

OEM

piFLOW™

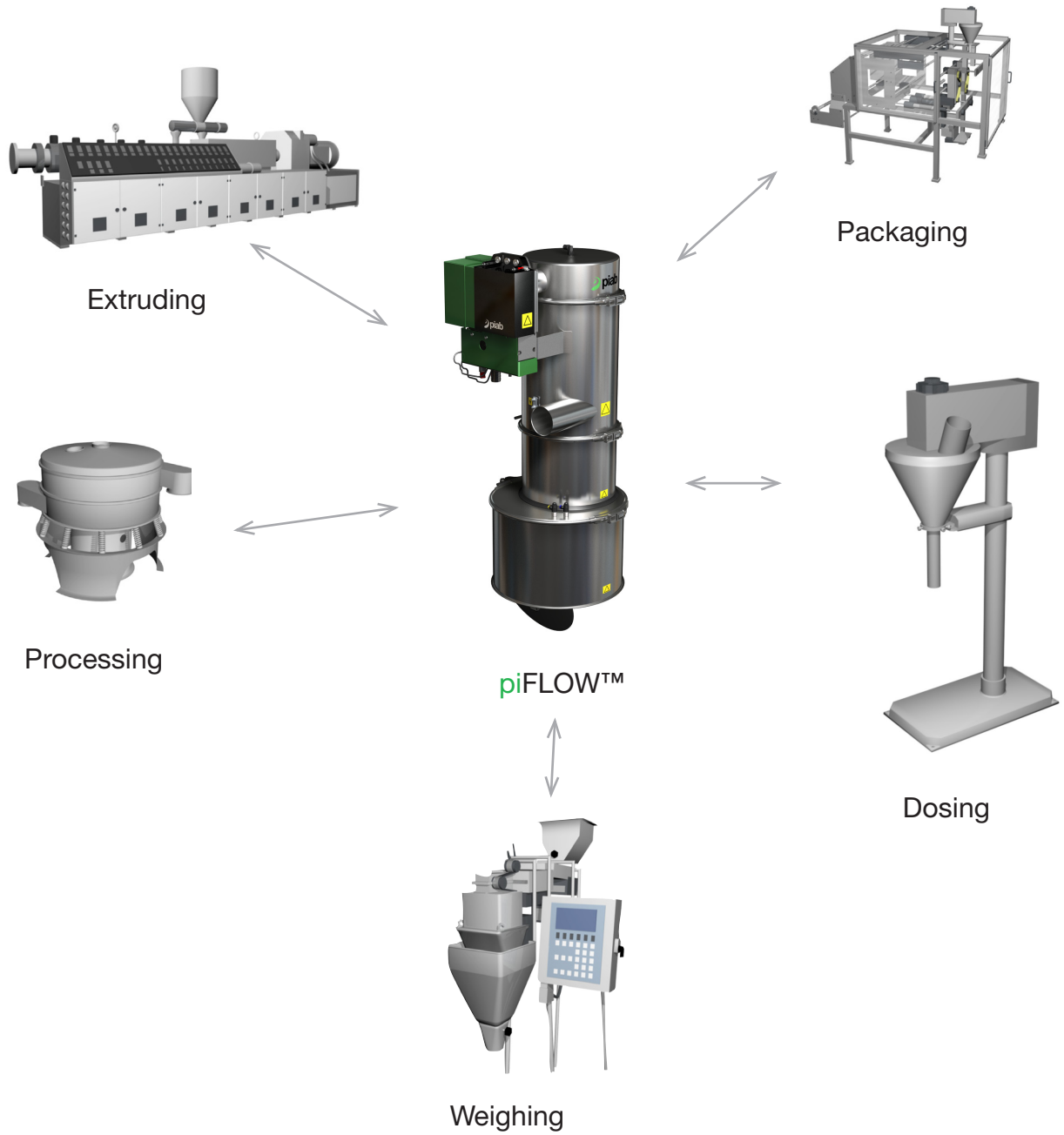
Integrate the most cost efficient powder conveying concept on the market



 piab

piFLOW™

Integrate the state of the art component with your solution



piFLOW™

Integrate 60 years of global vacuum experience into your solution

With more than 60 years of experience we are the leader within vacuum technology- that is our core business. We have built up a global expertise in vacuum conveying that you now can easily access.

