

# Modular Design - Guarantees a custom-designed Operation

The strict market requirements for higher productivity, a more efficient usage of energy, a simpler handling, as well as a machine design which requires a lower amount of maintenance and is easier to service have considerably influenced the new modular structure of the high-capacity drycleaning machine for industrial use.

## BÖWE Induline = Made for you

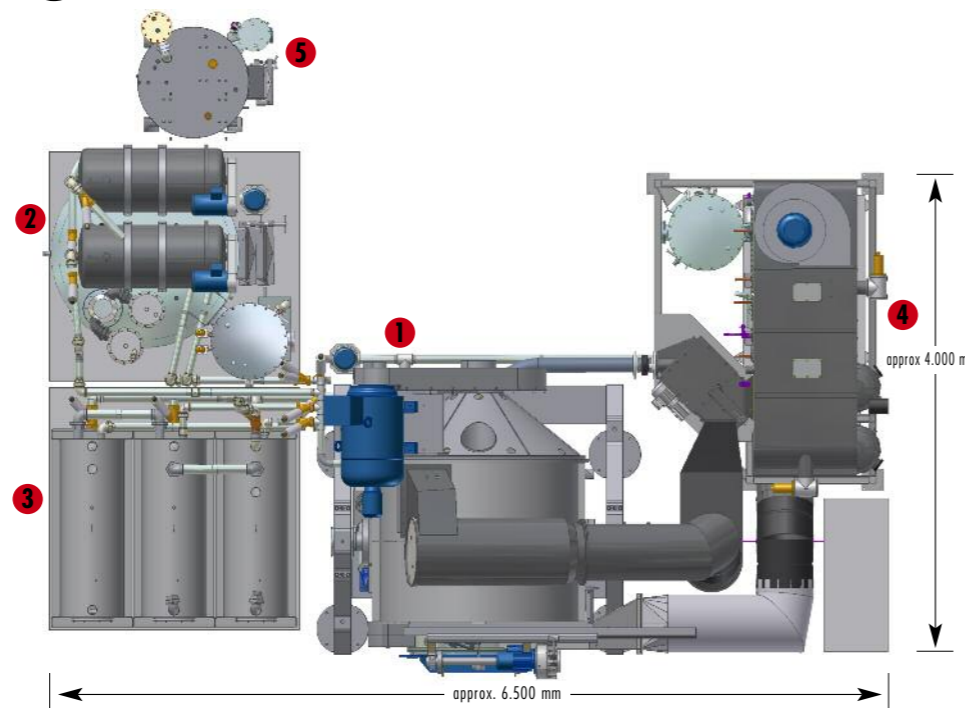
Generally, the Induline is set up according to individual requirements and offers tailor-made solutions, e.g. for

- industrial cleaning
- fur and leather cleaners
- textile service plants
- textile finishers/-industry
- carpet cleaners
- laundry plants

Loading capacities from 100 up to 200kg allow for selection of the optimum care process for each individual case, with free choice of solvents like perc, hydrocarbon and alternatives. Especially the automated loading and unloading in which an operator is only rarely needed and the possibility to easily integrate the industrial drycleaning machine into new and already existing automations make use of the Induline a commercial success.



Module air duct: easy and from everywhere accessible



### Future-oriented, modular design

- ① Machine module
- ② Still module
- ③ Tank module
- ④ Drying module
- ⑤ Sludge still (optional)

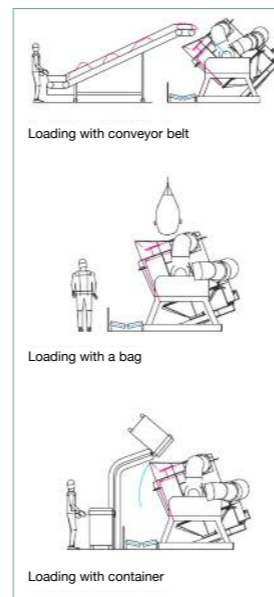
The tank group and still unit can be positioned as per local conditions.

### SuperDry PDS+ and refrigeration technology

The optimized air flow of the recovery section of the drying system SuperDry PDS+ is used analogous to the PremiumLine series. In combination with the patented dynamic cage perforation in the shell of the cage and the perforation in the cage back plate an optimum diagonal flow of the drying air through the interior and the garments is reached also in the depth of the cage. Thus, the most modern and highest-performance BÖWE process technology is available also for industrial users. The rugged and capacity controlled refrigeration unit with two reciprocating compressors is located below the recovery section. This provides for a fast, cost-effective and very low-noise drying process.

### Automation by-integration

The design and functionality of the machine make automated loading and unloading, as well as the integration of automation processes possible. They offer great savings potential in operation and handling. Thus, you are able to increase the efficiency of your machine and the yield of the capital you have invested.



During loading the cage can be turned for better filling. Via a conveyor belt, bag or container goods like e.g. furs, leather, carpets, gloves, cleaning cloth, industrial/outer garments or milling goods can be loaded fast and conveniently by just one operator. The loading door is automated and swivelmounted. It is driven and locked electromechanically via the machine control. The loading door opening with a diameter of 1,000mm provides for an optimum accessibility, also with bulky and hard to handle goods like e.g. carpets.

For unloading the goods can be dumped on a conveyor belt for further processing. Thanks to the large pivot angle a complete emptying of the cage is guaranteed here as well.



