



## BHS-Filtration Inc.

### BHS Belt Filter

Print-Friendly Version

#### Rental Filter for On-Site Testing

The BHS Vacuum Belt Filter-Dryer provides for multi-step processing in a single unit. Filtration, multiple washing zones for forward or counter-current washing to 99.99% purity, mechanical compression and hot gas drying are conducted in the unit. Heated vacuum trays provide for contact drying for improved drying performance down to 0.1% moisture. Cooling and steaming operations can also be accomplished.

The BHS Belt Filter-Dryers are available either as continuous or indexing belt designs. For applications where containment is necessary due to the products or solvents, the units are fully gas-tight and pressurized such that a nitrogen blanket can be used. For corrosive applications, all polypropylene, polyethylene and PVDF designs are available. BHS offers a wide range of materials of construction including 316L stainless steel, 904L, Hastelloy and similar metals. Pharmaceutical grade electro-polish is provided for critical applications.

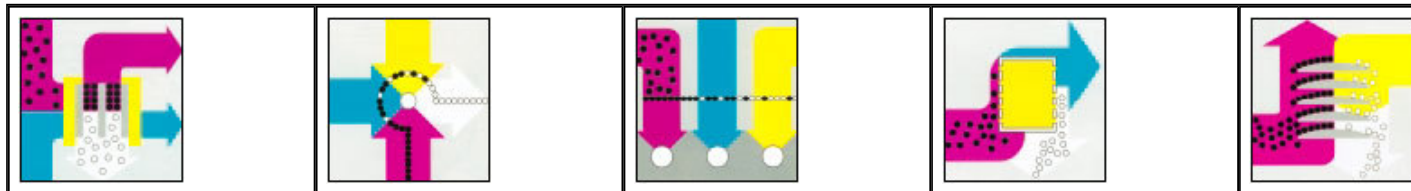
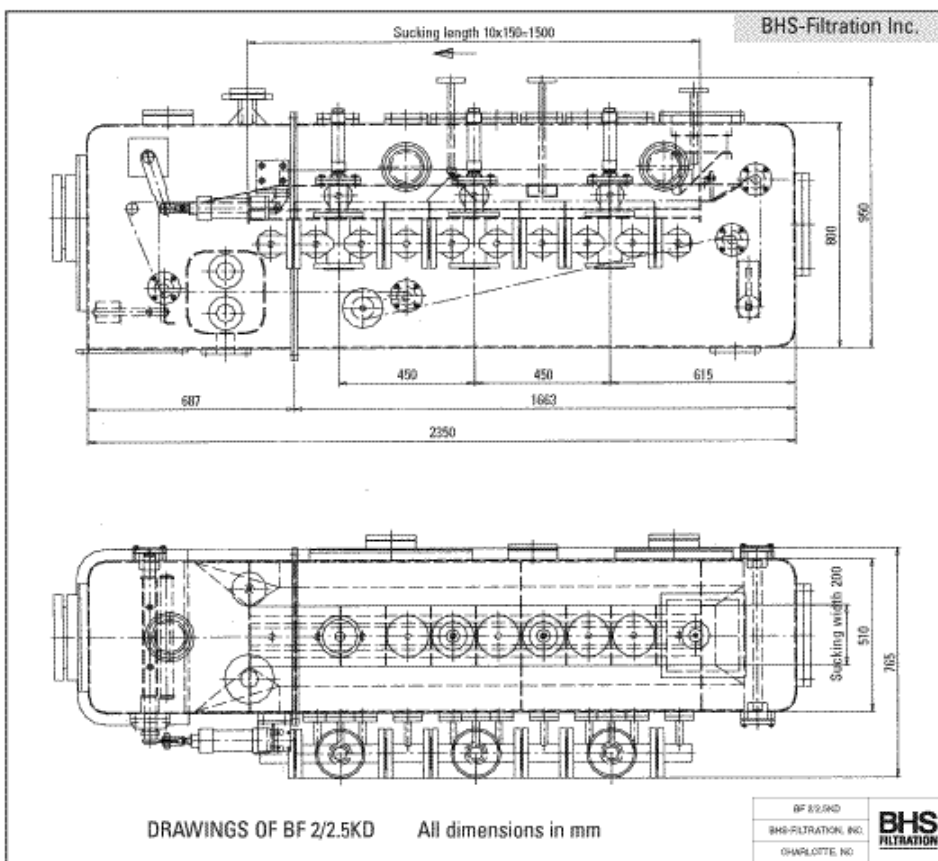
The BHS vacuum belt filter-dryer is used for thin-cake filtration usually between depths of 1/4 to 4 inches. They are installed as an alternative to nutsche filters, centrifuges, tower and filter presses and other vacuum filters such as table, pan, disc and rotary vacuum drum filters. Application benefits include flexibility, efficient washing and maximum cake discharge for improved product yields.

