piFLOW®p conveyor

Expanded piFLOW®p conveyor family offers Wet-In-Place (WIP) function!



piFLOW®p optimised for the pharma, and food industry

Wet in Place* (WIP)

Wet In Place (WIP) functionality has been added to Piab's popular piFLOW®p vacuum conveyor family. WIP spray nozzles can now be included or retrofitted to the piFLOW®p conveying family.

Improving the work environment with WIP functionality

The water sprayed by the WIP nozzles will wet any dust from food or pharmaceutical materials left in conveyors. This helps to prevent product from escaping into the air, where it can be inhaled by the processing staff during maintenance or cleaning procedures. By wetting potentially harmful leftover material before the equipment is opened for final cleaning, the spray nozzles can ensure that any such dust stays "Wet-In-Place" until it can be safely removed. For maximum performance and coverage, and to make sure as much material as possible is captured as quickly as possible, three spray nozzles are included with each WIP module.



piFLOW®p: The conveyor family designed to meet the stringent demands of the pharmaceutical and food industry

The piFLOW®p conveyor for powder and bulk materials is designed to perfectly match the stringent demands for operational safety and hygiene within the food and pharmaceutical industries. Made from materials that comply with US FDA and EC 1935/2004 regulations, Piab's conveyors can be used to safely transport large volumes of powder/bulk materials. The conveyor's advanced technology can also provide segregation-free conveying. piFLOW®p is also available with ATEX dust and gas approved certification, which helps to maximize the safety of the processing staff.

Retrofit your piFLOW®p with WIP

The modular design of the piFLOW®p conveyor allows for simple retrofitting of WIP units. The modular design of the piFLOW®p conveyor allows for simple retrofitting of WIP units. You also have the option to simply add just the module, with the nozzles, and in a blink of an eye you will have a piFLOW®p with a WIP functionality.

*WIP= Wet In Place. To bind (wet) dust in the equipment prior to manual dismantling of equipment for cleaning. Not a validated process.

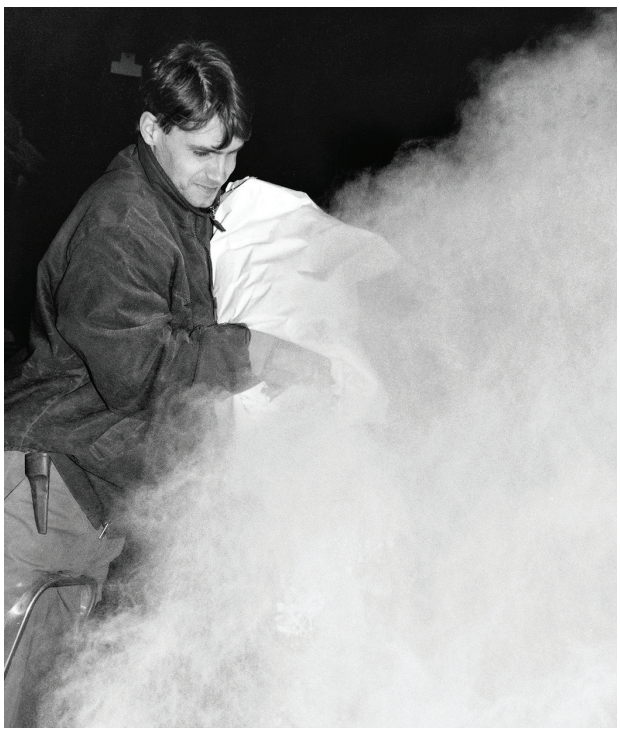
Specifications subject to change without notice.

Vacuum conveying and its great benefits

Vacuum conveying offers a quick, efficient, space saving, work environment friendly and convenient solution for moving powder, granules and tablets from one place to another. Compared to other conveying methods there are some clear benefits to be had when using vacuum conveyors within the food industry.

Reduce scrap and product contamination

Vacuum conveying provides an enclosed system where no foreign material can accidentally be mixed into the transfer line. Unlike conveying belts, where product can fall off the sides and into the surrounding area, vacuum conveyors keep all product contained from the pick-up point to the discharge vessel. Vacuum conveying is also a very gentle way of transporting product. Gentle conveying helps to keep the material intact and also minimizes product scrap.



