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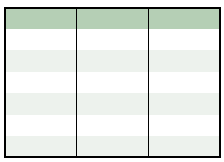

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PVA™ PIAB Vacuum Academy

PIAB VACUUM ACADEMY EMPHASIZES THE BASICS

In industry today there is an accelerating trend toward ever more customized solutions that can be made available at short notice. Product development times and production runs are both becoming shorter. Changes are becoming more sudden and harder to predict.

Competence and willingness to change are being challenged by a never-ending parade of new situations. Training that sharpens skills and broadens perspectives enables your personnel – and your company – to handle more sophisticated assignments while accepting highly qualified responsibilities. This makes it easier for you to develop new functions and work pro-cedures while advancing into new markets.

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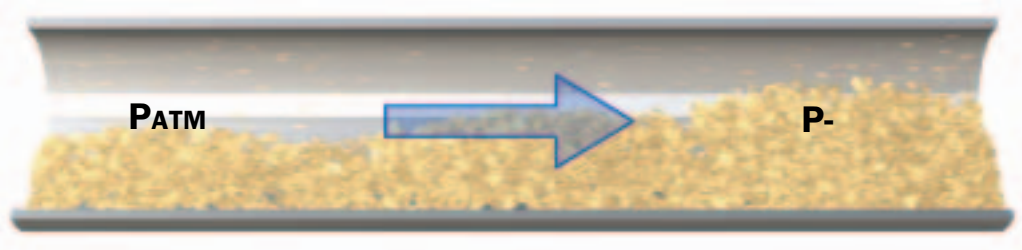
The PIAB Vacuum Academy trains your company's employees to make sounder pre-purchasing de-cisions, find new fields of applica-tion, develop production process-es and make your business more profitable.

Training courses are held wher-ever PIAB is represented. More-over, they can be held on your company's premises and be adapted to meet special needs whenever you desire.

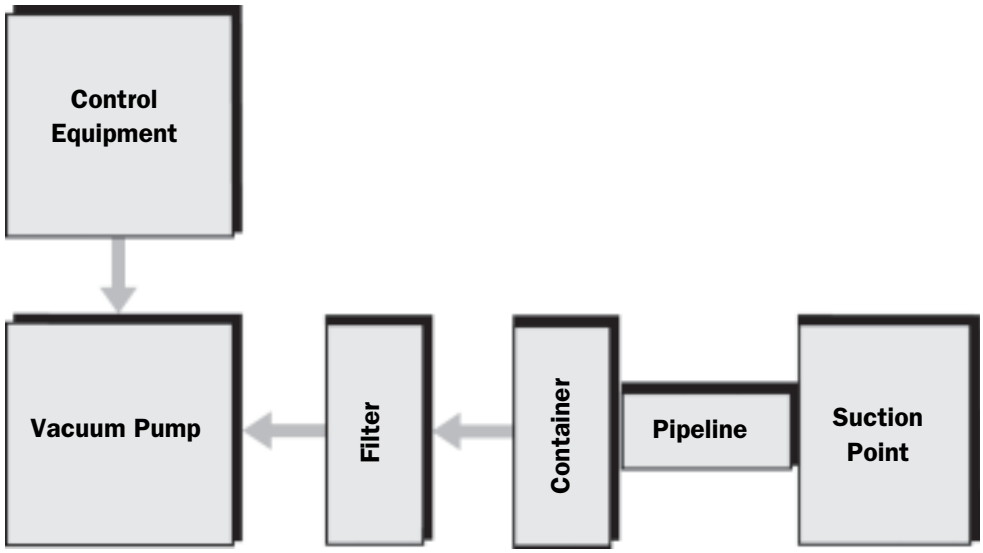
PRINCIPLES OF VACUUM CONVEYING



In the field of vacuum conveying technology we speak of vacuum conveyors being used for "sucking" material. What actually happens is that the air is evacuated from the suction pipe and the pressure of the atmosphere pushes the material into the suction pipeline. It is the atmospheric pressure that indirectly performs the work. The stream of air that is formed upon pressure equalisation pulls the solid particles into the pipeline.

All vacuum conveyors work according to the same main principle, as illustrated below. The material is conveyed from a suction point through a pipeline to a container, where the air and the material are separated. The filter cleans the air before it passes through the vacuum source. A control unit regulates the operating sequence.

Block Sketch, Vacuum Conveying



A TYPICAL VACUUM CONVEYING SYSTEM

A. PIAB vacuum pump

B. Bottom valve

C. Inlet container

D. Pipeline (hose or pipe system)

E. Feed station

F. Filter

G. Air shock tanks

H. Control system

1. Vacuum is generated by a compressed air-driven PIAB vacuum pump (**A**). The pump can easily be automatically controlled. Since it has few moving parts, the pump is virtually maintenance-free.
2. The bottom valve (**B**) is closed, and vacuum is raised in the container (**C**) and the conveying pipeline (**D**).
3. From the feed station (**E**) the material is drawn into the conveying pipeline and then on to the container.
4. The filter (**F**) prevents dust and fine particles from being drawn into the pump and escaping into the surroundings.
5. During the suction period, the air shock tanks (**G**) are filled with compressed air.
6. When the material container is full, the vacuum pump is stopped. The bottom valve opens and the material in the container is discharged. At the same time, the compressed air in the filter tank is released and cleans the filter
7. When the pump is restarted, the process is repeated and a new cycle begins. The suction and discharge times are normally controlled by pneumatic or electrical control systems (**H**).

MATERIAL HANDLING

MATERIAL FLOW

The material flow is determined by the diameter of the conveying pipeline, the vacuum flow, conveying distance and not least by the characteristics of the material.

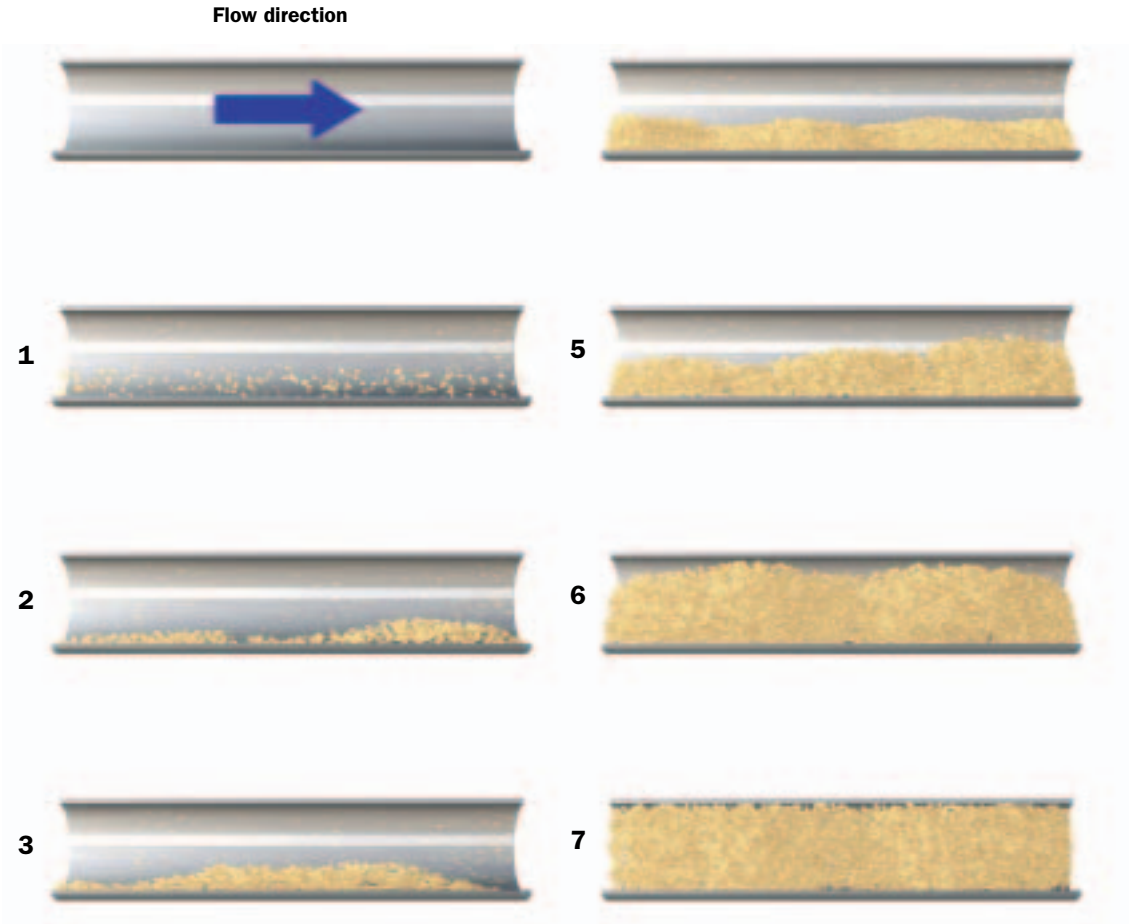
The relationship between material flow and vacuum flow is usually stated as phase densities and is a dimensionless quantity. If the phase density is the same as the bulk density, it means that there is no air in the conveying pipeline and that the pipeline is blocked. The converse also applies. If the phase density is equal to zero, there is no material in the conveying pipeline. Between these two limits, a range of phase densities may occur.

Dense phase means that the material is conveyed in separate plugs in the conveying pipeline. For most materials, the phase density is a factor above ten for dense phase. Some materials can be conveyed in dense phase.

Another conveying phase is “dilute phase”. The phase density is usually below ten. Conveying speed in dilute phase is usually >10 m/s.

The figure below shows conveying phases with different phase densities. From very dilute phase (1), over dense phase (6) to blocked pipeline (7).

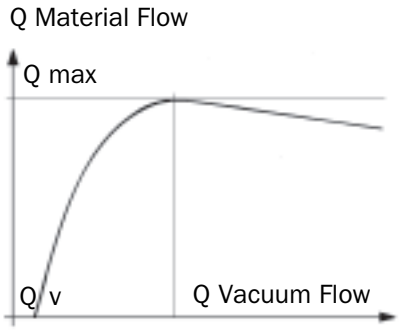
$$* \text{ Phase density} = \frac{\text{Material flow}}{\text{Vacuum flow}} \quad \frac{\text{material kg/h}}{\text{conveying air kg/h}}$$



It is generally the case that in dense phase, because the material moves in the form of plugs, the vacuum level is usually 30–65%, while in dilute phase it is 10–30%.

When sizing a conveying installation, it is important to find the optimum conveying phase for a specific material. A common misapprehension is that the greater the vacuum flow, the higher the material flow. The relation between material flow and vacuum flow may, for example, be as shown in the opposite figure. The diagram shows that the maximum material flow Q_{max} is equivalent to the vacuum flow Q_v. When the vacuum flow increases, the material flow will decrease.

When sizing a conveying installation, it is important to find the optimum point of the curve. The only way of ascertaining the position of maximum material flow for a specific product is to experiment with varying degrees of aeration and vacuum flow. For this purpose many manufacturers have special test plants.



MATERIAL CLASSIFICATION

When sizing a conveyor, it is important to determine the fluidity of the material that is to be conveyed.

To sum up, the following points should be included in the material classification:

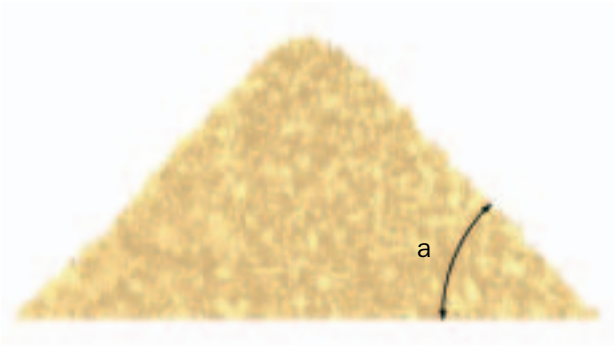
- Fluidity/angle of repose
- Bulk density
- Abrasion factor
- Particle
  - size
  - distribution
  - form
  - density
  - hardness
- Moisture sensitivity (hygroscopicity)
- Explosion hazard
- Harmfulness/poisonousness

FLUIDITY

The fluidity is one of the most important qualities when the conveying possibilities of a material shall be decided. One way of making a rough assessment of the fluidity is to determine the material's angle of repose by pouring out the material from a height and measuring the angle (a).

A small angle of repose means good fluidity and a large angle of repose, poor fluidity. The factors that determine the fluidity of the material are particle size, geometric shape, tendency to pick up static electricity and degree of moisture sensitivity. Plastic granules generally have good fluidity while cornflour has poor fluidity and is also sensitive to moisture.

Material with poor fluidity can often be fluidised. For fluidisation to work, the material must be reasonably fine so that it is lifted by the fluidising air. If the material consists of coarse particles, fluidisation will not be so effective.



BULK DENSITY

The term “bulk density” refers to the weight/volume of a material, in other words, how much one litre of the material weighs. As one litre of powder contains both material and air, the bulk density will vary considerably depending on how closely a particular material is packed. In other words, the same material will have different bulk density values if you weigh a litre of material that has been poured into a beaker and a litre of material that has been shaken and packed. It is therefore important to measure bulk density under conditions that are as similar as possible to the actual conveying conditions.

PARTICLES

Individual particle weight, size, distribution, form and hardness are all parameters that determine a material’s flow ability and thus its conveying characteristics.

The weight (density and size) of the individual particles determines the vacuum flow that is required to lift the material into the conveyor pipe and move it forward in the pipeline.

The term “particle distribution” refers to how much of various-sized particles, from the smallest to the largest, make up the material’s composition.

MOISTURE SENSITIVITY

Different materials are more or less hygroscopic. If test running is carried out on a particular material, it is important that the conditions are kept as similar as possible to those that will apply on installation. A moisture-sensitive material may form lumps that catch in the material intake, stick in the pipeline or block up the filter.

EXPLOSION RISK

In connection with handling of finely ground material, there may be a risk of dust explosion. Dust explosions can occur when certain types of particles are mixed with air at a certain ratio and a source of ignition is present. Rapid expansion and pressure increase are characteristics of dust explosions.

Dust explosions that occur during conveying of materials are commonly caused by sparks from static electric discharge. You can read more about this in the statute book of the Swedish Board for Occupational Safety and Health (Arbetarskyddsstyrelsen) AFS 1981:5 concerning dust explosions.

In a vacuum conveyor, the ratio of the air-to-material mixture (phase density) varies and the risk of a dangerous mix cannot be eliminated entirely. The risk of ignition can, on the other hand, be minimized by preventing electrostatic discharge and thus the generation of sparks. This can be achieved by connecting the various parts of the conveyor system to the same earth point (equipotential connection).

Many common materials have a tendency to cause dust explosions. Examples of such materials are given below. A complete list may be found in the above-mentioned statute book published by the Board for Occupational Safety and Health.

- Aluminium
- Aspirin
- Carbon
- Coffee
- Cork
- Cotton
- Flour
- Grain
- Iron
- Nylon
- Sugar
- Tea

HARMFULNESS AND TOXICITY

A vacuum conveying system is appropriate for conveying harmful materials, as any leakage in the system does not allow the conveyed material to leak out into the surroundings because of the lower pressure within the system.

The air extracted from the system may need to be filtered particularly carefully by means of a special filter or be piped away to a central filter system

PNEUMATIC CONVEYING SYSTEMS

GENERAL

From a technical point of view, pneumatic conveying is based on conveying of solid particles mixed with a gas, usually air.
By means of pneumatic conveying, solid particles of varying sizes can be conveyed between points, for example, from a storage to a processing machine.

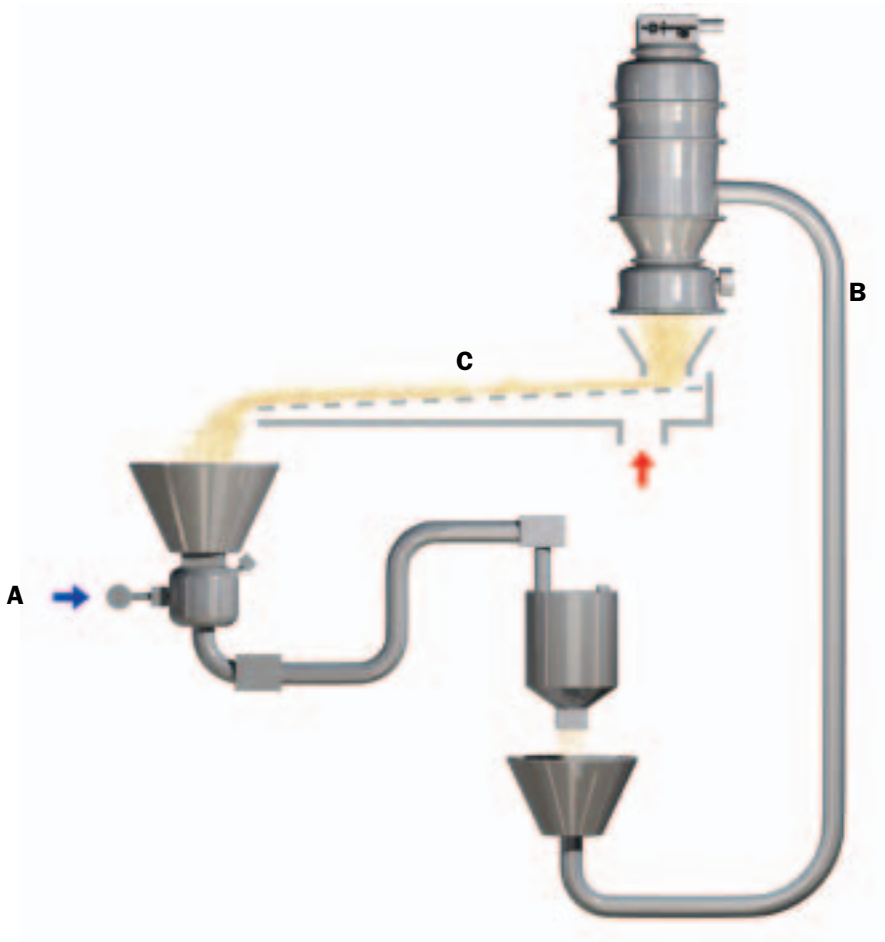
Pneumatic conveying depends on access to compressed air or a source of vacuum, a feed device where air is mixed with the solid particles, a conveying pipeline and a receiving device that separates the carrier air from the particles.

PNEUMATIC CONVEYING SYSTEMS ARE DIVIDED INTO THREE CATEGORIES:

A. Positive-pressure systems, where the material is blown through the conveying pipeline by compressed air.

B. Negative-pressure systems where the material is "sucked" through the conveying pipeline.

C. Fluidised beds. The force of gravity is utilised in combination with fluidisation.
The fluidising layer of air lowers the friction and makes the material run like a liquid.



POSITIVE-PRESSURE CONVEYING SYSTEMS

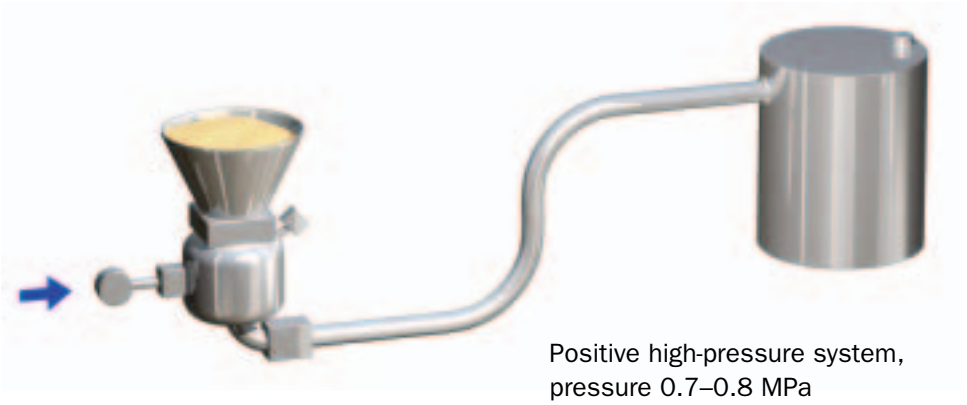
Positive low-pressure system, pressure about 0.1 MPa

The advantage of positive-pressure systems is that bulk material can be distributed from one source to several locations through a system of valves.

Usually, positive-pressure systems are divided into low-pressure and high-pressure systems. A high-pressure system has much greater capacity in regard to the quantity of material that can be conveyed and also allows significantly longer conveying distances than are possible with low-pressure systems.

In low-pressure systems (pressure 0.1 MPa) bulk material is usually fed in with the help of a rotary valve or screw. The low-pressure system provides a continuous flow. In the receiving container, the carrier air is filtered out through a filter cartridge.

Positive high-pressure systems (0.7–0.8 MPa) can provide much higher material flows (>150 ton/h) over much longer conveying distances (>2 km). In order to avoid leakage through the feed device, the material is put into a blower tank. The valve between the storage silo and the blower tank is closed and compressed air blows out the material. The tank is refilled and the procedure repeated. The carrier air is filtered in the receiving silo.



Positive high-pressure system, pressure 0.7–0.8 MPa

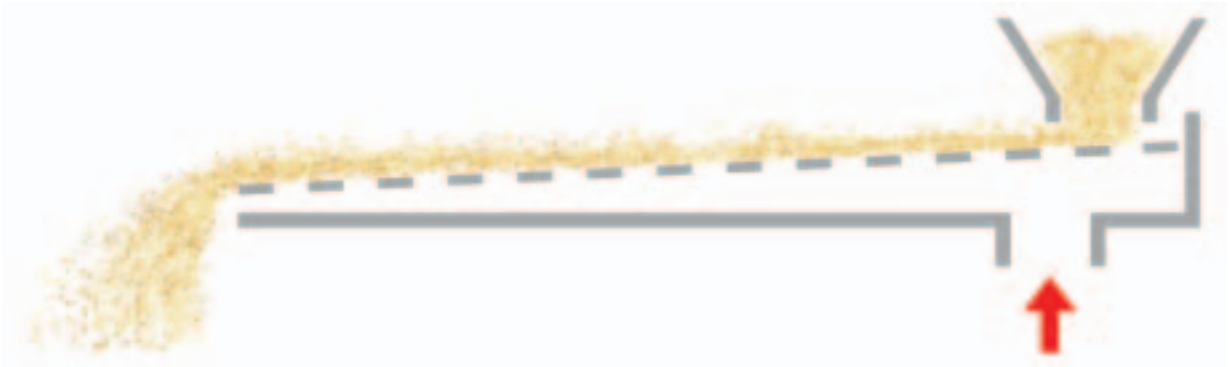
VACUUM CONVEYING SYSTEMS

With vacuum systems, material can be sucked from several pick-up points and collected at one receiving point. This is the opposite of what happens in positive-pressure systems. Vacuum systems have lower material flows than positive-pressure systems. Maximum conveying distances may, with favourable materials, be 100–150 m.

The limitation of the conveying capacity is due to the fact that vacuum systems utilise only atmospheric pressure, while in positive-pressure systems considerably higher pressures can be achieved.

FLUIDISED BEDS

In fluidised beds the air passes through a porous filter material. The passage of air lowers the friction, and gravity causes the material to run like a liquid. Very high material flows can be achieved but the material must have specific properties that allow fluidisation. A gentle slope of one or two degrees is required to set the material in motion.



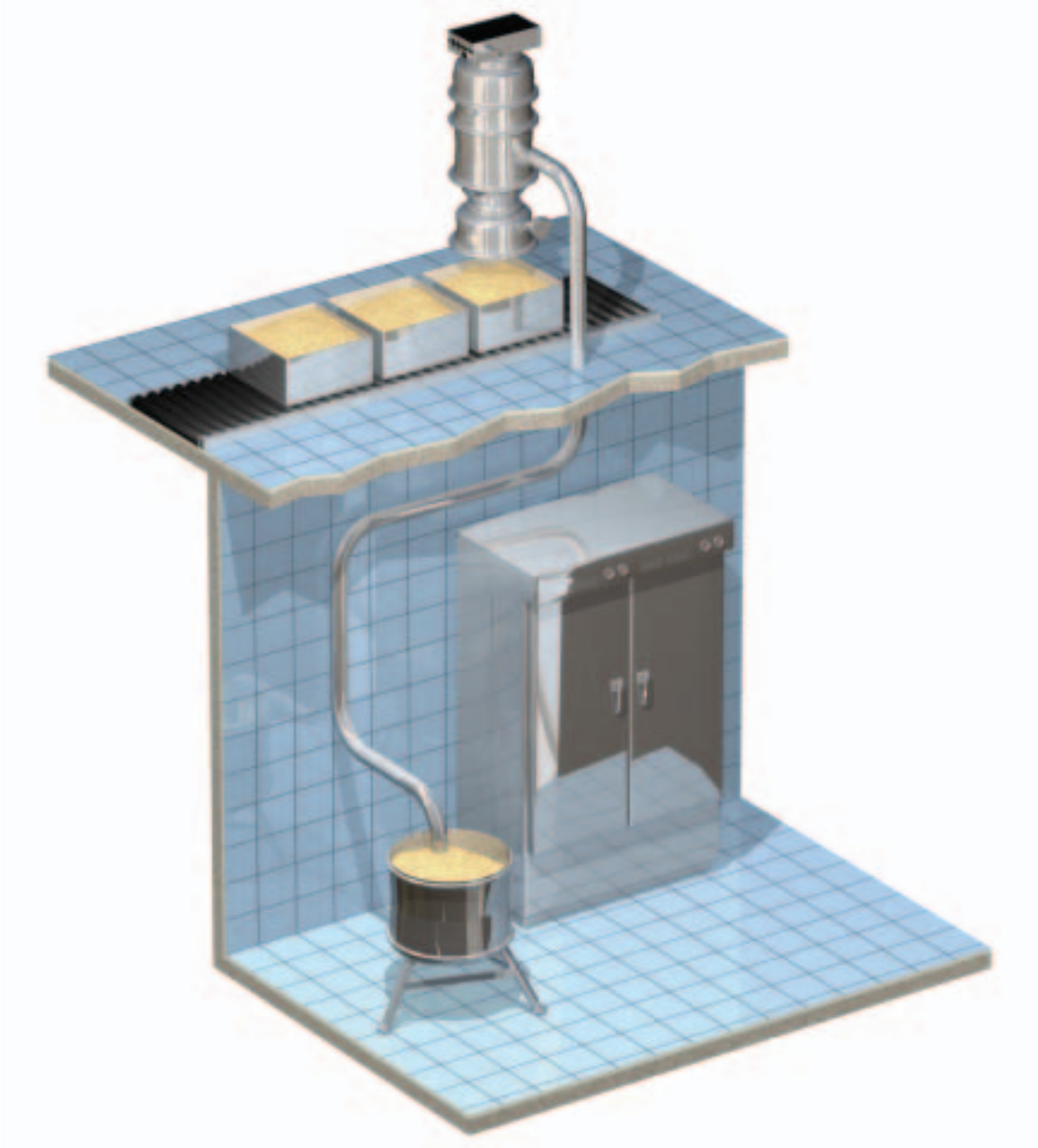
ADVANTAGES - DISADVANTAGES OF DIFFERENT PNEUMATIC CONVEYING SYSTEMS

Conveying system	Advantages	Disadvantages
Positive high-pressure system 	▶ Long distance conveying ▶ High capacities	▶ Risks of leakage ▶ Heavy installations ▶ Expensive components ▶ Wear on material and system
Positive low-pressure system 	▶ Little wear on material and system ▶ Continuous flow	▶ Limited conveying distance ▶ Risks of leakage ▶ Feeder often needed
Vacuum conveying system 	▶ No leakage of material ▶ Simple to install ▶ Dustless ▶ Easy to control	▶ Limited conveying distance ▶ Limited capacity ▶ Usually intermittent operation
Fluidised beds 	▶ Angle of conveying from only 2–3° slope ▶ No moving parts	▶ Dusty conveying ▶ Open system

HANDLING DRY PRODUCTS HYGIENICALLY

Vacuum can be used at great advantage to convey dry products such as powders and granules. PIAB's vacuum conveyors C21, C33 and C56 have been developed especially for handling dairy, food and pharmaceutical products. Some of the models have been examined by USDA – United States Department of Agriculture, and conform with their guidelines concerning dairy products. Through this, the conveyors also comply with the hygienic standards that organizations such as 3-A Sanitary Standards and EHEDG – European Hygiene Engineering Design Group, have established. USDA works closely together with 3-A, and 3-A works in close cooperation with EHEDG. To manufacture equipment according to these requirements is GMP – Good Manufacturing Practice.

PIAB's vacuum conveyors are made of acid-proof stainless steel, ASTM 316L, and withstand the most demanding conditions that they may be subjected to.



COMPONENTS OF A VACUUM CONVEYING SYSTEM

A vacuum conveying system always consists of a number of components. The components are suction point, conveying pipeline, collecting container, filter, vacuum pump and control equipment. Support components may be fluidisation, pipeline valves, various sack dischargers, weighing equipment, etc.

THE SUCTION POINT

For automatic or semi-automatic systems a feed station or different types of feeding adapters can be used. A feed station is a special feeding adapter that can mix air with the material and, if necessary, be provided with fluidisation.

The suction point can also consist of an aspirated feed nozzle, which entrains extra air to the conveying.

A feeding adapter with adjustable intake for air and material, that can be mounted on, for example, a silo.

CONVEYOR PIPELINE

One of the many advantages of pneumatic conveying systems is that they are simple to install. Friction in pipes and hoses can reduce the material flow considerably. For permanent installation, rigid pipes should always be used. Pipes have lower friction than hoses. A good pipe installation may mean an increase in the material flow so that pump capacity can be reduced and thus lower running costs achieved.

COLLECTION CONTAINER

The collection container is the vessel or volume that is placed under vacuum in connection with the suction cycle and in which the material is collected. At the bottom of the container there is a discharge device that opens when the suction cycle is complete and the material flows out and then closes again in preparation for the next suction cycle.

If necessary, the discharge device may be fitted with fluidisation for better discharge.

FILTER

The filter separates the conveyed material from the carrier air. If some particles should follow the air up to the filter, they will be filtered away, and the clean air will continue out through the vacuum pump. Most filters are fitted with some kind of cleaning device.

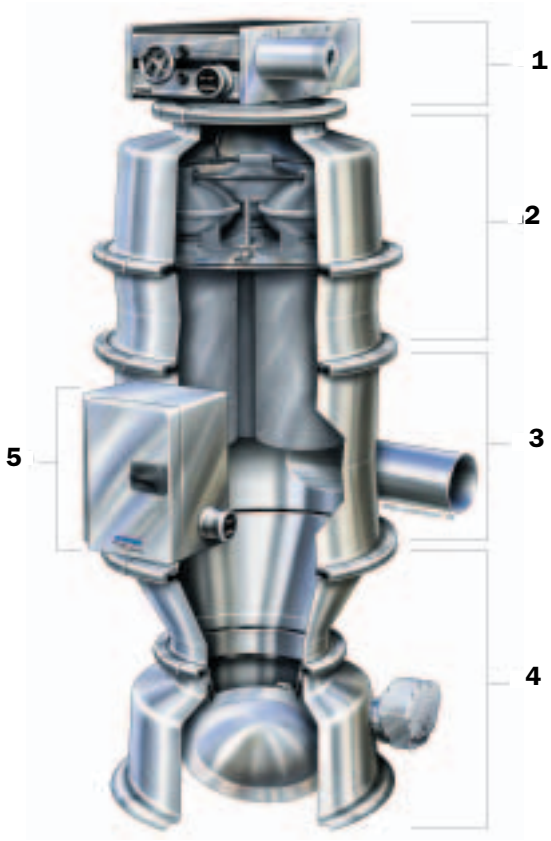
VACUUM PUMP

The heart of the system is the vacuum pump that creates the reduction of pressure or suction that moves the material.

By using a compressed air-driven vacuum pump, a complete explosion-proof unit is achieved, which is important in order to avoid dust explosions. Vacuum pumps driven by compressed air also have the advantage of being virtually maintenance-free, silent and not emitting any heat. They are also easy to control as they react very quickly. The pump can be controlled by means of the compressed-air supply, which means that the pump runs only during the suction period and is at rest, saving energy, at other times.

CONTROL EQUIPMENT

As a vacuum conveyor works intermittently, some form of control equipment that regulates running time, standstill time, discharge, fluidisation, etc., is required.



1. Pump unit
2. Filter unit
3. Connection unit
4. Bottom valve unit
5. Control unit
6. Nylon tubing kit (not in picture)

SYSTEM DESIGN

As mentioned previously, there are many parameters that affect a vacuum conveying system. Naturally, the system design itself is also extremely important. However, as most vacuum conveying systems are unique it is hard to give direct instructions. Certain general basic principles do of course apply and the most important of these are described below.

GENERAL

Some general rules to bear in mind when planning a vacuum conveying system are:

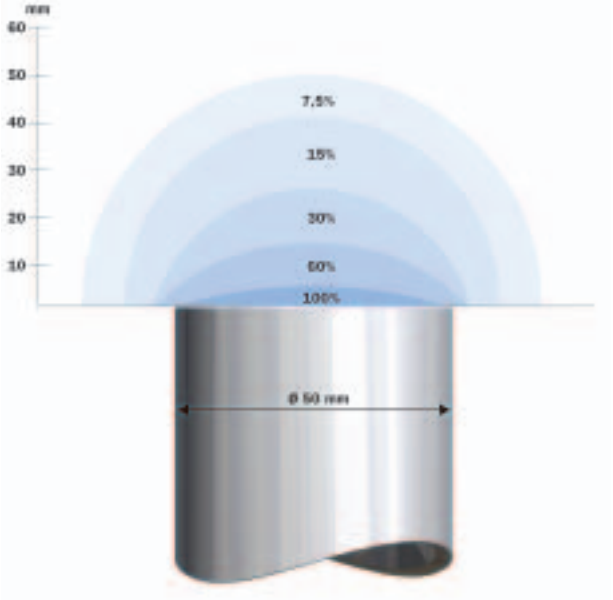
- Short conveying distance reduces system and running costs.
- Keep pipe bends to a minimum to reduce system and running costs.
- Avoid running the conveying pipeline on an inclined plane.
- Use rigid pipes where possible.

SUCTION POINT DESIGN

In order to be able to suck material into a conveying pipeline and then convey it, the conveying air must have a certain minimum speed. Most materials need additional air in order to be set in motion. If a system is to function satisfactorily, the feed, i.e., the suction point, must be designed correctly. It is important that the material is placed close to the intake on the conveying pipeline as the suction capacity decreases by the square of the distance.

When the suction point is designed as a feed station, there are normally two valves, one for air and one for the material, which can be controlled to give the right proportions of material and air in the pipeline. Another way of supplying air, particularly with material that is hard to convey, is to fit the feed funnel with fluidisation.

If a suction nozzle is used, the simplest way of supplying additional air is by using a double-mantled feed nozzle, where the input air is regulated by means of a valve on the handle. The inner tube can also be regulated upwards and downwards in relation to the outer one, and this setting also has an effect on conveying.

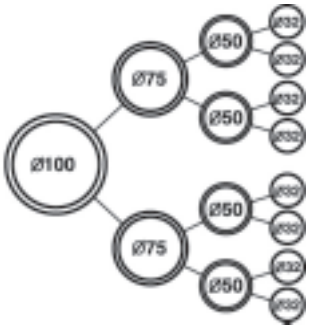


AUTOMATIC ASPIRATING VALVE UNIT

With the help of a Y-piece, a vacuum switch and a valve, additional air can be automatically introduced into the conveying pipeline. In the first part of the conveying pipeline, a Y-piece is fitted (exactly where depends on the material). On the open part of the Y-piece, a valve that is controlled by a vacuum switch is fitted. The vacuum switch senses the vacuum level in the conveying pipeline and when the set value is reached, the switch gives a signal that opens the valve and lets air into the system. To protect the conveyed material from contamination, the inlet is fitted with a filter.

PIPE DIMENSIONS

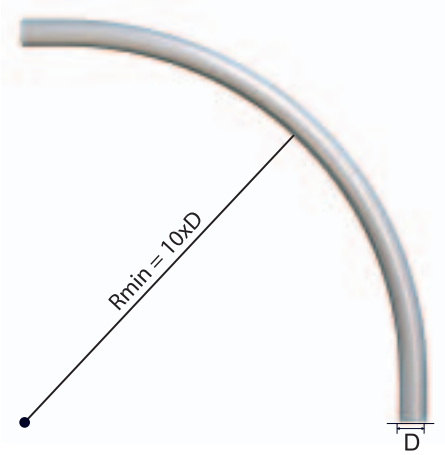
Pipe diameter is of vital importance for the capacity of a conveying system. In principle, the greater the diameter of the pipe, the greater the capacity of the system, provided the speed is kept constant. In practice this means that if you want to increase the capacity, you usually have to overhaul the entire system, including vacuum pump and containers as well as tube dimensions. In certain cases, however, a capacity increase may be made possible with smaller pipes and the same pump. This is due to the fact that it may be possible to move the material in another phase (dense phase). The ratio of the various pipe diameters is shown by the adjacent figure. For example, a pipe with a diameter of 75 mm is equivalent to two pipes with a diameter of 50 mm.



The speed of the material is directly related to the speed of the air in the pipeline. As the pressure in the pipeline falls the closer you get to the conveyor, the speed of the air and the material increases correspondingly. That is why in certain cases stepped pipelines (pipes of increasing diameter) have to be used to keep down the speed of the material so that it is not broken to pieces.

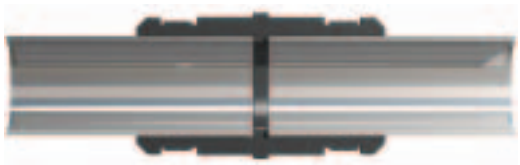
PIPE BENDS

A large bending radius is one way of avoiding unnecessary wear and pipeline resistance. Hoses are often used in bends so that they can be simply and cheaply replaced when they wear out.



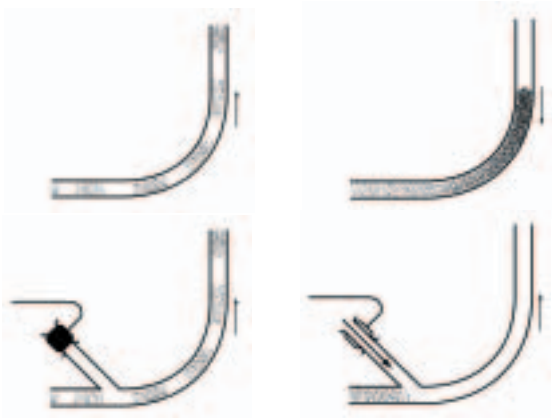
PIPE JOINTS

Pipe joints must be constructed correctly so that material does not build up around the joints. Rounded edges and a good seal are important points to remember.



EMPTYING THE PIPELINE

Vacuum conveying systems can lift materials through relatively large vertical distances, 10–20 m, and in some cases even higher. As the conveyor works intermittently there is a risk that, when the pump stops and the material falls down, a plug will form at the bottom of the vertical part of the system. To avoid this, the tube has to be emptied from time to time from the beginning of the vertical part right up to the conveyor. This may be achieved by inserting a valve that can be opened to let in air before the rise. This means that no material is conveyed before the rise and all material is discharged from the pipe up to the conveyor.

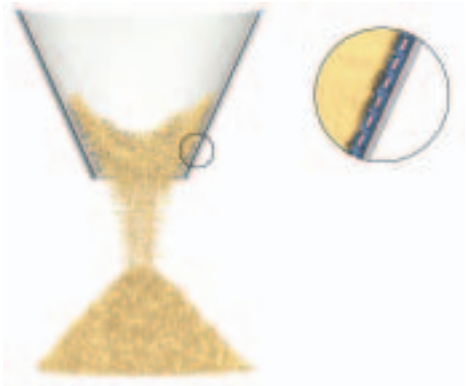


1 and 2 = Without pipeline emptying
3 and 4 = With pipeline emptying

FLUIDISATION

In cases where the material to be conveyed has poor flow capacity, fluidisation may be an option. Fluidisation may take place both at the feed station, to ensure supply of material to the conveyor, and in the conveyor container to improve discharge.

Fluidisation means that compressed air passes through a porous filter material where it is finely distributed. The finely distributed air creates a cushion or film that reduces the friction quite considerably between material and base. What is more, the air is mixed with the material in such a way that friction is also reduced between the particles in the material, which means that the material “flows like water”. Not all materials can be fluidised.



WEIGHING

Checking or weighing how much material has been conveyed may take place according to three main principles. The feed station can measure how much has been taken away, the conveyor container can be weighed to measure how much has reached it, and the receiving container may be weighed to ascertain how much has been discharged. Usually, the last weighing option provides the greatest accuracy. The degree of accuracy that can be achieved with the various systems is entirely dependent on the properties of the material conveyed and the construction of the system. In cases where the aim is to meter out a certain quantity of material it is best to place special metering equipment between the conveyor and the receiving container. There are many different types of equipment in the market and the properties of the material determine type and make.

REGULATION AND CONTROL

All vacuum conveying systems require some form of control, which may be designed in many different ways depending on industry and application. Control may be fully pneumatic (suitable where there is a risk of explosion, for example), fully electrical or a combination of both. The system may be a separate unit with independent control or part of a larger system where slave units receive signals from the main system.

Normally, vacuum conveying takes place intermittently (in batches) and more or less automatically and a cycle may have the following sequence:

1. The vacuum pump starts.
2. The bottom valve closes.
3. The material is conveyed.
4. The vacuum pump stops.
5. The filter is cleaned.
6. (Fluidisation, if any, starts.)
7. The bottom valve opens.
8. The product is discharged.
9. (Fluidisation, if any, stops.)

VARIOUS SPECIAL DEVICES

A conveyor may be fitted with a rotary valve so that it can be run continuously. Another method of making a continuous material flow possible is for two conveyors to be run alternately in what is known as a twin set (see fig.).

In a twin set the conveyors are controlled in such a way that while one is sucking the other one is discharging. On changeover there is an overlap period when both conveyors run together for a short time. Sometimes, continuous conveying may be made possible by eliminating the separate container and conveying directly down into a vacuum-proof vessel.

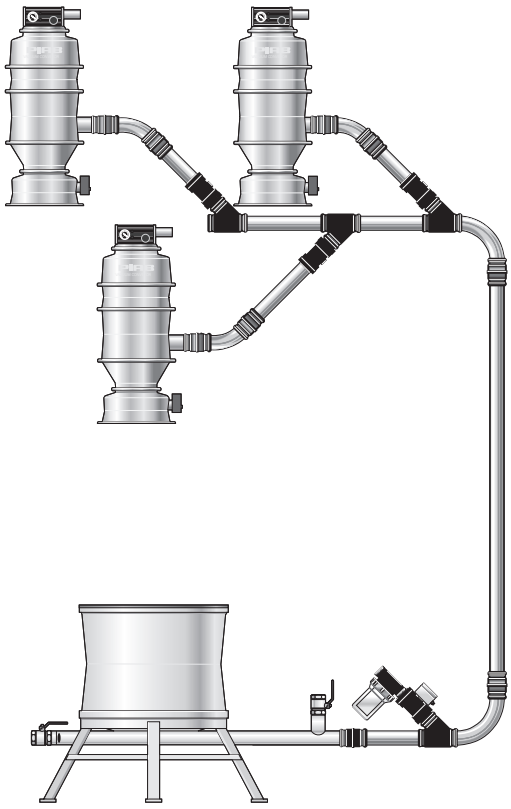
SEVERAL DIFFERENT MATERIALS

It is simple to connect a vacuum conveyor to different feed stations and thus it can convey different materials to one and the same container, but only one material at a time. If you want to mix different material to a recipe, the system can be fitted with load cells for weighing.

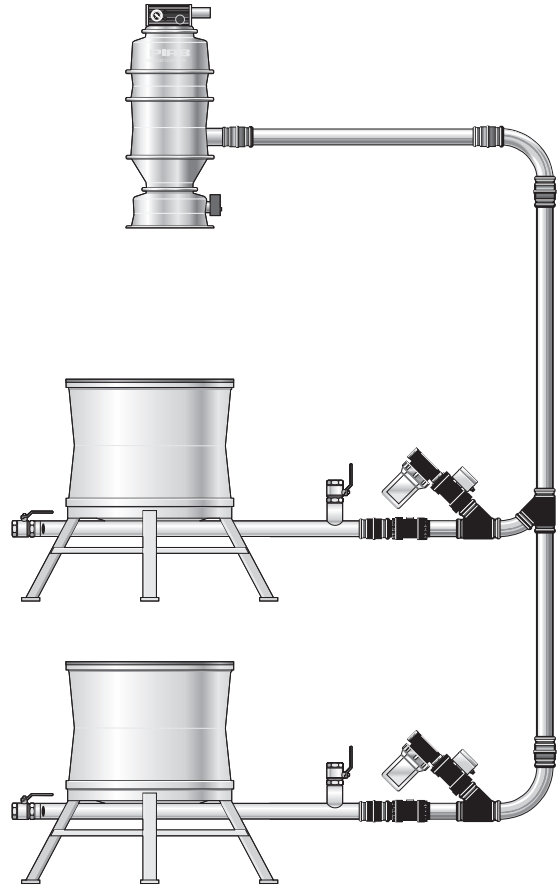
SYSTEM EXAMPLES

The most common application is to have a conveyor (1), a feeding point (2) and a conveying pipe for the material to be conveyed (3) between point (1) and (2). In order to achieve an even and smooth conveying phase, an aspiration valve unit (4) is sometimes used to open and introduce material-carrier air at regular intervals.

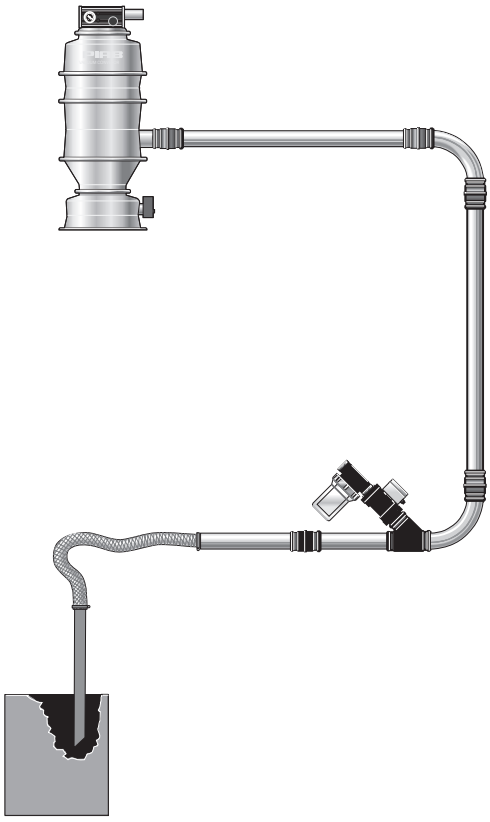
In some applications it is desirable to empty the conveyed material at different points in the production chain. This may be conveying of wheat flour from a loading platform, for example, to three different dough-mixing machines.



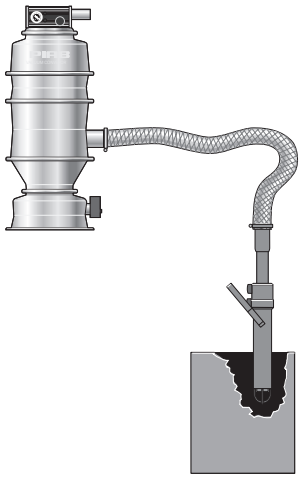
Sometimes one needs to be able to convey different materials from different points of suction to one and the same point of collection in the production chain.



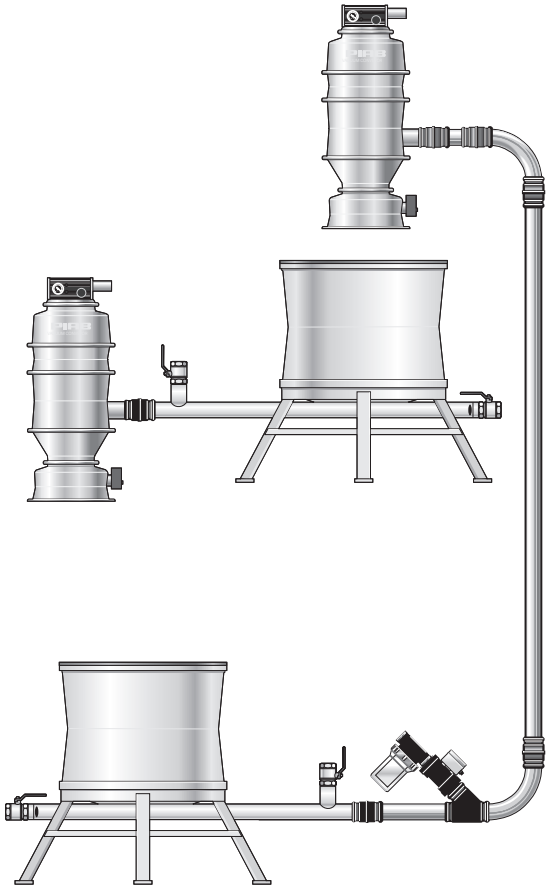
This picture illustrates manual handling at the point of suction by using only one pipe that is entered into the material, with the conveyor located quite far away from that point.



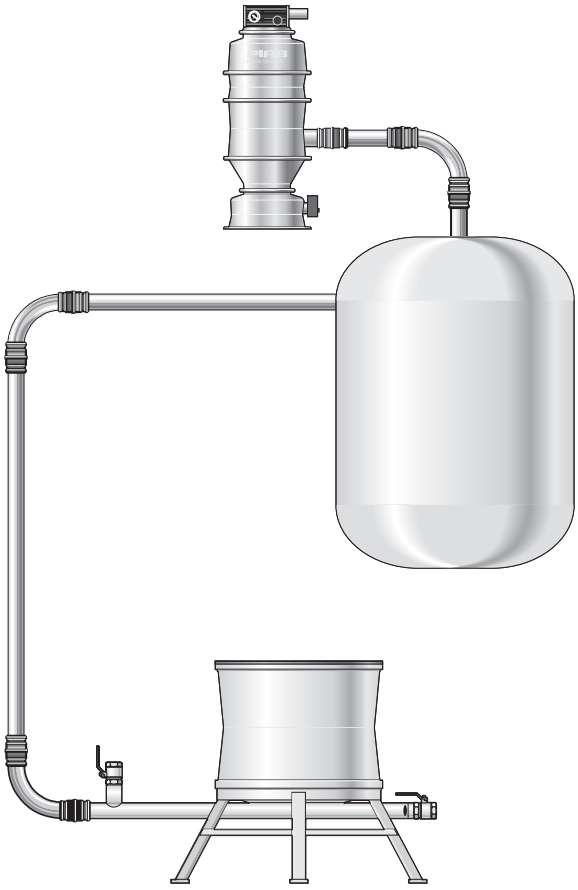
This picture illustrates manual handling at the point of suction by using PIAB's original feed nozzle that is used to control the product-carrier air in the material.



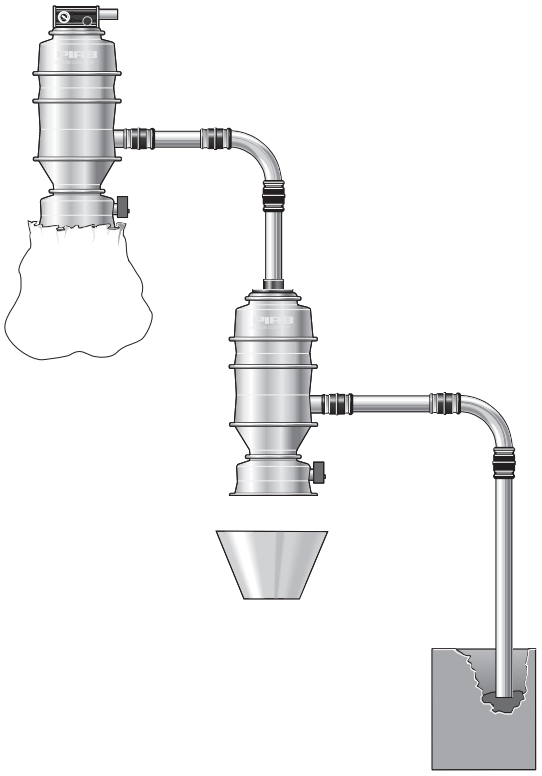
There may be reason for conveying a material in two stages, for example, when the conveying distances are very long, or in applications where the material is to be conveyed up to a considerable height.



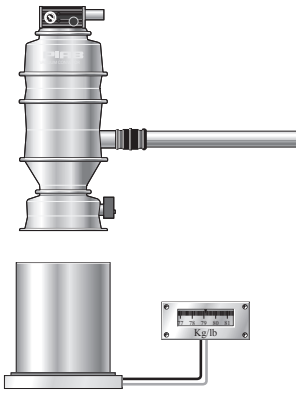
A so-called twin installation is used when one wants to convey the material continuously. One of the conveyors then empties the material at the same time as the other conveyor conveys the material, and vice versa.



Continuous conveying is achieved by collecting the material in a container (2) that can hold a large volume, at a place that lies before the conveyor (1). This solution is ideal also when one has to convey in a vertical direction. If the vertical distance is very long, the container may be positioned at a point halfway of the conveying distance to make it all work smoothly.



There may be instances when one would like to separate two different materials having differing physical properties. Then the heavier particles fall down into the container (2) while the lighter ones are conveyed to the conveyor (1).



In many cases one has to be very precise when it comes to metering the material. By placing a weighing device (2) under the conveyor (1) it is quite easy to measure how much material is conveyed.

VACUUM PUMPS

MECHANICAL PUMPS

The main principle for all mechanical pumps is that they convey, in one way or another, a certain volume of air from the suction side (the vacuum side) to the exhaust side. In that way they create a vacuum.

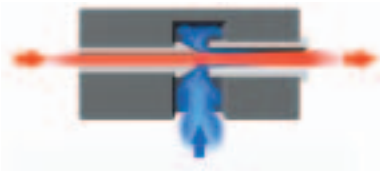
Mechanical pumps usually have an electric motor as power source, but it can also be an internal combustion engine, a hydraulic or a compressed air-driven pump.

Fans		Advantages	Disadvantages
	Centrifugal blower	Few moving parts Large suction volumes Strong	Low maximum vacuum Slow start-up and long stop time High noise level
	Regenerative blower	Few moving parts Large suction volumes Low energy consumption	Low maximum vacuum Slow start-up and long stop time High noise level

Displacement pumps		Advantages	Disadvantages
	Piston pump	Relatively low price	High heat emission Low maximum vacuum
	Membrane pump	Few moving parts Compact Low price	Small suction volumes
	Vane pump	High vacuum and flow Relatively low noise level	Sensitive to contamination Relatively high price High service requirements High heat emission
	Roots pump	High flow Low service requirements	High price High heat emission High noise level

COMPRESSED AIR-DRIVEN EJECTOR PUMPS

All ejector pumps are driven with pressurised gas, usually compressed air. The compressed air flows into the ejector pump, where it expands in one or more ejector nozzles. When expanding, the stored energy (pressure and heat) is converted into motive energy. The speed of the compressed air jet increases rapidly, while the pressure and the temperature go down, attracting more air and thereby creating a vacuum on the suction side. Some ejector pumps may also be used to blow air.

Compressed air-driven ejector pumps		Advantages	Disadvantages
	Single-stage ejector	Low price No heat emission Compact	High noise level Gives either high flow or high vacuum Poor efficiency
	Multi-stage ejector	High efficiency Low energy consumption High reliability Low noise level No heat emission	
	COAX® technology	High efficiency Low energy consumption High reliability Low noise level No heat emission Operates even at low feed pressure Integrated features Modularly built Easy to supplement and upgrade later on Easy to clean	

COMPRESSOR ENERGY CONSUMPTION

According to manufacturers specifications the electrical power consumption is 5.5 – 6 W per l/min, for a 0.7 MPa compressor. This means that an air-driven pump, which consumes 100 l/min, takes 100x6 = 600 W compressor power (0.7 MPa compressor). With 100% running time of the Maxi L600 vacuum pump the air consumption at 0.6 MPa = 2520 l/min.

A vacuum conveying test performed at the PIAB AB test facility.	
Vacuum conveyor	C3304-600
Feed pressure at vacuum pump	0.6 MPa
Material	Granulated sugar
Average particle size	200 µ
Total conveying length	20 m
Pipe diameter	∅76 mm
Measured capacity	2.0 ton/h
Suction time per cycle	10 s
Discharging time per cycle	5 s
Total cycle time per batch of sugar	15 s

- In the test the suction time (running time of pump) is only 2/3 of the total cycle time, which gives the actual air consumption:

  $2 \times 2520/3 = 1680$ l/min.

- The power requirements for this test is:

  $1680 \times 6 = 10080 = 10$ kW.

  The energy consumption per hour = 10 kWh. Assume that the cost for 1 kWh = 0.1 Euro.

- The cost to run the conveyor per hour is:

  $10 \times 0.1 = 1$ Euro.

- Bases on an eight hour running shift per day, 172 hour per month, the energy cost for this test is:

  $172 \times 1 = 172$ Euro/month.

- Comment: In this specific test where two tons of sugar is conveyed every hour, the cost per ton of material is:

  1 Euro/2.0 ton = 0.5 Euro/ton.

CONCLUSION

- To run a small-size conveyor C21, at an eight-hour shift per day, the energy cost per month is:

  Energy cost = 20–100 Euro.

- To run a mid-size conveyor C33, at an eight-hour shift per day, the energy cost per month is:

  Energy cost = 100–200 Euro.

- To run a large-size conveyor C56, at an eight-hour shift per day, the energy cost per month is:

  Energy cost = 200–400 Euro.

TABLES

In everyday speech, many different expressions and units are used for both pressure and flow. It is important to agree on what is meant by them.

PRESSURE

P=F/A (Force/Area).
SI unit (Système International d'Unités): Pascal (Pa). 1 Pa = 1 N/m^2.
Common multiple units: MPa and kPa.

Pa (N/m^2)	bar	kp/cm^2	torr	psi (lb/in^2)
1	0.00001	$10.1972x10^{-6}$	$7.50062x10^{-3}$	$0.145038x10^{-3}$
100 000	1	1.01972	750.062	14.5038
98 066.5	0.980665	1	735.559	14.2233
133.322	$1.33322x10^{-3}$	$1.35951x10^{-3}$	1	$19.3368x10^{-3}$
6 894.76	$68.9476x10^{-3}$	$0.145038x10^{-3}$	51.7149	1

1 torr = 1 mm HG à 0° C,
1 mm column of water = 9.81 Pa

PRESSURE ABOVE ATMOSPHERIC

kPa	bar	psi	kp/cm^2
1013	10.13	146.9	10.3
1000	10	145	10.2
900	9	130.5	9.2
800	8	116	8.2
700	7	101.5	7.1
600	6	87	6.1
500	5	72.5	5.1
400	4	58	4.1
300	3	43.5	3.1
200	2	29	2
100	1	14.5	1
0	0	0	0

PRESSURE BELOW ATMOSPHERIC

	kPa	mbar	torr	-kPa	-mmHg	-inHg	% vacuum
Sea level	101.3	1013	760	0	0	0	0
	90	900	675	10	75	3	10
	80	800	600	20	150	6	20
	70	700	525	30	225	9	30
	60	600	450	40	300	12	40
	50	500	375	50	375	15	50
	40	400	300	60	450	18	60
	30	300	225	70	525	21	70
	20	200	150	80	600	24	80
	10	100	75	90	675	27	90
Absolute vacuum	0	0	0	101.3	760	30	100

CHANGE IN ATMOSPHERIC PRESSURE IN RELATION TO ALTITUDE (HEIGHT ABOVE SEA LEVEL)

A vacuum gauge is normally calibrated with normal atmospheric pressure at sea level as a reference, 1013.25 mbar, and is influenced by the surrounding atmospheric pressure in accordance with the table below.

Barometric pressure			The reading on the vacuum gauge at 1013.25 mbar				
mm Hg	mbar	Equiv. m above sea level	60 -kPa	75 -kPa	85 -kPa	90 -kPa	99 -kPa
593	790.6	2,000	37.7	52.7	62.7	67.7	76.7
671	894.6	1,000	48.1	63.1	73.1	78.1	87.1
690	919.9	778	50.7	65.7	75.7	80.7	89.7
700	933.3	655	52.0	67.0	77.0	82.0	91.0
710	946.6	545	53.3	68.3	78.3	83.3	92.3
720	959.9	467	54.7	69.7	79.7	84.7	93.7
730	973.3	275	56.0	71.0	81.0	86.0	95.0
740	986.6	200	57.3	72.3	82.3	87.3	96.3
750	999.9	111	58.7	73.7	83.7	88.7	97.7
760	1013.25	0	60.0	75.0	85.0	90.0	99.0

** at normal barometric pressure.*

The vacuum gauge shows the differential pressure between atmospheric pressure and absolute pressure. This means that the gauge shows what vacuum level is available at different heights.

FLOWS

Flows, volume per unit of time.
Quantity designations: Q, q, = V/t (volume/time).
SI Unit: cubic metres per second (m^3/s).
Common multiple units: l/min, l/s, m^3/h.

m^3/s	m^3/h	l/min	l/s	ft^3/min (cfm)*
1	3600	60000	1000	2118.9
$0.28x10^{-3}$	1	16.6667	0.2778	0.5885
$16.67x10^{-6}$	0.06	1	0.0167	0.035
$1x10^{-3}$	3.6	60	1	2.1189
$0.472x10^{-3}$	1.6992	28.32	0.4720	1

**1 ft ≈ 0.305 m*

VOLUME FLOW VERSUS GAS FLOW

Unit		Vacuum level -kPa										
		0	10	20	30	40	50	60	70	80	90	99
Volume flow	l/s	10	10	10	10	10	10	10	10	10	10	0
	m^3/h	36	36	36	36	36	36	36	36	36	36	0
Free air	Nl/s	10	9	8	7	6	5	4	3	2	1	0
	Nm^3/h	36	32.4	28.8	25.2	21.6	18	14.4	10.8	7.2	3.6	0

LEAKAGE FLOWS

The table below shows the leakage flow at different levels and through an opening of 1 mm^2.

Vacuum level -kPa	Leakage flow l/s and mm^2
10	0.11
20	0.17
30	0.18
40	0.2*

** From about 47 -kPa to 100 -kPa the flow is constant.*

PRESSURE DROP IN COMPRESSED AIR HOSES

When installing compressed air hoses, it is important that the dimension (diameter) and length do not lead to excessive pressure drops. PIAB vacuum pumps are supplied with recommended hose dimensions that will not cause excessive pressure drops at lengths below 2 m.

In cases when the pressure drop has to be calculated, the formula below can be used.

$$\Delta P = \frac{1{,}6 \times 10^{12} \times qv^{1{,}85} \times L}{d^5 \times P1}$$

$$d = \left(\frac{1{,}6 \times 10^{12} \times qv^{1{,}85} \times L}{\Delta P \times P1} \right)^{0{,}2}$$

Δ P	=	Pressure drop in kPa
qv	=	Flow in m^3/s
d	=	Inner diameter in mm
L	=	Length of compressed air hoses in m
P1	=	Absolute starting pressure in kPa

WEIGHT

	kg	g	oz	lb
1 kg	1	1000	35.27	2.205
1 g	0.001	1	0.03527	0.002205
1 oz	0.02835	28.35	1	0.0625
1 lb	0.4536	453.6	16	1

FORCE

Force	
1 N =	0.10197 kp
1 kp =	9.8066 N
1 N =	0.2248 lbf
1 lbf =	4.4482 N

TEMPERATURE

Melting point of ice	Boiling point of water at 101.3 kPa	Absolute zero
0°C	100°C	273.15°C
32°F	212°F	459.67°F
273.15K	373.15 K	0K

°F = 1.8(°C) + 32

PARTICLE AND FILTER PORE SIZE

mesh	micron	inches
4	5205	0.2030
8	2487	0.0970
10	1923	0.0750
14	1307	0.0510
18	1000	0.0394
20	840	0.0331
25	710	0.0280
30	590	0.0232
35	500	0.0197
40	420	0.0165
45	350	0.0138
50	297	0.0117
60	250	0.0098
70	210	0.0083
80	177	0.0070
100	149	0.0059
120	125	0.0049
140	105	0.0041
170	88	0.0035
200	74	0.0029
230	62	0.0024
270	53	0.0021
325	44	0.0017
400	37	0.0015*
550	25	0.0009
800	15	0.0006
1250	10	0.0004
...	5	0.0002
...	1	0.000039
* Threshold of visibility		

THREAD SYSTEMS

1. ISO THREAD:

Cylindrical Metric thread, designated with the letter M. Example: M5.

Cylindrical Inch thread (also called Unified thread): designated with the letter UNF. Example: 10-32UNF.

2. BSP THREAD

(British System of Pipe threads):

The threads have a 55° profile angle and are dimensioned in inches.

Cylindrical thread is designated with the letter G. Example: G 1/8“.

