

PowerPress

The Output Maximizer

Kannegiesser®

PARTNER IN LAUNDRY TECHNOLOGY



BLUECOMPETENCE
Alliance Member
Partner of the Engineering Industry
Sustainability Initiative

The Output Maximizer

The name says it all: The Kannegiesser PowerPress redefines moisture extraction in batch washer systems.

High moisture extraction performance

One of the most important development objectives of a modern moisture extraction press is optimum performance with all types of laundry, even for very short wash cycles and delicate articles. The subsequent energy savings during drying and ironing are considerable and high performance hydraulics and control system ensure gentle treatment of all textiles.

Reliability

A high degree of reliability, even if the press is overloaded or when processing types of laundry liable to fall apart, is vital for the practical operation of the equipment.

Safe operation and hygiene

There is no such thing as standard operation in the field. Overloading, bulky items, batches that fall apart easily are the norm. The PowerPress is optimally designed for this type of operation in the field.

Water recycling

To maximise water saving it is necessary for the water extracted in the press to be used in the batch washer, even in the event of any faults or colour changes. This requires, among others, a large recycling volume.

Simple operation, easy maintenance

These two features are inextricably linked. A clearly designed machine construction with highest material standards and a completely newly designed collection tank makes maintenance very simple. The system remains clean and, therefore, perfectly hygienic and requires minimum maintenance. The PowerPress is controlled by a high performance yet easy to operate control system.

High Moisture Extraction Performance

With and without the TURBO Version

Time and hydraulic performance are the key to powerful but gentle moisture extraction. The new high performance hydraulic system reaches maximum capacity even faster than previously designed. And if your PowerPress is equipped with the TURBO version, even long batch washers with correspondingly shorter wash cycle times are able to achieve moisture extraction performances which were not considered to be possible until now. Our perforated transport belt ensures fast and gentle extraction.

With a batch washer having a cycle time of 2 minutes we achieve a moisture retention of just 38.5 % (!) with the 56 bar PP 10 (50 kg cotton towels 325 g/m², rinse water temperature 40° C) and just 42 % with 40 bar PP10 TURBO.

High moisture extraction performances are possible for batch cycle times well below 90 seconds.

Examples for cost saving by lower moisture retention

The following examples impressively illustrate the possibilities of a PowerPress, with and without the TURBO version, for mixed laundry consisting of 60 % cotton flat work (170 g/m²) and 40 % towels (320 g/m²). The moisture retention savings are based on comparison with a conventional 27 bar Press. The low moisture retention considerably improves the following processes such as, for example partial and full drying. The drying times are shortened and fewer dryers are required .

Hourly performance	800 kg/h	1200 kg/h	1800 kg/h
Wash cycle time	180 s	120 s	90 s
PowerPress model	40 bar	40 bar TURBO	56 bar TURBO
Steam saving per year	348 t	646 t	669 t
Cost saving per year	€ 13 920,-	€ 25 840,-	€ 26 760,-

Basis: 50 kg batch, rinse water temperature: 40° C, running costs: € 40,- per ton steam, hourly performance: 60 % cotton flat work, 40 % towels, steam consumption 1.6/2.0 kg per litre water evaporated.

Cost Saving

With Water Recycling

Large recycling volume and safe hygiene

The PowerPress is equipped with a very large, fully viewable collection tank, which can be enlarged up to a capacity of 1000 litres depending on which batch washer system is used. A large capacity tank is very important as it is the only effective way to avoid water loss due to stopping times, faults and underloading in the batch washer. Recycling always works perfectly even for short wash cycles. When the machine is switched off in the evening, the tank is automatically drained and left to dry out.



Safe Operation and Hygiene

For all Applications

Safe loading and unloading

For the first time unloading from the batch washer into the Press basket is monitored with an intelligent infrared device. The safety system adjusts automatically to all loading states whether water, textiles or foam. For the first time – and no less innovatively – the pressing process and the unloading of the pressed batch are monitored by means of precise, hard-wearing and completely neutral ultrasonic sensors in the wet section.