Minimal floor space

The vacuum conveying solution has a small plant floor footprint since tubing can be routed specifically to the environment where the conveyor is installed. Tubing can be run straight vertical from the pick-up point and can also run parallel to the discharge point. This helps to minimize conflicts with other machinery. Floor space in the factory can then be kept to a minimum, and be used in a more cost-efficient way.

Dust free working environment

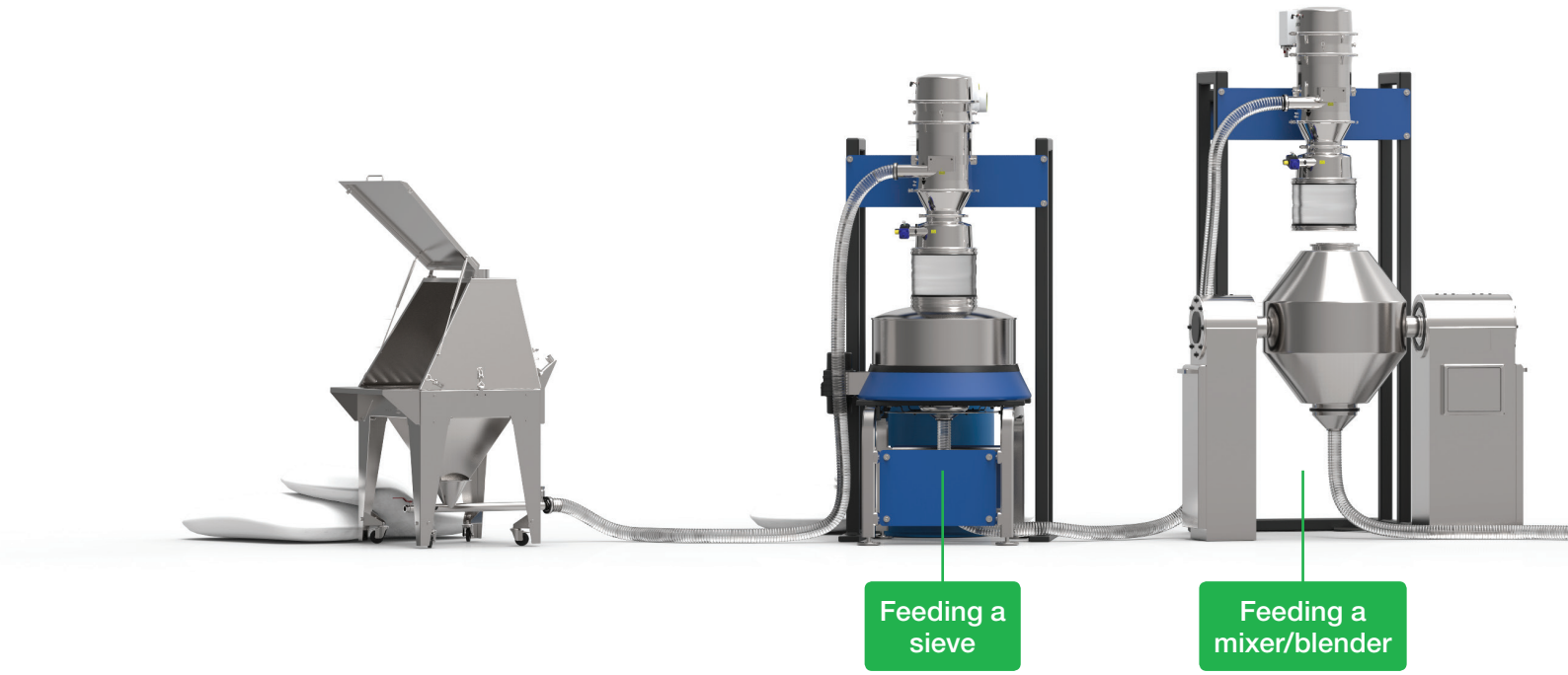
Using a vacuum conveyor can provide a dust free working environment. As an enclosed system, the vacuum conveyor can provide a better working environment. Vacuum conveying also gives one the possibility of moving materials that can be hazardous to the operators or the working environment.

Piab in the global food & pharmaceutical industries

Piab's vacuum conveyors are widely used in the food and pharmaceutical industries. Piab's presence is well spread across the globe and across various applications. Each one of our different conveyor families is developed with a specific industry in mind.

In the food industry, conveyors can be found in the baking goods, confectionery, candy, instant food, food additive, coffee, and nutraceutical industries.

