



SmartLine BATCH WASHER

VEGA CONTINUOUS BATCH WASHER

Features:

- Combined single & double drum machine
- Modular concept
- Highly flexible for all applications
- High performance batch washer
- Exceptionally reliable design
- Low operation & maintenance costs
- Reliable Smartline bottom transfer technology
- Pick-up & drop wash action



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UNDERSTANDING THE CONCEPT

The most effective washing concept

The Vega Smartline utilizes washing in *Standing-bath* for both the *Pre-wash* and *Main-wash* sections of the machine in order to maximize the washing efficiency. The rinsing section of the batch washers utilizes the *Contra-flow* concept, for the best rinsing results.

Standing-bath washing processes can be used for standard requirements (such as *lightly soiled linen*) and for special requirements (such as *heavily soiled linen, Hospital linen, Workwear, nursing home linen, and mats*).

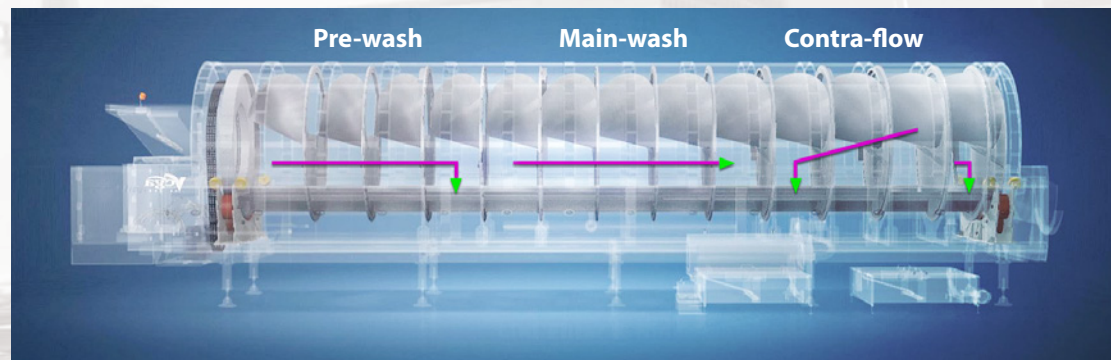
The standard execution of Smartline batch washers can be fitted with efficient lint-filtration system and a highly effective water recovery system. All additional features are modular by design, this makes it highly flexible for a wide range of applications as each machine is built based on the selected modules and requirements of our customers.



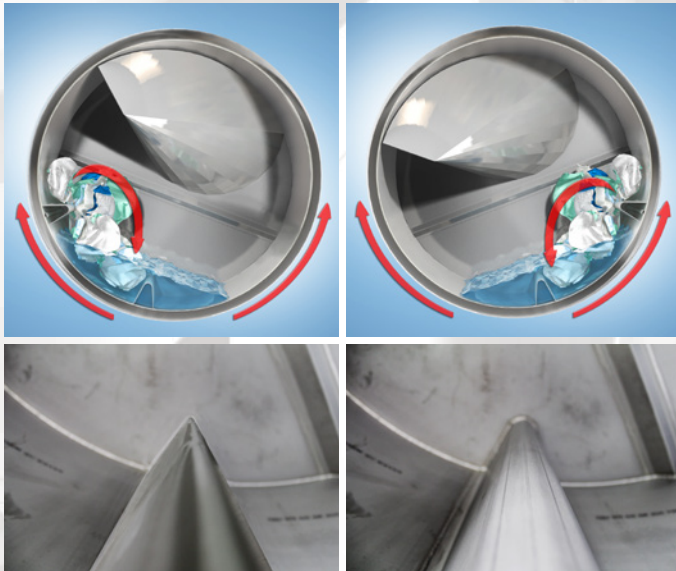
What does washing in *Standing-bath* mean?

When you need to change between processing different colored batches, the *standing-bath* design will handle this without the need for multiple empty compartments. A single empty compartment will usually be enough to prevent color bleed between incompatible colors, resulting in higher production rates than other conventional designs.

In addition, each batch of linen gets exactly the right amount of water, temperature and detergent in accordance to the size of the load; resulting in lower overall water, chemical and steam consumption.



