FTNON

Swirl Bath Washer

The combination of special techniques gives an optimal washing result while the product is treated as delicate as possible.

Eminently designed for washing and mixing different products, such as sliced vegetables, salads and herbs

FRESH-CUT, ROBOTICS, STEAMING

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Washing

The product arrives in a water bath with a calm flow. Water is being injected into the water bath; this creates a screw rotation of the wash water. Thus the product is massaged and dirt comes loose without subjecting the product to large forces. The screw rotation causes a maximum retention time in the washer.

Outfeed

At the outfeed side of the water tank an accelerated water flow pulls the product out of the washer.

Dewatering belt

The product is being dewatered on a dewatering belt. After dewatering, the water is fed back to the filter from where it will be re-circulated.

Fresh water spraying pipe

After dewatering, the product is rinsed off again with fresh water. This water will also be used for the refreshment of the system.

Static filter

All the water is being filtered with a horizontal static filter. The water is buffered in the pump tank underneath the filter. The static filter lies above the pump tank and the water coming from the dewatering belt flows through the filter. The dirt particles will remain on the filter. The static filter has to be cleaned manually. Depending on the degree of dirt on the filter, the filter has to be cleaned frequently. The washer is to be filled by a pipe mounted on the side of the washer. This pipe needs to be arranged by the customer.

Controls

Stainless steel control panel with:

- Main isolator
- Start-Stop buttons
- Emergency stop
- Reset button

Technical specifications - Swirl Bath Washer

	SBW 062	SBW 063	SBW 064	SBW 093	SBW 094
EFFECTIVE LENGTH	2,000 / 79"	3,000 / 118"	4,000 / 157"	3,000 / 118"	4,000 / 157"
EFFECTIVE WIDTH	600 / 24"	600 / 24"	600 / 24"	900 / 35"	900 / 35"

Water injection

On several points in the washer, each with manually adjustable valve.

Technical specifications - Dewatering belt

	SBW 062	SBW 063	SBW 064	SBW 093	SBW 094
WIDTH	500 / 20"	500 / 20"	500 / 20"	700 / 28"	700 / 28"
LENGTH	1,800 / 71"	1,800 / 71"	1,800 / 71"	1,800 / 71"	1,800 / 71"
DRIVE	drum motor	drum motor	drum motor	drum motor	drum motor
IDLE ROLLER	complete with quick release system	complete with quick release system	complete with quick release system	complete with quick release system	complete with quick release system

Belt type

PVC mesh belt 1x1 mm, blue with stainless steel zip

Frame type

Hollow section frame

Side guides

Hingeable

Technical specifications - Fresh water spraying pipe - Filter

	SBW 062	SBW 063	SBW 064	SBW 093	SBW 094
FRESH WATER SPRAYING PIPE					
VALVE	manual	manual	manual	manual	manual
SUPPLY FRESH WATER	pipe 1"	pipe 1"	pipe 1"	pipe 1"	pipe 1"
FILTER					
TYPE	static	static	static	static	static
FILTER OPENING	wedge wire 750 µm	wedge wire 750 µm	wedge wire 750 µm	wedge wire 750 µm	wedge wire 750 µm

Hygiene

The swirl bath washer has a very open construction, so that the inner side of the water bath is completely accessible. The swirl bath washer runs itself empty very well, through which little product remains after production. The diameter of the valves permit a quick discharge of the water containing dirt and product rests. Most pipes are equipped with demountable parts to assist cleaning. The dewatering belt is easy to clean, because the belt can be de-tensioned with one simple movement.
Also, the side guides are hingeable. This way, the belt frame underneath the belt is easily and completely accessible for cleaning. It is hardly possible for dirt to build up, because in the construction the use of bolted connections and horizontal surfaces has been minimized. At the positions where the connections are not completely welded, the space between the parts has been increased in order to make cleaning possible.

Options

1) Separation drum floating particles

Halfway the swirl bath washer the floating product and dirt particles are being submerged by a large perforated drum, which rotates in the same direction as the water flow.
Small particles, like small leaf parts and flies, that float on the water surface, are being pushed by the water injection through the perforation of the drum. Inside the drum there is a strong cross flow, to push these parts through an exit in the side of the water tank. This water flows back to the filter.

TECHNICAL SPECIFICATION – SEPARATION DRUM FLOATING PARTICLES	
DIAMETER	Ø 950 mm / 37"
PERFORATION	Ø 10 / Ø 15 / Ø 20 mm, to be agreed
DRIVE	Motor gearbox combination

2) Frequency inverter on separation drum floating particles

The separation drum can be executed with a frequency inverter so the retention time can be controlled more specific.

3) Lift system for separation drum floating particles

The separation drum for floating particles can be lifted. This way the products that are smaller than the perforation of the drum can also be washed. The lift system is provided with 2 pneumatic cylinders.

4) Automatic electric valve for fresh water spraying pipe

The advantage of this electric valve is that when the pump stops, the valve automatically closes. This saves water. The manual valve remains, to set the flow.

5) Automatic filling valve

The washer can be executed with a fixed connection to an automatic filling valve. With this, the washer can be filled quickly and automatically. The valve closes automatically when a high water level is reached in the system.

- Valve - pneumatic
- Supply fresh water, pipe 2"

6) Rotating filter instead of static filter

All the recycled water is being filtered by means of a rotating filter. The rotating filter filters very fine, as a result of which the water needs to be refreshed less often. During production the

filter does not require attention. The filter system is executed as a rotating wedge wire drum through which the water flows. Because of the wedge wire sieve profile, it is almost not possible for dirt to pile up in the filter gaps. The drum turns at a very low speed and dirt is scraped off from the outside. The water is buffered in the pump tank under the filter.

