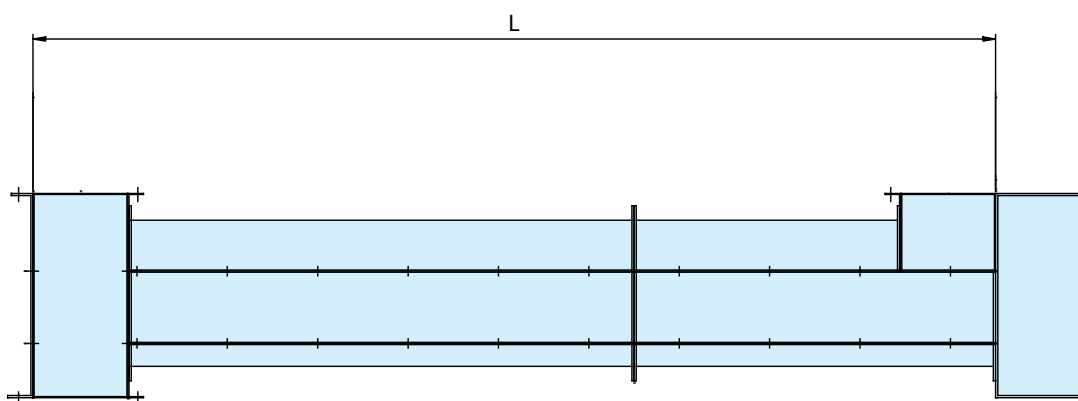
Self-Cleaning Modular Screw Conveyors SPA



Technical Features / Performance ▼

- ▶ Compact drive unit
- ▶ Product-specific anti-wear screws
- ▶ Fully inspectable trough

Overall Dimensions ▼



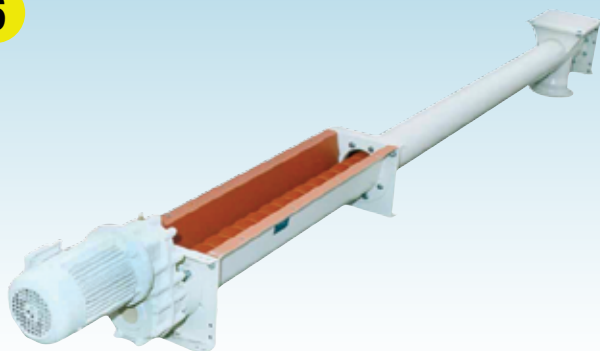
Product group A	Model	SPA				
	Flight diameter	200	250	300	350	400
	Q=m ³ /h, 50Hz	46	67	84	108	145
Product group B	L max. (mm)*	10,000	10,000	10,000	10,000	10,000
	Q=m ³ /h, 50Hz	33	53	65	84	94
Product group C	L max. (mm)*	10,000	10,000	10,000	10,000	10,000
	Q=m ³ /h, 50Hz	15	24	30	42	64
Product group C	L max. (mm)*	10,000	10,000	10,000	10,000	10,000
	Q=m ³ /h, 50Hz	15	24	30	42	64

	Product properties	Products
Product group A	flowing and little abrasive	Nitrates, Carbonates, Titanium dioxide
Product group B	flowing on average and abrasive on average	Oxides, Kaolin, Cement, Gypsum, Lime
Product group C	little flowing and abrasive	Sand, Feldspar, Dolomite, Limestone

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Single Shaft Screw Feeders SU

6



Description ▼

SU-type Single Shaft Screw Feeders are highly versatile offering numerous solutions for conveying powdery or granular materials. SU Screw Feeders are manufactured from carbon steel or stainless steel with a suitable surface finishing. The inlet section is made up from a U or V-shape trough and a tubular outlet section that is equipped with an outlet. There is an end plate at each trough end, helicoid screw flighting welded on a centre pipe with a coupling bush at each end and two end bearing assemblies complete with shaft sealing unit. Furthermore, SU Screw Feeders, which come in a medium heavy-duty design, are equipped with a gear motor that suits the application.

Function ▼

According to the cross section of the silo outlet, SU-type Single Shaft Screw Feeders are available with standard U-shaped or with flared V-section trough. For wet or dry sludge an extra heavy-duty version is available too.



Application ▼

SU Single-shafted Screw Feeders are used for discharging poorly flowing materials from hoppers or silos with a rectangular outlet.

Benefits ▼

- ✓ Prevention of bridging, rat holing and segregation and improvement of material flow;
- ✓ Maintenance-free intermediate cast hanger bearings with self-lubricating slide bushes.

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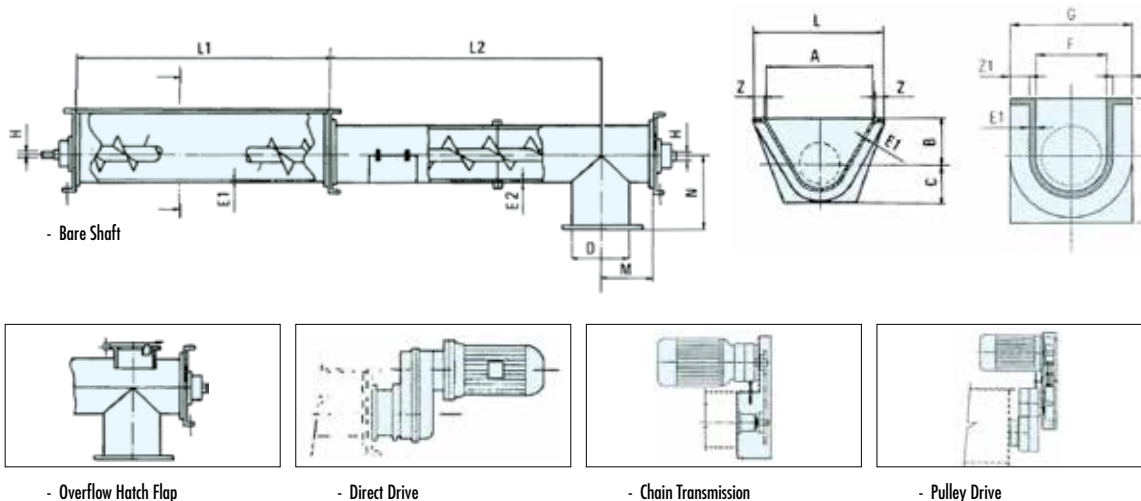
Single Shaft Screw Feeders SU



Technical Features / Performance

- ▶ Powder-coated
- ▶ Constant feed rates
- ▶ Modular design enables easy access and individual custom-design features
- ▶ Sturdy design
- ▶ Medium-heavy-duty helicoid flighting welded on centre pipe
- ▶ Medium-heavy-duty trough in modular flanged sections
- ▶ Open trough section with drilled trough WAM® standard flange
- ▶ Round outlet with drilled WAM® standard flange
- ▶ Robust cast iron body flanged end bearing assemblies with external bearing units and manually adjustable packing gland seals
- ▶ Splined or bolted shaft couplings
- ▶ Drive units mounted at inlet or outlet end
- ▶ Direct drives in a compact version, or with coupling transmission, or with chain or belt transmission

Overall Dimensions



Trough screw conveyors and feeders are manufactured to the customer's requirements by means of standard components available from stock, thus enabling quick delivery.

Screw Ø	Trough U-V		Tubular trough Ø			A	B	C	D	F	G	H	L	M	N*	Q	Z	Z1
	L1	E1	Ø	E2	L2													
100	500 750 1,000	2	114	3	VAR.	175	115	145	114	-	-	25	265	120	120	-	40	-
120	500 750 1,000	2	139	3	VAR.	175	115	145	168	-	-	25	265	120	210	-	40	-
150	500 750 1,000 1,250	2	168	4	VAR.	375	175	145	168	175	265	35	485	140	175	115	50	40
200	500 750 1,000 1,250	2	219	4	VAR.	425	200	185	219	225	315	35	540	160	205	135	50	40
250	500 750 1,000 1,250	2	273	4	VAR.	525	225	215	273	275	365	35	655	180	250	160	60	40
300	500 1,000 1,250 1,500	3	323	4	VAR.	525	250	245	323	325	435	55	655	220	300	195	60	50
350	1,000 1,250 1,500	3	406	5	VAR.	625	270	275	406	375	485	55	755	280	360	235	60	50
400	1,000 1,250 1,500	3	457	5	VAR.	730	290	305	457	425	540	55	900	320	420	270	80	50

Dimensions mm

* For cylindrical outlet (in compliance with WAM® standard)

This datasheet might not show the complete range but only the models specialised for the application.



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Bucket Elevators EI

7



Description ▼

EIS-type Bucket Elevators are specialised for vertical elevation of dry sand and fine aggregates in dry premixed building material processing plants.

Function ▼

The machine consists of a head section with rubber-coated pulley, a foot section with squirrel-cage pulley and a variable number of intermediate sections. Buckets are available in reinforced mild steel or increased thickness Nylon PA6 to ensure high durability against abrasive materials handled.



Application ▼

EIS Bucket Elevators are used for dry sand and fine aggregates having bulk density ranging from 0.8 to 2.5 kg/dm³, and particle size of up to 5mm.

The material, entering through the loading hopper of the foot section, is continuously picked by appropriately shaped buckets fixed on the rubber belt, which is rotating around head and foot roller wheels.

A screw tensioning system enables tensioning of the rubber belt.

The buckets discharge the material through the outlet spout by centrifugal force at a constant speed of 1.5 m/s.

EIS Bucket Elevators are used in dry premixed building material processing plants to fill dry sand and fine aggregates into vertical storage silos.

Benefits ▼

- ✓ **Reliable & durable;**
- ✓ **Easy installation thanks to modular components;**
- ✓ **Low maintenance;**
- ✓ **Small footprint;**
- ✓ **Matching complementary equipment.**



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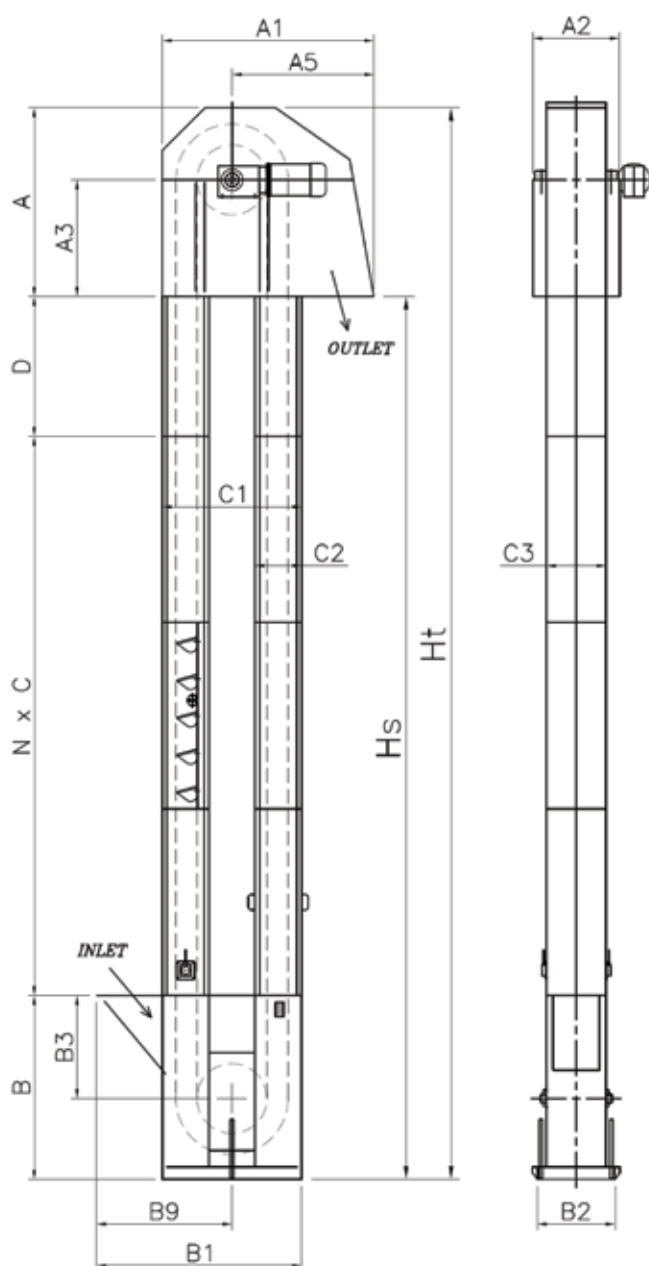
Bucket Elevators EI



Technical Features / Performance ▼

- ▶ Throughput rates up to 52 m³/h
- ▶ Discharge heights up to 34m
- ▶ Anti-wear shields on inlet and outlet
- ▶ Plummer-block bearing with packing on head shaft
- ▶ Flanged-block bearing with felt on foot shaft

Overall Dimensions ▼



Rif	08-09	11	20-21	29-30
	mm	mm	mm	mm
A	765	950	1,172	1,276
A1	823	1,026	1,224	1,422
A2	345	410	460	620
A3	460	580	700	740
A5	548	687	812	961
B	753	923	1,104	1,320
B1	814	941	1,136	1,352
B2	310	384	432	490
B3	370	430	550	720
B9	539	604	725	891
C	2,000	2,000	2,000	2,000
C1	550	674	822	922
C2	211	230	264	336
C3	211	250	300	386
D	500-1,500			
N	variable			

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WAMFLO® Front Dust Collectors

8



Description ▼

WAMFLO® Front Dust Collectors have been specifically developed for Dry-Mix Processing Plants. They are equipped with a round stainless steel body, optionally with a large residue-free access door for filter element removal. The casing contains vertically mounted round bag-type filter elements. To keep the filter media clean an air jet cleaning system is integrated in the top cover.

Function ▼

WAMFLO® Front Dust Collectors are used for both venting and suction applications. Dust separated from the air flow by round bag-type filter elements drops back into the silo, bin or hopper after an integrated automatic reverse air jet cleaning system has removed it from the filter elements.



Application ▼

WAMFLO® Front Dust Collectors are mainly used for venting of mixer for finished products and weigh hopper venting. They are equipped with a centrifugal fan with a potential air volume capacity of up to 53 m³/min.

Benefits ▼

- ✓ Running cost reduction;
- ✓ Residue-free access door;
- ✓ Round bags available in after-market;
- ✓ Compliance with health and safety standards;
- ✓ Maintenance cost reduction;
- ✓ Safety for both OEM and End User.



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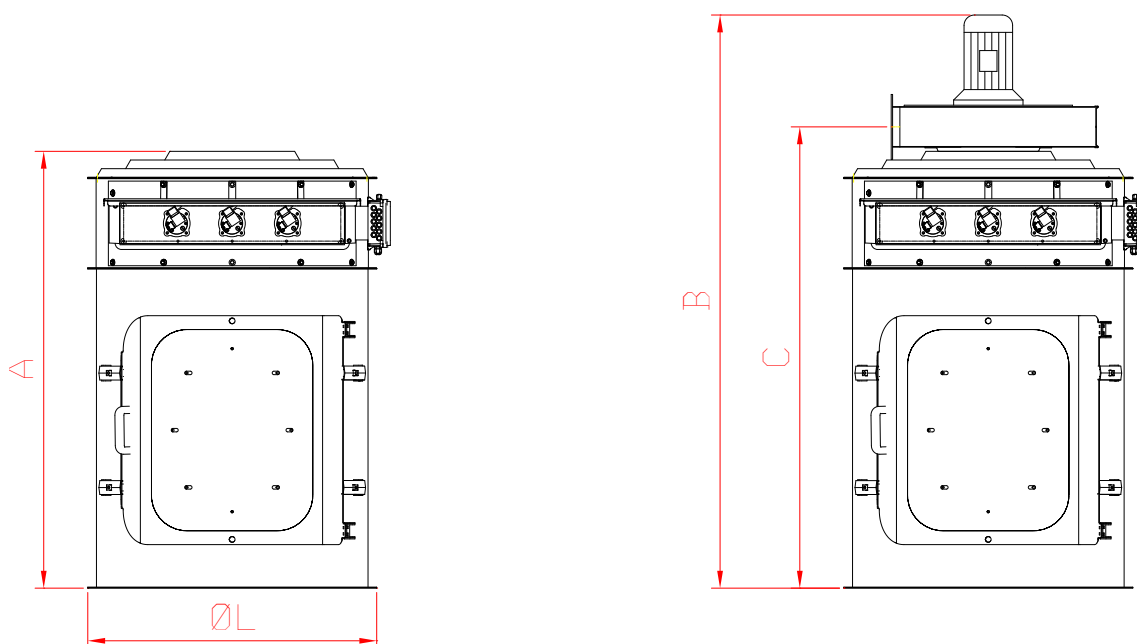
WAMFLO® Front Dust Collectors



Technical Features / Performance ▼

- ▶ 304 SS flanged cylindrical body
- ▶ Filter surface from 5 to 21m² (54 to 226 sq ft)
- ▶ Low emission level due to B.I.A.-certified filter media
- ▶ Compressed air-jet cleaning system integrated in top cover
- ▶ High efficiency centrifugal fan
- ▶ High cleaning efficiency due to "Full Immersion" solenoid valves integrated inside aluminium air tank (corrosion-resistant) for low-maintenance operation
- ▶ No tools for filtering element removal required
- ▶ Large access door for comfortable filter element removal

Overall Dimensions ▼



FILTER CODE	FILTER SURFACE (m ²)	Ø L	A	B	C
FNB2J05	5	603	1,666	2,221	1,809
FNB3J08	8	783	1,676	2,326	1,839
FNB3J11	11	783	2,156	2,806	2,319
FNB4J16	16	1,038	1,692	2,351	1,859
FNB4J21	21	1,038	2,172	2,831	2,339

Paint & Varnish Processing

WAMAIR® Dust Collectors FP

9



Description ▼

WAMAIR® FP Dust Collectors consist of a polygonal shape casing, specifically developed for de-dusting mechanical conveyors in Dry-Mix Processing Plants. The filter is equipped with horizontally inserted pocket filter elements and a reverse air jet cleaning system integrated inside the hinged access door.

