

SLUDGE SCREW PRESS

Cost-effective Sludge Thickener Dewatering Solution

DESCRIPTION

The Thickener and Dewater SCREW PRESS are machines used for thickening and dewatering sludge. They represent a viable alternative to machines currently in use and have been designed to achieve high levels of thickening and dewatering, combined with a reduction in energy costs and maintenance.

The machines are both constituted by a drum, with wedge wire spacing, inside which, by means of a geared motor with a low power and low rpm, rotates a screw with a variable pitch shaft.



Dimensionally the two versions have the same footprint, what differs is mainly the screw pitch, the pneumatic counter pressure system, only present in the Dewater Screw Press, and further technical measures needed for the different purpose of the machine.

Both versions are equipped with a cleaning system necessary for the drum cleaning it can be motorized or fixed. On request is possible to have the dehydrator/thickener complete with all the machines (EQUIP POLY, EQUIP FLOCCU, pumps, control panel, ect) needed for its correct operation, installed on mobile skid in stainless steel. In both models the incoming sludge should be first conditioned by a polyelectrolyte treatment, so as to obtain a proper flocculation of the sludge itself, in order to optimize the operation of the machines.



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The Thickener and Dewater Screw Press can be provided, on request, even with a static or dynamic flocculation system. The flocculated sludge, once it comes inside of the thickener or dehydrator proceeds its path moved by a screw with shaft. The screw, depending on the type of machine, changes its pitch, besides other technical characteristics, thus allowing the thickening or dehydration. During the rotation of the screw at low rpm, the separated water passes through the drum to then be channeled towards the discharge area of the eluate.



On skid

To obtain the best performance in terms of sludge dewatering, the two machines can be installed one after the other: first the thickener to obtain a concentration, variable depending on the model from 4 to 8% of SS, and to follow the dewater screw press for dewatering, with a dry matter percentage up to 25%. The dewatering screw press is particularly suitable to thicken and also dehydrate the material from flotation units.



After reaching the discharge zone, the sludge is conveyed towards the outlet, situated on the bottom of the machine which in the case of the thickener can be connected to a pump which transfers the product to a possible subsequent dehydration system, while in the dewater screw press, once passed the pneumatic counter pressure system, the sludge is discharged within special dumpster or is loaded into a transport system made with screw conveyors or with transport belts.

BENEFITS

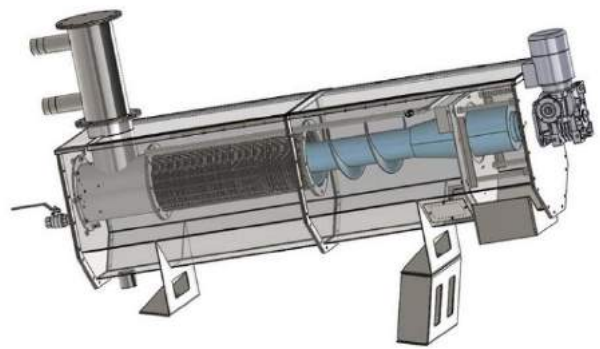
- ➔ Low energy consumption
- ➔ Low cost of operation
- ➔ Low noise level
- ➔ Easy access and maintenance
- ➔ System fully closed

THICKENER SCREW PRESS

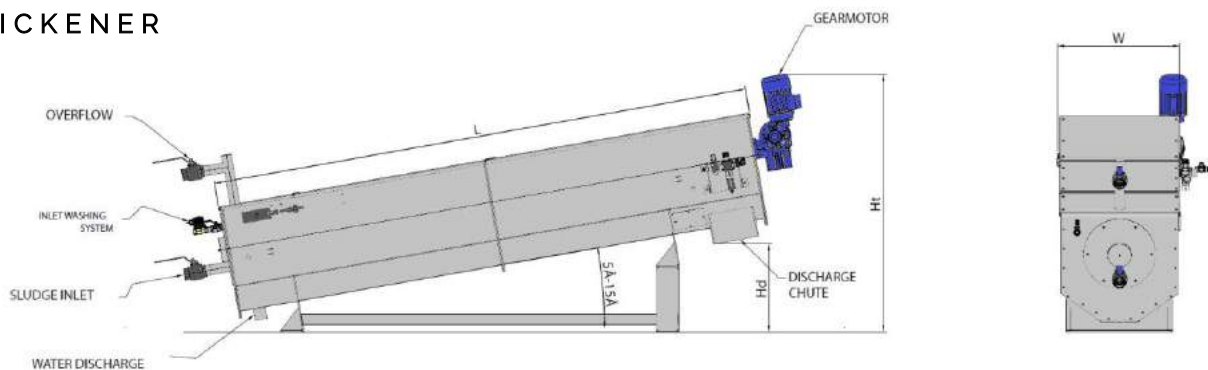
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FEATURES SCREW PRESS

