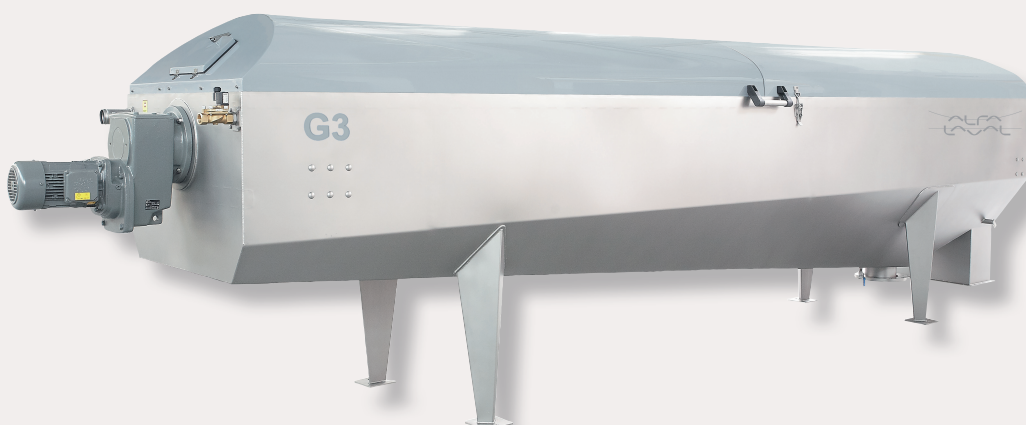




ALDRUM G3 – a revolution in sludge thickening

Rotary drum filter for medium to high capacity sludge thickening



Alfa Laval ALDRUM G3 Sludge Thickeners are ideal for mechanical thickening of sludge to optimize subsequent processes such as digestion with higher biogas production or more cost-efficient dewatering. They handle capacities from 15-180 m³/h.

Applications

- All municipal wastewater sludge types
- A wide variety of industrial separation applications, such as paper, solid waste and food
- Fresh water production at waterworks

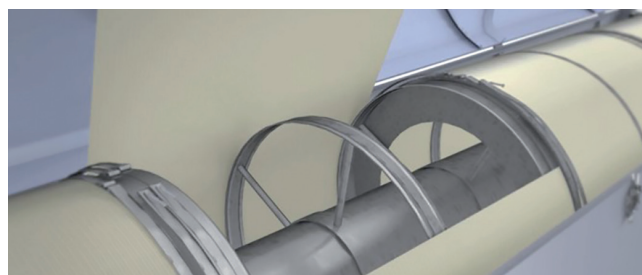
The ALDRUM G3 rotating drum filter is optimized to set new standards for sludge thickening, resulting in greatly improved capacity and process performance at minimum operating cost. The robust, straightforward design makes the ALDRUM G3 drum thickener a reliable, user-friendly product that only requires a minimum of maintenance. It is available with a range of auxiliary equipment to meet individual customer requirements.

The ALDRUM G3 reduces the sludge volume by as much as 90%, thus cutting costs for sludge handling, transportation and storage considerably.

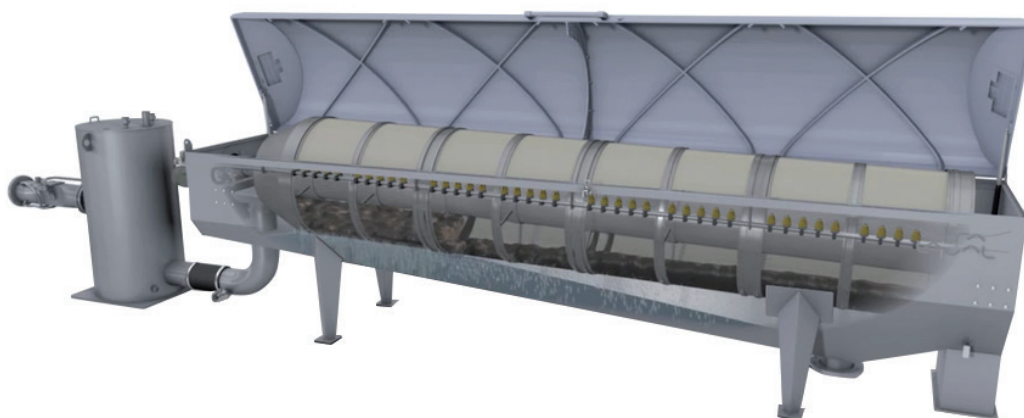
Benefits

The ALDRUM G3 range features a unique design with multiple benefits:

