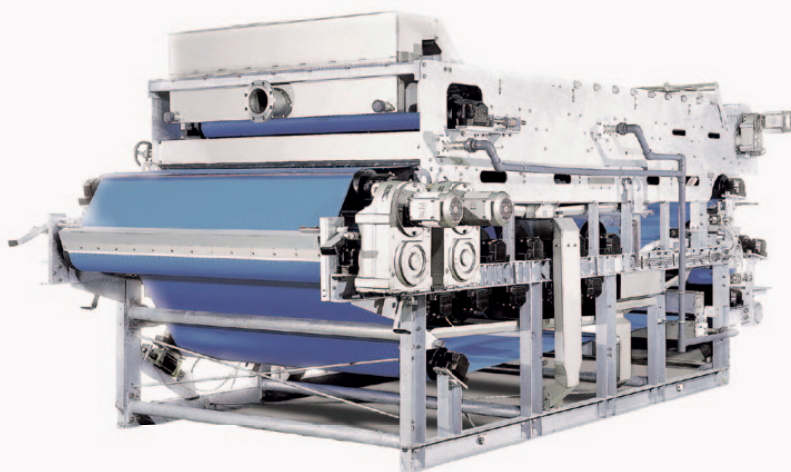




Alfa Laval AS-H Belt Press G3 3-Belt

Sludge thickening and dewatering machine



Application

The Alfa Laval AS-H Belt Press G3 3-Belt with independent gravity deck has the capability to take feed sludges that are less than 1% dry solids.

The independent gravity deck has the ability to run at different speeds than the pressure zone, therefore, thinner sludges can be fed at high hydraulic feed rates to a faster moving belt on the gravity section. The result is a machine that is not limited to the standard hydraulic and loading rates of typical two belt machines. The machine can eliminate the need for a gravity thickener or holding tank to thicken sludge prior to the belt press.

Working principle

Its operating principle is to condition the feed sludge with a polyelectrolyte and drain the flocculated sludge over an endless, horizontal porous independent filter belt. The thickened sludge is then sandwiched by two additional filter belts before further dewatering by a series of decreasing diameter rollers. Final moisture removal is achieved by shear rollers arranged to give minimum 180 degree belt wrap in order to optimize dewatering.

Features

- Independent belts for gravity and pressure section
- Dual function as gravity belt thickener or belt filter press option

- Available in 8 roller and 12 roller designs in the pressure section
- Open frame design allows for maximum access for normal maintenance
- Enclosed design available ensures any odours, aerosols and spillages are contained
- Pre-installed hydraulic system for automatic belt tensioning and steering

Benefits

- Up to 5 times higher throughputs using same footprint as conventional belt press
- Higher cake dry solids performance with dilute sludges of 1 to 2%
- More forgiving/flexible with different incoming feed solids
- Thorough, uniform mixing of polymer into sludge
- Lower power consumption as there is no requirement for an additional tank / mixer
- Lower polymer usage due to single polymer dose for the thickening and dewatering process
- Better filtrate quality
- Long life design

Sludge/polymer mixer valve

- Variable orifice, in-line polymer mixer that combines polymer and sludge instantly
- Optimizes polymer effectiveness and minimized polymer consumption

Gravity drainage zone

- Independent gravity section
- Even sludge distribution prior to a two stage high efficiency gravity drainage areas fitted with easy to operate and maintain sludge ploughs and precisely arranged support grid to optimize filtrate removal

Adjustable wedge dewatering zone

- Initiates application of pressure to the dewatering process
- Adjustable during operation

Radial pressure dewatering zone

- Radial grid and perforated roller to prevent pressure-shock of sludge in the pressure zone

Full pressure dewatering zone

- Optional number of pressure rollers depending on dewatering requirements
- Belt wrap of 180 degrees or greater maximizing cake dry solids

Belt alignment and tensioning

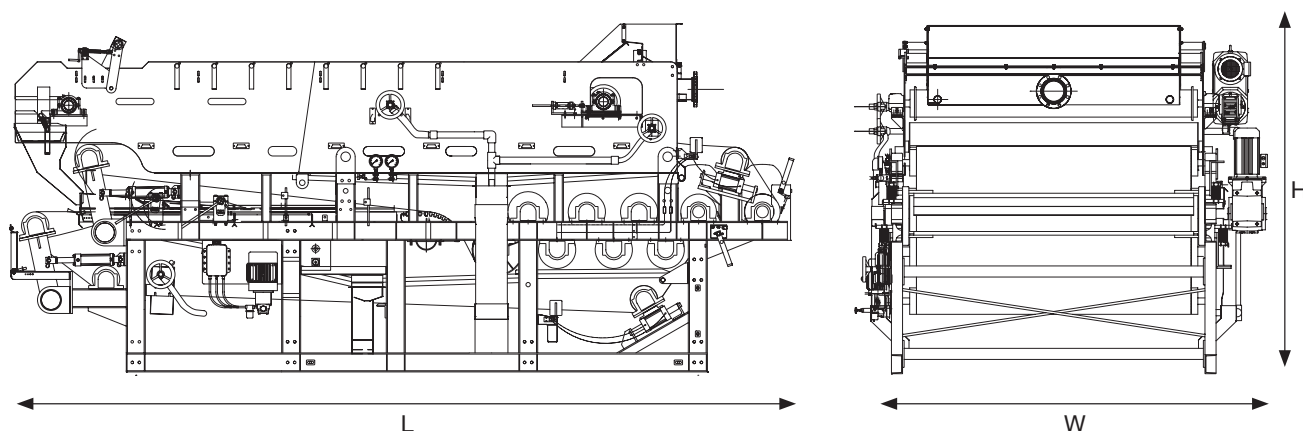
- Pre-installed and press-mounted to minimize on site installation requirements
- Hydraulically controlled and adjustable for continuous operation, reduced belt wear and optimum performance for a prolonged belt life

Bearings

- Lifetime rated bearings with triple labyrinth seal and specially designed shaft mounted splash guards on belt press
- Extended lubrication cycle (6 monthly)

Roller design

- Specialized forged end construction
- Rubber coated drive roller and thermoplastic nylon coated pressure rollers for corrosion resistance



Dimensions

8 roller version

Model	Length		Width		Height	
	mm	inches	mm	inches	mm	inches
3-Belt Press 100	6,244	246	2,077	82	2,784	110
3-Belt Press 150	6,244	246	2,585	102	2,784	110
3-Belt Press 200	6,244	246	3,094	122	2,784	110
3-Belt Press 250	6,244	246	3,650	144	2,784	110

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com