

ZEUS

←  →

hybrid

The **ZEUS** offers an excellent solution for both sludge thickening and mechanical dewatering in civil or industrial purification plants. It can be also successfully applied in various industrial processes that require solid-liquid separation by flocculation.

The low operating and maintenance costs and the compact form were the mainly objectives of this machines series.

Depending on the chemical, physical and biological characteristics of the sludge treated in each individual plant, the machine can thicken the sludge up to 10% DS or dewater it up to 30% ±5% DS.

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MECHANICAL SLUDGE DEWATERING E/O THICKENING UNIT

The **ZEUS** has all the equipment to complete the dehydration section such as: the single screw electric pumps for feeding the sludge and for the polyelectrolyte dosage, sludge and polyelectrolyte flow meters, the polyelectrolyte preparation station and any augers for transporting the dehydrated sludge.
In this way the Easy Press Zeus turns to be a complete monobloc treatment package.

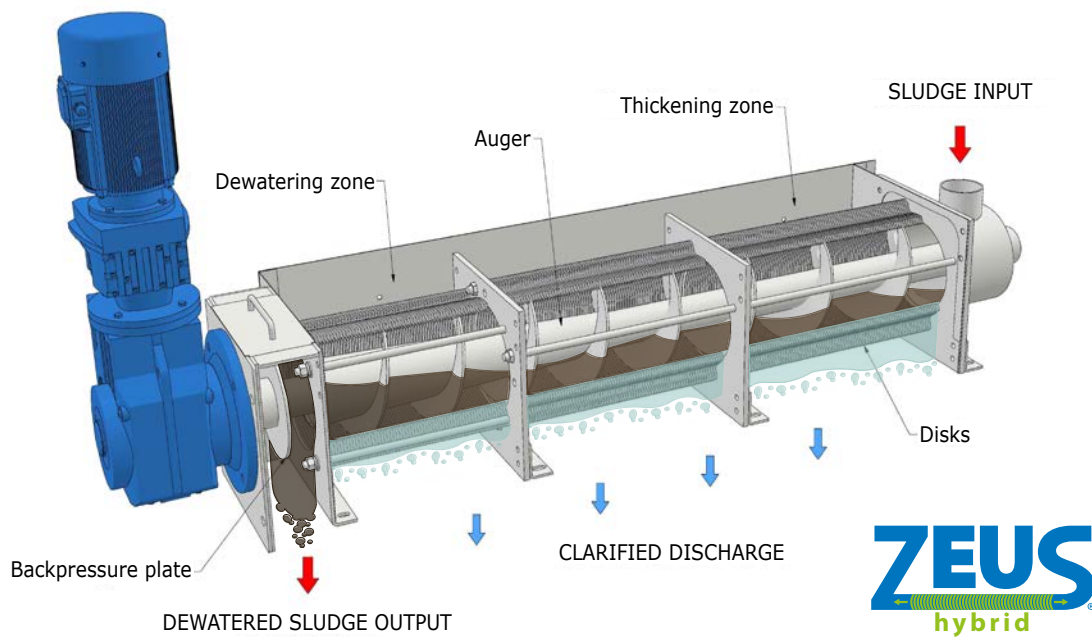


Description

The main part of **ZEUS** consists of one or more screw augers (depending on the different models) with shaft. This axis flows inside a kind of channel made by alternated fixed and moving discs. These discs are entirely made of AISI 304 or 316L stainless steel.

The sludge enters from the sludge inlet area positioned at the beginning of each single pressing screw after being conditioned in the special flocculation tank; then, it is transported by the spiral movement of the auger and finally it is progressively dehydrated and compacted.

The water is separated from the sludge through the space created between the moving discs; this movement also promotes the continuous self-cleaning of the spaces between them, consequently it prevents the obstruction or the blockage of the machine. Thanks to this innovative system, the machine needs a lower washing water quantity than the other types of equipment on the market as regards dehydration sludge.