- High capacity in small footprint
- Clean, enclosed, odour-free solution
- Compact and robust design
- Long life time filter cloth
- Intermittent flushing saves water
- Very gentle treatment of flocculated feed saves polymer and gives high recovery
- Safe design with hinged cover and safety switch
- Selection of control panels and auxiliary equipment to meet virtually any specific processing requirement.



The filter cloth of ALDRUM G3 is extremely durable



Alfa Laval ALDRUM G3 Drum Thickener configured with mixing valve (optional) and flocculation reactor (optional)

Working principle

The ALDRUM G3 works on the principle of conveying polyelectrolyte treated sludge (a.k.a. flocculated sludge) through a slowly rotating drum filter. The sludge remains in the drum, while the water phase passes through the filter cloth. Integrated scrolls inside the drum filter retains the liquid level between baffles, increasing capacity and separation efficiency due to higher liquid pond, and transports the sludge from one compartment to the next. Scrolling also drains the drum after operation.

Water consumption is low due to intermittent cleaning of the drum using either potable water, final effluent or treated filtrate.

The ALDRUM G3 can be adjusted to suit individual sludge thickening needs. Optimal thickening is obtained by varying the feed rate, the polymer type and dosage, drum speed and the spraying interval. The best possible flocculation is achieved by installing the optional flocculation reactor and/or mixing valve upstream of the actual drum thickener.

Design features - Achieve more with ALDRUM G3

The feed inlet adaptor provides extraordinarily gentle treatment of the sludge being processed. This results in up to 10% lower polymer consumption at the same time as making sure of exceptionally high recovery rates for most types of sludge. Some particularly difficult sludge types, which normally require liquid polymer to flocculate and thicken them, can be treated using cheaper powder polymer, thus reducing operating costs.



Integrated scrolls increase capacity and separation efficiency

The ALDRUM G3 offers a very high solids load capacity as a result of the conveyor design with integrated scrolls that also increases the separation efficiency in the drum. This, combined with the more gentle treatment of sludge, ensures superior performance as well as low polymer consumption. The one piece cover is "slam proof" due to the integrated gas struts in each side. It comes with safety switches on both sides.

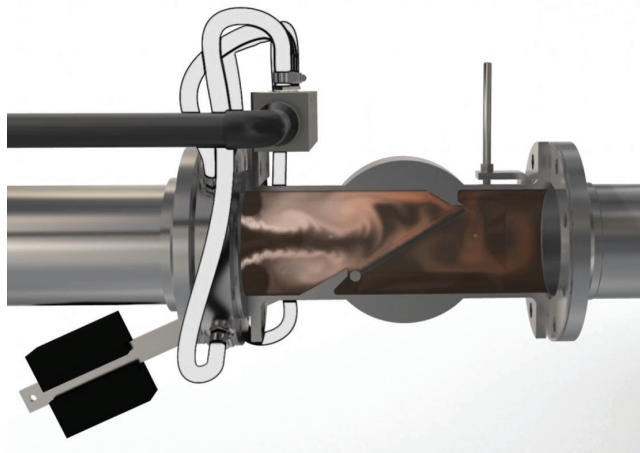
Less maintenance work with ALDRUM G3

Alfa Laval ALDRUM G3 drum thickeners are renowned for their robust, straightforward design, and extremely durable filter cloth. They are also equipped with an integrated Cleaning-in-place (CIP) system. The benefits include easy operation, limited maintenance and maximum uptime.