Function ▼

WAMAIR® Dust Collectors separate dust from the air flow by means of pocket filter elements. The dust drops down after an automatic reverse air jet cleaning device inside the front inspection door has removed it from the filter elements.



Application ▼

WAMAIR® FP Dust Collectors are specially developed for de-dusting mechanical conveyors such as belt conveyors, chain conveyors and bucket elevators.

Benefits ▼

- ✓ Filter dimensions match conveyor shape;
- ✓ Compliance with health and safety standards;
- ✓ Filter elements available in after-market;
- ✓ Safety for both OEM and End User;
- ✓ Running cost reduction;
- ✓ Low energy consumption;
- ✓ Maintenance cost reduction.



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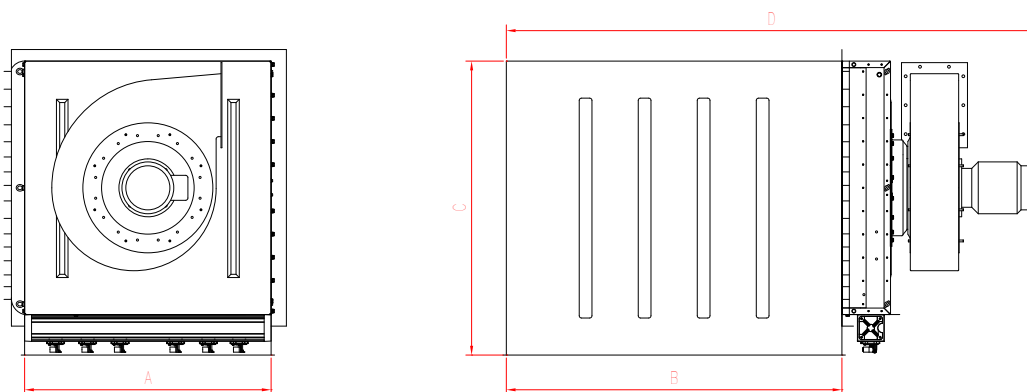
WAMAIR® Dust Collectors FP



Technical Features / Performance ▼

- ▶ 304 SS polygonal body
- ▶ Filter surface from 3 to 54m² (32 to 581 sq ft)
- ▶ Low emission level due to B.I.A.-certified filter media
- ▶ Large access door for comfortable filter element removal
- ▶ High cleaning efficiency due to "Full Immersion" solenoid valves integrated in aluminium air tank (corrosion-resistant) for low-maintenance operation
- ▶ High efficiency centrifugal fan
- ▶ Fan integrated in access door

Overall Dimensions ▼



FILTER CODE	FILTER SURFACE (m ²)	A	B	C	D
FPHT 1 03	3	570	700	825	1,570
FPHT 2 05	5	570	950	825	1,820
FPHT 5 09	9	570	1,700	825	2,570
FPHT D 12	12	570	1,200	1,320	2,170
FPHT E 15	15	570	1,450	1,320	2,420
FPHT F 18	18	570	1,700	1,320	2,670
FPHT M 22	22	845	1,450	1,320	2,440
FPHT R 24	24	1,065	1,200	1,320	2,190
FPHT S 30	30	1,065	1,450	1,320	2,530
FPHT T 36	36	1,065	1,700	1,320	2,813
FPHT Y 45	45	1,065	1,450	1,815	2,563
FPHT U 54	54	1,065	1,700	1,815	2,813

This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

HOPPERJET™ Weigh Hopper Venting Filters

10



Function ▼

HOPPERJET is a compact venting filter for mechanically filled hoppers.

Dust is separated from the air flow by a single POLYPLEAT or bag-type filter element and 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.



Description ▼

HOPPERJET is a polygonally shaped, small footprint venting filter for installation on intermediate storage hoppers or weigh hoppers. It can be used in various industries.

Application ▼

The application in the photograph shows a HOPPERJET installed over a hopper/mixer for transfer of the material (e.g. raw material as calcium carbonate or titanium dioxide) into the process.

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DS: HOPPERJETEN, September 2015, 800

- ✓ High filtration efficiency of WAM® filtering elements
- ✓ Low emission level due to B.I.A.-certified filter media
- ✓ Small Footprint: 0.11 m² (1.2 sq ft)
- ✓ Corrosion-free design



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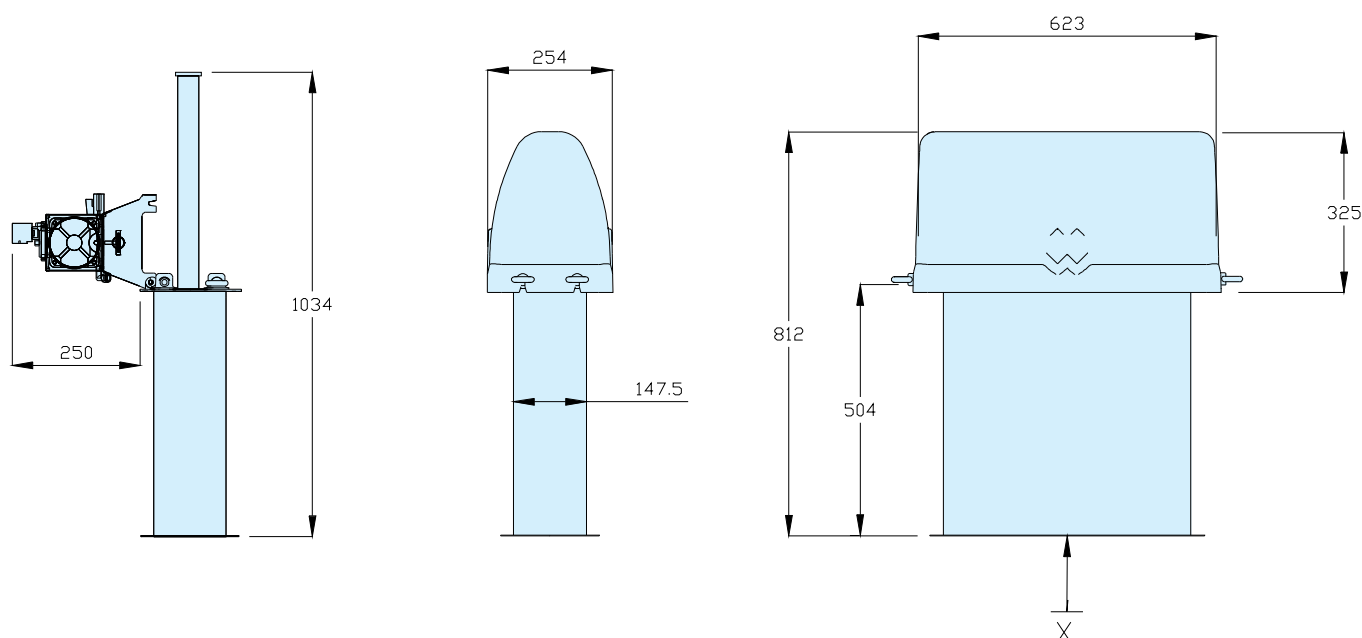
HOPPERJET™ Weigh Hopper Venting Filters



Technical Features / Performance ▼

- ▶ 304 stainless steel body with bottom flange
- ▶ Compact design
- ▶ Compressed air jet cleaning system
- ▶ Quick, tool-free filter element replacement
- ▶ Maintenance-free air jet cleaning unit integrated in the cover
- ▶ High cleaning efficiency due to "Full-Immersion" solenoid valves
- ▶ Easy installation and retrofitting

Overall Dimensions ▼



Code	Nbr. Filter Elements	Filter Surface	Compr. air consumption	Noise db(A)	kg
HOPT05	1	0.5	4.5	67	22

Paint & Varnish Processing

Bin Activators BA



11



Description ▼

The BA Bin Activator is a device of conical shape that, due to vibration, facilitates material flow from hoppers or silos. It consists of a seamless carbon 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 Activator with the silo, as well as one or two electric vibrators.

Function ▼

One or two electric vibrators fitted to the unit generate vibration of the Bin Activator every time the feeding device beneath the silo is started for material discharge. During operation the Bin Activator describes a gyratory movement which is transmitted to the material inside the silo. The result is smooth material flow through the Bin Activator outlet into the connected feeder. The use of this equipment ensures optimum feeding of the material causing "mass flow" inside the silo, thus avoiding bridging or rat holing phenomena.



Application ▼

Discharging of a variety of powders

Usually fitted in large numbers under material storage silos or daily buffer silos/hoppers to discharge poorly flowing powders such as additives.

The Bin Activator outlet is usually shut off by a slide valve or butterfly valve which is connected with a mechanical feeding device or loading bellows.

Benefits ▼

- ✓ High discharging performance;
- ✓ No waste material thanks to special seal design;
- ✓ Reduced maintenance thanks to long-life seal material.

Paint & Varnish Processing

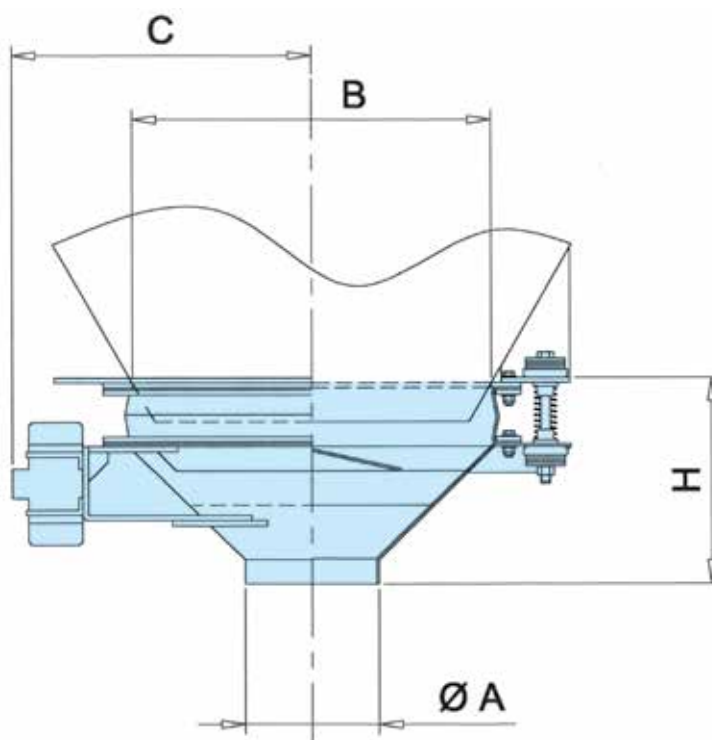
Bin Activators BA



Technical Features / Performance ▼

- ▶ Diameters up to 3,000mm
- ▶ No internal residue nests
- ▶ 304L SS available for additives
- ▶ Smooth internal finishing
- ▶ Strong seamless seal
- ▶ ATEX-compliant

Overall Dimensions ▼



TYPE	Size	Ø A* Standard	B	C	H	Vibrators	kg
BA040	400	114	380	427	330	1	59
BA060	600	168	580	519	408	1	80
BA075	750	219	730	609	456	1	99
BA090	900	219	880	684	531	1	134
BA100	1,000	273	980	734	555	1	146
BA125	1,250	273	1,230	937	730	1	290
BA150	1,500	323	1,480	1,120	774	1	475
BA180	1,800	323	1,780	1,194	924	2	726
BA210	2,100	406	2,080	1,420	1,033	2	881
BA235	2,350	406	2,330	1,547	1,166	2	1,255

(*) Further outlet dimensions reported in Technical Catalogue

Dimensions in mm



www.wamgroup.com

This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

Manual Bag Openers RSM



12



Description ▼

The RSM Manual Bag Opener is manufactured from stainless steel and consists of a grille with a rest fitted to its front. The grille is mounted on top of a hopper which is supported by four feet. A fabricated hood with protection door fitted to its front covers the hopper and grille. RSM-310 Bag Openers are manufactured in high-finish-grade materials and come with or without integrated de-dusting filter unit. In the version with integrated dust filter the filter elements are cleaned pneumatically by reverse air jet.

Function ▼

The operator puts the bag on the rest and pushes it on to the grille. He then slits the bag open with a vertical cut and shakes it empty. While the bag content may be discharged through a hopper or by BINSWEEP®, a special rotary discharging device, into any type of feeder, the built-in fan operated, air jet cleaned dust collector filters the dust generated during emptying. The empty bag is dropped in the chute on the side which leads into the optional COM-type Waste Bag Compactor (see COM). Manual RSM Bag Openers are designed to minimise material residue. They satisfy a large number of applications due to their modular component design.



Application ▼

RSM Manual Bag Openers are used to transfer the raw materials contained in bags to silos for storage. The material is normally conveyed pneumatically into the silo.

Benefits ▼

- ✓ Space-saving overall dimensions and compact user-friendly design;
- ✓ Built-in fan-operated, air jet-cleaned, maintenance-friendly dust collector;
- ✓ With optional BINSWEEP® Rotary Discharging Device (see chapter) low overall height;
- ✓ Favourable price-performance ratio.

Paint & Varnish Processing

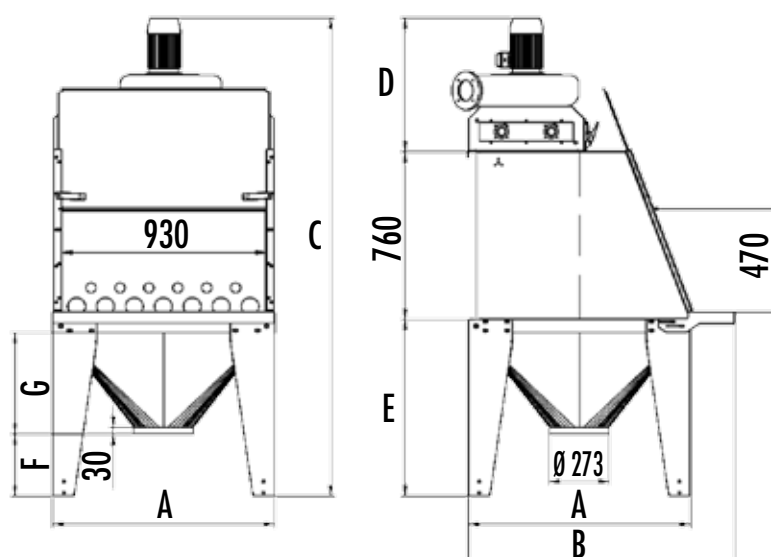
Manual Bag Openers RSM



Technical Features / Performance ▼

- ▶ Construction material: stainless steel
- ▶ Available with de-dusting filter or equipped for centralised dust suction
- ▶ Filter element options: cartridges, round bags, elliptical bags
- ▶ Filter surface from 3 to 22 m² (32 to 237 sq ft)
- ▶ Collecting hoppers with different capacity volumes
- ▶ Support feet with possibility of height adjustment
- ▶ ATEX compliant

Overall Dimensions ▼



	RSM 310
A	1,006
B	1,208
C*	2,166
D*	606
E*	800
F**	282
G**	458

Paint & Varnish Processing

Automatic Bag Splitters RSA

13



Description ▼

The RSA Automatic Bag Splitter is made up of a splitting unit consisting of a trough that encloses an extra-heavy-duty splitting screw complete with an appropriate gear motor and of a screening unit consisting of a horizontal cylindrically shaped rotating screen also complete with a drive unit. On top of the screening unit a suitable fan-operated dust collector can be integrated. Alternatively the RSA-310 is supplied with connecting spigots for a central de-dusting unit.

Function ▼

The RSA Automatic Bag Splitter is used for splitting and emptying single or multiple layer bags made from paper, polyethylene, or polyethylene-lined paper.

The bags are loaded manually or via belt conveyor into the inlet which is covered by a dust collecting hood. The bags drop from the belt on an extra-heavy-duty shaftless screw. Thin bags will burst open just through the impact. Bags with multiple layers or those made of elastic plastic material are pulled in by the slowly turning screw and ripped open through a scissor effect between screw and trough. This effect is increased due to a replaceable panel with integrated cutters applied to the inside of the trough. As it cuts them open the screw conveys the broken bags and their content into the revolving screen. The bag contents fall through the screen mesh into a collecting device mounted on the outlet of the machine. Through rotation and a slight vibration of the screen (due to its patented design) the bags are completely emptied. Paddles applied inside the screen drum repeatedly lift up the empty bags. In this manner the bags are liberated from remaining material. The inclination of the paddles helps the bags move towards the screen outlet where they drop into the optionally built-on COM-type bag compactor (see COM).



Application ▼

RSA Automatic Bag Splitters are used to transfer large quantities of raw materials contained in bags to silos for storage. The material is normally conveyed pneumatically into the silo.

Benefits ▼

- ✓ Low product retention rate;
- ✓ Compact machine consisting of a small number of components (only few spare parts required);
- ✓ Easy access to all machine parts;
- ✓ Low operating noise level due to use of SINT® engineering polymers;
- ✓ Easy and quick replacement of filter elements;
- ✓ Able to handle bags of different sizes without any machine adjustment;
- ✓ Favourable price-performance ratio.