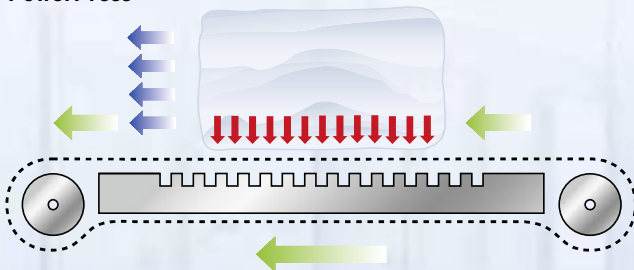
Belt unloading – guarantee for safety and hygiene

The decision to use a belt system for unloading the pressed batch was easy to make. Pushing out the batch via a perforated surface with a chain-driven pusher was too complex and susceptible to faults. Our special, web-like, full plastic conveyor belt running over a simple, large drainage plate ensures fast extraction throughout the entire area and each batch is conveyed out quickly and gently onto the shuttle conveyor belt system for the dryer. This system guarantees optimum hygiene with no chain covers and no water channels in the bottom section.

The press area remains clean

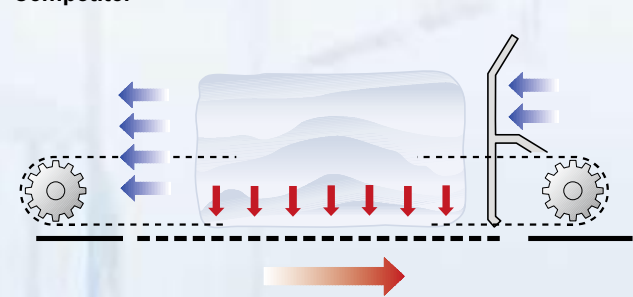
It is very important for the Press area to stay clean. A great advantage of our belt transport system ensures that items like the chain drive, chain covers, lubricating grease, shafts, gear wheels or bearings in the wet area, which are required for systems with a pusher discharge are no longer required. In our belt system it is only necessary to remove the drainage plate (which is also made of full plastic) from the side from time to time and no tools are required. The drainage plate can then be quickly and easily cleaned and replaced.

PowerPress

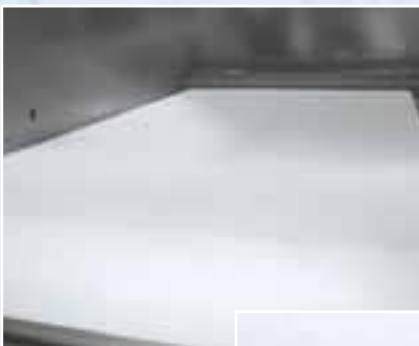


Batch conveying with perforated belt system

Competitor



Batch push motion over a fixed base



Perforated full plastic belt for a homogeneous press surface



Easy to clean press area



The Control System

With an up-to-date SPS control and 99 pressing processes the system can be individually adapted to your range of articles

10 processes are already pre-programmed to give you an optimum start with the new machine. Operation and programming are very simple. The PP 10 and PP 13 series are equipped with a full 3D-graphics touch screen display. All PowerPress models are of course compatible with **Kanlink**.



Touch screen panel (PP 10)

Intelligent Detailed Solutions

The innovations consist of a range of intelligent detailed solutions and new engineering and production methods

- Quality assurance of the mechanical main components using ultrasonic testing
- Design support with modern computer simulation calculations
- 60 mm strong hydraulic main cylinder for fatigue strength
- Low electrical connection and low consumption due to the innovative hydraulic control system
- V-shaped press basket with guidance for the Press membrane to ensure gentle treatment of the fabrics
- Cooling of the hydraulic system with separate pump circulation
- Thermostat controlled cooling circuit keeps the hydraulic oil temperature always at its optimum with lowest possible cooling water consumption. The cooling water is fed to the process water of the batch washer
- Quadruple plunger sealing system for highest operating safety in a moist and chemical environment
- Textured lower membrane surface (PP 10) for better debonding of the press cake and improved drainage



V-shaped press basket



Freely rotating press die for longer membrane lifetime



PowerPress

Overview

PowerPress PP 10 and PP 13

In addition to the PP 10 series with its batch diameter of 1004 mm we offer as an even more powerful alternative the PP 13 series. The volume of our press containers are designed to allow a 10 % overloading with cotton sheets (150-250 g/m²) *. This ensures that your press will not limit especially overload-safe batch washers like the PowerTrans PLUS and thus limits the complete production line.

