



Alfa Laval AS-H Belt Thickener

Low energy gravity sludge thickening

Introduction

The Alfa Laval AS-H Belt Thickener is considered the industry standard for removal of liquid from a solid-liquid suspension/sludge.

Application

The Alfa Laval AS-H Belt Thickener uses basic gravity to thicken dilute sludge and slurries. It is suitable for all municipal sludge types as well as industrial sludges that flocculate – particularly those from biological and activated sludge processes

This low energy technology is designed for minimal polymer consumption, high throughput rates, and high solids content providing superior value, performance and durability.

Key Features and Benefits

The Alfa Laval AS-H Belt Thickener is designed with ease of operation and maintenance in mind, with many enhanced features to simplify access – leading to safer and more cost-effective operation.

High Performance

- Higher percentage thickened dry solids
- Ramp for enhanced thickening performance
- Higher throughput

Simple Operation

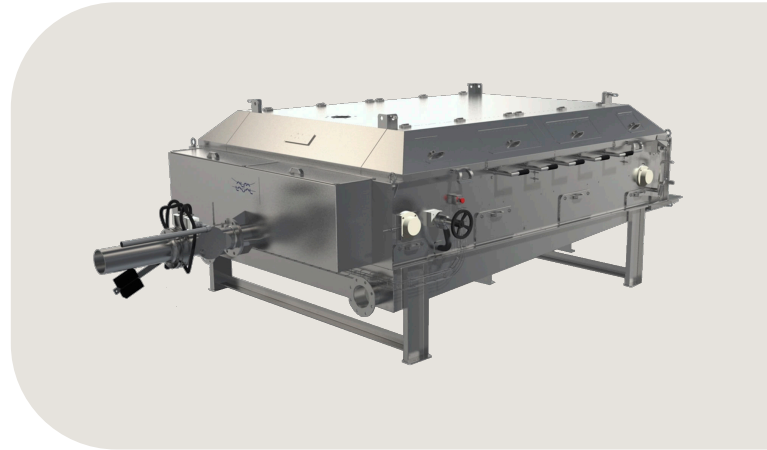
- No spill design
- No additional flocculator and mixer requirement
- Few moving parts
- Externally adjustable ploughs

Quality Build

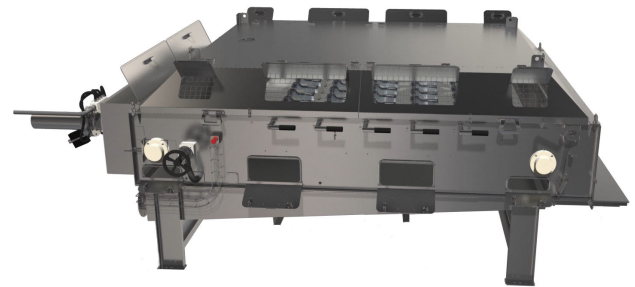
- Robust belt steering and & tension mechanism
- Fully enclosed design to eliminate aerosol and odour
- Suitable for outdoor operation
- Stainless steel construction grades 316L or 304

Cost Effective Thickening

- Low power consumption
- Low polymer usage
- Low internal volume (minimize costs of odour control)
- Minimum operator input



The low-height odour hood is designed to contain all potential malodour generated by the sludges and mitigate its escape to atmosphere. The low level allows for easier access to the machine without the need for significant steelwork platforms.



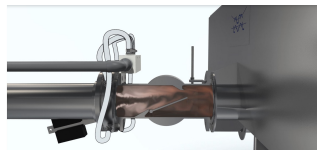
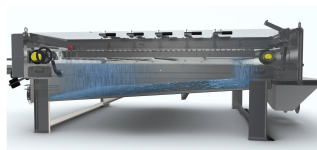
The belt thickener machine and odour hood both feature a number of inspection hatches with integral mesh covers for safe viewing



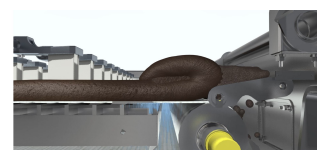
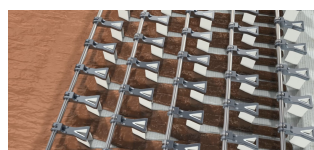
The odour cover also includes a full opening hood for simple belt and sludge plough maintenance accessibility.

Working Principle

The Alfa Laval AS-H Belt Thickener works on the principle of separating liquid from solids by gravity drainage through a porous filter belt. Thickened sludge is collected at the far end of the belt; the removed water gravitates away from the belt.



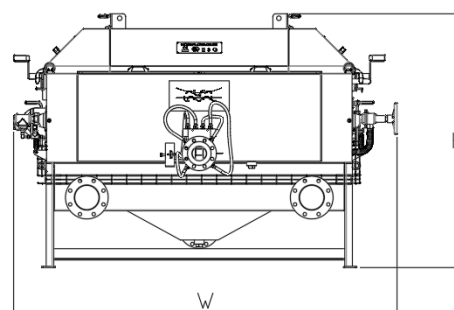
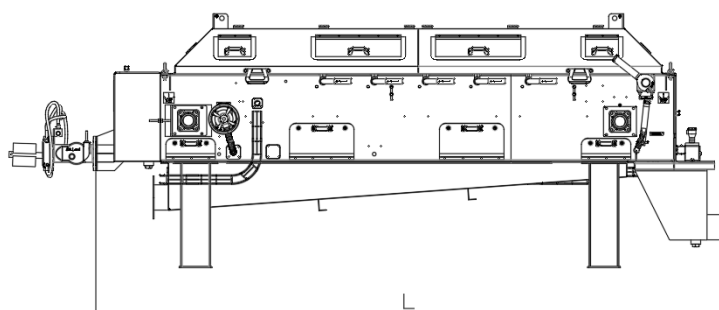
The flocculated sludge rises into the flocculation chamber and over a weir, ensuring even distribution onto the belt. Sludge ploughs force the sludge into lanes, encouraging free water to run through the filter belt thereby thickening the sludge.



The Belt Thickener feed is equipped with a unique mixing valve ensuring a thorough, uniform mix of polymer into sludge.

The discharge ramp can be precisely adjusted to further improve the thickened solids content of the product; this may be fine-tuned during thickening operation.

Dimensions



Model	Length		Width		Height	
	(mm)	(inches)	(mm)	(inches)	(mm)	(inches)
Belt Thickener 60	4175	164	1640	65	1690	67
Belt Thickener 100	4175	164	2040	80	1690	67
Belt Thickener 150	4175	164	2540	100	1690	67
Belt Thickener 200	4175	164	3040	120	1690	67
Belt Thickener 250	4175	164	3540	139	1690	67

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

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval Corporate AB. No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval Corporate AB's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

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