Paint & Varnish Processing

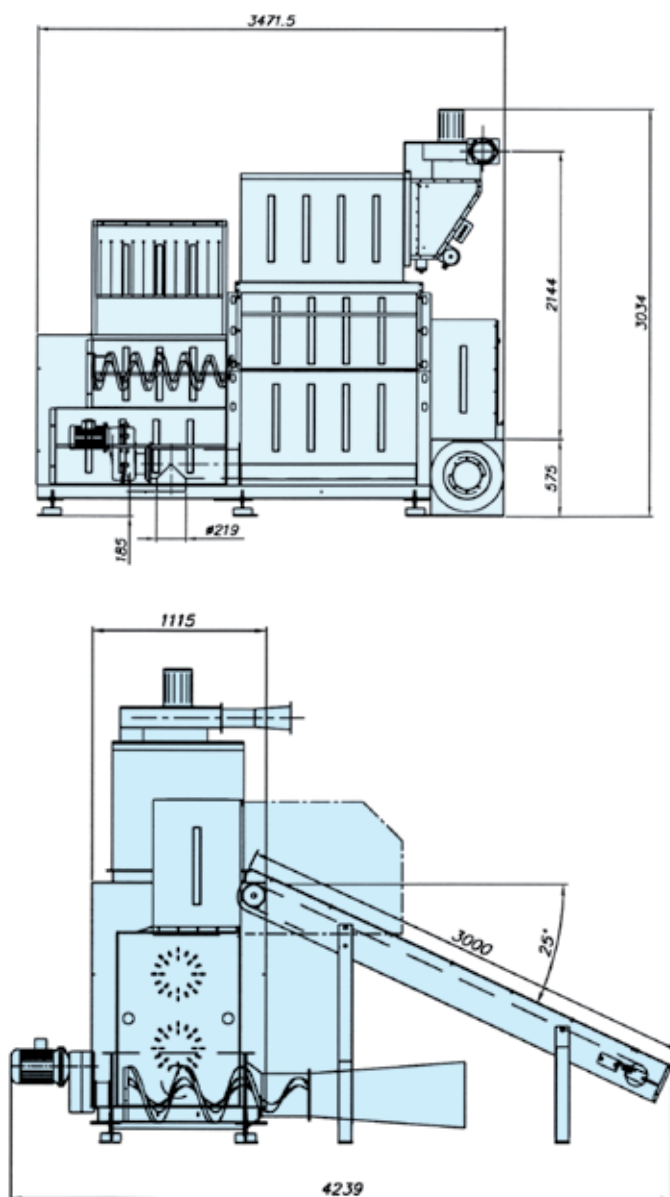
Automatic Bag Splitters RSA



Technical Features / Performance ▼

- ▶ Construction material: contact parts in stainless steel;
- ▶ Compact and robust design;
- ▶ Available with integrated dust collector or pre-equipped for centralised de-dusting system;
- ▶ Rotary vibrating screen completely in stainless steel with different size screen mesh.

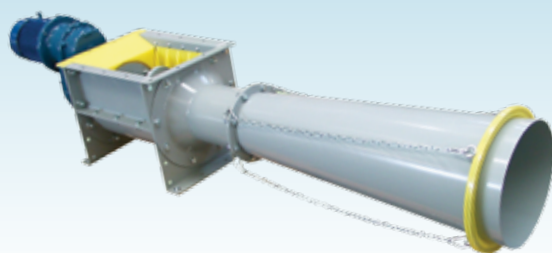
Overall Dimensions ▼



Paint & Varnish Processing

Waste Bag Compactors COM

14



Description ▼

The COM Bag Compactor for torn empty bags consists of a carbon or stainless steel trough with appropriate surface finishing. The U-profile trough is longitudinally split in half to facilitate replacement of the SINT® liner that helps introduction and further compression of the broken bags. The Bag Compactor is equipped with a suitable direct drive unit. At the drive end the compactor is equipped with an end plate fixed to the end flange of the trough for assembly of the end bearing complete with flanged shaft coupling for the bag compacting screw. The other trough end is connected with a tapered pipe that facilitates the progress of the compacted broken bags. At the end of this pipe a polyethylene tube for disposal of the waste bags can be fitted.

Function ▼

The COM Waste Bag Compactor receives entire empty bags or bag fragments from a bag emptying device compacting the bags to approximately one eighth of their original volume. Collected in a polyethylene hose that is periodically untied and cut, the waste bags can be easily disposed of.



Application ▼

COM Waste Bag Compactors are fitted on the outlet of an RSM-310 Manual Bag Opener or an RSA Automatic Bag Splitter for the compaction and disposal of waste bag material.

Benefits ▼

- ✓ Work environment kept clean;
- ✓ Easy access to all parts due to modular design;
- ✓ Extra-heavy-duty shaftless compactor spiral able to handle waste bags of any type without adjustment;
- ✓ Detachable outlet safeguard in compliance with CE-regulations;
- ✓ Compactor does not have to be stopped for untieing filled polyethylene tube;
- ✓ SINT® engineering polymer liner for better compression of the bags.

Paint & Varnish Processing

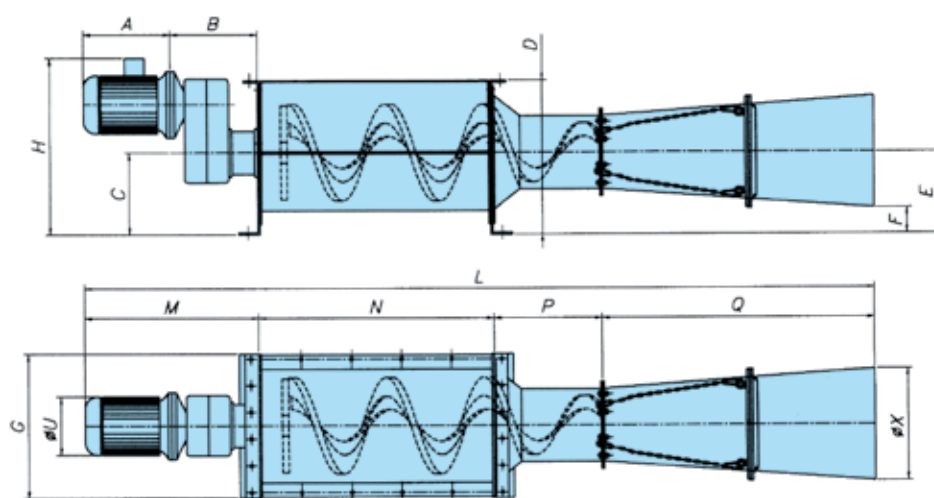
Waste Bag Compactors COM



Technical Features / Performance ▼

- ▶ Construction material: carbon steel or stainless steel;
- ▶ Complete with adjustable tensioning ring for polyethylene hose for disposal of waste bags;
- ▶ Heavy-duty shaftless compactor spiral supported at inlet end;
- ▶ Direct gear motor drive directly mounted at inlet end;
- ▶ ATEX.

Overall Dimensions ▼



Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	U	X	R	T	V	Z	AA	AB	AC	N°W	K	N°Y	S	N°AD	J
COM 030	320	320	245	440	245	67	435	600	2.436	640	496	300	1.000	218	357	584	435	484	325	624	564	435	3	128,3	4	136	3	128,3
COM 040	320	320	305	575	305	95	540	660	2.906	640	868	398	1.000	218	420	970	540	850	425	1.010	940	540	5	100	5	185	5	100

Paint & Varnish Processing

FIBC Dischargers SBB

15



Description ▼

The SBB FIBC Discharger consists of a stainless steel frame complete with a material discharge hopper and an upper mobile cross bar for lifting of the filled up bag by forklift truck into the Discharger.

Function ▼

The SBB is a modular system for discharging Flexible Intermediate Bulk Containers (Big Bags) in different configurations depending on the application. Easy introduction of the FIBC into the support frame and dust-free discharging along with a variety of options make the SBB extremely user-friendly.

The four loops of the FIBC are attached to the hooks of the detached cross bar that has previously been laid on top of the FIBC. The cross bar with the attached FIBC is then picked up by a forklift truck and introduced into the frame of the SBB Discharger. Once the FIBC has settled on the rubber seal of the discharge hopper the outlet closing rope of the FIBC can be pulled open through the inspection hatch of the discharge hopper.



Application ▼

SBB FIBC Dischargers are used to transfer the raw materials contained in FIBCs to silos for storage. The material is normally conveyed pneumatically into the silo.

Benefits ▼

- ✓ **Modular design;**
- ✓ **Compact shipping dimensions;**
- ✓ **Easy to install;**
- ✓ **Complete dust-free discharging from bag corners even with compressed powders.**

Paint & Varnish Processing

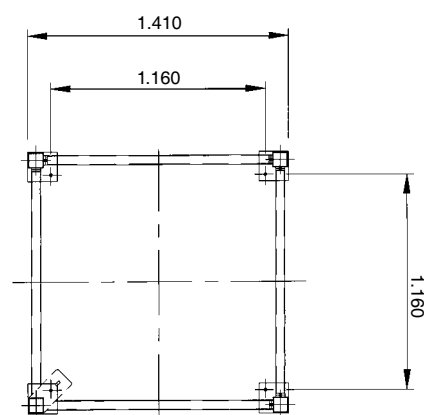
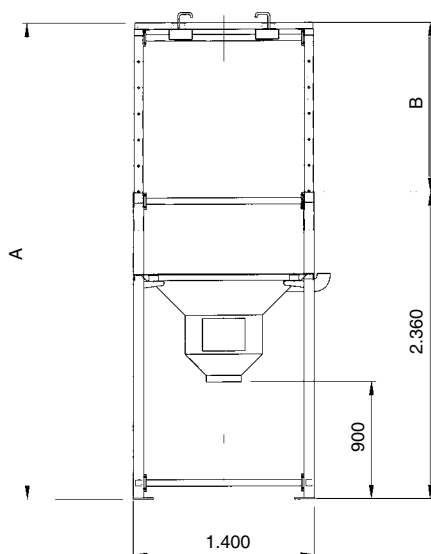
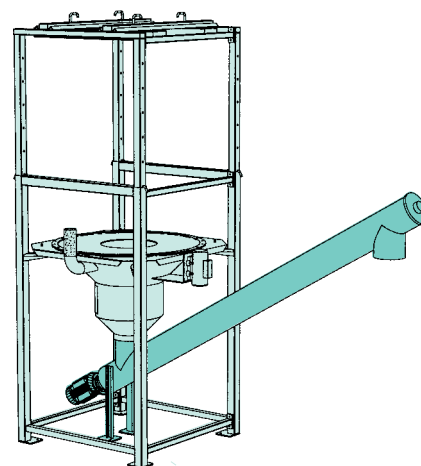
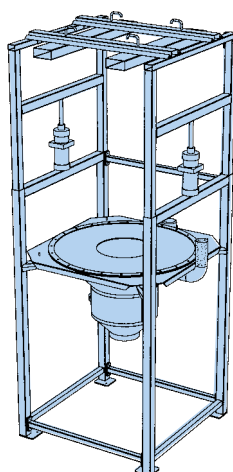
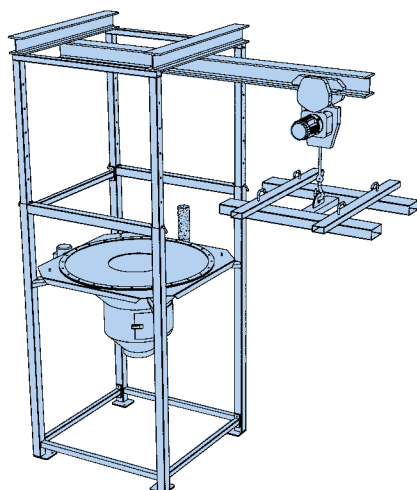
FIBC Dischargers SBB



Technical Features / Performance ▼

- ▶ Construction material: stainless steel
- ▶ Vibrating outlet cone fitted with outlet opening hatchway

Overall Dimensions ▼



TYPE	A	B	C	Max. Bulk Bag Dimensions		
				L	W	M (max.)
SBB 1.1.125 C, S, M (tramoggia e telaio in mild steel)	3,668	1,884	1,308	1,000	1,000	1,800
SBB 2.1.125 C, S, M (tramoggia in aisi e telaio in mild steel)	4,108	2,234	1,658	1,000	1,000	2,200

Dimensions in mm

This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

Rotary Level Indicators ILT

16



Description ▼

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.

Function ▼

As long as material is present, the paddle of the ILT Bin Level Indicator does not rotate. As soon as the material level sinks below the paddle radius, rotation restarts activating other system components. The top or side-mounted indicators are commonly used for materials having a bulk density ranging between 0.5t/m^3 (0.02 lb per cu in) and 2t/m^3 (0.08 lb per cu in).



Application ▼

Typically ILT Rotary Level Indicators are fitted on the vertical walls of a bin, silo or hopper at the desired maximum or minimum level. Equipped with an extension rod, they can also be mounted vertically into the roof plate.

Benefits ▼

- ✓ No product contamination due to the 304 stainless steel shaft; and measuring paddle and non-toxic plastic fittings;
- ✓ No product contact with the casing;
- ✓ ATEX;
- ✓ Adjustable via reset of force spring in 3 positions;
- ✓ Double threaded fitting ensures system compatibility;
- ✓ Use with different materials in one single configuration;
- ✓ Easy and quick installation and replacement;
- ✓ Compact overall dimensions;
- ✓ Lightweight due to casing in aluminium alloy;
- ✓ Maintenance-free;
- ✓ Cost-effective.

Paint & Varnish Processing

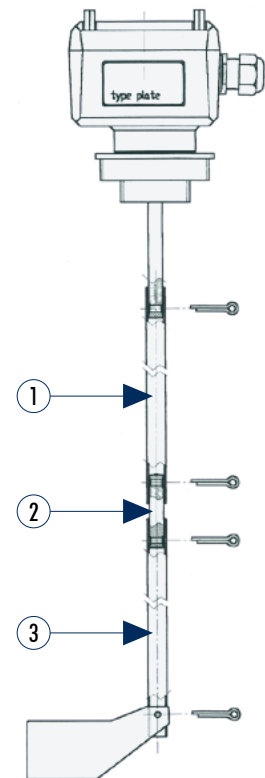
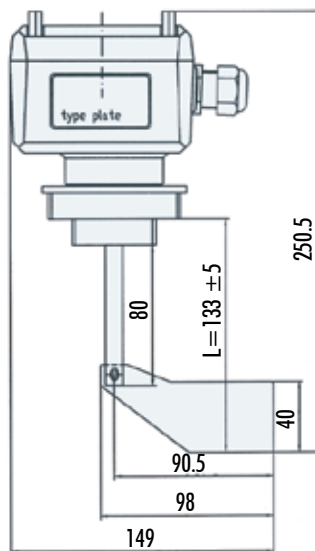
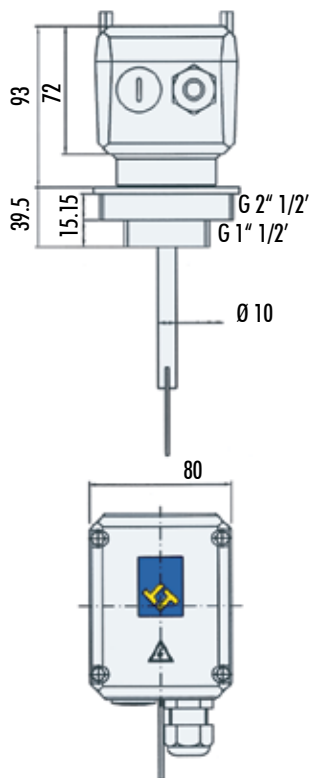
Rotary Level Indicators ILT



Technical Features / Performance ▼

- ▶ Voltages available: 24 V – 48 V (AC), 50-60 Hz; 110 V – 230 V (AC), 50-60 Hz; 24 V (DC)
- ▶ Signal output: Floating microswitch AC max. 250 V, 2 A
- ▶ Standard connection: thread G 1½" – G 2½"
- ▶ Enclosure: IP 66
- ▶ Working temperature inside vessel: - 20 °C to 80 °C (- 4° F to 178° F)
- ▶ Vessel maximum pressure: max. 0.8 bar (12 PSI)
- ▶ Threaded fittings material: Plastic
- ▶ Rotating shaft and measuring paddle material: 304 stainless steel
- ▶ Casing material: Aluminium alloy
- ▶ Speed of measuring paddle: 1 rpm
- ▶ Friction clutch protection of the gearing of impacts of the measuring paddle
- ▶ Self-opening double paddle for light materials
- ▶ Flanged connection as option
- ▶ Modular shaft extension up to 3 metres (10 ft)
- ▶ External light

Overall Dimensions ▼



1: L = 500 /1000

Paint & Varnish Processing

Silo Safety System KCS

20



Description ▼

The KCS Silo Safety System for the safeguarding of silos consists of a central electronic monitoring and control unit which manages a series of silos and a component kit including, in the basic version one power panel for each silo, a silo pipe connection, a pinch valve, a tanker coupling with the filling pipe, a maximum level indicator, a differential pressure switch or electronic pressure meter, a pressure gauge for the venting filter, a pressure relief valve, and an audible alarm.

Function ▼

The KCS Silo Safety System can be used for silos which are filled by tanker with powdery materials. Damage to the silo or its accessories is most likely during the operation of tanker filling. This is due to the risk of overfilling or excess pressurisation. The KCS system, supplied in component form, prevents both overfilling and excess pressurisation, thus avoiding damage to the silo, to the venting filter or other accessories, as well as reducing the risk of dust emission into the atmosphere.



Application ▼

In Dry-Mix plants it is essential that each silo is equipped with the safety components described. The control panel should be installed in the central control room from where the plant operator can monitor up to 32 silos.

Benefits ▼

- ✓ Avoids harm to people and damage to the silo and its accessories;
- ✓ Reduces risk of air pollution;
- ✓ Eliminates risk of filling the wrong silo;
- ✓ Starts and stops filter cleaning automatically;
- ✓ Receives indication from electronic pressure meter whether filter may need attention.