3. DRY SEAL THREAD

(American system of pipe threads):

The dry seal system consists of cylindrical and conical pipe threads. The threads have a 60° profile angle and are sealed without packing or seal rings (please note that when these are used in other combinations of thread systems, “sealing“ is not applicable). The dimensions are given in inches and PIAB’s catalogue uses the letters NPT and NPSF:

Conical thread is designated NPT.
Example: 1/8“ NPT

Cylindrical thread is noted as the letters NPSF.
Example: 1/8“ NPSF

COMPATIBILITY OF DIFFERENT THREAD SYSTEMS

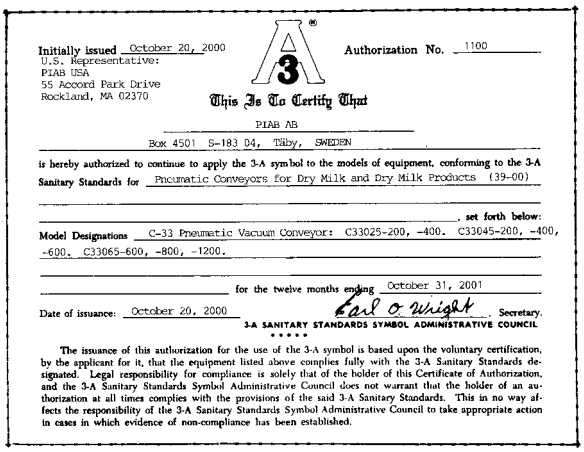
	M5 male	M5 female	G1/8” male	G1/8” female	G1/4” male	G1/4” female	G3/8” male	G3/8” female	G1/2” male	G1/2” female	G3/4” male	G3/4” female	G1” male	G1" female	G2" male	G2" female
10-32UNF female or male	+	+++														
1/8” NPSF female			+++													
1/8” NPT female or male			—	+												
1/4” NPSF female					+											
1/4” NPT female or male					—	—										
3/8” NPSF female							—									
3/8" NPT female or male							—	—								
1/2” NPSF female									+							
1/2” NPT female or male									—	+++						
3/4” NPSF female											+					
3/4” NPT female or male											—	+++				
1” NPT female or male													—	—		
2” NPT female or male															—	—

+++ Fits *+ Fits with short thread* *— Does not fit*

INTERNATIONAL STANDARDS

3-A

- The objective of the 3-A Sanitary Standards is to formulate standards and accepted practices for equipment and systems used to produce, process and package milk, milk products and other perishable foods or comestible products. These standards are developed through the cooperative efforts of local, state and federal sanitarians, equipment manufacturers and equipment users. The ultimate goal is to protect dairy and food products from contamination and to ensure that all product contact surfaces can be mechanically cleaned (CIP) or easily dismantled for manual cleaning, and when necessary, dismantled for inspection.
- 3-A Sanitary Standards are developed to detail the sanitary requirements for a specific type of equipment. Specifications include material selection (FDA compliance), design and fabrication for that type of equipment.
- 3-A Accepted Practices are guidelines for entire systems and include the same sanitary criteria as 3-A Sanitary Standards, in addition to installation criteria where appropriate.
- When a vacuum conveyor is classified as a hygienic device by 3-A, a certificate is obtained to the effect that the “3-A” symbol may be placed on the device. This symbol shows that the device is designed for consumer products that demand a very high degree of hygiene. This certificate is updated annually.



Initially issued October 20, 2000
U.S. Representative:
PIAB USA
55 Accord Park Drive
Rockland, MA 02370

Authorization No. 1100

This Is To Certify That

PIAB AB
Box 4501 S-183 04, Täby, SWEDEN

is hereby authorized to continue to apply the 3-A symbol to the models of equipment, conforming to the 3-A Sanitary Standards for Pneumatic Conveyors for Dry Milk and Dry Milk Products (39-00)

set forth below:

Model Designations C-33 Pneumatic Vacuum Conveyor: C33025-200, -400. C33045-200, -400, -600. C33065-600, -800, -1200.

for the twelve months ending October 31, 2001

Date of issuance: October 20, 2000

Earl O Wright, Secretary,
3-A SANITARY STANDARDS SYMBOL ADMINISTRATIVE COUNCIL

The issuance of this authorization for the use of the 3-A symbol is based upon the voluntary certification, by the applicant for it, that the equipment listed above complies fully with the 3-A Sanitary Standards designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and the 3-A Sanitary Standards Symbol Administrative Council does not warrant that the holder of an authorization at all times complies with the provisions of the said 3-A Sanitary Standards. This in no way affects the responsibility of the 3-A Sanitary Standards Symbol Administrative Council to take appropriate action in cases in which evidence of non-compliance has been established.

USDA

- United States Department of Agriculture is an authority that, among other things, reviews and approves equipment intended for processing dairy products such as dry milk and dry milk products. The USDA section intended for reviewing equipment for dairy products is called USDA Dairy Grading Branch.
- All included materials in a product that is examined and recognized by USDA are also recognized by the organization FDA – Food and Drug Administration. USDA and FDA work in close cooperation. USDA and 3-A also work in close cooperation.
- A vacuum conveyor accepted by USDA Dairy Grading Branch complies with the strictest safety requirements for health in regard to conveying of dairy, food and other farm products.
- PIAB manufactures and markets a series of vacuum conveyors that have been examined and recognized by USDA.

UNITED STATES DEPARTMENT OF AGRICULTURE
MARKETING AND REGULATORY PROGRAMS
AGRICULTURAL MARKETING SERVICE
DAIRY GRADING BRANCH

EQUIPMENT ACCEPTANCE CERTIFICATE

PIAB AB
P.O. Box 4501
SE-183 04 Täby
Sweden

The following equipment is acceptable for use in dairy plants surveyed and approved for USDA grading service.

Vacuum Pump and Receiver

Model Designation: C33025-200, -400
C33045-200, -400, -600
C33065-600, -800, -1200

Filter Elements, Part Numbers 01.04.016, 01.04.017, 01.04.018.

May 24, 2000
Date of Issuance

U.S. Department of Agriculture
Marketing and Regulatory Programs
Agricultural Marketing Service
Dairy Grading Branch
P.O. Box 96456
Washington, DC 20090-6456

The issuance of this form is based on U.S. Department of Agriculture, Dairy Grading Branch, evaluation of the equipment listed above for compliance with the USDA GUIDELINES FOR THE SANITARY DESIGN AND FABRICATION OF DAIRY PROCESSING EQUIPMENT or applicable 3-A SANITARY STANDARDS. This form does not limit USDA's responsibility to take appropriate action in cases in which evidence of non-compliance has been established.

USDA

United States Department of Agriculture

USDA

EHEDG

- The European Hygiene Engineering Design Group.
- In the European directives it is stated that all handling of food products, packaging, processing, etc., shall be carried out with hygiene as a priority.
- EHEDG, with the help of the European Commission, introduces guidelines that specify how the handling of food products shall be carried out. (It is the same in the USA where USDA and FDA help 3-A to introduce sanitary standards.)
- For many years EHEDG has worked closely with 3-A, which in turn works in close cooperation with USDA. To manufacture devices according to these requirements is GMP – Good Manufacturing Practice and GAP – Good Agricultural Practice.

FDA

- Food and Drug Administration releases ”CFR = Code of Federal Regulations” which is a set of regulations describing material of equipment that can be used in contact with pharmaceutical, dairy, food and farm products.
- PIAB’s USDA series of vacuum conveyors contain nothing but materials that agree with the guidelines of FDA.
- FDA works in close cooperation with both USDA and 3-A.

CIP

- Clean In Place is a method by which tanks and piping in processing plants are automatically washed by re-circulating detergent and rinse solutions. CIP means cleaning of the device without moving or disassembling it.
- The system provides reservoirs for detergent and rinse solutions as well as pumping and heating capabilities for the solutions. Computer control handles the program sequences of the washing and rinsing steps.
- The process is used to ensure that production lines, vessels and reactors are free of inorganic and organic contaminants.
- PIAB’s vacuum conveyors must be manually disassembled before cleaning, and therefore they cannot be used in processes that require fully automatic CIP procedures.

GMP

- Good Manufacturing Practice is a guideline implemented to assure quality, effectiveness and safety of pharmaceutical products. It concerns the matter of “building in” quality rather than testing the quality.
- GMP is designed to minimise the risks involved in any pharmaceutical production that cannot be eliminated through testing the final product.
- GMP covers all aspects of production from the initial materials, premises, equipment, training and personal hygiene of staff.
- PIAB’s USDA series of vacuum conveyors are designed for use in production environments suitable for manufacture of pharmaceuticals.

IAFP

The International Association for Food Protection (formerly IAMFES) issues the 3-A Sanitary Standards and 3-A Accepted Practises that are standards for equipment used mainly in the dairy industry.

CE MARKING OF MACHINES

- Definition of machine:
  - At least one part with a driving function
    - PIAB vacuum pump.
  - At least one moving part – bottom valve.
  - A unit that controls the machine
    - PIAB control unit.
- CE marking originates from a European set of regulations to make sure that machines comply with essential health and safety requirements.
- PIAB’s vacuum conveyors are CE marked in accordance with European Machine Directive 98/37 EC.

ENCLOSURE CLASSIFICATIONS FOR ELECTRIC EQUIPMENT

Enclosure classifications for electric equipment according to Swedish standard SS IEC 529. The symbols have the form of IPxy.

- The first digit **(x)** denotes the degree of protection that the enclosure gives to human beings as well as to what is present inside.
- The second digit **(y)** denotes the degree of protection that the enclosure gives against damages due to penetrating water.

PROTECTION AGAINST SOLID FOREIGN OBJECTS (X)

0	No protection	
1	Protected against solid foreign objects of 50 mm diameter and greater	Body part, e.g., hand, but no protection against deliberate penetration. Solid foreign objects of 50 mm diameter and greater.
2	Protected against solid foreign objects of 12 mm diameter and greater	Fingers, etc., that are no longer than 80 mm. Solid foreign objects of 12 mm diameter and greater.
3	Protected against solid foreign objects of 2.5 mm diameter and greater	Tools, wires, etc., of a diameter or thickness that exceeds 2.5 mm. Solid foreign objects of 2.5 mm diameter and greater.
4	Protected against solid foreign objects of 1.0 mm diameter and greater	Wires or strips of a diameter or thickness that exceeds 1.0 mm. Solid foreign objects of 1.0 mm diameter and greater.
5	Protection against dust	Dust shall not penetrate in a quantity to interfere with satisfactory operation.
6	Dust tight	Dust cannot penetrate.

PROTECTION AGAINST PENETRATION OF WATER (Y)

0	No protection	
1	Protection against vertically falling water drops	Vertically falling water drops shall have no harmful effects.
2	Protection against vertically falling water drops when enclosure is tilted up to 15 degrees	Vertically falling water drops shall have no harmful effects when the enclosure is tilted at any angle up to 15 degrees on either side of the vertical axis.
3	Protection against spraying water	Water sprayed at an angle up to 60 degrees on either side of the vertical axis shall have no harmful effects.
4	Protection against splashing water	Water splashed from any direction against the enclosure shall have no harmful effects.
5	Protection against water jets	Water projected in water jets from any direction against the enclosure shall have no harmful effects.
6	Protection against powerful water jets	Water projected in powerful water jets from any direction against the enclosure shall have no harmful effects.
7	Protection against the effects of temporary immersion in water	Ingress of water in quantities causing harmful effects shall not be possible under standardized pressure and time.
8	Protection against the effects of continuous immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions that are to be declared by the manufacturer.

APPLICATION FORM FOR VACUUM CONVEYORS NO:

Distributor:		
Customer:	Contact:	
Address:		
Country:	Tel:	Fax:
Material information		
Material:	Chemical formula:	
Density: kg/dm^3	Bulk density: kg/dm^3	
Particle size: Max mm Min µm	Majority between: µm	
Is the material abrasive?	Other special characteristics:	
Angle of repose:	Fluidisation:	
Flowability: p free flowing p bridging p other information:		
The material is: p static p explosive p inflammable p toxic p aggressive in regard to:		
Installation		
Capacity: ton/h ton/24 h ton/shift shift = h		
Conveying distance: m tot.	Horizontally: m	Vertically: m
Number of bends: pcs	Temperature of material: °C	Ambient temperature: °C
Operating time: h/day	The material will be picked up from: p bag p barrel p silo p hopper	
Other solution:	Receiver:	
The installation is: p indoors p outdoors p both indoors and outdoors		
The operation is: p manual p automatic p semi-automatic		
Other information:		

SYSTEM SKETCH:

Conveyors C

Vacuum is used with great advantage in order to convey dry powder products through dedicated pipe systems. PIAB's vacuum conveying systems are built of strong components of high quality. Our objective is to offer solutions that help our customers raise their productivity. Production of food, pharmaceuticals and chemical products demands the highest possible degree of safety as to hygiene and operation. PIAB's new series of vacuum conveyors has been developed as an answer to the severe requirements of operational safety and hygiene in the food, pharmaceutical and chemical industries.

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CONVEYORS C

Complete 48
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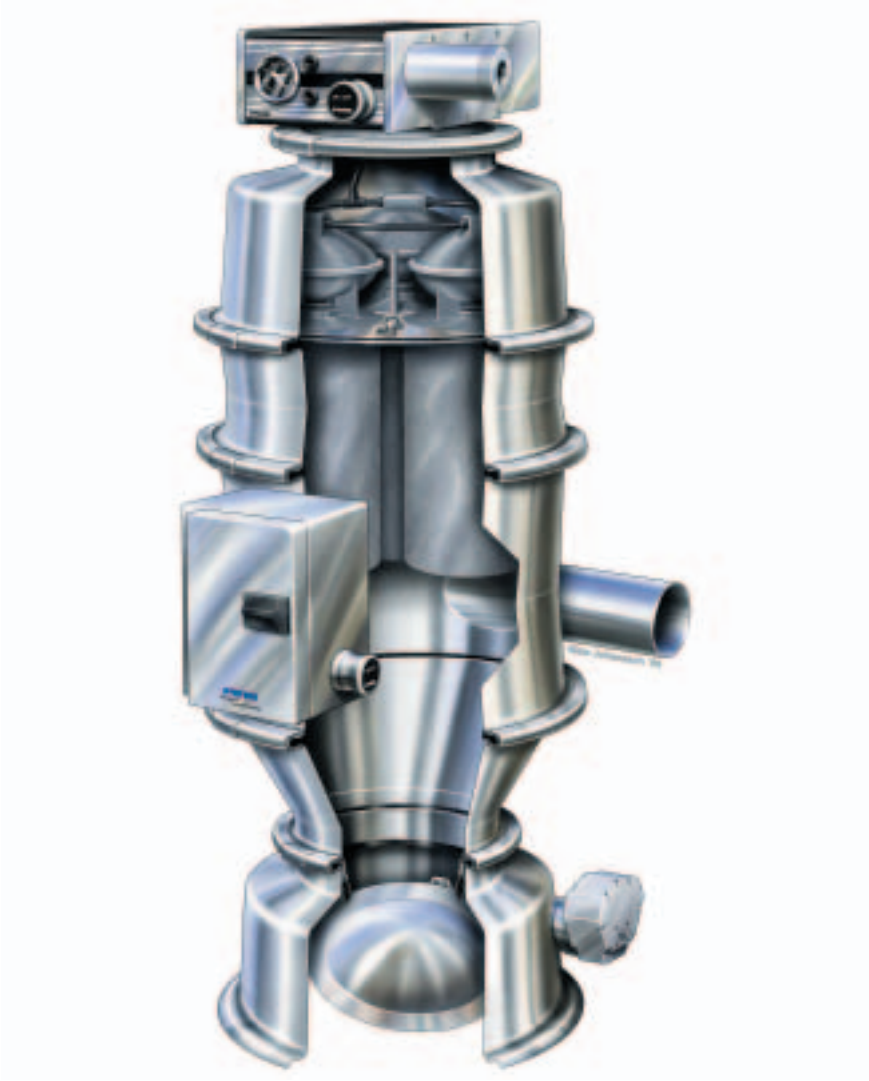
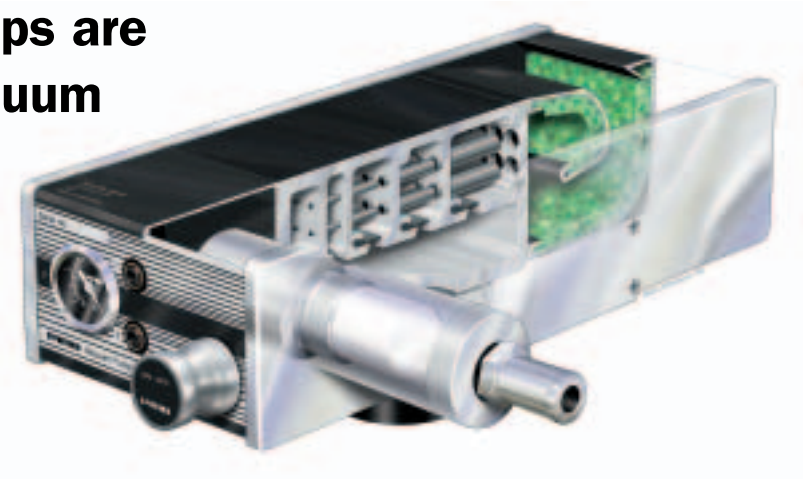
Vacuum conveying – an ingenious way of moving powders and granules.



PIAB's vacuum pumps are the heart of the vacuum conveying system.



PIAB CONVEYORS C, MODELS C21, C33 AND C56

TAKE A LEAP AHEAD OF THE CROWD!

Vacuum can be used at great advantage to convey dry powder products in exclusively designed pipe systems. Production of foodstuff, pharmaceutical and chemical products demands the highest possible safety in terms of hygiene and operation. PIAB's new series of vacuum conveyors have been developed to meet the strict demands of operational safety and hygiene in the food, pharmaceutical and chemical industries. USDA – United States Department of Agriculture, has examined some of our models and therefore these conveyors meet the requirements of the guidelines for handling of dairy products. Through this, the conveyors also conform to the hygienic standards implemented by organizations such as 3-A Sanitary Standards and EHEDG – European Hygiene Engineering Design Group. For further information on the above-mentioned organizations, please see the special chapter further back in the catalogue.

USDA spans the distance from the farm to your table!

INCREASE YOUR PRODUCTIVITY

- Optimized design for highest possible hygiene.
- Few moving parts to ensure a minimum of maintenance.
- Easy to disassemble/assemble and clean.
- Modular design for easy adaptation to your unique production environment.
- USDA – Hygienic safety.
- FDA – Material used is in accordance with the requirements of FDA.
- 3-A – Hygienic safety.
- EHEDG – Hygienic safety.
- GMP – Hygienic safety.
- PIAB's vacuum pumps for high operational safety and low energy consumption.
- Designed for the food and pharmaceutical industries.
- Steel quality ASTM 316L – Market requirement.

ADVANTAGES WITH PIAB CONVEYORS C

PERFECT FOR POWDERS AND GRANULES

Industries that produce foodstuff, pharmaceuticals and chemical products have discovered the advantages of vacuum conveying. PIAB, which has developed vacuum conveying systems for 30 years, is the leader of the industry. We provide the solutions to your conveying problems!

In manual handling the operators are subjected to heavy lifts and dusty premises.

FRIENDLY – BOTH TO YOUR HEALTH AS WELL AS TO THE ENVIRONMENT

Different powders require different vacuum levels in order to be conveyed. With PIAB conveyors C you just set the energy consumption exactly according to the prevailing conditions.

FROM 0 TO 20 METRES IN ONE SECOND

Time is money. The vacuum technology offers you powder conveying at express speed. Up to 30-metre long systems, the sum of vertical and horizontal conveying.

15 TONS PER HOUR

15 tons per hour have been measured at short distance tests with a PIAB conveyor C under favourable conditions.

In a vacuum conveying system, the conveying is fully sealed off from the surrounding environment, which means a working environment without heavy lifting, dust or other contaminations.

EASY TO INSTALL ANY PLACE

Our systems can be easily adapted to your production environment thanks to few components, small dimensions and low weight. The modular system facilitates the installation. The basic unit is delivered on a turn-key basis. You just have to connect compressed air!

DURABLE MATERIAL

The conveyors C are made of stainless, highly polished steel (ASTM 316L). The material is acid-proof and has very strong characteristics. We offer a full 5-year guarantee (filter and wear parts excluded.)

RELIABLE AND EASY TO MAINTAIN

Our systems require a minimum of maintenance. They are easy to clean, and filter cleaning is automatic. Operation and control are fully pneumatic in standard design.

OPERATIONAL SAFETY

The design of the conveyor and PIAB's vacuum pumps offers the highest possible operational safety.

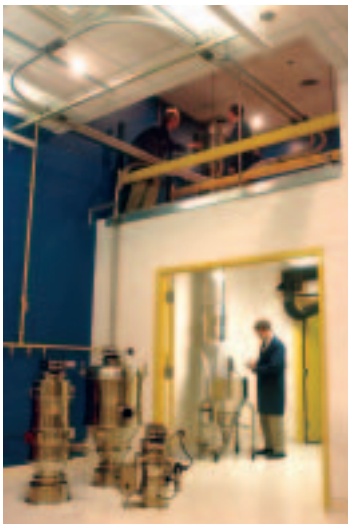
HYGIENE

The conveyors C are, first and foremost, adapted to the food and pharmaceutical industries.

WE TEST YOUR POWDERS

In our test facility different conveying distances and materials are tested in order to simulate your requirements and applications. The test results are available at your PIAB distributor. You can rest assured to get the optimum dimensioning of your installation, as well as the proper accessories and control system. PIAB is always nearby as PIAB is located all over the world with test center facilities in Asia, North America and in Europe.

Test facility at PIAB AB, Sweden.



Test facility at PIAB USA, Inc. USA.

Test facility at PIAB Japan Ltd, Japan.

Test facility at PIAB Vakuum AG, Switzerland.

EXAMPLE OF MATERIALS THAT HAVE BEEN TESTED BY PIAB

We can convey all sorts of products; fine powder, granules, dry, wet, sticky, dusty etc. Below is a short list showing examples of materials which have been tested in our test facilities.

Ask your nearest ditributor for questions about your material. To find your local distributor, please visit www.piab.com or see the back cover of this catalogue.

Consumer/food	Pharma/chemical	Others
Cereal	Capsule	Aluminium oxide
Cheese powder	Carbon, activated	Bronze (granules, powder)
Cocoa (powder, beans)	Clay powder	Calcium cloride
Coffee (ground and beans)	Cobalt	Glue tablets
Detergent	Corn flour	Gun powder
Egg yolk powder	Gelatine powder	Limestone
Milk powder	Glass blast powder	Pet food (pellets)
Rice, puffed	Plastic granules	Sand
Sugar (granulated, icing)	PVC powder	Saw dust
Tea	Silica gel	Silicium carbide
Wheat flour	Tablets	Talcum
Yeast	Titanium	Wood fluor

SELECTING A CONVEYOR

EXAMPLE OF CONVEYORS

Model	Pm figures
C2100-64	1-2
C2101-100	3-5
C2102-100	3-5
C2104-200	5-10
C2102S-100	3-5
C2104S-200	5-10
C3302-400	10-20
C3304-400	10-20
C3304-600	20-30
C3306-600	20-30
C3306-800	30-40
C3302S-400	10-20
C3304S-400	10-20
C3304S-600	20-30
C3306S-600	20-30
C3306S-800	30-40
C5602-800	30-40
C5604-800	30-40
C5604-1200	40-60
C5606-1200	40-60
C5606-1600	60-80

PM FIGURE, CONVEYING DISTANCE AND CAPACITY

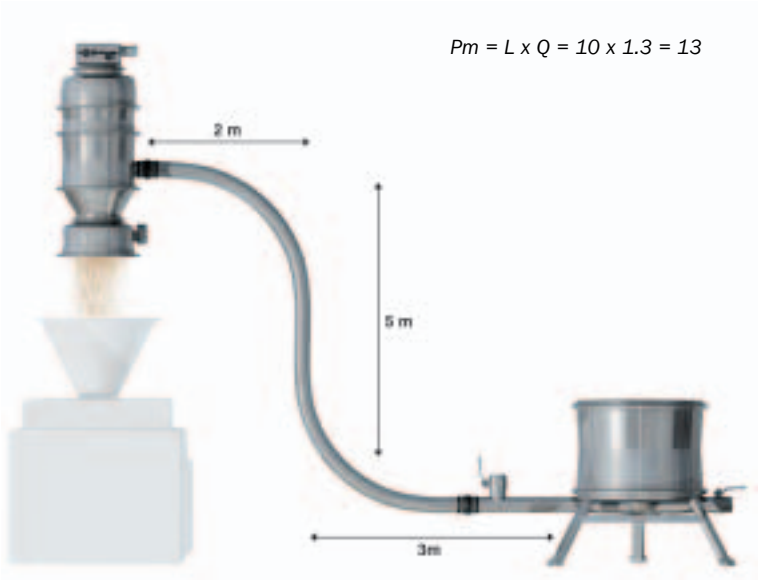
Power requirement *(Pm)* is the product of the total conveying distance *(L)* in metres and the capacity *(Q)* in tons/hour. *L* = the sum of the horizontal *(L_h)* and the vertical conveying distance *(L_v)*.

Pm = L x Q

This applies when L is 4–30 metres, at bulk densities *(B)* = 0.5–1.8 ton/m^3, as well as when the particle size is < 5 mm.

When the Pm figure has been calculated, one compares the recommended Pm value in the table.

EXAMPLE OF HOW TO SELECT A STANDARD CONVEYOR



PIPE DIMENSIONING

These recommendations apply at conveying distances 4 < L < 30 metres. At conveying distances > 30 metres, please contact PIAB.

In the case of heavier powders with a bulk density (B) > 1 ton/m³ smaller pipe dimensions should be chosen, and for lighter powders < 1 ton/m³ bigger pipe dimensions should be chosen.

NOTE! The bends should be as few as possible and should have a radius of at least 10 pipe diameters = 10x50 = 500 mm to make the conveying of powder run smoothly.

Model	B > 1 ton/m³	B < 1 ton/m³
C2100-64	25	25
C2101-100	32	40
C2102-200	32	40
C2104-200	32.40	51
C3302-400	40	51
C3304-400	40	51
C3304-600	51	76
C3306-600	51	76
C3306-800	51	76
C5602-800	51	76
C5604-800	51	76
C5604-1200	51.76	102
C5606-1200	51.76	102
C5606-1600	76	102

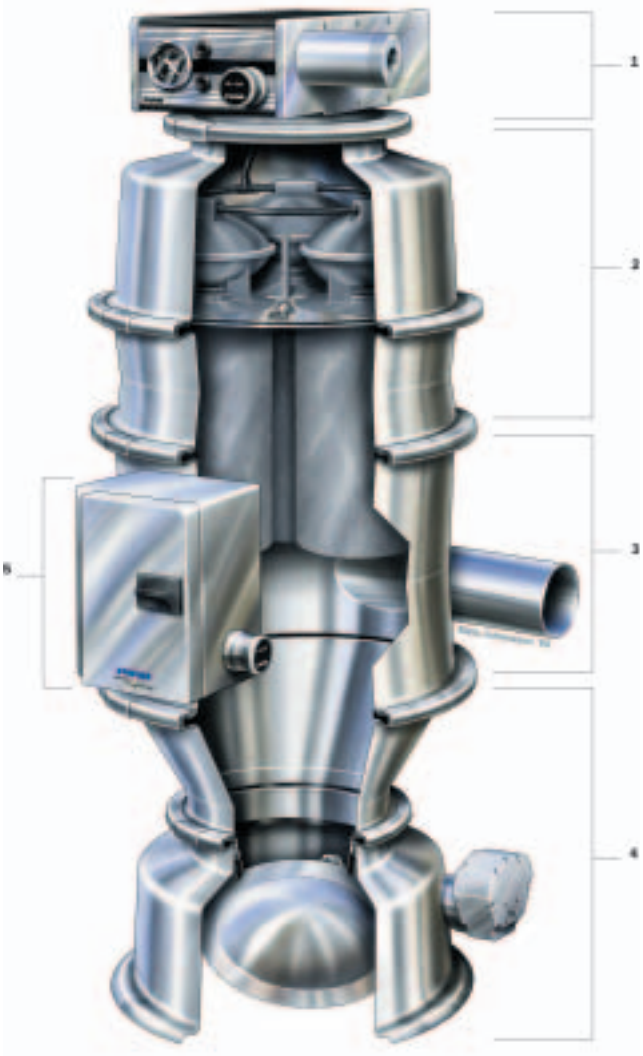
THE CONVEYOR BUILD-UP

PIAB's conveyor C is built of different functional units, 1–5, where each unit offers a number of different choices such as filter material, gasket material, type of connection, control possibilities, etc. These choices are decisive as to how sophisticated the final function of the conveyor will be. Your PIAB distributor will be glad to help you when making your choice. PIAB's conveyors C are available in three different sizes, C21, C33 and C56.

UNITS

Figures **1–5** below show the functional units that can be chosen.

1. Pump unit
2. Filter unit
3. Connection unit
4. Bottom valve unit
5. Control unit



HOW TO ORDER

When building a vacuum conveyor, it is necessary to notice the following:
- Performance of the conveyor C.
- Special demands such as USDA, ATEX or FDA requirements.
- Take into consideration the material of sealings, fluid cones and type of filter.

Properties of different materials used in PIAB vacuum conveyor sealings				
	Synthetic rubber			
Term	Nitrile rubber	Silicone rubber	Fluorine rubber	**Definition of numbers**
Notification	The Nitrile rubber is designated .../1 in the PN	The Silicone rubber is designated .../2 in the PN	The Fluorin rubber is ordered separately	
Abbrevation	NBR	Q	FPM	**1** = Not recommended
Trade name (common)	Perbunan Krynac	Elastosil Silopren	Viton Fluorel	**2** = Moderate to severe effect. The material may be used to a certain extent in conjunction with the indicated behavior of chemicals if the contact period is short. Permanent contact will, however, destroy the material. The indicated materials have consequently a limited field of operation.
				3 = Little to minor effect. The material will probably give satisfactory results but will sooner or later be destroyed by the indicated behavior of chemicals.
Characteristics				**4** = Recommended. The material is unlikely to be destroyed by the indicated behavior of chemicals.
Colour	Black	White	Green	
Upper temperature limit	+125 °C	+175 °C	+200 °C	
Lower temperature limit	–20 °C	–30 °C	–15 °C	
FDA	Yes	Yes	No	
Antistatic	Yes	No	No	
Resistance to				**Comment**
Wear	3	1	2	For more specific information about a typical material, please contact PIAB AB.
Weather and ozone	1	4	4	
Ageing due to heat	3	4	4	
Hydrocarbon	4	2	4	
Hydrolysis	4	3	4	
Acids	2	1	3	
Basicity	3	2	2	

The capacity requirements decide **the pump**. The pump unit is the driving force of the conveyor and is available in different sizes.

Pm figure	Pump unit	Art. No.
1-2	Pump PS6610	0117443
3-5	Pump unit Maxi L100	0106812
5-10	Pump unit Maxi L200	0103878
10-20	Pump unit Maxi L400	0103879
20-30	Pump unit Maxi L600	0103880
30-40	Pump unit Maxi L800	0103881
40-60	Pump unit Maxi L1200	0103882
60-80	Pump unit Maxi L1600	0103883

- **The material characteristics**; the characteristics of the product, such as particle size, bulk density, possible tendency to be adhesive, abrasive, etc., are, together with the pump unit, the critical point when choosing a **filter unit.**

	Selection of FILTER UNIT corresponding to selected PUMP UNIT and powder PARTICLE SIZE.								
	G = powder with particle size >25 µm (granules) **P** = powder with particle size >10 µm **FP** = powder with particle size >5 µm **UFP** = powder with particle size >0.5 µm **H** = USDA accepted unit	Pump PS6610	Pump unit Maxi L100	Pump unit Maxi L200	Pump unit Maxi L400	Pump unit Maxi L600	Pump unit Maxi L800	Pump unit Maxi L1200	Pump unit Maxi L1600
Filter units C21	Filter unit 2100 Gore Sinbran	**P**							
	Filter unit 2101 Textile		**G**						
	Filter unit 2102 Textile		**P**	**G**					
	Filter unit 2104 Textile		**FP**	**P**	**G**				
	Filter unit 2101 Gore Sinbran		**P**	**G**					
	Filter unit 2102 Gore Sinbran		**FP**	**P**	**G**				
	Filter unit 2104 Gore Sinbran		**UFP**	**FP**	**P**				
	Filter unit 2102 Gore Sinbran, Ext.		**FP** **H**	**P** **H**	**G** **H**				
	Filter unit 2104 Gore Sinbran Ext.		**UFP** **H**	**FP** **H**	**P** **H**				
Filter units C33	Filter unit 3302 Textile			**P**	**G**				
	Filter unit 3304 Textile			**P**	**P**	**G**			
	Filter unit 3306 Textile			**FP**	**FP**	**P**	**G**		
	Filter unit 3302 Gore Sinbran			**FP**	**P**	**G**			
	Filter unit 3304 Gore Sinbran			**UFP**	**FP**	**P**	**G**		
	Filter unit 3306 Gore Sinbran				**UFP**	**FP**	**P**	**G**	
	Filter unit 3302 Gore Sinbran Ext.			**FP** **H**	**P** **H**	**G** **H**			
	Filter unit 3304 Gore Sinbran Ext.			**UFP** **H**	**FP** **H**	**P** **H**	**G** **H**		
	Filter unit 3306 Gore Sinbran Ext.				**UFP** **H**	**FP** **H**	**P** **H**	**G** **H**	
Filter units C56	Filter unit 5602 Textile				**P**	**G**			
	Filter unit 5602 Textile				**P**	**G**			
	Filter unit 5602 Gore Sinbran				**FP**	**P**	**G**		
	Filter unit 5602 Gore Sinbran				**FP**	**P**	**G**		
	Filter unit 5604 Textile				**FP**	**P**	**G**	**G**	
	Filter unit 5606 Textile				**FP**	**FP**	**P**	**P**	**G**
	Filter unit 5604 Gore Sinbran				**UFP**	**FP**	**P**	**P**	**G**
	Filter unit 5606 Gore Sinbran				**UFP**	**FP**	**FP**	**UFP**	**P**

- **The application** and the pipe system decide the **connection unit**.
  There are two different connection units to choose from: with or without 3-A flange on the connection pipe.

- **The material features** and application requirements are the critical point when choosing a **bottom valve unit.**
  The bottom valve unit can be delivered with various options:
  With or without fluidisation and the actuator that controls the bottom valve is available in different materials.
  Different gasket materials are chosen according to the application.

- **The complete vacuum conveying system** decides the type of **control unit**.
  The control unit is connected to the pump and the bottom flap to control these two. In the control box one starts and stops the vacuum conveyor, as well as sets the intervals that the conveyor is to convey and empty itself of powder.

C2100-64

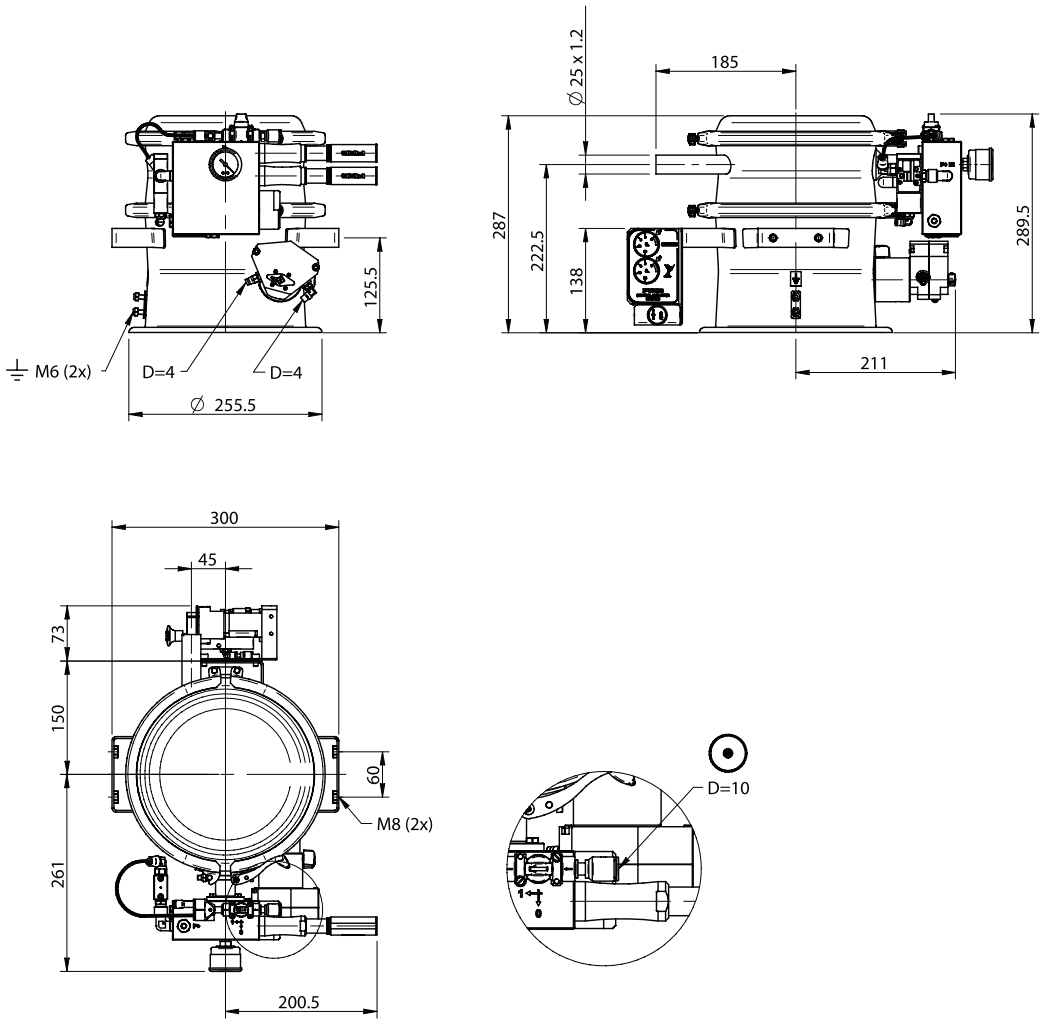
- Low building height.
- COAX® patented technology.
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Fulfils the requirements of FDA.
- Manual dismounting and cleaning.
- Gore Sinbran filter with PTFE membrane.
- Fully pneumatic.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	2.5–3.5
Vacuum range	-kPa	61–75
Noise level range	dBA	70–73
Material		ASTM 316L, Q, SS
Temperature range	°C	0–60
Weight	kg	9.6
Filter area	m^2	0.027
Material batch volume	l	1.5
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances	
5 m	10 m
0.35–0.50	0.20–0.25



PARTS INCLUDED

Description	Art. No.
Vacuum pump PS6610 Si32-3x2	0117443
Filter unit 2100 Gore Sinbran, Q	0117442
Bottom valve unit/module 21/16, brackets, stainless steel, Q	0117449
Control unit PPT/RS	0111636
Nylon tubing kit PPT/RS-C2100-64	0117509

C2101-100

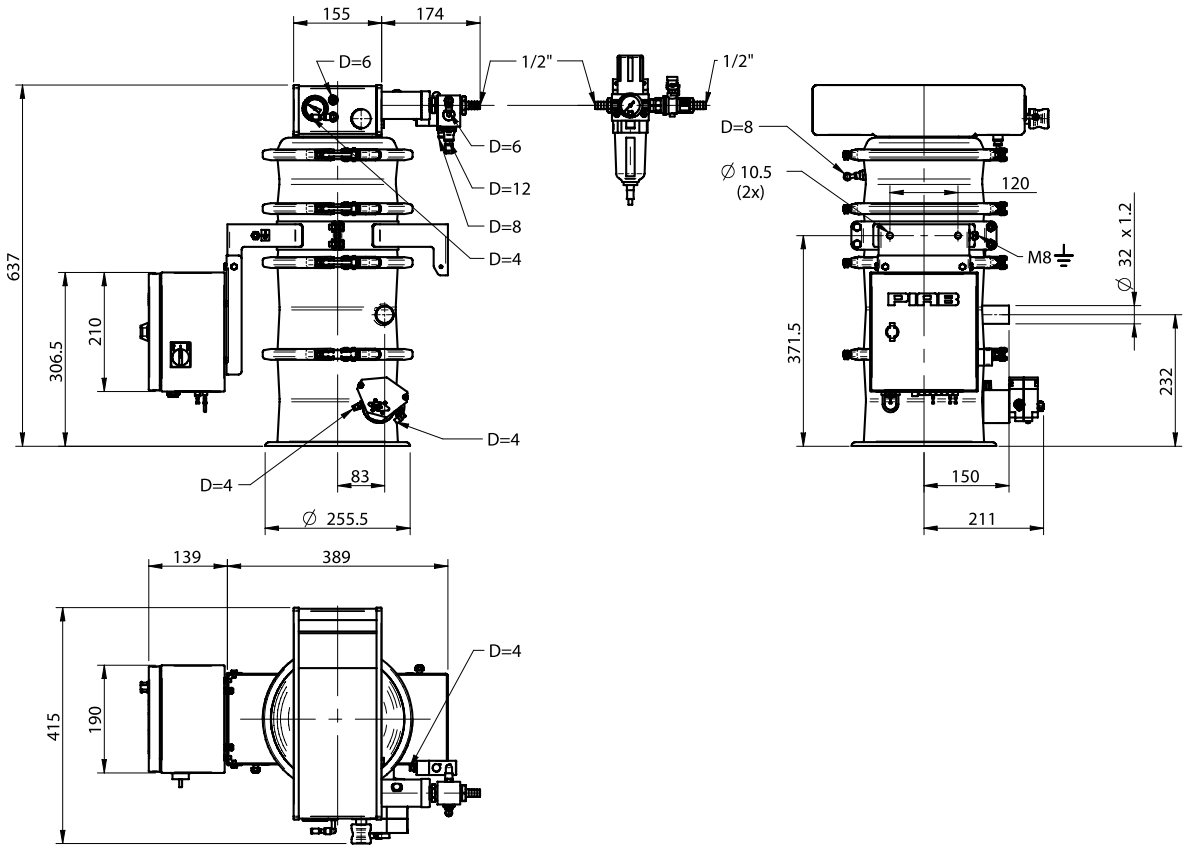
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	5–7
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, PPS, Q
Temperature range	°C	0–60
Weight	kg	13.9
Safety classification		IP54
Filter area	m^2	0.06
Material batch volume	l	3.8
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
0.90	0.45	0.20	–



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L100	0106812
Filter unit 2101 textile filter int, Q	0106057/2
Connection unit 21/16 D=32 tang Q	0104498/2
Bottom valve unit 21/16 SS Q	0106787/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C21	0106978

C2102-100

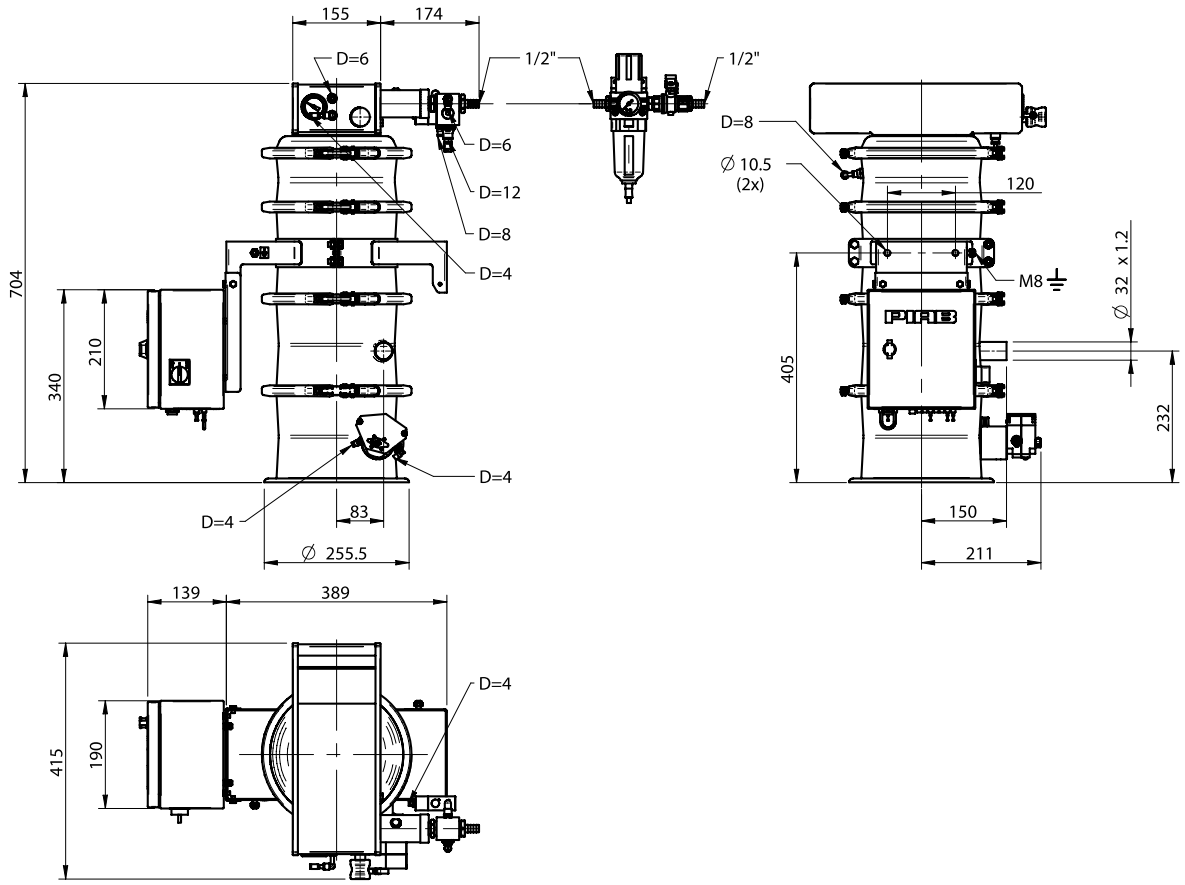
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	5–7
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, PPS, Q
Temperature range	°C	0–60
Weight	kg	22.00
Safety classification		IP54
Filter area	m^2	0.09
Material batch volume	l	3.8
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
0.90	0.45	0.20	–



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L100	0106812
Filter unit 2102 textile filter int, Q	0106054/2
Connection unit 21/16 D=tang Q	0104798/2
Bottom valve unit 21/16 SS, fluid, Q	0106591/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C21	0106978

C2104-200

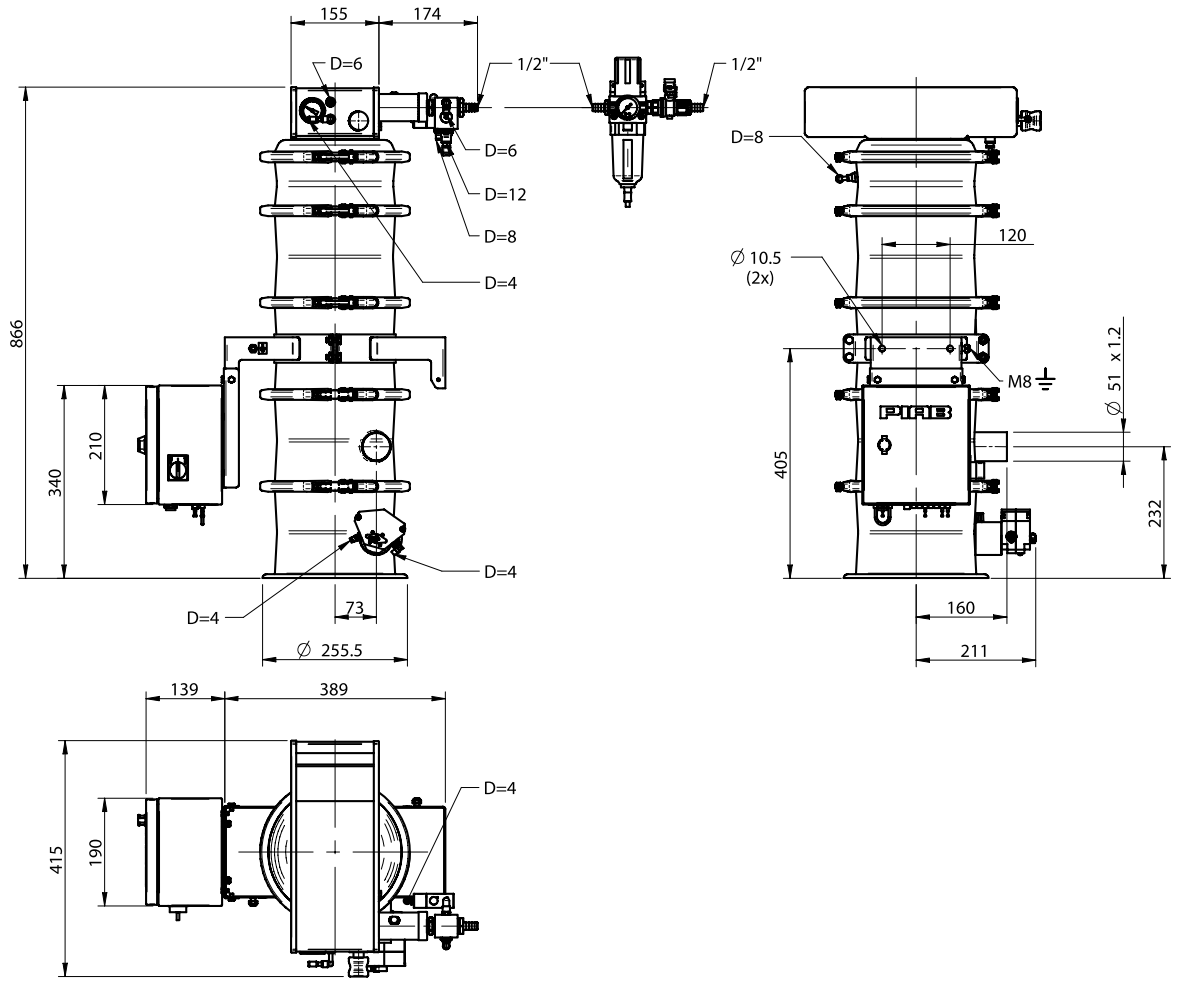
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	10–14
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	24.0
Safety classification		IP54
Filter area	m^2	0.14
Material batch volume	l	3.8
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
1.80	0.90	0.50	0.30



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L200	0103878
Filter unit 2104 textile filter int, Q	0106058/2
Connection unit 21/16 D=51 tang Q	0104514/2
Bottom valve unit 21/16 SS Q	0106787/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C21	0106978

C2102S-100

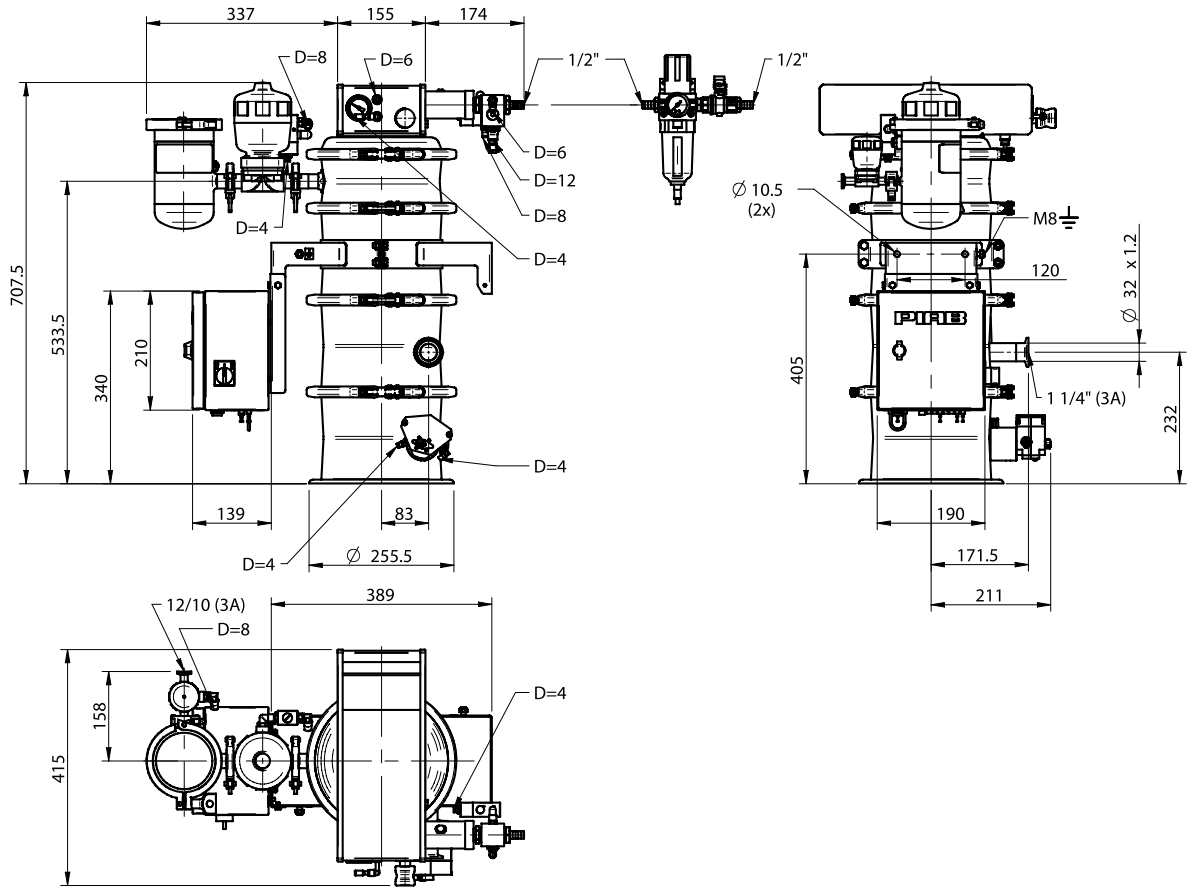
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	5–7
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	29.0
Safety classification		IP54
Filter area	m^2	0.11
Material batch volume	l	3.8
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
0.90	0.45	0.20	–



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L100	0106812
Filter unit 2102 Gore Sinbran ext, Q	0106190/2
Connection unit 21/16 D=32 tang 3-A, Q	0106113/2
Bottom valve unit 21/16 SS Q	0106787/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C21	0106978

C2104S-200

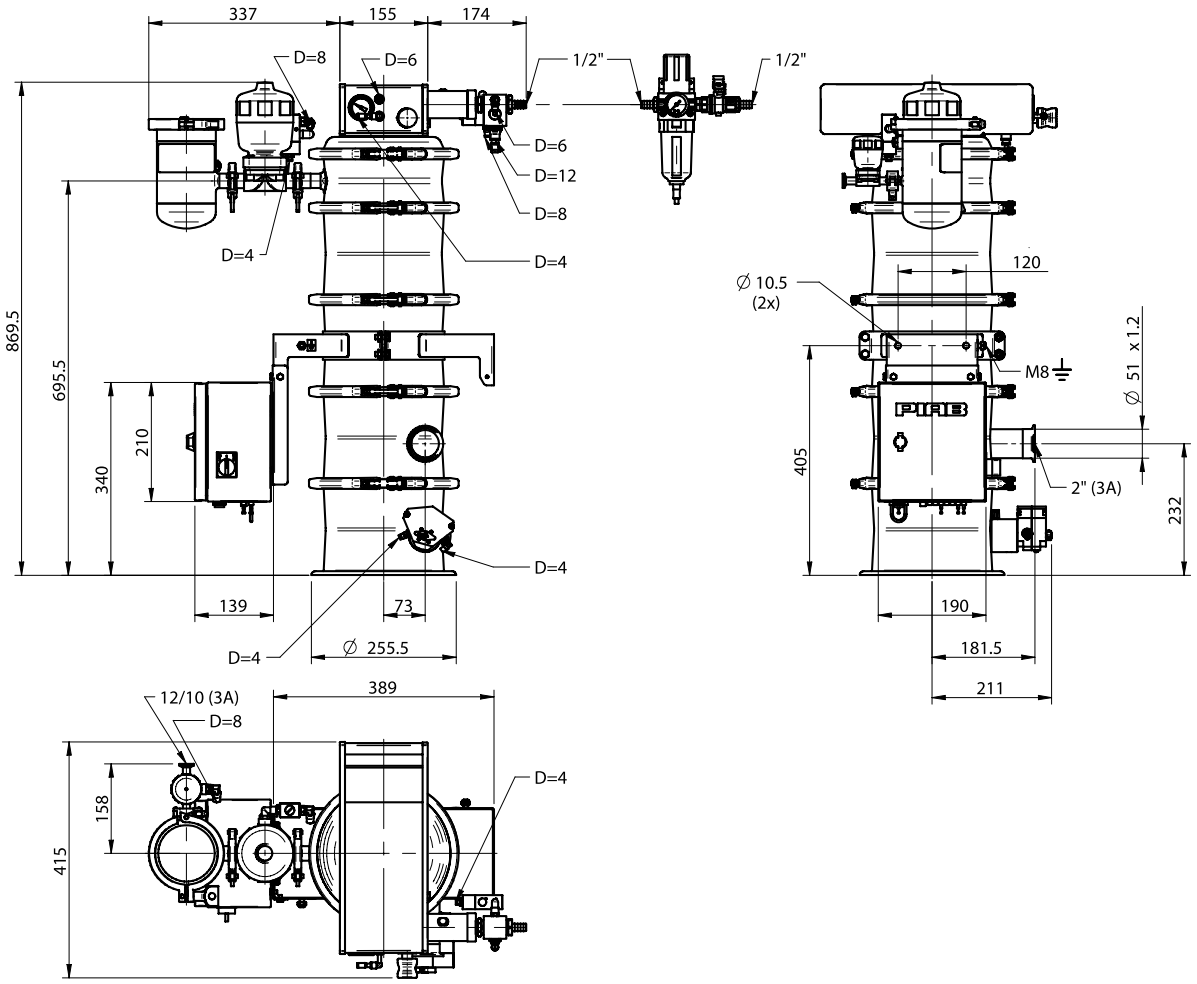
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	10–14
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	29.0
Safety classification		IP54
Filter area	m^2	0.19
Material batch volume	l	3.8
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
1.80	0.90	0.50	0.30



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L200	0103878
Filter unit 2104 Gore Sinbran ext, Q	0106198/2
Connection unit 21/16 D=51 tang Q	0104514/2
Bottom valve unit 21/16 SS Q	0106787/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C21	0106978

C3302-400

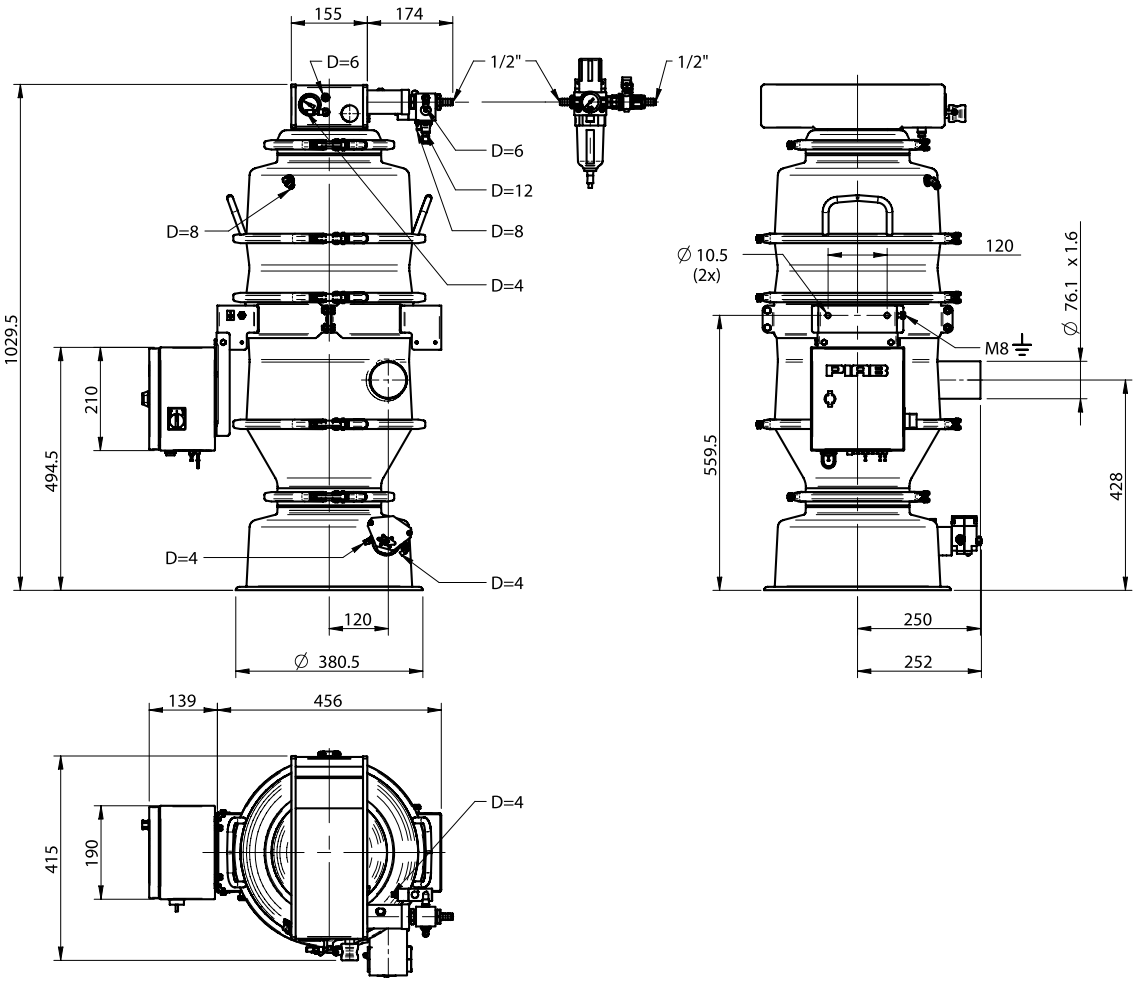
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressurer range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	36.0
Safety classification		IP54
Filter area	m^2	0.26
Material batch volume	l	14.0
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
3.60	1.80	1.00	0.60



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L400	0103879
Filter unit 3302 Pitex int Q	0103887/2
Connection unit 33/26 D=76 tang Q	0103884/2
Bottom valve unit 33/34 SS Q	0103907/2
Control unit CU-1B bracket	0103919
Tubing kit, nylon, standard CU-C33	0103929

C3304-400

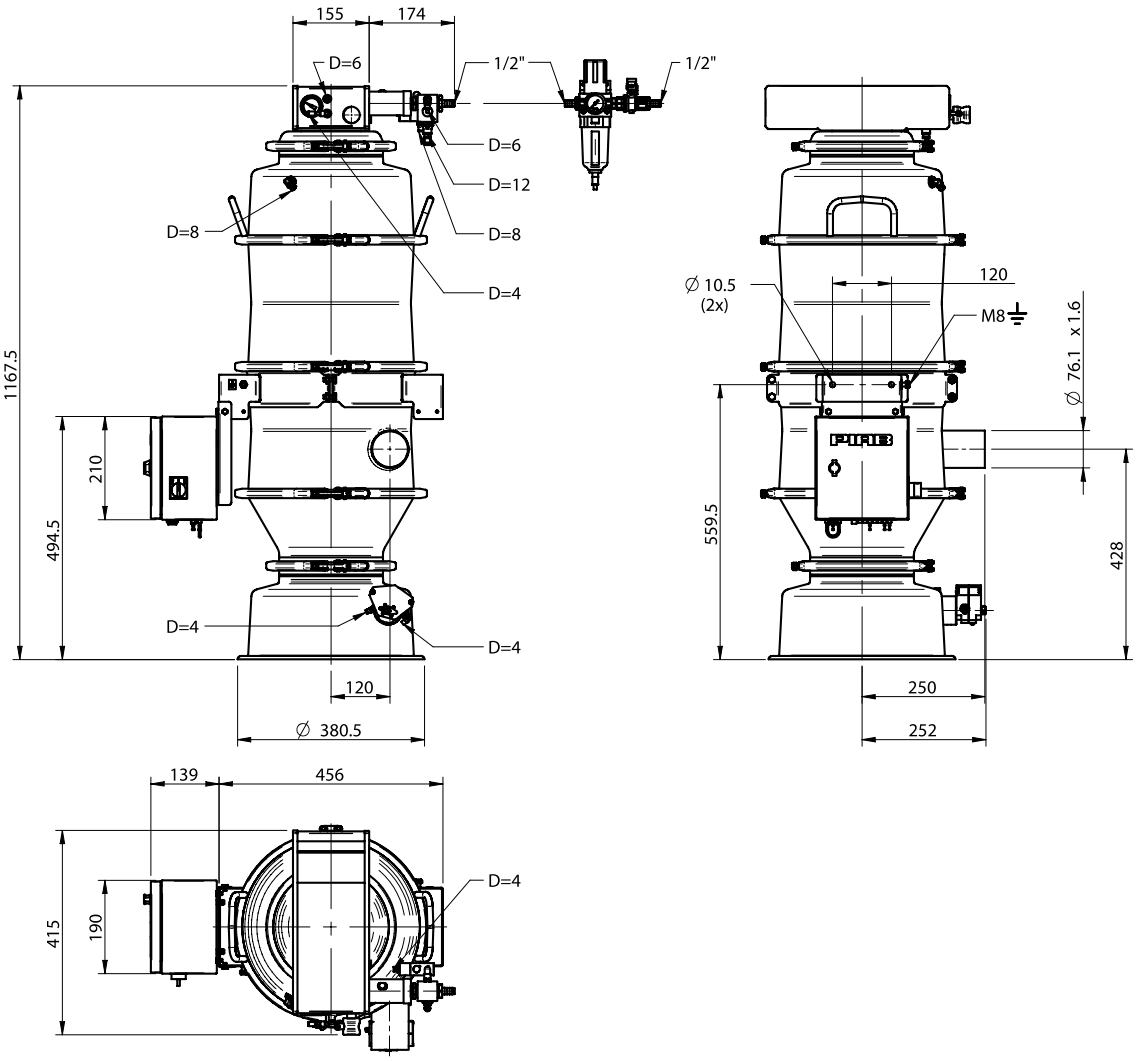
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	44.0
Safety classification		IP54
Filter area	m^2	0.42
Material batch volume	l	14.0
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
3.60	1.80	1.00	0.60