We have integrated our products in various industries e.g. Consumer and food, Pharmaceutical and Chemical . Now we are opening up the possibility for you to integrate the vacuum conveyor as a part of your solution. This gives you the possibility to focus your resources on your core business.

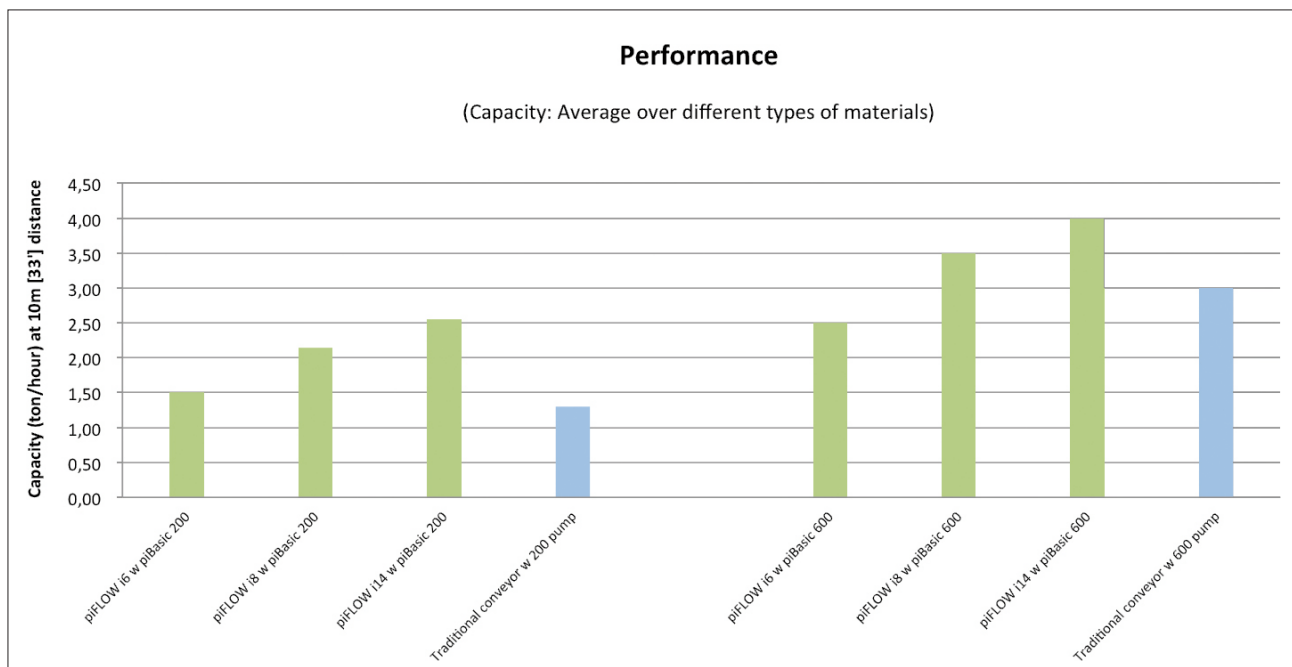
With our world-wide sales offices, we will be your local conveying expert for you to grow your business.

Maximize your customer's product throughput

piFLOW™ series is designed with a full opening option making it possible for your customer to maximize the material throughput and increase the overall capacity of their system. The full opening gives an instant discharge, i.e. increased material throughput.

Standard modular components

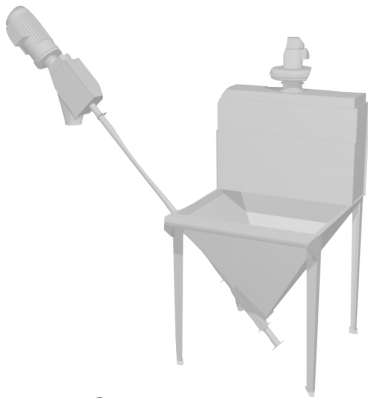
Our vacuum conveyors are all designed through a modular program based on standard components. This gives you the possibility to convey a wide range of different customer products, still with a limited number of standard modules. Hence you can call off the piFLOW™ with short delivery time, avoiding costly stock.