Paint & Varnish Processing

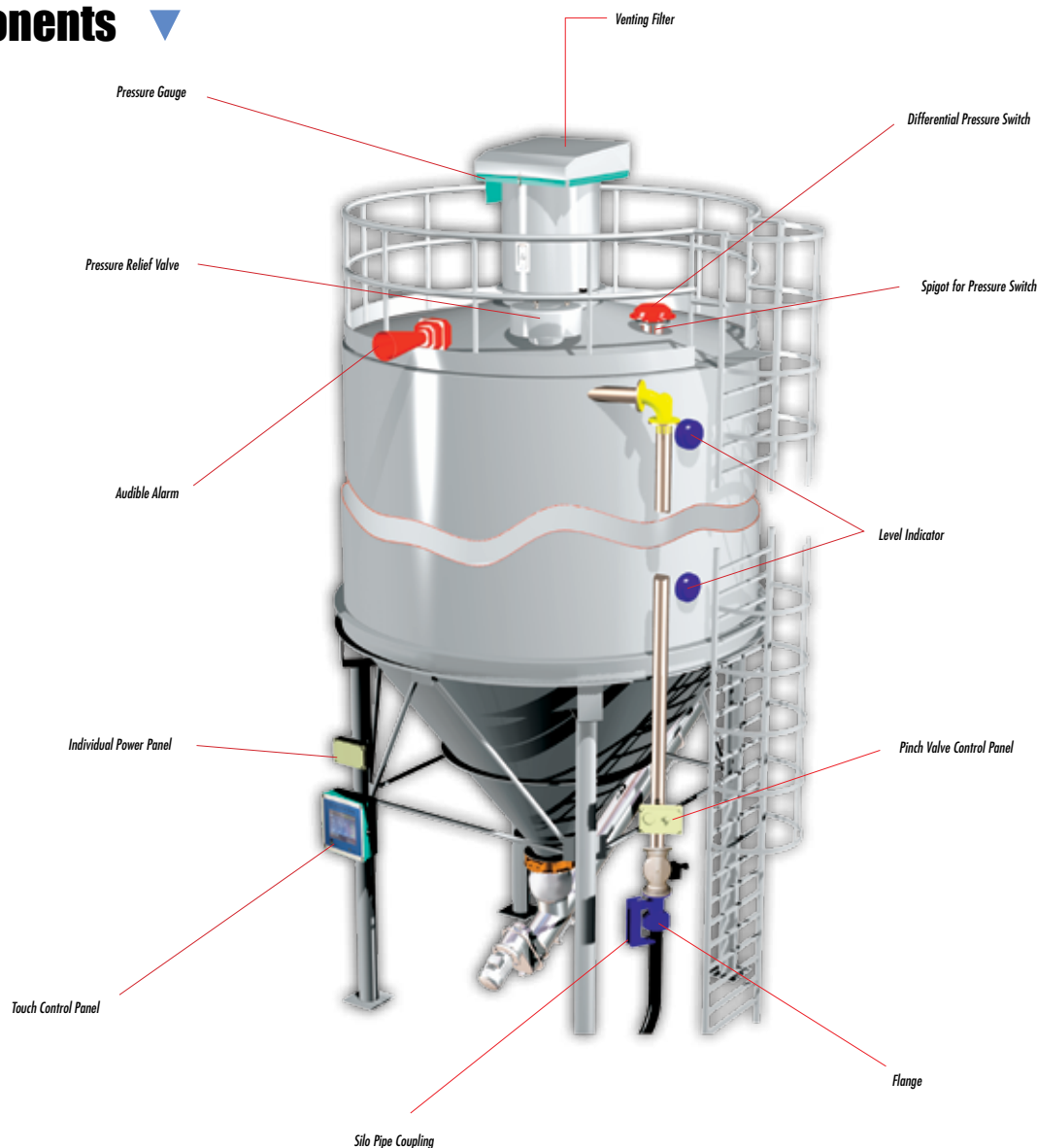
Silo Safety System KCS



Technical Features / Performance ▼

- ▶ To avoid damage to silo and accessories
- ▶ To reduce risk of air pollution
- ▶ To eliminate risk of filling wrong silo
- ▶ To start and stop filter cleaning automatically
- ▶ To receive indication from pressure gauge whether filter may need attention
- ▶ To benefit from control panel monitoring of:
 - Internal pressure of any silo;
 - Maximum level indicator free;
 - Presence of compressed air to venting filter (if air jet filter is used);
 - Presence of compressed air to pinch valve.

Components ▼

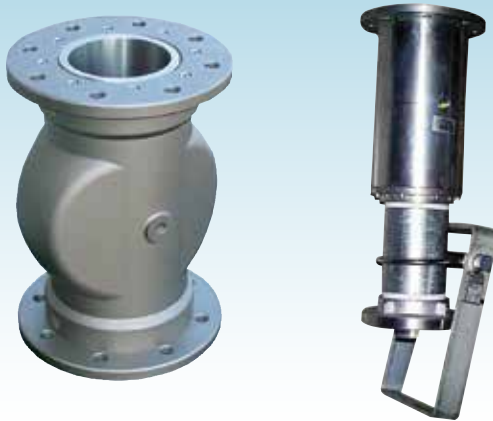


This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

Pinch Valves VM / Pipe Connections KAT

22



Description ▼

The casing of the VM Pinch Valve is manufactured from aluminium alloy. Sleeves are made from fabric-reinforced NR or NBR. The sleeve support bushes are either made from aluminium alloy or 304/316 stainless steel.

Function ▼

VM-type Pinch Valves are used for interception of the material flow in pneumatic conveying systems, or other pipelines. They can be also installed as a locking device for silo filling pipes. In the open position the internal cross section of the valve is identical with the connecting pipe diameter. By introducing compressed air through the threaded bore into the interior of the valve, the internal flexible sleeve is reshaped in such a way as to hermetically seal the passage.



Application ▼

VM Pinch Valves are mounted between the bottom end of the silo filling pipe and the KAT Pipe Connection for tanker filling. Should any abnormal conditions occur, such as excess pressure inside the silo or overfilling of the latter, the VM Pinch Valve receives command for instantaneous closure, thus safeguarding the silo from any further filling or overpressurization.

Benefits ▼

- ✓ Full bore-through passage without any pressure loss and stagnation points;
- ✓ Low air consumption;
- ✓ Easy and quick sleeve and bush replacement;
- ✓ Sleeves in fabric-reinforced NR;
- ✓ Compact overall dimensions;
- ✓ Lightweight due to valve body in aluminium alloy;
- ✓ No maintenance required except for periodic replacement of the sleeve and the bushes.

Paint & Varnish Processing

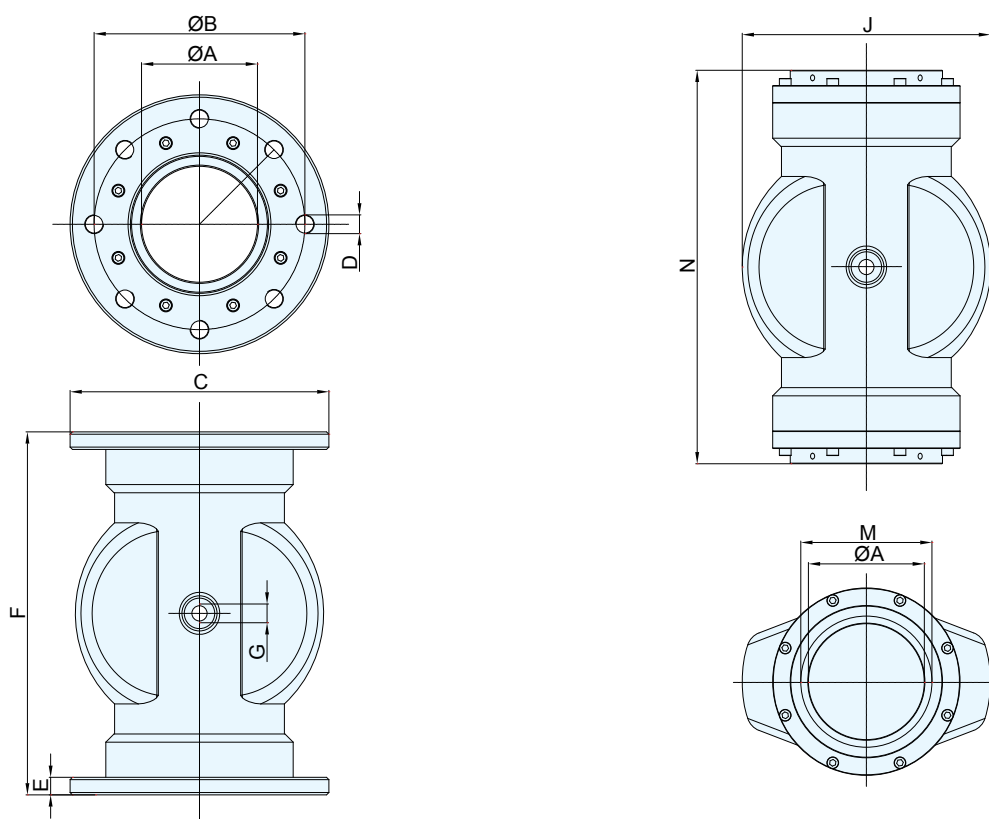
Pinch Valves VM / Pipe Connections KAT



Technical Features / Performance ▼

- ▶ Passage diameter 80mm or 100mm (3 or 4 in)
- ▶ Maximum working pressure: 3.5 bar (52 PSI)
- ▶ Maximum inflation pressure: 6.0 bar (90 PSI)
- ▶ Recommended maximum differential pressure: 2.5 bar (37 PSI)
- ▶ Sleeve material: NR
- ▶ Bush material: Aluminium alloy

Overall Dimensions ▼



TYPE	A	B	C	D		E	F	G	H	J	L	M	N	kg
				Ø	Qty.									
VM080	80	160	200	M 16	4	15	270	1/4"		180		3"	294	5.40
VM0100	100	180	220	M 16	8	15	310	1/4"		214		4"	334	7.60

Paint & Varnish Processing

Drop-Through Rotary Valves RV / RVR

23



RV



RVR



Description ▼

RV Drop-Through Rotary Valves 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.

Function ▼

RV Rotary Valves have been developed for maximum versatility in application. They are suitable for controlled discharging and feeding of powdery or granular materials from silos, hoppers, pneumatic conveying systems, or cyclones.



Application ▼

RV-RVR Rotary valves are fitted at the outlet of silos, bins or hoppers for feeding the discharged material with high accuracy into the downstream process.

Benefits ▼

- ✓ Air-purged seals;
- ✓ Square or round flanges ensure system compatibility and match with WAM® flanges;
- ✓ Cast iron or SS, nickel coating, chrome-plated casing, as well as various rotor versions available to ensure the most appropriate configuration for application requirements;
- ✓ Quick integration into the process thanks to easy handling;
- ✓ Modular design and easy maintenance thanks to few components.

Paint & Varnish Processing

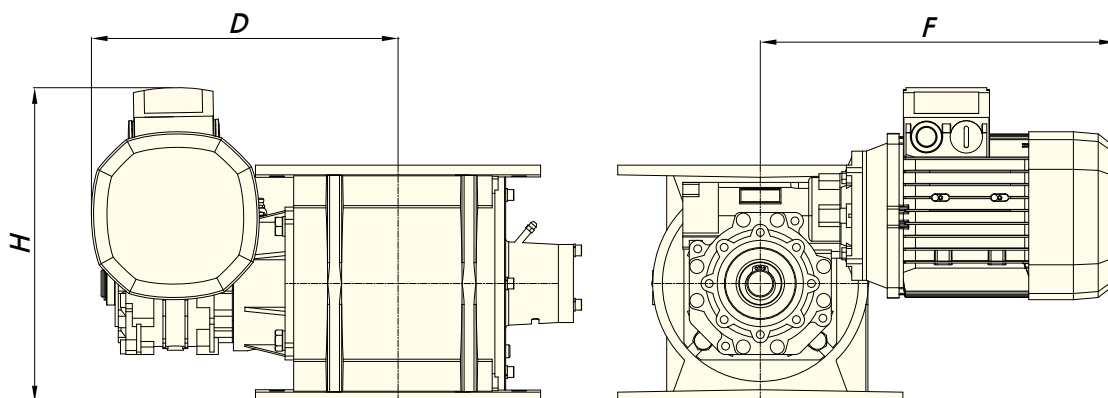
Drop-Through Rotary Valves RV / RVR



Technical Features / Performance ▼

- ▶ Capacity: 2.2 ~ 19.5 litres per revolution (0.08 ~ 0.7 cu ft per revolution)
- ▶ Working temperature: - 20° C ~ 150° C (- 4° F ~ 300° F)
- ▶ Maximum differential pressure: 0.3 bar (4.4 psi)
- ▶ Cast iron or SS design
- ▶ Nickel coating or chrome-plated casing for abrasive materials available
- ▶ Rotor with beveled blades or replaceable tips available
- ▶ Sturdy compact structure
- ▶ Small footprint
- ▶ Drive unit mounted directly on shaft without further bearing assembly or coupling
- ▶ Square or round flanges and inlet spouts
- ▶ Compatibility with WAM® standard flanges on inlet and outlet

Overall Dimensions ▼



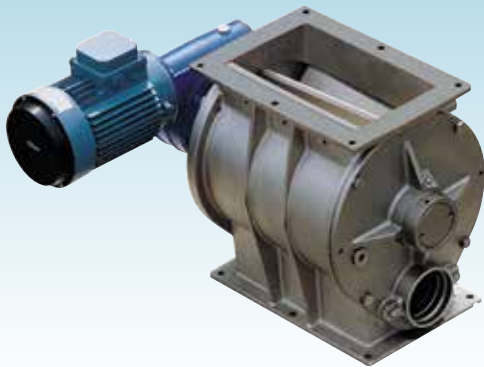
TYPE	D*	F*	H*		kW
			RV	RVR	
RV/RVR 02 30 rpm	294	350	318	333	0.5
RV/RVR 02 20 rpm					0.75
RV/RVR 05 30 rpm	328	394	348	373	0.5
RV/RVR 05 20 rpm					1.1
RV/RVR 10 30 rpm	364	419	425	472	0.75
RV/RVR 10 20 rpm					1.5
RV/RVR 20 30 rpm	392				1.1
RV/RVR 20 20 rpm					

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Paint & Varnish Processing

Drop-Through Rotary Valves RVSC

24



Description ▼

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.

Function ▼

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. After less than half a turn the material falls through the bottom opening into an air stream passing through a pneumatic conveying duct connected with the bottom part of the Rotary Valve.



Application ▼

RVS Blow-Through Rotary Valves are usually fitted at the outlet of a bin, silo or hopper upstream of a pneumatic conveying duct into which the material is accurately fed.

Benefits ▼

- ✓ **Material:** cast iron, SS, coating, chromed body and various rotor versions available to offer the ideal configuration for most application requirements;
- ✓ **Pipe connections** included simplifying unit installation and removal.

Paint & Varnish Processing

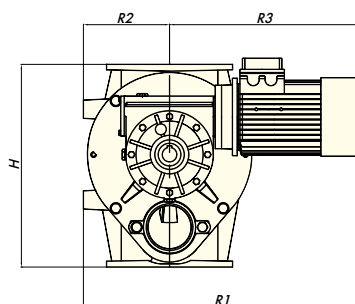
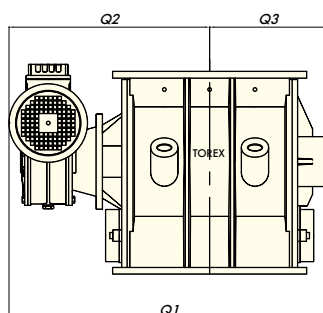
Drop-Through Rotary Valves RVSC



Technical Features / Performance ▼

- ▶ Feed rates: 5, 9, 14, 20, 38, 80 litres per revolution (0.17, 0.3, 0.5, 0.7, 1.3, 2.8 cu ft per revolution)
- ▶ Working temperature: -20 °C ~ 220 °C (-4° F ~ 428° F)
- ▶ Maximum differential pressure: 0.8 bar (11.6 psi)
- ▶ Cast iron or 304 SS
- ▶ Nickel coating available
- ▶ Rotor with beveled blades or replaceable tips
- ▶ Chrome-plated casing for abrasive materials
- ▶ Sturdy compact structure
- ▶ Small footprint
- ▶ Drive unit mounted directly on shaft without any further bearing assembly or coupling
- ▶ Rectangular inlet flanges
- ▶ Counterflanges to be welded on pneumatic conveying duct
- ▶ Blade scraper installed inside the inlet to ease rotor movement

Overall Dimensions ▼



30 RPM	TYPE	Dimensions in mm							Electric Motor	
		Q1	Q2	Q3	R1	R2	R3	H	kW	min ⁻¹
	RVS/C 05	505	342	163	550	130	420	335	0.55	1,400
	RVS/C 10	572	372	200	560	140	420	339	0.75	1,400
	RVS/C 15	605	390	215	588	162	426	399	1.1	1,400
	RVS/C 20	705	444	261	608	181	426	447	1.5	1,400
	RVS/C 35	890	558	332	740	217	523	530	2.2	1,400
	RVS/C 80	1,165	718	447	890	277	613	677	3	1,400

20 RPM	TYPE	Dimensions in mm							Electric Motor	
		Q1	Q2	Q3	R1	R2	R3	H	kW	min ⁻¹
	RVS/C 05	505	342	163	550	130	420	335	0.55	900
	RVS/C 10	572	372	200	560	140	420	339	0.55	900
	RVS/C 15	605	390	215	588	162	426	399	0.75	900
	RVS/C 20	705	444	261	608	181	426	447	1.1	900
	RVS/C 35	890	558	332	740	217	523	530	1.5	900
	RVS/C 80	1,165	718	447	883	277	556	677	2.2	900

10 RPM	TYPE	Dimensions in mm							Electric Motor		Pre-Torque
		Q1	Q2	Q3	R1	R2	R3	H	kW	min ⁻¹	
	RVS/C 05	475	342	163	517	130	387	335	0.37	1,400	YES
	RVS/C 10	542	342	200	527	140	387	339	0.37	1,400	YES
	RVS/C 15	585	370	215	572	162	410	399	0.55	1,400	YES
	RVS/C 20	658	397	261	591	181	410	447	0.75	1,400	YES
	RVS/C 35	890	558	332	740	217	523	530	1.1	1,400	NO
	RVS/C 80	1,150	703	447	832	277	555	677	1.5	1,400	NO

Paint & Varnish Processing

Diverter Valves VAR

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Description ▼

The VAR Diverter Valves consist of a cast aluminium body and cover and a rotary inner drum which closes one of the two outlet pipes as required.

