

CONVEYING

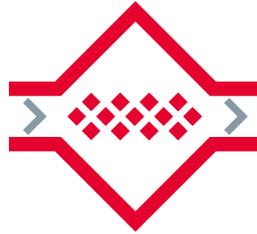


HECHT – We care.

As your competent partner for safe bulk material handling, our family business stands for tailor-made and efficient solutions.

A woman with blonde hair, smiling, wearing a white lab coat with the HECHT logo on the chest. She is standing in a technical environment, possibly a control room or a laboratory, with various panels and equipment visible in the background. The background includes a control panel with orange-handled knobs and a window with blinds. The overall scene is brightly lit and professional.

HECHT
technologie



Bulk Material Handling at the highest level

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HECHT has reacted to the increasing challenges when it comes to transportation of powders and granulates: With the innovative pneumatic conveying concept, the ProClean Conveyor. Especially demanding areas within the pharmaceutical, food or chemical industries benefit from the numerous advantages of this special conveying system. The basic operation method is based on pneumatic vacuum conveying. Compared to mechanical conveying methods, pneumatic modules can be easily and flexibly integrated into an existing production process. Only a low assembly height is necessary. The PCC stands out for its special design and construction style. The system is fully closed. In addition, combined with the principle of vacuum conveying, all specified requirements in terms of Containment are fulfilled. And moreover, operator and product protection are always guaranteed. More efficiency, flexibility, safety and quality – with the ProClean Conveyor HECHT sets standards that our customers trust and value.

A clear head for your requirements



Image 1

Image 1: vacuum-/purge air unit

- 1: manometer
- 2: vacuum connection
- 3: impulse membrane valve
- 4: vacuum valve
- 5: air reservoir



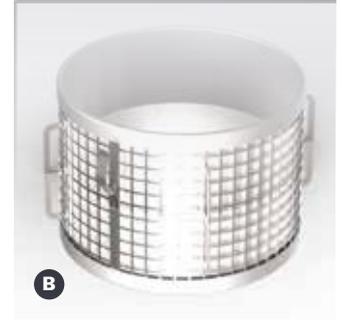
Image 2

Image 2: The PCC and its basic components

- 1: vacuum-/purge air unit
- 2: product inlet valve
- 3: filter head
- 4: cover
- 5: quick release fasteners
- 6: separator vessel
- 7: product outlet valve

HECHT Technologie – We stand for decades of experience and specialized know-how when it comes to pneumatic conveying.

Our design specialists constantly work on new developments for our systems. Feedback from our customers give us the necessary basis for the realization. With the design of the ProClean Conveyor we reacted to different needs and the steady growing demands. The result is a highly flexible and innovative conveying system. Extremely clean, efficient, robust and operator-friendly.



Filter heads

- A:** PE sinter filter for standard application
- B:** Stainless steel filter fleece for hygienic applications
- C:** PTFE-filter fleece for special applications

The core of the ProClean Conveyor: its filter head.

That's where the high-performance ring filter is located with its many benefits:

- W** Large filter surface and therefore a lower filter resistance for a high conveying capacity
- W** Long conveying distances due to the unique filter concept
- W** Optional: feeding of components through the top inlet
- W** Simple filter exchange – no tools, no dismantling

The PCC keeps a clear head for its key task: conveying.

The cover of the filter head is free of any ports and connections. It is easy to open and maintenance times can be reduced to a minimum. Further benefits of the PCC:

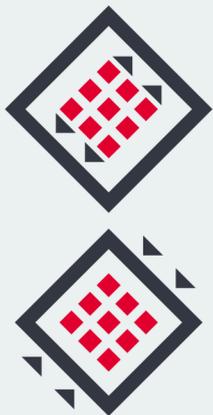
- W** Compact design: reduced space but high performance
- W** Steady monitoring of the system through the optional integrated sight glass
- W** Different filter types for different applications
- W** Adjustable settings like conveying times or cleaning times

- W** Various add-ons to the filter head possible – no interference with the filter system
- W** Very low product residue due to the smooth cylindrical shape
- W** Connected vessels can be filled under positive pressure or under vacuum

Practical Benefits

for all industries

Bayer, Novartis, Pfizer, Sanofi, BASF, Clariant, Herbalife, Novozymes, etc.- numerous customers in the pharmaceutical, chemical and food industries have integrated the HECHT ProClean Conveyor into their production processes.



Containment

No matter if it is about explosive dusts, toxic substances or products in the pharmaceutical or food industry that need to be handled under high-level security requirements, the HECHT PCC is a completely closed system and offers protection for operator and product among all Containment levels.