In the pharmaceutical industry conveyors are found in various steps throughout the manufacturing process. Piab conveyors can be found in numerous pharmaceutical applications. Some examples are as follows; feeding tablet presses, coating, sieving, milling, mixing/blending, fluid bed dryer and reclaim.



Specifications subject to change without notice.

How Piab conveyors meet different demands from the food and pharma industry

- Working conditions are important for both industries and by wetting potentially harmful leftover material before the equipment is opened for cleaning, the WIP functionality is often required.

- **Contained conveying** is often required as most of the materials are dusty.

- **ATEX certification** is a very common requirement for safety reasons.

- In both industries, conveying equipment must be certified according to **FDA and EC 1935/2004.** We also work according to **cGMP** (current Good Manufacturing Practice).

- Available space in the production facility is often a constraint. Production floor layout changes due to variations in capacity and production mixes means that space saving, **easily moved** conveying equipment is typically requested with **a small footprint.**

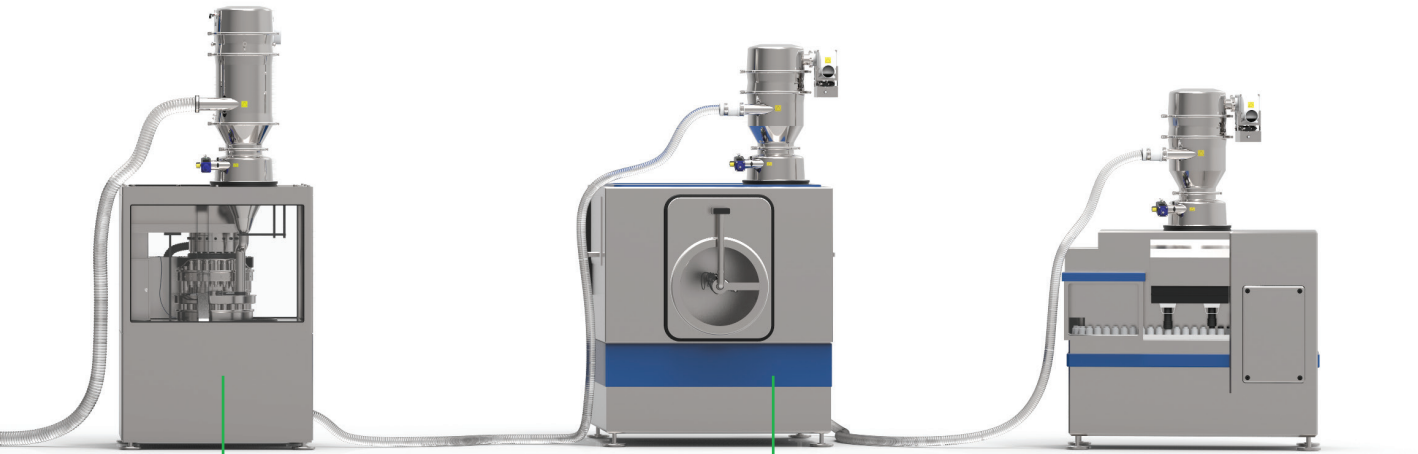
- A **quick changeover** is needed as the changes of conveyed material happens quite often. Consequently, the need of being able to quickly open and clean the conveying equipment maximizes uptime.

- If the final product is tablets, capsules or fragile materials such as nuts, almonds or cereals, it is of a great importance to move them gently without damaging the product. Here **gentle conveying** is of great importance. Traceability of materials used in product contact zones is needed, hence we provide the **2.2 certificate** for the stainless-steel material.