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L400	0103879
Filter unit 3304 textile filter int, Q	0103888/2
Connection unit 33/26 D=76 tang, Q	0103884/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3304-600

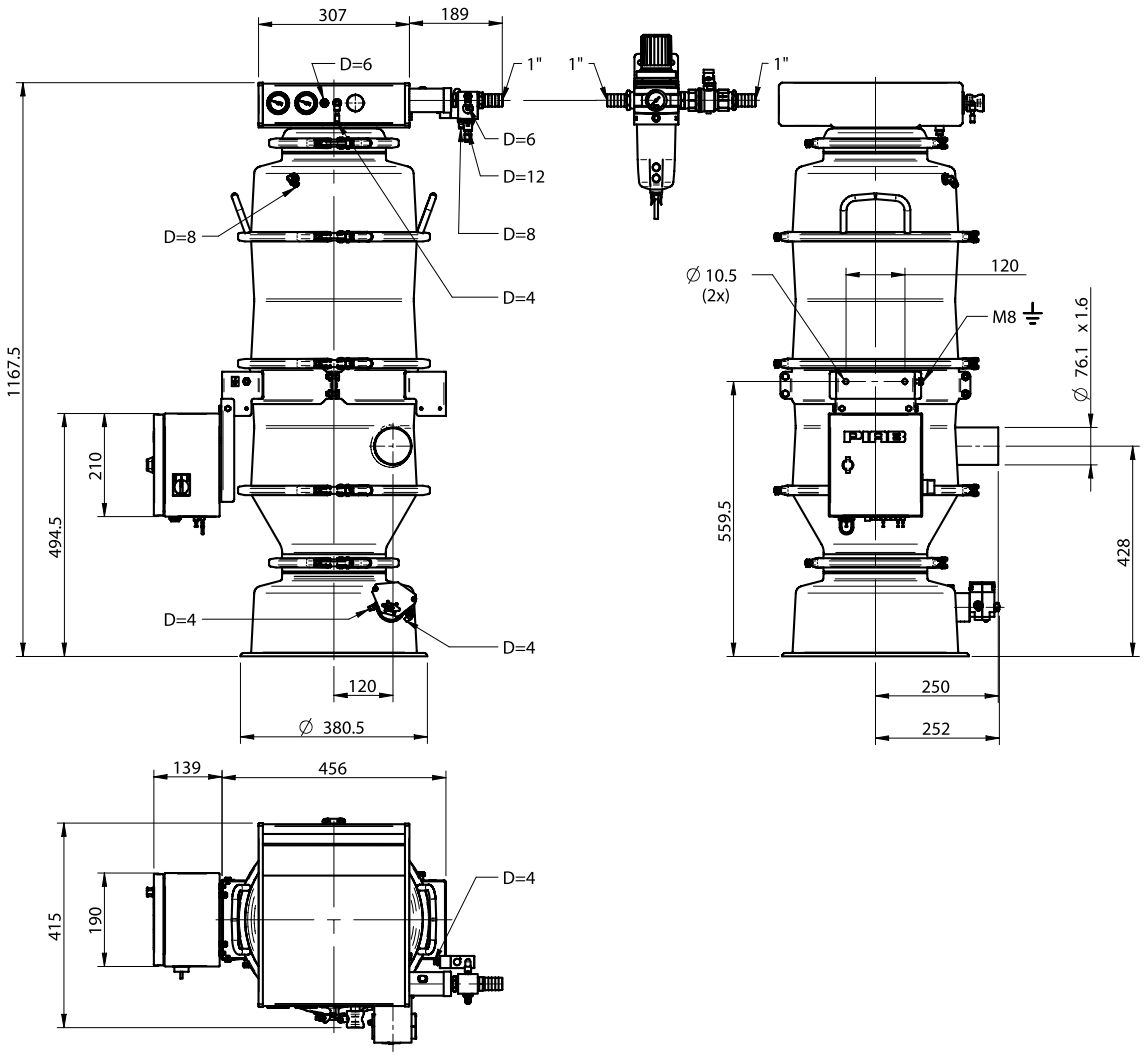
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	41.0
Safety classification		IP54
Filter area	m^2	0.42
Material batch volume	l	14.0
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
5.40	2.60	1.40	0.90



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L600	0103880
Filter unit 3304 textile filter int, Q	0103888/2
Connection unit 33/26 D=76 tang, Q	0103884/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3306-600

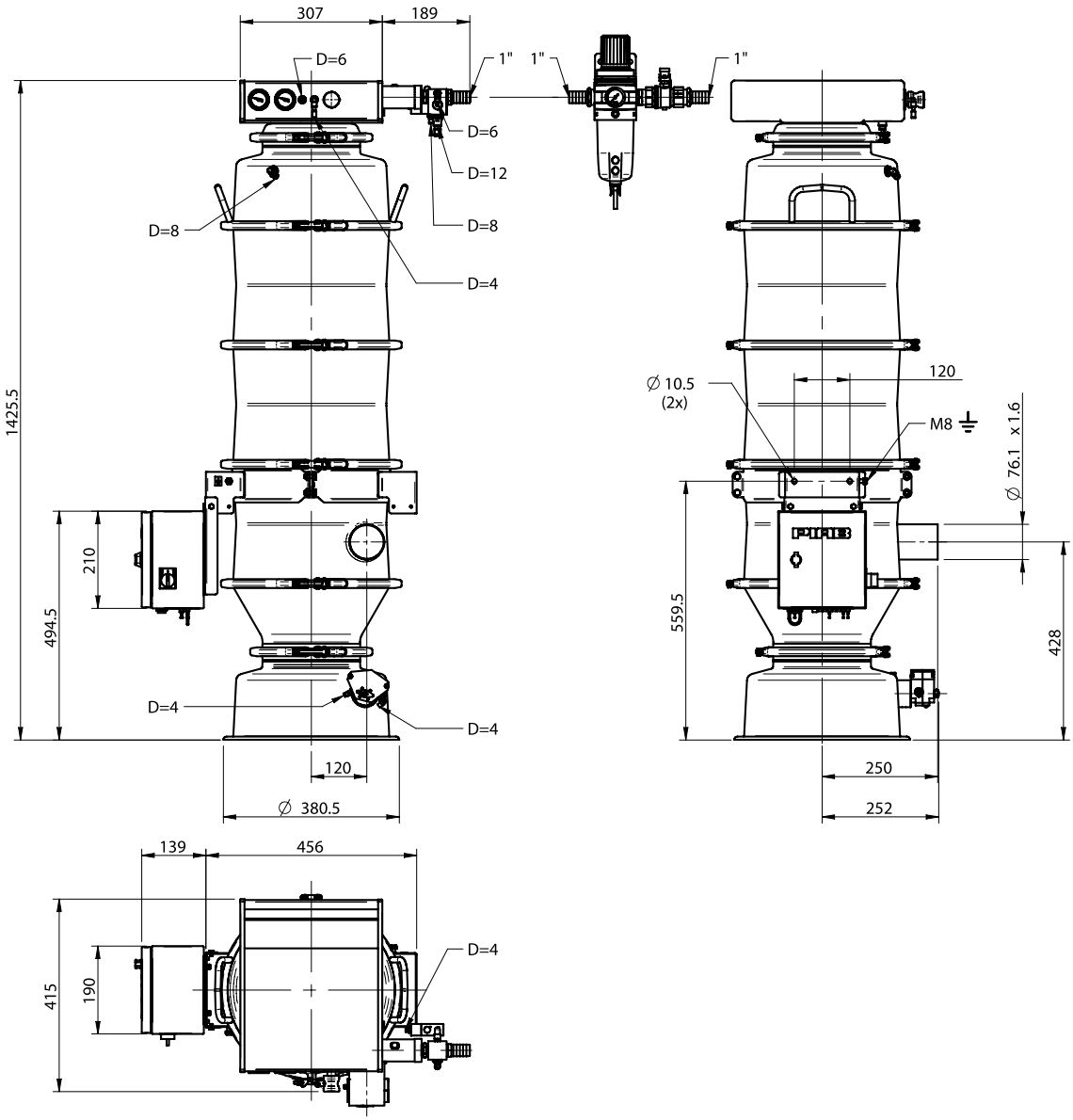
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	45.0
Safety classification		IP54
Filter area	m^2	0,70
Material batch volume	l	14.0
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
5.40	2.60	1.40	0.90



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L600	0103880
Filter unit 3306 textile filter int, Q	0103889/2
Connection unit 33/26 D=76 tang, Q	0103884/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3306-800

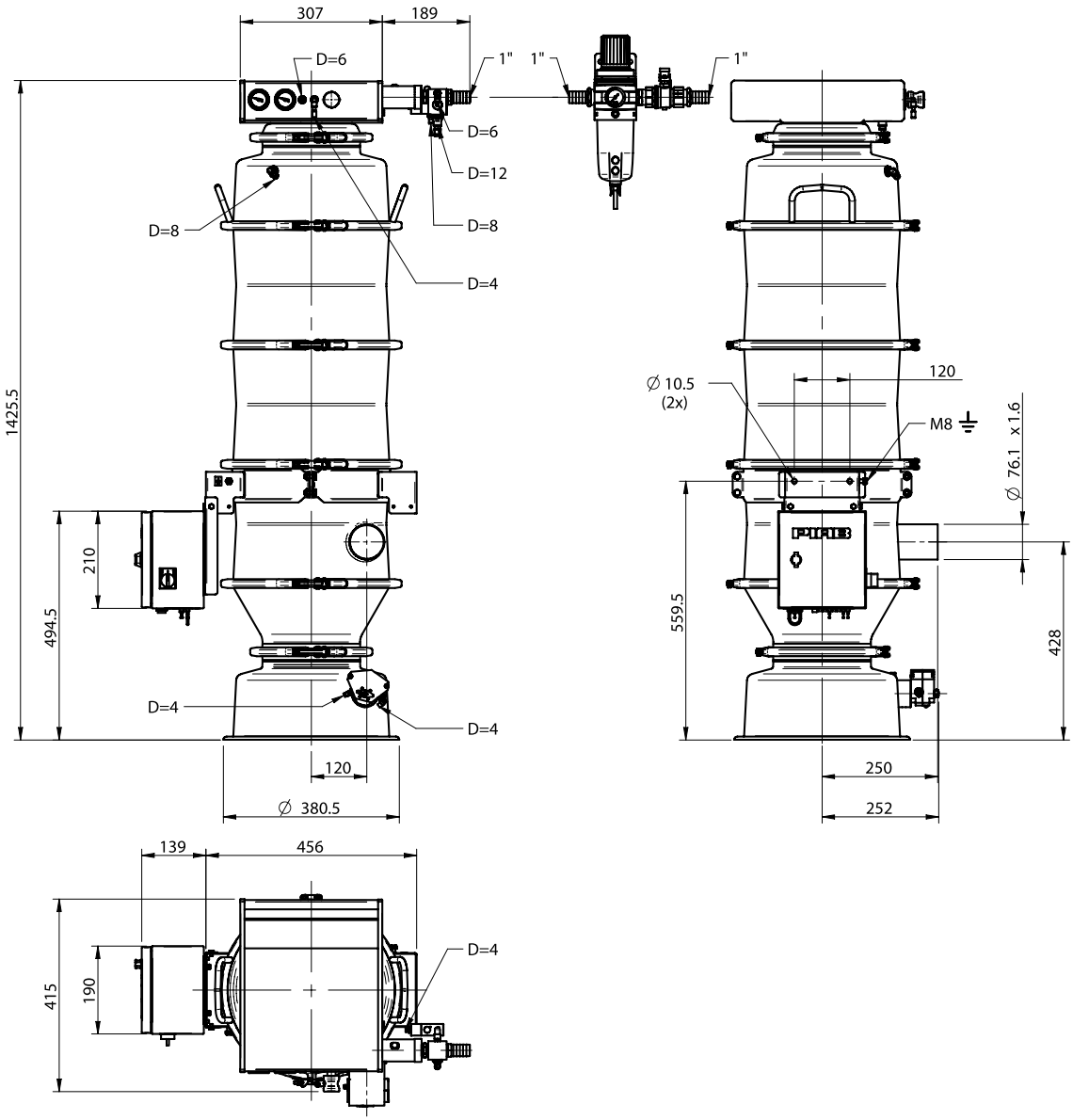
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	45.0
Safety classification		IP54
Filter area	m^2	0.70
Material batch volume	l	14.0
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
7.20	3.60	1.80	1.20



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L600	0103880
Filter unit 3306 textile filter int, Q	0103889/2
Connection unit 33/26 D=76 tang, Q	0103884/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3302S-400

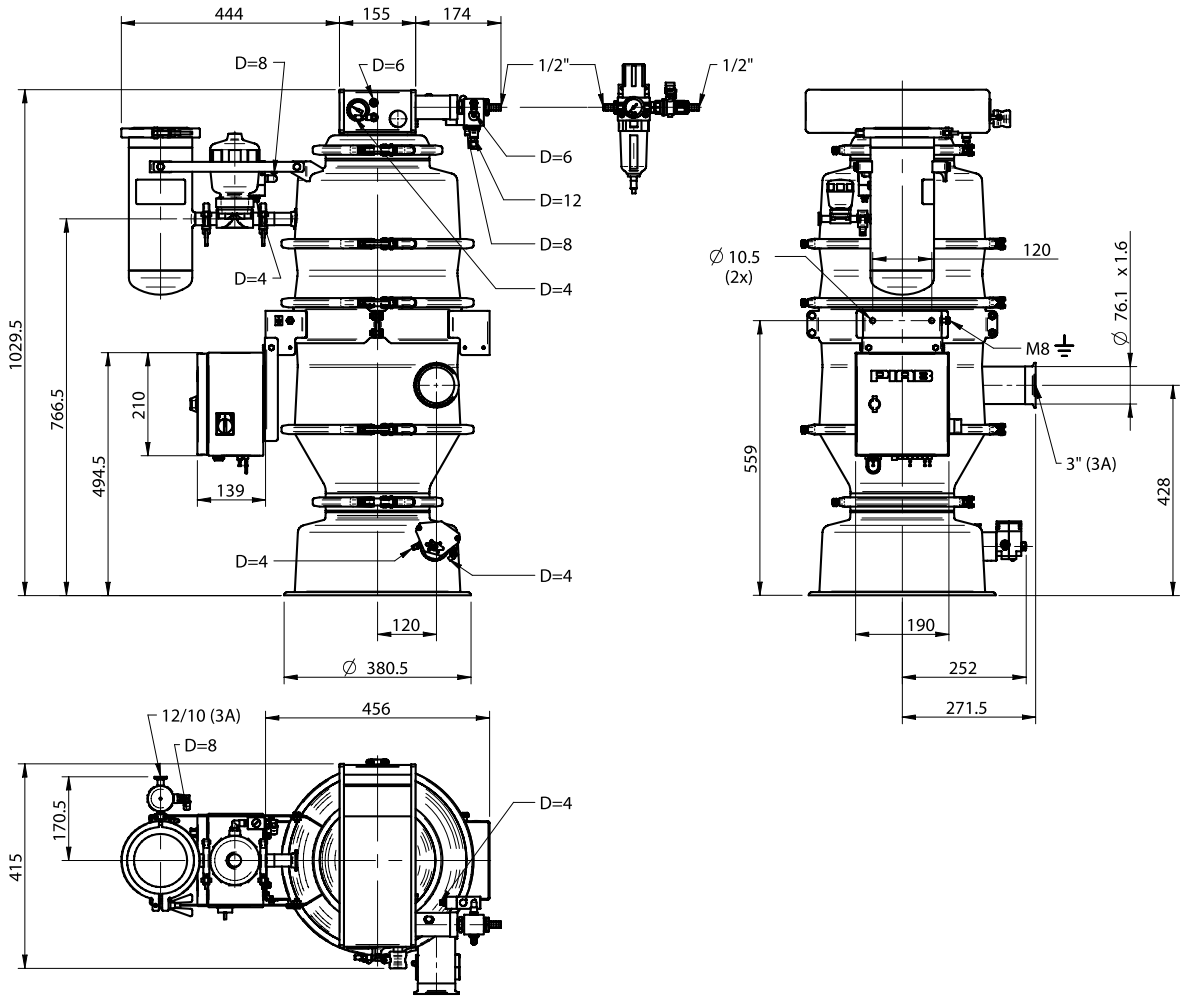
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	44.0
Safety classification		IP54
Filter area	m^2	0.34
Material batch volume	l	14.0
Min particle size	µm	0.5

CAPACITY

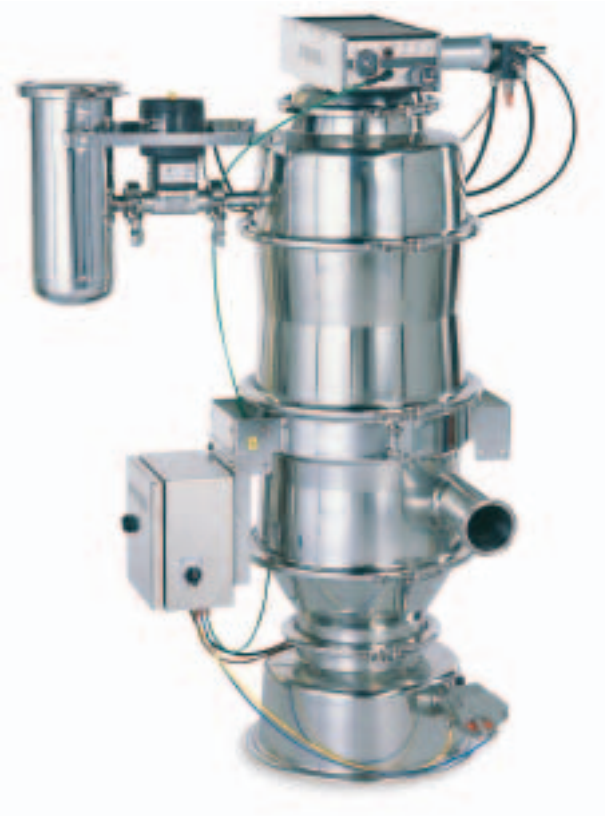
Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
3.60	1.80	1.00	0.60



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L400	0103879
Filter unit 3302 Gore Sinbran ext, Q	0103896/2
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3304S-400



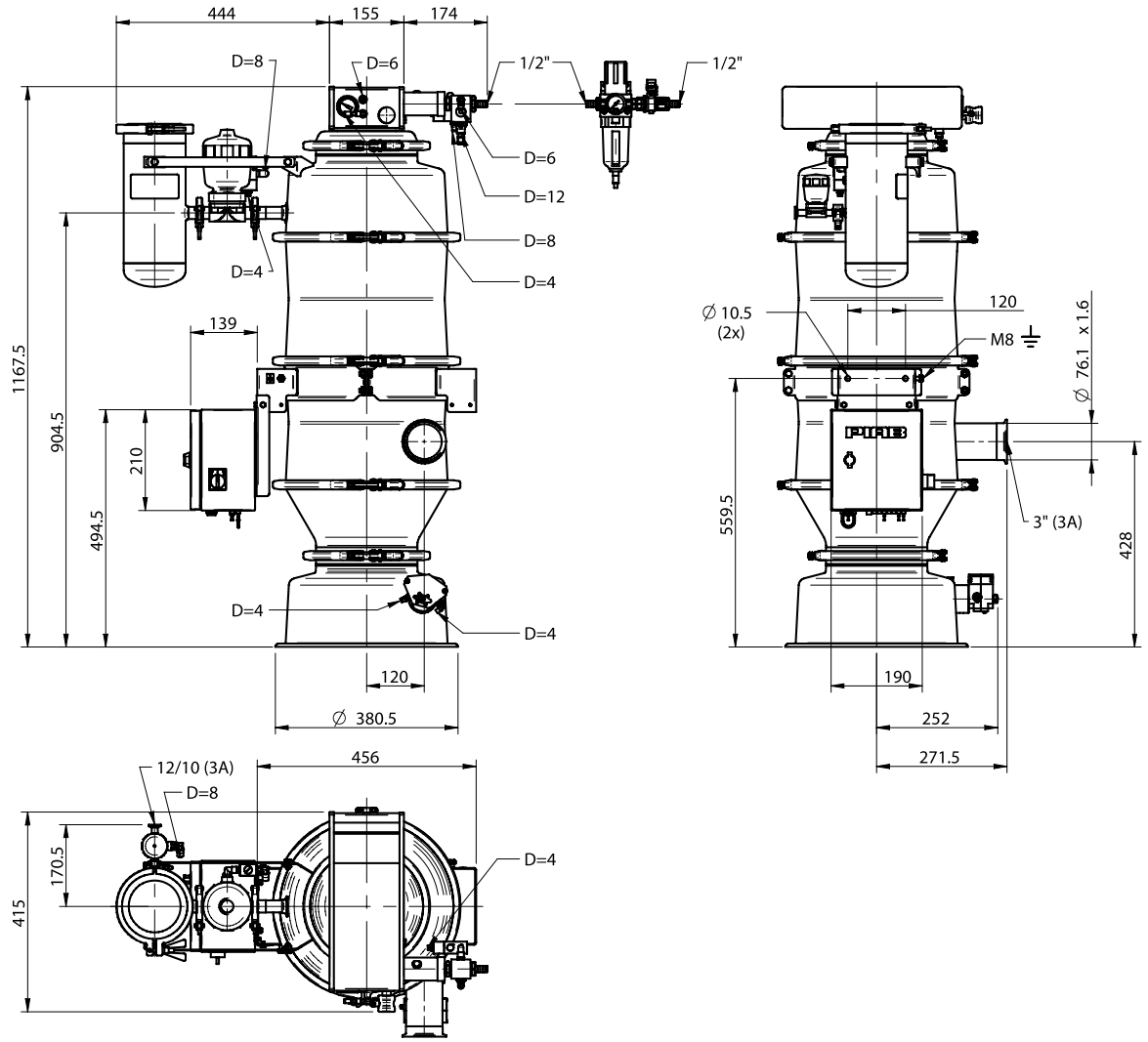
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	46.0
Safety classification		IP54
Filter area	m^2	0.57
Material batch volume	l	14.0
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
3.60	1.80	1.00	0.60



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L400	0103879
Filter unit 3304 Gore Sinbran ext, Q	0103897/2
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3304S-600

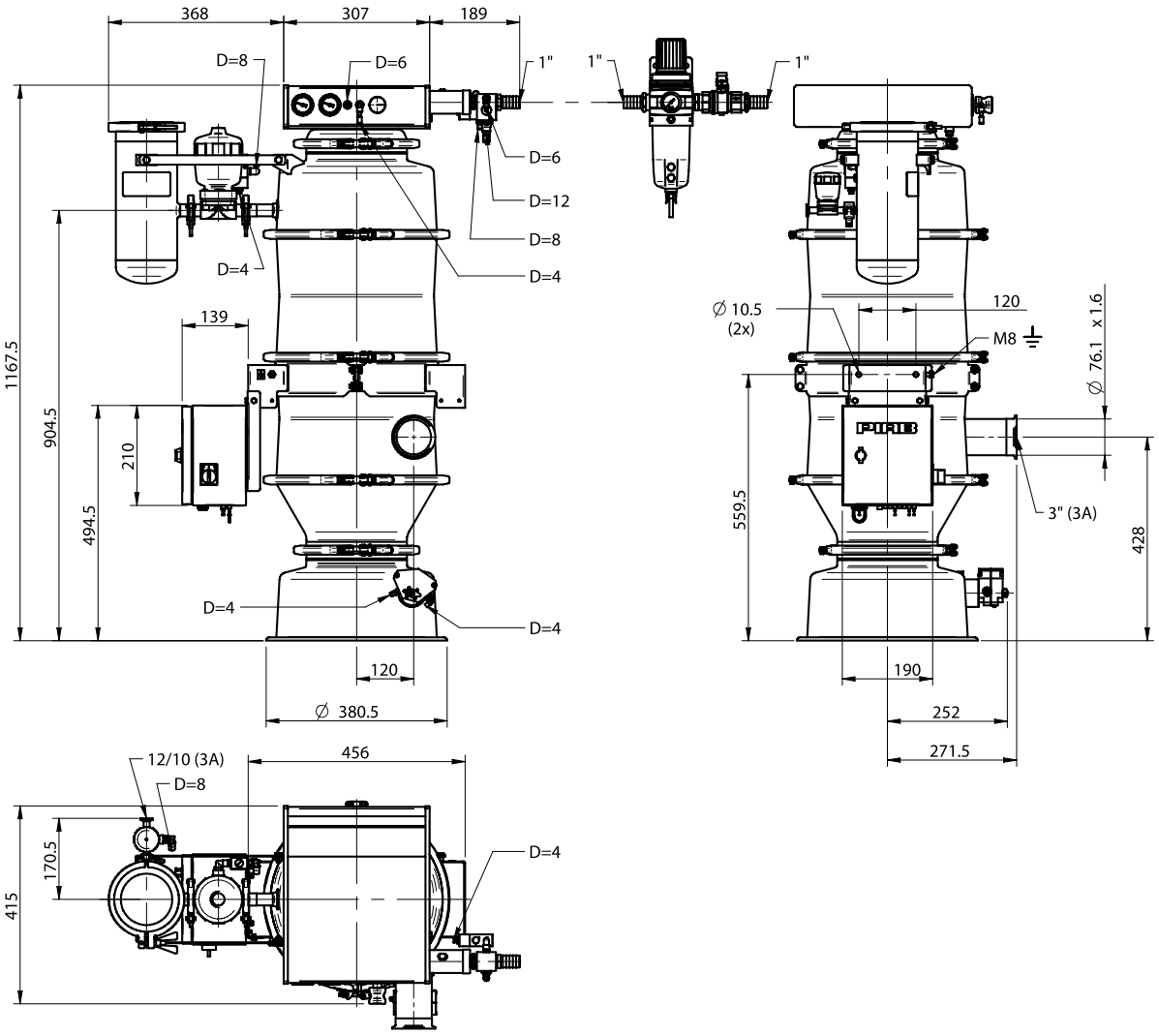
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	49.0
Safety classification		IP54
Filter area	m^2	0.57
Material batch volume	l	14.0
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
5.40	2.60	1.40	0.90



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L600	0103880
Filter unit 3304 Gore Sinbran ext, Q	0103897/2
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3306S-600

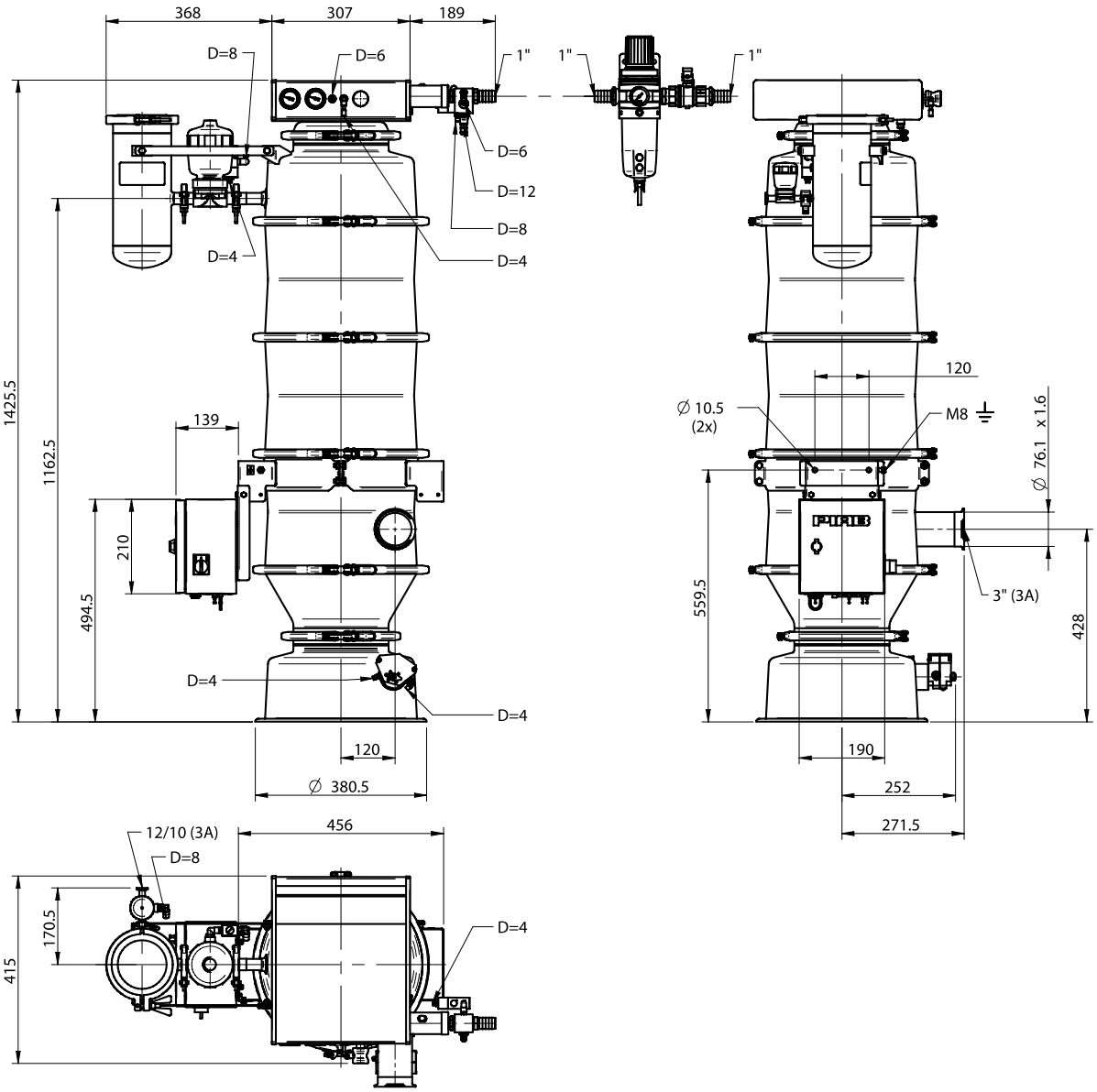
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	53.0
Safety classification		IP54
Filter area	m^2	1.02
Material batch volume	l	14.0
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
5.40	2.60	1.40	0.90



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L600	0103880
Filter unit 3306 Gore Sinbran ext, Q	0103898/2
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C3306S-800

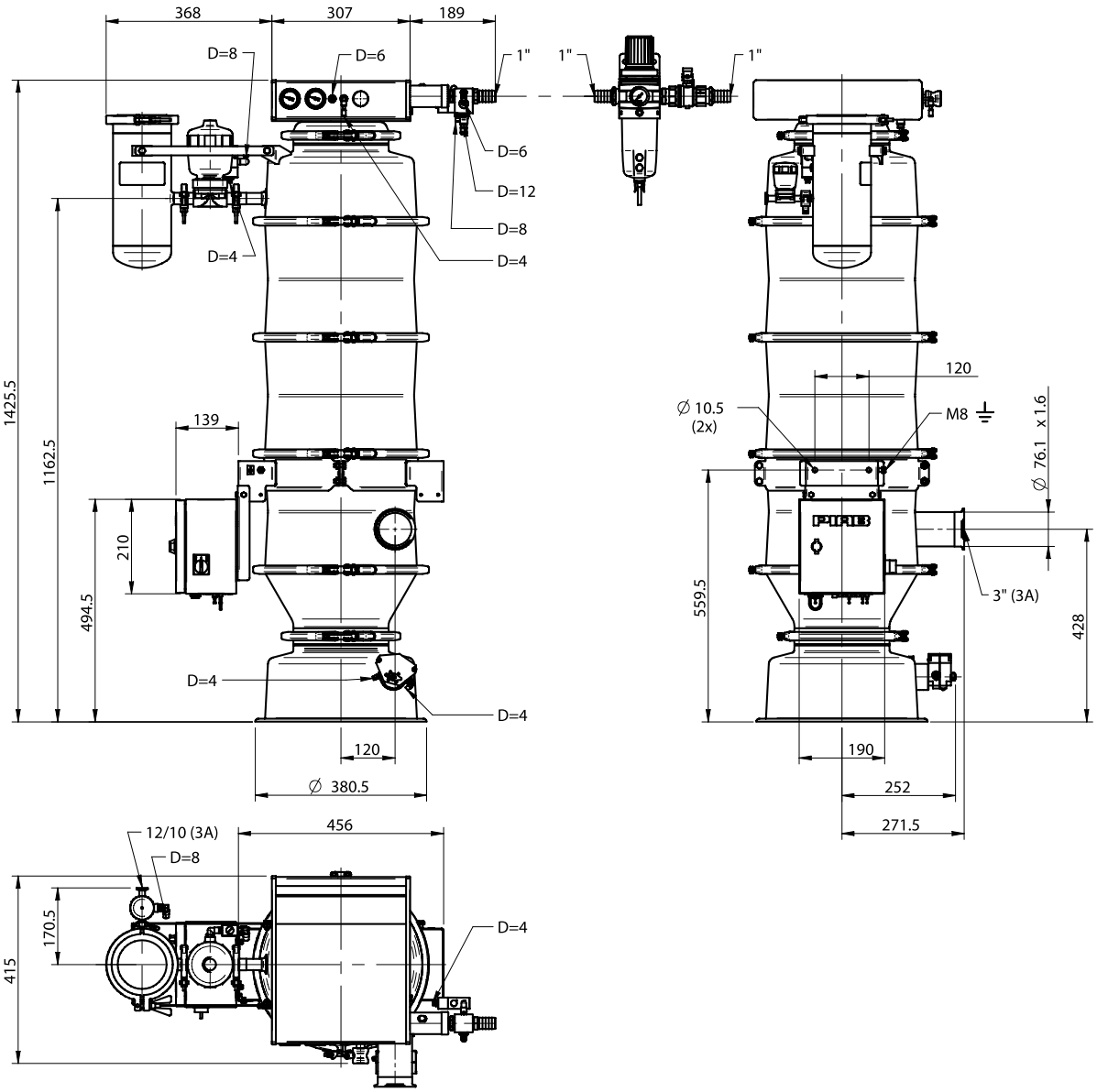
- USDA and 3-A accepted conveyors that meet the stringent sanitary requirements of the food, dairy and pharmaceutical industries.
- Solution that contributes to dust-free conveying.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- External filter shock assembly.
- Gore Sinbran filters with PTFE membrane.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	53.0
Safety classification		IP54
Filter area	m^2	1.02
Material batch volume	l	14.0
Min particle size	µm	0.5

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
7.20	3.60	1.80	1.20



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L800	0103881
Filter unit 3306 Gore Sinbran ext, Q	0103898/2
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2
Bottom valve unit 33/34 SS, Q	0103907/2
Control unit CU-1B bracket	0103919
Nylon tubing kit Standard CU-C33	0103929

C5602-800

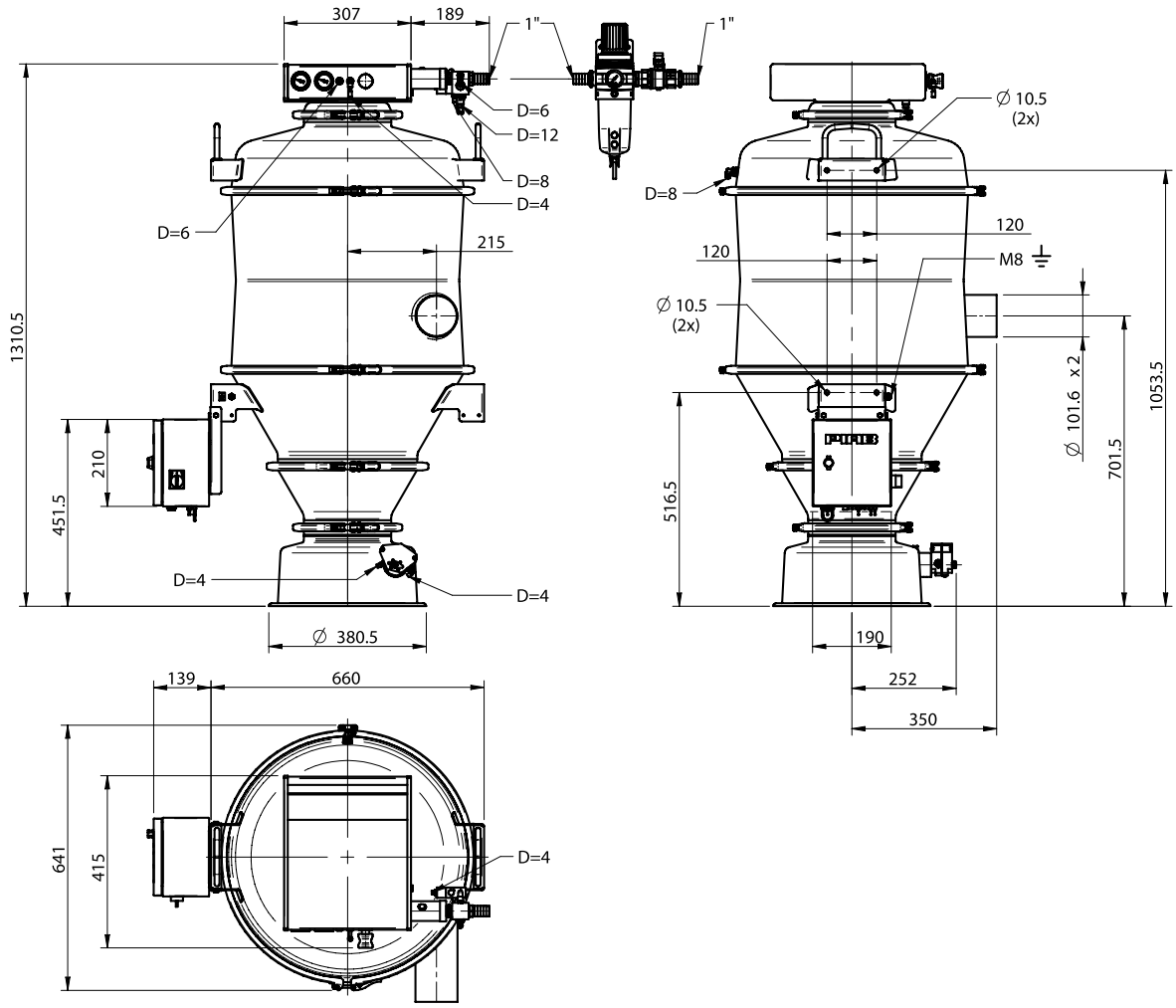
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.04–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	54.0
Safety classification		IP54
Filter area	m^2	0.60
Material batch volume	l	72.3
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
7.2	3.6	1.8	1.2



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L800	0103881
Filter unit 5602 textile filter int tang, Q	0106820/2
Bottom valve unit 56/57 SS Q	0106816/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C56	0106981

C5604-800

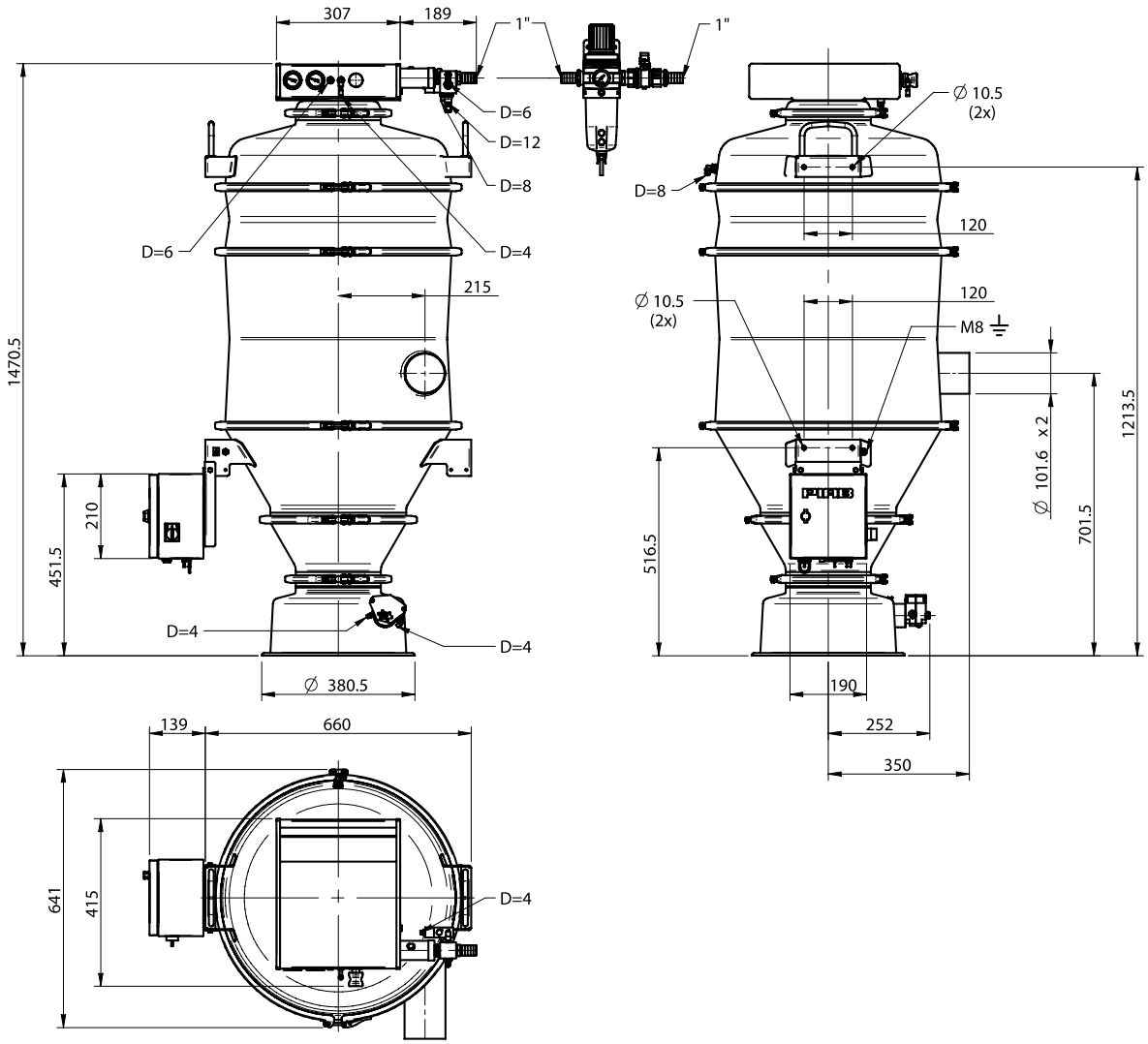
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	67.0
Safety classification		IP54
Filter area	m^2	0.98
Material batch volume	l	72.3
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
7.2	3.6	1.8	1.2



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L800	0103881
Filter unit 5604 textile filter int Q	0106822/2
Connection unit 56/43 D=102 tang, Q	0106239/2
Bottom valve unit 56/57 SS Q	0106816/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C56	0106981

C5604-1200

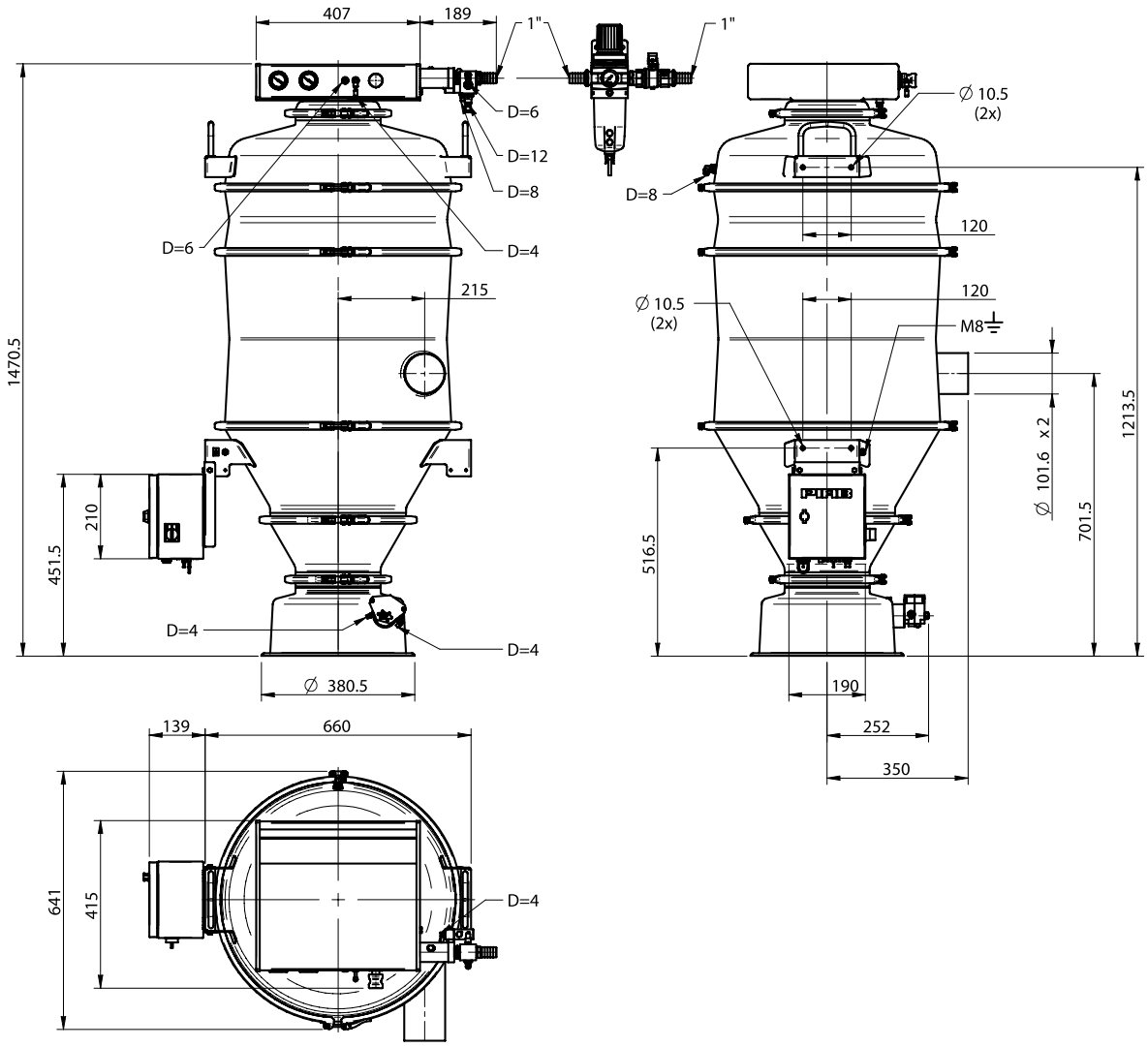
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	60–84
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	69.0
Safety classification		IP54
Filter area	m^2	0.98
Material batch volume	l	72.3
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
10.80	5.40	2.70	1.80



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L1200	0103882
Filter unit 5604 textile filter int Q	0106822/2
Connection unit 56/43 D=102 tang, Q	0106239/2
Bottom valve unit 56/57 SS Q	0106816/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C56	0106981

C5606-1200

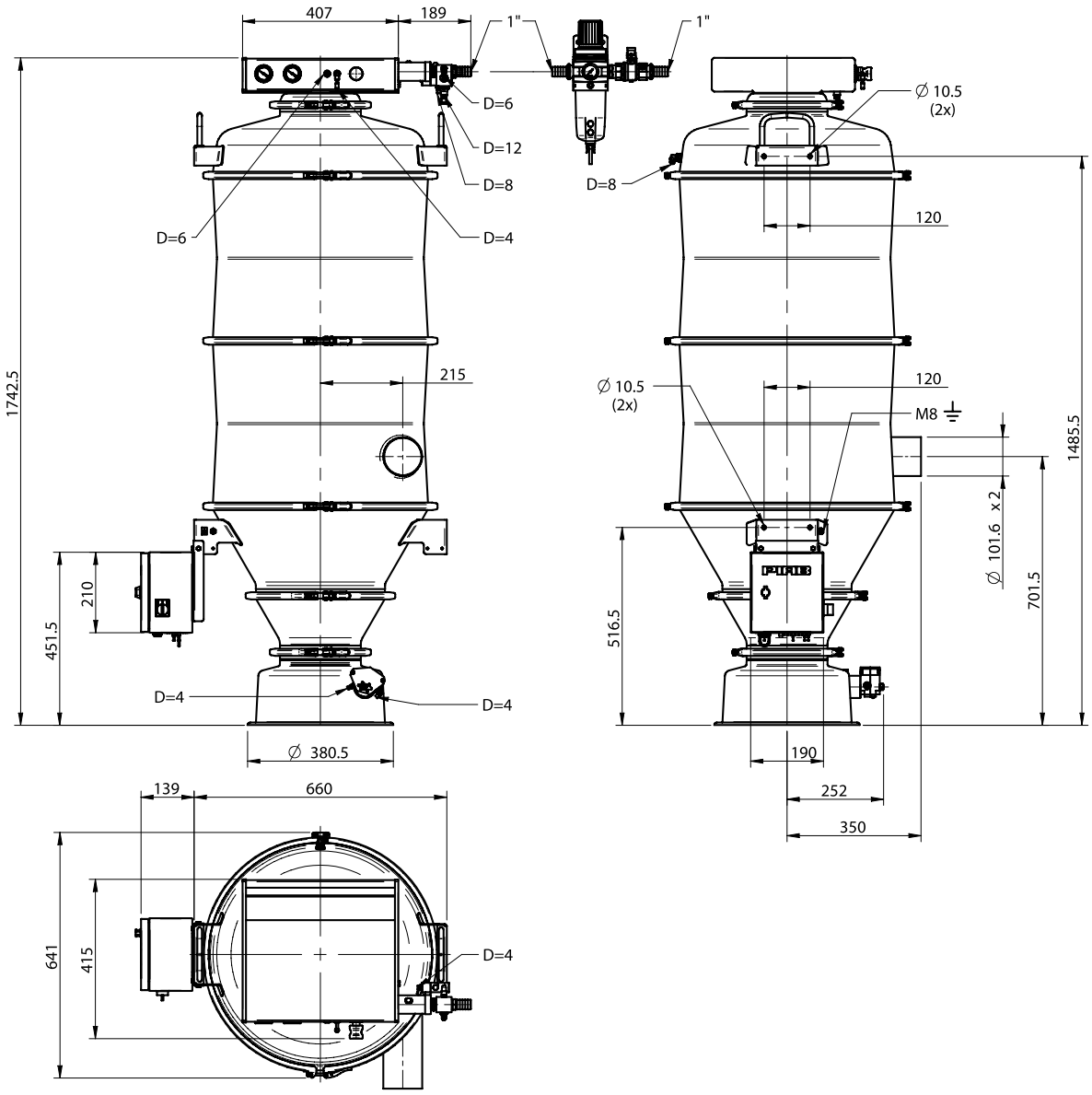
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	60–84
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	77.0
Safety classification		IP54
Filter area	m^2	1.64
Material batch volume	l	72.3
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
10.80	5.40	2.70	1.80



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L1200	0103882
Filter unit 5606 textile filter int Q	0106823/2
Connection unit 56/43 D=102 tang, Q	0106239/2
Bottom valve unit 56/57 SS Q	0106816/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C56	0106981

C5606-1600

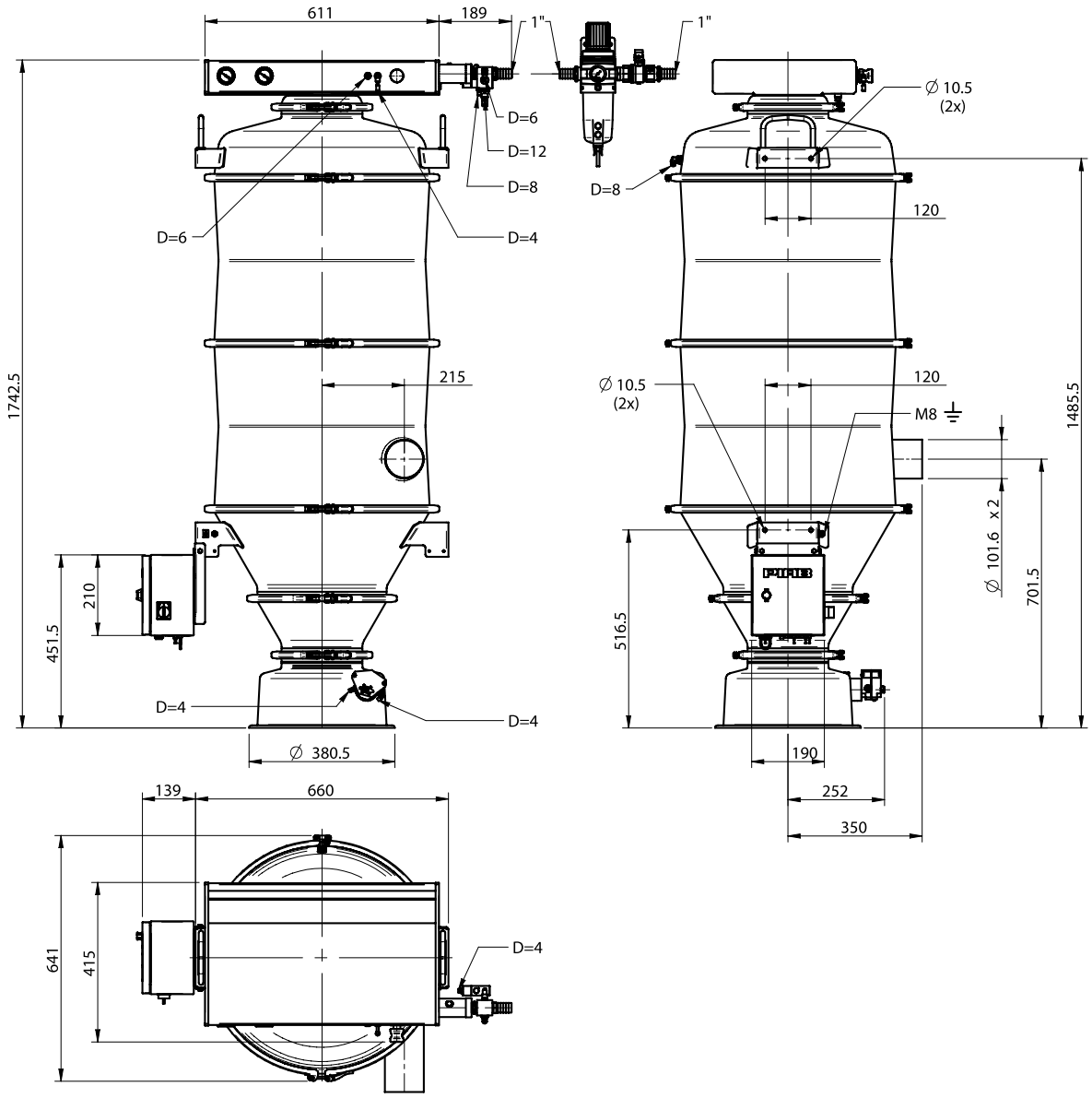
- Designed mainly for industries handling food, chemical and pharmaceutical products.
- Solution that contributes to dust-free conveying.
- All materials in contact with the conveyed product fulfil the requirements of FDA, USDA and 3-A.
- Turnkey conveyor that is easy to install and start up.
- Manual dismounting and cleaning.
- Low sound level.
- Fully pneumatic.
- Reusable textile bag filter.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	80–112
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		ASTM 316L, Q
Temperature range	°C	0–60
Weight	kg	78.0
Safety classification		IP54
Filter area	m^2	1.64
Material batch volume	l	72.3
Min particle size	µm	5.0

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
14.00	7.00	3.50	2.40



PARTS INCLUDED

Description	Art. No.
Pump unit Maxi L1600	0103883
Filter unit 5606 textile filter int Q	0106823/2
Connection unit 56/43 D=102 tang, Q	0106239/2
Connection unit 56/43 D=102 tang, Q	0106239/2
Control unit CU-1B bracket	0103919
Nylon tubing kit, Standard CU-C56	0106981

2101 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

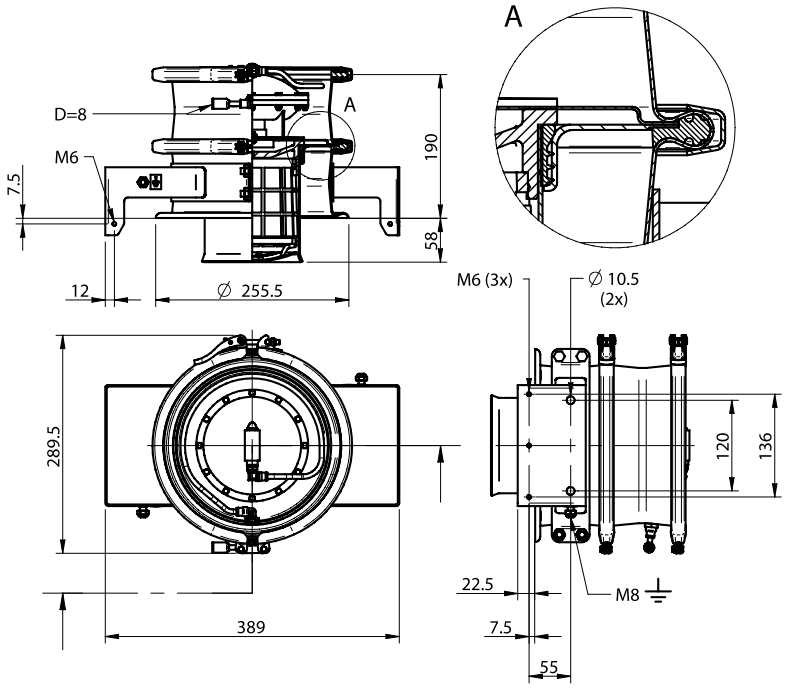
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.06
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106057/1	0106057/2
Material		NBR, C	Q
Weight	kg	6.69	6.71

ORDERING INFORMATION

Description	Art. No.
Filter unit 2101 textile filter int, NBR	0106057/1
Filter unit 2101 textile filter int, Q	0106057/2



2102 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

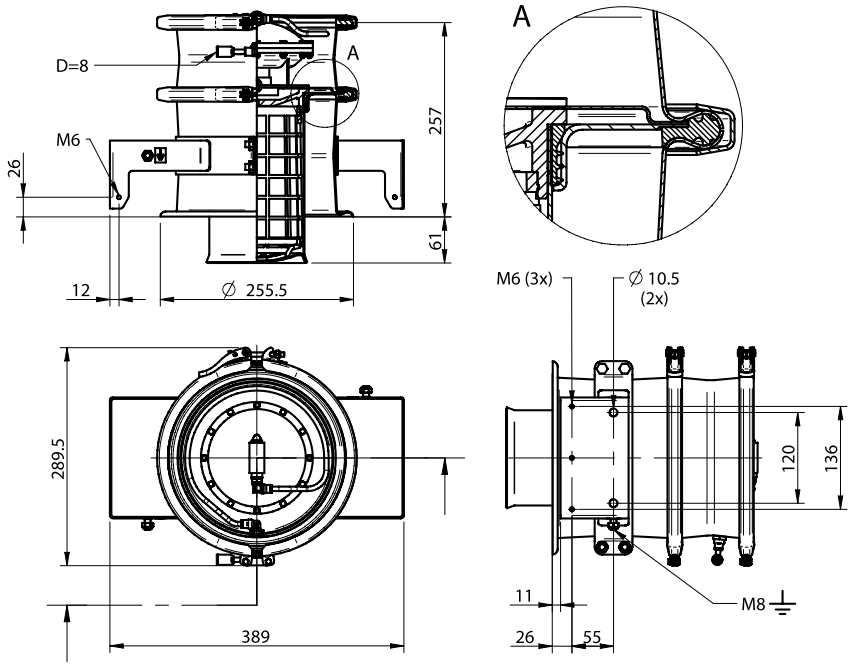
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.09
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	0106054/1	0106054/2
Material		NBR, C	Q
Weight	kg	7.21	7.23

ORDERING INFORMATION

Description	Art. No.
Filter unit 2102 textile filter int, NBR	0106054/1
Filter unit 2102 textile filter int, Q	0106054/2



2104 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

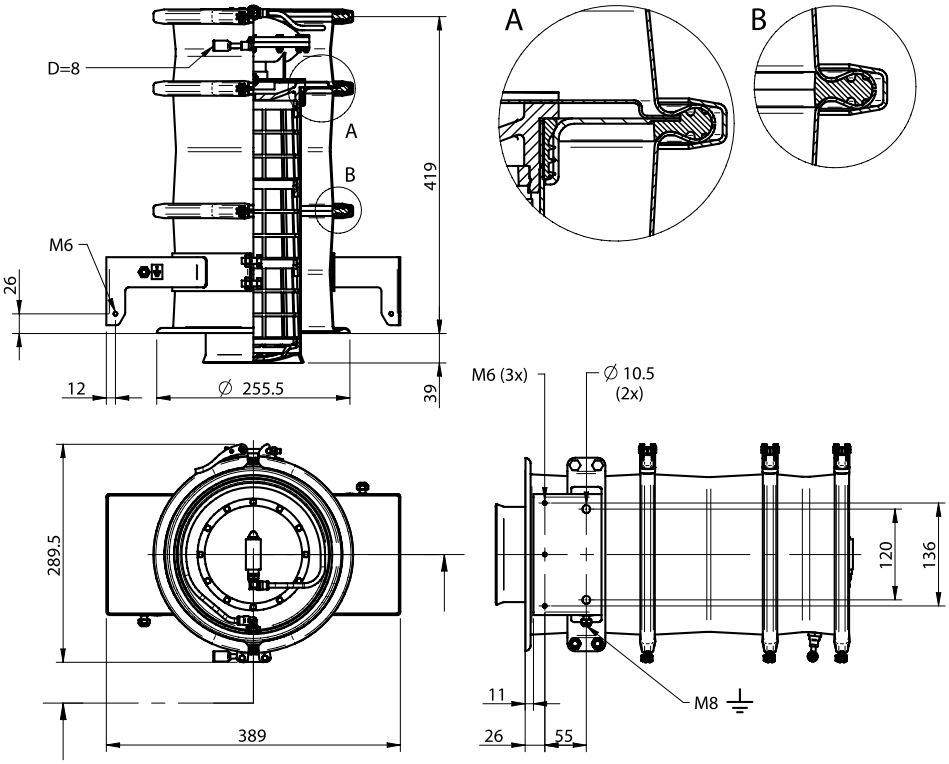
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.14
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106058/1	0106058/2
Material		NBR, C	Q
Weight	kg	9.39	9.42

ORDERING INFORMATION

Description	Art. No.
Filter unit 2104 textile filter int, NBR	0106058/1
Filter unit 2104 textile filter int, Q	0106058/2



2100 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

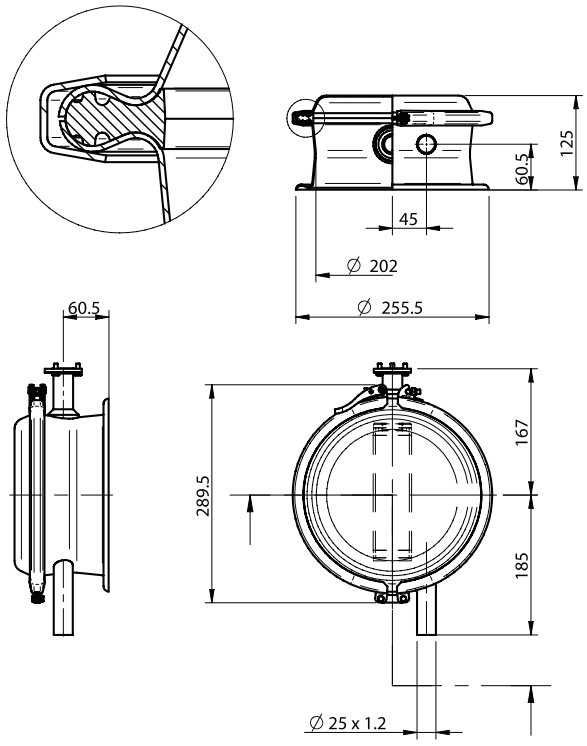
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m²	0.03
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	0117441	0117442
Material	NBR, C	Q
Weight	2.60	2.60

ORDERING INFORMATION

Description	Art. No.
Filter unit 2100 Gore Sinbran, NBR	0117441
Filter unit 2100 Gore Sinbran, Q	0117442



2101 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

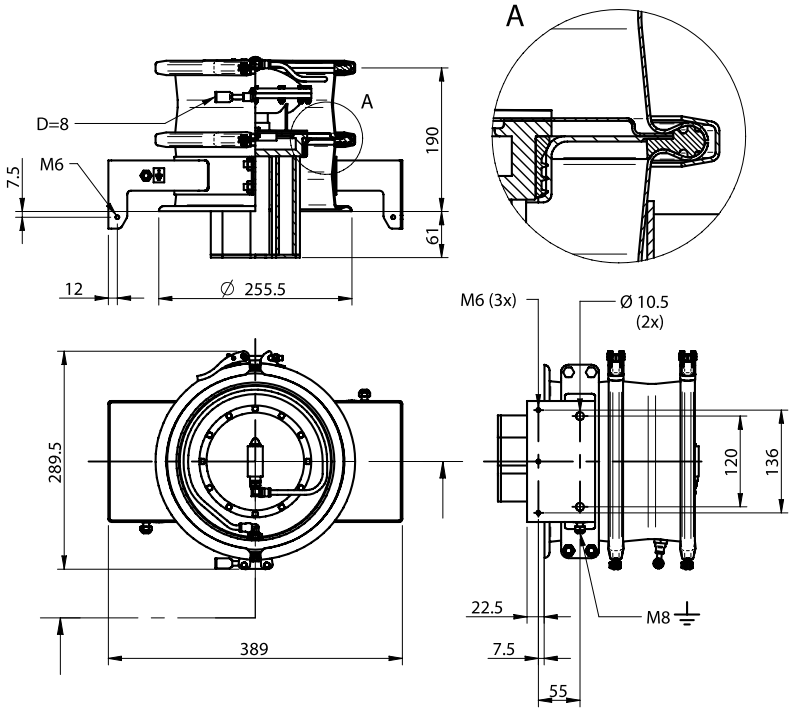
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFT, PE
Temperature range	°C	0–60
Filter area	m^2	0.08
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106057/1	0106057/2
Material		NBR, C	Q
Weight	kg	6.56	6.58