Cleanness and Hygiene

You operate in an environment with high cleanness and hygiene requirements? We have the perfect solution: The ProClean Conveyor is designed according to the principles of Hygienic Design and is optionally available for the US-market with FDA- or ASME-compliance.



WIP- and CIP function

For additional system cleaning a WIP- or CIP-unit can be installed which can also be easily retrofitted at any time. The cleaning system does not need to be dismantled during the filter change.

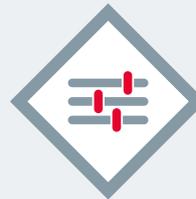
With the ProClean Conveyor (PCC) HECHT developed an extremely flexible and reliable conveying system. The pneumatic device is the ideal connection of different machinery such as granulators, dryers, blenders, grinders and centrifuges. It is especially suitable for discharging of bulk solids into different containers like drums, FIBCs or sacks within your in-house

process. The PCC ensures high conveying capacities for long conveying distances and guarantees a safe conveying of explosive or toxic substances. In addition, a dust- and contamination free environment is ensured. The special design with its innovative filter head comes with numerous benefits:



Explosion protection and inertisation

The PCC is able to convey even products with low ignition power in an oxygenfree environment (under an inert atmosphere by adding protection gas). Of course, also the inside of the PCC is at all times free of potential device-related ignition sources (according to the European Standard 2014/68/EU)



Flexible and gentle product handling

The PCC offers high-level flexibility. By adjusting the load capacity as well as the velocity different conveying methods, from a quick flight conveying up to a gentle plug conveying various parameters can be set.



Customized and modular

Adjust your systems to your needs. Depending on the requirements and operation method, we offer many optional functions for configuration like for example

w Double the filter surfaces by

installing an additional filter for a continuous conveying

w Different pre-installed suction

shoes for connection to any kind of discharging station

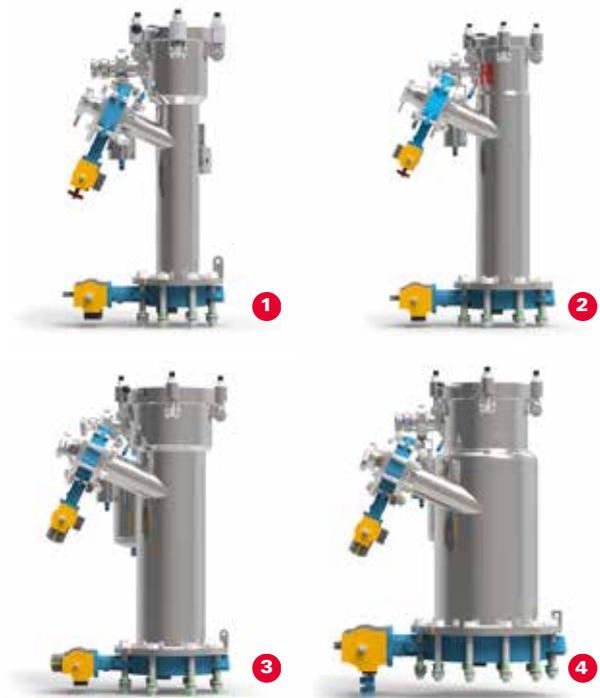


Tough and reliable

Save costs as well as time and make it simple: The special installation method of the unique ring filter system reduces maintenance times to a minimum. The quality of the used materials guarantees a continuous production process. Benefit from a great increase in process efficiency.

Different versions - versatile and highly effective

There are numerous operation purposes for the ProClean Conveyor. Therefore, HECHT developed four designs with different parameters (100 – 300) and conveying capacity. Depending on your customers' requirements and applications it is additionally possible to select from two different versions: pressureless or pressure-resistant. Due to the fact that workflows can change incidentally, the PCC is also available as a mobile version for conveying purposes from different vessels to different filling systems.