Our Easy to Buy Program

To simplify the process we give you access to our unique web interface where you are able to configure your product and download relevant documentations e.g. CAD files, manuals etc. This gives you the benefit of being in control of your projects in an easy way.

The most cost efficient alternative to other conveying methods



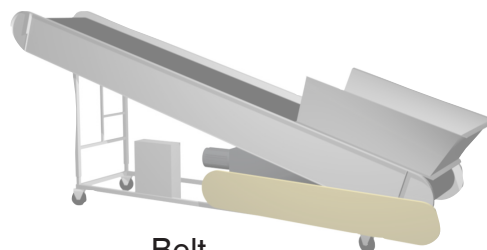
Screw



piFLOW™i



Cable



Belt

Why vacuum conveying?

One can question why to use vacuum conveying for dry powder and granules and not any of the other technologies that are available on the market. Here are just a few benefits:

Reduce product scrap and product contamination

When using a vacuum conveyor your customers are working with an enclosed system where they will not have any foreign material mixed in nor have any product falling off the sides into the surrounding area.

It is also a very gentle way of transporting the product, meaning that the product will be intact/not damaged throughout the whole transportation process. The velocity is adjusted depending on the product's fragility- giving your customer minimum product scrap.

Small Footprint

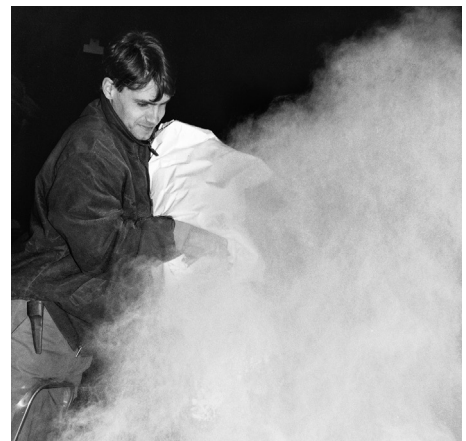
The vacuum conveying solution has a small plant floor footprint since the tubing can go strictly vertical from the point of suction. The tubing is normally mounted in level with the discharge point and therefore not in conflict with other machinery. This means that your customer can utilize the space in a more cost efficient way.

Minimize maintenance

Piab's vacuum conveyors have very few moving parts, meaning that the service and maintenance cost is kept at a very low level without needing to compromise on the reliability of the system. You can disassemble the conveyor body without using tools. The pump unit is designed with a separate vacuum module that can easily be removed for cleaning, resulting in reduced downtime.

Dust free working environment

When comparing with mechanical conveying systems such as screw and belt conveyors – another important advantage of the vacuum conveying is a dust free working environment. As vacuum conveying is an enclosed system you will be able to improve the working environment, and it will also give you the possibility to convey materials that are hazardous to inhale that needs to be contained.

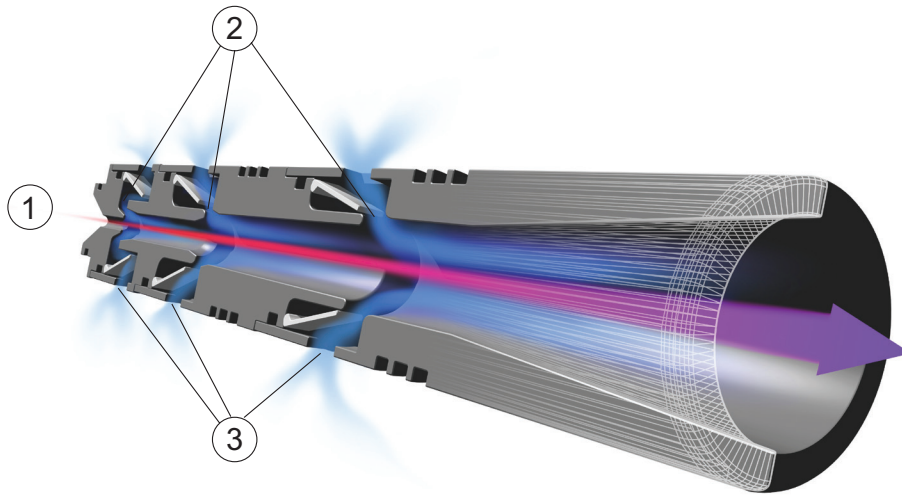


Production flexibility

By replacing just a few parts of the modular vacuum conveying solution, one can easily change the installation in order to increase conveying distance, change the plant layout or enhance the system capacity at a very reasonable cost. This gives a future proof installation without compromising the reliability of the system.

