



Drum Thickener KD 30



Danish Wastewater
Equipment

Drum Thickener KD 30

The drum thickener KD 30 is a thoroughly tested machine designed to ensure low service and maintenance costs.

Introduction

Drum thickener KD 30 is used for thickening of effluent sludge. A concentration from 0.8% dry solids to approximately 6% dry solids is normally achieved when dewatering municipal biological excess sludge.

The drum thickener is especially suited for further treatment of sludge in e.g. sludge digesters or similar as it is possible to place an eccentric worm pump directly under the sludge discharge.

Construction

The drum thickener is designed as a closed unit in which one or two drums are placed. The drum is equipped with polyester filter cloth or similar. The drum is equipped with internal twisted guide/bump plates.

A flushing bar is placed over the drum and flushing is performed continuously during operation and during final cleaning. The flushing bar can be easily dismantled and is equipped with a number of click-on nozzles facilitating cleaning.

The drum thickener has inspection doors – one on each side and one

at the sludge outlet. The latter is equipped with a window for easy inspection of the dewatering process.

The entire machine is made of stainless steel, which has been dip-pickled after manufacturing, thus ensuring optimum resistance against corrosion.

Method of operation

Dewatering is performed by adding a polymer to the sludge which is then carried to the bottom of the rotating drum (gear end). The drained water is then gravitated through the filter cloth and the up-concentrated sludge is carried to the sludge discharge.

The direction of rotation can be changed according to the requirements. During normal operation the sludge is screwed towards the sludge inlet end of the drum. In this way the interior drum bumps ensure a long retention time.

During cleaning of the filter cloth the sludge is screwed outwards to the sludge discharge.

When cleaning the filter cloth all

impurities are led to the sludge discharge. Flushing water is carried towards the drum bottom in order not to influence the dewatering process.

Control

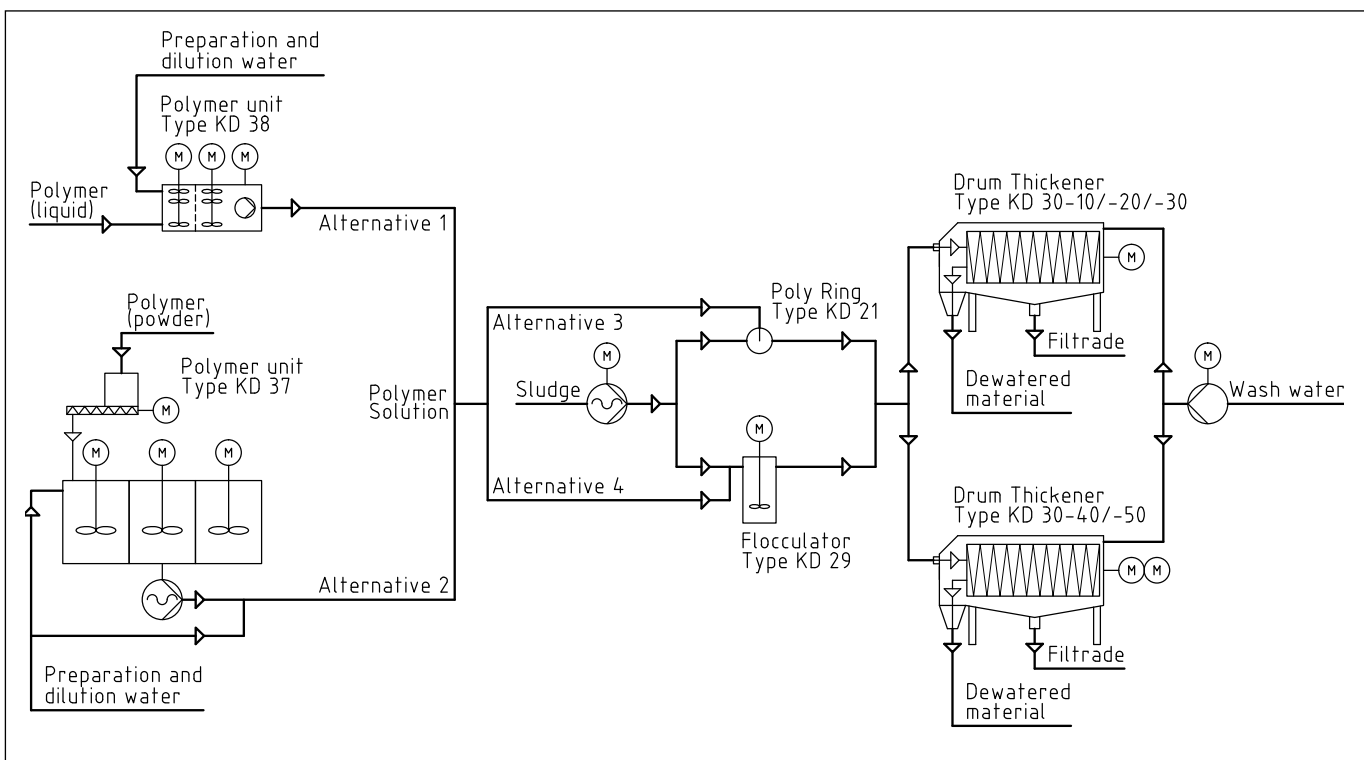
The drum thickener is equipped with motor valve, pressure control and level electrode in discharge hopper.

The control unit, which is enclosed in a separate cabinet, contains logic module, frequency regulation of gear motor, contactors, protective motor switches, etc.