DRUM WASHING ACTION



Standard rib design
(Breaks linen fiber)

Smartline rounded rib design
(Designed to be gentle on linen fiber)

Smartline Pick-up & Drop wash action

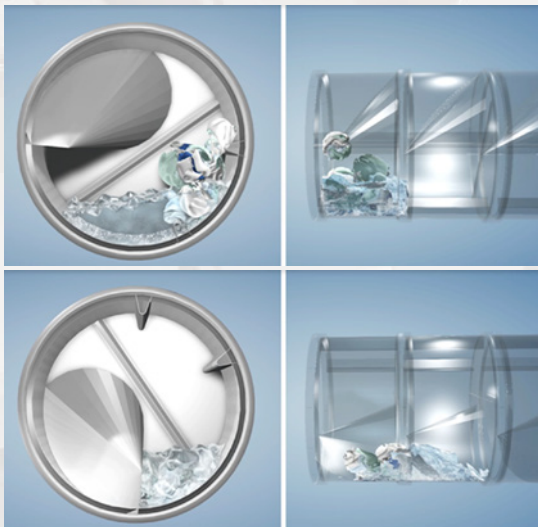
Allows for shorter washing times, resulting in:

- Increased production output
- Reduced detergent consumption
- Fast and thorough washing of linen

The drum design incorporates a special computer modeled rib arrangement comprising of two large ribs optimally positioned to give a highly effective pick-up and drop wash action. This arrangement allows the water and chemicals to fully penetrate the linen giving efficient washing and rinsing. It further eliminates the rubbing action, found in other designs, which reduces linen life due to wear-and-tear.

The ribs are designed to be gentle on linen fiber, and the rotation angle, as well as speed, can be adjusted to optimize the wash action for processing different types of linen.

BOTTOM TRANSFER



Reliable bottom transfer technology

- 40% larger transfer openings
- No clogging of linen guaranteed
- Safe transfer between compartments
- Fast transfer ensures higher productivity

The Smartline inner drum is designed with large openings between compartments (*up to 40% more than other models*) to ensure fast and safe transfer between compartments without the risk of linen clogging.

The transfer spiral pushes the linen flawlessly from one compartment to the next. The transfer speed is freely adjustable to increase the transfer force.

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UNIQUE STEAM INJECTION DESIGN

Effective mixing, exact-heating and measuring

The steam injection allows for rapid adjustment of water temperature and further allows for fast and effective mixing of water and wash chemicals - this allows the machine to run on shorter cycle times, reducing washing times and increasing production rates.

The injected steam pushes most of the water and soap between the inner and outer-drum, while the inner-drum perforations allow the soap and water to be rapidly mixed while creating a circulation effect.

As water is moving rapidly, the lint and hair from the linen will float upwards, rather than sinking down to the bottom of the drum. All Smartline machines are fitted with the *VEGA Steam injection 2.0*.

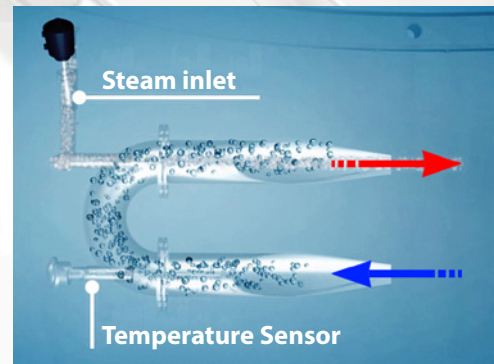
When the steam injection starts, the wash liquor is pulled into the circulation where the temperature sensor measures the exact water temperature before it comes in contact with the steam.

The steam heats up the water and pushes it out into the drum where the process is then repeated.

This ensures that the real water temperature inside the drum is measured, and not the water temperature adjacent to the steam injector.



Steam injection



RECOVERED WATER QUALITY

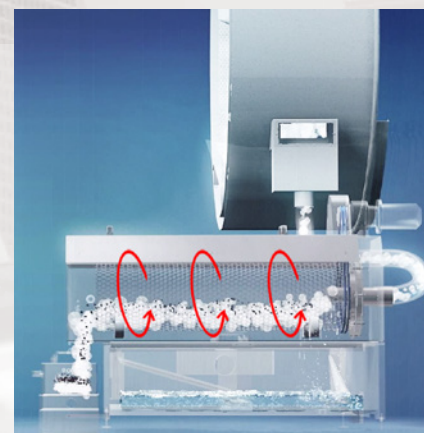
Separating lint & particles from the wash liquor

The opening of the water-box is positioned to be in line with the water surface inside the drum. With each rotation, foam, hair and lint is then transferred into the water-box and out of the machine to the rotary lint filter.

