

Alfa Laval AS-H Belt Thickener

Gravity belt thickener

Introduction

The Alfa Laval AS-H Belt Thickener is considered the industry standard for superior value, performance and durability where removal of a liquid (usually water) from a solid-liquid suspension/sludge, is required.

The Belt Thickener is designed for low polymer consumption, high throughput rates, and high solids content and is available in six standard sizes.

Application

The Alfa Laval AS-H Belt Thickener is a gravity belt thickener used to thicken dilute sludge and slurries particularly those from biological and activated sludge processes. It is suitable for all municipal sludge types and all industrial sludge that flocculates.

Benefits

- No spill design
- Minimum operator input
- Low power consumption
- Low polymer usage
- Low internal volume to minimize costs of odour control equipment
- Cost effective thickening
- Suitable for outdoor operation
- No additional flocculator and mixer requirement
- Higher percentage thickened dry solids
- Higher throughput

Features

- Ramp for enhanced thickening performance
- Stainless steel construction grades 316L or 304
- Robust belt steering and tension mechanism
- Fully enclosed design to eliminate aerosol and odour
- Externally adjustable ploughs
- Few moving parts

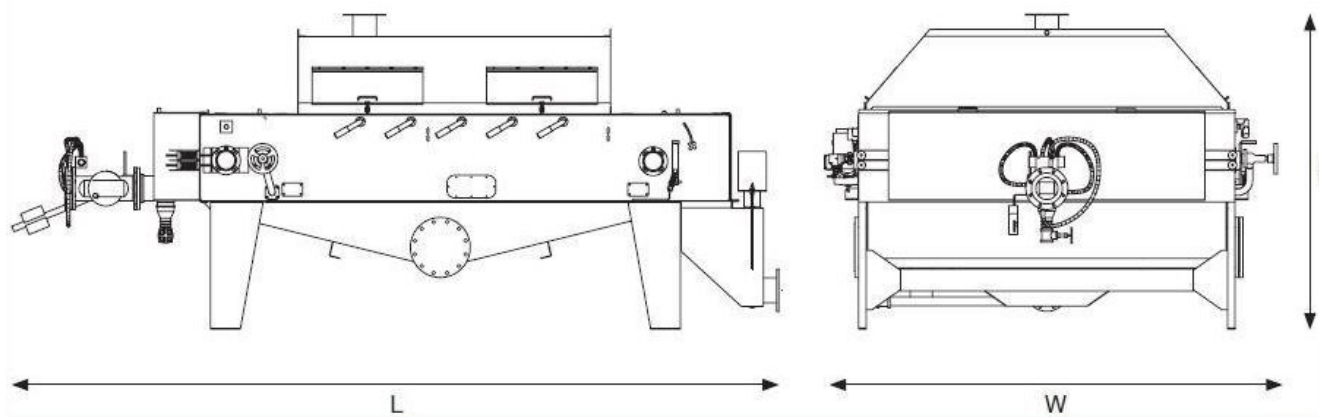
Working Principle

It works on the principle of separating liquid from solids by gravity drainage through a porous filter belt. The Alfa Laval AS-H Belt Thickener is equipped with a sludge polymer mixing valve to ensure thorough, uniform mixing of polymer into the sludge. A sludge retention tank, also known as the flocculation chamber, is filled from the bottom and the



flocculated sludge rises up over a weir to ensure even distribution onto the belt. Sludge ploughs force the sludge into lanes which allows free water to run through the filter belt where sludge is not present, thus enhancing the thickening process. The ramp allows the thickened solids content of the product to be precisely adjusted and fine tuned during operation.

Dimensions



Model	Length		Width		Height	
	(mm)	(inches)	(mm)	(inches)	(mm)	(inches)
Belt Thickener 60	4,375	172	1,606	63	2,126	84
Belt Thickener 100	4,375	172	2,012	79	2,126	84
Belt Thickener 150	4,345	171	2,560	101	2,126	84
Belt Thickener 200	4,345	171	3,064	121	2,126	84
Belt Thickener 250	4,345	171	3,564	140	2,126	84
Belt Thickener 300	6,237	246	4,053	160	2,053	81

Typical performance

Sludge Type	Feed Solids (% D.S.)	Throughput (m ³ /hr/m belt width)	Product (% D.S.)
Surplus / Waste Activated	0.3 to 1.0	30 to 60	5 to 8
Co-settled	1.0 to 3.0	20 to 50	6 to 10
Primary	2.0 to 5.0	20 to 40	6 to 12
Waterworks	0.3 to 0.8	15 to 30	4 to 6

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