Optional equipment to meet your exact requirements

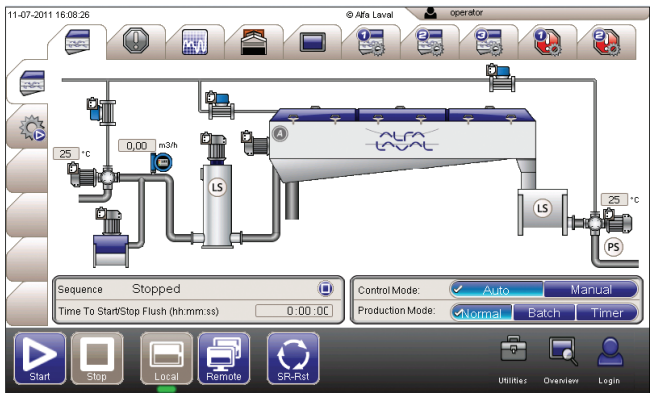
A selection of auxiliary equipment is available for ALDRUM G3:

- Polymer Mixing Valve
Ensures thorough mixing of polymer and sludge to allow flocculation with minimum amount of polymer. Can be installed directly onto the inlet of the drum thickener, or before the flocculation reactor.



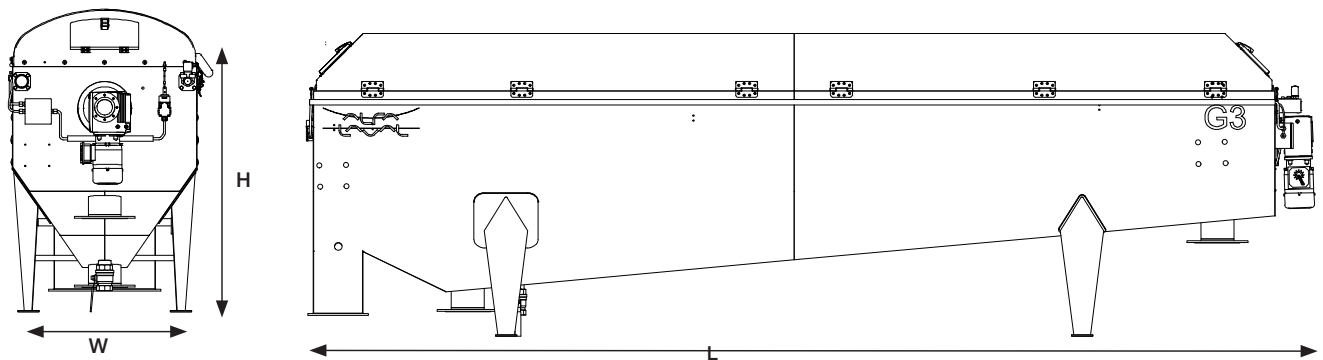
Optional polymer mixing valve reduces polymer consumption

- Flocculation reactor, with or without agitator
Simple open reactor that kick-starts the creation of large and strong flocs. Can be installed directly onto the inlet of the drum thickener
- Inlet pipe adaptor, a connection to the flocculation reactor with a sampling point included
- Sludge hopper
Leads the thickened sludge to the sludge pump in a controlled and efficient manner
- Basic control panel
Straightforward, user-friendly control of the drum thickener, including level monitoring in the flocculation reactor (if fitted)
- Advanced control panel
All-in-one control solution. Control of the plant's feed pump, sludge pump and polymer pump, as well as the drum thickener, and level monitoring in the flocculation reactor and the sludge hopper.



ALDRUM G3 advanced control panel

Technical specifications - ALDRUM G3



Dimensions	ALDRUM G3 Maxi	ALDRUM G3 Mega	ALDRUM G3 Mega Duo*
Length	4,715 mm (186")	6,086 mm (240")	6,086 mm (240")
Width	957 mm (38")	1,110 mm (44")	2,679 mm (106")
Height	1,361 mm (54")	1,744 mm (69")	1,744 mm (69")
Weight (dry)	730 kg (1,606 lbs)	1,280 kg (2,816 lbs)	2,560 kg (5,632 lbs)
Capacity	15–45 m ³ /hour	30–90 m ³ /hour	60–180 m ³ /hour