Advantages

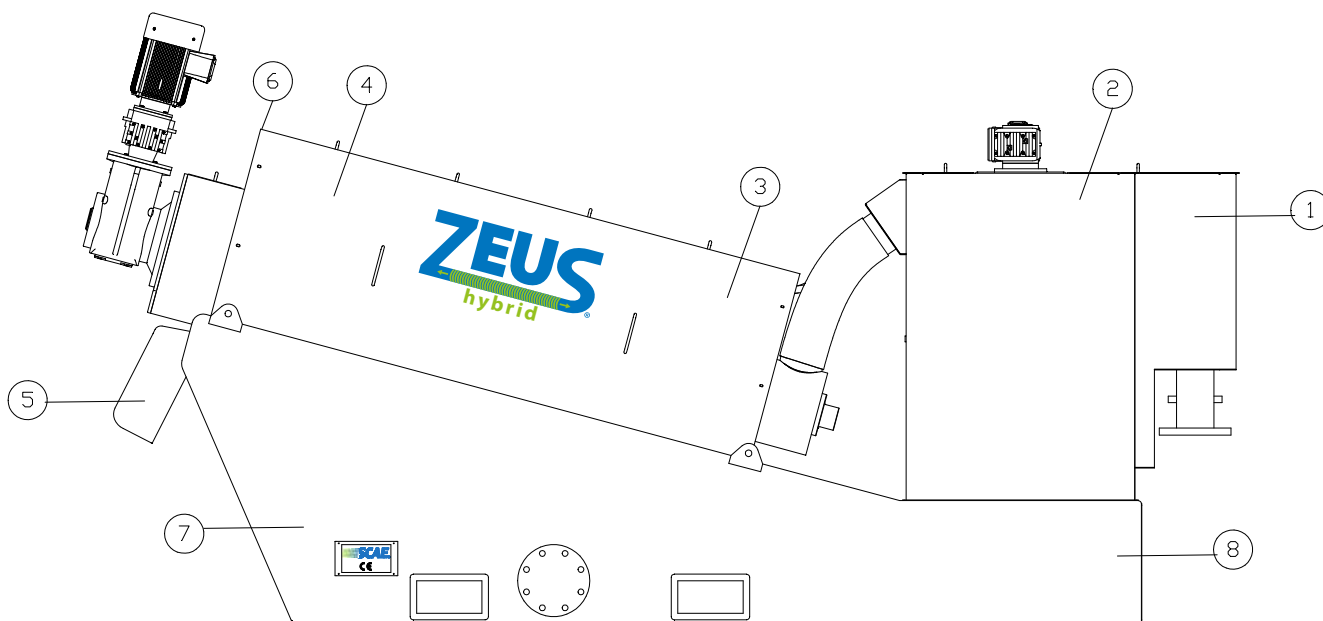
- Self-cleaning, it requires very small quantities of washing water
- Compact shape and small overall dimension
- Constant and automatic operation 24/24 hours with minimum operator presence request
- Reduced and simple maintenance and cleaning
- It has no rotors which require periodic maintenance
- Low power requirements and reduced energy consumption compared to other systems
- High reliability and long-lasting quality

Application

The **multi-disc screw press** is suitable for both sludge concentration and dewatering produced in the wastewater treatment plants of many urban and industrial activities such as:

- urban sewage wastewater;
- food and beverage industry;
- dairy industry;
- slaughterhouses and meat processing;
- textile and laundry industry;
- pulp and paper industry;
- chemical and pharmaceutical industry;
- oil and hydrocarbon industry;
- leather processing;
- animal farming;
- biogas plants from agricultural matrices and industrial waste;
- mining and metallurgical industry.





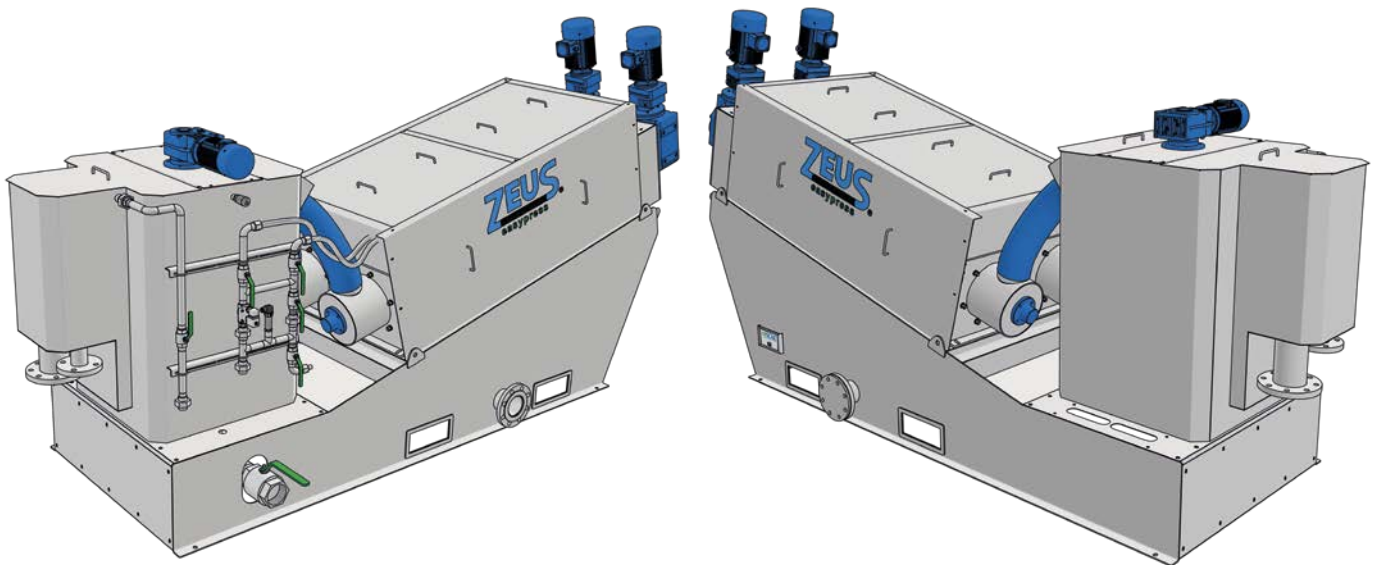
Composition

1. Pre-feeding and overflow tank
2. Flocculation tank with polyelectrolyte dosage
3. Draining and tickening area
4. Compression and dehydration area
5. Drain channel of dehydrated sludge
6. External covering of the screw (s)
7. Press support structure and drainage water collection box
8. Flocculation unit support structure
9. Electric control panel supplied separately – not installed on the machine