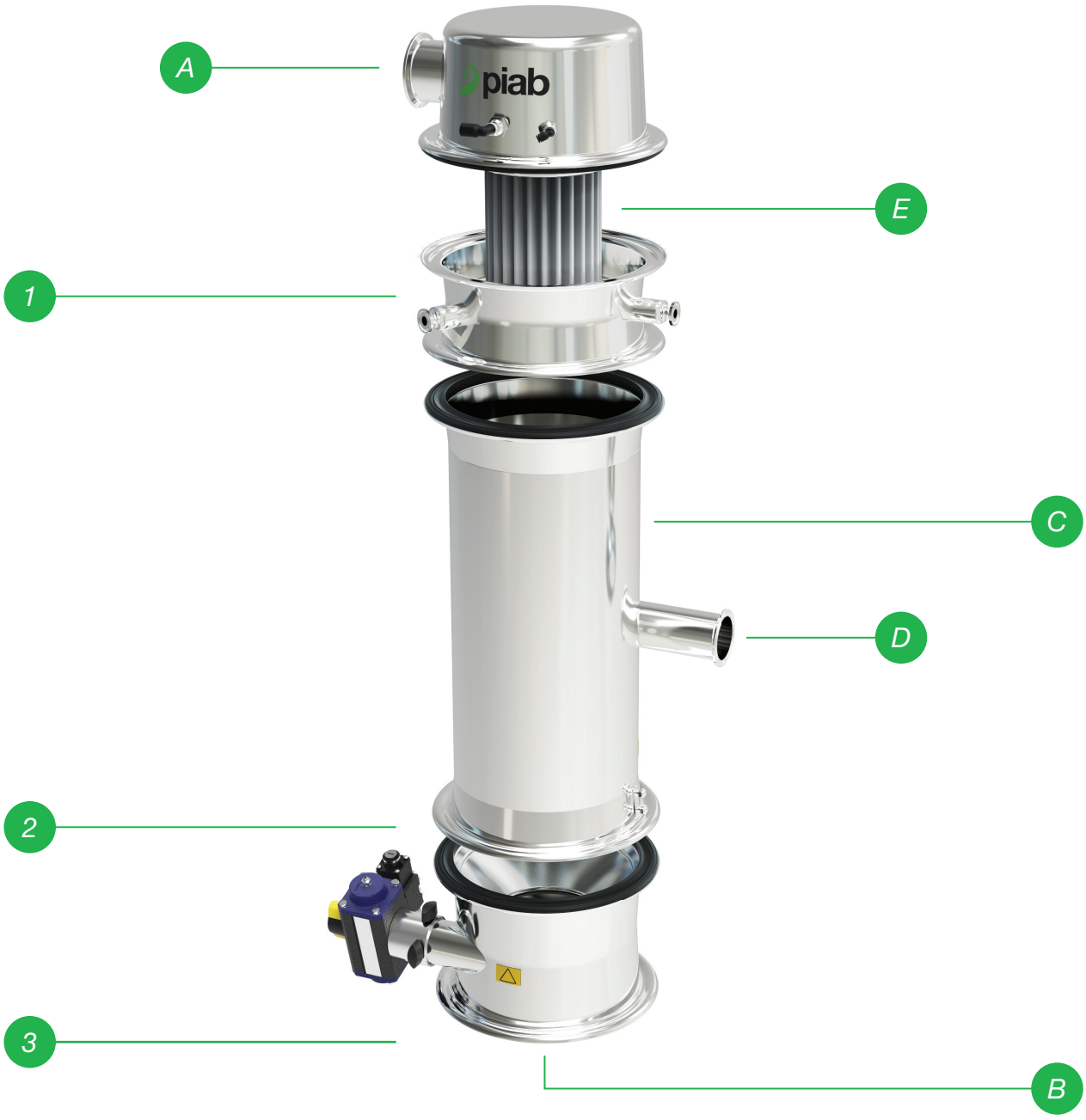
- Changes to material also means that the conveying equipment needs to be **easy to clean and must have a hygienic design.**

- Low noise and contained conveying promotes a good and healthy work environment.

- **A 5-year warranty** for the conveyor provides security in the production.



Specifications subject to change without notice.



(1, 2, 3) Possible positions for one or more water nozzle modules for having Wet in Place (WIP) functionality.

Vacuum pump (A) – using COAX® with compressed air or a mechanical pump.

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

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

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

Specifications subject to change without notice.

piFLOW®p – Overview



- The WIP modules fits well with all piFLOW®p conveyors between two to 33 litres
- The WIP module has a hygienic design to secure optimum functionality
- Designed mainly for industries handling food, chemical and pharmaceutical products
- Low noise level
- Automatic filter cleaning
- All materials in contact with the conveyed product fulfill the requirements of FDA and EC 1935/2004, and designed according to USDA dairy guideline
- Optionally available with ATEX certificate and/or IQ/OQ and/or 2.2 certificate

Technical data

Description	Unit	Value
Material		ASTM 316L, EPDM, Q, NBR, ePTFE, PTFE, PE, PET, PA, Al, SS, PP
Temperature range	°C	0 – 60
Weight	kg	11–102
Feed pressure max.	MPa	0,7
Feed pressure range	MPa	0.4–0.6
Air consumption range	Nl/s	2.5–112
Vacuum range	-kPa	60–75
Noise level range	dBA	69–77
Filter area	m^2	0.031–7
Min. particle size	µm	0,5 or 5
Material batch volume	l	2–56
Feed pressure range, control	MPa	0.4–0.6

AMERICAS

BRAZIL

Regional office South America

Piab do Brasil Ltda.