- Screen Basket: wedge wire/perforated plate
- Sludge Type: activated digested sludge
- Outlet Dryness: from 4 to 8%
- Inlet Sludge Solids Concentration: from 1 to 4%
- Inlet Flow: up to 94 m³/h



THICKENER



MODEL	Dimensions				Flow	Power	Washing System			
	Length L	Height Hd	Width W	Height Ht	Screw Press Thickener		Motorized Washing	Washing water Consumption		Polymer Consumption
	mm	mm	mm	mm	m ³ /h	KW at 6,7 RPM	Power kW	liter/sec		g/KgSS
Screw Press T200	2700	600	600	Variable	8,5	0,37	0,09	0,9	0,22	3 to 4
Screw Press T400	3500	720	820	Variable	19,5	1,1	0,09	1,4	0,34	3 to 4
Screw Press T700	4400	880	1080	Variable	41	1,1	0,09	1,7	0,41	3 to 4
Screw Press T900	4800	1030	1330	Variable	83	1,5	0,09	2,1	0,5	3 to 4
Screw Press T1200	5200	1056	1633	Variable	94	1,5	0,09	2,5	0,6	3 to 4
Comments	The dimensions for Thickener Ht is variable following inclination.				Sludge inlet with a value of 0.6% of SS	We recommend to use an inverter for the gear.	Motorized washing available only on request.	We consider the frequency of the washing 1 minute 4 time per hour.		

DEWATERING SCREW PRESS

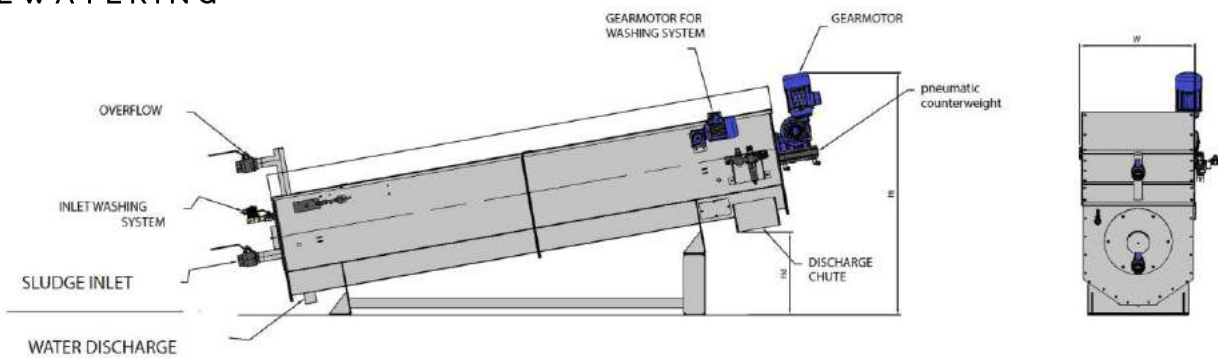
Cost-effective Sludge Dewatering Solution

FEATURES SCREW PRESS

- Screen Basket: wedge wire/perforated plate
- Sludge Type: activated digested sludge
- Outlet Dryness: from 15 to 22%
- Inlet Sludge Solids Concentration: from 4 to 8%
- Inlet Flow: up to 9 m³/h



DEWATERING



MODEL	Dimensions				Flow	Power	Washing System			Polymer Consumption
	Length L	Height Hd	Width W	Height Ht			Screw Press Dewatering	Motorized Washing	Washing water Consumption	
	mm	mm	mm	mm	m ³ /h	KW at 0,8 RPM	Power kW	liter/sec	g/KgSS	
Screw Press D200	2700	600	600	Variable	0,8	0,25	0,09	0,9	0,22	3 to 4
Screw Press D400	3500	720	820	Variable	2	0,37	0,09	1,4	0,34	3 to 4
Screw Press D700	4400	880	1080	Variable	4,5	0,55	0,09	1,7	0,41	3 to 4
Screw Press D900	4800	1030	1330	Variable	7,7	0,55	0,09	2,1	0,5	3 to 4
Screw Press D1200	5200	1056	1633	Variable	9	0,75	0,09	2,5	0,6	3 to 4
Comments	The dimensions for the Dehydrator Ht is variable following inclination.				Sludge inlet with a value of 0,6% of SS	We recommend to use an inverter for the gear.	Motorized washing available only on request	We consider the frequency of the washing 1 minute 4 time per hour		