ORDERING INFORMATION

Description	Art. No.
Filter unit 2101 Gore Sinbran int, NBR	0108095/1
Filter unit 2101 Gore Sinbran int, Q	0108095/2



2102 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

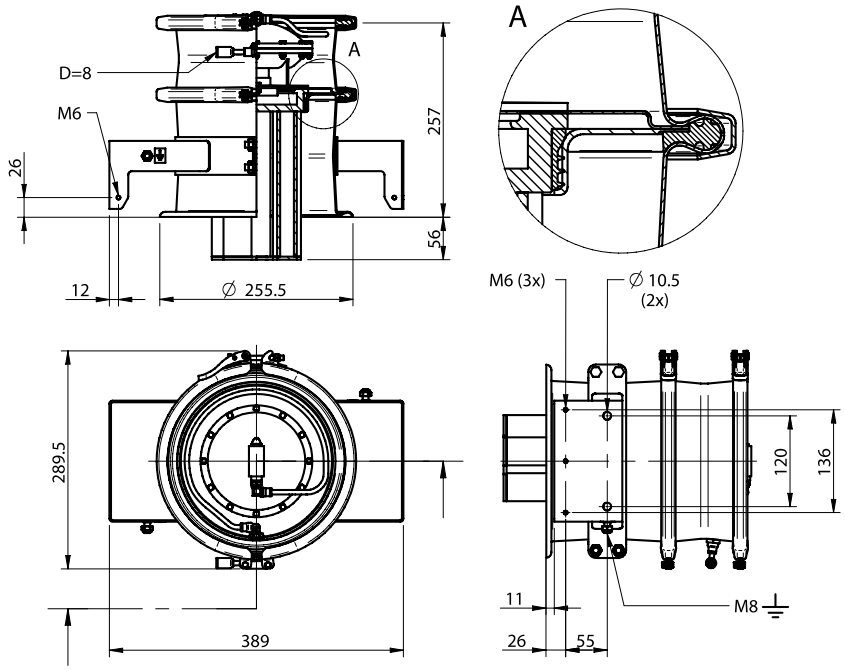
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFT, PE
Temperature range	°C	0–60
Filter area	m^2	0.11
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106052/1	0106052/2
Material		NBR, C	Q
Weight	kg	7.05	7.07

ORDERING INFORMATION

Description	Art. No.
Filter unit 2102 Gore Sinbran int, NBR	0106052/1
Filter unit 2102 Gore Sinbran int, Q	0106052/2



2104 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

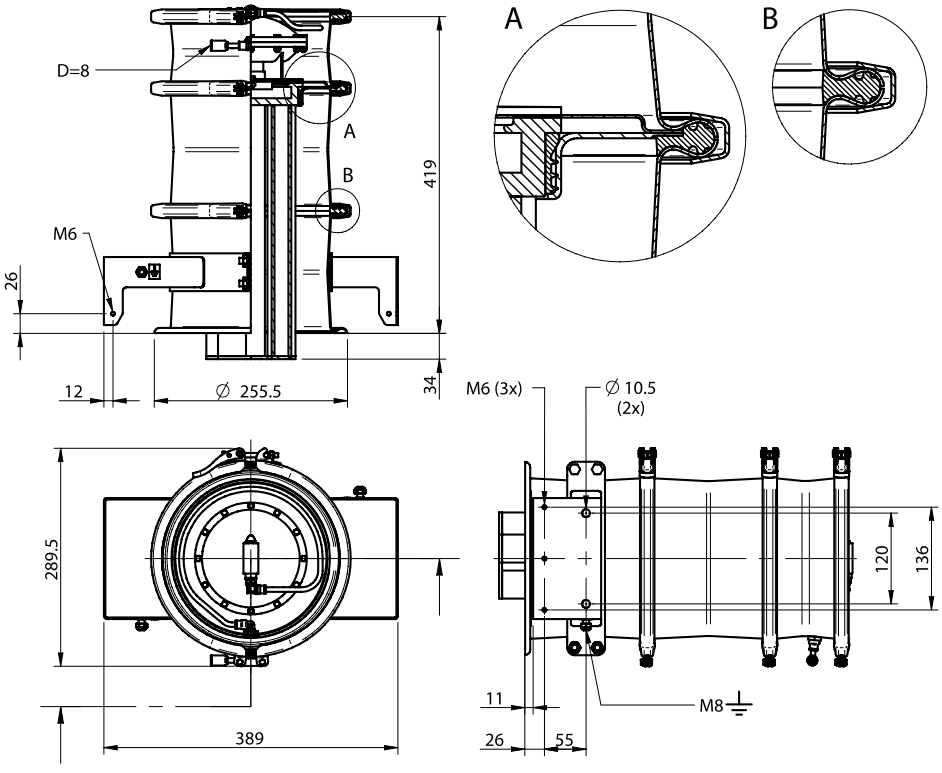
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	0.19
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106055/1	0106055/2
Material		NBR, C	Q
Weight	kg	9.13	9.16

ORDERING INFORMATION

Description	Art. No.
Filter unit 2104 Gore Sinbran int, NBR	0106055/1
Filter unit 2104 Gore Sinbran int, Q	0106055/2



2102 WITH GORE SINBRAN FILTER AND EXTERNAL FILTER SHOCK

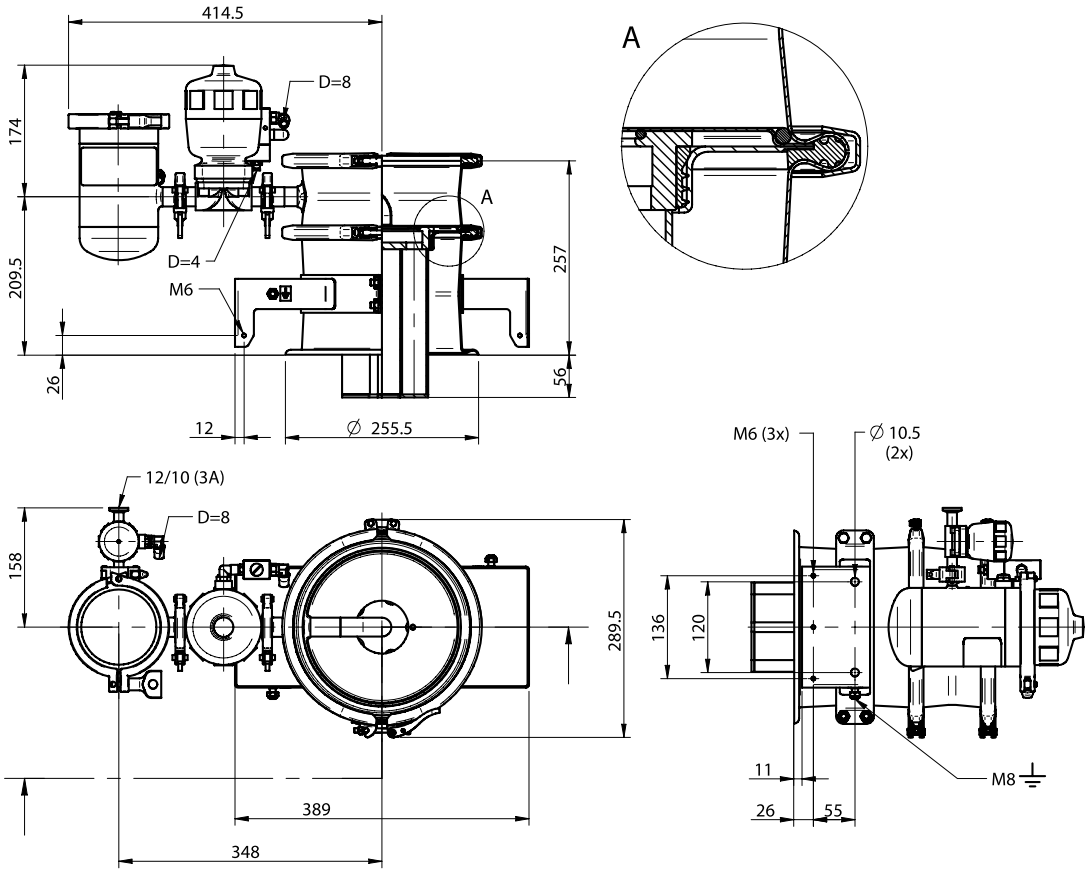
- Separates the carrying air from the conveyed product.
- Hygienic design.
- The sealings and white rod filter fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.04–0.6
Material		ASTM 316L, Q, PTFE, PE
Temperature range	°C	0–60
Weight	kg	12.3
Filter area	m^2	0.11
Min particle size	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 2102 Gore Sinbran ext, Q	0106190/2



2104 WITH GORE SINBRAN FILTER AND EXTERNAL FILTER SHOCK

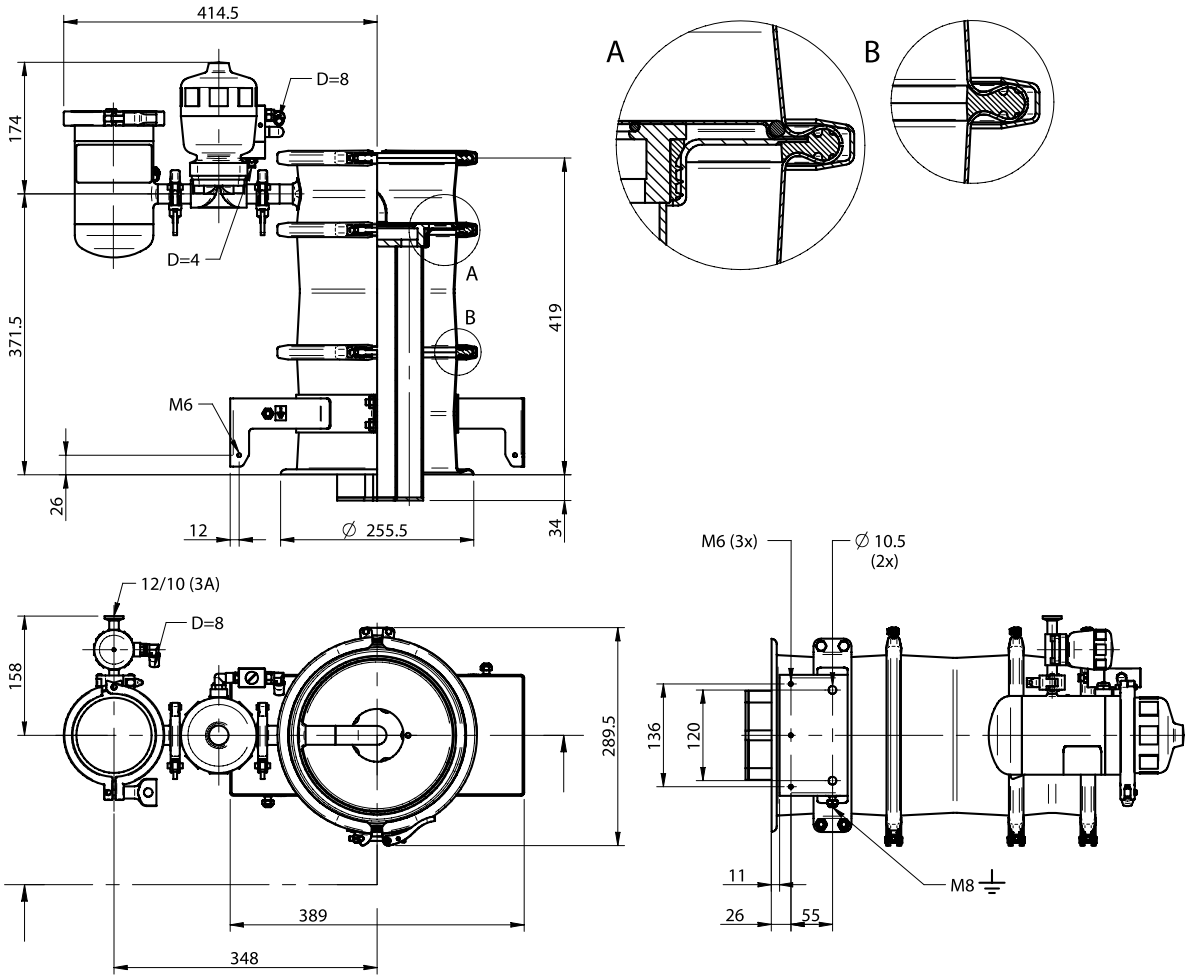
- Separates the carrying air from the conveyed product.
- Hygienic design.
- The sealings and white rod filter fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Q, PTFE, PE
Temperature range	°C	0–60
Weight	kg	14.3
Filter area	m^2	0.19
Min particle area	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 2104 Gore Sinbran ext, Q	0106198/2



PS6610 SI 32-3X2

- COAX® patented technology.
- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.

TECHNICAL DATA

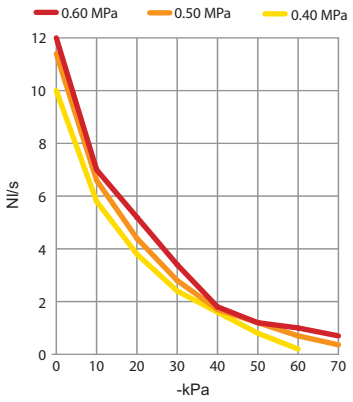
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	2.5–3.5
Vacuum range	-kPa	61–75
Noise level	dBA	70–73
Material		Al, PA, NBR, PUR
Temperature range	°C	0–60
Weight	kg	1.94

VACUUM FLOW

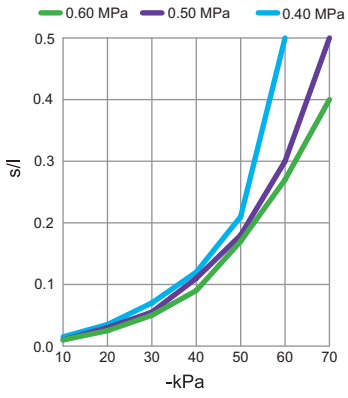
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.40	2.5	10.0	5.8	3.8	2.4	1.6	0.80	0.20	—	60
0.50	3.0	11.4	6.6	4.4	2.8	1.7	1.2	0.70	0.36	70
0.60	3.5	12.0	7.0	5.2	3.4	1.8	1.2	1.0	0.70	75

EVACUATION TIME

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)							Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	-kPa
0.40	2.5	0.015	0.035	0.070	0.12	0.21	0.50	—	60
0.50	3.0	0.010	0.030	0.055	0.11	0.18	0.30	0.50	70
0.60	3.5	0.010	0.025	0.050	0.090	0.17	0.27	0.40	75



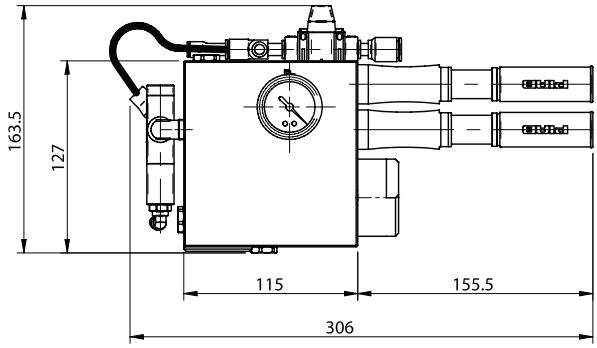
Vacuum flow

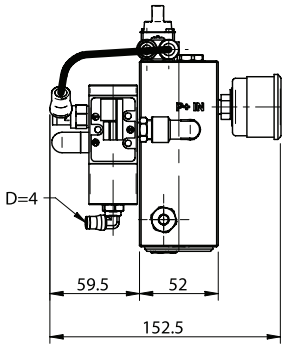


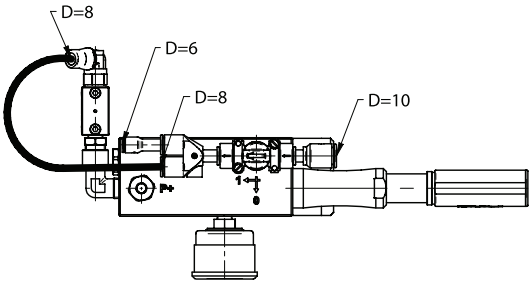
Evacuation time

ORDERING INFORMATION

Description	Art. No.
Vacuum pump PS6610 Si32-3x2	0117443







CLASSIC L100

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

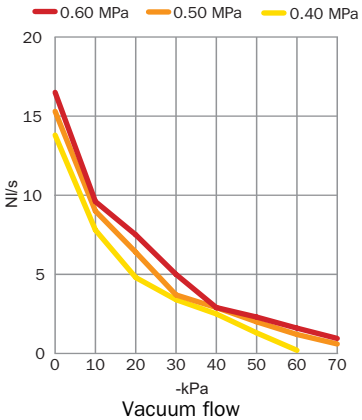
Description	Unit	Value
Feed pressure range	MPa	0.4-0.6
Air consumption range	Nl/s	5-7
Vacuum range	-kPa	61-75
Noise level range	dBA	60-65
Material		PPS, Al, ASTM 316L
Temperature range	°C	0-60
Weight	kg	4.7

VACUUM FLOW

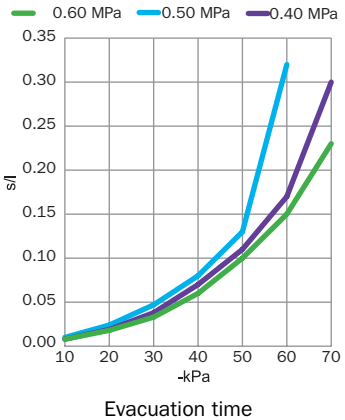
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	NL/s	0	10	20	30	40	50	60	70	-kPa
0.6	7	16.5	9.6	7.5	5.0	2.9	2.3	1.6	0.95	75
0.5	6	15.3	9.0	6.4	3.7	2.9	2.0	1.2	0.60	71
0.4	5	13.8	7.8	4.8	3.4	2.5	1.3	0.20	-	61

EVACUATION TIME

Feed pressure	Air consumption	Evacuation time (s/l) at different vacuum levels (-kPa)							Max vacuum
MPa	NL/s	10	20	30	40	50	60	70	-kPa
0.6	7	0.008	0.018	0.033	0.060	0.10	0.15	0.23	75
0.5	6	0.008	0.019	0.038	0.070	0.11	0.17	0.30	71
0.4	5	0.010	0.024	0.047	0.080	0.13	0.32	-	61



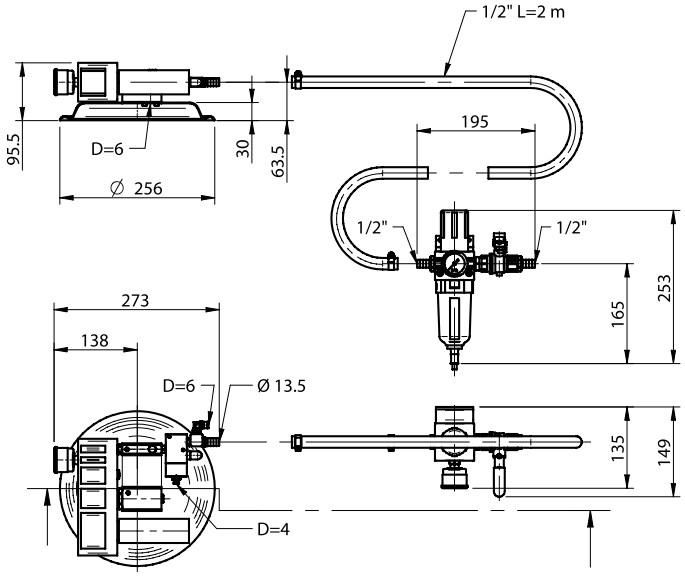
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit CLASSIC L100	0107367



MAXI L100

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

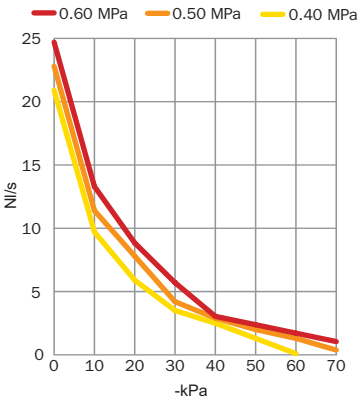
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	5–7
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.6

VACUUM FLOW

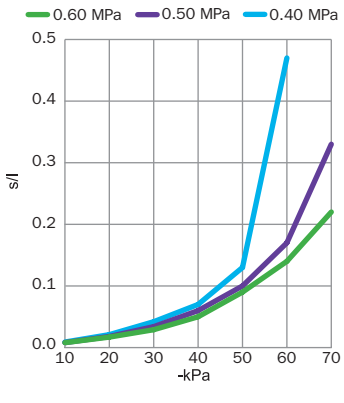
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	7	24.7	13.3	8.84	5.70	3.04	2.38	1.71	1.05	75
0.5	6	22.8	11.4	7.8	4.2	2.9	2.0	1.3	0.38	71
0.4	5	20.9	97.1	5.9	3.5	2.5	1.3	0.1	–	61

EVACUATION TIME

Feed pressure	Air consumption	Evacuation time (s/l) at different vacuum levels (-kPa)							Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	-kPa
0.6	7	0.008	0.017	0.029	0.05	0.09	0.14	0.22	75
0.5	6	0.008	0.018	0.034	0.06	0.10	0.17	0.33	71
0.4	5	0.009	0.021	0.042	0.07	0.13	0.47	–	61



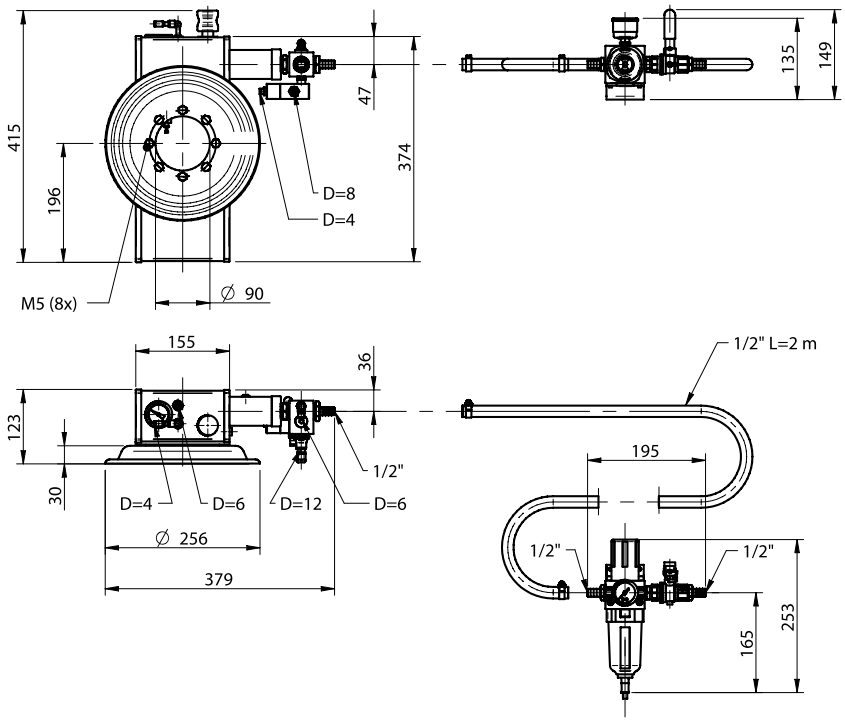
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L100	0106812



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

MAXI L200

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

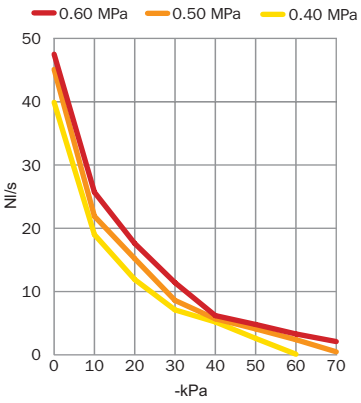
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	10–14
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.6

VACUUM FLOW

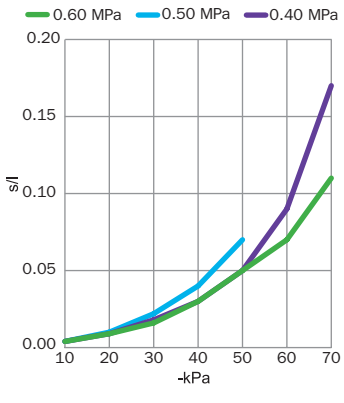
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	14	47.5	25.7	17.6	11.4	6.2	4.8	3.3	2.1	75
0.5	12	45.1	21.9	15.2	8.6	5.7	4.1	2.4	0.48	71
0.4	10	39.9	19.0	11.9	7.1	5.2	2.6	0.1	–	61

EVACUATION TIME

Feed pressure	Air consumption	Evacuation time (s/l) at different vacuum levels (-kPa)							Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	-kPa
0.6	14	0.004	0.009	0.016	0.03	0.05	0.07	0.11	75
0.5	12	0.004	0.009	0.018	0.03	0.05	0.09	0.17	71
0.4	10	0.004	0.01	0.022	0.04	0.07	–	–	61



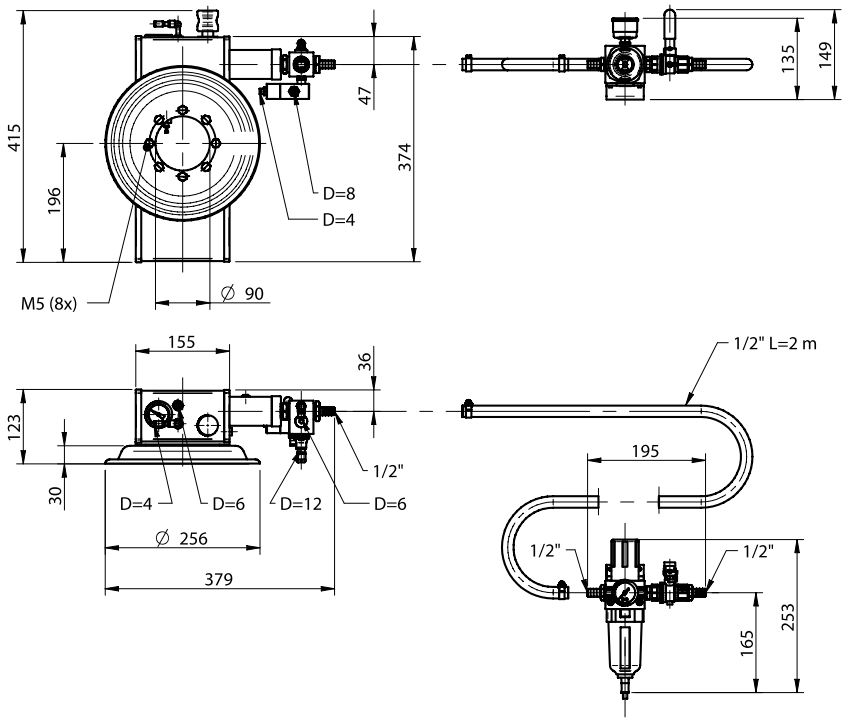
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L200	0103878



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

MAXI L400

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

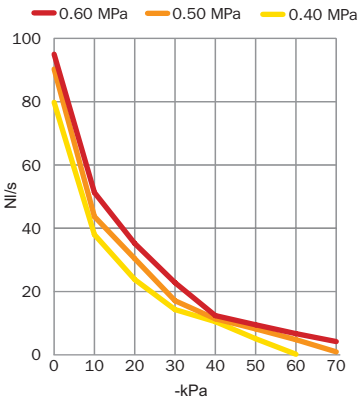
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.7

VACUUM FLOW

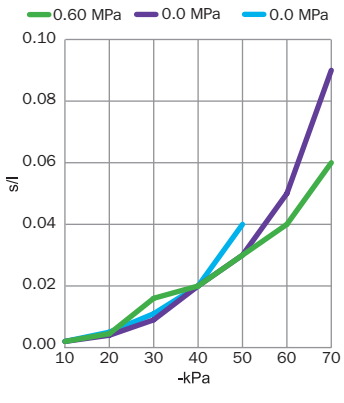
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	28	95.0	51.3	35.2	22.8	12.4	9.5	6.7	4.2	75
0.5	24	90.3	43.7	30.4	17.1	11.4	8.2	4.8	0.95	71
0.4	20	79.8	38.0	23.8	14.3	10.5	5.1	0.19	–	61

EVACUATION TIME

Feed pressure	Air consumption	10	20	30	40	50	60	70	Max vacuum
MPa	Nl/s								-kPa
0.6	28	0.002	0.0045	0.016	0.02	0.03	0.04	0.06	75
0.5	24	0.002	0.004	0.009	0.02	0.03	0.05	0.09	71
0.4	20	0.002	0.005	0.011	0.02	0.04	–	–	61



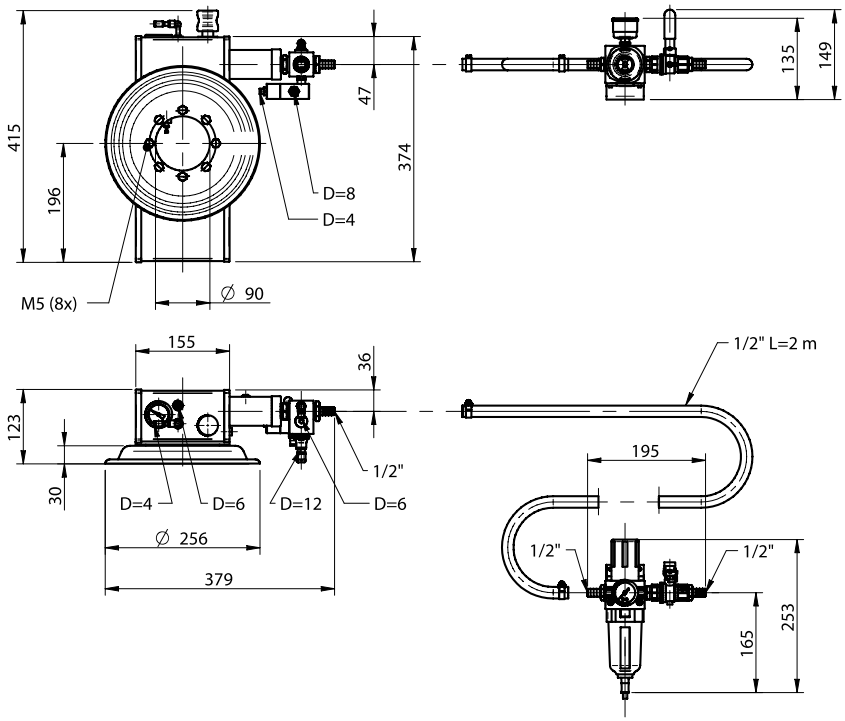
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L400	0103879



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

21/16 D=32 TANGENTIAL CONNECTION

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- Standard connection.

TECHNICAL DATA

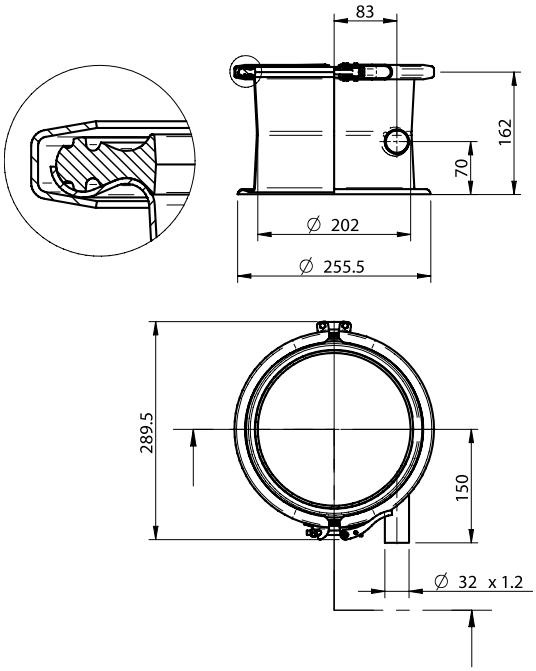
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	2.1

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104498/1	0104498/2
Material		NBR	Q
Weight	kg	2.03	2.04

ORDERING INFORMATION

Description	Art. No.
Connection unit 21/16 D=32 tang NBR	0104498/1
Connection unit 21/16 D=32 tang Q	0104498/2



21/16 D=51 TANGENTIAL CONNECTION

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- Standard connection.

TECHNICAL DATA

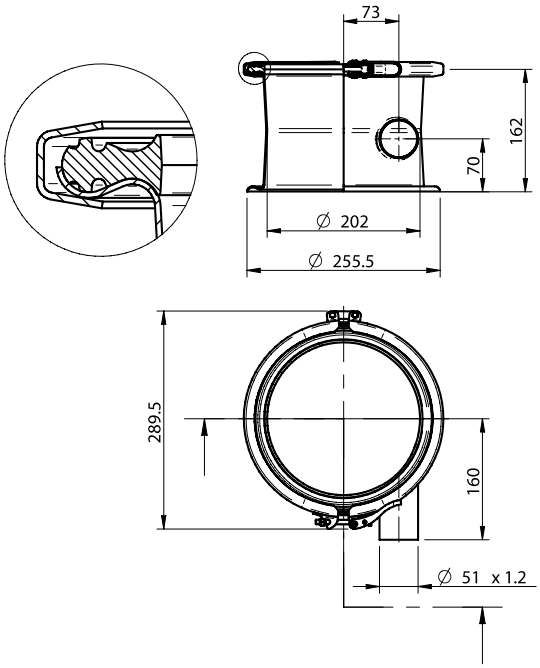
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	2.1

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104514/1	0104514/2
Material		NBR	Q
Weight	kg	2.06	2.7

ORDERING INFORMATION

Description	Art. No.
Connection unit 21/16 D=51 tang NBR	0104514/1
Connection unit 21/16 D=51 tang Q	0104514/2



21/16 D=32 TANGENTIAL CONNECTION 3-A

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- 3-A connection.

TECHNICAL DATA

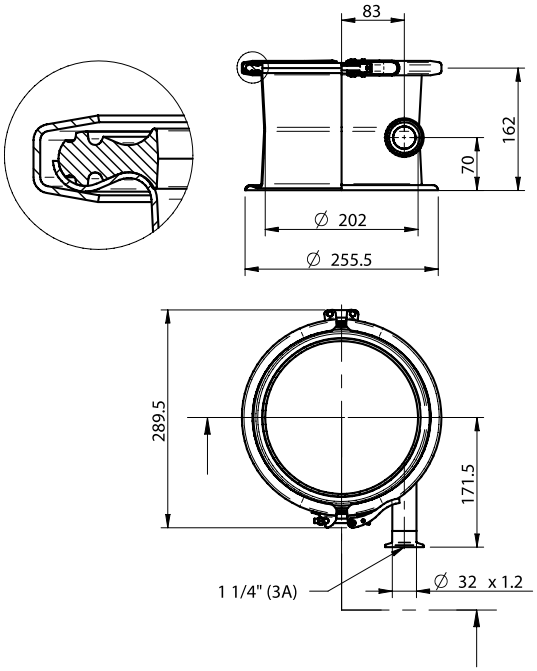
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	2.1

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106113/1	0106113/2
Material		NBR	Q
Weight	kg	2.09	2.09

ORDERING INFORMATION

Description	Art. No.
Connection unit 21/16 D=32 tang 3-A, NBR	0106113/1
Connection unit 21/16 D=32 tang 3-A, Q	0106113/2



21/16 D=51 TANGENTIAL CONNECTION 3-A

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- 3-A connection.

TECHNICAL DATA

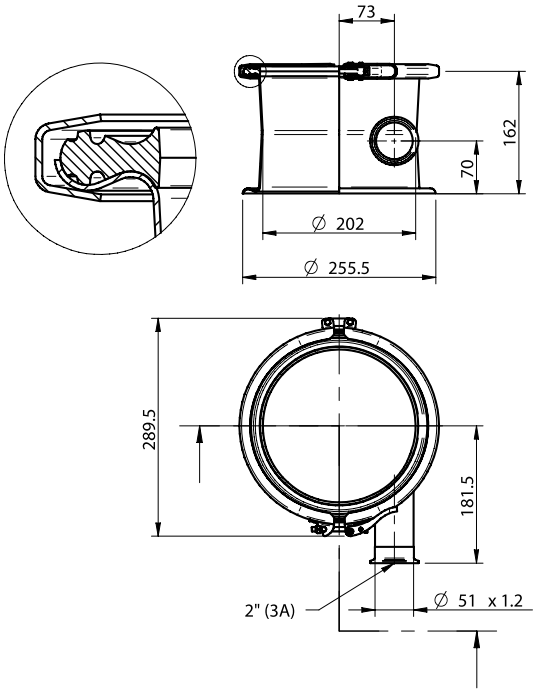
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	2.1

TECHNICAL DATA, SPECIFIC

Description	Value	Unit	
		0106114/1	0106114/2
Material		NBR	Q
Weight	kg	2.14	2.14

ORDERING INFORMATION

Description	Art. No.
Connection unit 21/16 D=51 tang 3-A NBR	0106114/1
Connection unit 21/16 D=51 tang 3-A Q	0106114/2



21/16 WITH BRACKETS AND ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in stainless steel.

TECHNICAL DATA

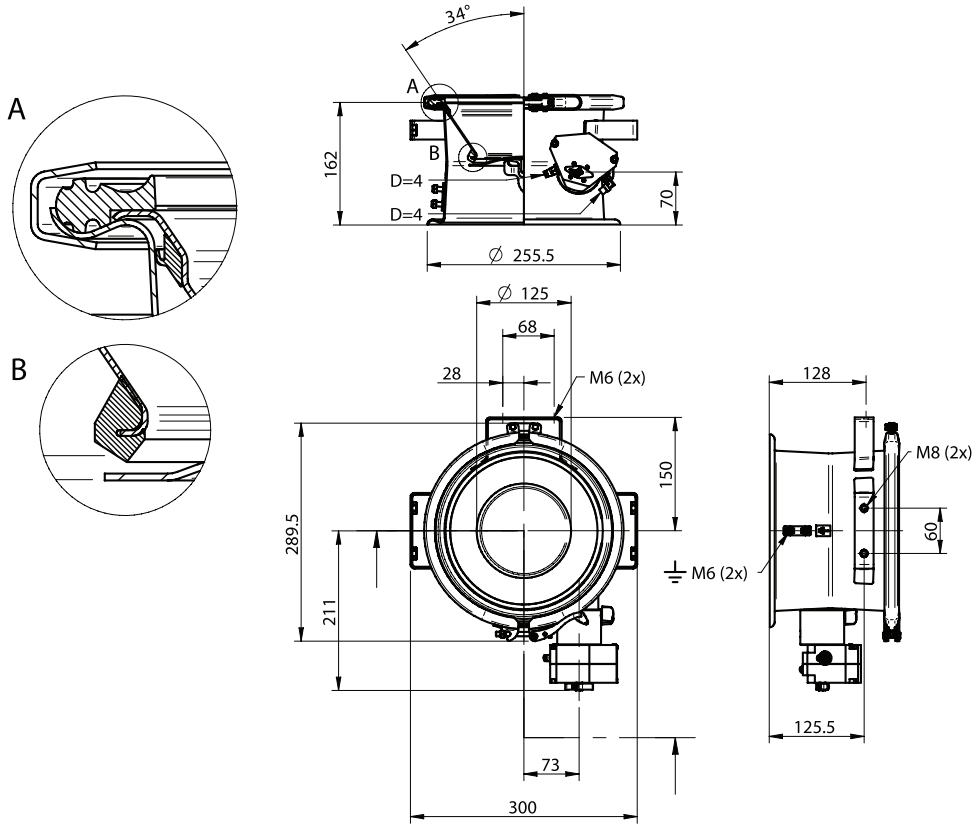
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L
Temperature range	°C	0–60
Material batch volume	l	1.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0117448	0117449
Material		NBR	Q
Weight	kg	5.50	5.51

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit/module 21/16, brackets, stainless steel, NBR	0117448
Bottom valve unit/module 21/16, brackets, stainless steel, Q	0117449



21/16 WITH BRACKETS AND ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in epoxy-coated aluminium.

TECHNICAL DATA

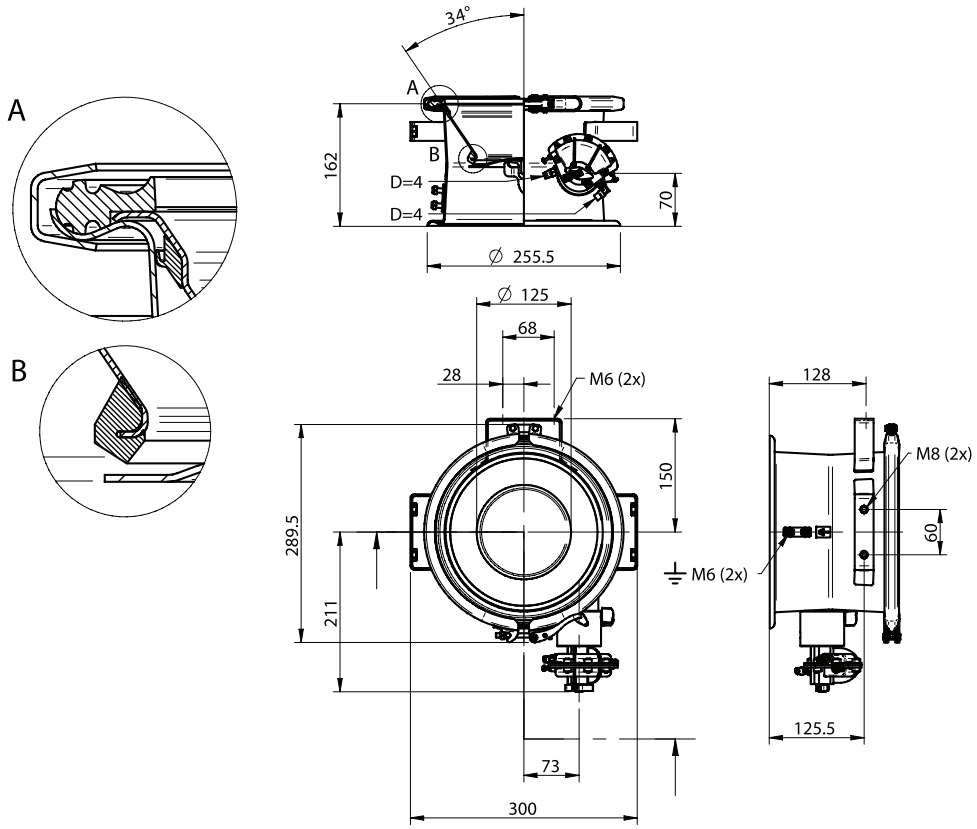
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Zn, EP
Temperature range	°C	0–60
Material batch volume	l	1.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0117446	0117447
Material		NBR	Q
Weight	kg	4.56	4.57

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit/module 21/16, brackets, aluminium, NBR	0117446
Bottom valve unit/module 21/16, brackets, aluminium, Q	0117447



21/16 WITH BRACKETS, FLUIDISATION AND ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in stainless steel.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

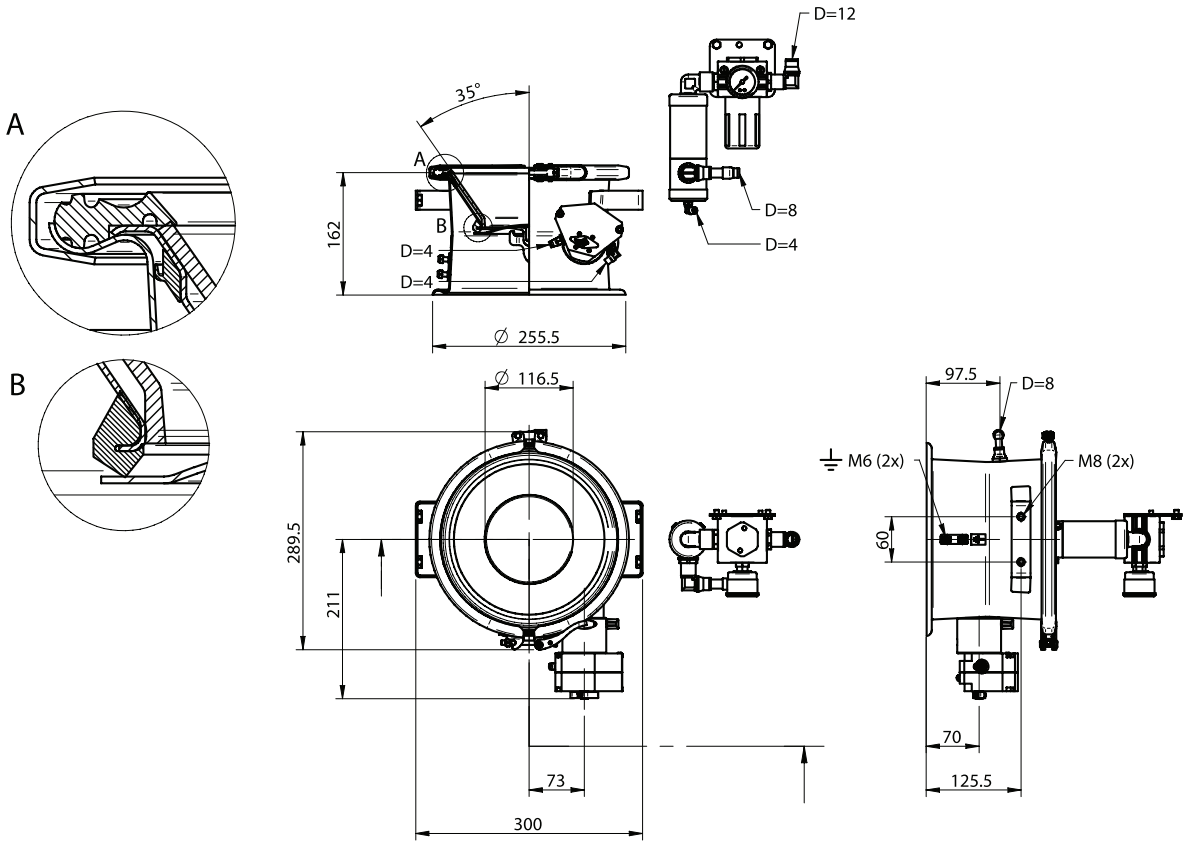
Description	Unit	Value
Feed pressure max	MPa	0.7
Feed pressure min, fluidization	MPa	0.05
Feed pressure max, fluidization	MPa	0.15
Air consumption min	Nl/s	3
Air consumption max	Nl/s	6
Material		ASTM 316L, PE
Temperature range	°C	0–60
Material batch volume	l	1.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0117444	0117445
Material		NBR, C	Q
Weight	kg	6.56	6.57

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit/module 21/16, brackets, stainless steel, fluid, NBR	0117457
Bottom valve unit/module 21/16, brackets, stainless steel, fluid, Q	0117458



21/16 WITH BRACKETS, FLUIDISATION AND ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in epoxy-coated aluminium.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

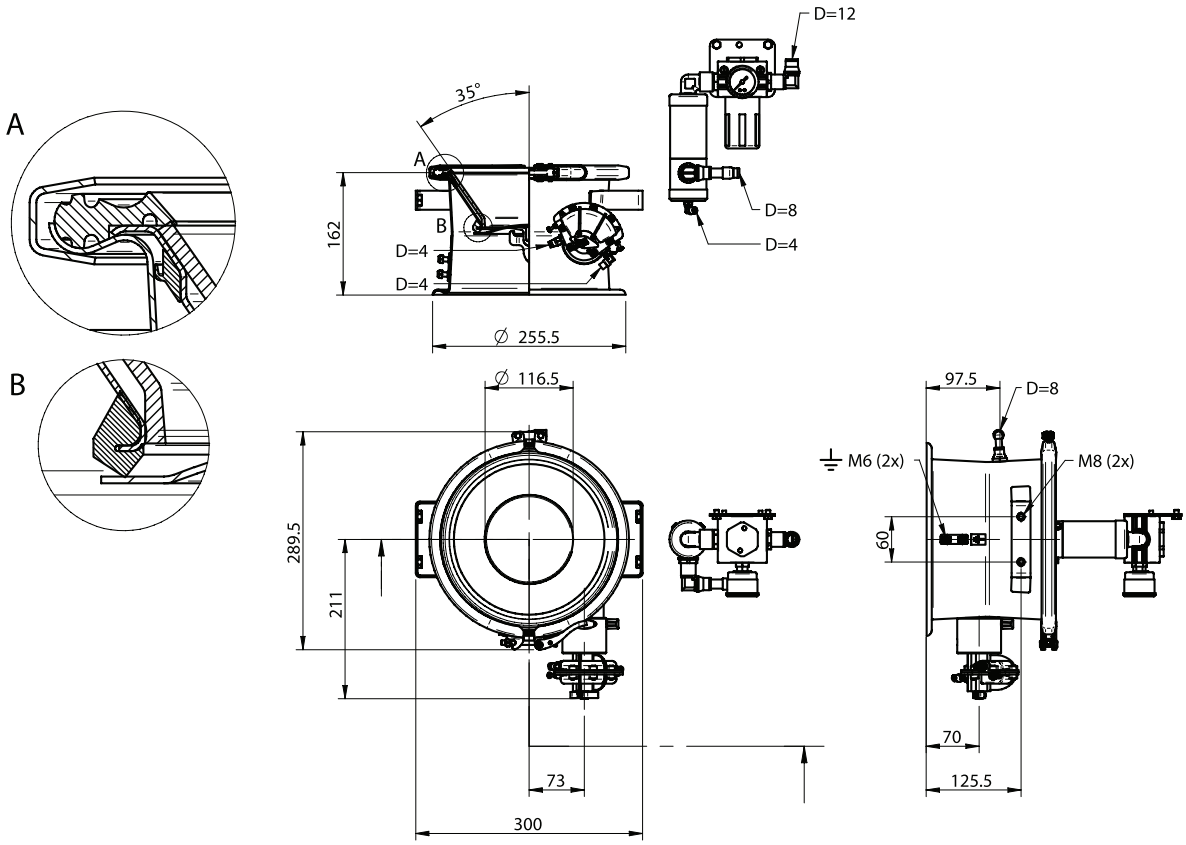
Description	Unit	Value
Feed pressure max	MPa	0.7
Feed pressure min, fluidization	MPa	0.05
Feed pressure max, fluidization	MPa	0.15
Air consumption min	Nl/s	3
Air consumption max	Nl/s	6
Material		ASTM 316L, Zn, EP, PE
Temperature range	°C	0–60
Material batch volume	l	1.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0117457	0117458
Material		NBR, C	Q
Weight	kg	6.56	6.57

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit/module 21/16, brackets, aluminium, fluid, NBR	0117444
Bottom valve unit/module 21/16, brackets, aluminium, fluid, Q	0117445



21/16 WITH ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in stainless steel.

TECHNICAL DATA

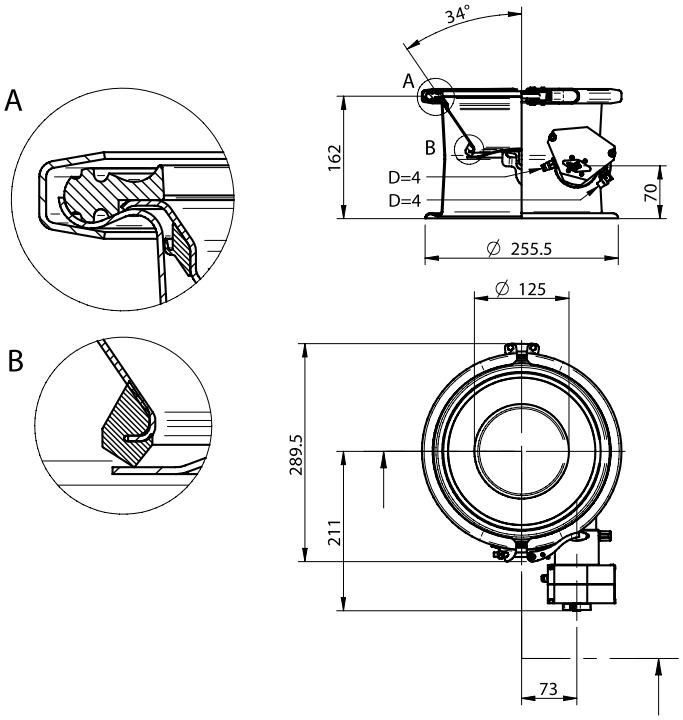
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L
Temperature range	°C	0–60
Material batch volume	l	1.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106787/1	0106787/2
Material		NBR	Q
Weight	kg	5.08	5.09

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 21/16 SS NBR	0106787/1
Bottom valve unit 21/16 SS Q	0106787/2



21/16 WITH ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in epoxy-coated aluminium.

TECHNICAL DATA

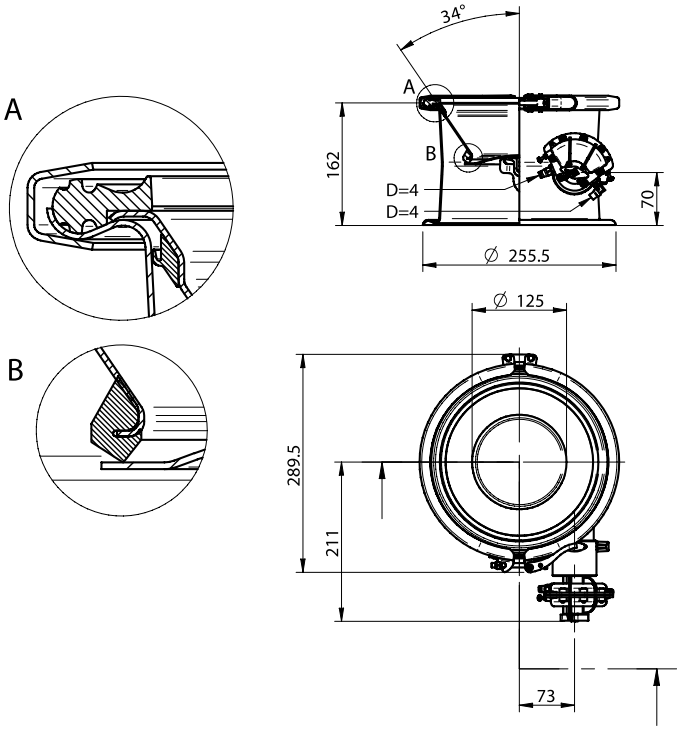
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Zn, EP
Temperature range	°C	0–60
Material batch volume	l	1.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106786/1	0106786/2
Material		NBR	Q
Weight	kg	4.14	4.15

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 21/16 Al NBR	0106786/1
Bottom valve unit 21/16 Al Q	0106786/2



21/16 WITH FLUIDISATION AND ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in stainless steel.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

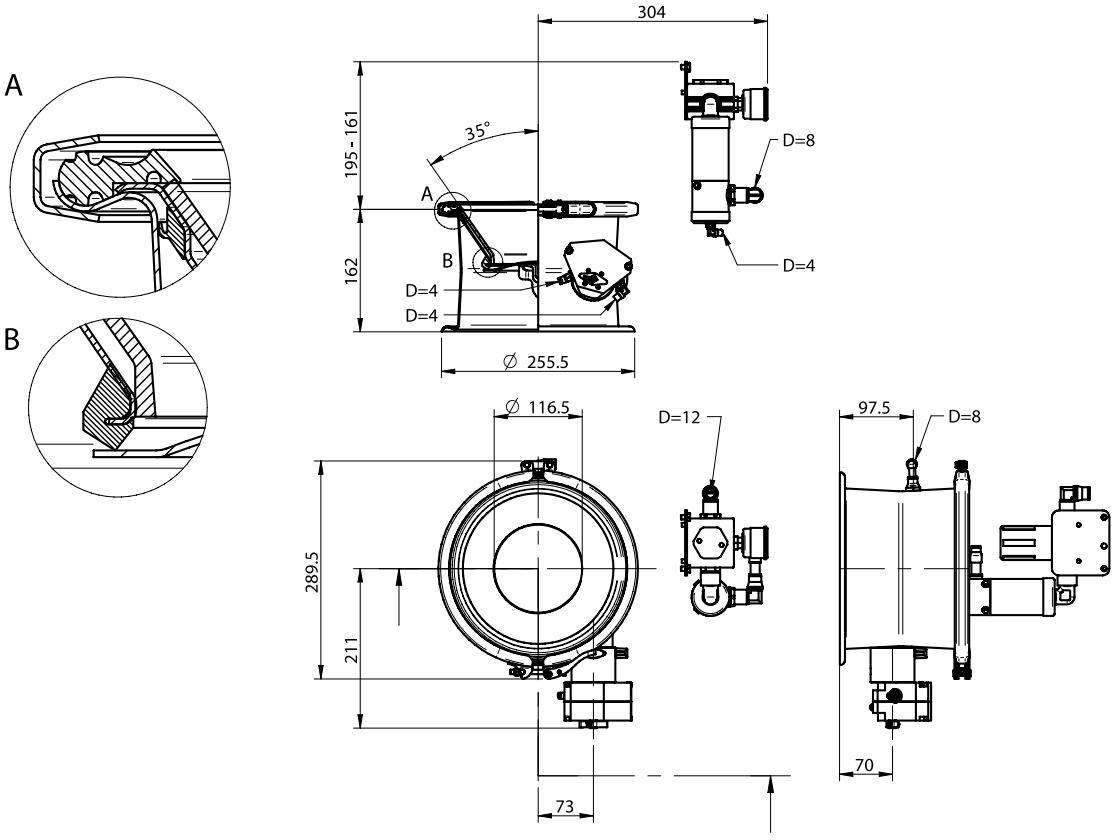
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption, min	Nl/s	3.0
Air consumption, max	Nl/s	6.0
Material		ASTM 316L, PE
Temperature range	°C	0–60
Material batch volume	l	1.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106591/1	0106591/2
Material		NBR, C	Q
Weight	kg	7.21	7.22

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 21/16 SS, fluid, NBR	0106591/1
Bottom valve unit 21/16 SS, fluid, Q	0106591/2



21/16 WITH FLUIDISATION AND ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in epoxy-coated aluminium.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

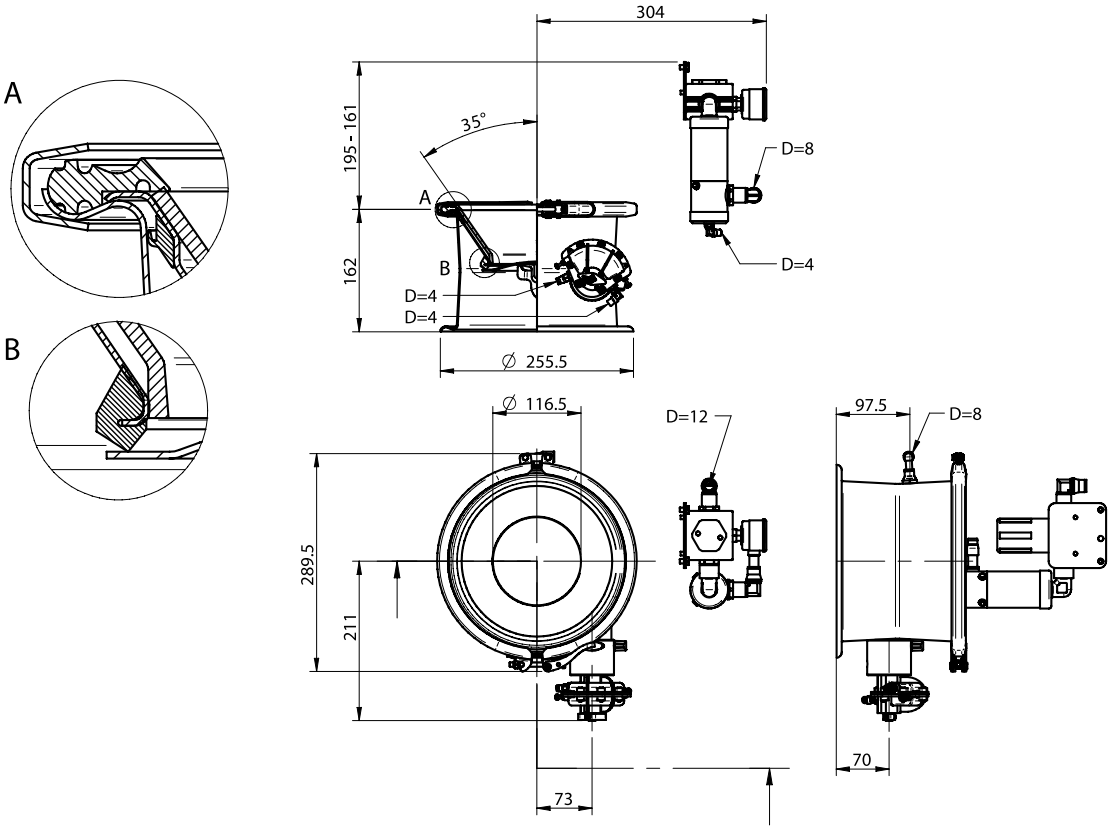
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption,	Nl/s	3.0
Air consumption	Nl/s	6.0
Material		ASTM 316L, Zn, EP, PE
Temperature range	°C	0–60
Material batch volume	l	1.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106785/1	0106785/2
Material		NBR, C	Q
Weight	kg	6.27	6.28

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 21/16 Al fluid NBR	0106785/1
Bottom valve unit 21/16 Al fluid Q	0106785/2



BOTTOM VALVE MODULE 33/19 COMPLETE WITH ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Used together with conveyor C21 in order to increase the area of the bottom lid.
- Reduces the use of fluidisation with conveyor C21 when the cone angle is reduced.

TECHNICAL DATA

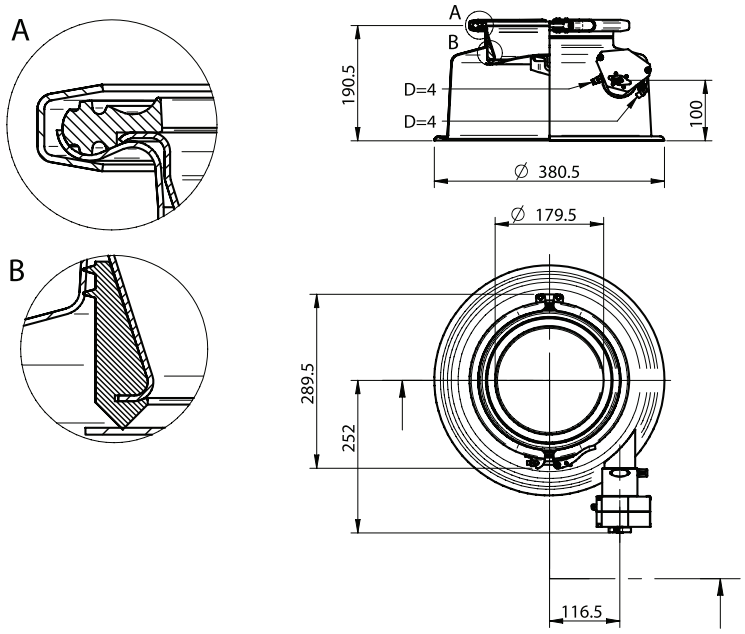
Description	Unit	Value
Material		ASTM 316L
Volume	l	1.7
Finish	Ra	≤0.8

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104026/1	0104026/2
Material		NBR	Q
Weight	kg	6.4	6.4

ORDERING INFORMATION

Description	Art. No.
Bottom valve module 33/19 SS cpl NBR	0104026/1
Bottom valve module 33/19 SS cpl Q	0104026/2



BOTTOM VALVE MODULE 33/19 COMPLETE WITH ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Used together with conveyor C21 in order to increase the area of the bottom lid.
- Reduces the use of fluidisation with conveyor C21 when the cone angle is reduced.