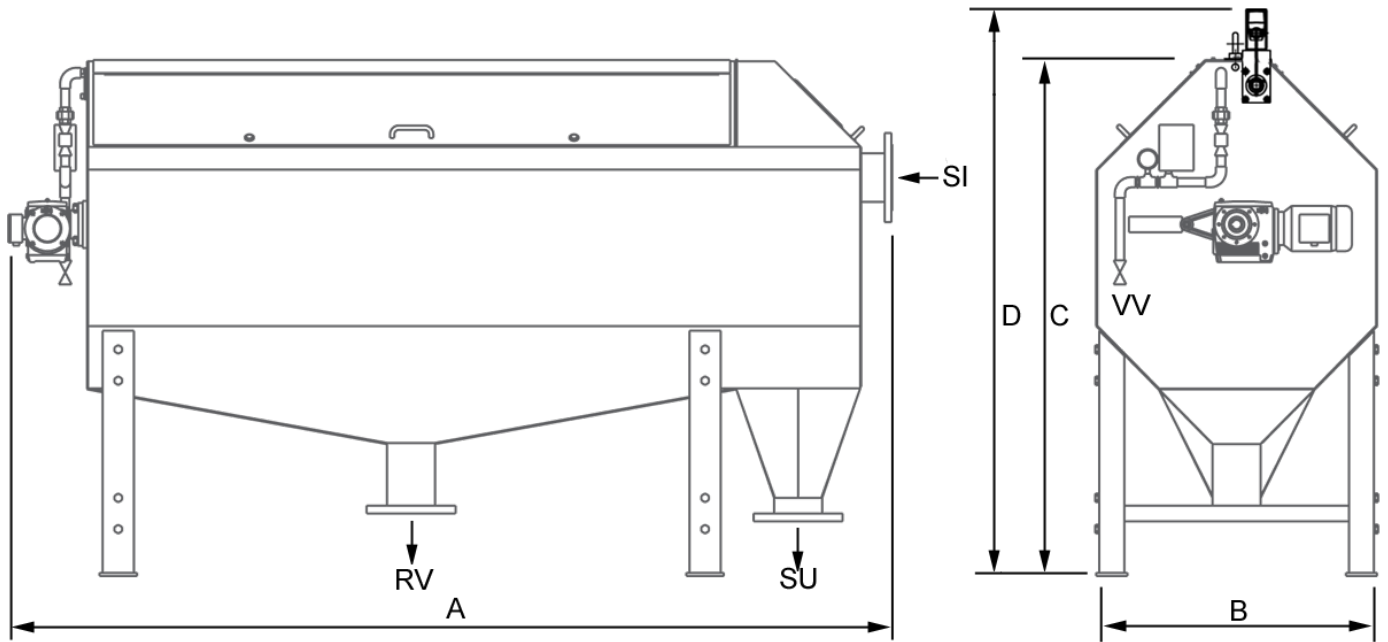
The control unit is designed to control the internal functions, working time, cleaning time, etc. of drum thickener as well as the necessary signals for external equipment such as sludge pump, polymer unit, etc.

The control unit can be placed according to convenience as the drum thickener is equipped with a junction box.

The drum thickener can be supplied in other materials and designs according to customer requirements.



KD 30-10/20/30



Aalborg WWTP (Denmark) – 2 pcs. KD 30-40



Drum Thickener KD 30-30

	KD 30-10	KD 30-20	KD 30-30	KD 30-35	KD 30-40	KD 30-50
Capacity*	6 m ³ /h	12 m ³ /h	25 m ³ /h	38 m ³ /h	50 m ³ /h	75 m ³ /h
Sludge load*	60 kg ss/h	120 kg ss/h	250 kg ss/h	380 kg ss/h	500 kg ss/h	750 kg ss/h
Amount of drums	1	1	1	1	2	2
Sludge inlet (SI)	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Sludge outlet (SU)	DN 100	DN 125	DN 150	200	DN 200	DN 300
Reject water outlet (RV)	DN 100	DN 125	DN 150	200	DN 200	DN 300
Flush water connection	¾"	¾"	¾"	1"	1"	1½"
Flush water (6 bar) (VV)	1.5 m ³ /h	1.5 m ³ /h	2.0 m ³ /h	3.0 m ³ /h	4.0 m ³ /h	6.0 m ³ /h
Power	0.25 kW	0.25 kW	0.25 kW	0,37 kW	2 x 0.25 kW	2 x 0.37 kW
Dimensions:						
A (Length) (mm)	2350	2350	2850	3250	2850	3250
B (Width) (mm)	700	800	900	1100	1800	2200
C (Height) (mm)	1450	1550	1650	1850	1650	1850
D (Option: High pressure flushing)	1700	1800	1900	2100	1900	2100

* Recommended capacity and sludge load.



Sludge Discharge.



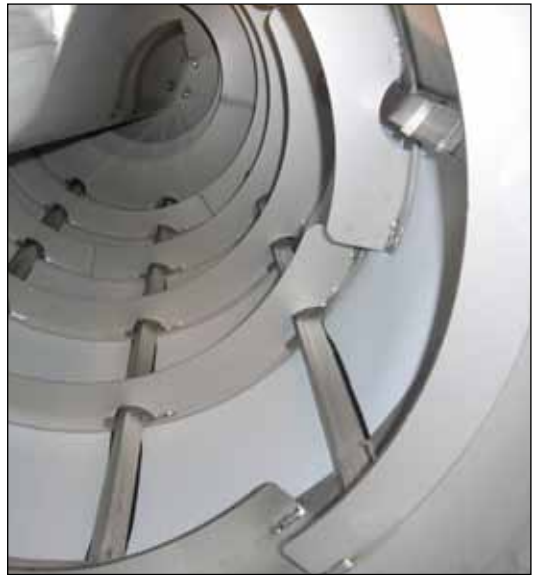
Standard arrangement.



Option: Extraction.



Option: High pressure flushing.



Drum with "spiral" .



Wheels for drum with greasing.



Flussing pipe with nozzles type click on and fast release joint.

12.2013 GB