TURBO – a new performance class

All PowerPress PP 10 models are available in TURBO version. This even makes it possible for batch washers with a shorter wash cycle time to achieve minimum moisture retention, leading to considerable increases in performance and savings in energy costs.

* except PP 10-50 U

Product range and field of application

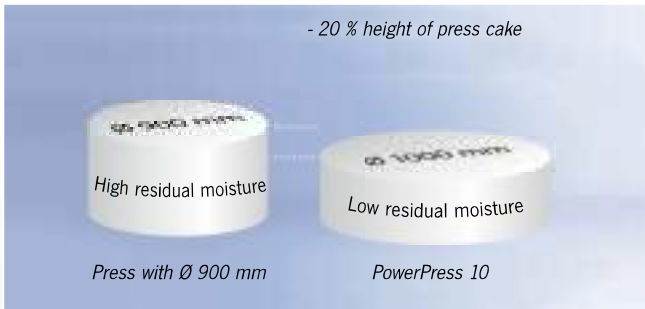
		PowerPress PP 10	PowerPress PP 13
Nominal loading	40 kg	•	-
Nominal loading	50 kg	•	-
Nominal loading	60 kg	•	-
Nominal loading	85 kg	•	•
Nominal loading up to	130 kg	-	•
Batch diameter	1004 mm	•	-
Batch diameter	1275 mm	-	•
Maximum pressure up to	40 bar	•	-
Maximum pressure up to	54 bar	-	•
Maximum pressure up to	56 bar	•	-
Cycle time from	90 sec.	•	•
Cycle time (Turbo) from	70 sec.	•	-

- available
- not available

PowerPress PP 10

Lower Residual Moisture Leads to Energy Savings in the Finishing Process

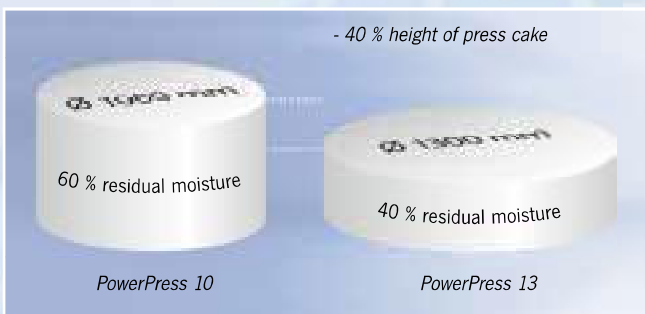
The PowerPress PP10 features a 1000 mm press cake diameter resulting in a lower press cake height. Thus, a lower residual moisture and a higher extraction performance can be achieved – compared to traditional extraction presses with e.g. a 900 mm press cake diameter.



PowerPress PP 13

Minimized Residual Moisture even for Large Batches with more than 85 kg

Extraction presses show at batch sizes of 85 kg and more disadvantages concerning residual moisture because of the press batch height. To use the energetic advantages of mechanical extraction with rather large batches as well, we designed the PP 13 with a larger press basket diameter. Through the enlargement of the diameter to now 1275 mm we achieve that the height of the batch is lower with the same amount of linen. Therefore much better residual moisture values are being achieved. This again leads to savings in the following drying processes of up to four to five minutes.



Residual moisture for 85 kg batches in comparison

Cycle time	High pressure duration	PP 10-85	PP 13
90 s	20 s	72%	48%
100 s	30 s	60%	40%
110 s	40 s	54%	38%

for cotton terry towels (325 g/m²)

PowerPress Universal

Compact, Flexible and Powerful

The newest model of the PowerPress series, the PowerPress Universal, has been designed to offer an ideal extraction unit for the smallest space conditions and most difficult initial conditions. The PP Universal consists of long term established components of the PowerPress series. Its extremely compact measurements makes it, as the name implies, very universally usable.