TECHNICAL DATA

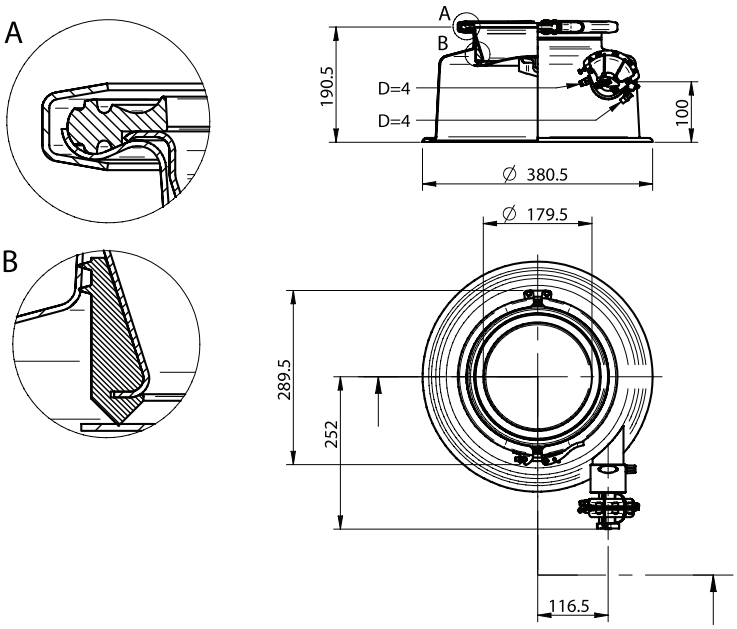
Description	Unit	Value
Material		ASTM 316L, Zn, EP
Volume	l	1.7
Finish	Ra	≤0.8

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104028/1	0104028/2
Material		NBR	Q
Weight	kg	5.37	5.37

ORDERING INFORMATION

Description	Art. No.
Bottom valve module 33/19 Al cpl, NBR	0104028/1
Bottom valve module 33/19 Al cpl, Q	0104028/2



3302 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

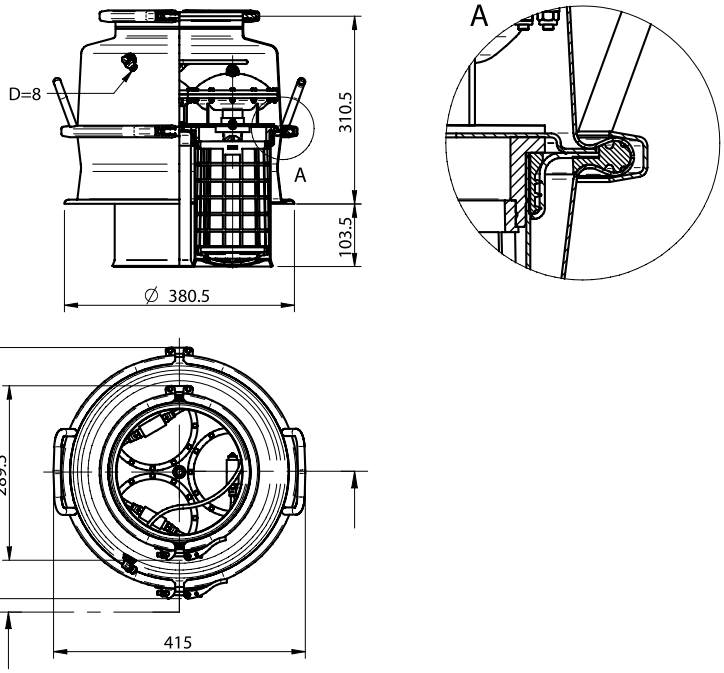
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.26
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103887/1	0103887/2
Material		NBR, C	Q
Weight	kg	11.9	11.9

ORDERING INFORMATION

Description	Art. No.
Filter unit 3302 textile filter int, NBR	0103887/1
Filter unit 3302 textile filter int, Q	0103887/2



3304 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

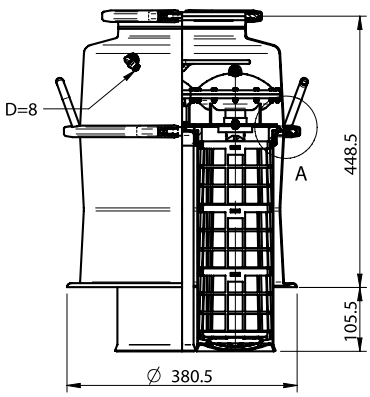
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.42
Min particle size	µm	5.0

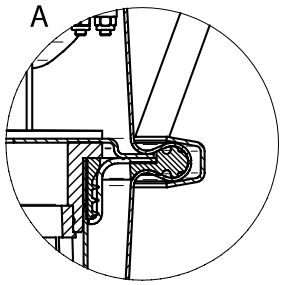
TECHNICAL DATA, SPECIFIC

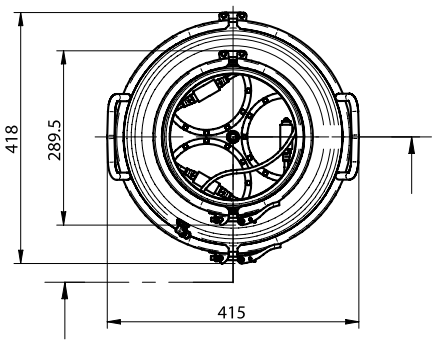
Description	Unit	Value	
		0103888/1	0103888/2
Material		NBR, C	Q
Weight	kg	14.0	14.0

ORDERING INFORMATION

Description	Art. No.
Filter unit 3304 textile filter int, NBR	0103888/1
Filter unit 3304 textile filter int, Q	0103888/2







3306 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

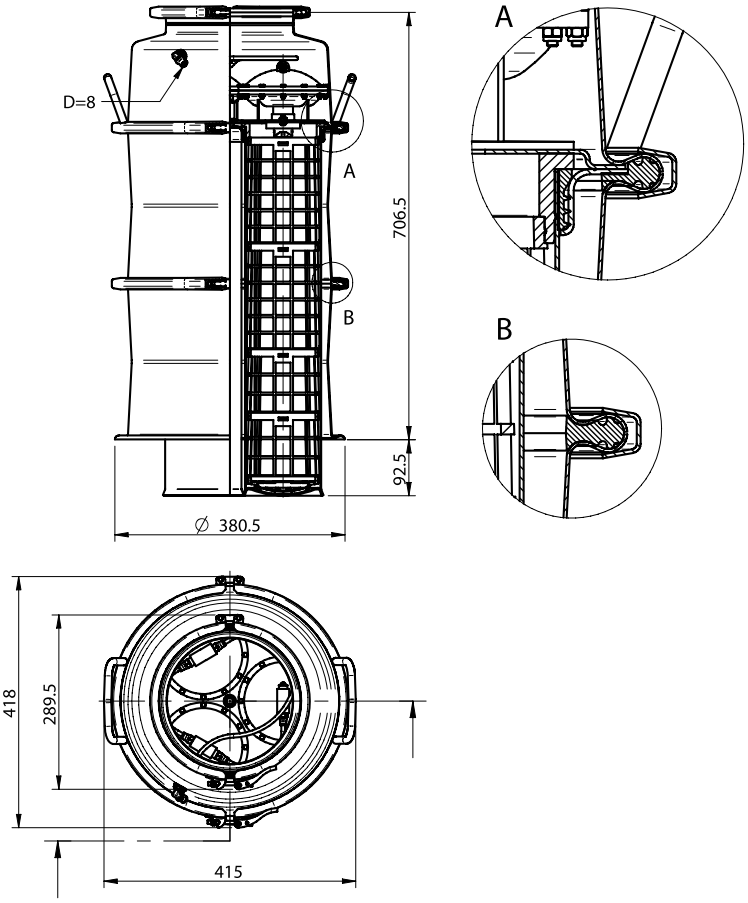
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, ePTFE, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.70
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103889/1	0103889/2
Material		NBR, C	Q
Weight	kg	18.9	19.0

ORDERING INFORMATION

Description	Art. No.
Filter unit 3306 textile filter int, NBR	0103889/1
Filter unit 3306 textile filter int, Q	0103889/2



3302 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

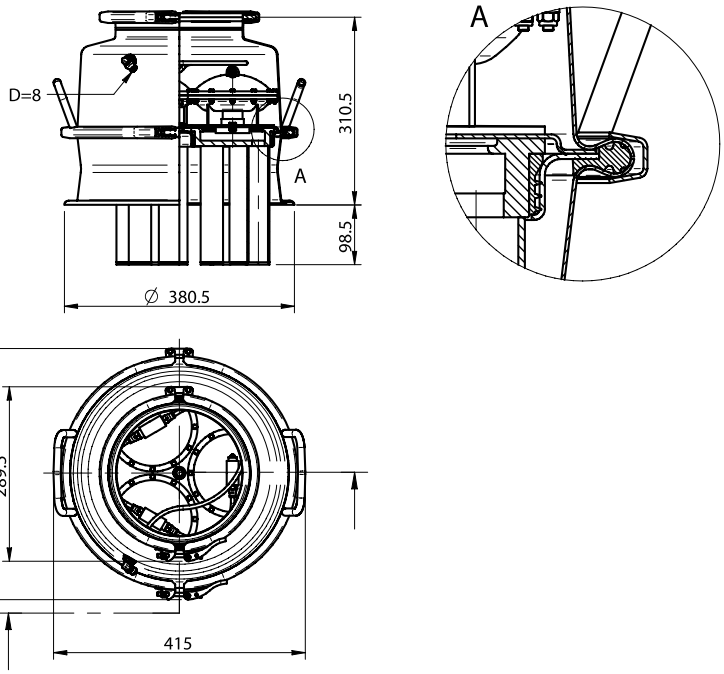
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m²	0.33
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103890/1	0103890/2
Material		NBR, C	Q
Weight	kg	11.4	11.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 3302 Gore Sinbran int, NBR	0103890/1
Filter unit 3302 Gore Sinbran int, Q	0103890/2



3304 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

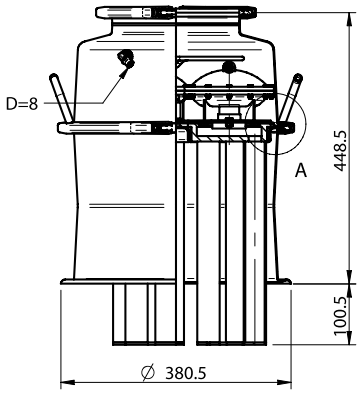
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	0.57
Min particle size	µm	0.5

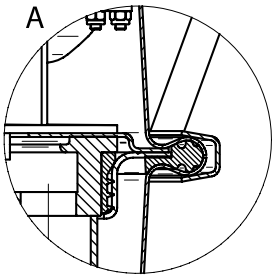
TECHNICAL DATA, SPECIFIC

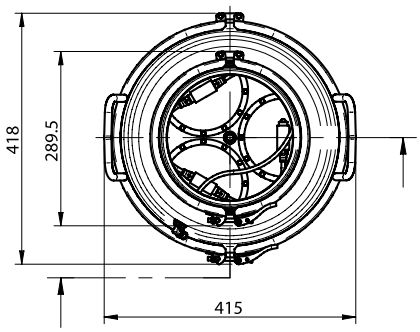
Description	Unit	Value	
		0103891/1	0103891/2
Material		NBR, C	Q
Weight	kg	13.19	13.24

ORDERING INFORMATION

Description	Art. No.
Filter unit 3304 Gore Sinbran int, NBR	0103891/1
Filter unit 3304 Gore Sinbran int, Q	0103891/2







3306 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

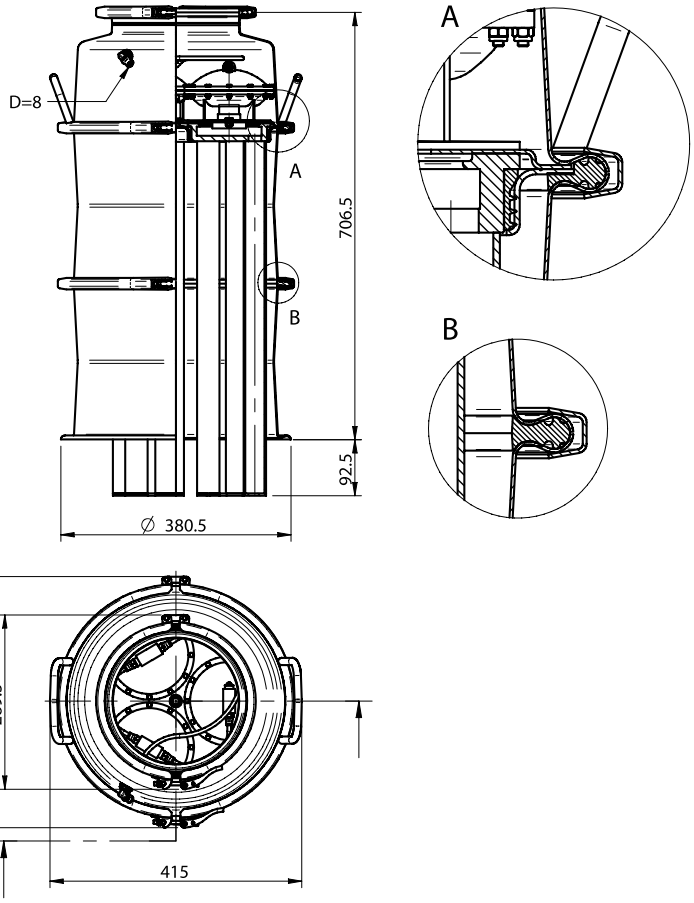
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	1.02
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103892/1	0103892/2
Material		NBR, C	Q
Weight	kg	17.8	17.8

ORDERING INFORMATION

Description	Art. No.
Filter unit 3306 Gore Sinbran int, NBR	0103892/1
Filter unit 3306 Gore Sinbran int, Q	0103892/2



3302 WITH GORE SINBRAN FILTER AND EXTERNAL FILTER SHOCK

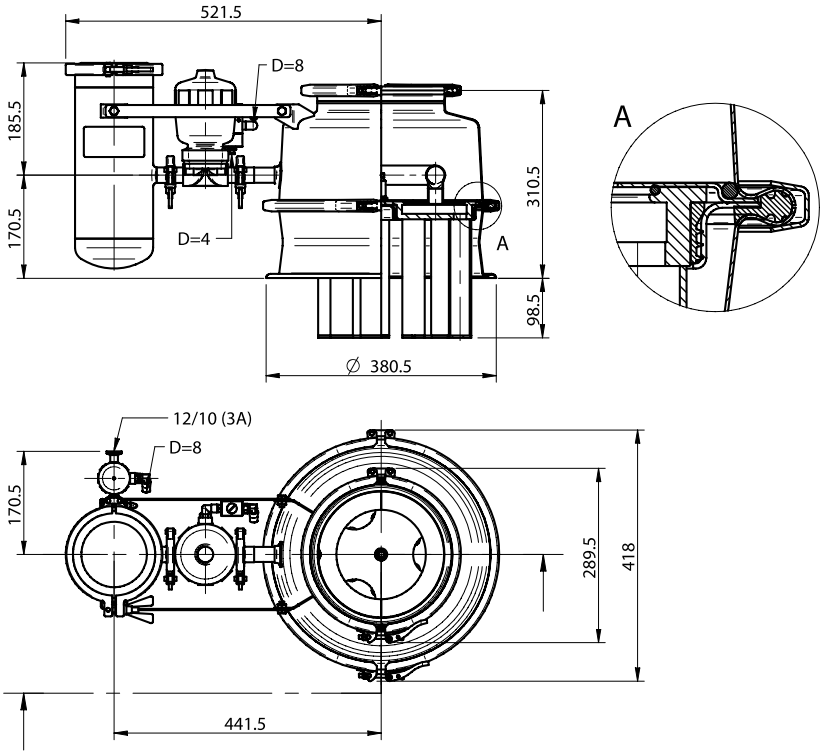
- Separates the carrying air from the conveyed product.
- Hygienic design.
- The sealings and white rod filter fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Q, PTFE, PE
Temperature range	°C	0–60
Weight	kg	18.5
Filter area	m^2	0.33
Min particle size	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 3302 Gore Sinbran ext, Q	0103896/2



3304 WITH GORE SINBRAN FILTER AND EXTERNAL FILTER SHOCK

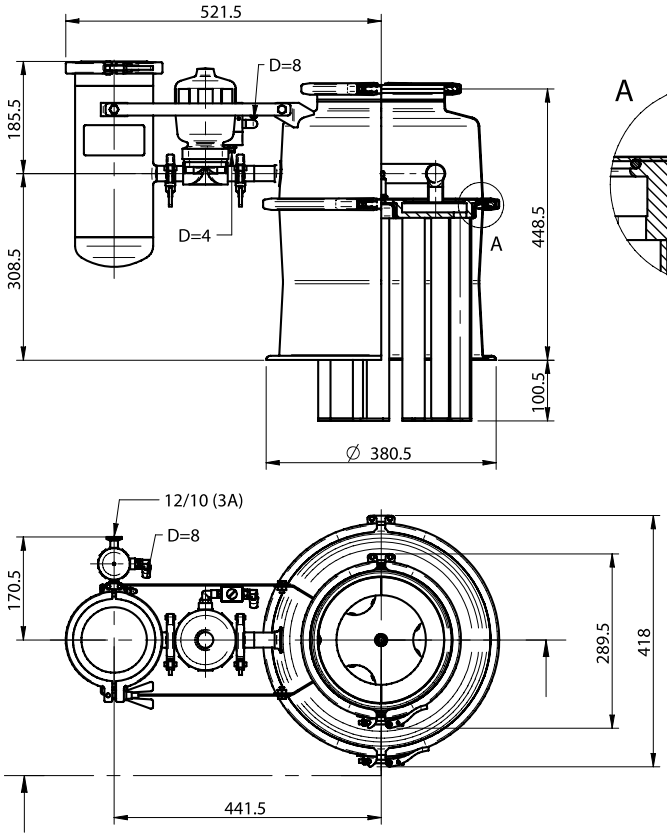
- Separates the carrying air from the conveyed product.
- Hygienic design.
- The sealings and white rod filter fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Q, PTFE, PE
Temperature range	°C	0–60
Weight	kg	19.8
Filter area	m^2	0.57
Min particle size	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 3304 Gore Sinbran ext, Q	0103897/2



3306 WITH GORE SINBRAN FILTER AND EXTERNAL FILTER SHOCK

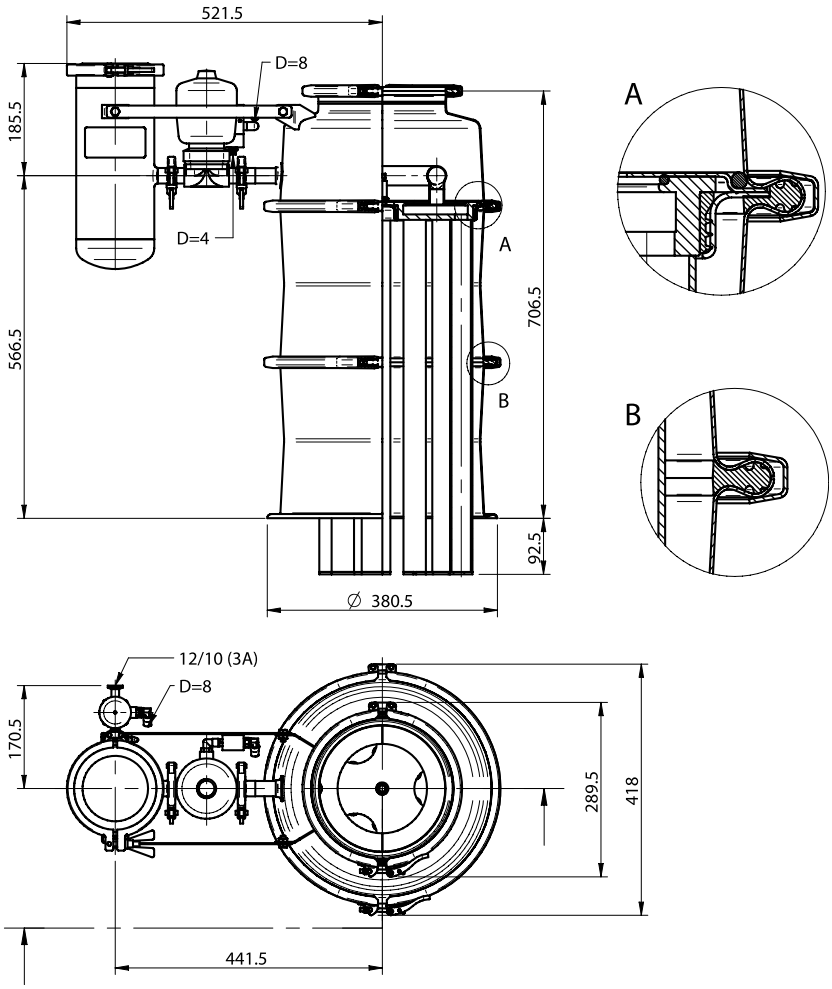
- Separates the carrying air from the conveyed product.
- Hygienic design.
- The sealings and white rod filter fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Q, PTFE, PE
Temperature range	°C	0–60
Weight	kg	24.4
Filter area	m^2	1.02
Min particle size	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 3306 Gore Sinbran ext, Q	0103898/2



MAXI L200

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

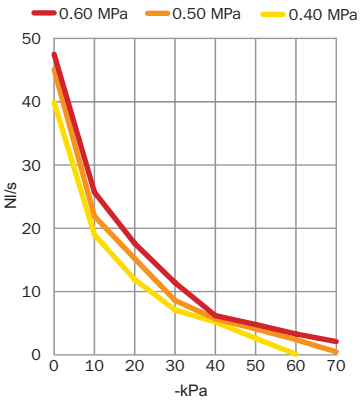
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	10–14
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.6

VACUUM FLOW

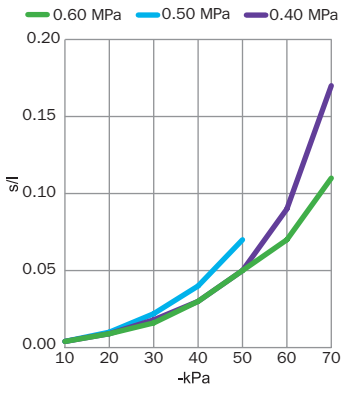
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	14	47.5	25.7	17.6	11.4	6.2	4.8	3.3	2.1	75
0.5	12	45.1	21.9	15.2	8.6	5.7	4.1	2.4	0.48	71
0.4	10	39.9	19.0	11.9	7.1	5.2	2.6	0.1	–	61

EVACUATION TIME

Feed pressure	Air consumption	Evacuation time (s/l) at different vacuum levels (-kPa)							Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	-kPa
0.6	14	0.004	0.009	0.016	0.03	0.05	0.07	0.11	75
0.5	12	0.004	0.009	0.018	0.03	0.05	0.09	0.17	71
0.4	10	0.004	0.01	0.022	0.04	0.07	–	–	61



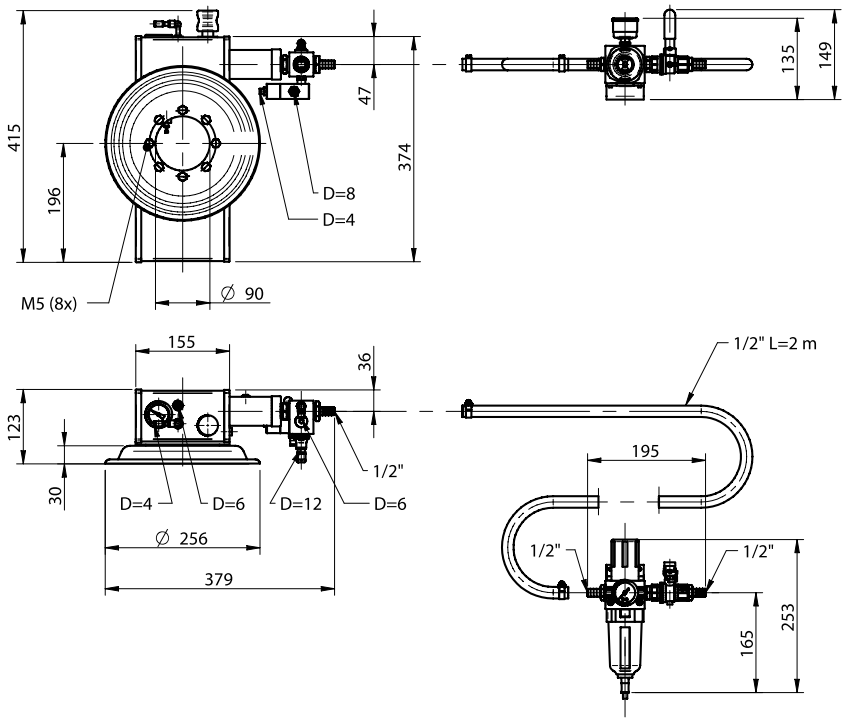
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L200	0103878



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

MAXI L400

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

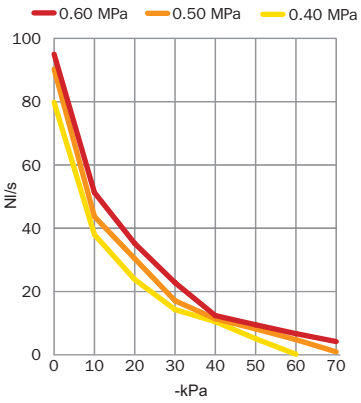
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.7

VACUUM FLOW

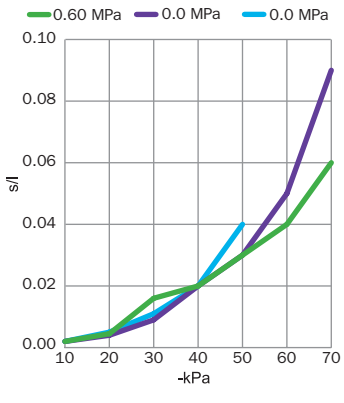
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	28	95.0	51.3	35.2	22.8	12.4	9.5	6.7	4.2	75
0.5	24	90.3	43.7	30.4	17.1	11.4	8.2	4.8	0.95	71
0.4	20	79.8	38.0	23.8	14.3	10.5	5.1	0.19	–	61

EVACUATION TIME

Feed pressure	Air consumption	10	20	30	40	50	60	70	Max vacuum
MPa	Nl/s								-kPa
0.6	28	0.002	0.0045	0.016	0.02	0.03	0.04	0.06	75
0.5	24	0.002	0.004	0.009	0.02	0.03	0.05	0.09	71
0.4	20	0.002	0.005	0.011	0.02	0.04	–	–	61



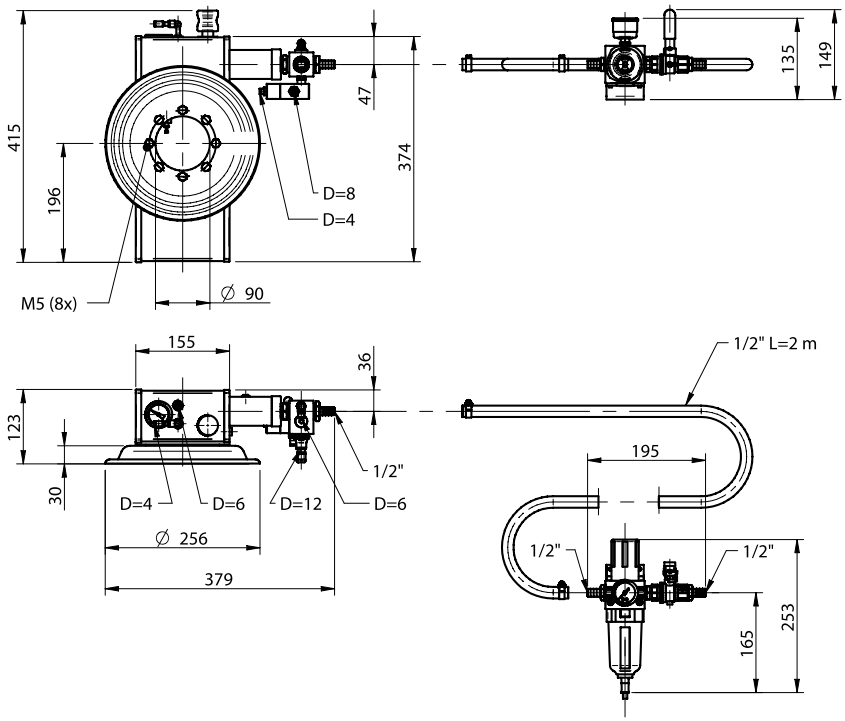
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L400	0103879



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

MAXI L600

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

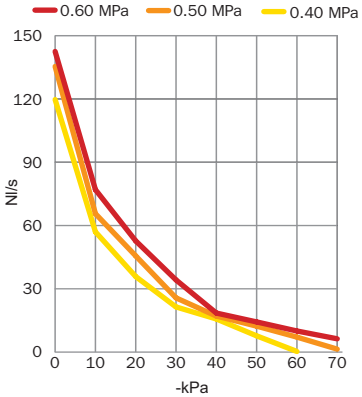
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	13.3

VACUUM FLOW

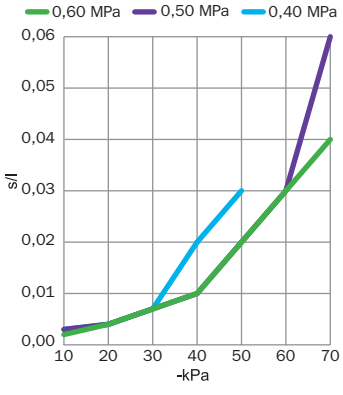
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum -kPa
		0	10	20	30	40	50	60	70	
0.6	42	142.5	77.0	52.7	34.2	18.5	14.3	10.0	6.3	75
0.5	36	135.4	65.6	45.6	25.7	17.1	12.3	7.1	1.4	71
0.4	30	119.7	57.0	35.8	21.4	15.7	7.7	0.3	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	42	0.002	0.004	0.007	0.01	0.02	0.03	0.04	75
0.5	36	0.003	0.004	0.007	0.01	0.02	0.03	0.06	71
0.4	30	0.003	0.004	0.007	0.02	0.03	–	–	61



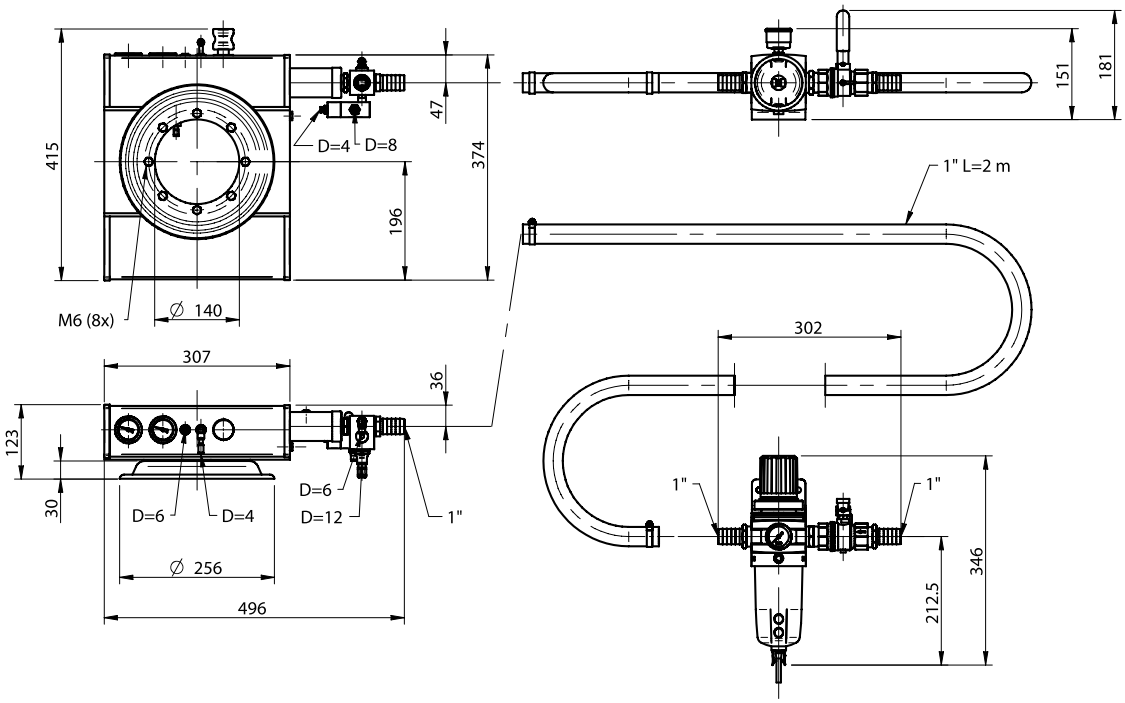
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L600	0103880



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapters L600-L800	3116018
Adapter Maxi L100-L1600	3102073

MAXI L800

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

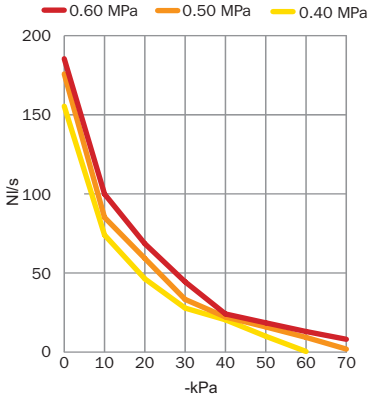
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	13.3

VACUUM FLOW

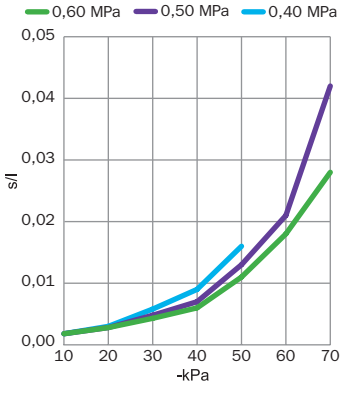
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa) 0	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	56	185.4	99.9	68.5	44.4	24.1	18.5	13.0	8.1	75
0.5	48	175.8	85.1	59.2	33.3	22.2	15.9	9.3	1.9	71
0.4	40	155.4	74.0	46.3	27.8	20.4	10.0	0.4	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	56	0.0018	0.0028	0.0043	0.006	0.011	0.018	0.028	75
0.5	48	0.0018	0.0028	0.0048	0.007	0.013	0.021	0.042	71
0.4	40	0.018	0.003	0.0058	0.009	0.016	–	–	61



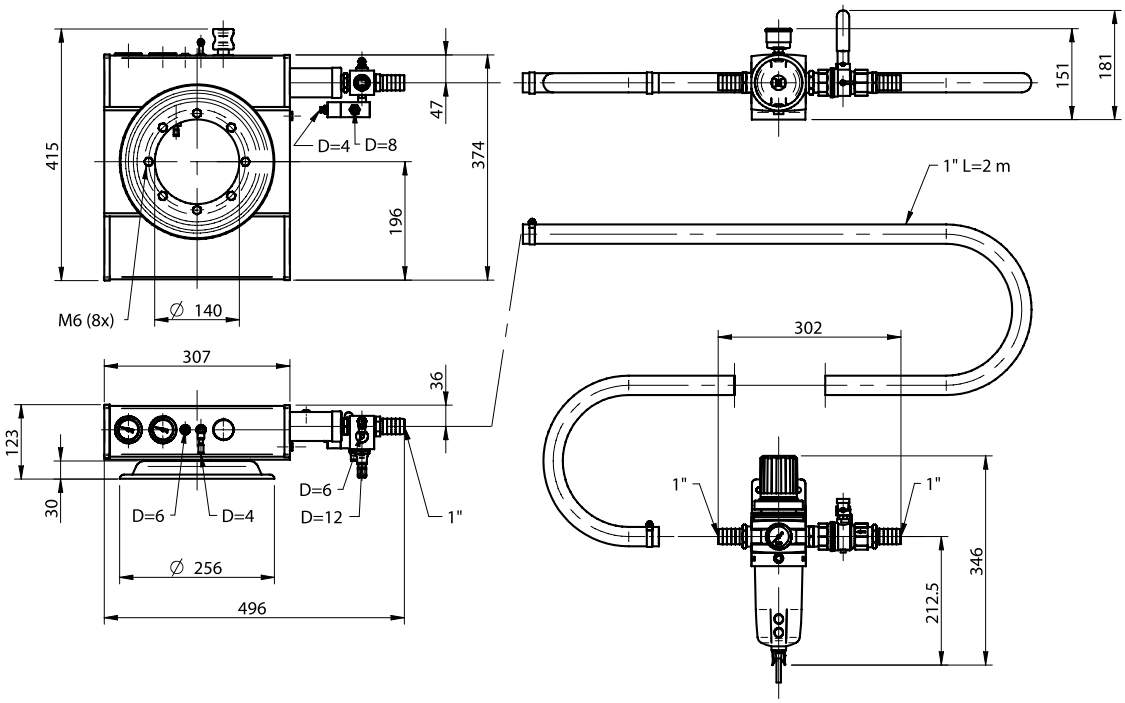
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L800	0103881



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapters L600-L800	3116018
Adapter Maxi L100-L1600	3102073

MAXI L1200

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

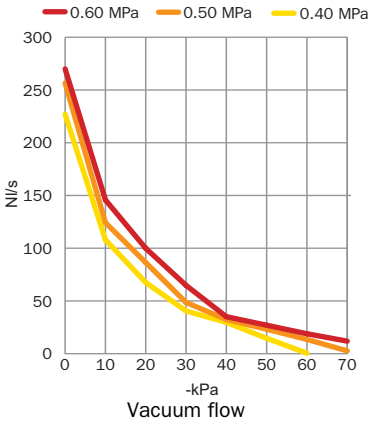
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	60–84
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	15.0

VACUUM FLOW

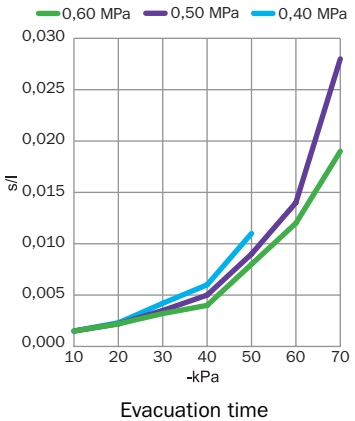
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa) 0	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	84	270.0	145.8	99.9	64.8	35.1	27.0	18.9	11.9	75
0.5	72	256.5	124.2	86.4	48.6	32.4	23.2	13.5	2.7	71
0.4	60	227	108	67.5	40.5	29.7	14.6	0.5	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	84	0.0015	0.0022	0.0032	0.004	0.008	0.012	0.019	75
0.5	72	0.0015	0.0022	0.0035	0.005	0.009	0.014	0.028	71
0.4	60	0.0015	0.0023	0.0042	0.006	0.011	–	–	61



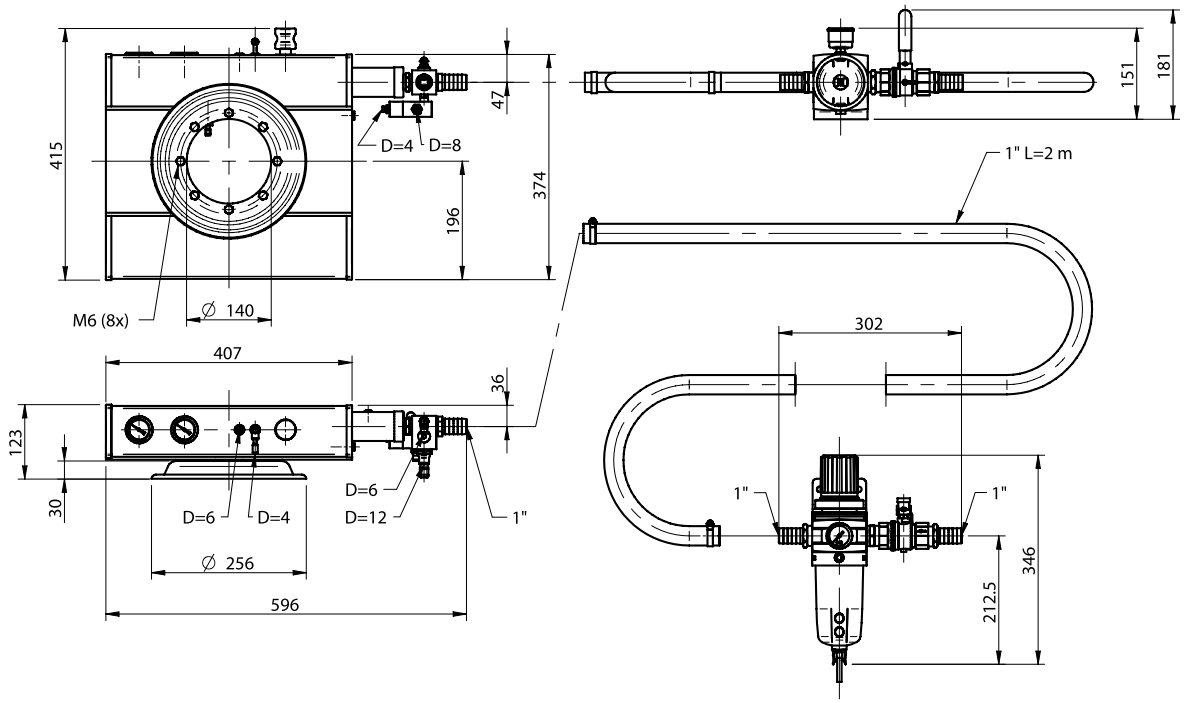
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L1200	0103882



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Central exhaust MLL1200	3116054
Adapter MAXI L100-L1600 cpl	3102073

33/26 D=76 TANGENTIAL CONNECTION WITH MOUNTING BRACKET

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- Standard connection.

TECHNICAL DATA

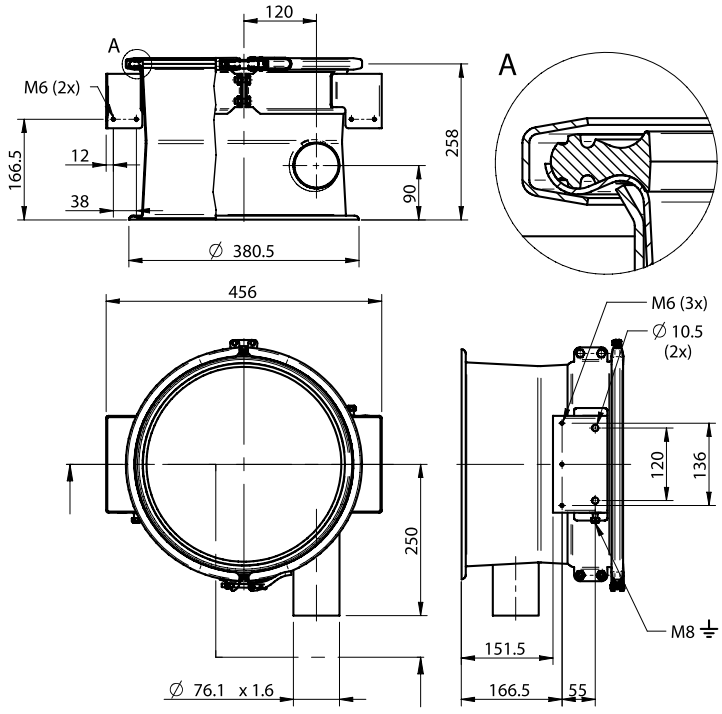
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	4.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103884/1	0103884/2
Material		NBR	Q
Weight	kg	6.50	6.54

ORDERING INFORMATION

Description	Art. No.
Connection unit 33/26 D=76 tang, NBR	0103884/1
Connection unit 33/26 D=76 tang, Q	0103884/2



33/26 D=76 TANGENTIAL CONNECTION WITH MOUNTING BRACKET 3-A

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- 3-A connection.

TECHNICAL DATA

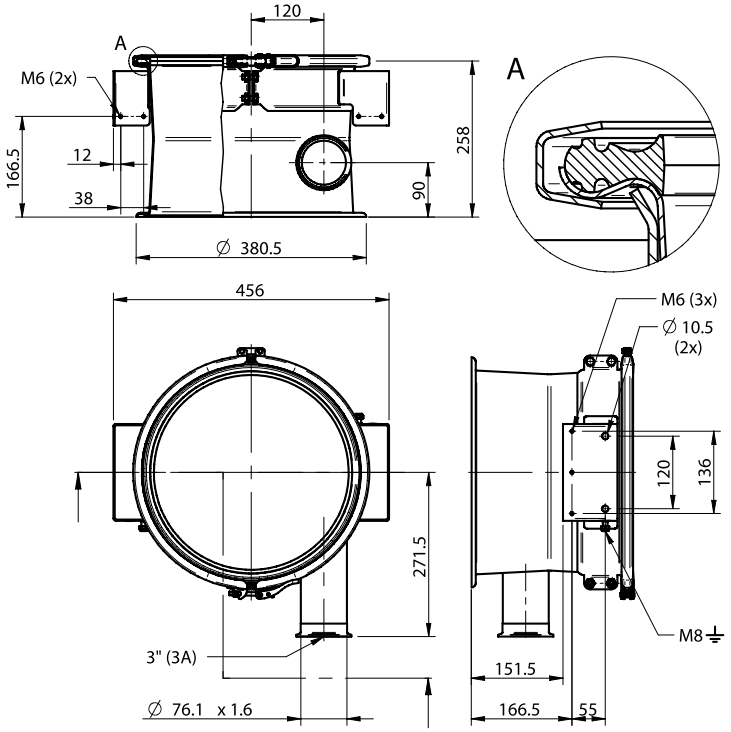
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	4.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103885/1	0103885/2
Material		NBR	Q
Weight	kg	7.00	7.00

ORDERING INFORMATION

Description	Art. No.
Connection unit 33/26 D=75 tang 3-A, NBR	0103885/1
Connection unit 33/26 D=75 tang 3-A, Q	0103885/2



33/34 WITH ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in stainless steel.

TECHNICAL DATA

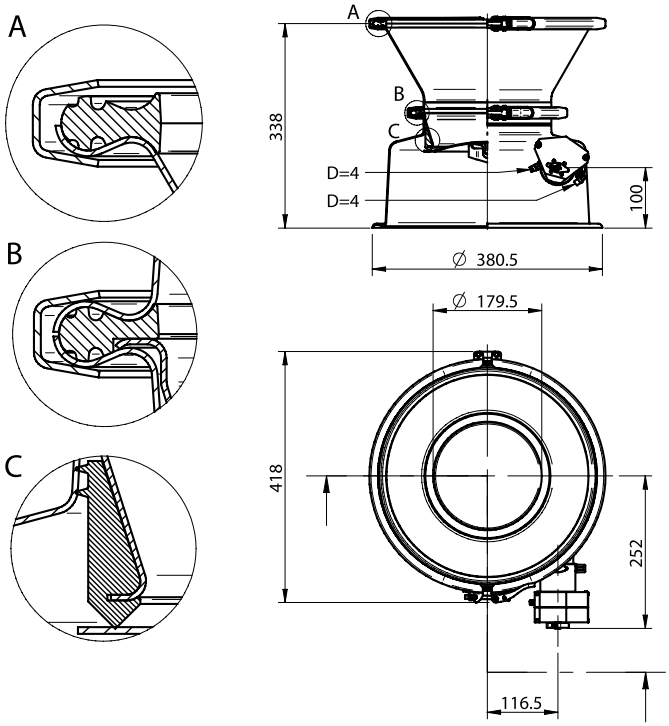
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L
Temperature range	°C	0–60
Material batch volume	l	9.8

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103907/1	0103907/2
Material		NBR	Q
Weight	kg	9.20	9.20

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 33/34 SS, NBR	0103907/1
Bottom valve unit 33/34 SS, Q	0103907/2



33/34 WITH ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in epoxy-coated aluminium.

TECHNICAL DATA

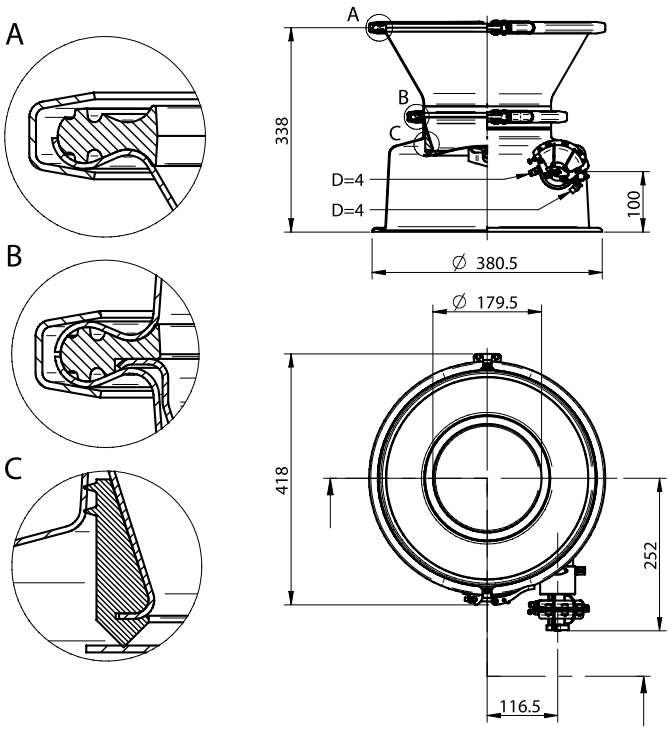
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Zn, EP
Temperature range	°C	0–60
Material batch volume	l	9.8

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103913/1	0103913/2
Material		NBR	Q
Weight	kg	8.00	8.00

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 33/34 Al NBR	0103913/1
Bottom valve unit 33/34 Al Q	0103913/2



33/34 WITH FLUIDISATION AND ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in stainless steel.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

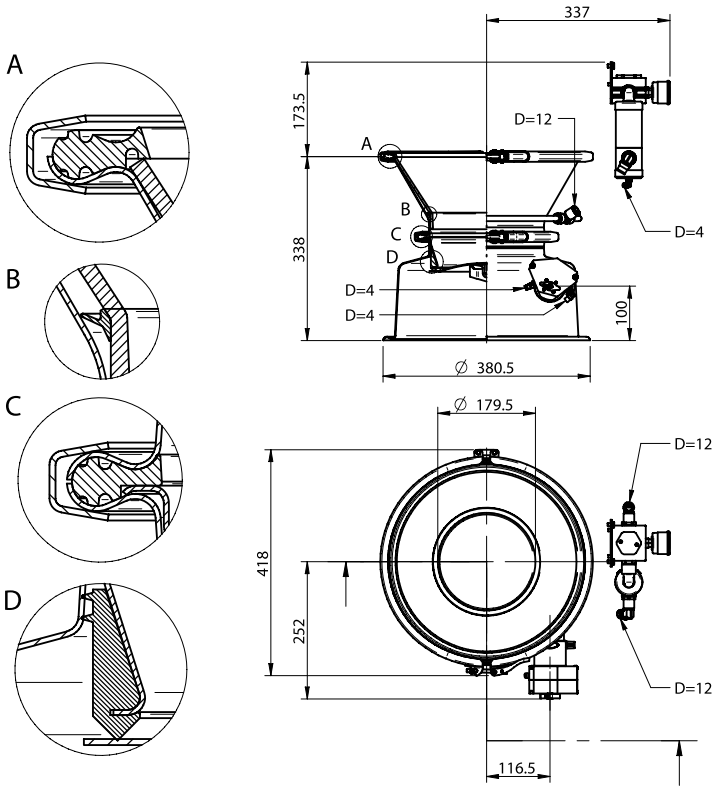
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption, min	Nl/s	6.0
Air consumption, max	Nl/s	12.0
Material		ASTM 316L, PE
Temperature range	C°	0–60
Material batch volume	l	9.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103909/1	0103909/2
Material		NBR, C	Q
Weight	kg	11.3	11.3

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 33/34 SS fluid NBR	0103909/1
Bottom valve unit 33/34 SS fluid Q	0103909/2



33/34 WITH FLUIDISATION AND ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in epoxy-coated aluminium.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

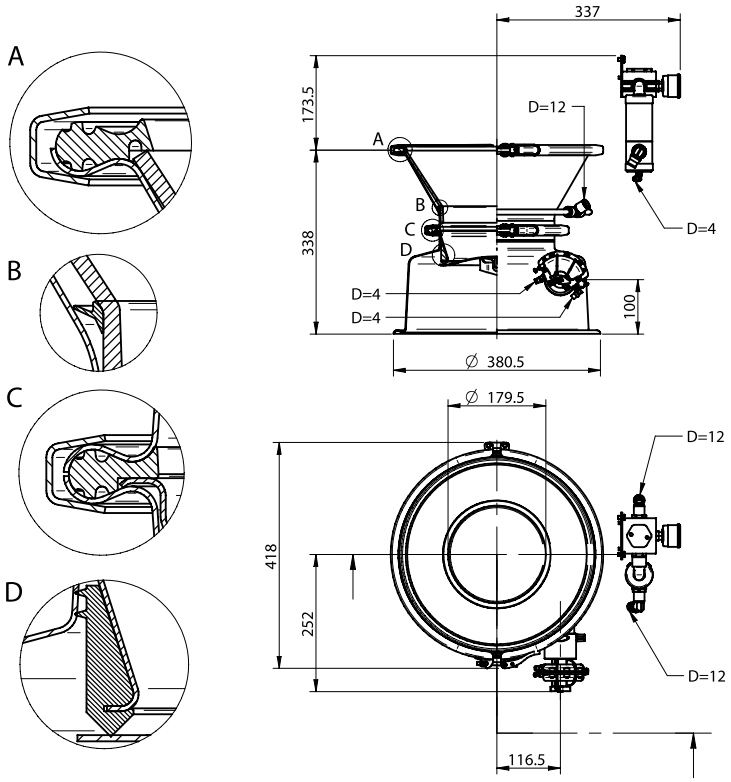
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption, min	Nl/s	6.0
Air consumption, max	Nl/s	12.0
Material		ASTM 316L, Zn, EP,PE
Temperature range	°C	0–60
Material batch volume	l	9.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103915/1	0103915/2
Material		NBR, C	Q
Weight	kg	10.1	10.1

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 33/34 Al, fluid, NBR	0103915/1
Bottom valve unit 33/34 Al, fluid, Q	0103915/2



5602 WITH TEXTILE FILTER, INTERNAL FILTER SHOCK AND CONNECTION MODULE

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

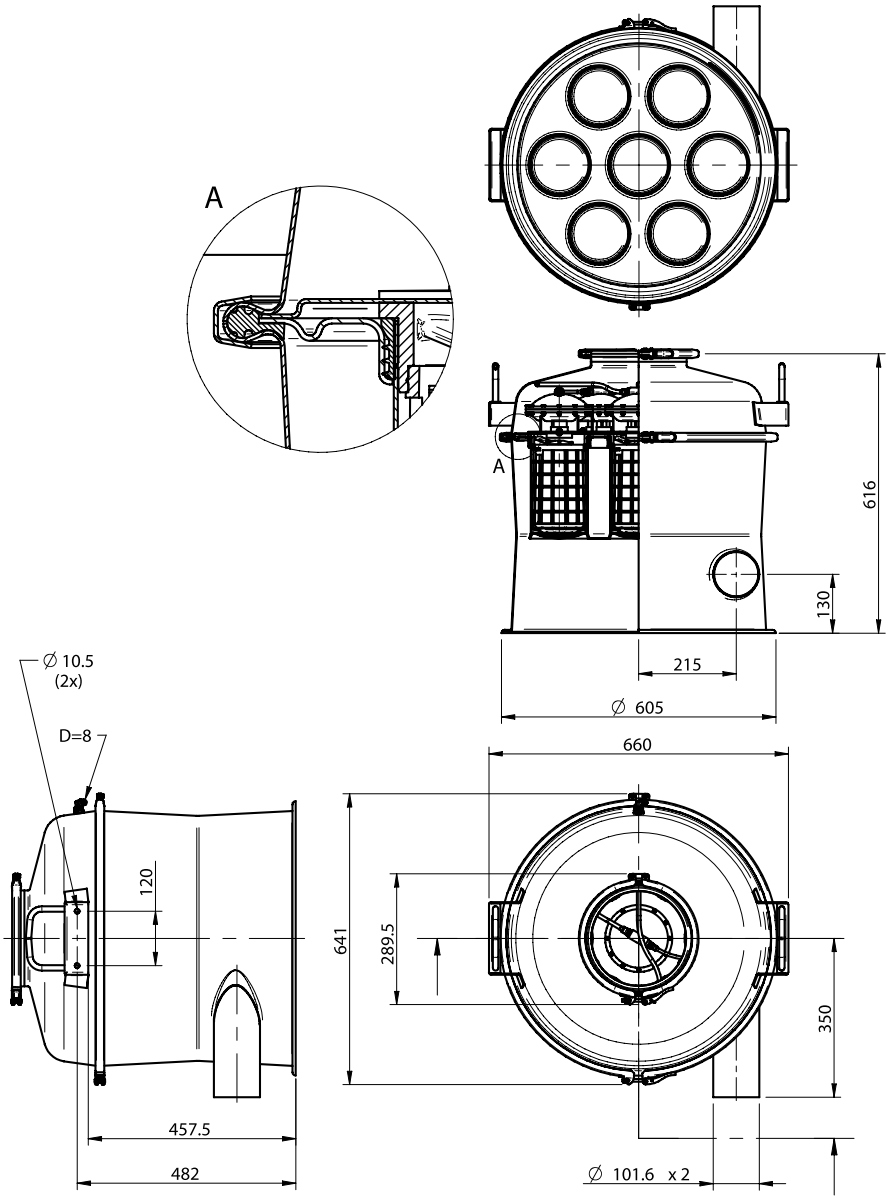
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.60
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106820/1	0106820/2
Material		NBR, C	Q
Weight	kg	34.2	34.2

ORDERING INFORMATION

Description	Art. No.
Filter unit 5602 textile filter int tang, NBR	0106820/1
Filter unit 5602 textile filter int tang, Q	0106820/2



5602 WITH TEXTILE FILTER, INTERNAL FILTER SHOCK AND 3-A CONNECTION MODULE

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

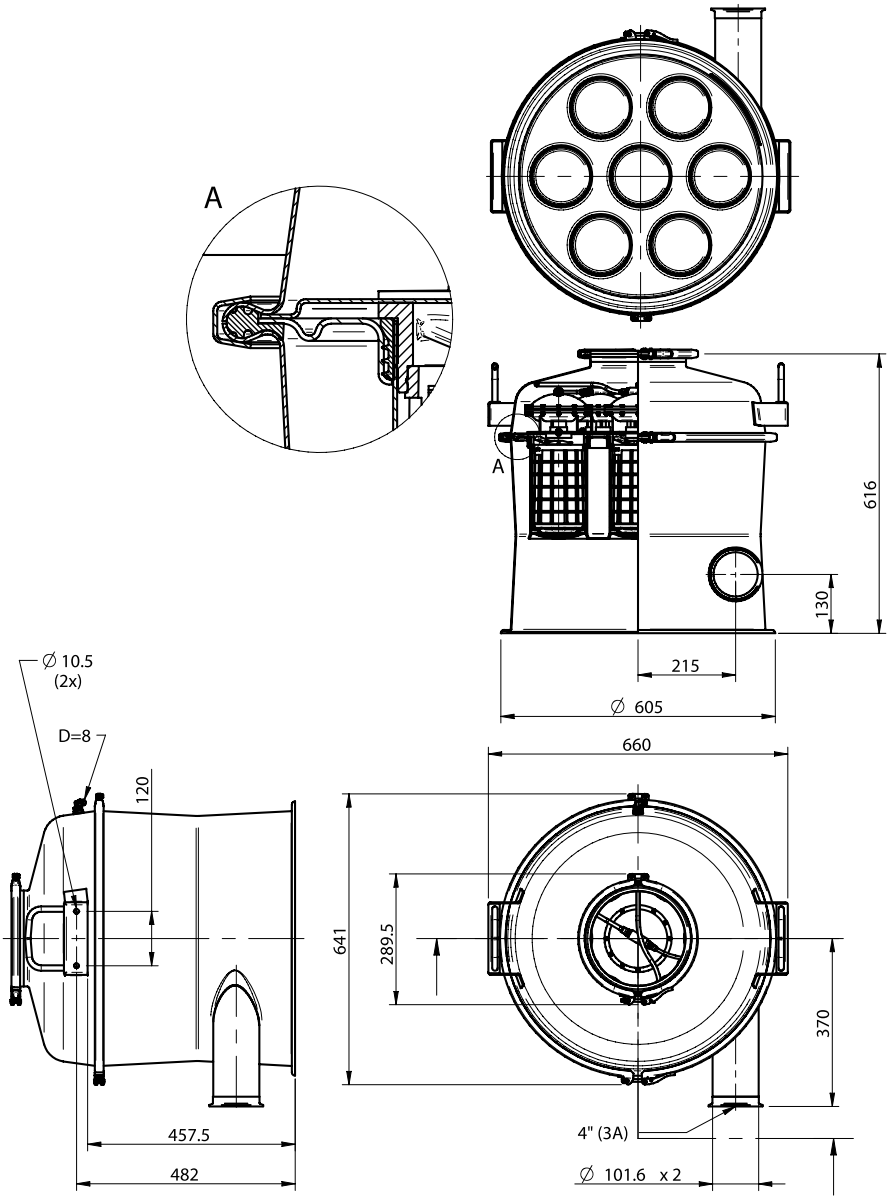
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.60
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106821/1	0106821/2
Material		NBR, C	Q
Weight	kg	34.4	34.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 5602 textile filter int tang 3-A NBR	0106821/1
Filter unit 5602 textile filter int tang 3-A Q	0106821/2



5604 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

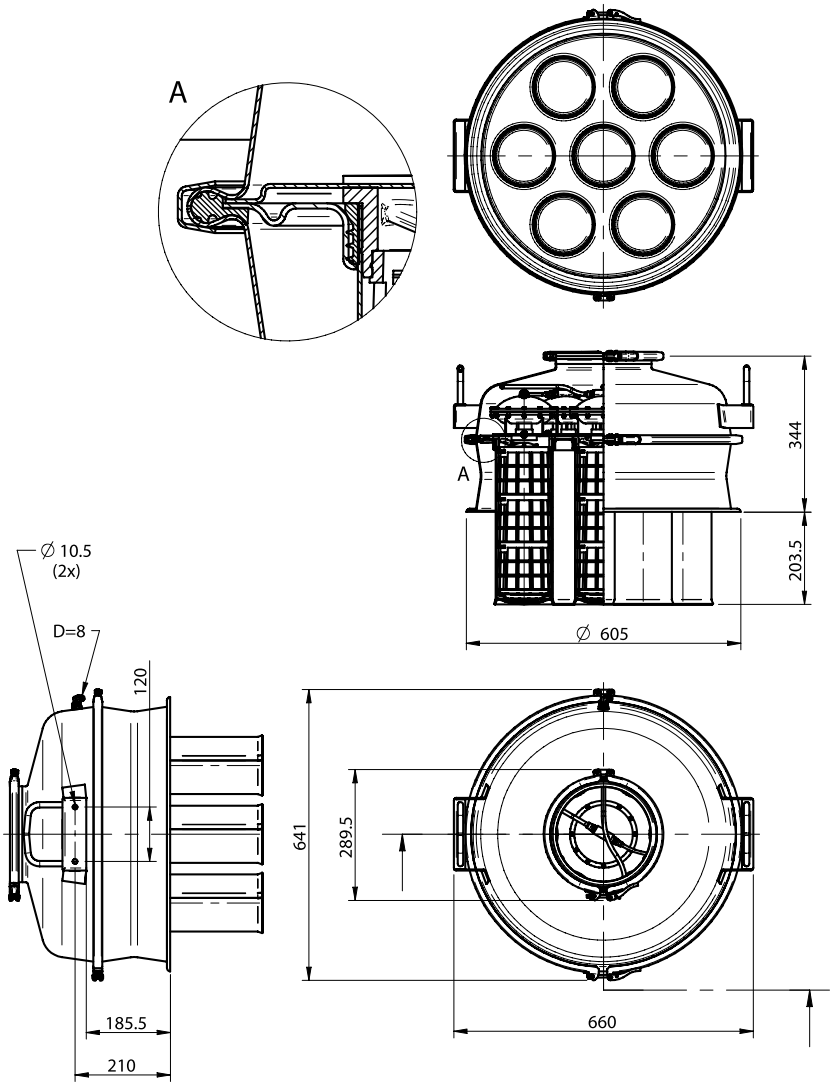
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Material		ASTM 316L, Polyester
Temperature range	°C	0–60
Filter area	m^2	0.98
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106822/1	0106822/2
Material		NBR, C	Q
Weight	kg	29.2	29.3

ORDERING INFORMATION

Description	Art. No.
Filter unit 5604 textile filter int NBR	0106822/1
Filter unit 5604 textile filter int Q	0106822/2



5606 WITH TEXTILE FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings fulfil the requirements of FDA.
- The filter bags are of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