R. Capitão Joaquim da Silva Rocha, 50
Jardim Ana Maria
BR-13208-750 JUNDIAI – SP
Phone: +55 11 4492 9050
Fax: +55 11 4522 4066
Email: info-brasil@piab.com

MEXICO

Piab Mexico & Central América

65 Sharp Street
HINGHAM MA 02043 US
Phone: +1 781 337 7309
Fax: +1 781 337 6864
Email: info-mxca@piab.com

USA/CANADA

Regional office North America

Piab USA, Inc.

65 Sharp Street
HINGHAM MA 02043 US
Phone: +1 781 337 7309
Fax: +1 781 337 6864
Email: info-usa@piab.com

ASIA

CHINA

Piab (Shanghai) Co., Ltd

Unit 401, Blk B1, No. 6000 Shenzhuan Rd
Songjiang District
CN-201619 SHANGHAI
Phone: +86 21 5237 6545
Fax: +86 21 5237 6549
Email: info-cn@piab.com

INDIA

Piab Vacuum Technology Pvt. Ltd

Plot no 11/C8, 11th block,
Mugappair East,
IN-600 037 CHENNAI
Phone: +91 9444 25 36 48
Email: info-india@piab.com

JAPAN

Piab Japan Ltd.

8-43-17 Tateishi Katsushika-ku,
JP-124-0012 TOKYO
Phone: +81 3 6662 8118
Fax: +81 3 6662 8128
Email: info-japan@piab.com

SINGAPORE

Regional office Asia Pacific

Piab Asia Pte Ltd

4008 Ang Mo Kio Ave 10
03-16 Techplace 1
SG-569625 SINGAPORE
Phone: +65 6455 7006
Fax: +65 6455 0081
Email: info-singapore@piab.com

SOUTH KOREA

Piab Korea Ltd

C-2402 Daelim Acrotel
KR-Kangnam-Gu 467-6
DOKOK-DONG
Phone: +82 2 3463 0751
Fax: +82 2 3463 0754
Email: info-korea@piab.com

EUROPE

FRANCE

Piab

Parc d'entreprises L'Esplanade
10 rue Enrico Fermi
Saint-Thibault des Vignes
FR-77462 LAGNY SUR MARNE Cedex
Phone: +33 1 6430 8267
Fax: +33 1 6430 8285
Email: info-france@piab.com

GERMANY

Regional office Europe

Piab Vakuum GmbH

Otto-Hahn-Str. 14
DE-35510 BUTZBACH
Phone: +49 6033 7960 – 0
Fax: +49 6033 7960 – 199
Email: info-germany@piab.com

ITALY

Piab Italia Srl

Via Cuniberti, 58
IT-10151 TORINO
Phone: +39 011 226 36 66
Fax: +39 011 226 21 11
Email: info-italy@piab.com

POLAND

Piab Polska Sp. z o.o.

Ul. Astronomow 1
PL-80-299 GDANSK
Phone: +48 58 785 08 50
Fax: +48 58 785 08 51
Email: info-poland@piab.com

SPAIN

Vacío Piab, S.L.

Avda. Pineda, 2
CASTELLDEFELS
ES-08860 BARCELONA
Phone: +34 93 6333876
Fax: +34 93 6380848
Email: info-spain@piab.com

SWEDEN

Head office

Piab AB

Box 4501
SE-183 04 TÄBY
Phone: +46 8 630 25 00
Fax: +46 8 630 26 90
Email: info-sweden@piab.com

UNITED KINGDOM

Piab Ltd.

Unit 7 Oaks Industrial Estate
Festival Drive
LOUGHBOROUGH LE11 5XN
Phone: +44 1509 857 010
Fax: +44 1509 857 011
Email: info-uk@piab.com

No need to compromise

piab

www.piab.com

Art. No. 0209570, Rev.00
Piab AB, 2017-06