Through the low height of the press basket loading edge and the short length of the press it is very well capable to replace older extraction units. In doing so it offers the newest standards of engineering and great extraction performances. These lead to savings in the following drying processes.

The PowerPress Universal can also be used as a replacement press for conventional extraction presses due to its low design.

Technical data

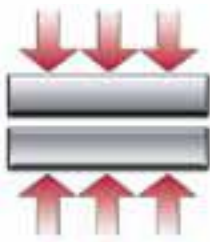
PowerPress Universal	PP U-36	PP U-50
Batch size (dry, BW 170 g/cm ³) [kg]	36	50
Batch diameter [mm]	1000	1000
Pressure at the press die [bar]	40	40



Highest performance at lowest space requirements

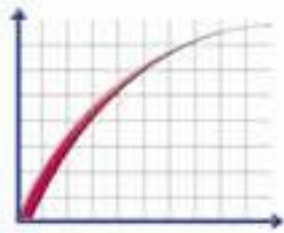
The 4 Pillars of Moisture Extraction Technology

With the PowerPress we achieve a perfect interaction of the “4 pillars of moisture extraction technology”. Together with the PowerTrans PLUS, the extraction units form an intelligent combination for high output and energy savings in the entire process chain!



Power

The PowerPress PP 10 extracts with up to 40 bar in the medium pressure version and up to 56 bar in the high pressure version, and the PP 13 extracts with up to 54 bar.



Speed

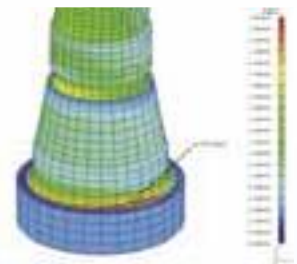
With the extraction technology from Kannegiesser, the non-productive times are drastically reduced by our optimized processes.

For instance, with a total cycle time of 90 seconds only the PowerPress Turbo achieves a full high pressure time of 30 seconds.



Water drainage

Optimizing power and speed remains useless if the extracted water is not drained from the textiles in a fast and effective manner. The PowerPress includes a special, web-like full polymer conveyor belt running over a simple, large drainage plate, directing the water to a large, easy-to-clean collection tank.



Fatigue strength

The components of the PowerPress are designed for highest operational demands and dynamical strains. The fatigue strength calculations are compliant to the strict FKM guidelines, which is the governing body for arithmetical strength determination of machine components.

Therefore, with Kannegiesser you get enduring reliability and operating safety – the base for high availability and low life-cycle costs!

Optimum System Integration

Which batch washers is the PowerPress suitable for?

In addition to optimum system integration with the PowerTrans range, all PowerPress models are suitable for installation in connection with all batch washers commercially available worldwide.

- For batch washers with bottom transfer unloading
- For batch washers with top transfer unloading
- For batch unloading 'in line' in direction of flow
- For batch unloading to the left or right (without additional cost)
- For retrofitting with existing batch washers, we supply a suitable unloading chute. Machine lowering for transport is without additional cost. No special foundations are required.

Technical Design

- Cover panels in stainless steel
- Control cabinet integrated into cover panels
- Press die freely rotating
- Belt conveyor drive outside of the recovery tank
- Volume of the recovery tank 650 litres (transfer tank) or 1000 litres (prozess tank)

Technical data

	Nominal loading (dry weight, in kg)	Maximum loading (dry weight, in kg)	Batch diameter (mm)	Minimum cycle time (s)	Minimum cycle time with Turbo version (s)	Free programm- able pressure up to (bar)
PP 10-40	40	44	1004	100	70	40
PP 10-50	50	55	1004	100	70	40/56
PP 10-60	60	66	1004	100	70	40/56
PP 10-85	85	94	1004	100	70	40/56
PP 13	up to 130	up to 143	1275	90	-	54

Loading values are related to cotton sheets with a fabric weight of 150 to 250 grams per square meter, new linen excepted

Subject to changes by development
Brochure shows optional equipment