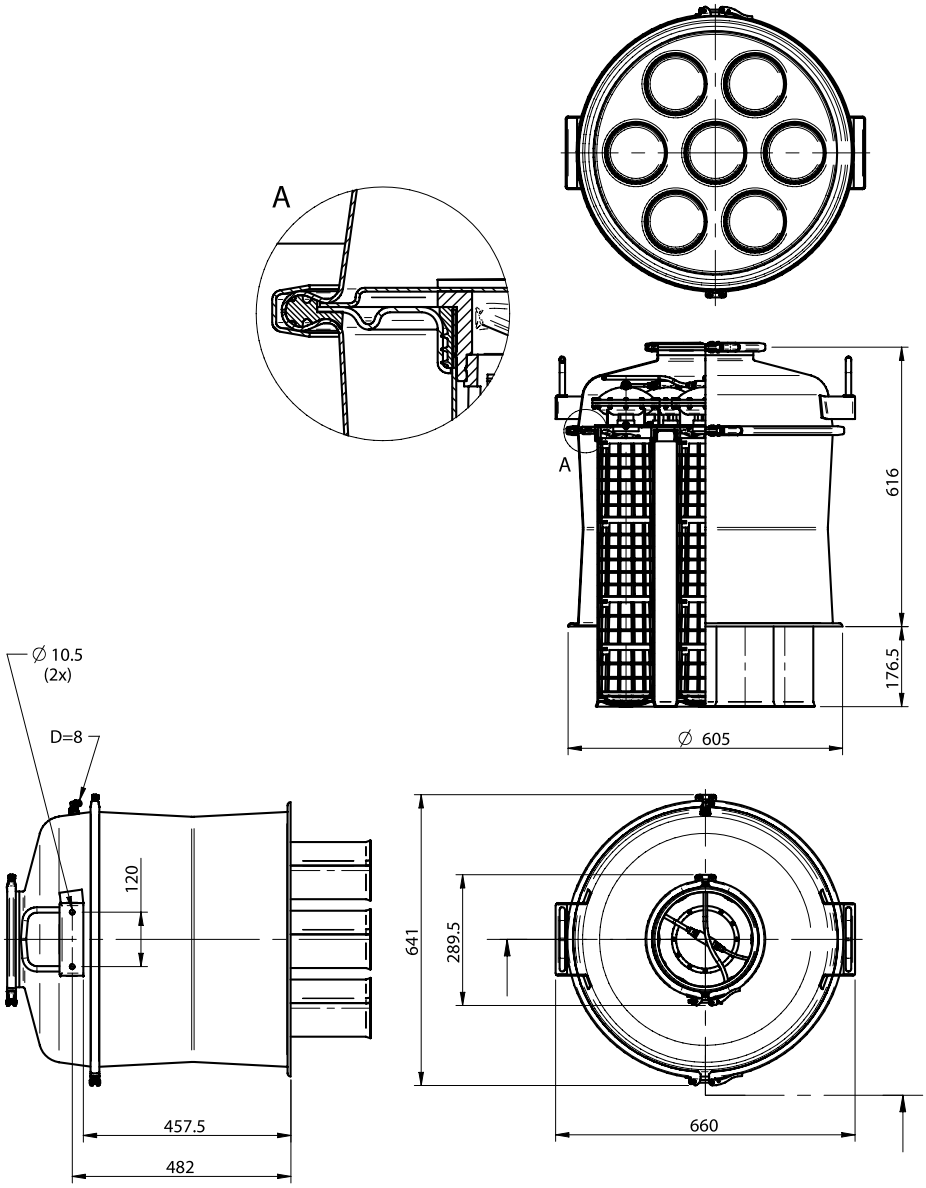
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Polyester
Temperature range	°C	0–60
Filter area	m^2	1.64
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106823/1	0106823/2
Material		NBR, C	Q
Weight	kg	37.0	37.1

ORDERING INFORMATION

Description	Art. No.
Filter unit 5606 textile filter int NBR	0106823/1
Filter unit 5606 textile filter int Q	0106823/2



5602 WITH GORE SINBRAN FILTER, INTERNAL FILTER SHOCK AND CONNECTION MODULE

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

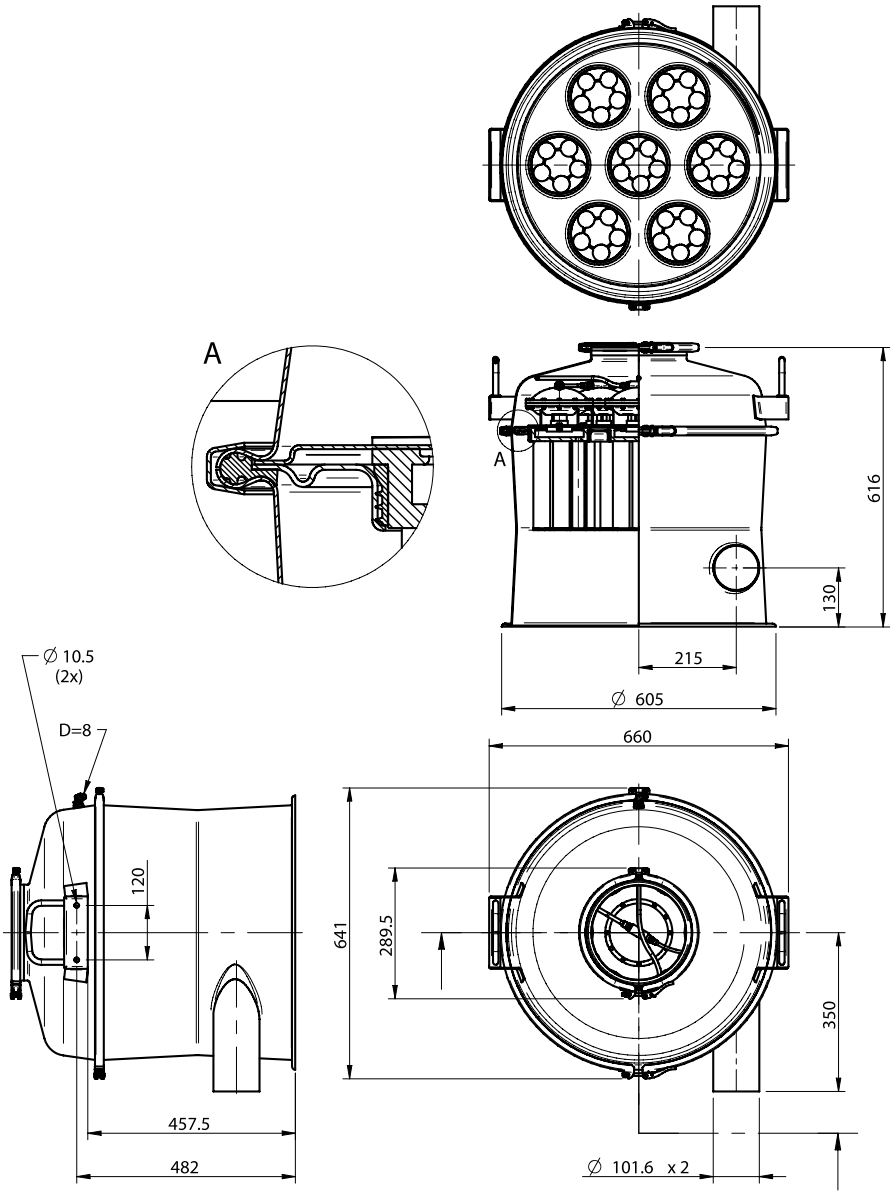
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	0.77
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106824/1	0106824/2
Material		NBR, C	Q
Weight	kg	34.0	34.1

ORDERING INFORMATION

Description	Art. No.
Filter unit 5602 Gore Sinbran int tang, NBR	0106824/1
Filter unit 5602 Gore Sinbran int tang, Q	0106824/2



5602 WITH GORE SINBRAN FILTER, INTERNAL FILTER SHOCK AND 3-A CONNECTION MODULE

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

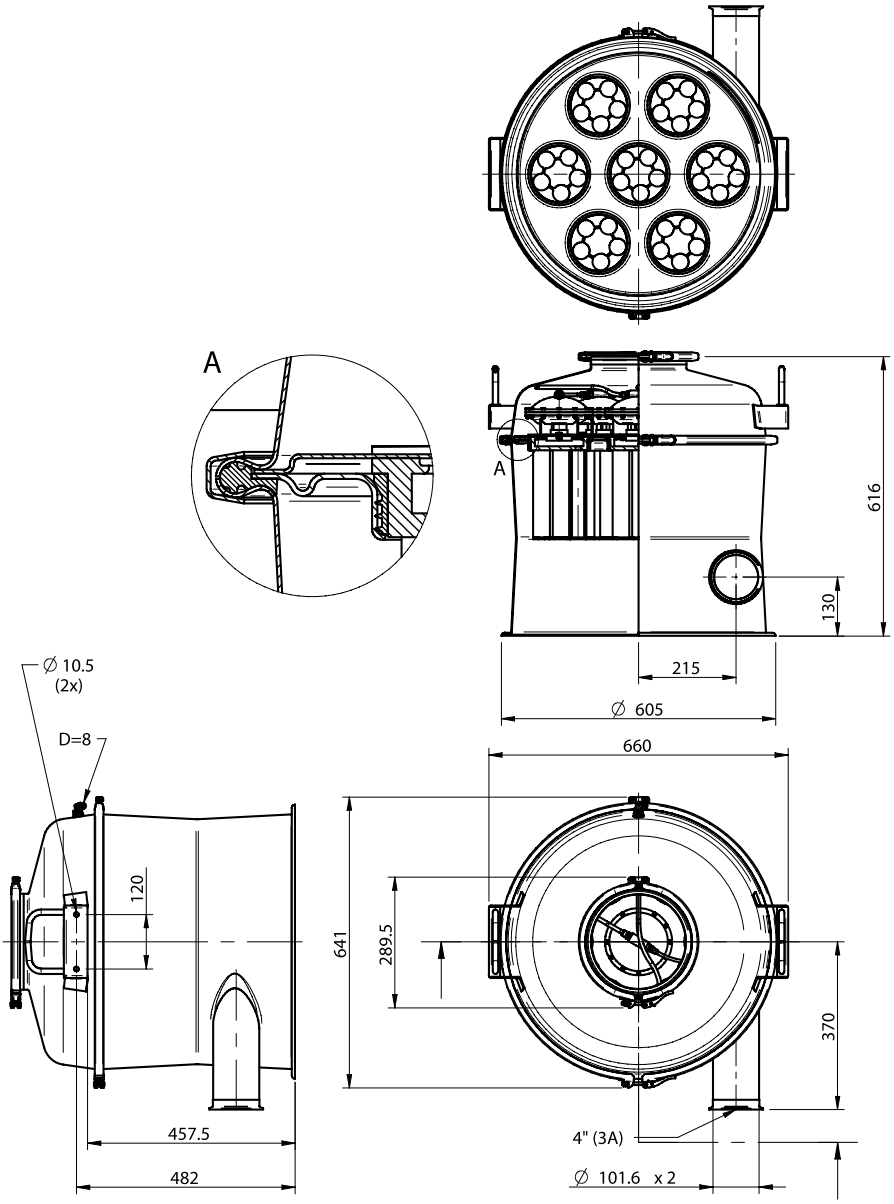
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	0.77
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106825/1	0106825/2
Material		NBR, C	Q
Weight	kg	34.4	33.3

ORDERING INFORMATION

Description	Art. No.
Filter unit 5602 Gore Sinbran int 3-A tang, NBR	0106825/1
Filter unit 5602 Gore Sinbran int 3-A tang, Q	0106825/2



5604 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

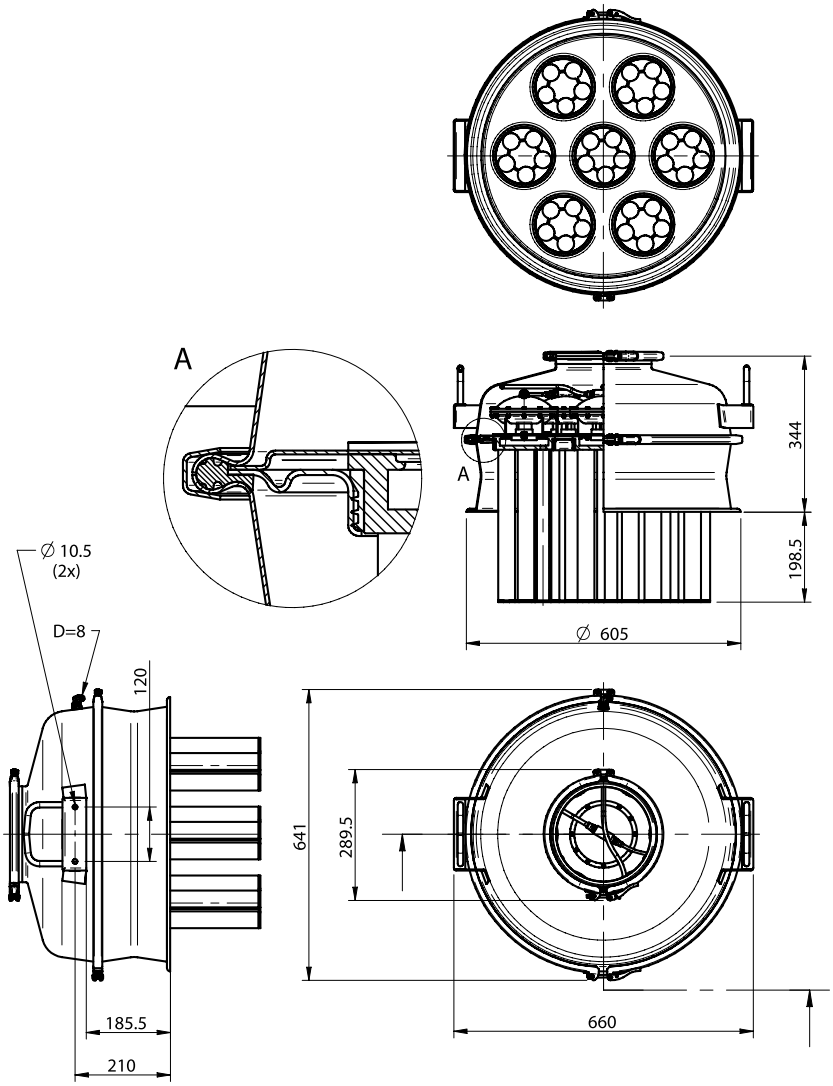
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	1.33
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106826/1	0106826/2
Material		NBR, C	Q
Weight	kg	27.4	27.4

ORDERING INFORMATION

Description	Art. No.
Filter unit 5604 Gore Sinbran int NBR	0106826/1
Filter unit 5604 Gore Sinbran int Q	0106826/2



5606 WITH GORE SINBRAN FILTER AND INTERNAL FILTER SHOCK

- Separates the carrying air from the conveyed product.
- The sealings and white rod filters fulfil the requirements of FDA.
- The black rod filters are antistatic and of food quality.
- Automatic filter cleaning.

TECHNICAL DATA

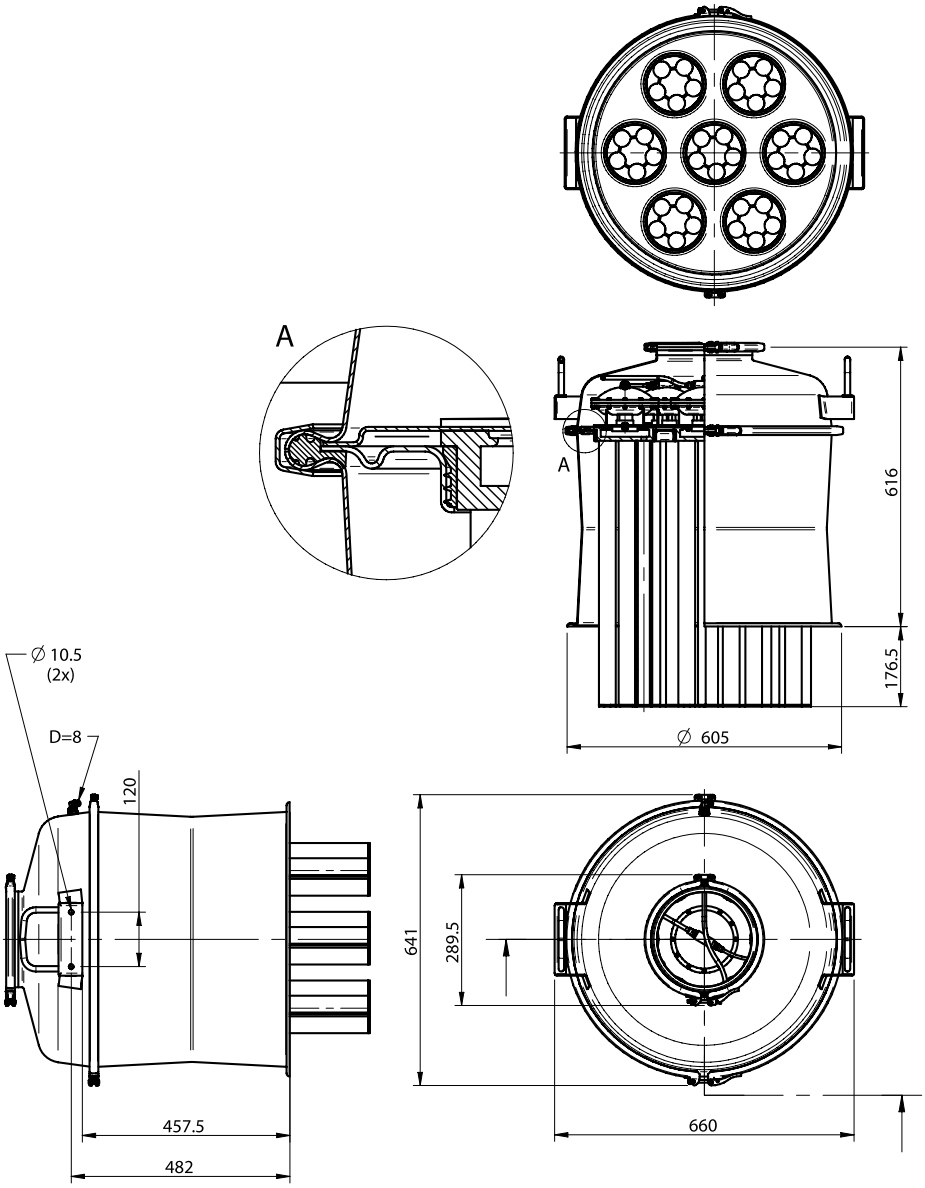
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Material		ASTM 316L, PTFE, PE
Temperature range	°C	0–60
Filter area	m^2	2.38
Min particle area	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106827/1	0106827/2
Material		NBR, C	Q
Weight	kg	34.4	34.5

ORDERING INFORMATION

Description	Art. No.
Filter unit 5606 Gore Sinbran int NBR	0106827/1
Filter unit 5606 Gore Sinbran int Q	0106827/2



MAXI L400

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

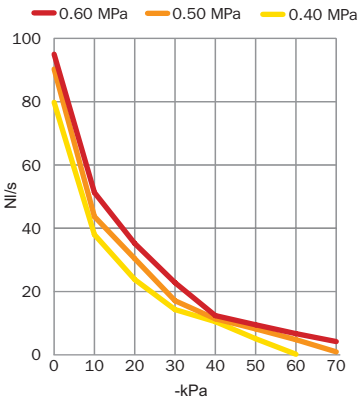
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	20–28
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	7.7

VACUUM FLOW

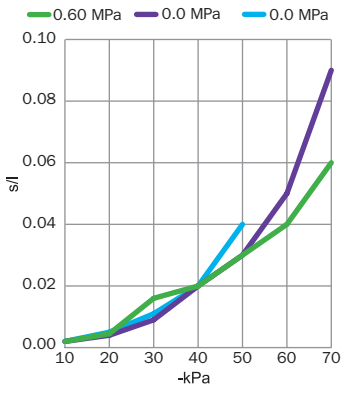
Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	-kPa
0.6	28	95.0	51.3	35.2	22.8	12.4	9.5	6.7	4.2	75
0.5	24	90.3	43.7	30.4	17.1	11.4	8.2	4.8	0.95	71
0.4	20	79.8	38.0	23.8	14.3	10.5	5.1	0.19	–	61

EVACUATION TIME

Feed pressure	Air consumption	10	20	30	40	50	60	70	Max vacuum
MPa	Nl/s								-kPa
0.6	28	0.002	0.0045	0.016	0.02	0.03	0.04	0.06	75
0.5	24	0.002	0.004	0.009	0.02	0.03	0.05	0.09	71
0.4	20	0.002	0.005	0.011	0.02	0.04	–	–	61



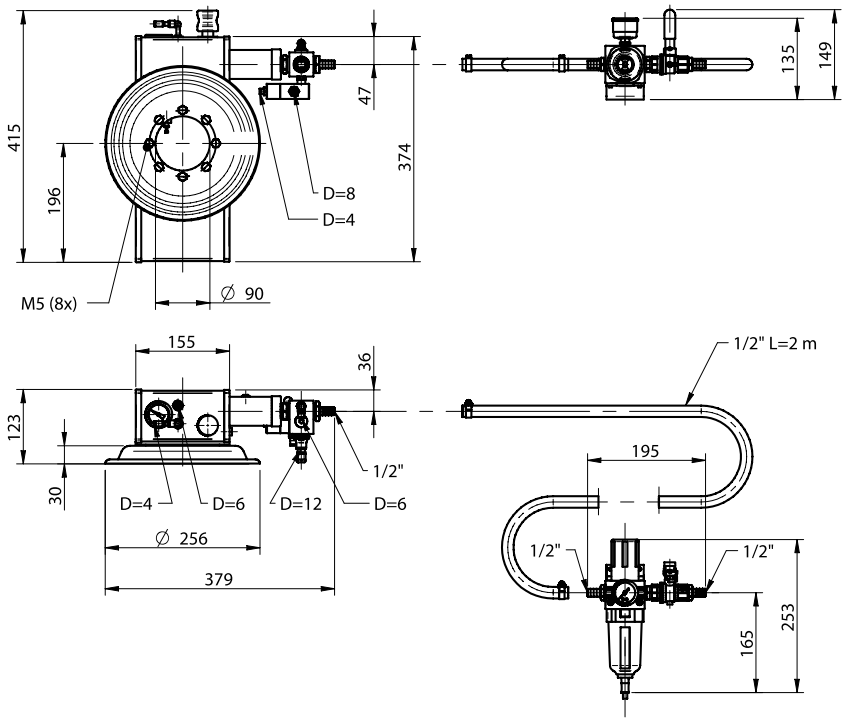
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L400	0103879



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapter L100-400	3116017
Adapter Maxi L100-L1600	3102073

MAXI L600

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

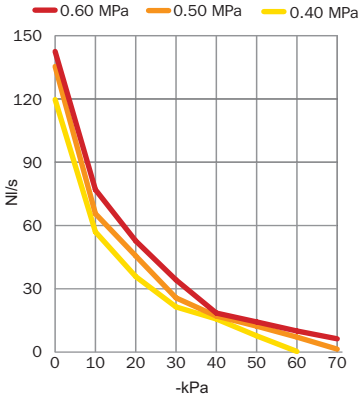
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	30–42
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	13.3

VACUUM FLOW

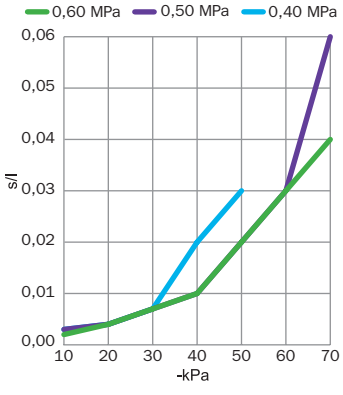
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum -kPa
		0	10	20	30	40	50	60	70	
0.6	42	142.5	77.0	52.7	34.2	18.5	14.3	10.0	6.3	75
0.5	36	135.4	65.6	45.6	25.7	17.1	12.3	7.1	1.4	71
0.4	30	119.7	57.0	35.8	21.4	15.7	7.7	0.3	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	42	0.002	0.004	0.007	0.01	0.02	0.03	0.04	75
0.5	36	0.003	0.004	0.007	0.01	0.02	0.03	0.06	71
0.4	30	0.003	0.004	0.007	0.02	0.03	–	–	61



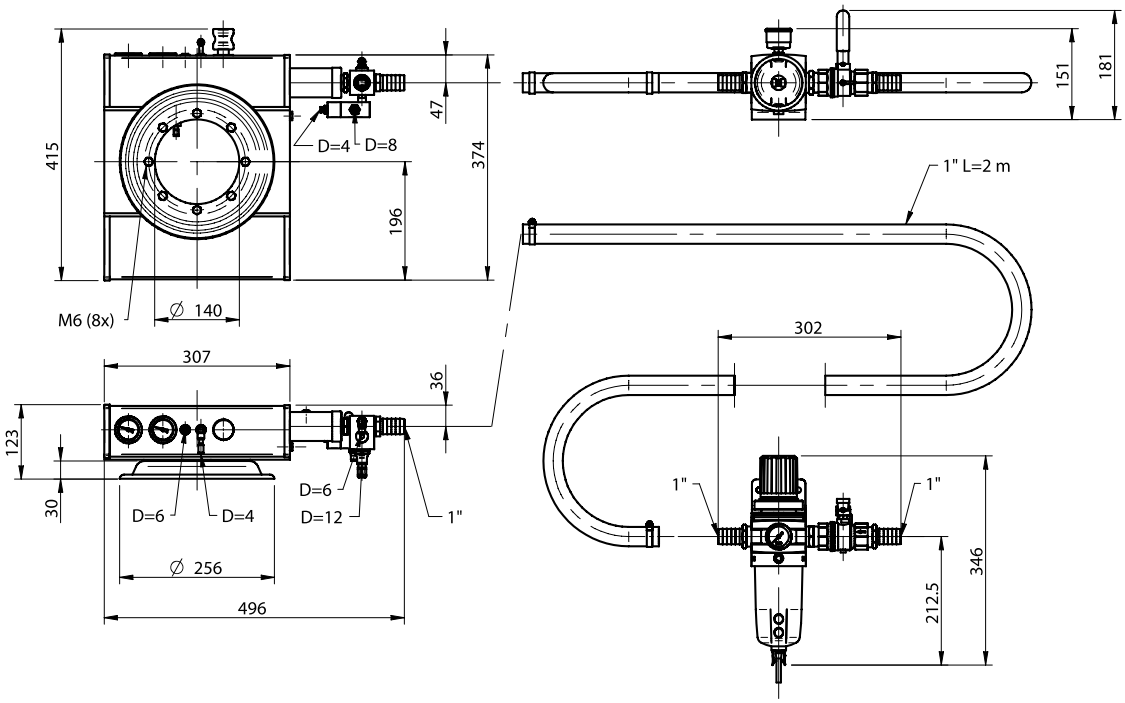
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L600	0103880



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapters L600-L800	3116018
Adapter Maxi L100-L1600	3102073

MAXI L800

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

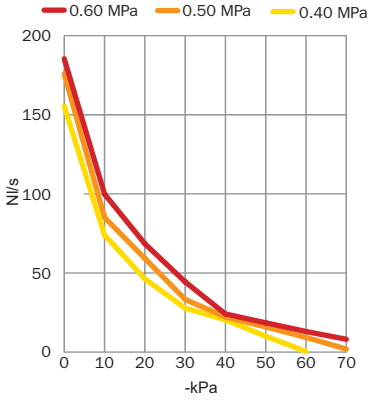
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	40–56
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	13.3

VACUUM FLOW

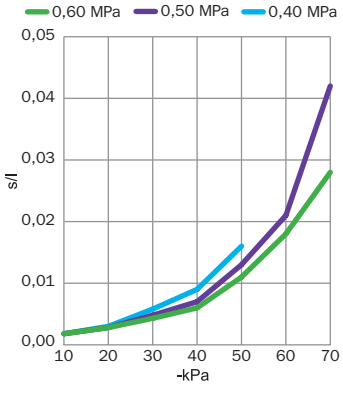
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa) 0	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	56	185.4	99.9	68.5	44.4	24.1	18.5	13.0	8.1	75
0.5	48	175.8	85.1	59.2	33.3	22.2	15.9	9.3	1.9	71
0.4	40	155.4	74.0	46.3	27.8	20.4	10.0	0.4	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	56	0.0018	0.0028	0.0043	0.006	0.011	0.018	0.028	75
0.5	48	0.0018	0.0028	0.0048	0.007	0.013	0.021	0.042	71
0.4	40	0.018	0.003	0.0058	0.009	0.016	–	–	61



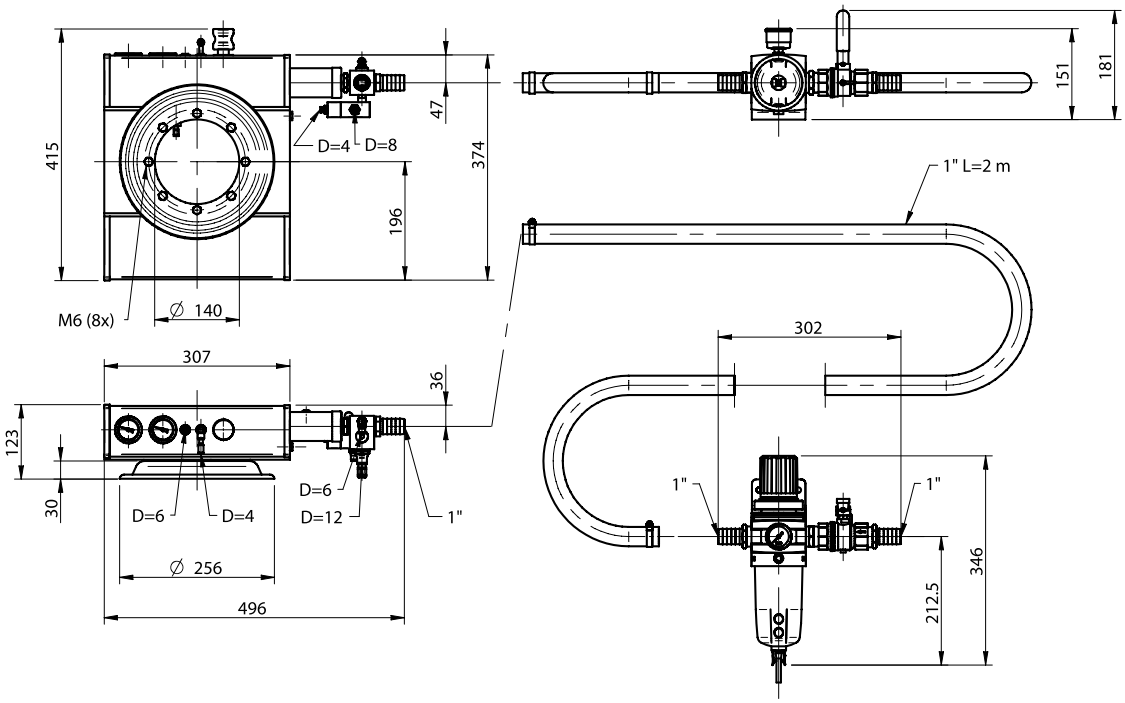
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L800	0103881



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapters L600-L800	3116018
Adapter Maxi L100-L1600	3102073

MAXI L1200

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

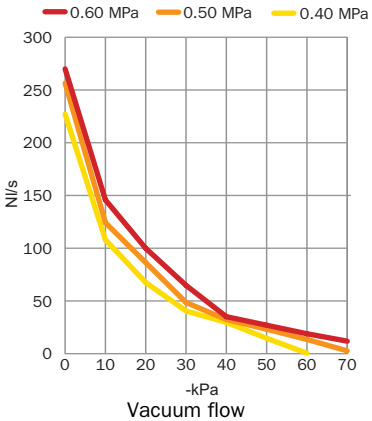
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	60–84
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	15.0

VACUUM FLOW

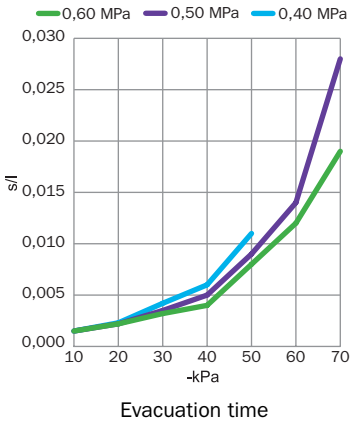
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa) 0	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	84	270.0	145.8	99.9	64.8	35.1	27.0	18.9	11.9	75
0.5	72	256.5	124.2	86.4	48.6	32.4	23.2	13.5	2.7	71
0.4	60	227	108	67.5	40.5	29.7	14.6	0.5	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	84	0.0015	0.0022	0.0032	0.004	0.008	0.012	0.019	75
0.5	72	0.0015	0.0022	0.0035	0.005	0.009	0.014	0.028	71
0.4	60	0.0015	0.0023	0.0042	0.006	0.011	–	–	61



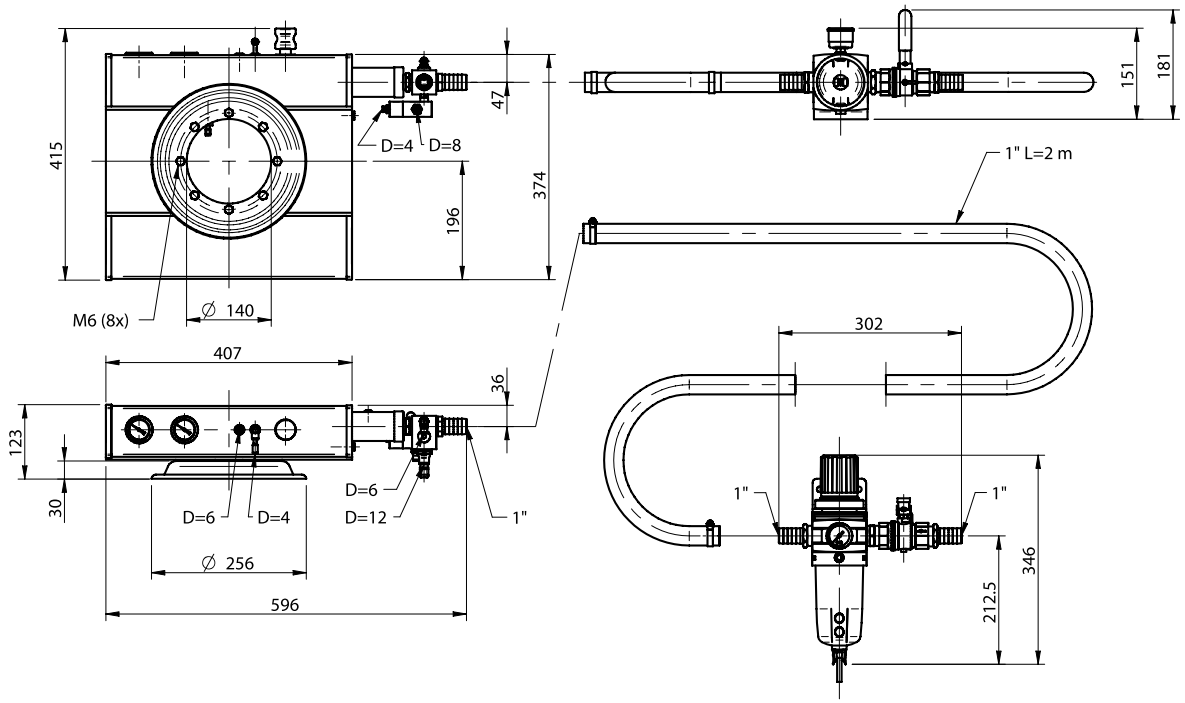
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L1200	0103882



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Central exhaust MLL1200	3116054
Adapter MAXI L100-L1600 cpl	3102073

MAXI L1600

- Power source of the vacuum conveyor.
- High vacuum flow.
- Short response time.
- Compact size and low weight in comparison to conventional mechanical pumps.
- Regulator kit is included.

TECHNICAL DATA

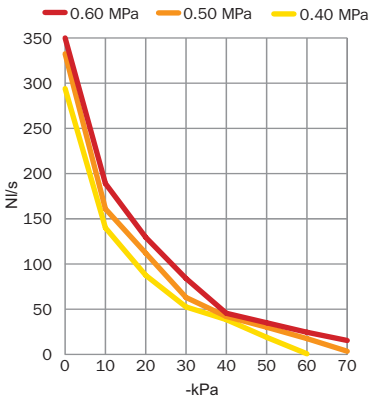
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	80–112
Vacuum range	-kPa	61–75
Noise level range	dBA	72–76
Material		Al, PPS, SS, NBR
Temperature range	°C	0–60
Weight	kg	19.5

VACUUM FLOW

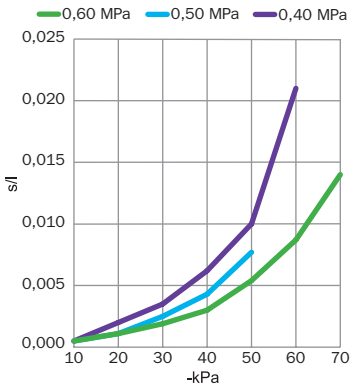
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum -kPa
		0	10	20	30	40	50	60	70	
0.6	112	350.0	189.0	129.5	840	45.5	35.0	24.5	15.4	75
0.5	96	332.5	161.0	112.0	63.0	42.0	30.1	17.5	3.5	71
0.4	80	294	140	87.5	52.5	38.5	18.9	0.7	–	61

EVACUATION TIME

Feed pressure MPa	Air consumption Nl/s	10	20	30	40	50	60	70	Max vacuum -kPa
0.6	112	0.0005	0.0011	0.0019	0.003	0.0054	0.0087	0.014	75
0.5	96	0.0098	0.0020	0.0035	0.0062	0.010	0.021	–	71
0.4	80	0.0005	0.0011	0.0025	0.0043	0.0077	–	–	61



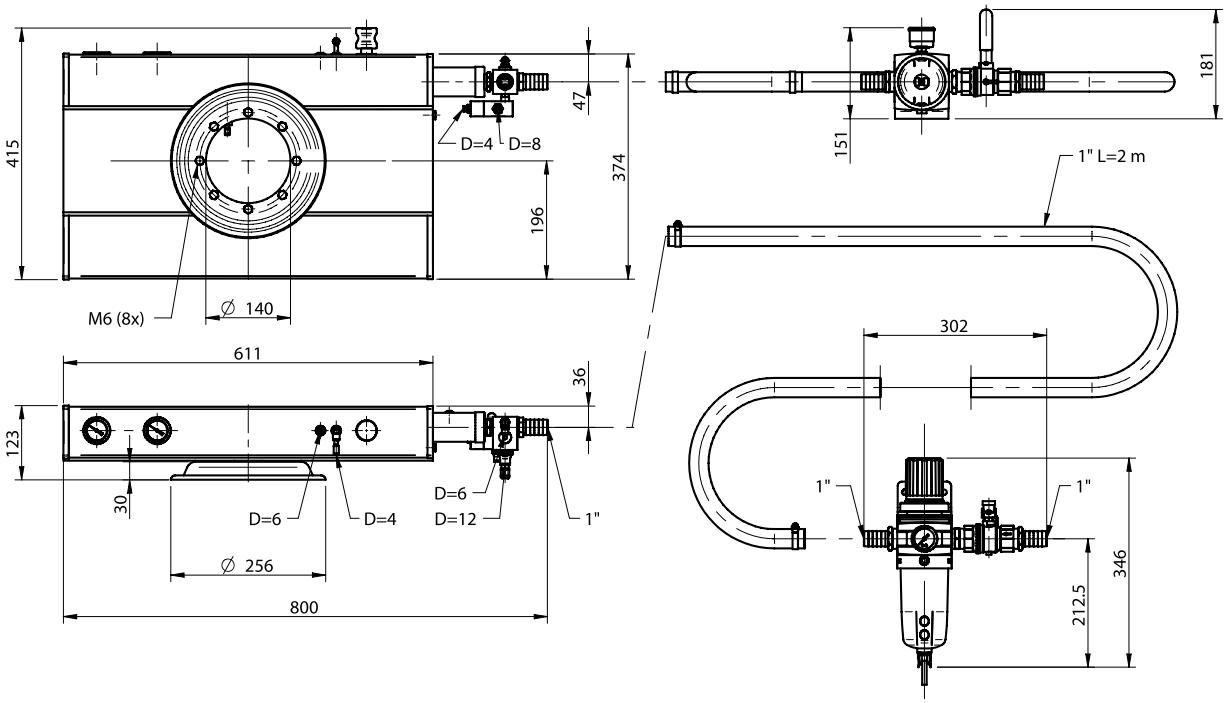
Vacuum flow



Evacuation time

ORDERING INFORMATION

Description	Art. No.
Pump unit Maxi L1600	0103883



ORDERING INFORMATION ACCESSORIES

Description	Art. No.
Exhaust adapters L1600	3116019
Adapter Maxi L100-L1600	3102073

56/43, D=102 TANGENTIAL CONNECTION

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- Standard connection.

TECHNICAL DATA

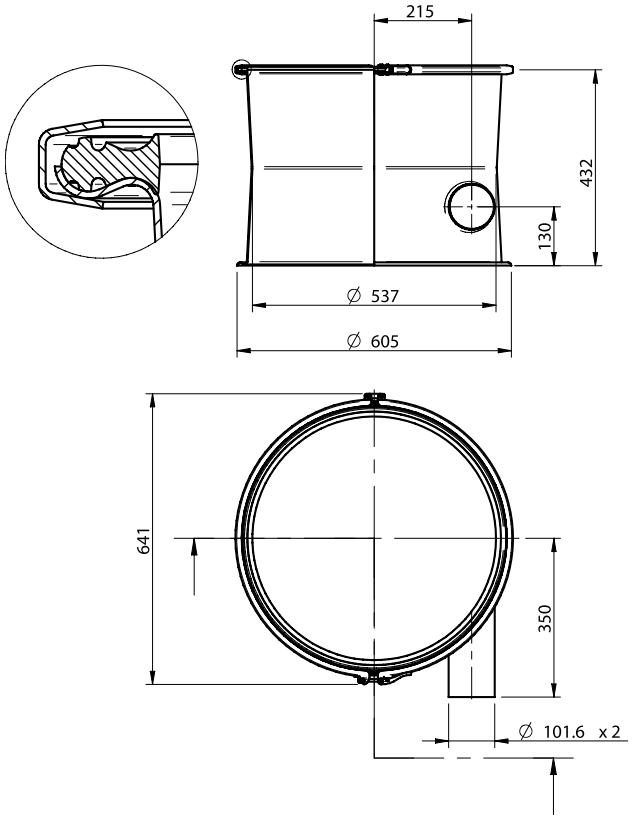
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	26.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106239/1	0106239/2
Material		NBR	Q
Weight	kg	12.5	12.5

ORDERING INFORMATION

Description	Art. No.
Connection unit 56/43 D=102 tang, NBR	0106239/1
Connection unit 56/43 D=102 tang, Q	0106239/2



56/43, D=102 TANGENTIAL CONNECTION 3-A

- Connects the conveyor to the pipe system.
- Hygienic design.
- Fulfils the requirements of FDA.
- 3-A connection.

TECHNICAL DATA

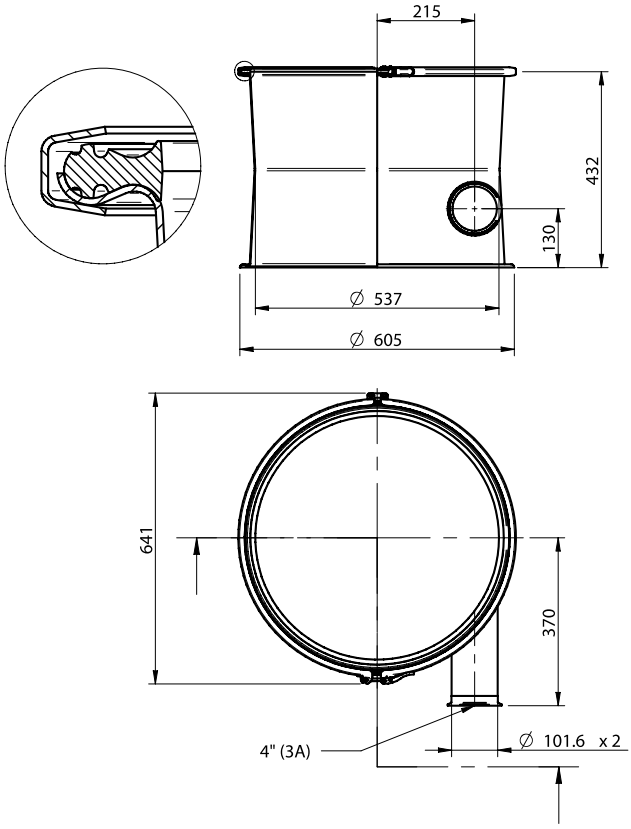
Description	Unit	Value
Material		ASTM 316L
Material batch volume below connection pipe	l	26.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106240/1	0106240/2
Material		NBR	Q
Weight	kg	12.7	12.7

ORDERING INFORMATION

Description	Art. No.
Connection unit 56/43 D=102 tang 3-A NBR	0106240/1
Connection unit 56/43 D=102 tang 3-A, Q	0106240/2



56/57 WITH ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in stainless steel.

TECHNICAL DATA

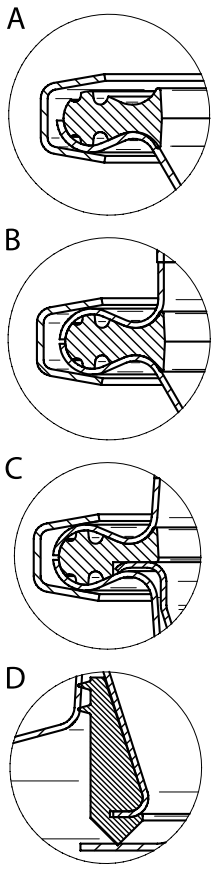
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L
Temperature range	°C	0–60
Material batch volume	l	45.5

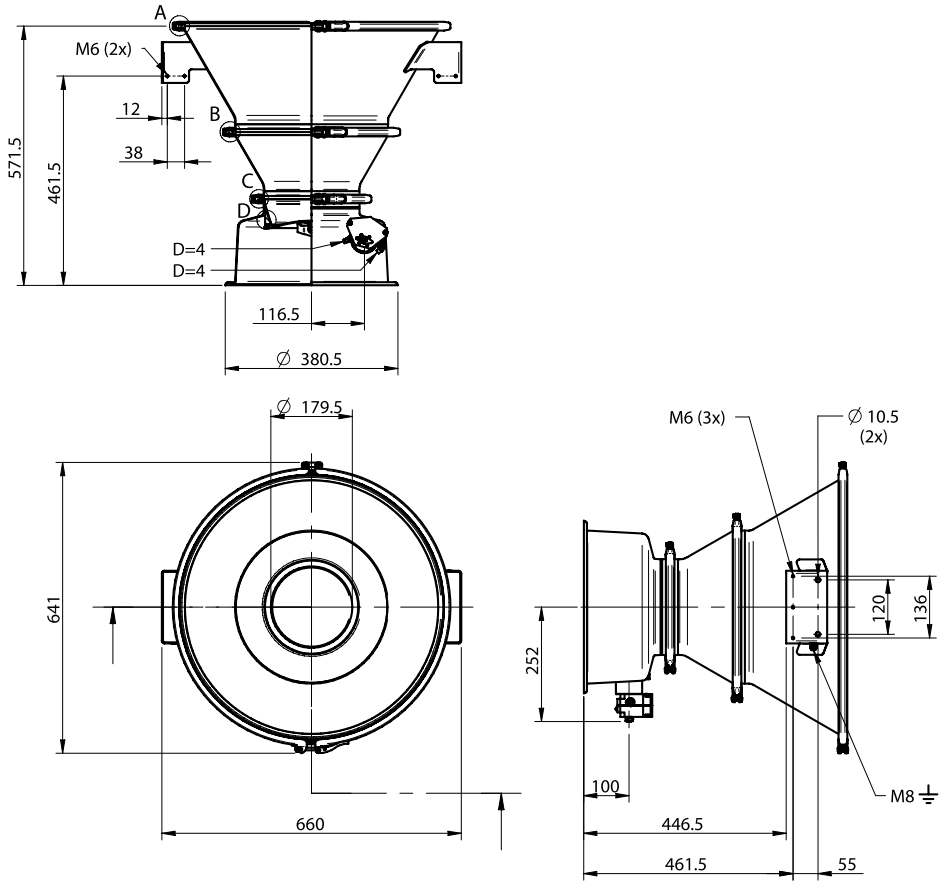
TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106816/1	0106816/2
Material		NBR	Q
Weight	kg	17.5	17.5

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 56/57 SS, NBR	0106816/1
Bottom valve unit 56/57 SS Q	0106816/2





56/57 WITH ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA.
- Fitted with actuator in epoxy-coated aluminium.

TECHNICAL DATA

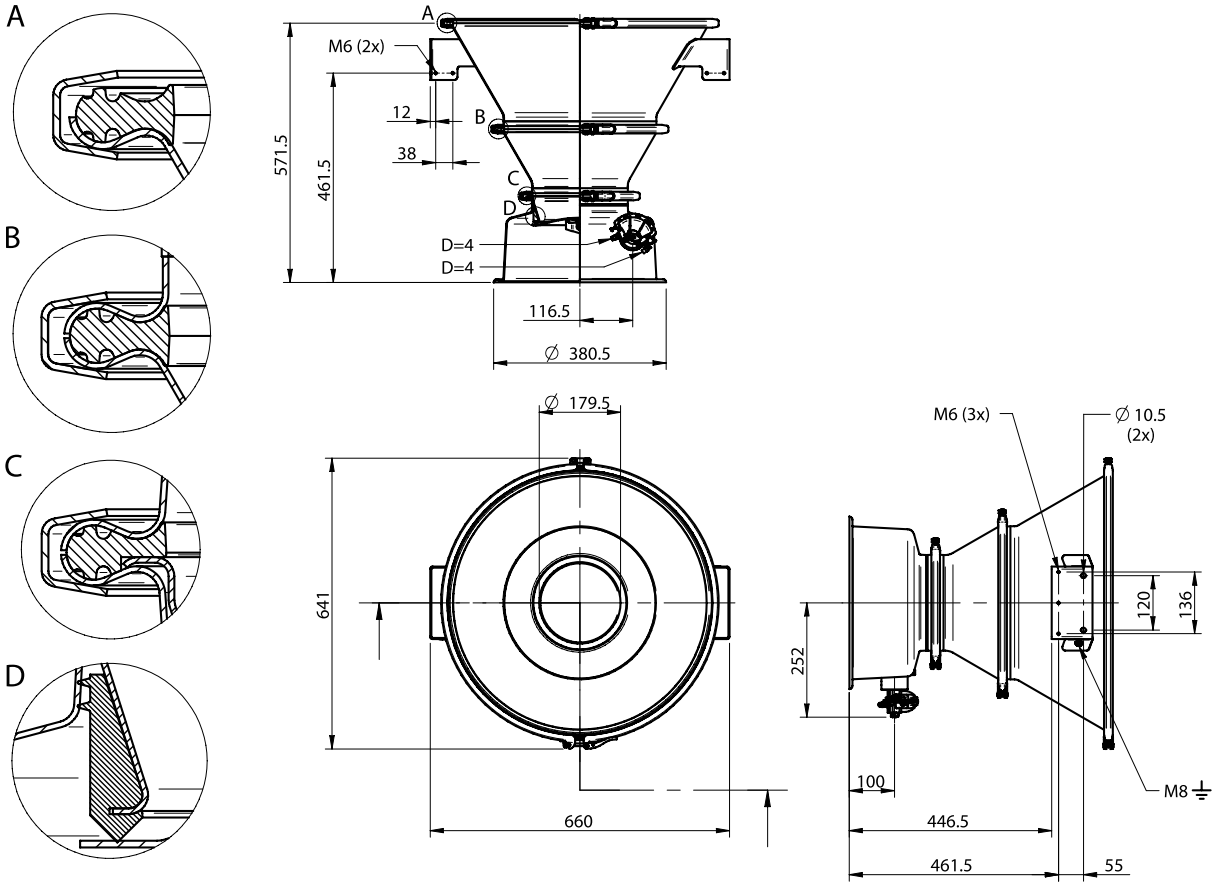
Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		ASTM 316L, Zn, EP
Temperature range	°C	0–60
Material batch volume	l	45.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106818/1	0106818/2
Material		NBR	Q
Weight	kg	16.5	16.5

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 56/57 Al, NBR	0106818/1
Bottom valve unit 56/57 Al, Q	0106818/2



56/57 WITH FLUIDISATION AND ACTUATOR IN STAINLESS STEEL

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in stainless steel.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

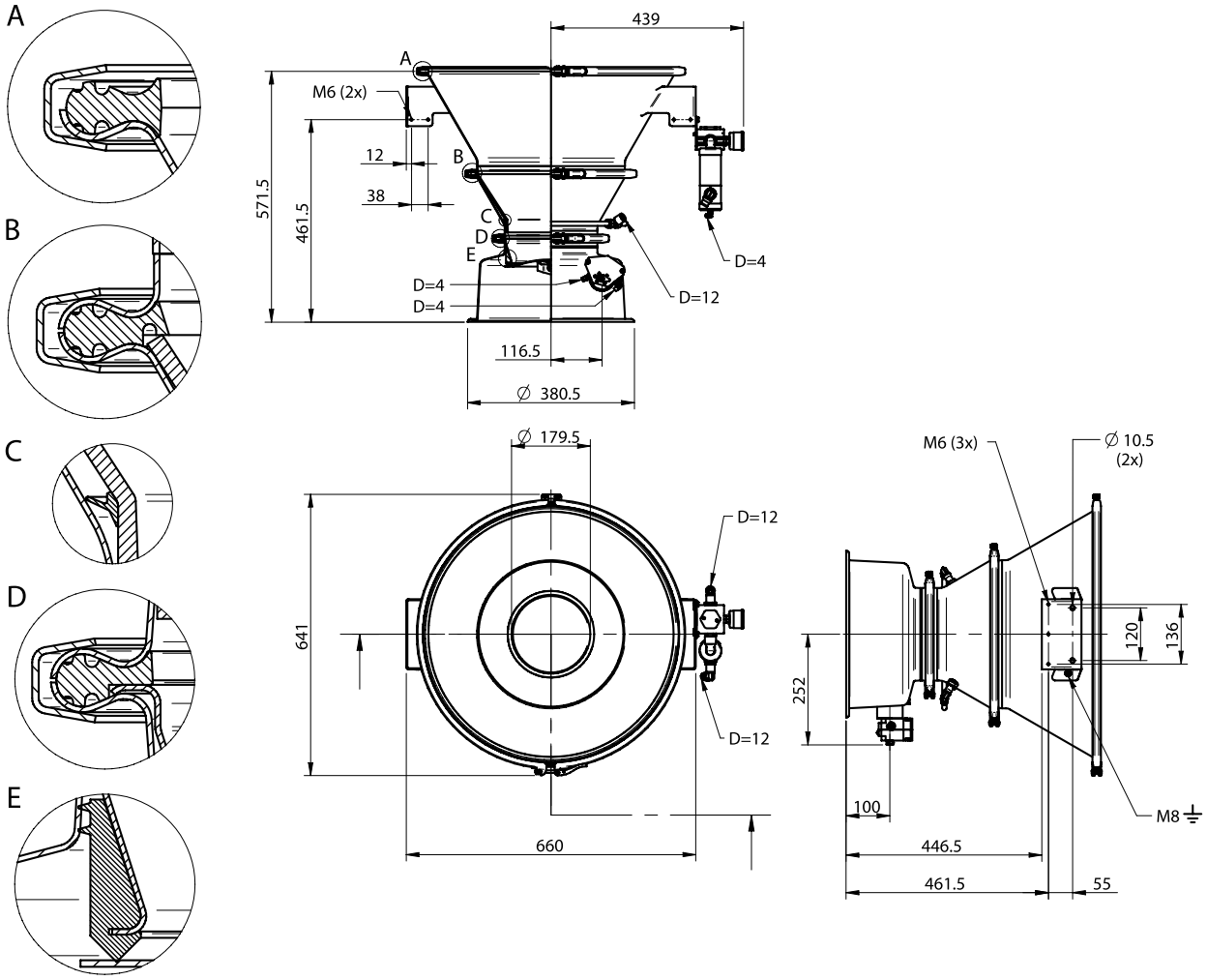
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption	Nl/s	6.0
Air consumption	Nl/s	12.0
Material		ASTM 316L, PE
Temperature range	°C	0–60
Material batch volume	l	44.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106817/1	0106817/2
Material		NBR, C	Q
Weight	kg	19.6	19.6

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 56/57 SS, fluid, NBR	0106817/1
Bottom valve unit 56/57 SS fluid Q	0106817/2



56/57 WITH FLUIDISATION AND ACTUATOR IN ALUMINIUM

- Unloads the conveyed product.
- Hygienic design.
- Fulfils the requirements of FDA (with white fluidisation cone).
- Fitted with actuator in epoxy-coated aluminium.
- Available with white or antistatic (black) fluidisation cone.
- Fluidisation regulator is included.

TECHNICAL DATA

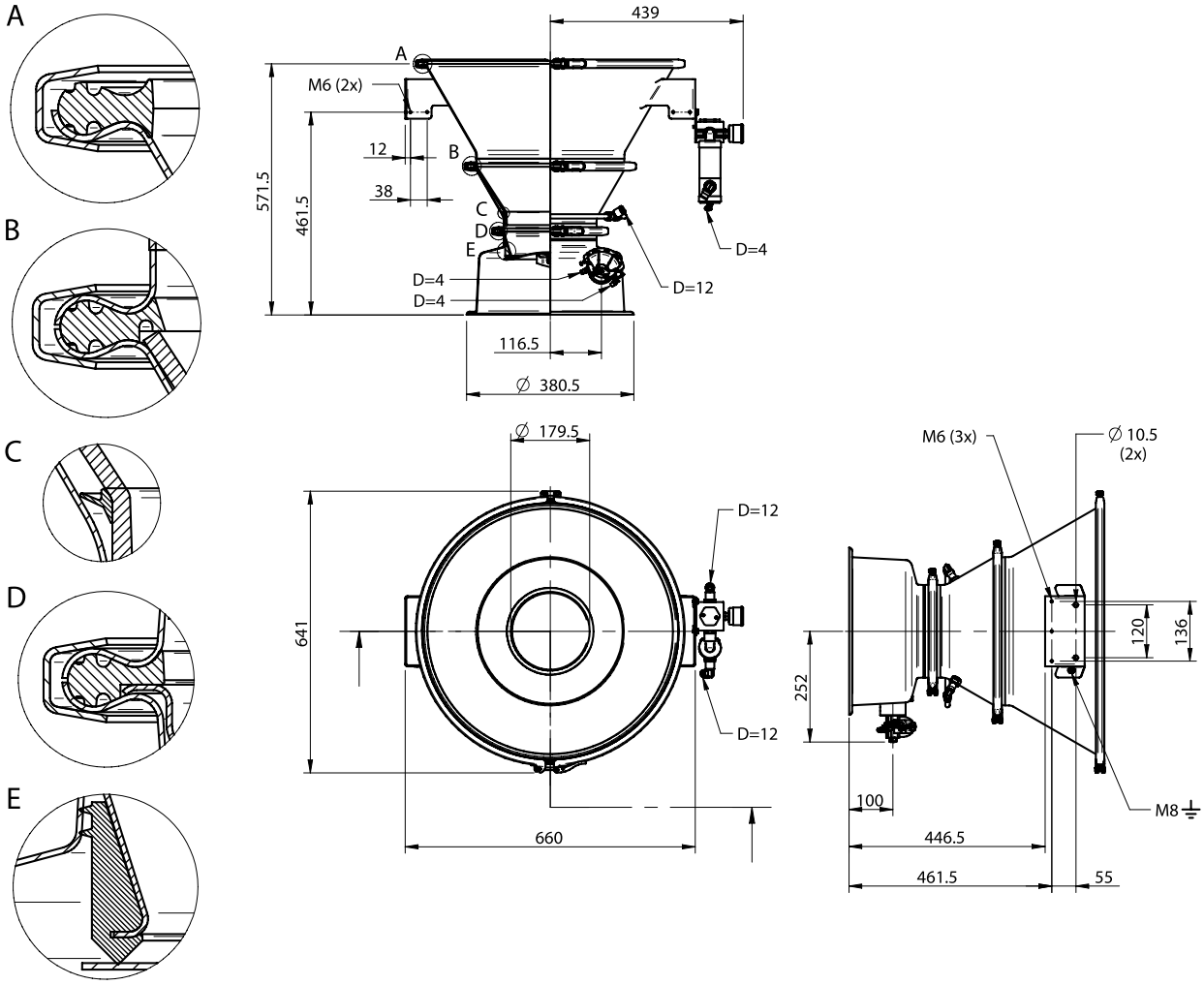
Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure, min fluidisation	MPa	0.05
Feed pressure, max fluidisation	MPa	0.15
Air consumption	Nl/s	6.0
Air consumption	Nl/s	12.0
Material		ASTM 316L, Zn, EP, PE
Temperature range	°C	0–60
Material batch volume	l	44.7

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106819/1	0106819/2
Material		NBR, C	Q
Weight	kg	18.6	18.6

ORDERING INFORMATION

Description	Art. No.
Bottom valve unit 56/57 Al, fluid, NBR	0106819/1
Bottom valve unit 56/57 Al, fluid, Q	0106819/2



CONTROL UNIT CU-1A/B, CU-2A/B

- Controls the functions of the conveyor.
- Fully pneumatic.
- The maximum recommended distance between the conveyor and control unit is 10 metres when feed pressure is 0.6 MPa.
- Separate order for the tubing kit.
- Function of CU-1/2A: the bottom valve is open when the conveyor is shut off.
- Function of the CU-1/2B: the bottom valve is colse when the conveyor is shut off.

TECHNICAL DATA

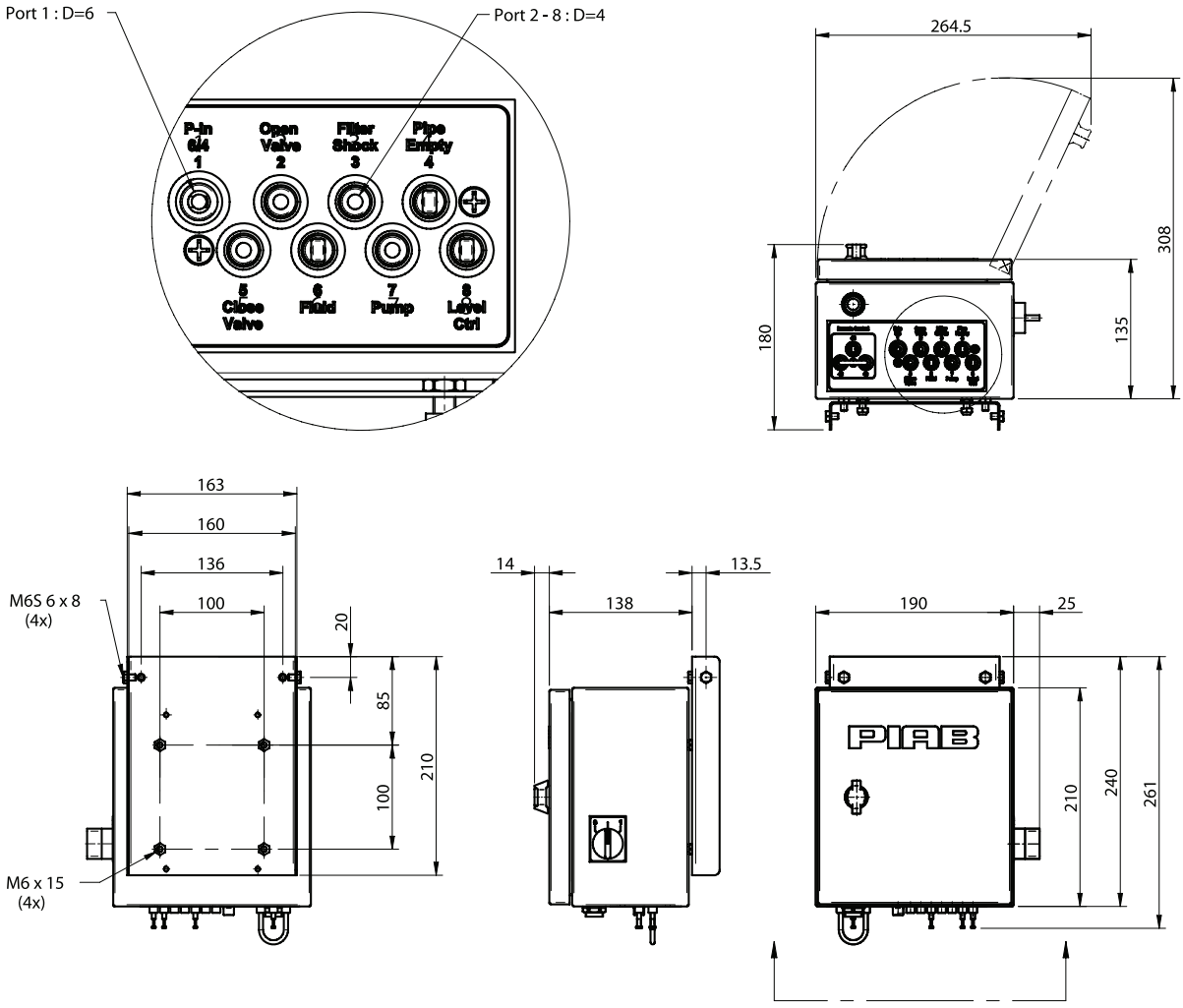
Description	Unit	Value
Feed pressure	MPa	0.4-0.6
Material		ASTM 316L
Temperature range	°C	0-50
Safety classification		IP54

TECHNICAL DATA, SPECIFIC

Description	Unit	Value			
		0103918	0103919	0103920	0103921
Weight	kg	4.30	4.30	4.43	4.43

ORDERING INFORMATION

Description	Art. No.
Control unit CU-1A bracket	0103918
Control unit CU-1B bracket	0103919
Control unit CU-2A bracket	0103920
Control unit CU-2B bracket	0103921



ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Nylon tubing kit, Standard, CU-C21	0106978
Nylon tubing kit, Fluid, CU-C21	0106879
Nylon tubing kit, Standard, CU-C33	0103929
Nylon tubing kit, Fluid, CU-C33	0103930
Nylon tubing kit, Standard, CU-C56	0106981
Nylon tubing kit, Fluid, CU-C56	0106982
Remote control	0103924
Mounting clamp to control unit CU-1/2	0104487

CONTROL UNIT PPT/R

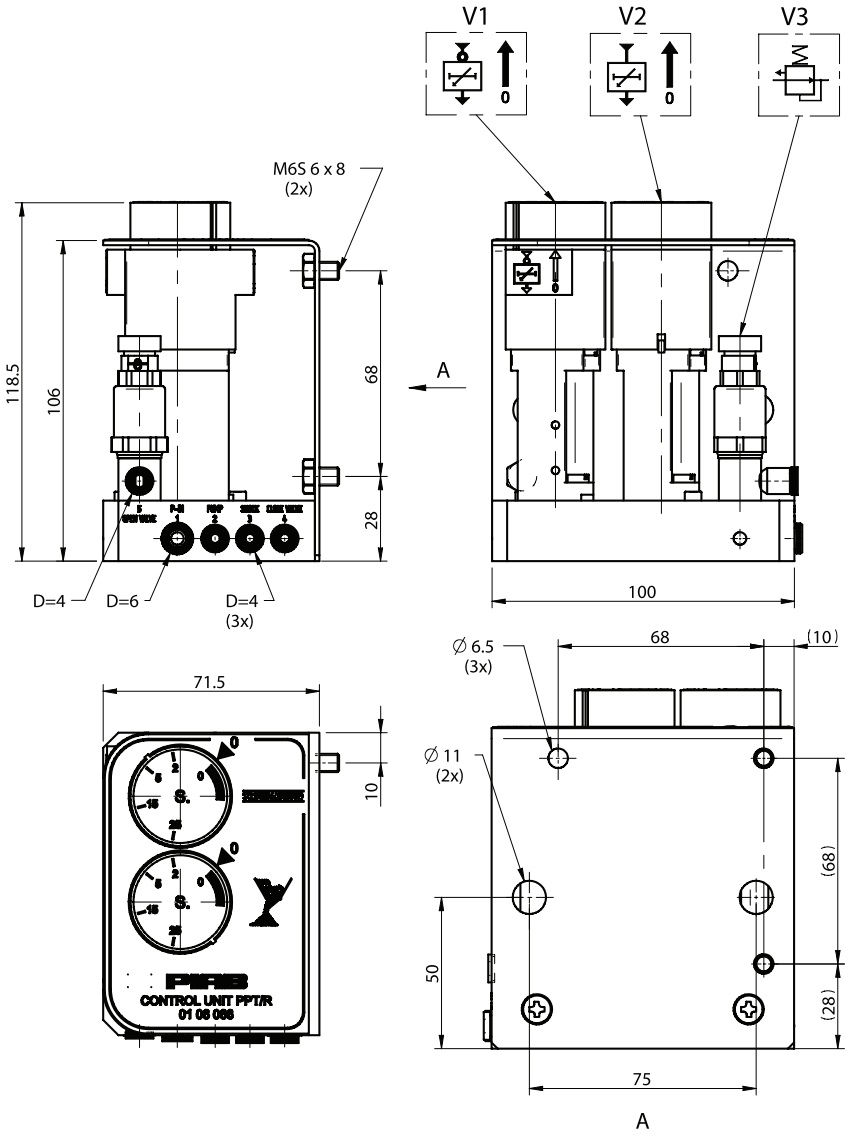
- Controls the functions of the conveyor, start/stop function is not included.
- Fully pneumatic.
- The maximum recommended distance between the conveyor and control unit is 10 metres when feed pressure is 0.6 MPa.
- Separate order for the tubing kit.