The rotation of the inner drum is brought about by means of a pneumatic actuator. The inner sealing is ensured by pneumatically inflatable gaskets.

Function ▼

The VAR Diverter Valves are suitable for conveying any kind of material, both in powder and granular form.

The pneumatic actuator which activates the inner rotary drum makes it possible to switch the outlet pipe and thereby divert the flow of material from one duct to another one.



Application ▼

The VAR Diverter Valves are fitted directly to the pneumatic conveying ducts whenever is needed to switch the flow of material to different production lines.

Benefits ▼

- ✓ No contamination due to the 304 stainless steel contact parts inserts;
- ✓ Minimum pressure drop thanks to inflatable seal;
- ✓ Minimum friction during switching operations thanks to inflatable seal;
- ✓ ATEX-compliant pneumatic actuator and solenoid Valves;
- ✓ Use with different materials in a one configuration only;
- ✓ Quick integration into the process thanks to its light weight and easy handling;
- ✓ Modular design and easy maintenance thanks to small numbers of components.

Paint & Varnish Processing

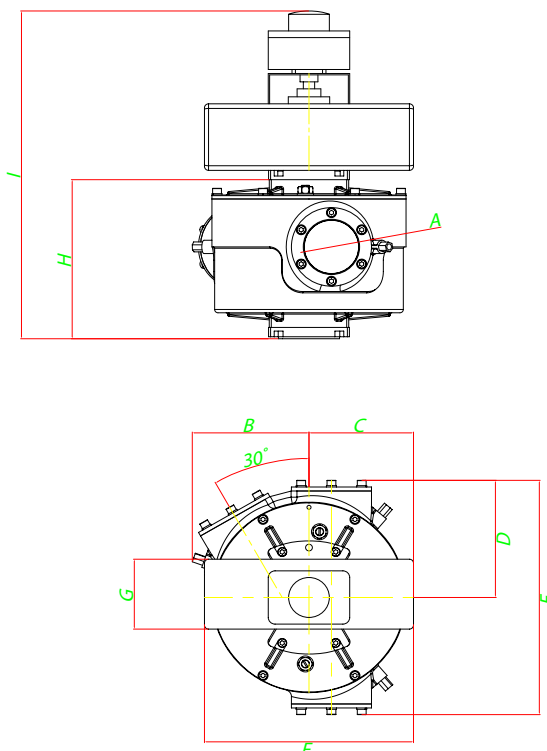
Diverter Valves VAR



Technical Features / Performance ▼

- ▶ Basic structure made from cast aluminium
- ▶ Operating temperature: -20° C to 80° C (-4° F to 180° F)
- ▶ Diverter operating pressure: max. 3.5 bar (36 PSI)
- ▶ Inflatable seal closure pressure: max. 4 bar (58 PSI)
- ▶ Pneumatic actuator activation pressure: max. 8 bar (116 PSI)
- ▶ Range comprising diameters from 80mm to 150mm (3 to 6 in)
- ▶ Micro-switch box for signalling actuator position
- ▶ Electro-pneumatic actuator with possibility of different supply voltages 24/48/110/230 V AC

Overall Dimensions ▼



Type	A	B	C	D	E	F	G	H	I	kg
80	80	172	154	176	352	338	106	239	488	30
100	100	198	169	218	436	338	106	265	514	40
125	125	229	192	249	498	384	123	351	613	60
150	150	260	192	278	556	384	123	383	645	78
175	175	310	266	321	642	532	148	421	725	115

Paint & Varnish Processing

Slide Valves VL

26



Description ▼

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

Function ▼

VL Slide Valves are used where flow of a bulk solid caused by gravity or transport has to be intercepted. Valves may be fitted on hopper or silo outlets, on inlets or outlets of mechanical conveyors and to the inlet of telescopic loading spouts.



Application ▼

VL Slide Valves are used to shut off the outlets of cement and other powdery material silos. Usually kept open during regular operation and even after work shutdown, they need to be perfectly functional for outlet cone closure when maintenance is performed on any of the downstream equipment.

Due to their special design and to the engineering materials used, they represent a particularly cost-effective yet most efficient solution.

Benefits ▼

- ✓ Dust and granule-proof thanks to special component geometry;
- ✓ Easy integration into the process and easy handling;
- ✓ ATEX certified on request;
- ✓ Time-saving maintenance thanks to interchangeable components;
- ✓ Optimized performance thanks to friction-free contact design (actuator torque is not wasted in order to win friction resistance).

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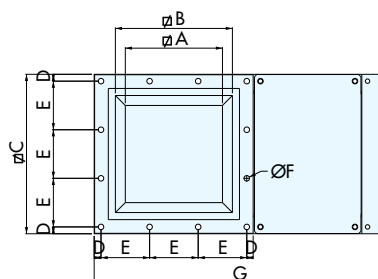
Slide Valves VL



Technical Features / Performance ▼

- ▶ Square (VLQ) or round (VLC) inlet from 150 to 400mm (6 to 16 in)
- ▶ Dust and granular-proof at max. temperature of 80°C (176 F°)
- ▶ Carbon steel frame, SINT® polymer or carbon steel blade
- ▶ Absence of residue points
- ▶ Friction-free contact design
- ▶ Few components
- ▶ Easy part replacement
- ▶ Safe sealing with no additional measures due to the all-round dustproof seal lips incorporated in polymer coating

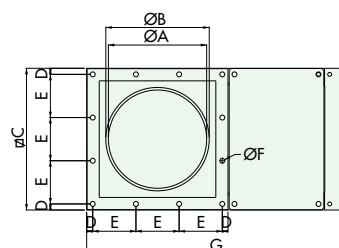
Overall Dimensions ▼



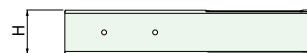
VLQ



TYPE	A	B	C	D	E	N°E	Ø F	Bolts	G	H	kg
VLQ0250..	220	275	361	15.5	110	3	12.5	M10	650	113	22
VLQ0300..	270	325	431	23.0	128	3	12.5	M10	765	113	30
VLQ0350..	320	375	481	18.0	89	5	12.5	M10	900	125	40
VLQ0400..	370	425	531	15.5	100	5	12.5	M10	1,000	125	46



VLC



TYPE	A	Ø B	Ø C	D	E	N°E	Ø F	Bolts	G	H	kg
VLC0250..	250	265	361	15.5	110	3	12.5	M10	650	113	22
VLC0300..	300	315	431	23.0	128	3	12.5	M10	765	113	30
VLC0350..	350	365	481	18.0	89	5	12.5	M10	900	125	40
VLC0400..	400	415	531	15.5	100	5	12.5	M10	1,000	125	46

Paint & Varnish Processing

Low Profile Slide Valves VIB

27

PATENT PENDING



Description ▼

Low Profile VIB Slide Valves consist of two high pressure die-cast semi-bodies manufactured from aluminium alloy, a sliding blade in carbon or stainless steel, a carbon or stainless steel frame and a pre-stressed elastomeric seal manufactured from WAM®'s unique SINT® engineering polymer composite.

The use of SINT® engineering polymer composites considerably increases resistance to abrasion as compared to traditional valves. The valves are equipped with live-loaded seals which ensure extended durability and wear resistance, providing excellent sealing across the entire valve surface. Additional flange gaskets are not required.

Low Profile VIB Slide Valves are available in a variety of configurations: the VIBQ version comes with a square inlet; the VIBC-type has a circular open cross section. For the food industry a version with stainless steel blade and frame, as well as food-grade seal is available. The VIB is a gravity Slide Valve for all kinds of powdery or granular materials stored in silos or bins.



Benefits ▼

- ✓ Minimised residue and contamination thanks to low profile design;
- ✓ Quick and easy maintenance;
- ✓ Dust, pellet and granule-proof thanks to special component geometry;
- ✓ Quick fitting thanks to WAM® and CEMA flange compatibility;
- ✓ Highly wear-resistant;
- ✓ Better performance as a result of friction-free contact design (no waste of actuator torque to increase friction);
- ✓ Ex-stock delivery.



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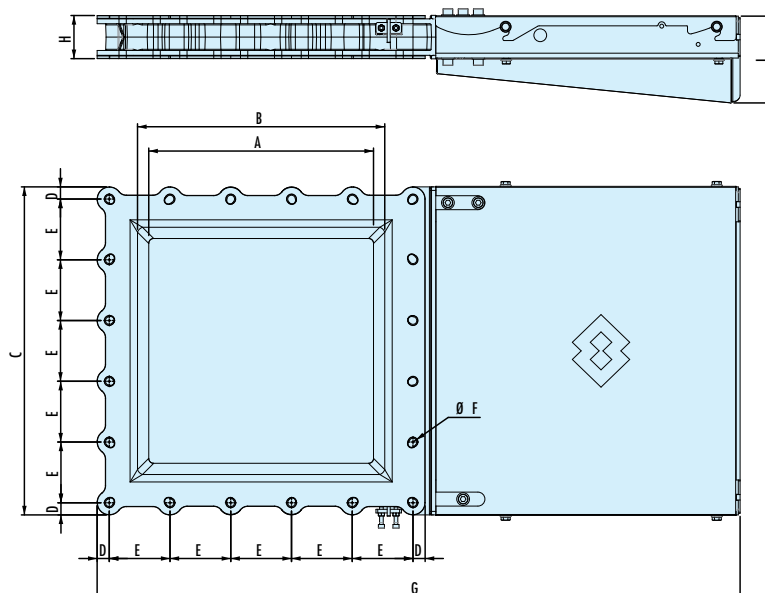
Low Profile Slide Valves VIB



Technical Features / Performance ▼

- ▶ PATENTED dust-proof, friction-free design;
- ▶ Intercepts the flow of powders, flakes, granular materials and pellets;
- ▶ Compatible with WAM® and CEMA flanges;
- ▶ Wear compensating seal system;
- ▶ SINT® engineering polymer for standard and food-grade applications;
- ▶ Replaceable sealing system in SINT® engineering polymer
- ▶ Interchangeable actuators: manual, pneumatic, electric gear motor.

Overall Dimensions ▼



VIB	A	B	C	D	E	N° E	ØF	BOLTS	G	H	I	Kg
150	120	175	261	15.5	115	2	12.5	M10	510	61	125	10
200	170	225	311	15.5	93,3	3	12.5	M10	610	61	122	14
250	220	275	361	15.5	110	3	12.5	M10	710	61	122	17
300	270	325	438	26.5	128,3	3	12.5	M10	840	61	122	24
350	320	375	489	22	89	5	12.5	M10	961	71	145	34
400	370	425	531	20	100	5	12.5	M10	1,058	71	145	41

CEMA flange available

Dimensions in mm



This datasheet might not show the complete range but only the models specialised for the application.



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Paint & Varnish Processing

Butterfly Valves V2FS

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Description ▼

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. While V1FS has a top flange and a beaded bottom section suitable for the attachment of a flexible sleeve, the V2FS comes with an identical top and bottom flange.

Function ▼

For closing bins, hoppers and silos containing cement or similar materials, Butterfly Valves are among the most widely used equipment worldwide. What used to be custom-built items for specific applications, have been turned by WAM® into a mass-produced industrial product with features that allow extremely versatile use.

Material flow is intercepted by activating a manual lever or a pneumatic or electric actuator turning the valve disc 90 degrees, thus closing the valve hermetically.



Application ▼

VFS Butterfly Valves are used where interception of gravity-fed or pneumatically conveyed dry materials is required. They are fitted beneath hoppers, bins, silos, or screw feeder outlets. Due to their special design and to the engineering materials used, they represent a particularly cost-effective yet most efficient solution.

Benefits ▼

- ✓ **Dust-tight;**
- ✓ **Quick fitting, retro-fitting or replacement;**
- ✓ **Excellent resistance to wear and abrasive powders;**
- ✓ **More durable thanks to special performance features.**



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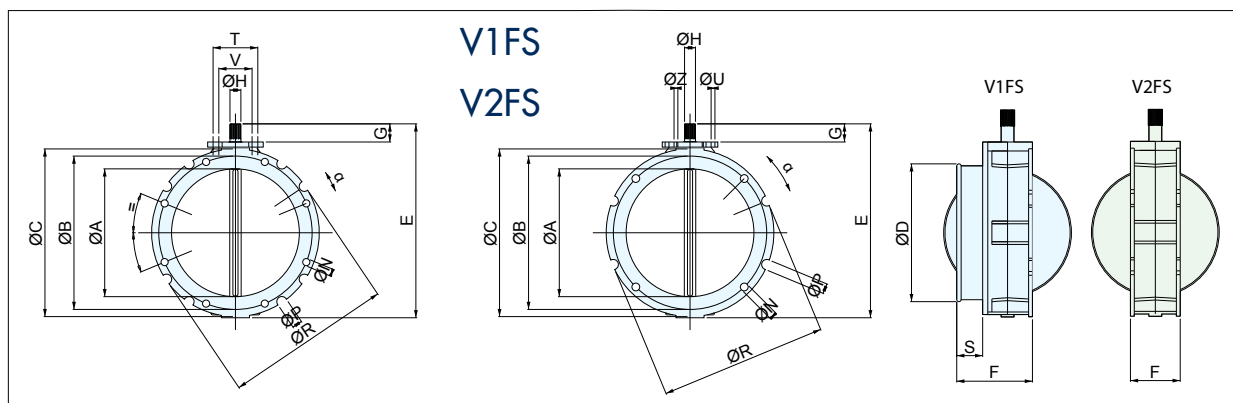
Slide Valves V2FS



Technical Features / Performance ▼

- ▶ V1FS with top flange and beaded bottom section suitable for fixing of flexible sleeve from 100 to 400mm (4 to 16 in)
- ▶ V2FS with identical top and bottom flange from 100 to 400mm (4 to 16 in)
- ▶ Disc in cast iron or SNT®-coated
- ▶ Few components
- ▶ Easy part replacement

Overall Dimensions ▼



TYPE	Ø A	Ø B	Ø C	Ø D	E	F	G	Ø H DIN 5482	N Drilling	P External grooves	Ø R	α	S	T	U	V	Z	kg
V1FS 100.	95	180	220	105	250	115	35	22x19	4 x Ø14	4 x Ø20	220	22°30'	40	80	M12	50	M10	4
V1FS 150.	150	200	228	163	290	115	35	22x19	4 x Ø14	4 x Ø20	228	22°30'	40	80	M12	50	M10	5
V1FS 200.	200	250	278	213	340	115	35	22x19	4 x Ø14	4 x Ø20	278	22°30'	40	80	M12	50	M10	6.5
V1FS 250.	250	300	328	263	390	115	35	22x19	8 x Ø14	8 x Ø20	325	11°15'	40	80	M12	50	M10	7.5
V1FS 300.	300	350	378	313	440	115	35	22x19	8 x Ø14	16 x Ø20	375	5°41'	40	80	M12	50	M10	9
V1FS 350.	350	400	440	363	530	123	50	28x25	8 x Ø14	8 x Ø20	440	10°	40	80	M12	-	-	16
V1FS 400.	400	470	530	413	580	123	50	28x25	8 x Ø14	16 x Ø20	530	4°30'	40	80	M12	-	-	20.5

Dimensions in mm

TYPE	Ø A	Ø B	Ø C	E	F	G	Ø H DIN 5482	N Drilling	P External grooves	Ø R	α	T	U	V	Z	kg
V2FS 100.	95	180	220	250	77	35	22x19	4 x Ø14	4 x Ø20	220	22°30'	80	M12	50	M10	4
V2FS 150.	150	200	228	290	77	35	22x19	4 x Ø14	4 x Ø20	228	22°30'	80	M12	50	M10	5
V2FS 200.	200	250	278	340	77	35	22x19	4 x Ø14	4 x Ø20	278	22°30'	80	M12	50	M10	6.5
V2FS 250.	250	300	328	390	77	35	22x19	8 x Ø14	8 x Ø20	325	11°15'	80	M12	50	M10	7.5
V2FS 300.	300	350	378	440	77	35	22x19	8 x Ø14	16 x Ø20	375	5°41'	80	M12	50	M10	9
V2FS 350.	350	400	440	530	85	50	28x25	8 x Ø14	8 x Ø20	440	10°	80	M12	-	-	16
V2FS 400.	400	470	530	580	85	50	28x25	8 x Ø14	16 x Ø20	530	4°30'	80	M12	-	-	20.5

Dimensions in mm

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Aluminium Diverter Valves DVA

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Description ▼

DVA Diverter Valve consists of a casing in stainless steel lined with SINT® engineering polymer and a flap in SINT® engineering polymer with a steel core. The flap is activated by a manual lever, or by a pneumatic or electric actuator.

Function ▼

DVA is a Diverter Valve with one inlet and two outlets for the diversion of the flow of powdery or granular materials. Engineering materials used enable quick cleaning and maintenance apart from offering great resistance to abrasion.