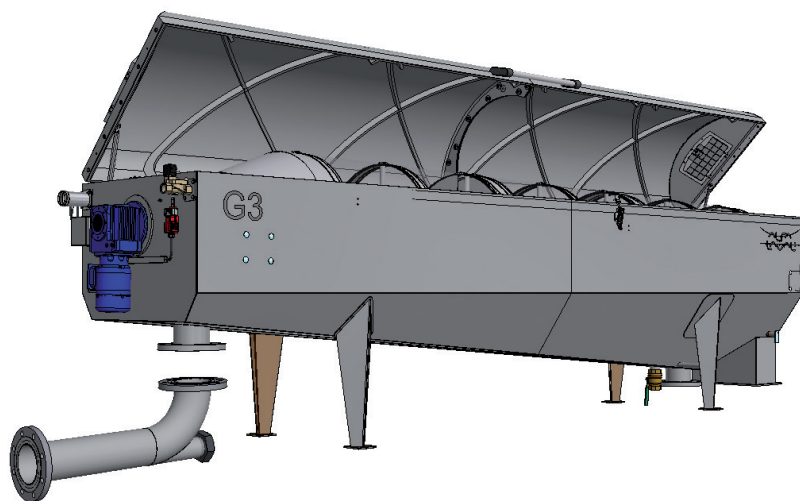
* Mega Duo is comprised of two (2) ALDRUM Mega in parallel

Materials

Cover	GRP	Bearings	HDPE
Casing	AISI316	Filter cloth	Polyester
Drum	AISI316	Spray nozzles	AISI303
Legs	AISI304	Materials used in other non-wetted parts	Aluminium, brass

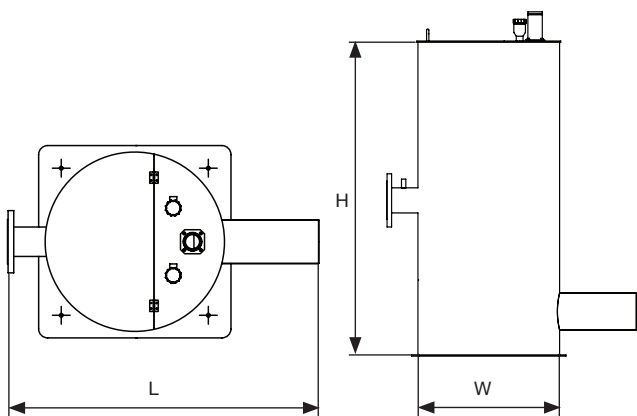
Typical performance

Type of sludge	Discharge dry solids (%)	Filtrate quality (mg/l SS)	Polymer consumption
Primary	3–10	50-400	1-3 kg/tDS (2-6 lbs/dT)
Mixed (50% primary/50% secondary)	3–8	50-400	1-4 kg/tDS (2-8 lbs/dT)
WAS (waste activated sludge)	3–6	50-400	2-5 kg/tDS (4-10 lbs/dT)

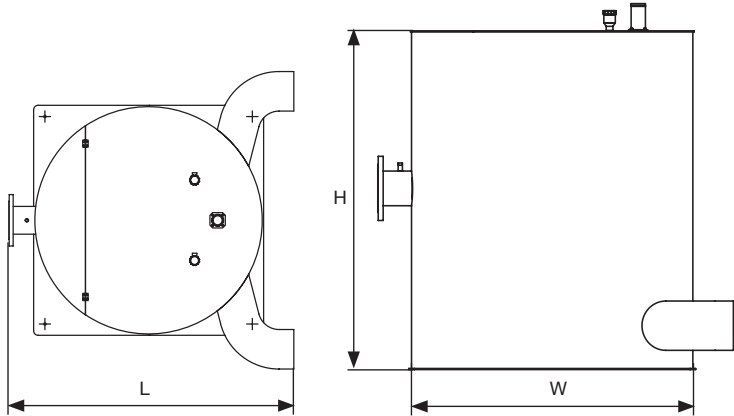


ALDRUM G3 with inlet pipe adaptor

Flocculation reactor dimensions - Maxi/Mega



Flocculation reactor dimensions - Mega Duo



Flocculation reactor	ALDRUM G3 Maxi	ALDRUM G3 Mega	ALDRUM G3 Mega Duo
Height	1,305 mm (51")	1,500 mm (59")	1,500 mm (59")
Length	869 mm (34")	1,030 mm (41")	1,399 mm (55")
Width	680 mm (27")	850 mm (33")	1,275 mm (50")
Weight (dry)	112 kg (247 lbs)	191 kg (421 lbs)	311 kg (686 lbs)



Flocculation reactor materials	
Cover	AISI316
Tank	AISI316
Pipes	AISI316
ISO flange	Polypropylene & fibre glass
ANSI flange	AISI316

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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