TECHNICAL SPECIFICATIONS - ROTATING FILTER	
TYPE	rotating
FILTER OPENING	wedge wire 750 µm
DRIVE	Motor gearbox combination

7) Extra fine rotating filter instead of static filter

All the recycled water is being filtered by means of a rotating filter. The rotating filter is a very fine filter, as a result of which the water needs to be refreshed less often. During production the filter does not require attention.
The filter system is executed as a rotating wedge wire drum through which the water runs. Because of the wedge wire sieve profile, it is hardly possible for dirt to pile up in the filter gaps. The drum rotates at a very low speed and dirt is scraped off the outside. The water is buffered in the pump tank under the filter.

TECHNICAL SPECIFICATIONS - EXTRA FINE ROTATING FILTER	
TYPE	rotating
FILTER OPENING	wedge wire 254 µm
DRIVE	Motor gearbox combination

8) Parabolic filter instead of static filter

All the recycled water is being filtered by means of a parabolic filter. The parabolic filter filters very fine, as a result of which the water needs to be refreshed less often. During production the filter does not require attention.
The filter system is executed as a parabolic wedge wire screen through which the water flows.
Because of the wedge wire sieve profile, it is almost not possible for dirt to pile up in the filter gaps. The water is buffered in the pump tank under the filter.

TECHNICAL SPECIFICATIONS - PARABOLIC FILTER	
TYPE	parabolic
FILTER OPENING	wedge wire 750 µm

9) Cooling coil

In the pump tank, a cooling coil is mounted which is connected to a glycol cooling system. The heat generated by the pump is absorbed by the water. Without cooling, the temperature of the wash water would rise.
The cooling coil can keep the wash water at a constant temperature of 4°C (38°F). The cooling coil comes complete with flanges for easy connection.

TECHNICAL SPECIFICATIONS – COOLING COIL	
WASH WATER TEMPERATURE	+4° C (38° F)
GLYCOL TEMPERATURE IN	-7° C (16° F)
GLYCOL COOLING SYSTEM	not included
GLYCOL CONTROL VALVE	not included
TEMPERATURE SENSOR PT100	not included
PRODUCT TEMPERATURE IN	max. 4° C (38° F)
REFRESHMENT WATER TEMPERATURE	max. 4° C (38° F)
AMBIENT TEMPERATURE	max. 4° C (38° F)
GLYCOL CONTROLS	not included

10) Swan neck on dewatering belt

The dewatering belt of the washer goes down into the water of f.e. a next washer or water flume. Product that does not automatically come off the belt on the outfeed side, is thus rinsed of by the water. This results in a strong reduction of the quantity of product which is carried back by the belt.

11) Ventilator with air knife in dewatering belt

Product which does not automatically come of the last dewatering belt at the outfeed side will be removed by an air knife, which is mounted between the belt. The air knife is connected to a hygienic design ventilator.

12) Suction point on dewatering belt

Suction point with ventilator. A suction point is integrated into the dewatering belt of the washer. A special ventilator sucks air at high speed through the product, thus taking off droplets of water from the product and the belt.

13) Demister for suction ventilator

The demister collects the droplets of water from the exhaust of the suction ventilator. This water is fed back to the filter of the washer, thus reducing water consumption.

14) Vortex point on dewatering belt

A Vortex point with ventilator. Above the belt a special Vortex air knife is installed to blow droplets of water from the product and the belt, to improve the drying result.
The Vortex point is adjustable in height and angle to be able to optimise the operation. The Vortex point is connected to a hygienic design ventilator.

15) Dewatering vibrator instead of dewatering belt

The product is being dewatered on a dewatering vibrator. The product flows directly out of the washer on to the vibrator. The water flows through the perforated deck and flows to the filter. The product is transported to the outfeed side. The perforated deck is manually removable by means of a bolt construction.

- Dewatering deck, perforation ø 3 mm/ approx. 1/8”
- Drive, 2x unbalance motors, fixed speed

16) Platform next to washer

At one side of the washer a platform can be mounted for improved access. The platform is complete with stairs.

- Dimensions platform 2,100 x 700 mm / 83” x 28”
- Top plates, stainless steel 304 crater plate

17) Outfeed basket filling station

Behind the last dewatering belt a hopper is mounted which transports the product to f.e. a basket. The basket can be placed on a stainless steel support frame. On this support 3 baskets can be placed. The baskets are handled manually.

- Dimension basket ø 425 x 375 mm / ø 17” x 15”
- Material basket, plastic, blue

Basic execution of JBT FTNON swirl bath washer

- Wash tank
- Dewatering belt
- Fresh water spraying pipe
- Static filter
- Controls

Basic execution of JBT FTNON swirl bath wash line (2 washers)

- Wash tank, 2x
- Dewatering belt, 2x
- Swan neck on 1st dewatering belt, 1x
- Ventilator with air knife in 2nd dewatering belt, 1x
- Fresh water spraying pipe, 1x
- Static filter, 2x
- Controls, 1x

In this Swirl Bath Washer Line, 2 Swirl Bath Washers are placed behind each other.

JBT FTNON can change the execution if this does not impact the functionality of the equipment. All mentioned sizes, capacities and figures are indicative. No rights may be derived from the information provided.
JBT FTNON delivers tailor-made machines. Therefore capacity and dimensions will depend on your product and specific requirements. All our machines are constructed of stainless steel wherever possible and comply with the stringent, international standards in the field of safety and hygiene.

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