Inside the lint-filter, the water goes directly to the water recovery tank, after passing through a nylon micro-filter.

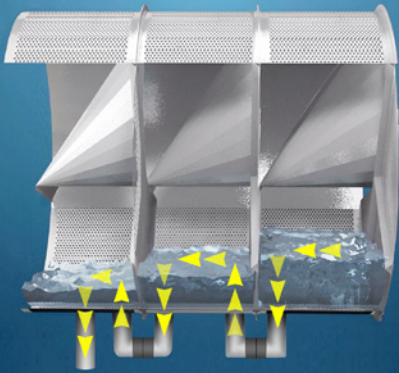
The filter is mounted inside a cylindrical drum, which rotates in order to pass the lint forward to the lint-collection box.

This filtering system ensures excellent recovered water quality, leading to a better overall washing results while lowering total water consumption.

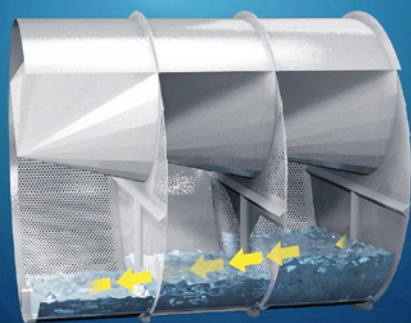


EFFECTIVE RINSING

Rinsing by lint-transfer pipes



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Rinsing by contra-flow

Lowest possible water consumption (While maintaining excellent washing quality)

The rinsing section will determine the overall water consumption level of any continuous batch washer system. Therefore, an effective rinsing process will not only remove any remaining chemicals from the linen, but also use less water to maintain excellent results.

In systems where the water passes between the inner and outer drum through lint-transfer pipes, the water does not completely pass directly through the linen. To get a better washing result in this kind of system, you will need to increase the amount of fresh water, or increase the level of acid, to balance pH levels.

(Keep in mind that using too much acid reduces the lifetime of clothing ironers and increases the running costs of finishing equipment).

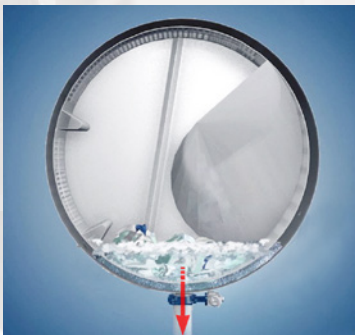
In the Smartline machines, the water is forced to pass the linen through the inner drum perforations. This design is superior in terms of water consumption and final washing quality.

This rinsing design (*contra-flow*) is included in all Vega Smartline batch washers.

Additional comparisons

As most lint and foam floats on the water surface, the conventional drain pipes can only transfer a small amount out of the system each cycle.

In the Smartline machines, the water-box is positioned to transfer the lint and foam out of the system with each rotation - effectively removing unwanted particles entirely.



Rinsing by lint-transfer pipes



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Rinsing by contra-flow - with waterbox

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GREEN FLOW

Excess Press-Water Recovery

The recovered water from the extraction press recovery tank is directed to the Smartline batch washer pre-wash zone through our standard module.

However, all water in the press recovery tank is not alone needed in the pre-wash zone, therefore excess water is pumped through our *Green flow* module to the rinsing section.

Green flow is a recommended option for all Smartline machines, as it efficiently uses excess water to lower the overall water consumption of the batch washer system.



EFFICIENT SOAKING

The Smartline hopper is designed to quickly soak all incoming linen as soon as it enters the hopper.

When the loading procedure starts, the main water outlet starts flooding water in order to push the linen into the first compartment. A fast and thorough soaking of the linen during the loading procedure reduces overall washing times.



DRUM CONSTRUCTION



Large opening between compartments allows for reliable bottom transfer.