OPERATION DATA	
Operation temperature	<80° and > -10° C
Flow rate / Suspension	< 100 l/h
Flow rate / Filter cake	< 100 l/h
Flow rate / Cake wash liquid	<500 l/h
Cake thickness	<30 mm and > 3 mm
Products Filtrate quality	depending on tests solid free
Specific flow rate	< 8000 l/m <sup>2</sup> h
Vacuum rate	80 m <sup>3</sup> /h (400 mbar)
Compressed air consumption	15 Nm <sup>3</sup> /h at 6 bar
Flow rate / Belt wash	150 l/h at 2 bar

DESIGN DATA	
Filter Type	BF 2/1.5-KD
Filtration area	0.3 m <sup>2</sup>
Total dimensions L/W/H (m)	2.45 / 0.85 / 1.06
Effective belt dimensions L/W (m)	1.50 / 0.20
Belt stroke	0.15 m
Number x length of zones	10 x 0.15 m
Range of stroke time	30 - 90 seconds
Possible zone division	3-4 for cake formation and filtration 3-4 for cake washing 2 for drying (suction)
Total weight	300 kg
Product side materials	1.4571 / PTFE Trays electro polished
Enclosure	3 mm wall thickness; pressure 35 mbarg
Cake wash units	Over flow channel and/or spray nozzles
Cake discharge	Rectangular flange

BHS is a manufacturer of filtration, solid-liquid separation, cake washing and drying technologies for the chemical, pharmaceutical and process industries. AUTOPRESS filter-dryers, FEST rotary pressure filters and specialized belt filter; well as other technologies allow

BHS to provide single-source solutions for your difficult filtration washing and drying operations. BHS completes the installation with vacuum packages, solids handling and containment systems, tanks, instrumentation, PLC controls and on-site start-up and preventative maintenance programs. Pilot-scale units are available for on-site testing.



**BHS-Filtration Inc.**  
*Filter Systems for the Chemical & Pharmaceutical Industries.*

## Specializing in Thin-Cake Filtration, Cake Washing & Drying Technologies

Test in the BHS Laboratory or at Your Plant for the Optimum Process Technology

### BHS FEST Rotary Pressure Filter



- Continuous thin-cake (0.25-6 inches) production
- Filtration is conducted via pressure of up to 90 psig
- Positive displacement washing or counter-current washing
- Multiple washing steps as well as solvent exchanges, steaming and extraction
- Cake drying by blowing hot or ambient-temperature gas
- Atmospheric discharge from pressure operations for direct discharge to downstream equipment

### BHS-Autopress



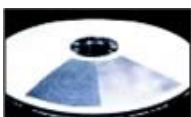
- The Autopress is installed in potent compound and active pharmaceutical ingredient (API's) facilities as well as for specialty chemical applications
- Thin-cake, typically 0.25-1.0 inches, production
- Filter plates are contained in a pressurized filter housing for complete containment
- Batch pressure filtration and forward or reverse flow washing
- Vacuum or hot-gas drying or pre-drying without agitation or tumbling
- Mechanical compression to 600 psig to eliminate cake cracking
- Fully automatic, heel-free and contained product discharge
- CIP systems with documented performance based upon Riboflavin tests

### BHS Belt Filter



- Continuous filtration, washing and drying
- Thin-cakes between 0.25-4 inches
- Multiple washing zones for forward or counter-current washing to 99.99% purity
- Drying to 0.1% moisture with heated trays and mechanical compression
- Materials include stainless steel, Hastelloy and synthetic materials
- Gas-tight and pressurized housings

### BHS Pressure Plate Filter



- Horizontally designed for stable cakes
- Possible pre-coating of the media with activated carbon or diatomaceous earth
- Vibrating plates, along with gas-assist pulsing, provide for automatic discharge
- Effective solids discharge without spinning-plates
- No rotating or mechanical seals

### BHS Candle Filter & Inverting Filter



- Pressure filtration, clarification and heel filtration
- Specialized candles with perforated metallic or synthetic cores
- Filter media to less than 1 micron
- Cake washing produces a uniform cake for drying
- Cake discharge via gas blowback
- Possible pre-coating of the media with activated carbon or diatomaceous earth
- Cake discharge by inverting filter cloth for heel-free discharge and final moisture content to 1%

## BHS-Filtration Inc.

9123-115 Monroe Road, Charlotte, NC 28270 . Tel 704.845.1190 . Fax 704.845.1902  
e-mail: [info@bhs-filtration.com](mailto:info@bhs-filtration.com) . internet: [www.bhs-filtration.com](http://www.bhs-filtration.com)

*BHS-Filtration Inc. is a subsidiary of BHS-Sonthofen*  
Hans-Böckler-Straße 7 . D-87527 Sonthofen, Germany . Tel 49.8321.802.200 . Fax 49.8321.802.320 . [www.bhs-sonthofen.de](http://www.bhs-sonthofen.de)