

Alfa Laval AS-H Belt Press G3

Sludge dewatering machine

Introduction

The Alfa Laval AS-H Belt Press G3 is considered the industry standard for superior value, performance and durability for sludge dewatering. The G3 belt press is designed for low polymer consumption, high throughput rates, and high solids content and is available in a wide size range and extensive modular options to meet individual process requirements.

Application

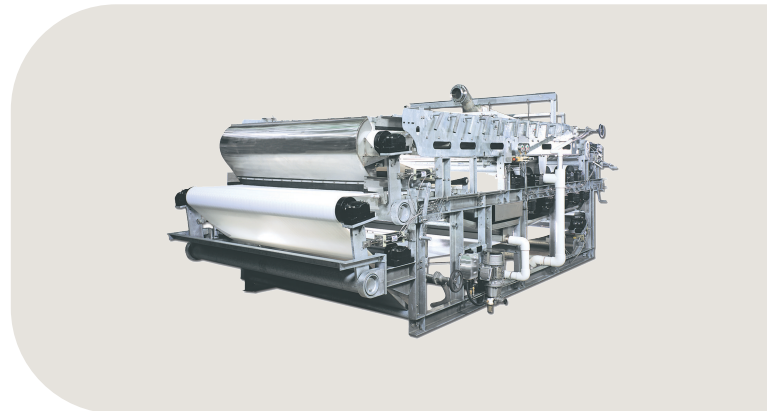
The Alfa Laval AS-H Belt Press G3 is a sludge dewatering machine suitable for all municipal wastewater sludge types and a wide variety of industrial solid / liquid separation applications, such as paper, petrochemical, mineral, food processing, pharmaceutical and chemical. The G3 belt press incorporates variable energy mixing, flocculation, gravity drainage and pressure filtration within a single mechanical framework. The G3 belt press offers the versatility of a wide size range and extensive modular options to meet individual process requirements.

Benefits

- Thorough uniform mixing of polymer into sludge
- Higher volumetric throughput and solids loading
- Higher cake dry solids
- Low power consumption
- Low polymer usage
- Better filtrate quality
- Low maintenance requirements
- Long life design
- Modular design allows upgrades to add more rollers in the pressure zone or an extended gravity zone

Features

- Available in 8 roller and 12 roller designs in the pressure section
- Extended gravity deck model for thinner sludges
- Open frame design allows for maximum access for normal maintenance
- Enclosed design available ensures any odours, aerosols and spillages are contained
- Adjustable wedge dewatering zone for process optimization
- Pre-installed hydraulic system for automatic belt tensioning and steering
- Lifetime rated bearings
- Radial grid and perforated roller to accelerate dewatering



Features description

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

- 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

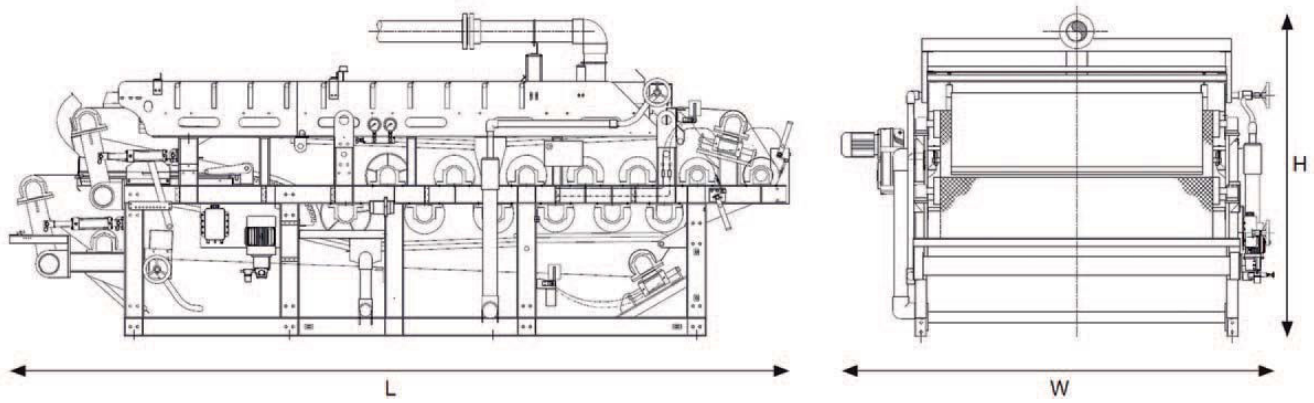
Belt alignment and tensioning

- 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
- Extended lubrication cycle (6 monthly)

Dimensions



12 roller version							
Model	Length		Width		Height		
	mm	inches	mm	inches	mm	inches	
Belt Press 100	6,242	246	2,407	95	2,546	100	
Belt Press 150	6,242	246	2,964	117	2,546	100	
Belt Press 200	6,242	246	3,516	139	2,597	102	
Belt Press 250	6,242	246	4,030	159	2,600	102	
Belt Press 300	6,242	246	4,572	180	2,680	106	

Roller design

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

Working principle

Its operating principle is to condition the feed sludge with a polyelectrolyte and drain the flocculated sludge over an endless, horizontal porous filter belt. The thickened sludge is then sandwiched by a second filter belt 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.

This document and its contents is owned by Alfa Laval Corporate AB and protected by laws governing intellectual property and thereto related rights. It is the responsibility of the user of this document to comply with all applicable intellectual property laws. Without limiting any rights related to this document, no part of this document may be copied, reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the expressed permission or authorized by Alfa Laval Corporate AB. Alfa Laval Corporate AB will enforce its rights related to this document to the fullest extent of the law, including the seeking of criminal prosecution.

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