Application ▼

DVA Diverter Valves are used in all types of plants where diversion of gravity flow or of conveyed dry materials is required.

DVA are also installed on top of bag or bulk bag packaging lines.

Benefits ▼

- ✓ **Dustproof;**
- ✓ **Elastic outline of the SINT® flap guarantees material transport without particle breakdown, grinding or jamming;**
- ✓ **Maximum efficiency and minimum operating costs;**
- ✓ **Quick and easy maintenance;**
- ✓ **Highly wear-resistant;**
- ✓ **Attractive price.**

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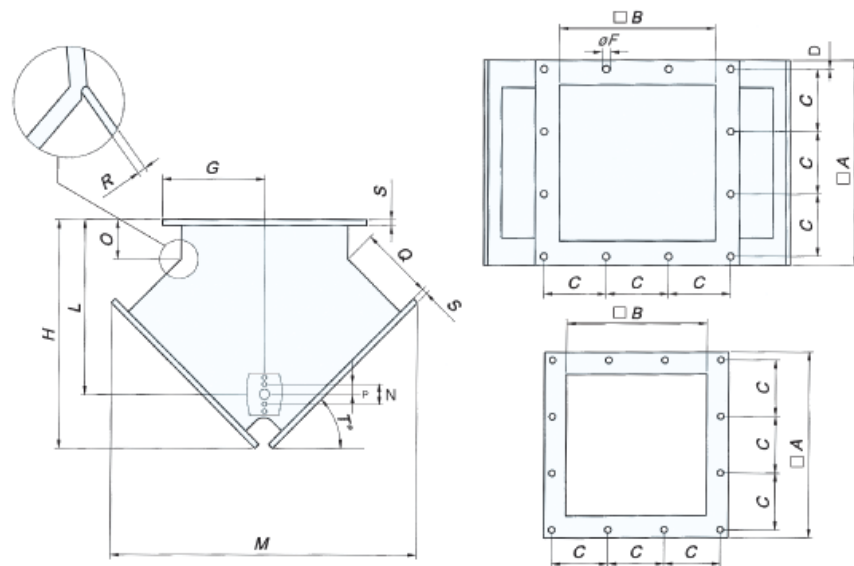
Aluminium Diverter Valves DVA



Technical Features / Performance ▼

- ▶ Range from 150mm to 300mm (6 to 12 in)
- ▶ Dust-proof at max. temperature of 80° C (176° F)
- ▶ Sturdy 304 stainless steel casing completely lined with non-stick, wear-resistant SINT® engineering polymer
- ▶ Flexible casing and flap
- ▶ Easy part replacement

Overall Dimensions ▼



TYPE	A	B	C	D	ØF	G	H	L	M	N	O	P	Q	R	S	T	kg
150	261	175	115	15	12.5	131	312	221	401	50	66	25	98	5	10	45°	12
200	311	225	93.3	15	12.5	156	358	267	472	50	66	25	114	5	10	45°	15
250	358	275	110	15	12.5	179	403	312	542	50	72	25	127	8	10	45°	19
300	433	325	128.3	24	12.5	217	465	358	645	50	66	25	152	8	10	45°	24

Paint & Varnish Processing

Spring-loaded Pressure Relief Valves VCP

30



Description ▼

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.

Function ▼

In the VCP Pressure Relief Valve, helical springs keep the valve lids closed as long as the pressure value remains within the preset limits. The three outside spring rods keep the external ring-shaped lid firmly closed as long as the force generated by the pressure inside the silo does not overcome the spring force. Once the pressure exceeds the preset value the lid is pushed up and the pressure can escape. The smaller lid covers the central circular opening of the external lid from below. It is held in the middle by a single spring rod and is pressed onto the external lid by the normal air pressure inside the silo. In the event of suction pressure, the spring is compressed and allows the lid to drop. The air entering the silo from outside ensures rapid pressure balance and pushes the central lid back up into the "closed" position.



Application ▼

VCP Pressure Relief Valves are the last resort if abnormal pressure conditions endanger the silo structure. This is why sudden excess or suction pressure inside the silo must be dealt with instantaneously.

Even though ideally a Pressure Relief Valve should never have to go into action, it must be efficient and reliable when needed.

With tens of thousands of units installed worldwide, VCP Pressure Relief Valves have given evidence of being totally reliable under the most different conditions.

Benefits ▼

- ✓ Used with different materials in the same configuration;
- ✓ Easy to handle and fit thanks to lightweight design and reduced overall dimensions;
- ✓ Maintenance-friendly thanks to small numbers of components.

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Spring-loaded Pressure Relief Valves VCP

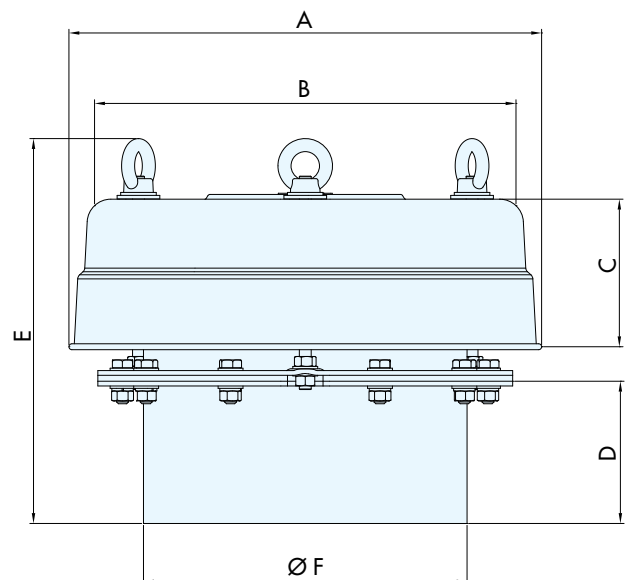


Technical Features / Performance ▼

- ▶ Carbon steel body (VCP...1C) painted RAL 7001
- ▶ Size 273mm (11 in) or 375mm (14 in)
- ▶ Weather protection cover in stainless steel
- ▶ Air volume up to 13,000 m³/h (7,650 cfm)
- ▶ Setting range: excess pressure from 300mm H₂O (0.44psi) up to 800mm H₂O (1.16 psi)
- ▶ Setting range: negative pressure from -50mm H₂O (0.07psi) up to -100mm H₂O (0.15psi)
- ▶ No welding seams inside
- ▶ Equipped for inductive signalling sensors
- ▶ Protective bellows for springs

Overall Dimensions ▼

	Size 273 mm	Size 375 mm
A	400	525
B	356	468
C	125	175
D	120	120
E	325	400
Ø F	273	356
kg	9.5	23



Paint & Varnish Processing

Membrane Pressure Relief Valves VHS-C

31

INTERNATIONAL PATENT



Description ▼

VHS Pressure Relief Valves consist of a cylindrically shaped body with flanged 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.

Function ▼

The counterweight-loaded VHS-type Pressure Relief Valve has one decisive advantage over the spring-loaded type. Due to the moment of inertia of the helical springs on the latter, pressure balance is re-established extremely quickly but not instantaneously. The VHS, on the other hand, does the job in real time. Through an interplay of pressure on different surface areas on both sides of a membrane fitted inside the valve casing, perfect pressure balance is achieved. In the event of excess pressure this interaction enables air from inside the silo to flow back into the atmosphere. In case of suction pressure the air penetrates from the atmosphere into the silo.



Application ▼

VHS Pressure Relief Valves are the last resort if abnormal pressure conditions endanger the silo structure. This is why sudden excess or suction pressure inside the silo must be dealt with instantaneously.

Even though ideally a Pressure Relief Valve should never have to go into action, it must be efficient and reliable when needed. With thousands of units installed worldwide, VHS Pressure Relief Valves have given evidence of being totally reliable under the most different conditions.

Benefits ▼

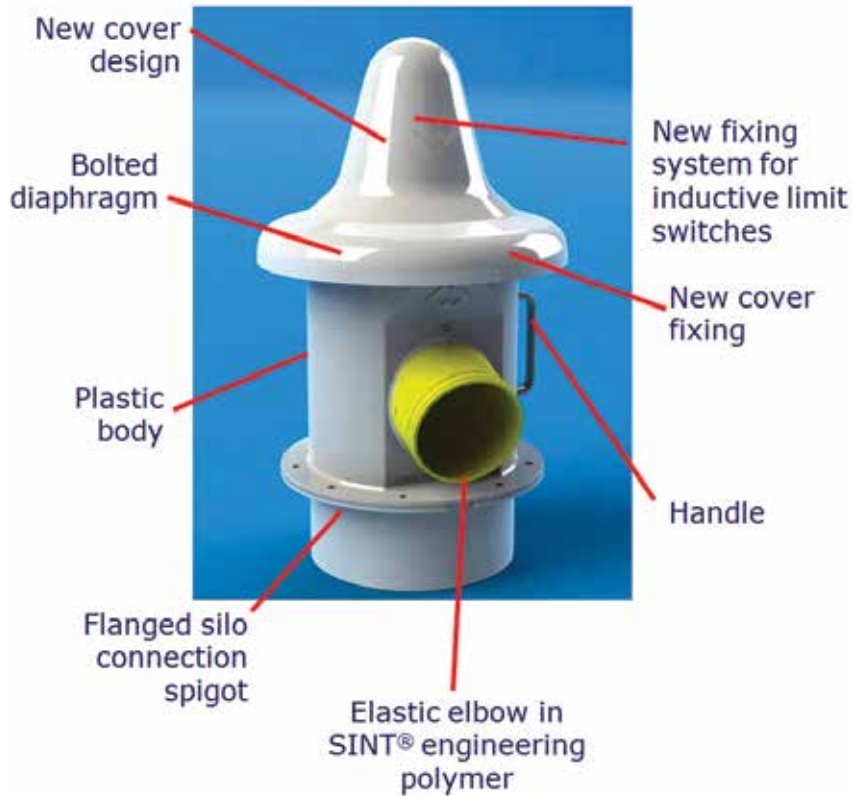
- ✓ Safety for people, plant and environment;
- ✓ Compliance with existing regulations;
- ✓ Maximum efficiency and minimum operating costs;
- ✓ Quick and easy maintenance;
- ✓ Attractive price.

Paint & Varnish Processing

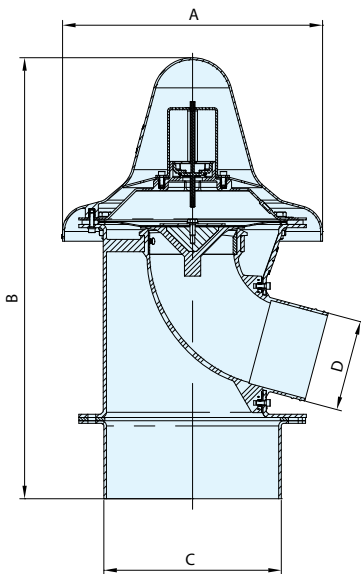
Membrane Pressure Relief Valves VHS-C



Technical Features / Performance ▼



Overall Dimensions ▼



VHS273	Excess Pressure	Negative Pressure	kg
Standard-type	500 mm H ₂ O	-50 mm H ₂ O*	8.0
Option	300 ~ 1,000 mm H ₂ O*	-50 mm H ₂ O*	

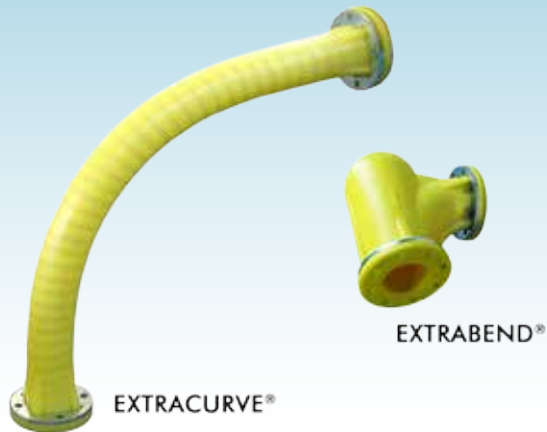
A	B	C	D
Ø 366 mm	557 mm	Ø 273 mm	Ø 140 mm

Paint & Varnish Processing

EXTRABEND® and EXTRACURVE® Pipe Elbows



32



Description ▼

Short-radius EXTRABEND® and wide-radius EXTRACURVE® Pipe Elbows are inserted as a link in pneumatic silo filling pipes. Both models are manufactured from a one-piece SINTTM engineering polymer cast.

Wear-resistant EXTRABEND® and EXTRACURVE® Pipe Elbows deflect incoming cement or other bulk materials minimising material degradation and elbow wear, avoiding at the same time any clogging or plugging.

Function ▼

The EXTRABEND® short-radius Pipe Elbow offers a substantially innovative geometry suitable to reduce wear during operation.

The body cavity next to the point of diversion generates an internal material turbulence which protects the elbow from wear caused by the material travelling through the duct.

The EXTRACURVE® represents the latest evolution in the development of wide angle pipe elbows. Due to its flexibility and adaptability installation has become quicker while durability is substantially increased.



Application ▼

EXTRABEND® and EXTRACURVE® Elbows are used as a link in silo filling pipes and in ductworks of pneumatic conveying systems. They excel through their particular resistance to wear with abrasive materials.



Benefits ▼

- ✓ Long-life elbow with abrasive materials thanks to anti-wear SINT™ engineering polymer material;
- ✓ Reduced installation costs thanks to elastic properties (no extra work for connection on site is needed);
- ✓ Reduced installation and maintenance time because EB/EW are easy to handle thanks to lightweight design;
- ✓ Reduced costs for plant designing thanks to elastic properties (elastic elbows fit for different plant layouts);
- ✓ Considerable reduction of flow resistance, consequently energy saving pneumatic conveying.

Paint & Varnish Processing

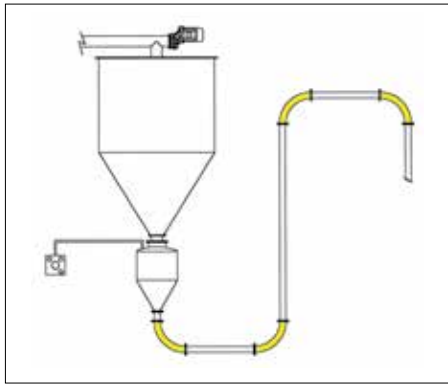
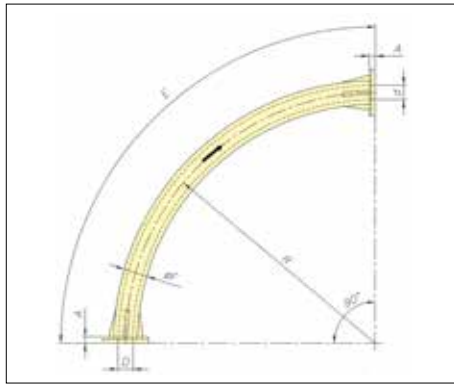
EXTRABEND® and EXTRACURVE® Pipe Elbows



Technical Features / Performance ▼

- ▶ SINT™ engineering polymer
- ▶ Max temperature : 80° C (176° F)
- ▶ Range from 2" to 4"
- ▶ Flexible and elastic
- ▶ PN-type connecting flanges
- ▶ Lightweight and easy to handle
- ▶ Up to 1.5 bar (22 PSI) in lean phase
- ▶ Reduced noise level

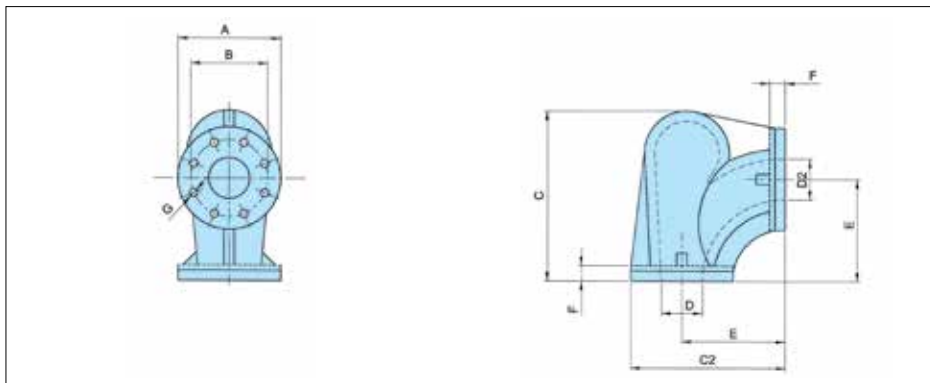
Overall Dimensions ▼



EXTRACURVE®

EW	A	Ød	ØD	E	ØF	R	kg
2"	23	52	55	1,400	85	900	7.3
3"	30	80	83	1,400	110	900	9.6
4"	30	105	108	1,400	140	900	13.4

Dimensions in mm



EXTRABEND®

Type	Ø Pipe	A	B	C	C2	Ø D	Ø D2	E	F	Ø G	Flange Drillings	kg
EB 2	2"	165	125	232	220	55	52	140	23	18	4	2
EB 3	3"	200	160	330	300	85	80	200	30	18	4	5
EB 4	4"	220	180	435	373	108	105	263	30	18	8	7

Dimension in mm



This datasheet might not show the complete range but only the models specialised for the application.



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Paint & Varnish Processing

Micro-Batch Feeders MBF

33



Description ▼

The MBF Micro-Batch Feeder consists of a casing entirely manufactured from stainless steel or a steel-reinforced SINT® engineering polymer body, a horizontally mounted rotating agitator tool, a feeder screw beneath the agitator tool, a feeder pipe enclosing the protruding feeder screw, as well as one drive unit each for agitator and feeder screw.