Front view loading - the cage tilts up to 70° upwards



Front view unloading - the cage tilts up to 30° downwards

### High-performance control ConfoTronic IL

The ConfoTronic IL offers a variety of possibilities for individual adjustment to various industrial applications and guarantees a safe, efficient and variable operation of the machine. The software especially considers requirements of automation of loading and unloading.



Control panel freely positionable

### New tank geometry

The separate and vertical solvent tanks have got a completely new designed round top with an overflow at the crest. This avoids creation of condensation water. The tank unit can be supplemented by tank elements for an optimum adjustment to the application. Quantity and condition of the solvent can be checked anytime by 2 ea. large sight glasses per tank - at the bottom and at the top. An optimized bottom geometry allows for complete pumping off, as well as an excellent rinsing of the tanks, which practically avoids dirt deposit. The separate solvent trough fulfils all regulations relevant to the environment.

### Visco-elastic spring damper system

In order to reduce high dynamic forces during the extraction process down to a minimum, the cage unit is set up on a spring damper unit. This design reduces the dynamic force by about 85 - 90 %.

### Easy operation and maintenance

The large surface, easy to access lint filter at the cage unit and the fine lint filter additionally integrated in the drying unit prevent any dirt in the refrigeration unit or the recovery section. The maintenance points button trap and lint filter can easily be reached.

### The Induline-machine

#### Special features

- **Preset cleaning, maintenance and auxiliary programs can also be freely programmed**
- **Interactive maintenance system IMS saves the operator's time and work**
- **Optimum operator guidance by a large clear text display with detailed operating instructions available in many languages. Possibility to switch to a second language**
- **Utilization of internal data out of the comprehensive operating data memory (e.g. for the solvent record)**
- **Integrated error diagnostics**
- **Optional remote maintenance via internet compatible networks at the customer's plant. Connection with other data media possible**
- **Software update via MMC card**
- **Proven hardware of the BÖWE PremiumLine series**

## The Future is modular



High-capacity drycleaning machine for industrial use

InduLine

**BÖWE**  
Textile Cleaning

## Still unit

Following the modern process engineering principle of BÖWE, the dirt separated from the garments is carried from the cage directly into the still. So, the machine works completely without a dirt tank and avoids the problems usually associated with that.

The high-capacity still in an energy efficient, easy to maintain round design holds up to 1,000l of solvent. In power level 1 with a floor heating, a still capacity of 600l per hour is reached. With the optional upgrade to power level 2 by an integrable side heating, up to 1,200l per hour can be distilled. Thus, with a 2-bath-process connection of a second machine is optionally possible.

Depending on the degree of soiling of the goods to be cleaned, a sludge still integrated into the system but working separately from the main still, can be supplemented optionally. It can be optionally equipped with a sludge stirrer in order to optimally decoct solvent residues from the distillation sludge.

## User-friendly features

- Consistent distillation process by a high-capacity condenser and a new temperature controlled control of the steam pressure
- Optimum separation of water and solvent by a large round water separator; for perc with an integrated secondary separator; with the MultiSolvent® version by a proven Hydro Balance System (HBS)
- Best possible monitoring of the distillation process by a large sight glass (rinsed during pumping in)
- Two large still doors for inspection and maintenance of the interior
- Optimum cleaning of the interior of the container thanks to the sloped bottom of the still
- The proven emission free still rake out system for perc, works with direct steam addition and a high-capacity sludge pump - even under hardest conditions
- Permanent working thanks to an optional, separate sludge distillation with perc
- Real fractional distillation process in the vacuum distillation with Multi-Solvent® machines

## Integrated activated carbon unit

Optionally, an adsorption unit can be integrated with perc, that is either designed as a one cycle system Consorba or a multi cycle system Polysorba. Thus, also the strictest environmental regulations for perc (like e.g. the 2nd BImSchV in Germany) are surely kept. No additional external air conditioning unit is necessary.

## The Induline-machines in Detail

Solvent		perchloroethylene, hydrocarbon solvents, cyclosiloxanes	
Cage	metric measures	US measures	
Loading capacity (depend. on applic.)	100-200kg	220-441lbs	
Cage volume	2,000l	528.4US gal.	
Cage diameter	1,500mm	59in	
Cage depth	1,100mm	43.3in	
Loading door, diameter	1,000mm	39.3in	
Cleaning speed, variable			
Extraction speed, max.	450 1/min	450rpm	
<b>Tanks (filling quantities)</b>			
Tank I	800l	211.3US gal.	
Tank II	800l	211.3US gal.	
Tank III	500l	132.1US gal.	
Further tanks (option)			
<b>Still</b>			
Loading capacity	1,000l	264.2US gal.	
Still flow rate 1	600l/h	158.5US gal./h	
Still flow rate 2	1,200l/h	317.0US gal./h	
<b>Extraction filter, filter surface</b>			
1st filter (option)	15m <sup>2</sup>	161.4ft <sup>2</sup>	
2nd filter (option)	15m <sup>2</sup>	161.4ft <sup>2</sup>	
Cartridge filter (option)			
<b>Machine dimensions (standard set-up) approx. meas.</b>			
Width	6,500mm	255.9in	
Depth	4,000mm	157.4in	
Height (installed)	3,100mm	122.0in	
Floor surface	26m <sup>2</sup>	279.7ft <sup>2</sup>	

All data are approximate values to be expected.



Your BÖWE Partner

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