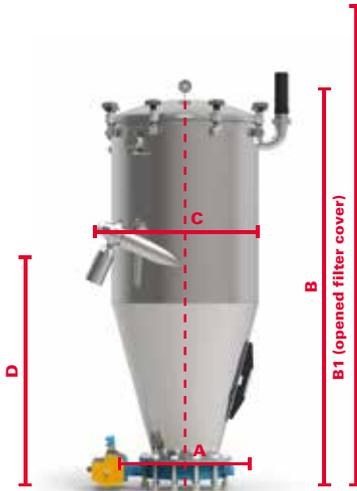


Standard specifications		1 PCC100	2 PCC150	3 PCC200	4 PCC300
liter/h*	capacity	300 – 1200	700 – 2600	1500 – 5800	2600 – 9600
liter	volume	5	11	24	44
cm ²	recommended volume	4	10	19	38
cm ²	filter surface	471	471	942	942
m ² /h	required suction capacity	160	200	200	300
(sec.)1	typical cycle time	15	15	20	20
mm	inlet valve diameter	50	65	80	80
mm	conveying tube diameter	40	50	50	65
mm	outlet valve diameter	100	150	200	300
mm	vacuum valve diameter	40	40	50	50
mm ²	clean gas valve diameter	52	5	25	25
m ² /h	air consumption for pneum. Control 5-6 bar	6 – 8	7 – 9	9 – 11	15 – 17
kg	weight	42	50	80	105

PCC 700

Especially for the connection of machinery like blenders or filling stations with high production volumes, HECHT developed the ProClean Conveyor **PCC 700**. It features a high volume of the separator vessel and a different filter technology. Depending on the installation site and the room height, a vertical version (PCC-700 V) or a horizontal version (PCC-700 H) is available. Even for large conveying volume in confined space conditions, a simple filter change can be performed at any time.

Vertical version



Conveying capacity exemplary with soy flour and fructose			
distance: 20 m height: 8 m	bulk density: 0,35 kg/dm ³		
	continuously	discontinuously	
bulk density: 0,70 kg/dm ³	8500 kg/h	5500 kg/h	5000
	7500 kg/h	kg/h	
volume (vessel) (standard volume)	100 l		
air consumption	ca. 80 l/min		
weight	ca. 250 kg		
dimension A	Flange DN 300 (EN 1092-1 PN 10)		
dimension B / B1	1555 mm (B1: 2180 mm)		
dimension C	Ø 708 mm		
dimension D	815 mm		

Horizontal version



Conveying capacity exemplary with soy flour and fructose			
distance: 20 m height: 8 m	bulk density: 0,35 kg/dm ³		
	continuously	discontinuously	
bulk density: 0,70 kg/dm ³	10000 kg/h	6000 kg/h	5500
	9000 kg/h	kg/h	
volume (vessel) (standard volume)	300 l	650 l	800 l
air consumption	ca. 80 l/min		
weight	ca. 250 kg	ca. 500 kg	ca. 550 kg
dimension A	DN 300	DN 300	DN 300
dimension B	740 mm	895 mm	895 mm
dimension B1	1455 mm	1580 mm	1580 mm
dimension C	Ø 850 mm	Ø 1200 mm	Ø 1200 mm
dimension D	1845 mm	1990 mm	2435 mm

Typical installation – best practice



Raw material supply via PCC for a continuous production process

Ten PCCs were installed in order to convey different substances from an adjacent room and transport those by means of a fluidically optimized piping system. In the subsequent process step, various differential-weight scales are charged, which function as receiving vessels for a continuous manufacturing process step.



Sack discharging stations in combination with the PCC

Sack discharging stations are available in different versions depending on the customers' requirements. An integrated protective vibration sieve dissolves small lumps and separates potential contaminants. With an optional integrated filter with up to 4 filter units and a pneumatic dedusting function, product loss in the dedusting pipes are prevented. With a connected suction shoe, optionally with agitating unit, the product is transported to a plug shear blender by means of pneumatic conveying with the HECHT ProClean Conveyor.

Further HECHT product lines

discharging and filling

Discover our large product range
and HECHT systems
at www.hecht.eu



FIBC discharging stations

In principle, discharging stations consist of four main components:

Connection Systems: core component for a safe FIBC discharging process.

Supporting Tables: Minimize the FIBC weight and are used to secure the handling of suspended loads.

Frames: Are necessary for a safe mounting of the connection system and the FIBC cover.

Lifting Devices: In order to safely lift FIBCs and mount them for the discharging process on top of the connection system, a lifting device is essential.



Bin filling stations

Bin Filling Stations normally consist of various components. Heart of every system is the filling head. Depending on the application, a filling head for individual filling of single sacks or liners can be integrated or a filling head with continuous liner can be connected. Further components for optional integration are loading cells, a dosing function, sampling systems as well as supporting frames or roller tracks. Feeding of the systems is performed via downpipes or by a pneumatic conveyor like the HECHT PCC.



DISCHARGING



CONVEYING



FILLING



DOSING



SAMPLING



SINGLE USE
TECHNOLOGY



COMPONENTS

WE CARE.

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