Function ▼

MBF Micro-Batch Feeders are particularly suitable for poorly flowing materials which tend to clog, as well as for adhesive products.

Fed through a bag opening hopper, a bulk bag discharger, or another feeding device, the agitator tool manages to keep the material flowing, reducing at the same time the possibility of formation of lumps or bridges.

Poorly flowing materials with cohesion or bridging problems are homogeneously fed into the feeding zone by the blending or agitator shaft which is shaped according to the product properties.



Application ▼

MBF, which come in various configurations, are suitable for feeding of granules or powders.

The flexible design enables feeding of a variety of additives used in Dry-Mix processing.

Typical positions within the plant are on weighing scales for loss-in-weight installations next to the mixer. Furthermore, they are fitted inside dosing stations on top of weighing scales upstream of the mixer.

Benefits ▼

- ✓ Easy integration into the plant;
- ✓ Feeding of different additives with the same unit thanks to component interchangeability;
- ✓ Small number of parts makes maintenance easy and quick;
- ✓ Independent drives for agitator and feeder tool leave all options open in terms of drive power and tool speed;
- ✓ Process reliability due to back-up by WAMGROUP® test labs ;
- ✓ High degree of homogeneity of fed material thanks to blending/agitating tool;
- ✓ Easy and quick internal cleaning thanks to quick-access inspection panel.

Paint & Varnish Processing

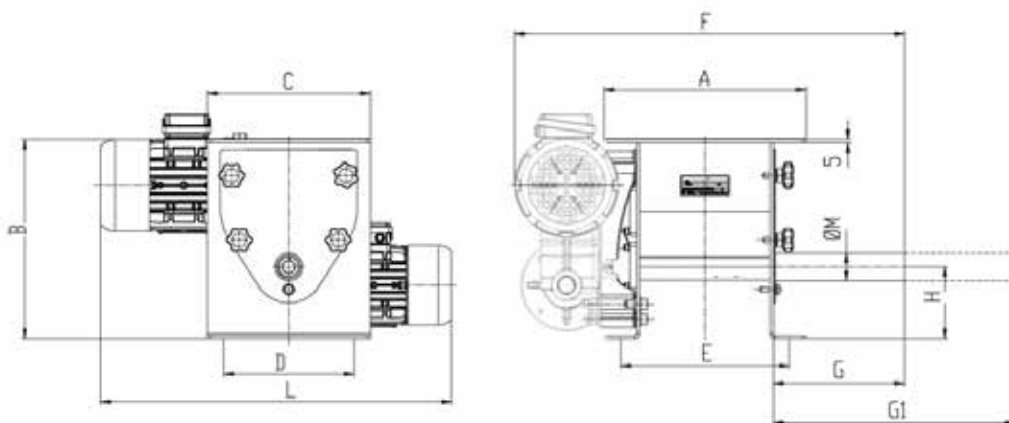
Micro-Batch Feeders MBF



Technical Features / Performance ▼

- ▶ Wide range of interchangeable machine components
- ▶ Compact design, small footprint
- ▶ 3 sizes available with feed rates ranging from 3 dm³/h to 4,000 dm³/h
- ▶ Agitator and feeder tool with independent drives
- ▶ Internal geometry ensures smooth feeding of particularly difficult materials
- ▶ No material residue
- ▶ Quick-access inspection panel available for stainless steel feeders
- ▶ Contact surfaces in SINT[®] engineering polymer or 304 SS (316 optional)
- ▶ Different types of 304 SS shaft seals

Overall Dimensions ▼



MBF	A	B	C	D	E	F	G	G1	H	L	M	N	dm ³	kg
042	310	295	250	200	260	595	200	370	100	535	42	12.5	5	40
073	464	486	390	305	410	855	250	500	135	600	76	12.5	28	105
114	464	486	390	305	410	855	250	500	135	600	114	12.5	35	110

Dimensions in mm

Paint & Varnish Processing

Electric Vibrators MVE

34



Description ▼

The range of MVE-type External Electric Vibrators is the result of more than fifty years of experience in vibrating technology for various industrial applications worldwide.

The high frequency of 3,000 rpm at 50 Hz (3,600 rpm at 60 Hz) avoids generation of dangerous resonance on the silo structure.

IP 66 protection ensures operation in severe environmental conditions.

Single phase models available.

Function ▼

MVE-type External Electric Vibrators are used in a number of different applications: as material flow aids, for screening, conveying, cleaning, detaching, compacting and sorting.



Application ▼

MVE-type External Electric Vibrators are used for silo and hopper emptying.

Benefits ▼

- ✓ **2-years-warranty including electric components;**
- ✓ **Ex-stock delivery;**
- ✓ **Maintenance-free;**
- ✓ **Excellent quality-price ratio.**

Paint & Varnish Processing

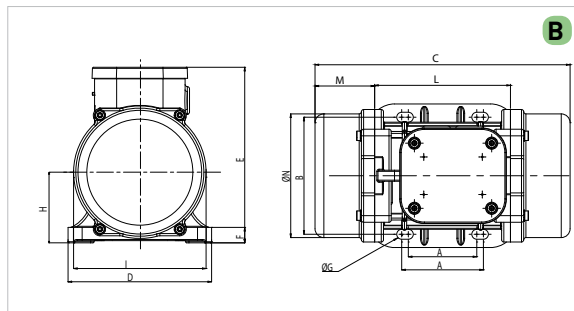
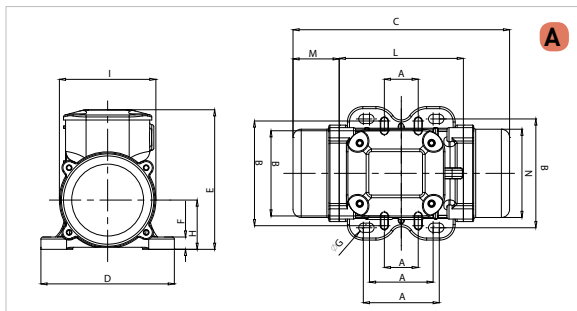
Electric Vibrators MVE



Technical Features / Performance

- ▶ Aluminium casing up to size 50 (included), cast iron from size 60
- ▶ SKF bearings
- ▶ Operating temperature: -20° C to 40° C (-4° F to 104° F)
- ▶ Multiple voltages: 220-240/380-415 V, 50 Hz
- ▶ 750 - 1,000 - 1,500 - 3,000 R.P.M. (900 – 1,200 – 1,800 – 3,000 R.P.M.)
- ▶ Multiple fixing bores
- ▶ Motor protection: IP 66-NEMA 4
- ▶ Continuous duty: S1
- ▶ Insulation class: F
- ▶ Standard: ATEX Ex II 3D CERTIFIED
- ▶ Standard: ETL (UL-CSA) Class II Div.2
- ▶ ATEX Exe II 2 GD increased safety range available
- ▶ Explosion-proof range available

Overall Dimensions



3 Phase		1 Phase	Drawing	Size	Overall dimension																				Weight						
					c		m		a		b		Ø g		N° Holes	d		e		f		h		i			l		n		
Type 50 / 60Hz	U.S. Market 60 Hz	Type 50 / 60 Hz			(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)		(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(Kg)	(Lb)
MVE 60/3	MVE 160/2	MVE 60/3M	A	10	211	8.31	45	1.77	62-74	2.44-2.91	106	4.17	9	0.35	4	130	5.12	136	5.35	12	0.47	48	1.89	94	3.70	121	4.76	85	3.35	4.2	9.3
MVE 100/3	MVE 220/2	MVE 100/3M							33	1.30																				83-102	3.27-4.02
MVE 200/3	MVE 440/2	MVE 200/3M	B	20	231	9.09	54	2.13	62-74	2.44-2.91	106	4.17	9	0.35	4	131	5.16	159	6.26	15	0.59	64	2.52	121	4.76	123	4.84	112	4.41	7.0	15.4

MVE 3 Phase Series

3 Phase		Mechanical Features								Electric Features														Cable Gland
		Working moment (*)				FC				Power				Current		Power Factor		Ia/In		ClassII Div.2	II 2D	Cable Type		
		Kg*cm		in*Lb		Kg		Lb		Kw		Hp		A max (V)								Type	U.S. Mar- ket	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50 Hz	60 Hz	50 Hz	60 Hz	400V	460V	50Hz	60Hz	50Hz	60Hz	Temp. Class	Temp. Class	Class Temp.	Type: AWG (SOW) Class Temp.	
Type 50 /60 Hz	U.S. Market 60 Hz																		T	(°C)				
MVE 60/3	MVE 160/2	1.3	0.9	1.1	0.9	66	71	145.5	156.5	0.08	0.09	0.11	0.12	0.16	0.18	0.74	0.82	3	3	T4	100	4G1.5 80°C	18-4c 90°C	M16 80°C
MVE 100/3	MVE 220/2	1.9	1.3	1.7	1.1	98	95	216	209.4	0.1	0.11	0.13	0.15	0.19	0.18	0.76	0.85	3	3					
MVE 200/3	MVE 440/2	3.7	2.6	3.2	2.3	187	189	412.3	416.7	0.18	0.21	0.24	0.28	0.35	0.35	0.78	0.87	3.3	3.30					
MVE 202/3	MVE 444/2	3.7	2.6	3.2	2.3	187	189	412.3	416.7	0.18	0.21	0.24	0.28	0.35	0.35	0.78	0.87	3.3	3.30	T4	100			
MVE 300/3	MVE 690/2	6.4	4.5	5.5	3.9	321	323	708	712.1	0.27	0.28	0.36	0.38	0.52	0.45	0.84	0.89	3.60	3.50	T4	100			
MVE 400/3	MVE 890/2	7.9	5.7	6.9	4.9	407	411	897	906.1	0.30	0.36	0.40	0.48	0.58	0.60	0.88	0.88	3.50	3.50	T4	100			
MVE 500/3	MVE 1200/2	10.3	7.4	8.9	6.4	530	534	1168.4	1177.3	0.50	0.58	0.67	0.78	0.96	0.97	0.84	0.87	4.00	4.20	T4	100			
MVE 700/3	MVE 1700/2	14.9	10.6	12.9	9.2	758	765	1671.1	1686.5	0.66	0.75	0.89	1.01	1.25	1.24	0.83	0.88	4.30	5.00					
MVE 800/3	MVE 1800/2	15.7	11.1	13.6	9.6	794	800	1750.5	1763.7	0.75	0.90	1.01	1.21	1.45	1.50	0.79	0.84	3.80	3.80					

This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

MARTSHOCK Pneumatic Hammers PS

35



Description ▼

MARTSHOCK PS Single impact vibrator or "Hammer", deliver high power impact that act destructively as bridge breakers. The mechanical energy released at regular intervals, at the moment of collision, is transmitted through the container wall to the stored material.

The vibrating impulse leads to the complete detachment of the crusts or the collapse of a material bridge.

MARTSHOCK Hammers are particularly suitable for retrofitting on silo cones or hoppers as no emptying of the bin or drilling of the wall is required.

Function ▼

MARTSHOCK Pneumatic Hammer impact produce a violent impact on the wall on which the unit is fitted. MARTSHOCK is suitable for all bin or hopper shapes and sizes.



Application ▼

In Dry-Mix plants PS-type MARTSHOCK is mainly used for cleaning the weigh hoppers while emptying into the mixer.

Benefits ▼

- ✓ No damage to the hopper structure;
- ✓ Low noise impact (with noise-abating accessories);
- ✓ Durable;
- ✓ Maintenance-friendly;
- ✓ Lubrication-free;
- ✓ Guarantee of up to 150,000 strikes.

Paint & Varnish Processing

MARTSHOCK Pneumatic Hammers PS

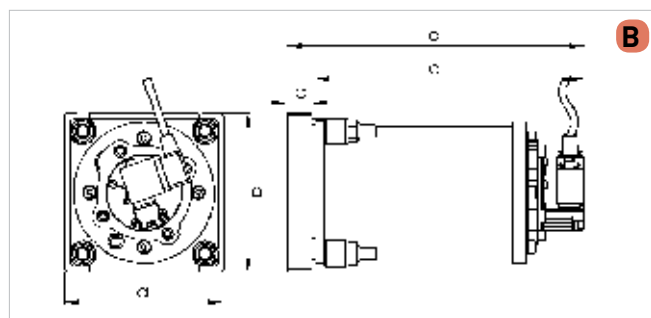
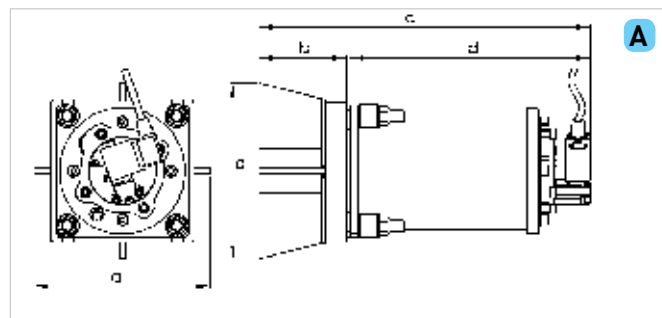


Technical Features / Performance

- ▶ Galvanised steel body
- ▶ Weld-on steel plate included (2 types with different thicknesses)
- ▶ Safety chain fixed on hopper (for assembly and dismantling)
- ▶ Air inlet (PS40: 1/8"; PS63: 1/4"; PS80: 1/4")
- ▶ Electro-pneumatic kit
- ▶ Operating temperature: -20°C to 80°C (-4°F to 180°F)
- ▶ Operating pressure: 3 to 6 bar (44 to 88 PSI)
- ▶ Accessories:
 - IP 65 coils
 - Noise-abating plate (option)
- ▶ Timer kit for adjustment of operation setting (option)

Overall Dimensions

Overall dimension					
Type	PS TYPE "A" [≤ 3mm hopper thickness]				
	a	b	c	d	M
	mm	mm	mm	mm	mm
PS 40	160	80	302	219	16
PS 63	200	95	357	259	25
PS 80	250	119	430	308	
Overall dimension					
Type	PS TYPE "B" [> 3mm hopper thickness]				
	a	b	c	d	M
	mm	mm	mm	mm	mm
PS 40	130	20	242	219	16
PS 63	163	20	282	259	25
PS 80	200	25	336	308	



Features								
Type	Energy	Force	Energy	Force	Air Consumption		i Ø Pipe	Air Nipple
	J	N	J	N	NL		mm	Inch GAS
	3 bar		6 bar		3 bar	6 bar		
PS 40	8.4	199	18.1	429	3.6	5.3	6	1/8" GAS
PS 63	28.8	589	62	1268	6.4	11.6	8	1/4" GAS
PS 80	59.2	846	153	2186	12.5	21	8	1/4" GAS

Paint & Varnish Processing

External Pneumatic Linear Vibrators K-Type

36



Description ▼

"K" External Pneumatic Linear Vibrators are particularly suitable for conveying, compacting and detaching of bulk solids due to perfectly linear vibrations. They reach optimum results in emptying of bins or as drives for vibrating conveyors or feeders.

Function ▼

"K" External Pneumatic Linear Vibrators are light and compact. Sinusoidal vibration is generated by a self-reversing piston which is freely floating on an air cushion. Frequency and amplitude can be continuously and independently adjusted. "K" External Pneumatic Linear Vibrators may operate mounted in any position. Their start/stop behaviour is optimal.



Application ▼

"K" External Pneumatic Linear Vibrators are used in fibre and flake processing plants where flow aids are required.

A typical application are compound or masterbatch lines.

"K" vibrators are fitted on:

- FIBC (Bulk Bag) dischargers
- Storage, weigh and feed hoppers
- Vibrating tables installed under FIBC filling stations (to compact the materials inside the Bulk Bag)

Benefits ▼

- ✓ Air-cushioned vibrator;
- ✓ Wide amplitude with low frequency;
- ✓ ATEX Zone 22 compliance – Ex II 3D T100°;
- ✓ Can operate in any position;
- ✓ Optimum start/stop behaviour;
- ✓ Suitable for powdery or granular materials;
- ✓ No damage to bin structure;
- ✓ Low noise level;
- ✓ Low air consumption;
- ✓ Durable;
- ✓ Easy to install;
- ✓ Lubrication-free.