TECHNICAL DATA

Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Material		Al, PA
Temperature range	°C	0-50
Weight	kg	0.86

ORDERING INFORMATION

Description	Art. No.
Control unit PPT/R	0106066



ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Nylon tubing kit, PPT/R C21	0106980
Nylon tubing kit, PPT/R C33	0103931
Nylon tubing kit, PPT/R C56	0106983

CONTROL UNIT PPT/RS

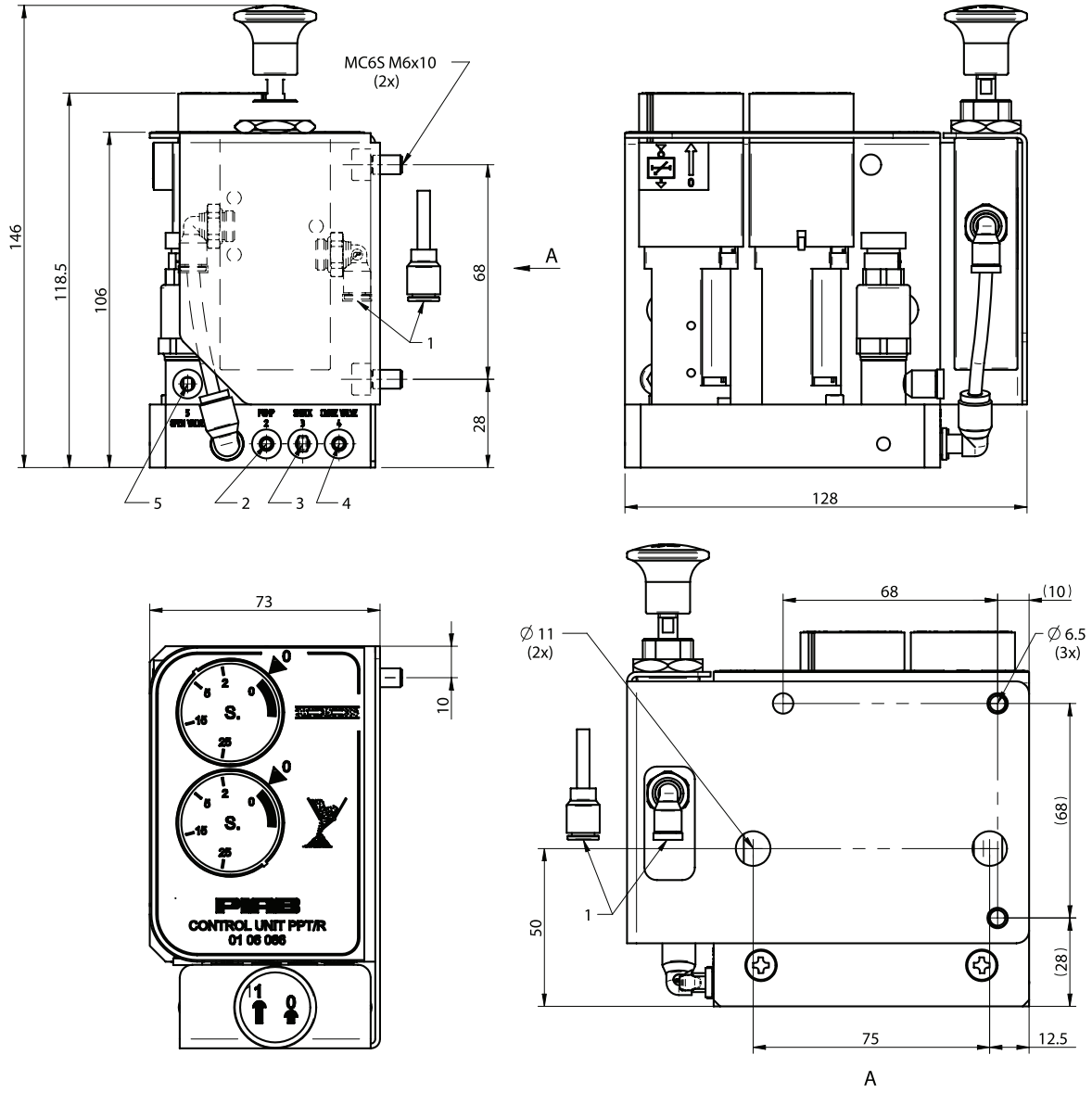
- Controls the functions of the conveyor.
- Fully pneumatic.
- The maximum recommended distance between the conveyor and control unit is 10 metres when feed pressure is 0.6 MPa.
- Separate order for the tubing kit.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		Al, PA
Temperature range	°C	0–50
Weight	kg	1.30
Min particle size, filtered air	µm	5

ORDERING INFORMATION

Description	Art. No.
Control unit PPT/RS	0111636



ORDERING INFORMATION, ACCESSORIES

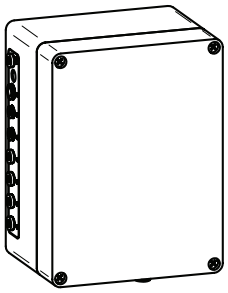
Description	Art. No.
Nylon tubing kit PPT/RS-C2100-64	0117509

VALVE UNIT VU EP-1

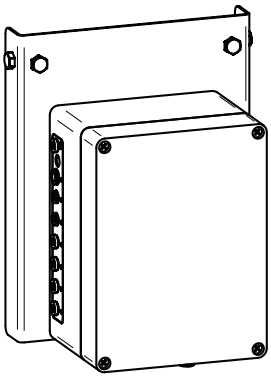
- Valve unit with electro-pneumatic valves that can be used to control PIAB's vacuum conveyors with external PLC or similar electrical control system.
- Simple installation: Prepared for connection to the vacuum conveyor's main functions; start the pump, close the bottom valve, open the bottom valve, fluidisation and the filter shock.
- Prepared to be fitted with six electro-pneumatic valves. The unit is delivered with four valves and two unused spare positions.
- The valve unit has an electrical connection with an 8-pin M12x1 connector.
- The unit is delivered with a connection cable (L=2 m) that is fitted with a connector at one end.
- Three versions are available; one basic version with no mounting bracket and one including mounting bracket for the C conveyors.
- Nylon tubing kit for connection of compressed air must be ordered separately.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Material		PC, Neoprene
Temperature range	°C	0-50
Weight	kg	2.27
Voltage	V	24
Safety classification		IP54
Display		LED-indicators
Power consumption	W	3(×4)
Electric connection		8-pin M12×1.0



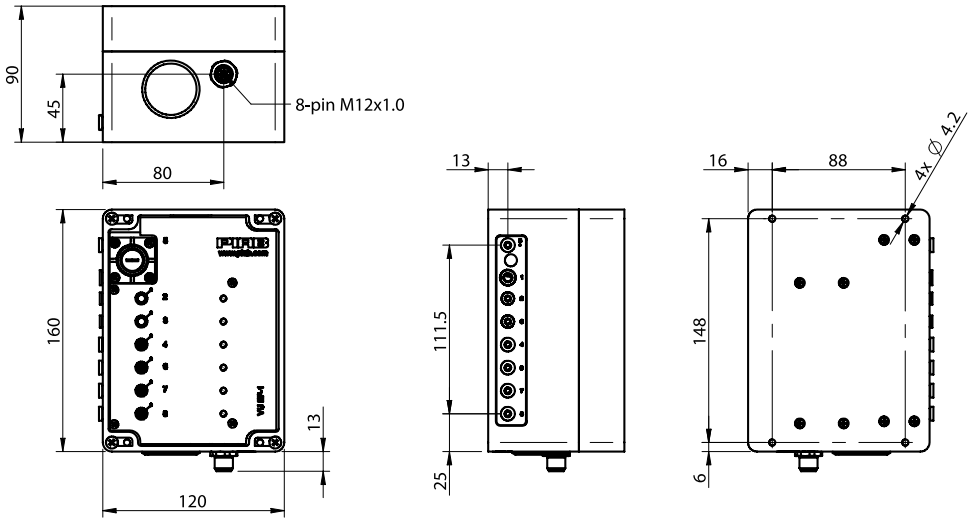
Art, No. 0112864



Art, No. 0113024

ORDERING INFORMATION

Description	Art. No.
Valve unit VU EP-1	0112864
Valve unit VU EP-1 cpl. for C-conveyor	0113024

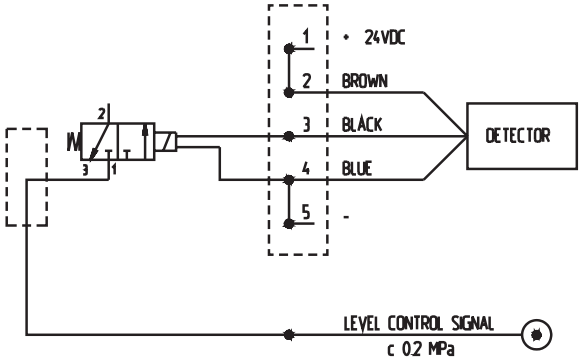


ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Nylon tubing kit, Standard CU-C21	0106978
Nylon tubing kit, Fluidisation CU-C21	0106979
Nylon tubing kit, Standard CU-C33	0103929
Nylon tubing kit, Fluidisation CU-C33	0103930
Nylon tubing kit, Standard CU-C56	0106981
Nylon tubing kit, Fluid CU-C56	0106982

LEVEL DETECTOR

- Apply with CU-1/2.
- Stops the conveyor when level in recieving vessel is reached.



TECHNICAL DATA

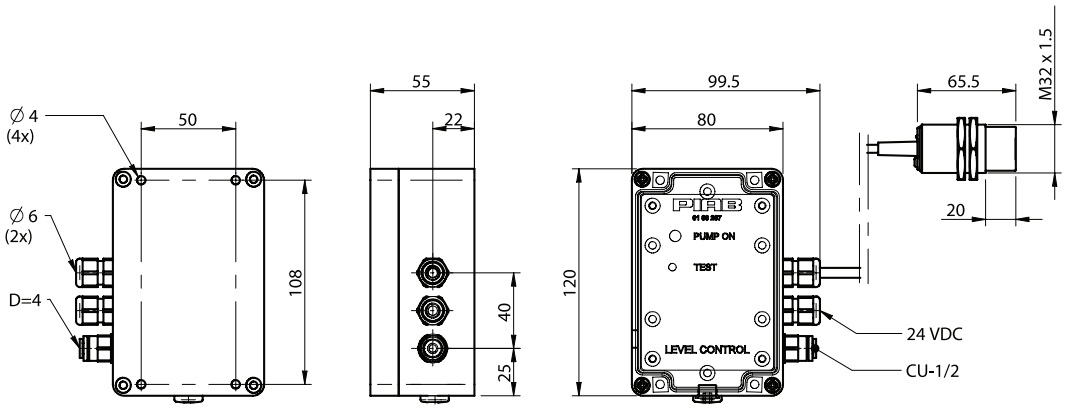
Description	Unit	Value
Material		PC, POM
Temperature range	°C	0-50
Weight	g	622
Voltage	V	24
Safety classification, box		IP54

TECHNICAL DATA, CAPACITIVE GAUGE

Description	Unit	Value
Temperature, operating	°C	-30–70
Cable, capacitive gauge	mm^2	3x0.5
Safety classification, capacitive gauge		IP67
Current, max	mA	300
Switching power	W	7.2

ORDERING INFORMATION

Description	Art. No.
Level detector	0100267



REMOTE-CONTROLLED START/STOP

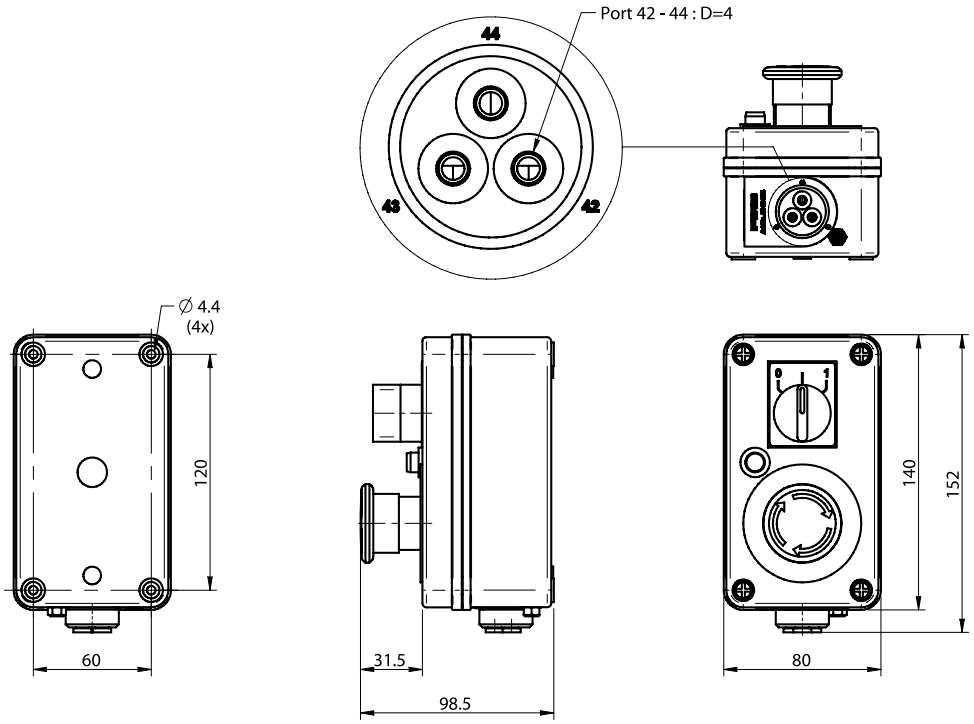
- Remote-controlled start and stop of the conveyor.
- Fully pneumatic.
- Visual signal (pneumatic eye) shows if the conveyor is running.
- Use together with CU-1A/B or CU-2A/B.

TECHNICAL DATA

Description	Unit	Value
Feed pressure range	MPa	0.4–0.6
Temperature range	°C	0–50
Weight	kg	0.47
Material		PA

ORDERING INFORMATION

Description	Art. No.
Remote control CU-1/2 Start/Stop with emergency stop	0103924



REGULATOR KIT

- Regulates the incoming pressure to the pump.
- The filter cleans the compressed air.

TECHNICAL DATA

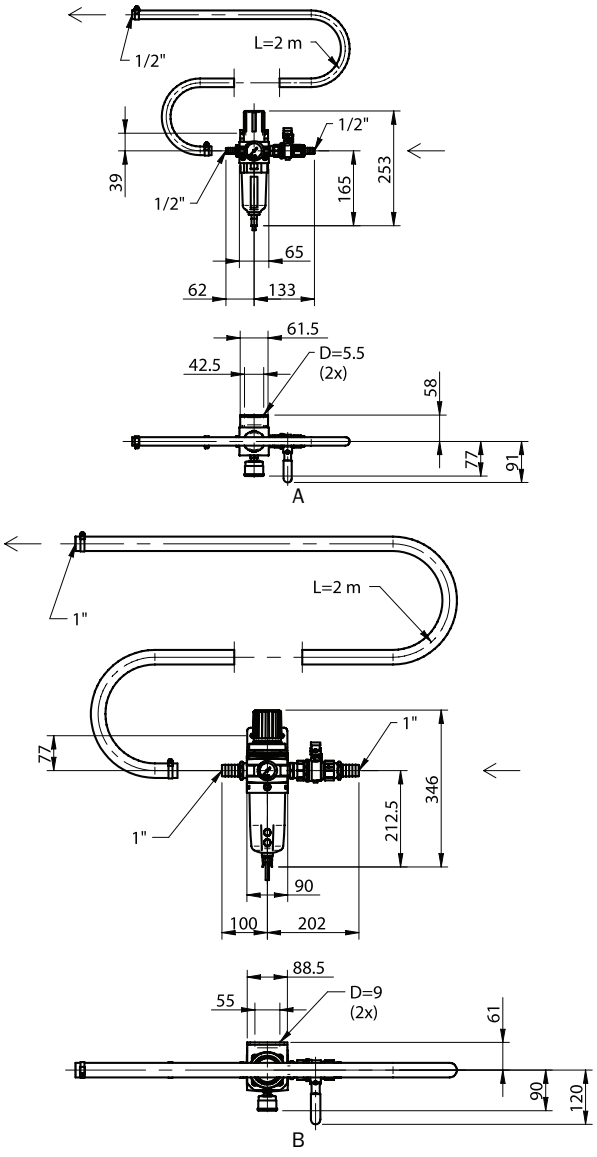
Description	Unit	Value
Feed pressure, max	MPa	0.8
Material		Al, PA, Cu, SS, PTFE, PP, POM, NBR, PB
Temperature range	°C	-10–80

TECHNICAL DATA, SPECIFIC

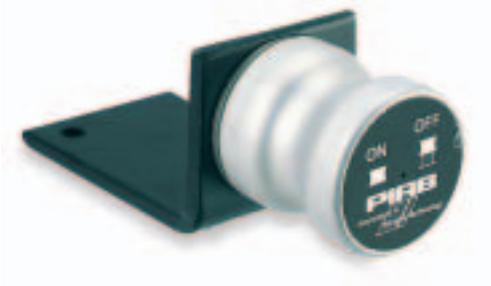
Description	Unit	Value	
		0104490	0104491
Weight	kg	2.78	4.79

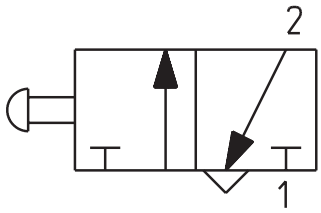
ORDERING INFORMATION

	Description	Art. No.
A	Regulator kit 1/2" 100-400	0104490
B	Regulator kit 1" 600-1600	0104491



ACTUATING VALVE



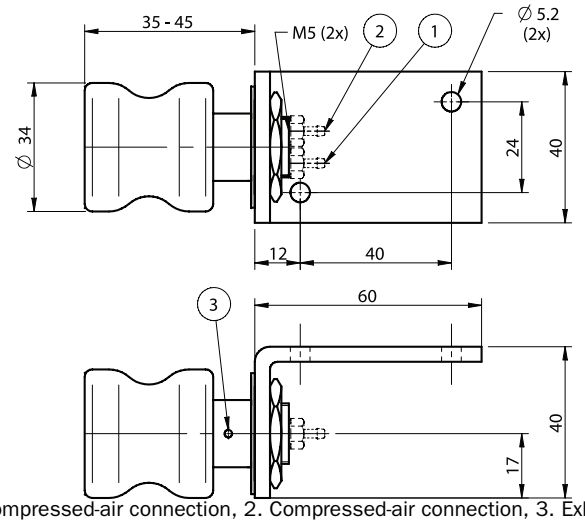


TECHNICAL DATA

Description	Unit	Value
Feed pressure, max	MPa	0.7
Material		SS, PB, Al, NBR, CuZn, PA
Temperature range	°C	-40–110
Weight	g	120

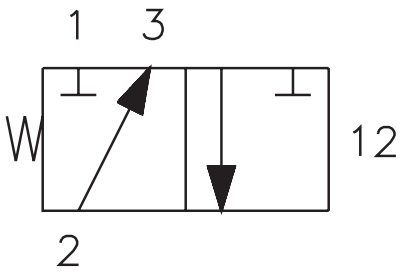
ORDERING INFORMATION

Description	Art. No.
Actuating valve cpl	3107001



1. Compressed-air connection, 2. Compressed-air connection, 3. Exhaust

VALVE 3/2 G1/8" PS NC

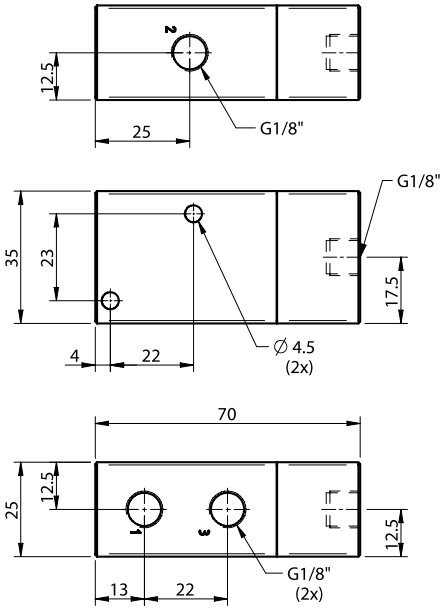


TECHNICAL DATA

Description	Unit	Value
Working pressure, max.	MPa	1.0
Temperature range	°C	-5–70
Weight	g	170
Flow, at 0.6 MPa with delta-p=0.1 MPa	Nl/min	840
Material		Al (anodized)

ORDERING INFORMATION

Description	Art. No.
Valve 3/2 G1/8" PS NC	0112436



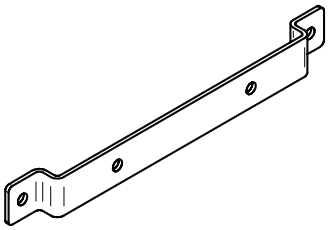
MOUNTING CLAMP TO CONTROL UNIT CU-1/2

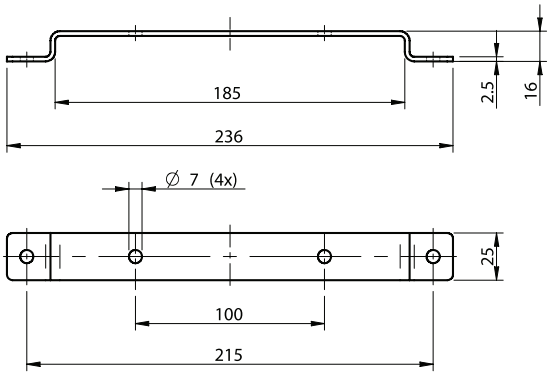
TECHNICAL DATA

Description	Unit	Value
Material		ASTM 316L
Weight	g	118

ORDERING INFORMATION

Description	Art. No.
Mounting clamp control unit CU-1/2	0104487





CONTAINER MODULE 21/16 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

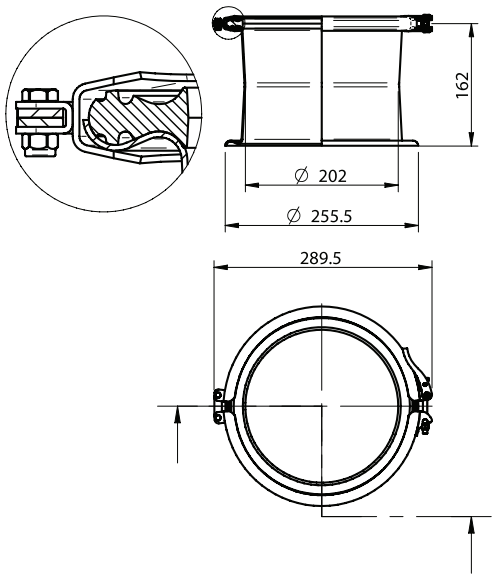
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	5.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104497/1	0104497/2
Material		NBR	Q
Weight	kg	1.96	1.97

ORDERING INFORMATION

Description	Art. No.
Container module 21/16 cpl NBR	0104497/1
Container module 21/16 cpl Q	0104497/2



CONTAINER MODULE 21/9 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

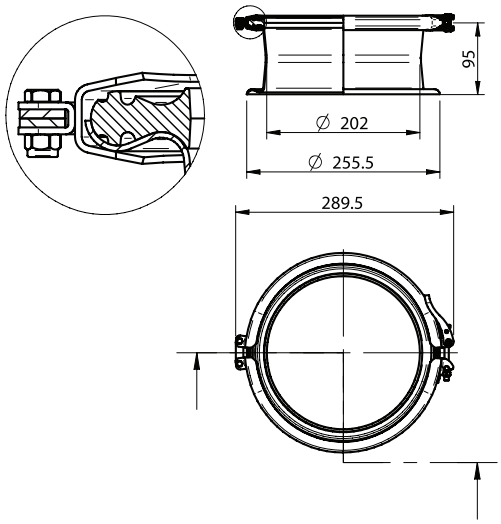
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	3.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104499/1	0104499/2
Material		NBR	Q
Weight	kg	1.52	1.53

ORDERING INFORMATION

Description	Art. No.
Container module 21/9 cpl NBR	0104499/1
Container module 21/9 cpl Q	0104499/2



CONTAINER MODULE 33/26 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

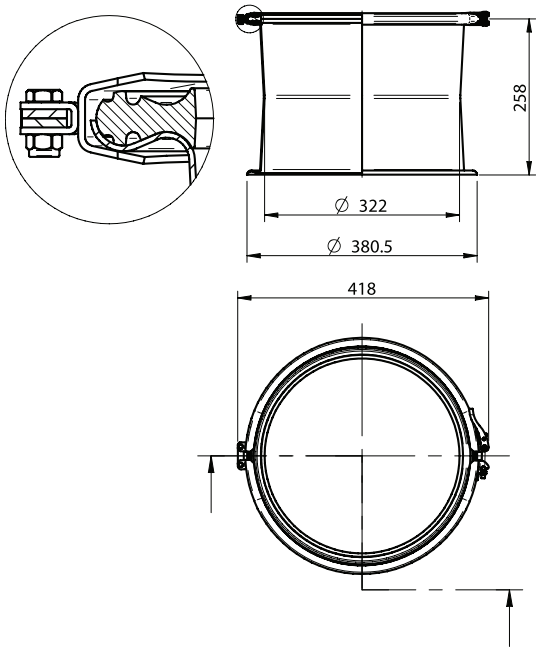
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	21.9

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103902/1	0103902/2
Material		NBR	Q
Weight	kg	3.99	3.99

ORDERING INFORMATION

Description	Art. No.
Container module 33/26 cpl NBR	0103902/1
Container module 33/26 cpl Q	0103902/2



CONTAINER MODULE 33/12 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

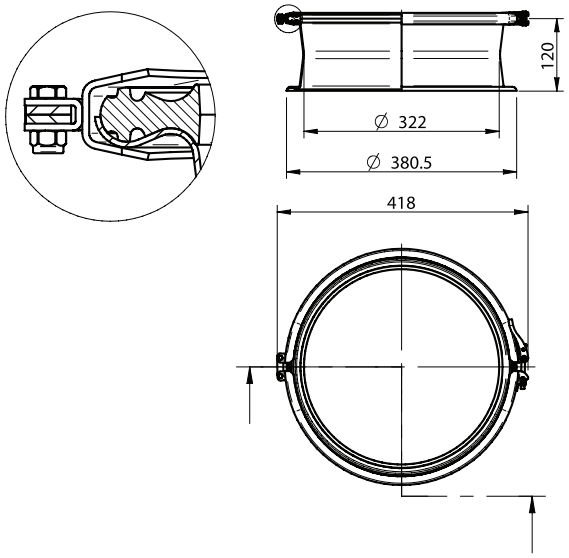
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	10.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Volume	
		0104046/1	0104046/2
Material		NBR	Q
Weight	kg	2.57	2.57

ORDERING INFORMATION

Description	Art. No.
Container module 33/12 cpl NBR	0104046/1
Container module 33/12 cpl Q	0104046/2



CONTAINER MODULE 56/43 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

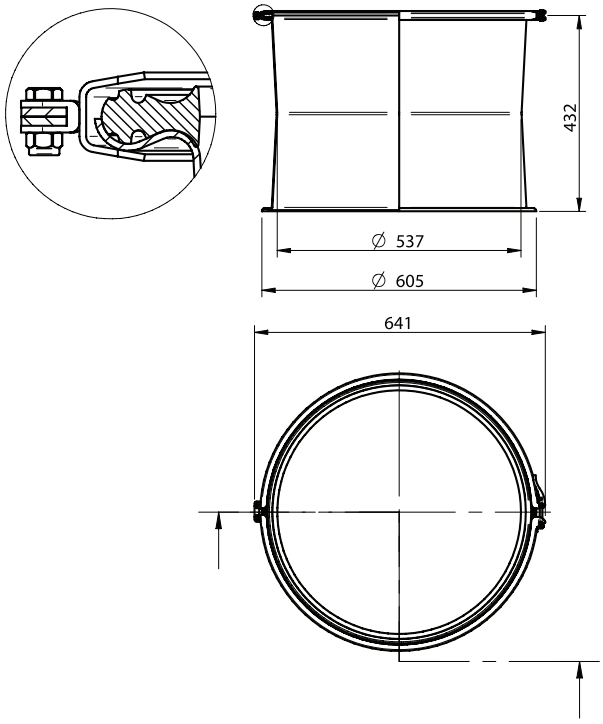
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	10.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		01066243/1	0106243/2
Material		NBR	Q
Weight	kg	11.0	11.0

ORDERING INFORMATION

Description	Art. No.
Container module 56/43 cpl NBR	0106243/1
Container module 56/43 cpl Q	0106243/2



CONTAINER MODULE 56/16 COMPLETE

- Increases the batch volume of the conveyor.
- Elevates and further protects the filter from the conveyed product.

TECHNICAL DATA

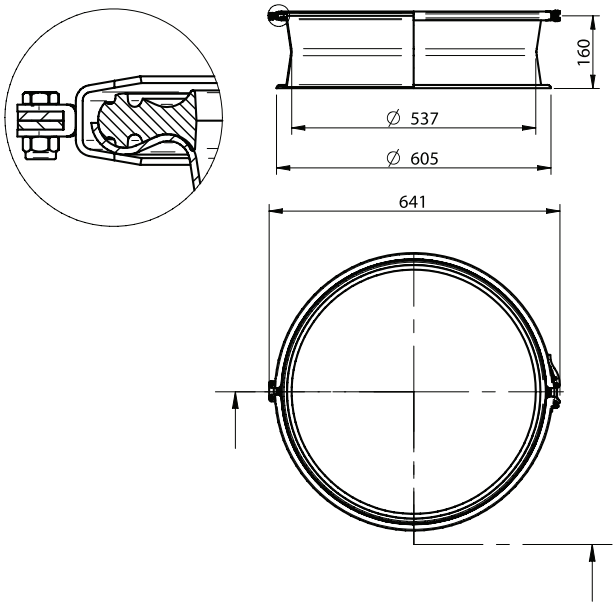
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	37.9

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		01066241/1	0106241/2
Material		NBR	Q
Weight	kg	5.5	5.5

ORDERING INFORMATION

Description	Art. No.
Container module 56/16 cpl, NBR	0106241/1
Container module 56/16 cpl Q	0106241/2



CONE MODULE 33/15 COMPLETE

- Used as a transition piece to increase the internal volume, etc.

TECHNICAL DATA

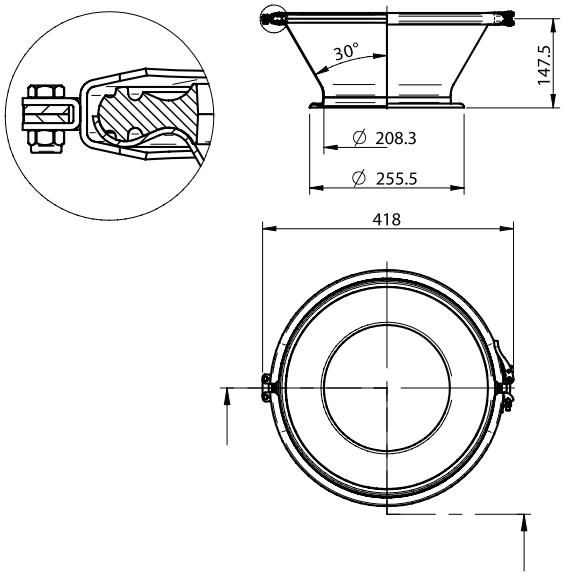
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	8.2

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104050/1	0104050/2
Material		NBR	Q
Weight	kg	2.59	2.60

ORDERING INFORMATION

Description	Art. No.
Cone module 33/15 cpl NBR	0104050/1
Cone module 33/15 cpl Q	0104050/2



CONE MODULE 56/23 COMPLETE WITH MOUNTING BRACKETS

- Used as a transition piece to increase the internal volume, etc

TECHNICAL DATA

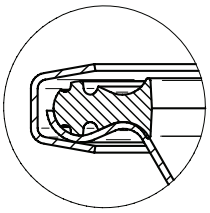
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	35.7

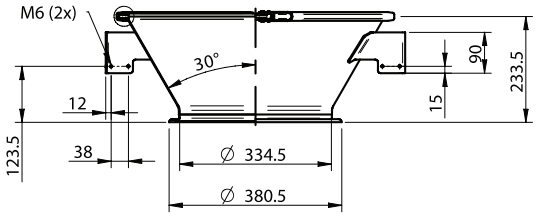
TECHNICAL DATA, SPECIFIC

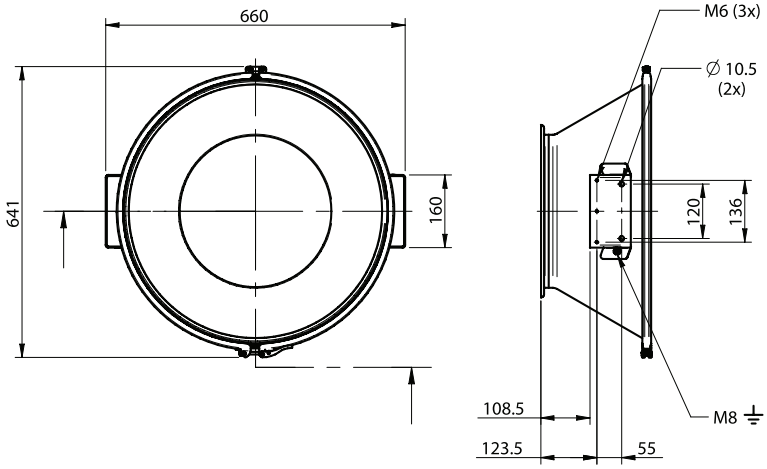
Description	Unit	Value	
		0104051/1	0104051/2
Material		NBR	Q
Weight	kg	7.6	7.6

ORDERING INFORMATION

Description	Art. No.
Cone module 56/23 brackets cpl, NBR	0106238/1
Cone module 56/23 brackets cpl, Q	0106238/2







CONTAINER 21/9 COMPLETE

- Used as a receiving vessel.
- Used for pre-separation.

TECHNICAL DATA

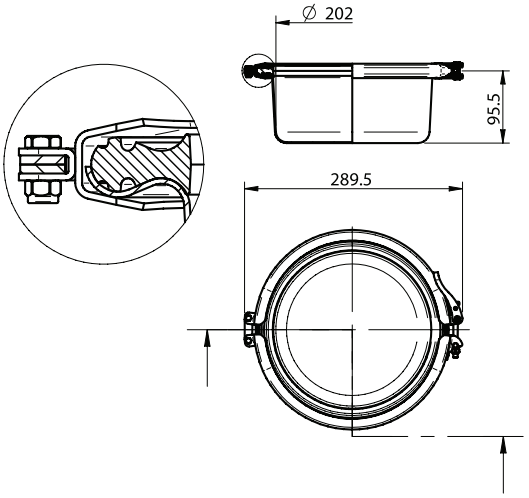
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	3.1

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106799/1	0106799/2
Material		NBR	Q
Weight	kg	1.65	1.65

ORDERING INFORMATION

Description	Art. No.
Container 21/9 cpl NBR	0106799/1
Container 21/9 cpl Q	0106799/2



CONTAINER 33/16 COMPLETE

- Used as a receiving vessel.
- Used for pre-separation.

TECHNICAL DATA

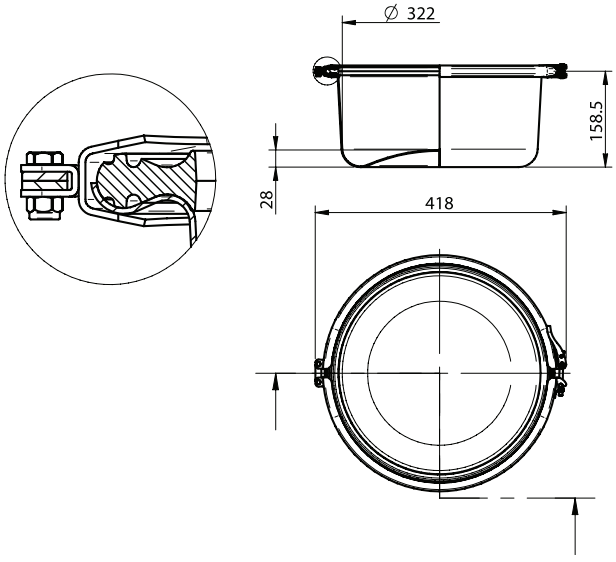
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	12.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0104493/1	0104493/2
Material		NBR	Q
Weight	kg	3.42	3.43

ORDERING INFORMATION

Description	Art. No.
Container 33/16 cpl NBR	0104493/1
Container 33/16 cpl Q	0104493/2



CONTAINER 56/23 COMPLETE

- Used as a receiving vessel.
- Used for pre-separation.

TECHNICAL DATA

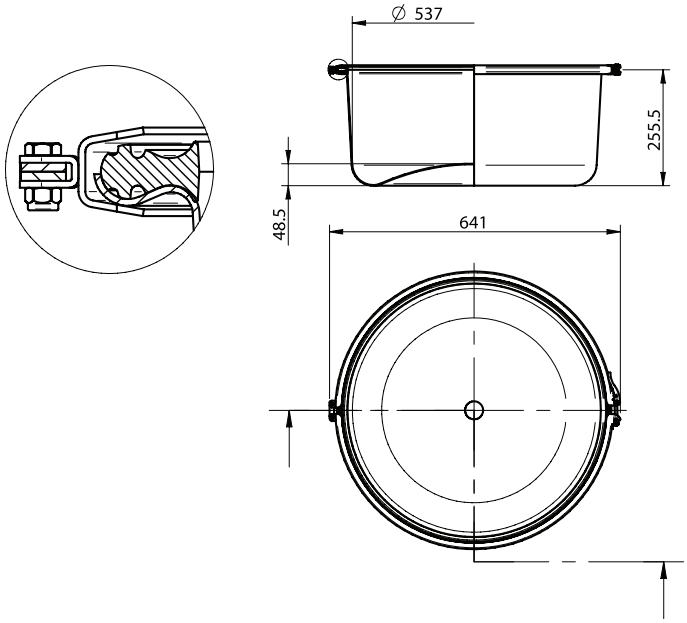
Description	Unit	Value
Material		ASTM 316L
Finish	Ra	≤0.8
Volume	l	55.4

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106969/1	0106969/2
Material		NBR	Q
Weight	kg	9.3	9.3

ORDERING INFORMATION

Description	Art. No.
Container 56/26 cpl NBR	0106969/1
Container 56/26 cpl Q	0106969/2



FEED NOZZLES 25, 32, 40, 50

- Polished ≤ Ra 0.8.
- To pick up the product in a smooth manner.
- Adjustable air intake at two places.

TECHNICAL DATA

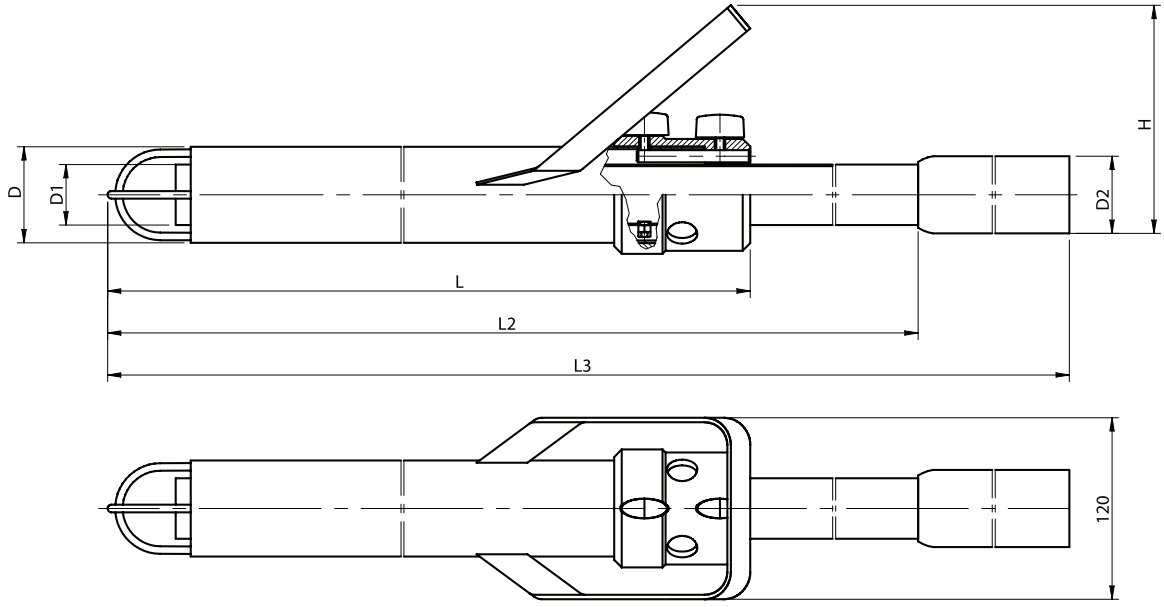
Description	Value
Material	ASTM 316L, POM

TECHNICAL DATA, SPECIFIC

Description	Unit	Value			
		0117440	3404001	3104055	3104054
Weight	kg	1.41	2.62	2.90	2.99

ORDERING INFORMATION

Description	Art. No.
Feed nozzle 25 without handle	0117440
Feed nozzle 32	3404001
Feed nozzle 40	3104055
Feed nozzle 50	3104054



DIMENSIONS

Description	D mm	D1 mm	D2 mm	L mm	L2 mm	L3 mm	H mm
Feed nozzle 25 without handle	Ø 40.0	Ø 25x1.2	Ø 25x1.2	730	911–940	—	66
Feed nozzle 32	Ø 51.0	Ø 32x1.2	Ø 32x1.2	780	940–1005	—	160
Feed nozzle 40	Ø 63.5	Ø 40x1.0	Ø 40x1.0	785	840–905	—	165
Feed nozzle 50	Ø 63.5	Ø 40x1.0	Ø 51x1.5	785	840–905	940-1005	165

FEED STATIONS

- To store the product at the suction point.
- Polished ≤ Ra 0.8.
- Available with white or antistatic (black) fluidisation cone
- Fluidisation regulator is included.

TECHNICAL DATA

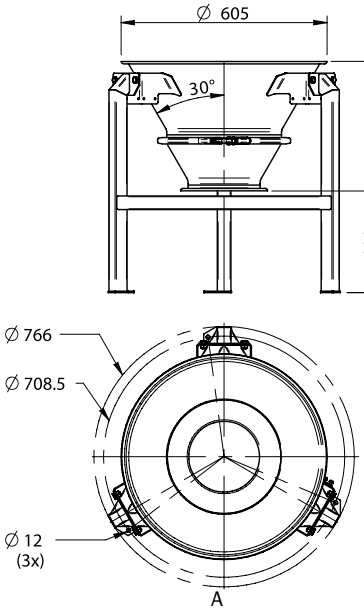
Description	Unit	Value
Material		ASTM 304, ASTM 316L
Material batch volume	l	40

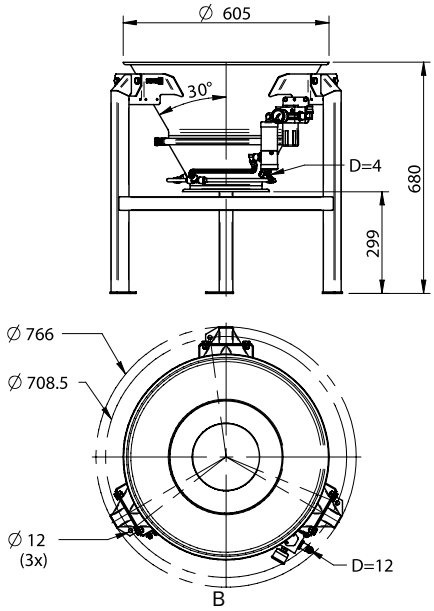
TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0117673/0117674	0117675/1017676
Material		NBR, Q	NBR, Q
Weight	kg	23.2	25.5

ORDERING INFORMATION

	Description	Art. No.
A	Feed station 40 liters, NBR	0117673
A	Feed station 40 liters, Q	0117674
B	Feed station 40 liters, fluidisation, NBR	0117675
B	Feed station 40 liters, fluidisation, Q	0117676





FEED ADAPTERS WITH CLAMP RING

- Polished ≤ Ra 0.8.
- To suit PIAB feed station or transition pieces.

TECHNICAL DATA

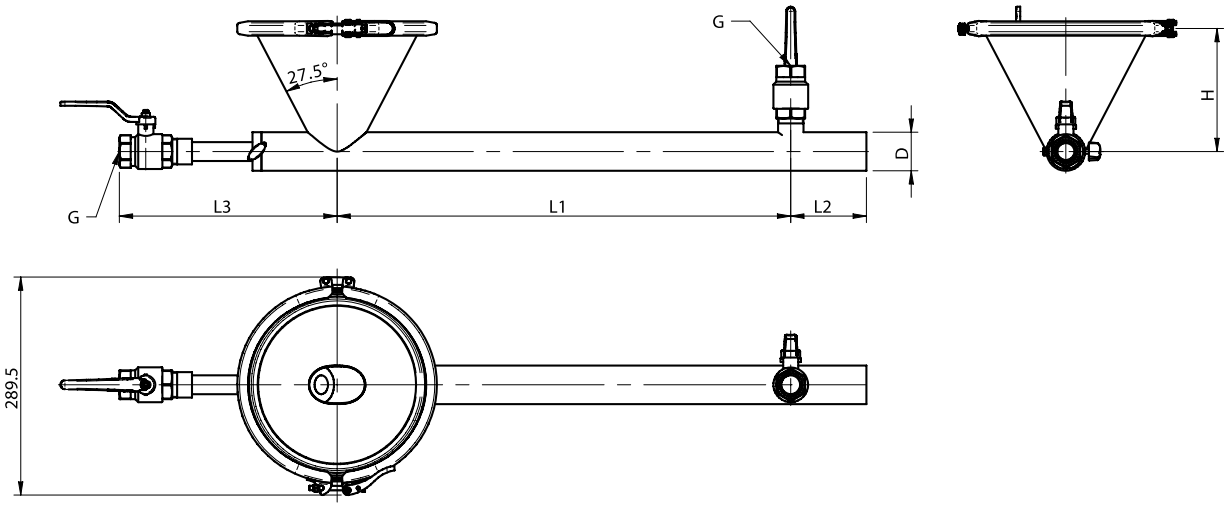
Description	Value
Material	ASTM 316L, CuNi

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg
Feed adapter, D=25, NBR clamp ring	0117438	2.42
Feed adapter, D=25, Q clamp ring	0117439	2.43
Feed adapter, D=32, NBR clamp ring	0117663	2.59
Feed adapter, D=32, Q clamp ring	0117664	2.59
Feed adapter, D=40, NBR clamp ring	0117708	2.92
Feed adapter, D=40, Q clamp ring	0117709	2.93
Feed adapter, D=50, NBR clamp ring	0117667	4.15
Feed adapter, D=50, Q clamp ring	0117668	4.16
Feed adapter, D=75, NBR clamp ring	0117669	7.95
Feed adapter, D=75, Q clamp ring	0117670	7.96
Feed adapter, D=100, NBR clamp ring	0117671	12.86
Feed adapter, D=100, Q clamp ring	0117672	12.87

ORDERING INFORMATION

Description	Art. No.
Feed adapter, D=25, NBR clamp ring	0117438
Feed adapter, D=25, Q clamp ring	0117439
Feed adapter, D=32, NBR clamp ring	0117663
Feed adapter, D=32, Q clamp ring	0117664
Feed adapter, D=40, NBR clamp ring	0117708
Feed adapter, D=40, Q clamp ring	0117709
Feed adapter, D=50, NBR clamp ring	0117667
Feed adapter, D=50, Q clamp ring	0117668
Feed adapter, D=75, NBR clamp ring	0117669
Feed adapter, D=75, Q clamp ring	0117670
Feed adapter, D=100, NBR clamp ring	0117671
Feed adapter, D=100, Q clamp ring	0117672



DIMENSIONS

Description	D mm	H mm	L1 mm	L2 mm	L3 mm	G
Feed adapter, D=25	Ø 25x1.2	184	385	65	137–190	1/4"
Feed adapter, D=32	Ø 32x1.2	181	425	100	155–208	1/2"
Feed adapter, D=40	Ø 40x1.0	173	500	100	188–255	3/4"
Feed adapter, D=50	Ø 51x1.2	163	600	100	208–288	1"
Feed adapter, D=75	Ø 76.1x1.6	139	775	150	252–372	1 1/4"
Feed adapter, D=100	Ø 101.6x2.0	114	1050	150	309–459	2"

TEXTILE FILTER BAGS

- The filter bags are of food quality.
- Antistatic.
- Welded seams.
- Silicone free.

TECHNICAL DATA

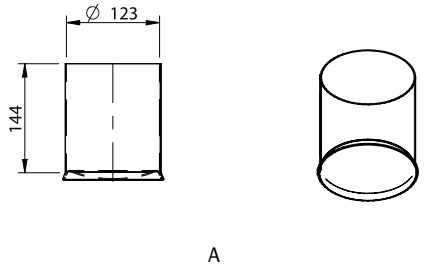
Description	Unit	Value
Material		ePTFE, Polyester (95%), C (5%)
Temperature, max.	°C	80
Min particle size	µm	5.0

TECHNICAL DATA, SPECIFIC

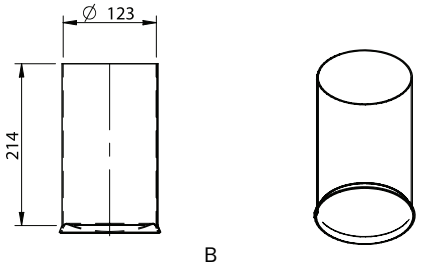
Description	Unit	Value			
		0115354	0115355	0115356	0115357
Weight	kg	0.032	0.045	0.071	0.116
Filter area/bag	m^2	0.06	0.09	0.14	0.23

ORDERING INFORMATION

	Description	Art. No.
A	Textile filter D=125 L=145	0115354
B	Textile filter D=125 L=220	0115355
C	Textile filter D=125 L=360	0115356
D	Textile filter D=125 L=610	0115357



A



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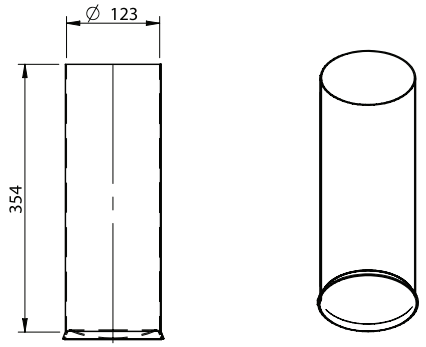

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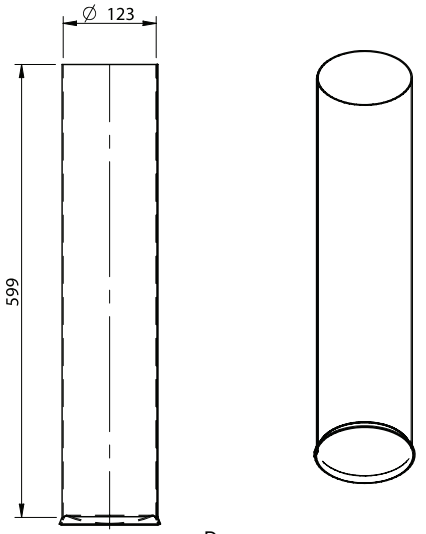


D

ROD FILTERS GORE SINBRAN

- Suitable for sticky powders.
- FDA compliance.
- The black Gore Sinbran filter is antistatic and in complience with ATEX.
- Silicone free.

TECHNICAL DATA

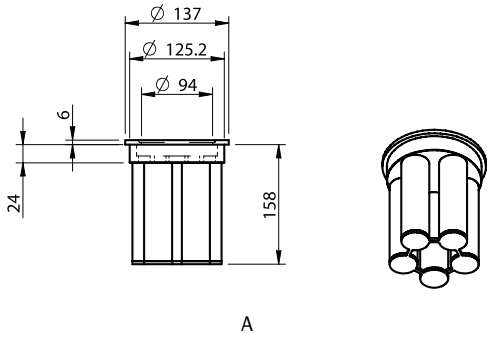
Description	Unit	Value
Material		PTFE, PE
Temperature, max.	°C	60
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

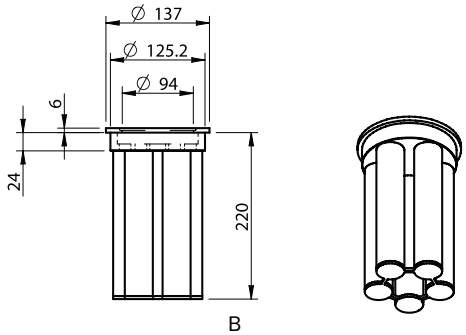
Description	Unit	Value			
		0111871	0111872	0111873	0111874
Weight	kg	0.285	0.335	0.449	0.652
Filter area/bag	m^2	0.08	0.11	0.19	0.34

ORDERING INFORMATION

	Description	Art. No.
A	Rod filter Gore Sinbran L=158, black	0111871/1
A	Rod filter Gore Sinbran L= 158, white	0111871/2
B	Rod filter Gore Sinbran L=220, black	0111872/1
B	Rod filter Gore Sinbran L=220, white	0111872/2
C	Rod filter Gore Sinbran L=360, black	0111873/1
C	Rod filter Gore Sinbran L=360, white	0111873/2
D	Rod filter Gore Sinbran L=610, black	0111874/1
D	Rod filter Gore Sinbran L=610, white	0111874/2



A



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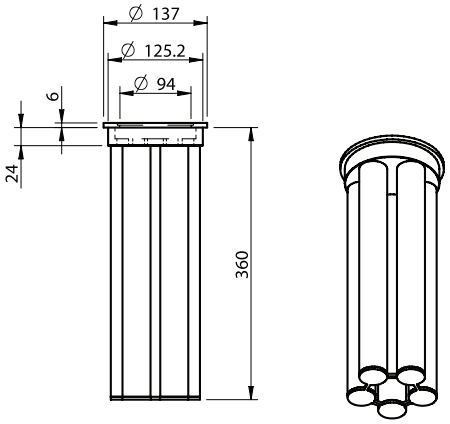

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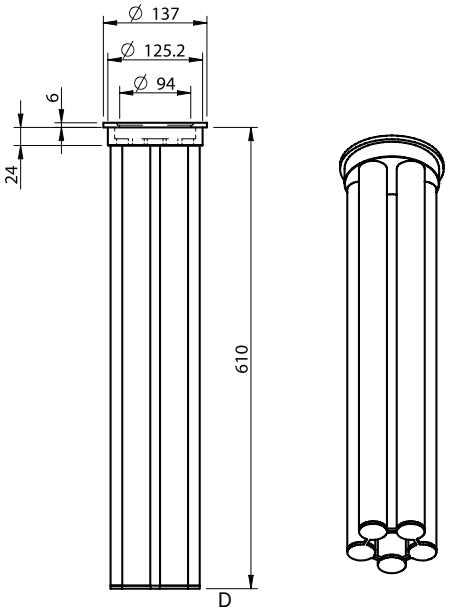


D

ROD FILTER GORE SINBRAN Ø50.8, L=182

- Suitable for sticky powders.
- FDA compliance.
- The black Gore Sinbran filter is antistatic and in complience with ATEX.
- Silicone free.

TECHNICAL DATA

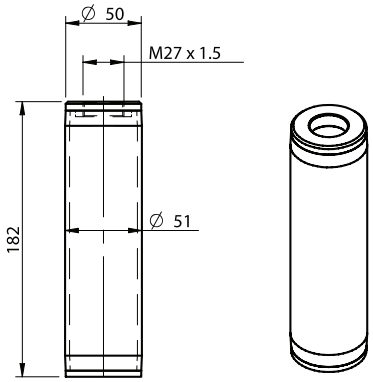
Description	Unit	Value
Material		PTFE, PE
Temperature max	°C	60
Weight	kg	0.064
Filter area	m^2	0.03
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	0109835/1	0109835/2
Material	C	-

ORDERING INFORMATION

Description	Art. No.
Rod filter Gore Sinbran Ø50,8 L=182, black antistatic	0109835/1
Rod filter Gore Sinbran Ø50,8 L=182, white	0109835/2



PLEATED FILTERS

- FDA compliance.
- The filter is antistatic and in complience with ATEX.
- Suitable for extreme fine and free flowing powder, i.e. toner.

TECHNICAL DATA

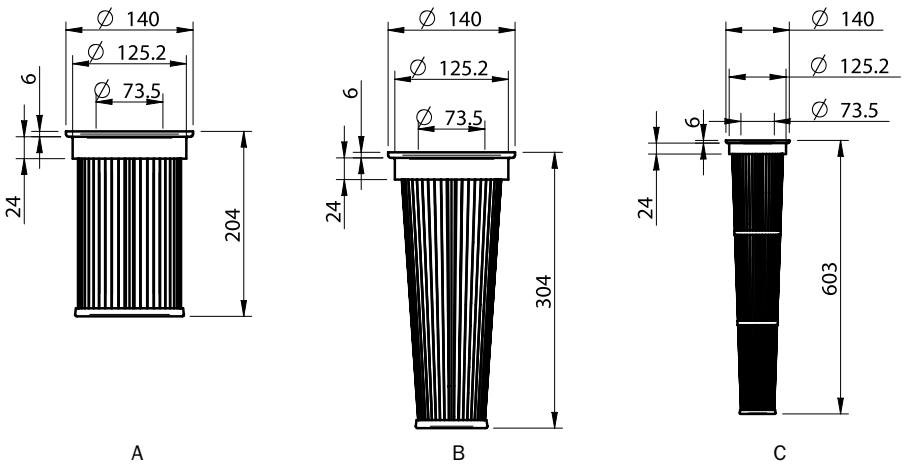
Description	Unit	Value
Material		PTFE, Polyester, PUR, EN1.4571
Temperature	°C	80
Min particle size	µm	0.5

TECHNICAL DATA, SPECIFIC

Description	Unit	Value		
		0112310	0112311	0112312
Weight	kg	0.83	0.86	1.10
Filter area	m²	0.30	0.50	1.00

ORDERING INFORMATION

	Description	Art. No.
A	Pleated filter L=198	0112310
B	Pleated filter L=298	0112311
C	Pleated filter L=597	0112312



PLEATED FILTER Ø61/58, L=182

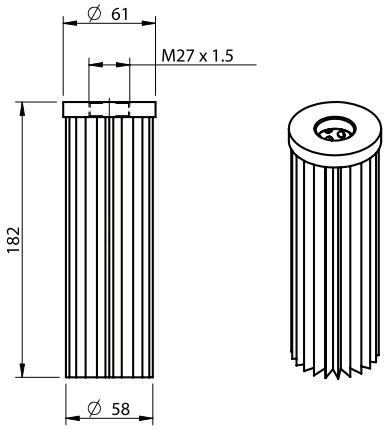
- FDA compliance.
- The filter is antistatic and in complience with ATEX.
- Suitable for extreme fine and free flowing powder, i.e. toner.

TECHNICAL DATA

Description	Unit	Value
Material		PTFE, Polyester, PUR, EN1.4404
Temperature max	°C	80
Weight	kg	0.182
Filter area	m^2	0.08
Min particle size	µm	0.5

ORDERING INFORMATION

Description	Art. No.
Pleated filter Ø61/58, L=182	0114056



CLAMP RINGS, COMPLETE

- Hygienic design.
- Spare part.

TECHNICAL DATA

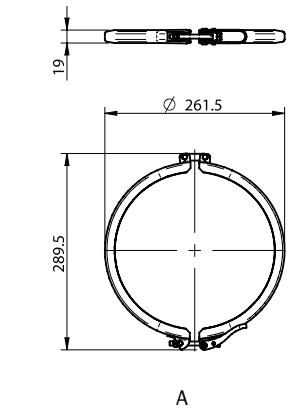
Description	Value
Material	ASTM 316L

TECHNICAL DATA, SPECIFIC

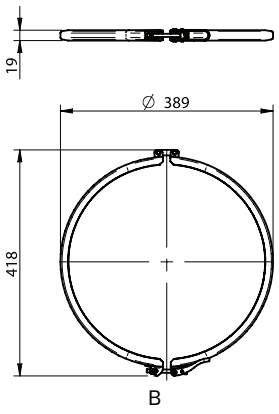
Description	Unit	Value			
		0103972	0103977	0104390	0106127
Weight	kg	0.451	0.625	0.827	0.955

ORDERING INFORMATION

	Description	Art. No.
A	Clamp ring 21 cpl	0103972
B	Clamp ring 33 cpl	0103977
C	Clamp ring 33 cpl handles	0104390
D	Clamp ring 56 cpl	0106127



A



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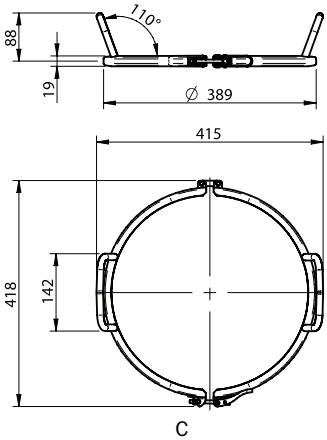
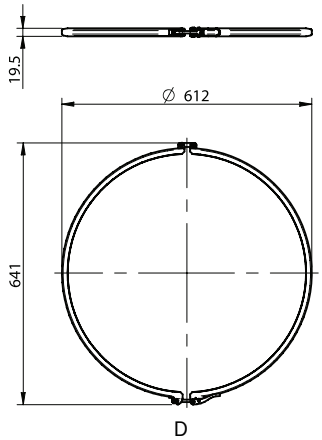


C



D

MOUNTING BRACKET

- Polished ≤ Ra 0.8.
- To fasten control units, fluidising regulator or to mount the conveyor on a wall.