Increase your customers energy efficiency through COAX[®] technology

COAX[®] cartridges are based on advanced technology for creating vacuum with compressed air. The COAX[®] cartridges are smaller, more efficient and more reliable than conventional ejectors, which allows for the design of a flexible, modular and efficient vacuum system. A vacuum system based on COAX[®] technology can provide your customer with three times more vacuum flow than conventional systems, while reducing energy consumption.



When compressed air (1) passes through the nozzles (2), air is pulled through with the stream of compressed air. Suction will be generated at the opening of each stage (3), resulting in vacuum.

The principle of vacuum conveying



1. Vacuum is created with compressed air through COAX® technology (A). The pump can be automatically controlled.

2. The bottom valve (B) closes and the vacuum increases in the container (C) and the conveying line (D).

3. The powder is carried away from the feed station (E) into the conveying line and then to the container.

4. The filter (F) protects the pump and the surrounding area from dust and small particles.

5. During the conveying time, the air shock tank (G) is filled with compressed air.

6. At a preset time, the pump and the conveying are stopped and the bottom valve (B) is opened. The powder is discharged at the same time as the air shock is activated and the compressed air cleans the filter from dust and small particles.

7. When the pump starts again, this process is repeated and a new cycle starts. The suction time and emptying times are normally controlled by a pneumatic or an electric control system.



Optimize your application

Filter

The filters are adapted to the pump size to optimize the filtration.

Filter type	Material	Grade of filtration	Application	Quality standards
Pleated filter	Polyester	0.5 µm	Extreme fine and free flowing powder	ATEX
Pleated rod filter	Polyethylene	0.5 µm	Fine powder	ATEX
Textile filter bags	Polyester	5 µm	Granules	ATEX



Pleated Filter



Pleated Rod Filter



Textile Filter bags

Control units

Piab control units are fully pneumatic operated with an extremely reliable function. The full pneumatic design also removes any source of ignition from the system and at the same time simplifies the validation process.

Control unit PPT is designed to control the basic functions of the conveyor. The PPT is compliant with ATEX.



The Valve unit VU-EP is designed to convert an electrical signal to a pneumatic signal, when there is a need to control the conveyor with a PLC or similar electrical control systems. The unit is prepared for connection to Piab conveyors main functions and is therefore easy to install.

Feed point

Feed nozzles and suction pipes

To manually feed the conveyor direct from bags, barrels, buckets, etc. The air flow intake into the nozzle can be adjusted to optimize the transport of the product into the conveying line.

Feed station

The feed station should be placed under a big bag or for dumping small bags. It has fluidization as an option for sticky, bridging, non-free flowing products to make the transport problem-free.

Feed adapters

The feed adapters are suitable for Piab feed station, customized hoppers, big bag unloaders or silos. The feed adapters can adjust the carrying air to optimize the transport of the product into the conveying line



Feed Nozzle to pick up the product from a bin, bag or bucket.



Feed Adapter to be mounted under a silo, sieve, big bag/ small bag discharger.



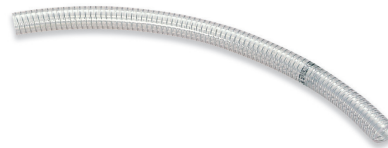
Feed Station to have under a big bag or for dumping small bags into it.

Piping

Pipes have lower friction (faster and gentler conveying) than hoses and should be used in all stationary installations. Total conveying distance, vertical distance, number of pipe bends, diameter, whether your customer are using steel tubes, vacuum hoses or a combination of pipes and hoses, the type of connections between the pipes, these are all factors to consider when you choose piping system.



Stainless steel pipe bends



PVC hose

Warranty

Piab offers a product warranty which is valid worldwide as per the following definitions:

- A five-year warranty is valid for complete vacuum conveyors excluding controls.
- A five-year warranty is valid for vacuum pumps excluding accessories and controls.
- A one-year warranty is valid for other products.