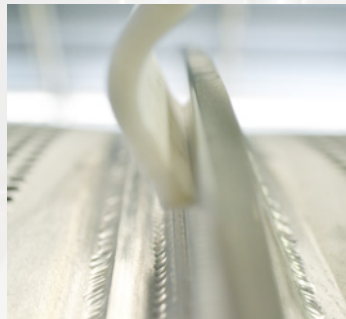
Smartline inner drum design

For a smooth and stable operation

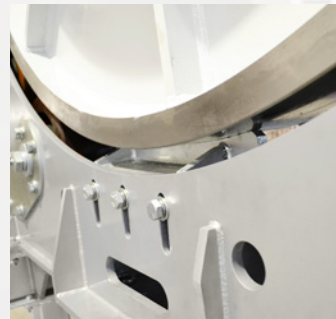
- 3 millimeter thick stainless steel
- Fully welded and machined
- Supported on heavy-duty polyurethane drive wheels
- Strong & reliable main support on bearings



Flat-bar machining process for sealing.



Effective sealing ensures 100% bath separation.



Design allows for easy maintenance.



Every compartment is supported with 12x50 mm flat bar for prolonged life.



Fully galvanized main-frame.

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INNER DRUM DESIGN

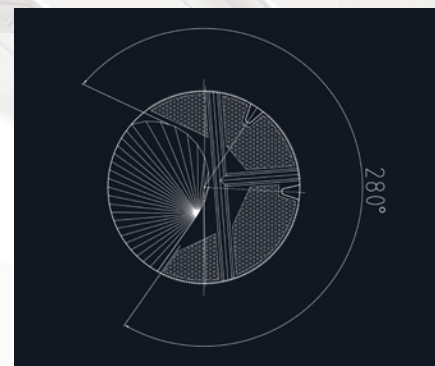
To reach the most efficient level of resource consumption the inner and outer drum needs to be perfectly matched, which is done in our Smartline design.

Smart inner drum design

The inner drum (*where an outer-drum is needed*) is 280 degree perforated; this ensures the fastest possible heating & mixing of the detergent in all rotational positions. It allows the Smartline to maximize its use of the cycle time, efficiently reducing the overall washing time, and increasing the total production while providing excellent washing quality.

The bottom surface of the inner drums for the rinsing section is also perforated in 280 degrees.

This design allows the Smartline to rinse linen in all rotation positions, reducing the total rinsing time, increasing the total production, and allowing excellent rinsing quality while reducing the overall fresh water consumption.



OUTER DRUM DESIGN

Smart outer drum design

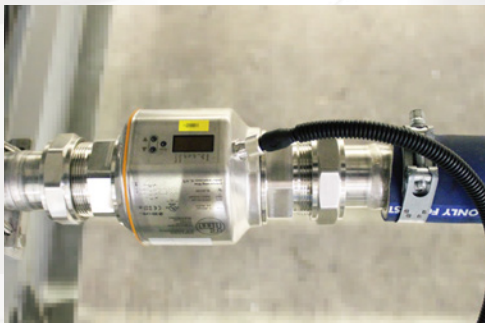
To reduce the standing water between the inner and outer drum, our engineers designed a new concept for the chemical and steam injection, along with a new drain concept.

We removed the injection box, which is widely implemented in most other batch washer designs. This allowed the Smartline to reduce the standing water to 3 liter, compared with the loss of 28 to 50 liter of water in conventional designs.

The new Smartline fast drain-valve design ensures emptying the compartment entirely during a bath exchange, removing the need for multiple empty compartments after a color change. A single empty compartment will usually be enough to prevent color bleed between incompatible colors.



DIGITAL MEASUREMENT



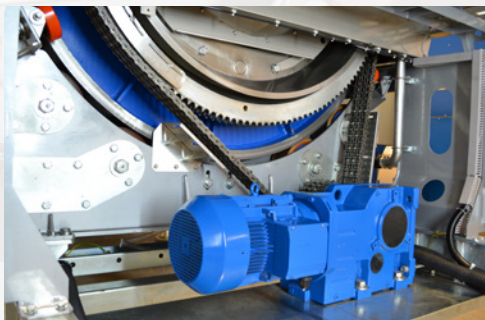
Water measurement components

The Smartline Digital flow meter (IDM) and Pressure control unit ensures that each batch of linen gets exactly the right amount of water according to the size of the load.