TECHNICAL DATA

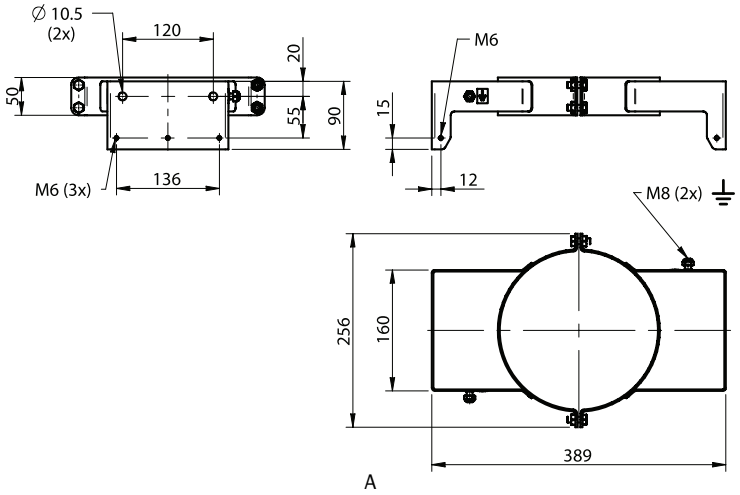
Description	Value
Material	ASTM 316L

TECHNICAL DATA, SPECIFIC

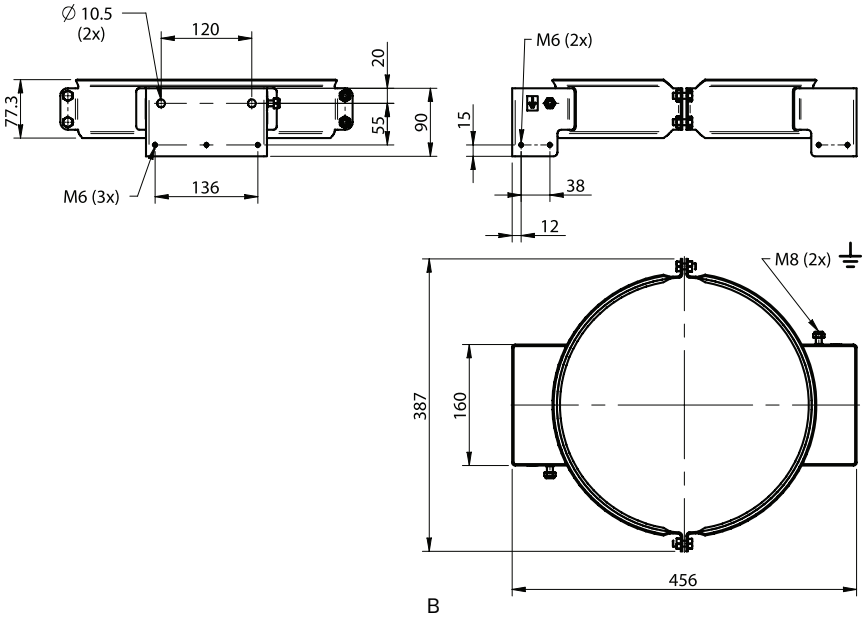
Description	Unit	Value	
		0108555	0104091
Weight	kg	1.68	2.35

ORDERING INFORMATION

	Description	Art. No.
A	Mounting bracket 21 cpl	0108555
B	Mounting bracket 33 cpl	0104091



A



B

MODULE SEALS

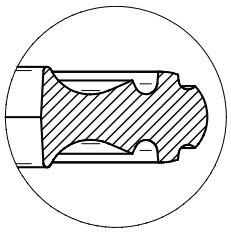
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value					
		0103946/1	0103946/2	0103948/1	0103948/2	0106142/1	0106142/2
Material		NBR	Q	NBR	Q	NBR	Q
Temperature range	°C	-20–125	-30–175	-20–125	-30–175	-20–125	-30–175
Weight	kg	0.150	0.157	0.227	0.240	0.370	0.386
Colour		black	white	black	white	black	white

ORDERING INFORMATION

Description	Art. No.
Module seal 21 NBR	0103946/1
Module seal 21 Q	0103946/2
Module seal 33 NBR	0103948/1
Module seal 33 Q	0103948/2
Module seal 56 NBR	0106142/1
Module seal 56 Q	0106142/2



MODULE FILTER PLATE SEALS

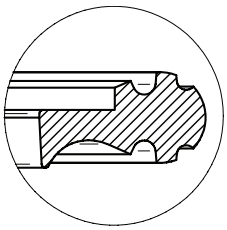
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value					
		0103947/1	0103947/2	0103949/1	0103949/2	0106143/1	0106143/2
Material		NBR	Q	NBR	Q	NBR	Q
Temperature range	°C	-20–125	-30–175	-20–125	-30–175	-20–125	-30–175
Weight	kg	0.126	0.132	0.181	0.189	0.286	0.299
Colour		black	white	black	white	black	white

ORDERING INFORMATION

Description	Art. No.
Module filter plate seal 21 NBR	0103947/1
Module filter plate seal 21 Q	0103947/2
Module filter plate seal 33 NBR	0103949/1
Module filter plate seal 33 Q	0103949/2
Module filter plate seal 56 NBR	0106143/1
Module filter plate seal 56 Q	0106143/2



MODULE FLUID SEALS

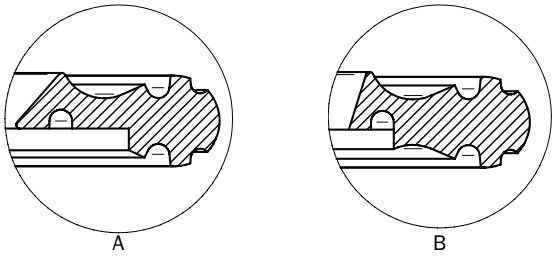
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value			
		0106670/1	0106670/2	0103950/1	0103950/2
Material		NBR	Q	NBR	Q
Temperature range	°C	-20-125	-30–175	-20-125	-30-175
Weight	kg	0.13	0.14	0.216	0.224
Colour		black	white	black	white

ORDERING INFORMATION

	Description	Art. No.
A	Module fluid seal 21 NBR	0106670/1
A	Module fluid seal 21 Q	0106670/2
B	Module fluid seal 33 NBR	0103950/1
B	Module fluid seal 33 Q	0103950/2



FLUID SEALS

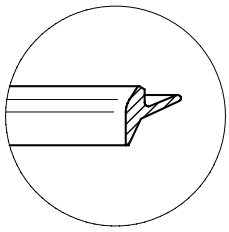
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103951/1	0103951/2
Material		NBR	Q
Temperature range	°C	-20–125	-30–175
Weight	kg	0.120	0.130
Colour		black	white

ORDERING INFORMATION

Description	Art. No.
Fluid seal 33 NBR	0103951/1
Fluid seal 33 Q	0103951/2



FILTER SEALS

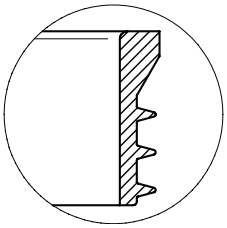
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103953/1	0103953/2
Material		NBR	Q
Temperature range	°C	-20–125	-30–175
Weight	kg	0.031	0.040
Colour		black	white

ORDERING INFORMATION

Description	Art. No.
Filter seal 125 NBR	0103953/1
Filter seal 125 Q	0103953/2



BOTTOM VALVE SEALS

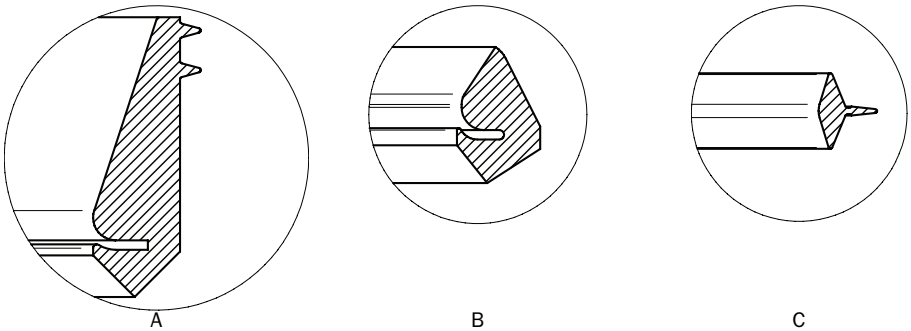
- Fulfils the requirements of FDA.
- Spare part.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value					
		0106617/1	0106617/2	0106603/1	0106603/2	0103952/1	0103952/2
Material		NBR	Q	NBR	Q	NBR	Q
Temperature range	°C	-20–125	-30–175	-20–125	-30–175	-20–125	-30–175
Weight	kg	0.169	0.176	0.060	0.063	0.195	0.202
Colour		black	white	black	white	black	white

ORDERING INFORMATION

	Description	Art. No.
A	Bottom valve seal 180 NBR	0103952/1
A	Bottom valve seal 180 Q	0103952/2
B	Bottom valve seal 125 NBR	0106603/1
B	Bottom valve seal 125 Q	0106603/2
C	Valve cone seal 21 NBR	0106617/1
C	Valve cone seal 21 Q	0106617/2



A B C

FLUIDISING CONE 21 MADE OF POLYETHYLENE

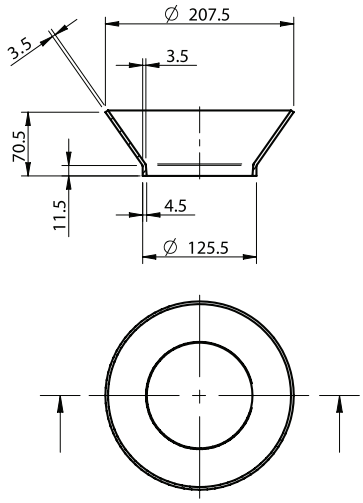
- Fulfils the requirements of FDA (white cone).
- Antistatic (black cone).

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0106669/1	0106669/2
Material		PE, Antistatic	PE
Weight	kg	0.076	0.076

ORDERING INFORMATION

Description	Art. No.
Fluidising cone 21 PE antistatic	0106669/1
Fluidising cone 21 PE	0106669/2



FLUIDISING CONE 33 MADE OF POLYETHYLENE

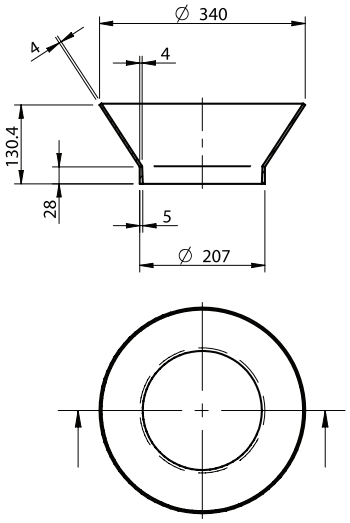
- Fulfils the requirements of FDA (white cone).
- Antistatic (black cone).

TECHNICAL DATA, SPECIFIC

Description	Unit	Value	
		0103978/1	0103978/2
Material		PE, Antistatic	PE
Weight	kg	0.220	0.250

ORDERING INFORMATION

Description	Art. No.
Fluidising cone 33 PE antistatic	0103978/1
Fluidising cone 33 PE	0103978/2



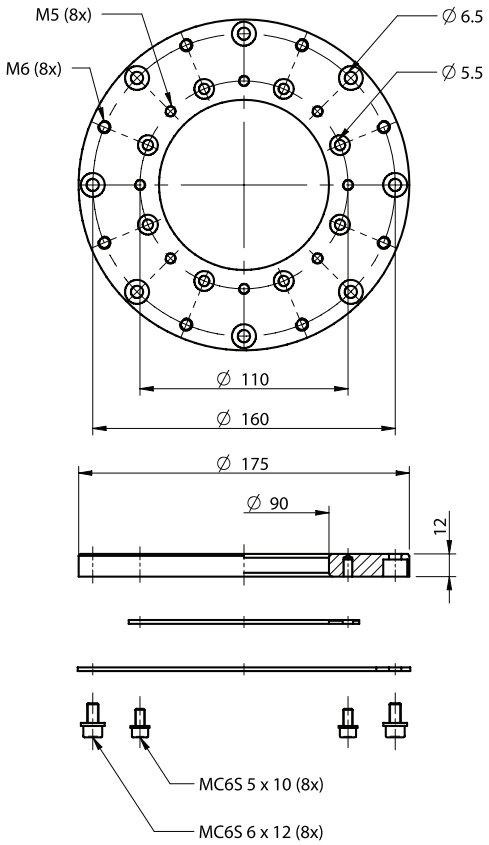
ADAPTER MAXI L100-1600

TECHNICAL DATA

Description	Unit	Value
Material		SS, CI, SIL, EPDM, Viton, NR, PA
Weight	kg	0.620

ORDERING INFORMATION

Description	Art. No.
Adapter MAXI L100-L1600 cpl	3102073



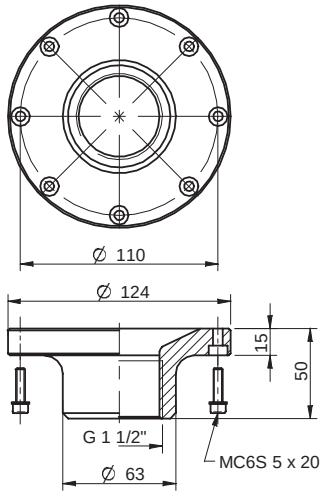
CONNECTION FLANGE

TECHNICAL DATA, SPECIFIC

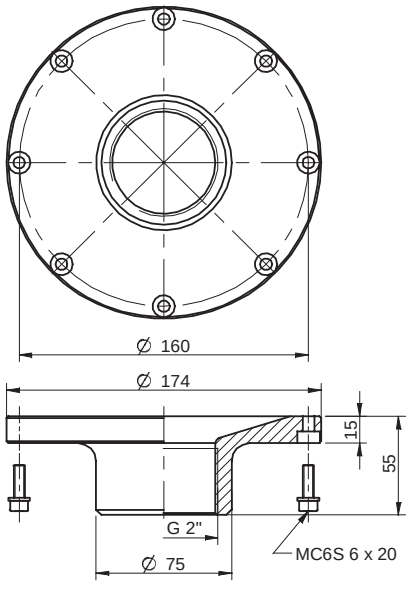
Description	Value	3116010	3116015
Material		Al, PA	Al, PA, SS
Weight	kg	0.500	0.910

ORDERING INFORMATION

	Description	Art. No.
A	Connection flange 100–600	3116010
B	Connection flange 800–1600	3116015



A



B

EXHAUST ADAPTERS

- Used with free-flow silencer 75.
- Carry-off air from pump.

TECHNICAL DATA

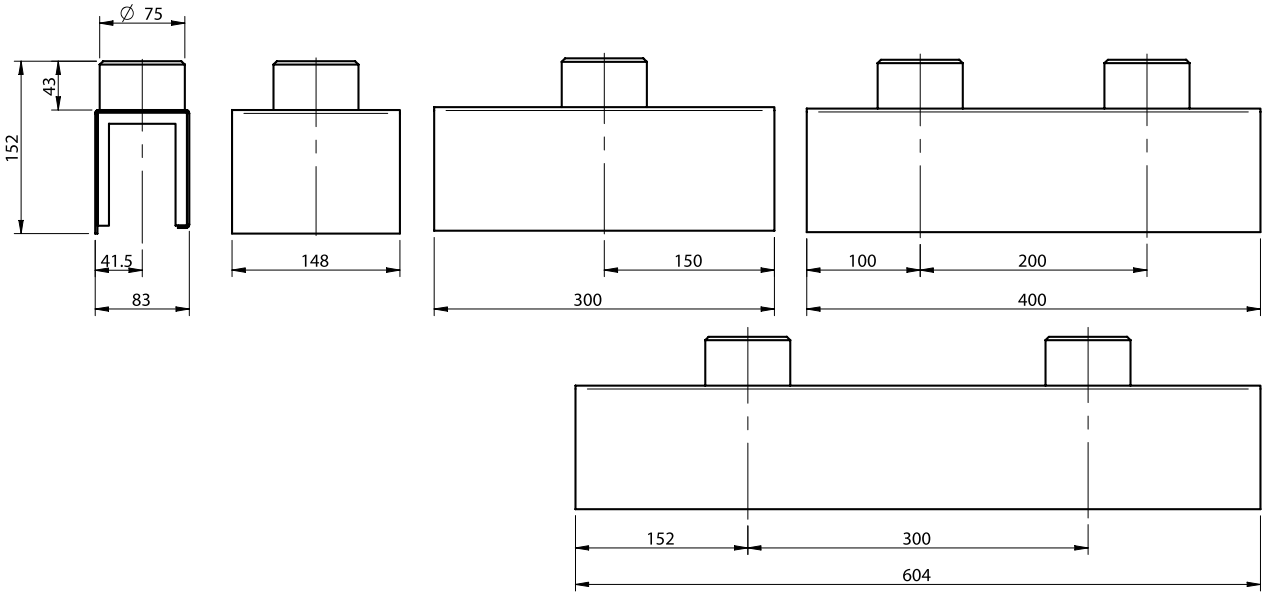
Description	Value
Material	Al, NBR, PE

TECHNICAL DATA, SPECIFIC

Description	Unit	Value			
		3116017	3116018	3116054	3116019
Weight	kg	0.406	0.900	1.03	1.45
Connection, exhaust		Ø75×1.5	Ø75×1.5	2×Ø75×1.5	2×Ø75×1.5

ORDERING INFORMATION

	Description	Art. No.
A	Central exhaust MLL100–400	3116017
B	Central exhaust MLL600–800	3116018
C	Central exhaust MLL1200	3116054
D	Central exhaust MLL1600	3116019



FREE-FLOW SILENCER 75

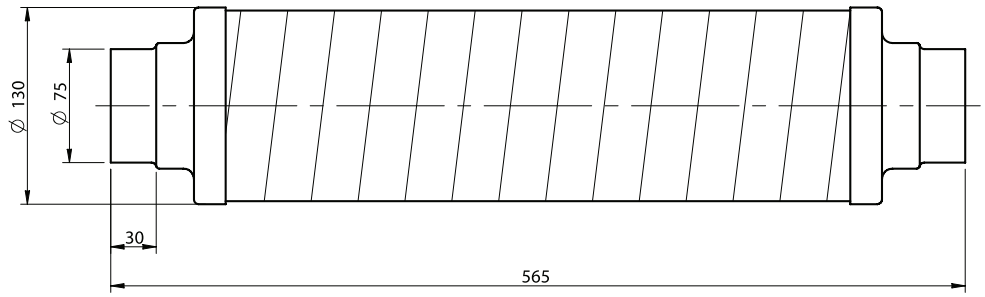
- Used with exhaust adapters.
- To decrease the noice-level.

TECHNICAL DATA

Description	Unit	Value
Noise level	dBA	-10
Material		Al
Weight	kg	0.500

ORDERING INFORMATION

Description	Art. No.
Free-flow silencer 75	3116609



Conveyors IC

Many industrial processes involve moving of bulk material.
A few examples of such materials are metal oxides, ceramics and plastic powders. These come into the production phase in the shape of powders, granules or pellets.
The IC Conveyor is suitable for industries where the sanitary demands are not primary, but lower energy consumption, lower maintenance and a better working environment are important.
The IC Conveyor is easy to install and maintain.

CONVEYORS IC

IC3301 242
IC3302 244
IC3304 246

IC3301

- COAX® *patented technology*
- Compact design
- Easy to install
- Antistatic filter and sealings

TECHNICAL DATA

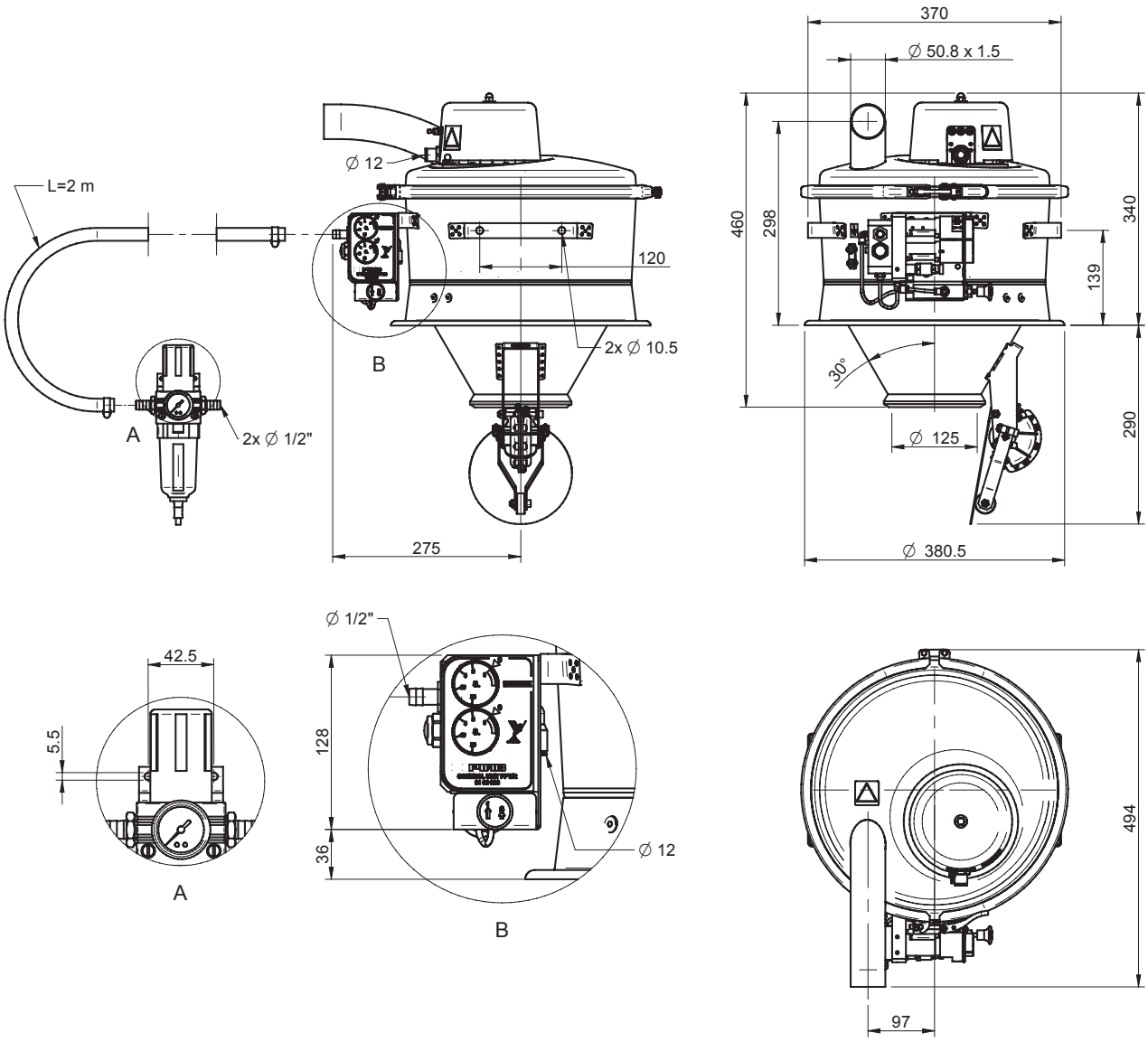
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Air consumption	Nl/s	5–7
Vacuum	-kPa	60–75
Noise level	dBA	72–76
Material		Fe, Zn, NBR, PA, Al
Temperature range	°C	0–50
Weight	kg	11.2
Filter area	m^2	0.06
Batch volume	l	5.5
Pipe dimension	mm	51

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
1.0	0.7	0.5	0.3

ORDERING INFORMATION

Description	Art. No.
Conveyor IC3301	0111537



ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Container module cpl short	0111563
Container module cpl tall	0111562

IC3302

- COAX® *patented technology*
- Compact design
- Easy to install
- Antistatic filter and sealings

TECHNICAL DATA

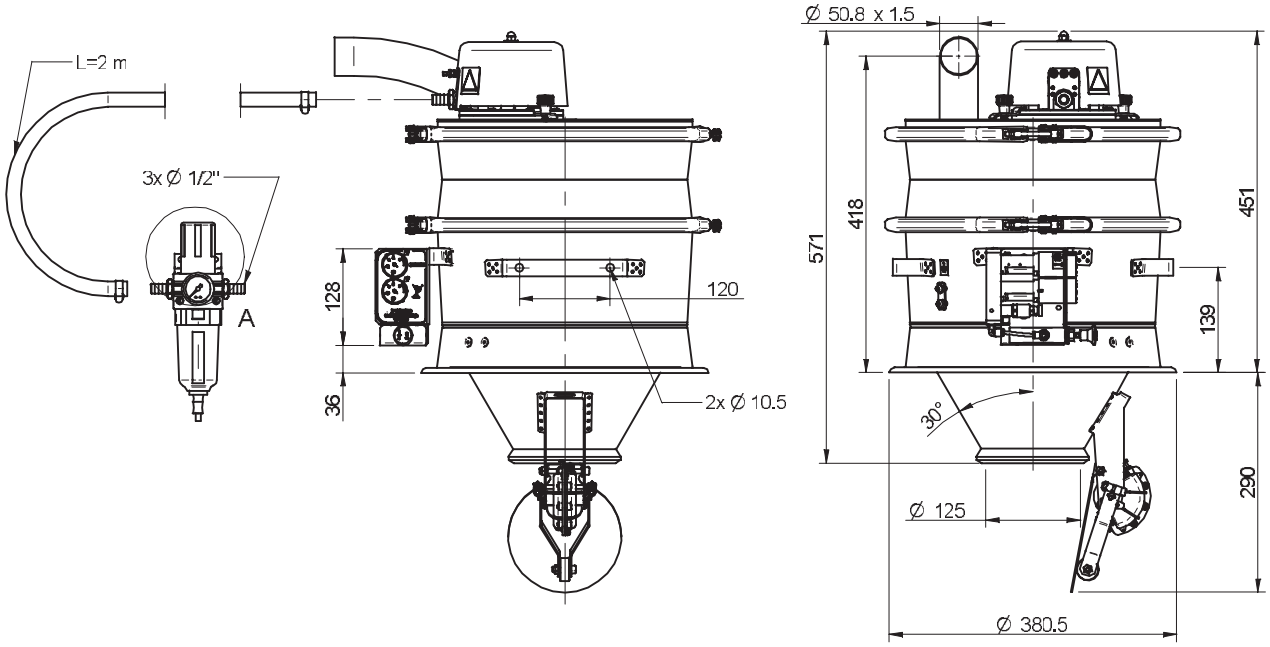
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Air consumption	Nl/s	10–14
Vacuum	-kPa	60–75
Noise level	dBA	72–76
Material		Fe, Zn, NBR, PA, Al
Temperature range	°C	0–50
Weight	kg	14
Filter area	m^2	0.09
Batch volume	l	9
Pipe dimension	mm	51

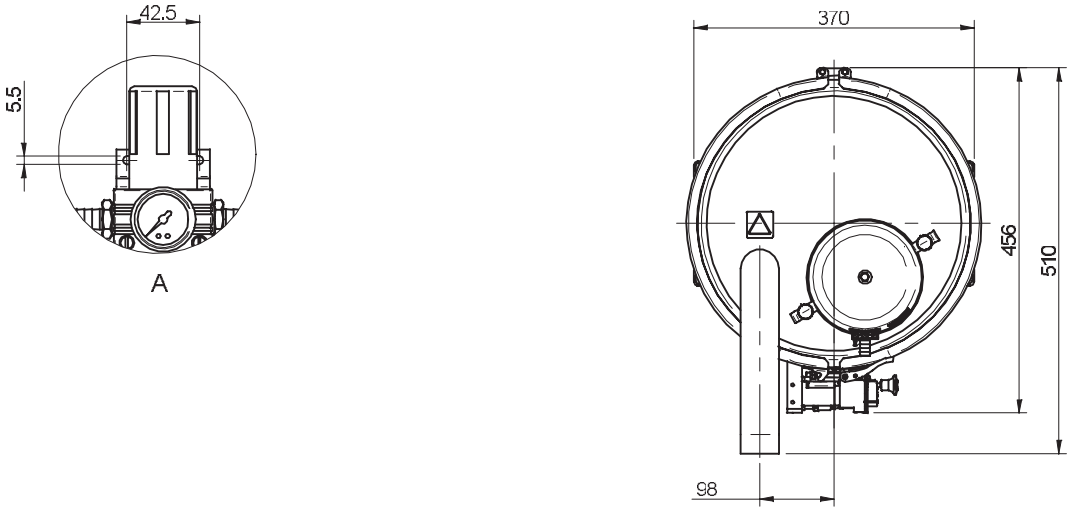
CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
1.5	1.0	0.7	0.5

ORDERING INFORMATION

Description	Art. No.
Conveyor IC3302	0111538





ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Container module cpl short	0111563
Container module cpl tall	0111562

IC3304

- COAX® *patented technology*
- Compact design
- Easy to install
- Antistatic filter and sealings

TECHNICAL DATA

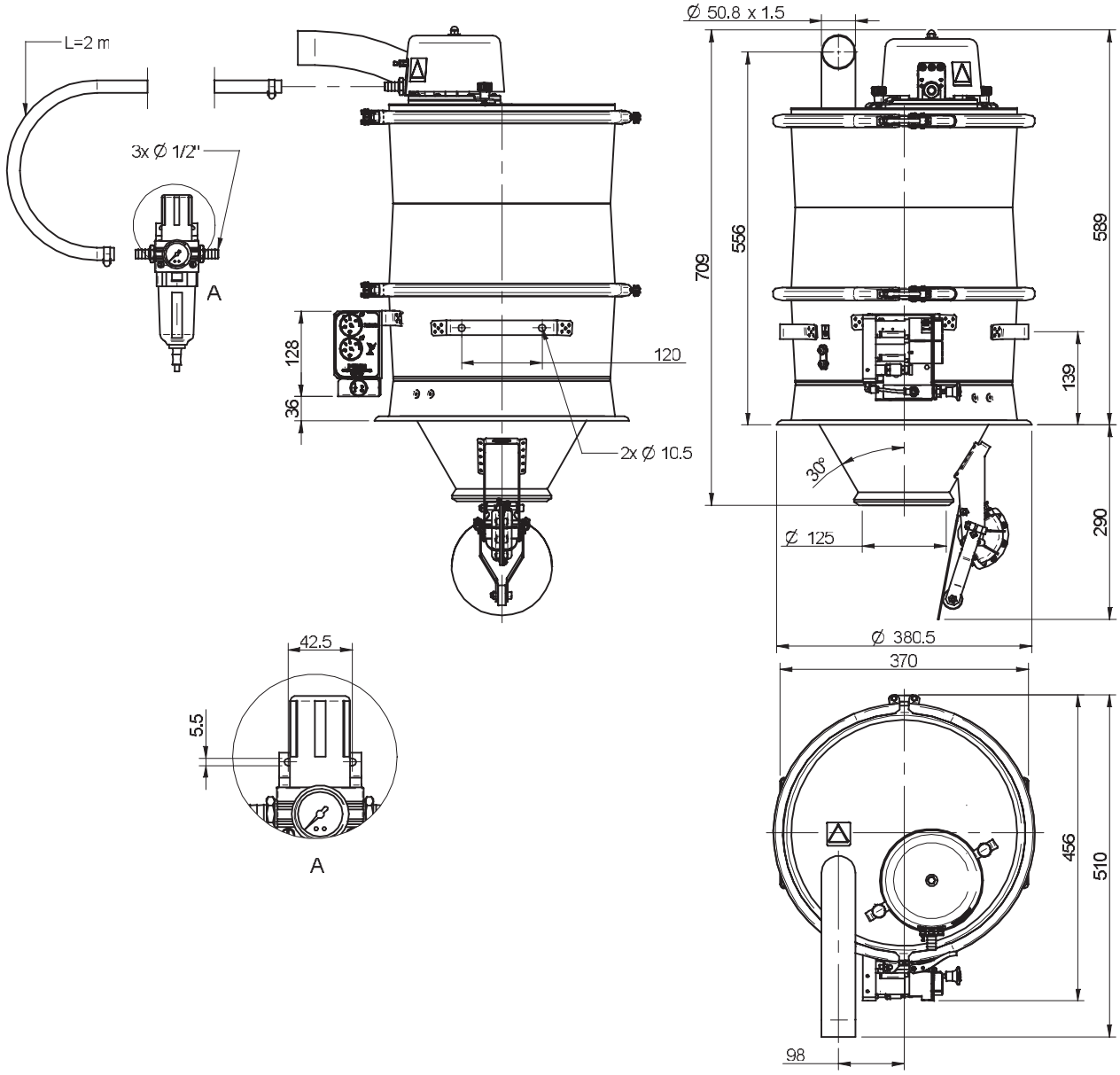
Description	Unit	Value
Feed pressure	MPa	0.4–0.6
Air consumption	Nl/s	15–21
Vacuum	-kPa	60–75
Noise level	dBA	72–76
Material		Fe, Zn, NBR, PA, Al
Temperature range	°C	0–50
Weight	kg	15.6
Filter area	m^2	0.14
Batch volume	l	9
Pipe dimension	mm	51

CAPACITY

Capacity ton/h at different conveying distances			
5 m	10 m	20 m	30 m
2.0	1.5	1.0	0.7

ORDERING INFORMATION

Description	Art. No.
Conveyor IC3304	0111539



ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Container module cpl short	0111563
Container module cpl tall	0111562

SUCTION PIPES

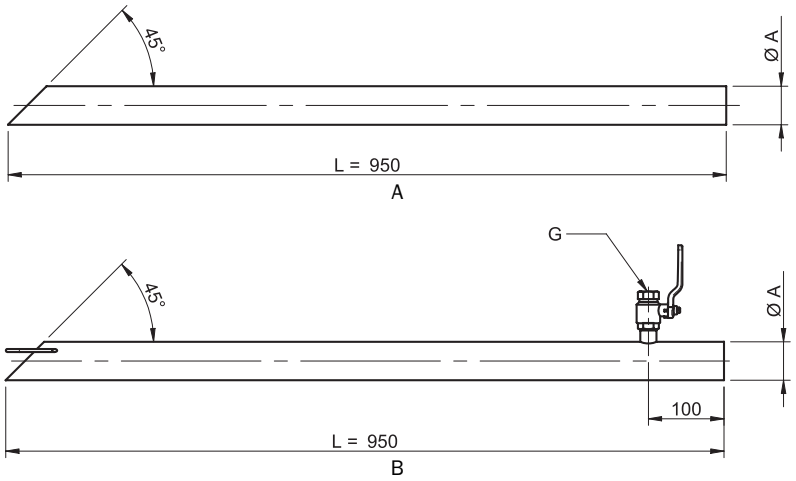
- The purpose of the suction pipe is to pick up product in a smooth manner.
- The suction pipe with ball valve is for powders. The amount of carrying air can be adjusted. The suction pipe is also equipped with an arched steel wire to protect bags from being drawn into the pipe.

TECHNICAL DATA, SPECIFIC

Description	Unit	Value			
		0113917	0113920	0113921	0113922
Material		SS	SS	SS, CuZn	SS, CuZn
Weight	kg	0.86	1.37	1.03	1.60

ORDERING INFORMATION

Description		Art. No.
A	Suction pipe 32	0113917
A	Suction pipe 50	0113920
B	Suction pipe 32 with ball valve	0113921
B	Suction pipe 50 with ball valve	0113922



DIMENSIONS

Description	L mm	A Ø mm	G in
Suction pipe 32	950	32 × 1.2	-
Suction pipe 50	950	51 × 1.2	-
Suction pipe 32 with ball valve	950	32 × 1.2	3/8"
Suction pipe 50 with ball valve	950	51 × 1.2	1/2"

CONTAINER MODULES

- Increases the batch volume of the conveyor
- Used as a transition piece.

TECHNICAL DATA

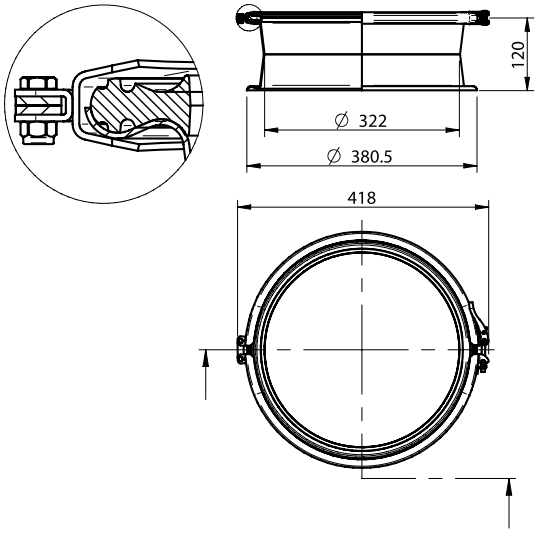
Description	Value
Material	Fe, NBR

TECHNICAL DATA, SPECIFIC

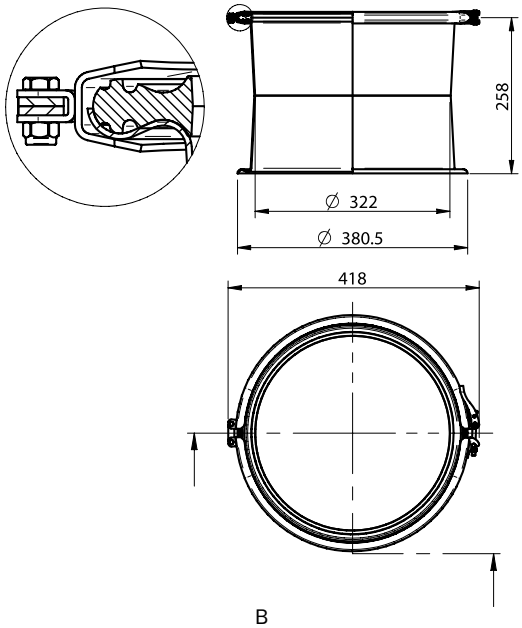
Description	Unit	Value	
		0111563	0111562
Weight	kg	2.45	3.84

ORDERING INFORMATION

	Description	Art. No.
A	Container module cpl short	0111563
B	Container module cpl tall	0111562



A



B

OUT2

Accessories

YOUR BEST SOLUTION – WITHOUT QUESTION

Our line of monitoring and control units for vacuum systems is unmatched when it comes to reliability. We focus on the overall solution, down to the last detail. We are fully aware that top quality components are as essential as designing pumps and suction cups that are in a class apart. You will find everything you need to monitor and control vacuum systems here.

Reliability, energy consumption and accurate control/monitoring are the key words.

ACCESSORIES

Injection valves 252
Injection units 253
Vacuum filters 254
Pipe bends 256
PVC Hoses 258
Nylon tubings 259
Rubber hoses 260
Hose Clamps 261
Pipe fittings, straight 262
Pipe fittings, Y 263
Pinch valves 264

INJECTION VALVES

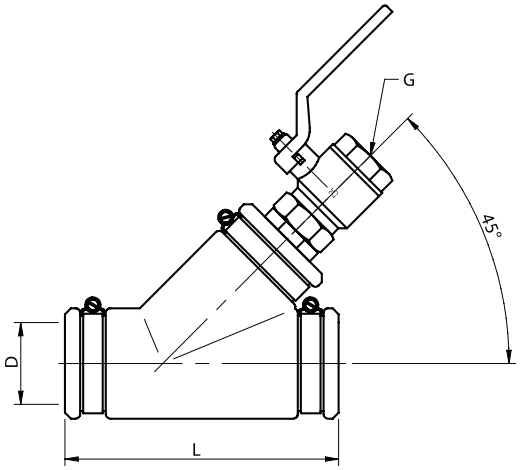
- Fulfils the requirements of FDA.
- Antistatic.
- Used to provide the product with extra carrying air.

TECHNICAL DATA

Description	Unit	Value
Material		SS 2343, Nickel-plated brass, NBR
Temperature	C°	-20–125

ORDERING INFORMATION

Description	Art. No.
Injection valve 22 cpl	3404039
Injection valve 32 cpl	3404038
Injection valve 40 cpl	3404037
Injection valve 50 cpl	3404036
Injection valve 75 cpl	3404035
Injection valve 100 cpl	3404034



DIMENSIONS

Description	D mm	L mm	G
Injection valve 22 cpl	22.0	118	3/8”
Injection valve 32 cpl	32.0	133	1/2”
Injection valve 40 cpl	40.0	154	3/4”
Injection valve 50 cpl	51.0	181	1”
Injection valve 75 cpl	76.1	236	1 1/4”
Injection valve 100 cpl	101.6	293	2”

INJECTION UNITS

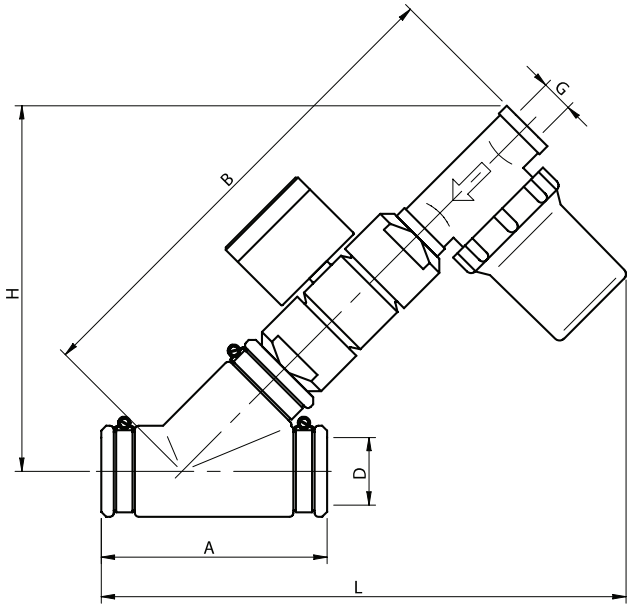
- Fulfils the requirements of FDA.
- Antistatic.
- Used to automatically provide the product with extra carrying air.

TECHNICAL DATA

Description	Unit	Value
Material		SS 2343, Nickel-plated brass

ORDERING INFORMATION

Description	Art. No.
Injection unit 32	3404023
Injection unit 40	3404022
Injection unit 50	3404021
Injection unit 75	3404020
Injection unit 100	3404019



DIMENSIONS

Description	D mm	L mm	H mm	B mm	A mm	G
Injection unit 32	32	313	209	277	133	3/4”
Injection unit 40	40	400	279	372	154	1”
Injection unit 50	51	421	293	391	181	1”
Injection unit 75	76.1	530	367	489	236	1 1/2”
Injection unit 100	101.6	575	396	529	293	1 1/2”

VACUUM FILTERS

FEATURES

- To filter dust and other small particles from the vacuum flow.
- Reduces the risk of operation breakdown or stoppage in the pump.
- Replaceable filter element.
- Available with special filter element with increased filter area

TECHNICAL DATA

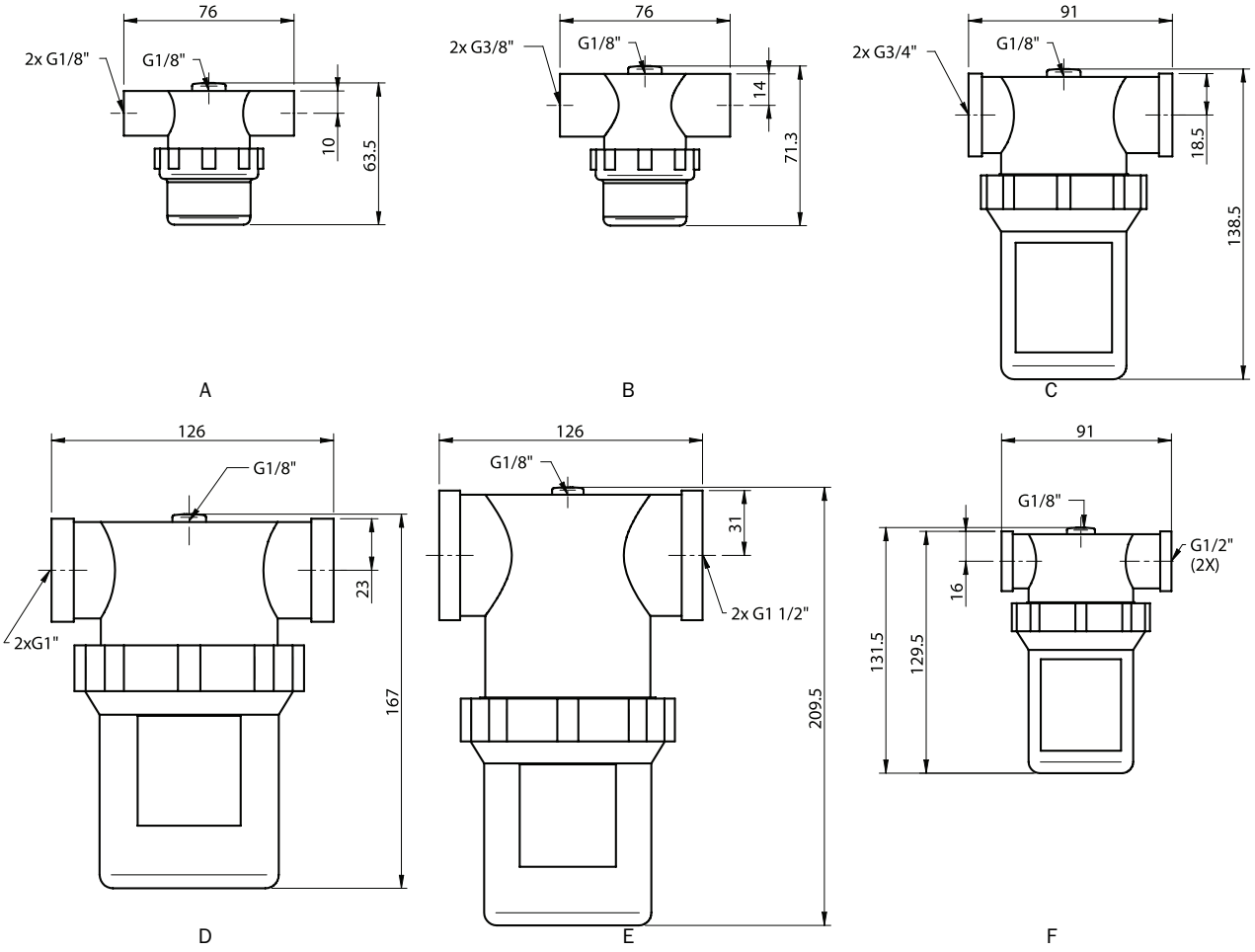
Description	Unit	Value
Pressure range	MPa	-0.1–0 MPa
Material		PA, PC, PE
Temperature range	°C	-20–80
Removal efficiency	µm	10

TECHNICAL DATA, SPECIFIC

Description	Unit	Value				
		3116671	3116651	3116652	3116672	3116653
Weight	g	70	168	170	424	550
Flow nominal	Nl/s	2.5	15	15	42	85
Volume Internal	cm^3	45	195	205	495	675
Filter area	m^2	0.003	0.010	0.010	0.019	0.023

ORDERING INFORMATION

	Description	Art. No.
A	Vacuum filter G1/8"	3116670
B	Vacuum filter G3/8"	3116671
C	Vacuum filter G3/4"	3116652
D	Vacuum filter G1"	3116672
E	Vacuum filter G1½"	3116653
F	Vacuum filter G1/2"	3116651
F	Vacuum filter G1/2" (special)	0110521
C	Vacuum filter G3/4" (special)	0110522
E	Vacuum filter G1 1/2" (special)	0110523



TECHNICAL DATA, ACCESSORIES

Description	Unit	Value					
		3116673	3116674	3116675	3116676	3116223	3116224
Weight	g	7	26	50	74	80	144
Filter area	m^2	0.003	0.010	0.019	0.023	0.028	0.074
Removal efficiency	µm	10	10	10	10	5	5

ORDERING INFORMATION, ACCESSORIES

Description	Art. No.
Filter element 3/8"	3116673
Filter element 1/2" & 3/4"	3116674
Filter element 1"	3116675
Filter element 1½"	3116676
Filter element 1/2" & 3/4" (special)	3116223
Filter element 1½" (special)	3116224

PIPE BENDS

- Food grade.
  Outside: ground finish
  Inside: Bright annealed and pickled.

TECHNICAL DATA

Description	Value
Material	SS 2333

TECHNICAL DATA, SPECIFIC, PIPE BEND 90°

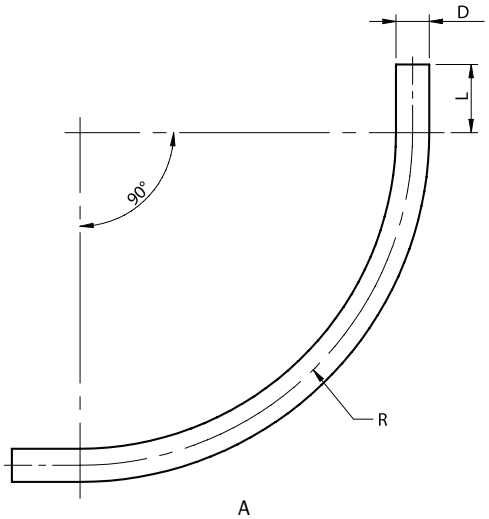
Description	Unit	Value					
		3404611	3404612	3404667	3404660	3404668	3404669
Weight	kg	0.010	0.574	0.754	1.440	5.250	9.740

TECHNICAL DATA, SPECIFIC, PIPE BEND 45°

Description	Unit	Value					
		3404670	3404671	3404672	3404673	3404674	3404675
Weight	kg	0.130	0.330	0.474	0.870	2.620	5.570

ORDERING INFORMATION

	Description	Art. No.
A	Pipe bend Ø22 - 90°	3404611
A	Pipe bend Ø32 - 90°	3404612
A	Pipe bend Ø40 - 90°	3404667
A	Pipe bend Ø50 - 90°	3404660
A	Pipe bend Ø75 - 90°	3404668
A	Pipe bend Ø100 - 90°	3404669
B	Pipe bend Ø22 - 45°	3404670
B	Pipe bend Ø32 - 45°	3404671
B	Pipe bend Ø40 - 45°	3404672
B	Pipe bend Ø50 - 45°	3404673
B	Pipe bend Ø75 - 45°	3404674
B	Pipe bend Ø100 - 45°	3404675



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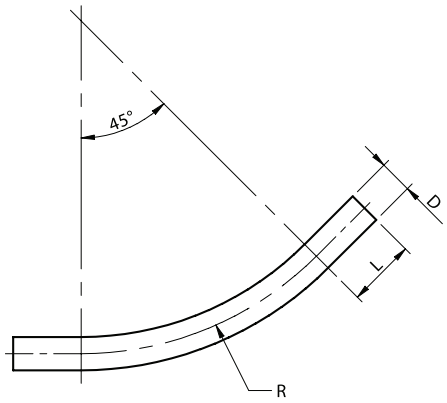


B

DIMENSIONS

Description	D mm	R mm	L mm
Pipe bend Ø22 - 90°	22.0×1.0	220	45
Pipe bend Ø32 - 90°	32.0×1.2	320	65
Pipe bend Ø40 - 90°	40.0×1.0	400	80
Pipe bend Ø50 - 90°	51.0×1.2	500	100
Pipe bend Ø75 - 90°	76.1×1.6	750	150
Pipe bend Ø100 - 90°	101.6×2.0	1000	200
Pipe bend Ø22 - 45°	22.0×1.0	220	45
Pipe bend Ø32 - 45°	32.0×1.2	320	65
Pipe bend Ø40 - 45°	40.0×1.0	400	80
Pipe bend Ø50 - 45°	51.0×1.2	500	100
Pipe bend Ø75 - 45°	76.1×1.6	750	150
Pipe bend Ø100 - 45°	101.6×2.0	1000	200

PVC HOSES

▶ The hoses are of food quality.

TECHNICAL DATA

Description	Unit	Value
Feed pressure	-MPa	0.1
Material		PVC
Temperature range	C°	-4–65

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg/m	Dimension ID mm
Hose clear PVC 22	3404112	0.440	22
Hose clear PVC 32	3404108	0.750	32
Hose clear PVC 40	3404130	0.970	40
Hose clear PVC 50	3404131	1.410	51
Hose clear PVC 75	3404132	2.300	76
Hose clear PVC 100	3404133	4.340	102

ORDERING INFORMATION

Description	Art. No.
Hose clear PVC 22	3404112
Hose clear PVC 32	3404108
Hose clear PVC 40	3404130
Hose clear PVC 50	3404131
Hose clear PVC 75	3404132
Hose clear PVC 100	3404133

NYLON TUBINGS

TECHNICAL DATA

Description	Unit	Value
Material		PA
Temperature range	C°	-40–100
Feed pressure	MPa	1.8

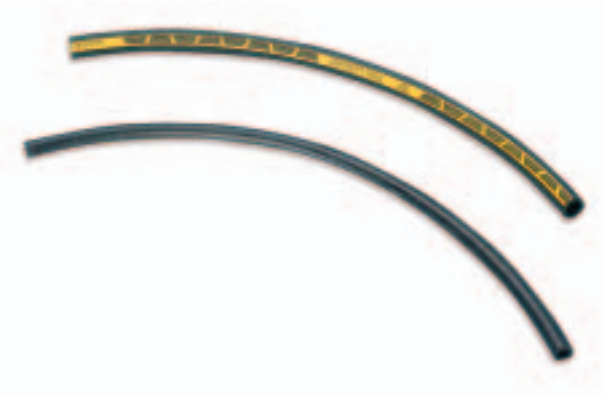
TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg/m	Dimension OD/ID mm
Nylon tubing black	0104807	0.012	4/2
Nylon tubing transparent	0104806	0.013	4/2
Nylon tubing blue	0104810	0.011	4/2
Nylon tubing green	0104808	0.012	4/2
Nylon tubing red	0104809	0.013	4/2
Nylon tubing yellow	0104811	0.013	4/2
Nylon tubing brown	0104717	0.010	4/2
Nylon tubing white	0104718	0.010	4/2
Nylon tubing grey	0104812	0.013	4/2
Nylon tubing black	0104814	0.002	6/4
Nylon tubing black	0104815	0.029	8/6
Nylon tubing black	0104833	0.045	10/7.5
Nylon tubing black	0104816	0.056	12/9

ORDERING INFORMATION

Description	Art. No.
Nylon tubing black	0104807
Nylon tubing transparent	0104806
Nylon tubing blue	0104810
Nylon tubing green	0104808
Nylon tubing red	0104809
Nylon tubing yellow	0104811
Nylon tubing brown	0104717
Nylon tubing white	0104718
Nylon tubing grey	0104812
Nylon tubing black	0104814
Nylon tubing black	0104815
Nylon tubing black	0104833
Nylon tubing black	0104816

RUBBER HOSES



TECHNICAL DATA

Description	Unit	Value
Feed pressure	MPa	1.0
Material		NR
Temperature range	°C	-4–100

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg/m	Dimension OD/ID mm
Rubber hose D=10	3107605	0.240	10.0
Rubber hose D=12.5	3107606	0.300	12.5
Rubber hose D=20	3107607	0.480	20.0
Rubber hose D=25	3107608	0.600	25.0

ORDERING INFORMATION

Description	Art. No.
Rubber hose D=10	3107605
Rubber hose D=12.5	3107606
Rubber hose D=20	3107607
Rubber hose D=25	3107608

HOSE CLAMPS

TECHNICAL DATA

Description	Value
Material	SS 2333

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight, g	Diameter mm
Hose clamp D=13-20	3113821	15	13–20
Hose clamp D=15-24	3113693	15	15–24
Hose clamp D=19-28	3113694	20	19–28
Hose clamp D=26-38	3113822	24	26–38
Hose clamp D=32-44	3113823	24	32–44
Hose clamp D=38-50	3113725	25	38–50
Hose clamp D=44-56	3113695	32	44–56
Hose clamp D=50-65	3113824	36	50–65
Hose clamp D=68-85	3113696	36	68–85
Hose clamp D=104-138	3113825	65	104–138
Hose clamp D=130-165	3113936	70	130–165
Hose clamp D=226-256	3113970	78	226–256
Hose clamp D=282-308	3413604	94	282–308

ORDERING INFORMATION

Description	Art. No.
Hose clamp D=13-20	3113821
Hose clamp D=15-24	3113693
Hose clamp D=19-28	3113694
Hose clamp D=26-38	3113822
Hose clamp D=32-44	3113823
Hose clamp D=38-50	3113725
Hose clamp D=44-56	3113695
Hose clamp D=50-65	3113824
Hose clamp D=68-85	3113696
Hose clamp D=104-138	3113825
Hose clamp D=130-165	3113936
Hose clamp D=226-256	3113970
Hose clamp D=282-308	3413604

PIPE FITTINGS, STRAIGHT

- Fulfils the requirements of FDA.
- Antistatic.

TECHNICAL DATA

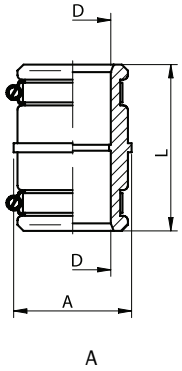
Description	Unit	Value
Material		SS 2333, NBR
Temperature range	°C	-20–125

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg	D mm	d mm	A mm	L mm
Pipe fitting straight 22x22 cpl	3404008	0.100	22.0	–	40.0	82.0
Pipe fitting straight 32x32 cpl	3404007	0.130	32.0	–	50.0	82.0
Pipe fitting straight 40x40 cpl	3404006	0.210	40.0	–	64.0	98.0
Pipe fitting straight 50x50 cpl	3404004	0.320	51.0	–	78.0	110.0
Pipe fitting straight 75x75 cpl	3404002	0.470	76.1	–	103.6	130.0
Pipe fitting straight 100x100 cpl	3404005	0.730	101.6	–	130.0	150.0
Pipe fitting straight reducer 32x22 cpl	3404012	0.120	32.0	22.0	50.0	82.0
Pipe fitting straight reducer 40x32 cpl	3404011	0.180	40.0	32.0	64.0	98.0
Pipe fitting straight reducer 50x40 cpl	3404010	0.280	51.0	40.0	78.0	110.0
Pipe fitting straight reducer 75x50 cpl	3404003	0.440	76.1	51.0	103.6	130.0
Pipe fitting straight reducer 100x75 cpl	3404009	0.650	101.6	76.1	130.0	150.0

ORDERING INFORMATION

	Description	Art. No.
A	Pipe fitting straight 22x22 cpl	3404008
A	Pipe fitting straight 32x32 cpl	3404007
A	Pipe fitting straight 40x40 cpl	3404006
A	Pipe fitting straight 50x50 cpl	3404004
A	Pipe fitting straight 75x75 cpl	3404002
A	Pipe fitting straight 100x100 cpl	3404005
B	Pipe fitting straight reducer 32x22 cpl	3404012
B	Pipe fitting straight reducer 40x32 cpl	3404011
B	Pipe fitting straight reducer 50x40 cpl	3404010
B	Pipe fitting straight reducer 75x50 cpl	3404003
B	Pipe fitting straight reducer 100x75 cpl	3404009



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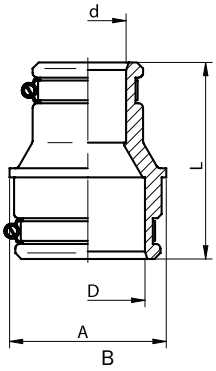


B

PIPE FITTINGS, Y

- Fulfils the requirements of FDA.
- Antistatic.

TECHNICAL DATA

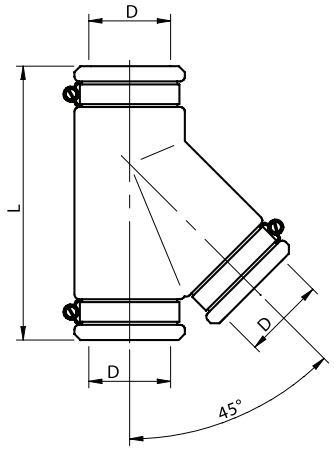
Description	Unit	Value
Material		SS 2333
Temperature range	°C	-20–125

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Weight kg	D mm	L mm
Pipe fitting Y 3x22 cpl	3404018	0.200	22.0	118
Pipe fitting Y 3x32 cpl	3404017	0.270	32.0	133
Pipe fitting Y 3x40 cpl	3404016	0.430	40.0	154
Pipe fitting Y 3x50 cpl	3404015	0.680	51.0	181
Pipe fitting Y 3x75 cpl	3404014	1.12	76.1	236
Pipe fitting Y 3x100 cpl	3404013	2.00	101.6	293

ORDERING INFORMATION

Description	Art. No.
Pipe fitting Y 3x22 cpl	3404018
Pipe fitting Y 3x32 cpl	3404017
Pipe fitting Y 3x40 cpl	3404016
Pipe fitting Y 3x50 cpl	3404015
Pipe fitting Y 3x75 cpl	3404014
Pipe fitting Y 3x100 cpl	3404013



PINCH VALVES

TECHNICAL DATA

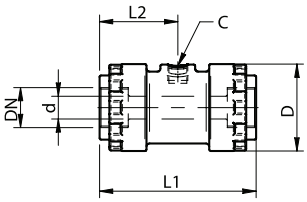
Description	Unit	Value
Feed pressure, max	MPa	0.4
Feed pressure, closing	MPa	0.18–0.20
Temperature	°C	0–60

TECHNICAL DATA, SPECIFIC

Description	Art. No.	Material	Weight kg
Pinch valve DN20 (4 bar) internal thread	3404676	PP, EPDM	0.180
Pinch valve DN32 (4 bar) internal thread	3404677	PP, EPDM	0.500
Pinch valve DN25 (8 bar) internal thread	3404624	Al, Crude rubber	0.400
Pinch valve DN32 (8 bar) internal thread	3404607	Al, Crude rubber	1.04
Pinch valve DN40 (8 bar) internal thread	3404625	Al, Crude rubber	1.45
Pinch valve DN50 (8 bar) internal thread	3404626	Al, Crude rubber	1.45
Pinch valve DN65 (8 bar) internal thread	3404627	Al, Crude rubber	1.45
Pinch valve DN80 (8 bar) internal thread	3404628	Al, Crude rubber	1.60
Pinch valve DN40 (4 bar) hoses	3404629	Al, Crude rubber	1.45
Pinch valve DN50 (4 bar) hoses	3404630	Al, Crude rubber	1.45
Pinch valve DN65 (4 bar) hoses	3404631	Al, Crude rubber	4.24
Pinch valve DN80 (4 bar) hoses	3404632	Al, Crude rubber	2.70
Pinch valve DN100 (4 bar) hoses	3404678	Al, Crude rubber	8.25

ORDERING INFORMATION

	Description	Art. No.
A	Pinch valve DN20 (4 bar) internal thread	3404676
A	Pinch valve DN32 (4 bar) internal thread	3404677
B	Pinch valve DN25 (8 bar) internal thread	3404624
B	Pinch valve DN32 (8 bar) internal thread	3404607
C	Pinch valve DN40 (8 bar) internal thread	3404625
C	Pinch valve DN50 (8 bar) internal thread	3404626
C	Pinch valve DN65 (8 bar) internal thread	3404627
C	Pinch valve DN80 (8 bar) internal thread	3404628
D	Pinch valve DN40 (4 bar) hoses	3404629
D	Pinch valve DN50 (4 bar) hoses	3404630
D	Pinch valve DN65 (4 bar) hoses	3404631
D	Pinch valve DN80 (4 bar) hoses	3404632
D	Pinch valve DN100 (4 bar) hoses	3404678



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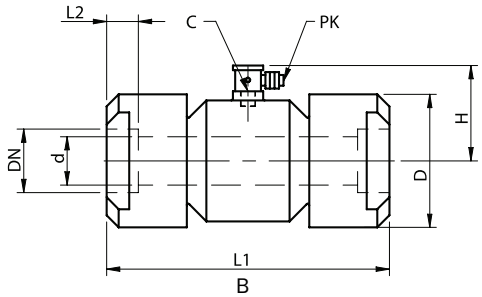

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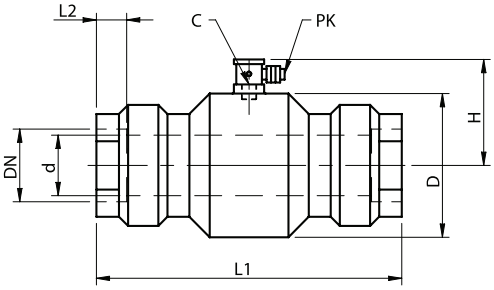

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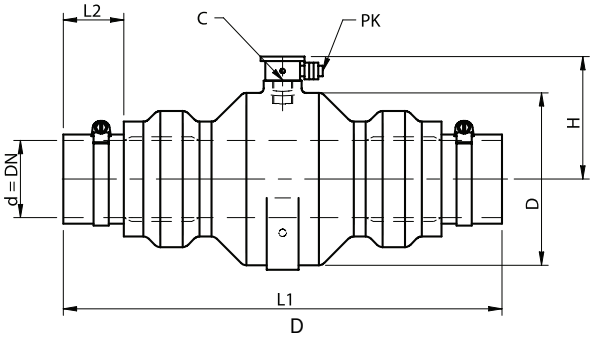

D

DIMENSIONS

Description	d mm	D mm	L1 mm	H mm	PK mm	DN G"	L2 mm	C G"
Pinch valve DN20 (4 bar) internal thread	15	57	103	—	—	3/4"	18	1/4"
Pinch valve DN32 (4 bar) internal thread	30	89	140	—	—	1 1/4"	22	1/4"
Pinch valve DN25 (8 bar) internal thread	25	65	152	55	6	1"	21	1/8"
Pinch valve DN32 (8 bar) internal thread	32	88	189	63	6	1 1/4"	21	1/8"
Pinch valve DN40 (8 bar) internal thread	40	95	202	70	6	1 1/2"	20	1/8"
Pinch valve DN50 (8 bar) internal thread	50	114	210	81	8	2"	20	1/4"
Pinch valve DN65 (8 bar) internal thread	65	140	240	94	8	2 1/2"	20	1/4"
Pinch valve DN80 (8 bar) internal thread	80	160	285	109	8	3"	20	1/4"
Pinch valve DN40 (4 bar) hoses	40	95	282	70	6	Ø40	40	1/8"
Pinch valve DN50 (4 bar) hoses	50	114	290	81	6	Ø 50	40	1/4"
Pinch valve DN65 (4 bar) hoses	65	140	340	94	8	Ø 65	50	1/4"
Pinch valve DN80 (4 bar) hoses	80	160	385	109	8	Ø 80	50	1/4"
Pinch valve DN100 (4 bar) hoses	100	210	440	127	8	Ø 100	50	1/2"

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