General warranty principles:

- Piab guarantees against defects in the manufacture and materials by normal use in proper environment, when following the instructions for care, maintenance and control described in the appropriate Piab manual.
- Piab replaces or repairs, free of charge, faulty products provided that these are returned to Piab, and found to be covered by the warranty.
- It is at Piab's discretion whether a faulty product should be sent back to Piab for replacement or if the repair shall be made locally at Piab's expense.
- This warranty does not include wear parts such as filter elements, seals, hoses, etc.
- This warranty does not include subsequent damages caused by defective products.

piFLOW™i series for general industry applications



ATEX compliant

Piab offers conveyors for ATEX Dust applications. These conveyors are type examined according to ATEX Dust by a third party. Piab has a quality management system which fulfills the high standards that is required for delivering ATEX Dust equipment on a regular basis.

Wide filtration range

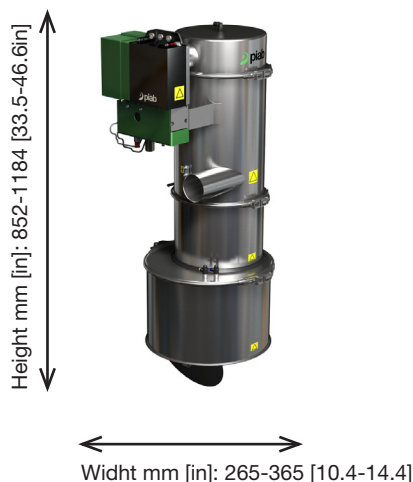
The piFLOW™i series offer a filtration range from 0.5 to 5 µm. This gives your customer the possibility to convey a range of material from extreme fine powers to granules. All filters are available in an antistatic option.

Durability and safety


The conveyor body is designed with stainless steel (ASTM 304) for high durability. The wall thickness in the conveyor body is 1.5 mm for higher wear resistance as well as for safety when working with vacuum.

Technical data


Description	Unit	Value
Feed pressure range	MPa/[psi]	0.4-0.6 [58-87]
Air consumption range	NI/s/[scfm]	5-37 [10.6-78.4]
Vacuum range	-kPa/[-inHg]	60-75 [18-22]
Noise level range	dBA	69-77
Material		ASTM 304
Temperature range	°C/[F]	0-60 [32-140]
Weight	Kg/[lb]	up to 35 [77]
Safety classification		
Filter area	m ² /[ft ²]	up to 0.5 [5.38]
Material batch volume	L/[cf]	6-14 [0.21-0.49]
Min particle size	µm	0.5-5




Model	Code
piFLOW™	i




Pump size	Code
piBASIC100	BA100
piBASIC200	BA200
piBASIC400	BA400
piBASIC600	BA600
No pump	0



Filter type	Code
Textile filter 02	TX2
Textile filter 04	TX4
Pleated filter 02	P2
Pleated filter 04	P4
Pleated rod filter 02	PR2
Pleated rod filter 04	PR4



Inlet diameter	Code
Inlet Ø 32 (1 ¼")	32
Inlet Ø 38 (1 ½")	38
Inlet Ø 51 (2")	51
Inlet Ø 76 (3")	76
No Inlet	0



Batch volume	Code
Volume 6L (0.21 cf)	6
Volume 8L (0.28 cf)	8
Volume 14L (0.49 cf)	14
No volume	0



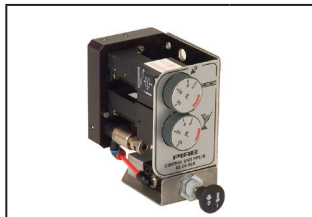
Discharge	Code
Cone Oper	
Full Openin	
No dischar	



i . BA100 . TX2 . 38 . 6 .



Large type	Code
Opening	C
Finishing	F
Charge	0



Control	Code
Control VU EP-1	EP
Control PPT/RS	RS
No control	0



Material	Code
Antistatic & AL	AAL



Special Technical documents	Code
ATEX	EX
No special documentation	0



Language	Code
Manual SE	SE
Manual GB	GB
Manual DE	DE
Manual IT	IT
Manual ES	ES
Manual FR	FR
Manual US	US
Manual DK	DK
Manual FI	FI
Manual NL	NL
Manual PL	PL
Manual PT	PT
Manual RO	RO
Manual CZ	CZ
Manual NO	NO

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No need to compromise

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