The pressure control unit allows for a controlled discharge of the batch water for special applications.

The results are; lower overall water, chemical and steam consumption.

DRIVE SYSTEM



Chain Drive System

Designed to be easily accessible

- Reliable & Powerful frontal chain drive
- Frequency controlled
- Automatic lubrication (*Low-Maintenance*)
- Splash-proof location with unique safety concept

Motor access and maintenance

The motor is located at the front of the machine, and can be accessed by opening the frontal maintenance doors.



Each component has been designed to be easily accessed and replaced in order to minimize downtime due to maintenance work.

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WATER MANAGEMENT

Efficient use of recovered water

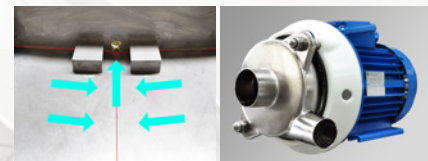
Designed to be easily accessible

- Smart tank placement
- High quality components

The recovery tanks of the Smartline batch washer are placed outside of the machine for easy maintenance.

Together with the high-volume recovery pumps, stainless-steel piping, and high-speed drain valves, the machine comes with a hygienic and low maintenance water recovery system.

The recovery tanks are hygiene approved, with a conical base design to ensure complete draining of the tanks. In addition, all tanks are designed to be easily opened, and there are no "hard-to-reach" areas within the tanks. This is particularly important to prevent bacterial build up and allows for a fast and efficient cleaning.



STEAM INJECTION

Superior steam technology

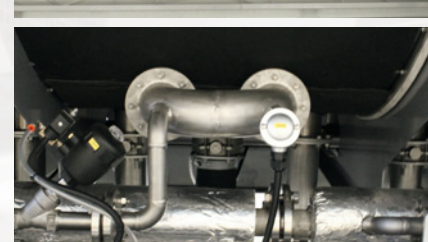
Precise and efficient

- Exact measurement of water temperature
- Clean design concept
- Fully insulated (360°) steam compartments
- Chemical connection above steam injector (For fast and efficient mixing)

Standard execution of the Vega Smartline batch washer comes fitted with two steam injectors.

Optionally, steam heating can be applied to compartments as well as recovery tanks.

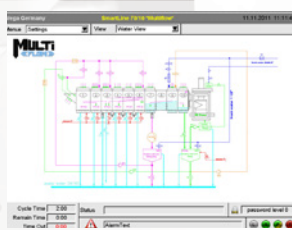
Please contact us for more information on our steam heating systems.



CONTROL & OPERATION



10.4 Color Touch panel for easy operation



Real-time display

With the best software the industry can provide

- PLC-controlled (*heavy duty industrial PLC system*)
- 10.4" color touch screen
- All relevant parameters are freely programmable
- Adjustable pivoting angle and speed
- Up to 99 custom made washing programs programmable
- Animated graphical visualization
- Full data tracking of customer, program, and load
- Elapsed hour counter with integrated service interval function
- Easy data backup by compact flash, or USB memory stick
- Optional remote diagnostics with 24/7 link-up to Vega HQ
- Manual operation mode for troubleshooting

The control panel comes with an animated graphical visualization of the complete batch washer unit, and supports all interfaces from leading detergent manufacturers.

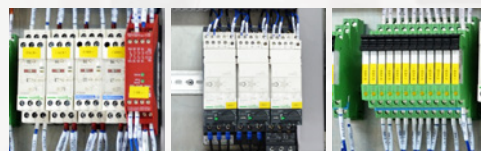
The system can be set up to allow for data exchange between machines, such as; monorail bag systems, extraction press, dryers.

ELECTRICAL COMPONENTS



Structured design

- Simple & structured design
- Using minimal number of components
- Easy troubleshooting
- All components are labeled



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AVAILABLE SIZES

Batch Sizes:	SL 40 kg / 88 lbs	SL 50 kg / 110 lbs	SL 60 kg / 132 lbs	SL 70 kg / 154 lbs	SL 80 kg / 176 lbs	SL 90 kg / 198 lbs
Number of Compartments:	7 - 20	7 - 20	7 - 18	7 - 16	7 - 14	7 - 12

For more information & additional sizes, please contact us.

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