Paint & Varnish Processing

External Pneumatic Linear Vibrators K-Type



Technical Features / Performance ▼

- ▶ Anodized "Anticorodal" aluminum body and cover
- ▶ Brass silencer
- ▶ Nickel-plated brass air nipple inlet
- ▶ Operating temperature : -20° to 130°C (-4° F to 266° F)
- ▶ Operating pressure : 3 to 6 bar (44 to 87 PSI)

Overall Dimensions ▼

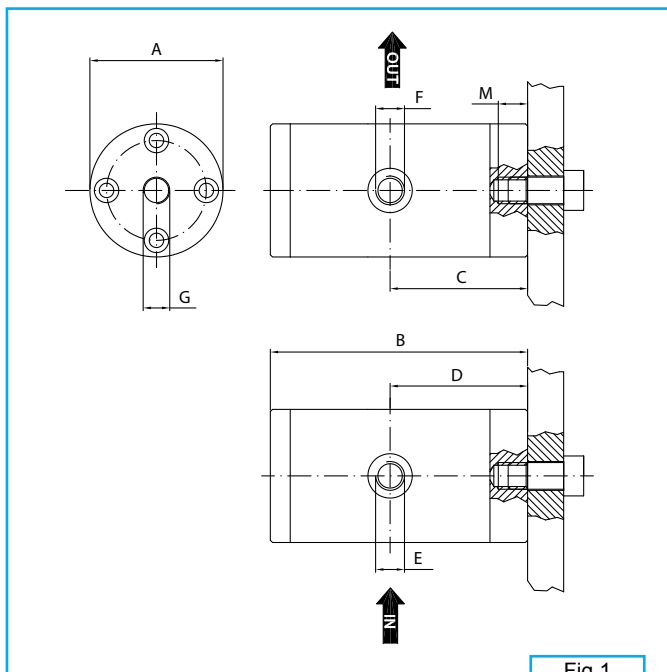


Fig.1

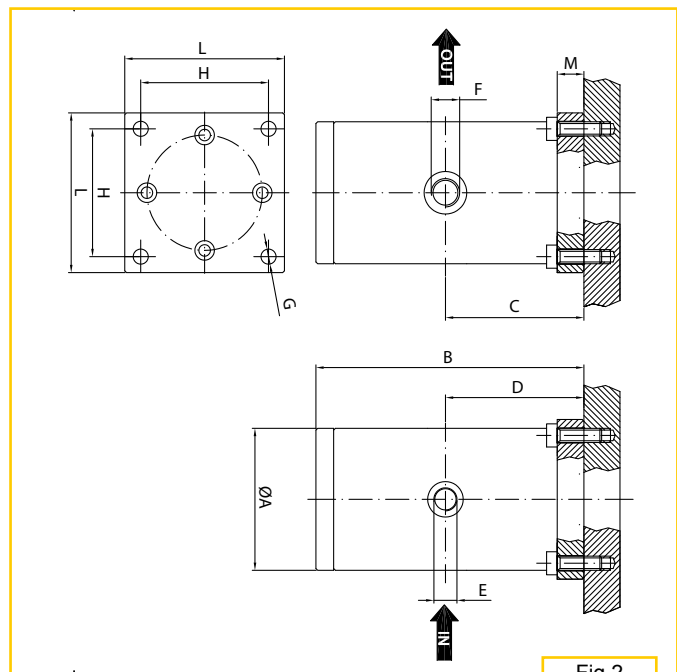


Fig.2

For activation a 3/2 way electrovalve and filtered compressed air are required.

TYPE	FIG.	A		B		C		D		E	F	G	H		Weight		L		M	
		mm	in	mm	in	mm	in	mm	in				mm	in	kg	lb	mm	in	mm	in
K15	1	32	1.26	69	2.72	37	1.46	37	1.46	M5	1/8"	M8	/	/	0.17	0.37	/	/	9	0.35
K22	1	45	1.77	105	4.13	56	2.2	56	2.2	1/8"	1/8"	M10	/	/	0.50	1.10	/	/	13	0.51
K30	1	60	2.36	116	4.57	62	2.44	62	2.44	1/4"	1/4"	M12	/	/	1.03	2.27	/	/	13	0.51
K45	2	80	3.15	151	5.94	78	3.07	78	3.07	1/4"	3/8"	ø 8.5	72	2.83	2.86	6.30	90	3.54	15	0.59
K60	2	115	4.53	224	8.82	115	4.53	115	4.53	1/2"	1/2"	ø 13	102	4.02	4.60	10.14	130	5.12	20	0.79

Paint & Varnish Processing

External Pneumatic Vibrators S-Type

37



Description ▼

"S" External Pneumatic Ball Vibrators develop frequencies of up to 35,000 r.p.m. and they are used wherever powdery materials have to be moved. "S" External Ball Vibrators are installed on bins to prevent bridging or ratholing and for the improvement of material flow on chutes, screens and vibrating tables.

Function ▼

"S" External Ball Vibrators consist of an anodized aluminium body inside which a steel ball rotates on a specially hardened and ground steel ring. For operation a 2/2-way-valve and filtered compressed air are required.



Application ▼

"S" External Ball Vibrators are used in all types of powder or granular material processing plants where flow aids are required. Typical applications are compounding or masterbatch lines.

They are fitted on FIBC (Bulk Bag) dischargers or storage, weigh or feeding hoppers.

Benefits ▼

- ✓ High centrifugal force and low amplitude;
- ✓ ATEX Zone 22-compliant – Ex II 3D T100°;
- ✓ Suitable for powdery or granular materials;
- ✓ No damage to bin structure;
- ✓ Low air consumption;
- ✓ Durable;
- ✓ Easy to install;
- ✓ Maintenance-free when used with filtered/lubricated air.

Paint & Varnish Processing

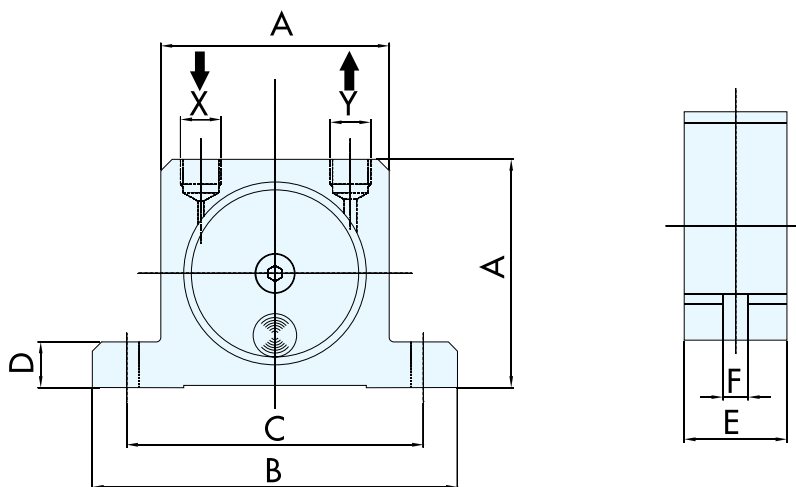
External Pneumatic Vibrators S-Type



Technical Features / Performance ▼

- ▶ Galvanised steel cover
- ▶ Brass silencer
- ▶ Nickel-plated brass air nipple inlet
- ▶ Operating temperature: -20° C to 180° C (-4° F to 356° F)
- ▶ Operating pressure: 3 to 6 bar (44 to 88 PSI)

Overall Dimensions ▼



TYPE	A		B		C		D		E		F		X-Y		
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		kg	lb
S8	50	1.97	86	3.39	68	2.68	12	0.47	20	0.79	7	0.28	1/8"	0.13	0.29
S 10									25	0.98	9	0.35	1/4"	0.26	0.57
S 13	65	2.56	113	4.45	90	3.54	16	0.63	28	1.10	9	0.35	1/4"	0.30	0.66
S 16									33	1.30				0.53	1.17
S 20	80	3.15	128	5.04	104	4.09	16	0.63	38	1.50	9	0.35	1/4"	0.63	1.39
S 25									45	1.77				1.13	2.49
S 30	100	3.94	160	6.30	130	5.12	20	0.79	50	1.97	11	0.43	3/8"	1.34	2.95
S 36															

TYPE	Vibrations			F.C. max.						Air Consumption					
	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi	2 bar=29 psi		4 bar=58 psi		6 bar=87 psi		2 bar=29 psi		4 bar=58 psi		6 bar=87 psi	
	Vpm			kg	lb	kg	lb	kg	lb	l/min	CF/min	l/min	CF/min	l/min	CF/min
S8	25,500	31,000	35,000	13	29	26	57	36	79	83	2.9	145	5.1	195	6.9
S 10	22,500	28,000	34,000	25	55	47	103	71	156	92	3.2	150	5.3	200	7.1
S 13	15,000	18,500	22,500	32	70	55	121	87	191	94	3.3	158	5.6	225	7.9
S 16	13,000	17,000	19,500	45	99	80	176	110	242	122	4.3	200	7.1	280	9.9
S 20	10,500	14,500	16,500	72	158	122	268	172	378	130	4.6	230	8.1	340	12.0
S 25	9,200	12,200	14,000	93	205	157	345	205	451	160	5.7	290	10.2	425	15.0
S 30	7,800	9,700	12,500	151	332	247	543	321	706	215	7.6	375	13.2	570	20.1
S 36	7,300	9,000	10,000	206	453	315	693	405	891	260	9.2	475	16.8	675	23.8

Paint & Varnish Processing

External Pneumatic Vibrators OT-Type

38



Description ▼

OT-Type External Pneumatic Turbine Vibrators develop frequencies of up to 42,000 r.p.m. and they are used wherever powdery materials have to be moved. OT-type Turbine Vibrators are installed on bins to prevent bridging or rat holing and for the improvement of material flow on chutes, screens and vibrating tables.

Function ▼

OT-type Turbine Vibrators consist of an anodized "anticorodal" aluminum casing inside. A turbine with integrated flyweights rotates on two oversized ball bearings. For operation a 2/2-way-valve and filtered compressed air are required.



Application ▼

OT Turbine Vibrators are used in all departments of a flour mill where flow aids are required. They are fitted to FIBC discharger or storage, weigh and feed hoppers.

Benefits ▼

- ✓ Large amplitude even with low operating pressure;
- ✓ ATEX 22 compliance – Ex II 3D T100°;
- ✓ Suitable for powdery or granular materials;
- ✓ Great acceleration;
- ✓ High centrifugal force and vibration frequency;
- ✓ No damage on the structure of the bin;
- ✓ Low noise level;
- ✓ Low air consumption;
- ✓ Durable;
- ✓ Easy to install;
- ✓ Oil-free, maintenance-free operation.

Paint & Varnish Processing

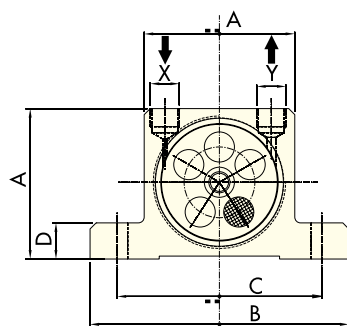
External Pneumatic Vibrators OT-Type



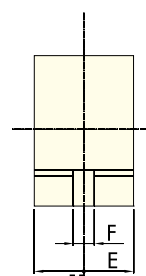
Technical Features / Performance ▼

- ▶ Galvanised steel cover
- ▶ Brass silencer
- ▶ Nickel-plated brass air nipple inlet
- ▶ Working temperature: -20° C to 120° C (-4° F to 250° F)
- ▶ Working pressure: 3 to 6 bar (44 to 88 PSI)

Overall Dimensions ▼



Turbine-type



TYPE	A		B		C		D		E		F		X-Y		
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		kg	lbs
OT 8	50	1.97	86	3.39	68	2.68	12	0.47	33	1.30	7	0.28	1/8"	0.250	0.55
OT 10														0.255	0.56
OT 10S														0.263	0.58
OT 13	65	2.56	113	4.45	90	3.54	16	0.63	42	1.65	9	0.35	1/4"	0.565	1.24
OT 16														0.580	1.28
OT 16S														0.614	1.35
OT 20	80	3.15	128	5.04	104	4.09	16	0.63	56	2.20	9	0.35	1/4"	1.090	2.40
OT 25														1.120	2.46
OT 25S														1.200	2.64
OT 30	100	3.94	160	6.30	130	5.12	20	0.79	73	2.87	11	0.43	3/8"	2.200	4.84
OT 36														2.300	5.06
OT 36S														2.530	5.57

TYPE	Vibrations			F.C. max.						Air consumption					
	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi	2 bar=29 psi	4 bar=58 psi	6 bar=87 psi
	Vpm			kg	lbs	kg	lbs	kg	lbs	l	CF	l	CF	l	CF
OT 8	34,000	38,000	42,000	110	242	205	451	292	641	45	1.6	81	2.9	110	3.9
OT 10	26,000	33,000	38,000	105	231	171	377	252	554	45	1.6	81	2.9	110	3.9
OT 10S	17,200	23,400	26,000	72	159	147	323	187	410	45	1.6	81	2.9	110	3.9
OT 13	24,500	28,500	31,000	202	444	263	579	300	659	122	4.3	204	7.2	285	10.1
OT 16	18,000	20,000	21,000	194	427	239	527	264	581	122	4.3	204	7.2	285	10.1
OT 16S	11,500	15,000	17,500	129	285	196	431	234	516	122	4.3	204	7.2	285	10.1
OT 20	14,500	19,000	23,000	251	552	404	888	526	1,157	184	6.5	318	11.2	452	16.0
OT 25	13,200	15,500	17,500	244	537	336	740	508	1,117	184	6.5	318	11.2	452	16.0
OT 25S	9,000	11,000	13,500	214	471	335	738	483	1,063	184	6.5	318	11.2	452	16.0
OT 30	11,000	12,500	14,500	351	771	721	1,586	781	1,718	322	11.4	542	19.1	749	26.5
OT 36	8,500	11,500	12,000	341	751	698	1,536	749	1,648	322	11.4	542	19.1	749	26.5
OT 36S	6,000	7,000	8,500	406	893	706	1,554	754	1,660	322	11.4	542	19.1	749	26.5

This datasheet might not show the complete range but only the models specialised for the application.

Paint & Varnish Processing

Vibrating Bin Aerators VBS-Type

40



PATENTED



Description ▼

Vibrating Bin Aerator types VBS combine product aeration under operating pressure reaching 4 bar (58 PSI) with an additional slight vibration on the silo wall. Due to their design damage of the silo is impossible even with abrasive materials. An additional backstop valve is not required as, due to the work pressure ranging from 0.8 to 4 bar (12-58 PSI), no material can enter the zone beneath the elastic lip. VBS-type Vibrating Bin Aerators are used for the improvement of mass flow with powders and granular materials.

VBS can be used with compressed air or, in some cases, inert gases such as CO₂ as a preventive measure.

Function ▼

Compressed air is introduced into the stored material through the silicon lip which adheres to the inside silo wall. By varying the work pressure within a range between 0.8 and 4 bar (12 to 58 PSI) the intensity of vibration of the elastic silicon lip can be changed. Due to interval operation and a maximum operation time of five seconds air consumption is very low. TRAMONTANA™ disc: the Venturi style disc cavity of the VBS boosts air flow in the direction of the discharge point reducing load-out time and air consumption.

Application ▼

VBS Vibrating Bin Aerators are used in all types of powder processing plants where flow aids are required.

Typical application is fluidisation of filler dust and additives in storage silos and hoppers. They are fitted on storage silos or weigh or feed hoppers, as well as fluidisers for dry bulk trailers.

Benefits ▼

- ✓ 2 combined effects: vibration and aeration;
- ✓ No damage to the structure of the bin;
- ✓ Suitable for powdery or granular materials (non hygroscopic);
- ✓ Self-cleaning;
- ✓ Abrasion-resistant;
- ✓ Durable;
- ✓ Easy to fit;
- ✓ Maintenance-free;
- ✓ Suitable for external mounting.

Paint & Varnish Processing

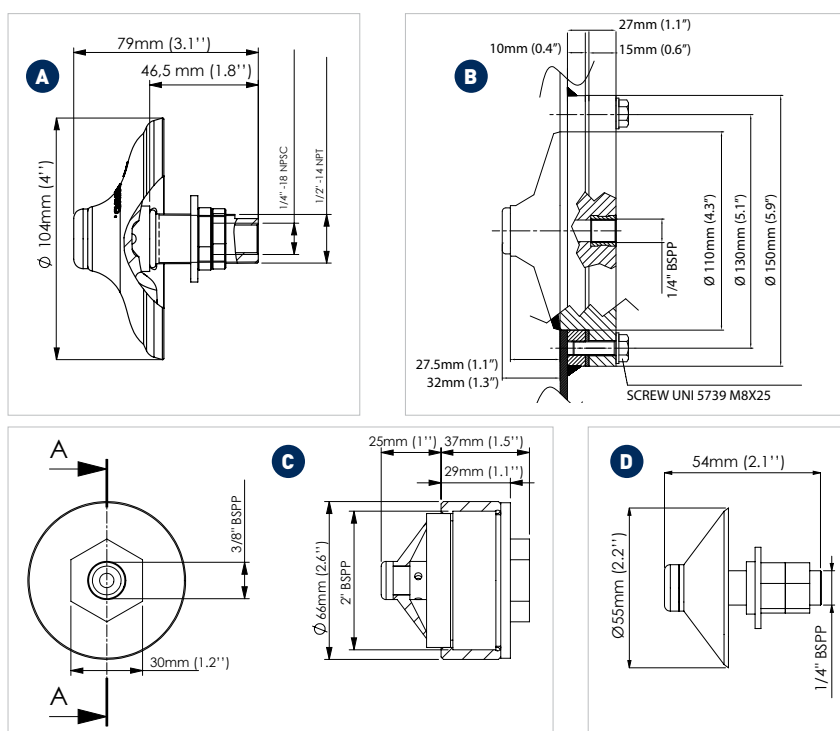
Vibrating Bin Aerators VBS-Type



Technical Features / Performance ▼

- ▶ Aluminum "anticorodal" shaft (stainless steel on request – VBI-Type)
- ▶ Vibrating silicon membrane
- ▶ Continuous or discontinuous duty cycle
- ▶ Work temperature: -40° ~ 235°C (-40° F ~ 455° F)
- ▶ Work pressure: 0.8 ~ 4 bar (12 ~ 58 psi)

Overall Dimensions ▼



PRODUCT	DRAWING	MEMBRANE COLOUR	STEM MATERIAL	Air consumption						Working temperature			
				0.8 bar (11.6 psi)		2 bar (29 psi)		4 bar (58 psi)		°C		°F	
				l/min	Cfm	l/min	Cfm	l/min	Cfm	Min.	Max.	Min.	Max.
VBS	A	White	Aluminium	600	20	800	28	1150	40	-40	170	-40	338
VBSI	A	White	Stainless steel	600	20	800	28	1150	40	-40	170	-40	338
VBE	B	White	Nylon	-	-	-	-	1150	40	-40	80	-40	176
VBSME	C	White	Nylon	100	3.5	150	5	-	-	-40	80	-40	176
VBSM	D	White	Aluminium	100	3.5	150	5	-	-	-40	170	-40	338
VBSMI	D	White	Stainless steel	100	3.5	150	5	-	-	-40	170	-40	338