MAIN TECHNICAL FEATURES

Series	Model	Nominal diameter screws and N°	Dimension (mm)			Weight (kg)		Flow-rate (lt/h) at 2 bar	Installed power (kW)
			Lenght	Lenght	Height	Dry	In process		
SMALL	ZEUS 402	200×1	2465	585	1535	400	650	50	0,55
600	ZEUS 602	300×1	3330	725	1890	860	1250	50	1,3
	ZEUS 604	300×2	3530	1115	1875	1300	1900	100	2,05
700	ZEUS 704	350×2	3920	1375	2180	3100	4700	140	2,95
	ZEUS 706	350×3	4120	1915	2180	3920	5430	210	4,4
	ZEUS 708	350×4	4685	2755	2180	5700	7710	280	5,5
800	ZEUS 804	400×2	3920	1375	2180	3300	4900	160	3,75
	ZEUS 806	400×3	4120	1915	2180	4350	6750	240	5,6
	ZEUS 808	400×4	4685	2755	2180	6100	8960	320	7,5

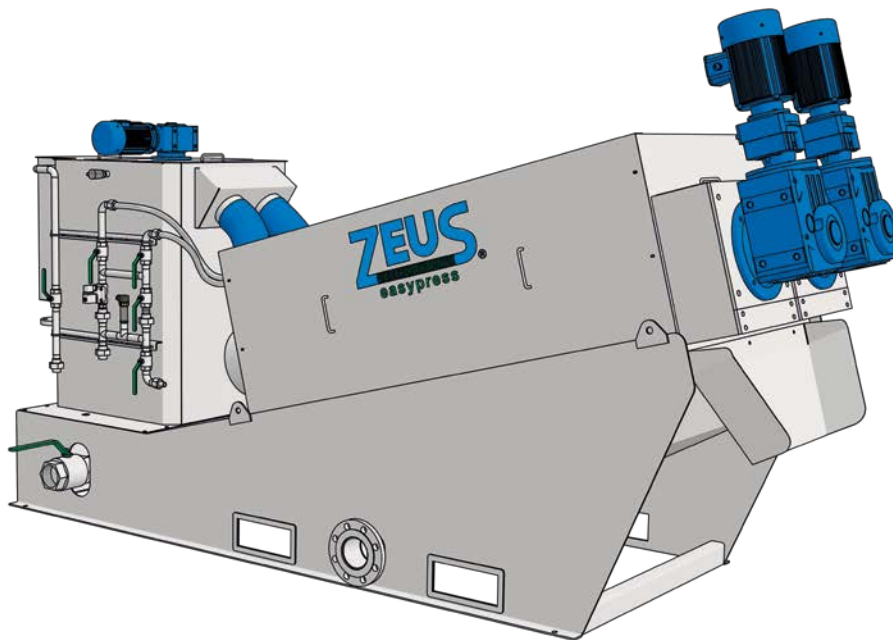


POWERS AND CAPACITIES

Series	Model	Nominal diameter screws and N°	Dry matter capacity			
			Concentration range	20.000 mg/L 2%	30.000 mg/L 3%	40.000 mg/L 4%
SMALL	ZEUS 402	200×1	8≈20 kg/h	≈ 0.75 mc/h	≈ 0.6 mc/h	≈ 0.5 mc/h
600	ZEUS 602	300×1	20≈60 kg/h	≈ 2.5 mc/h	≈ 2 mc/h	≈ 1.5 mc/h
	ZEUS 604	300×2	40≈120 kg/h	≈ 5 mc/h	≈ 4 mc/h	≈ 3 mc/h
700	ZEUS 704	350×2	80≈240 kg/h	≈ 10 mc/h	≈ 8 mc/h	≈ 6 mc/h
	ZEUS 706	350×3	120≈360 kg/h	≈ 15 mc/h	≈ 12 mc/h	≈ 9 mc/h
	ZEUS 708	350×4	160≈480 kg/h	≈ 20 mc/h	≈ 16 mc/h	≈ 13 mc/h
800	ZEUS 804	400×2	135≈320 kg/h	≈ 13 mc/h	≈ 10 mc/h	≈ 8 mc/h
	ZEUS 806	400×3	200≈480 kg/h	≈ 19.5 mc/h	≈ 15 mc/h	≈ 12 mc/h
	ZEUS 808	400×4	266≈640 kg/h	≈ 26 mc/h	≈ 20 mc/h	≈ 16 mc/h

Information:

- The flow rates calculated above are indicative as they may be different according to the sludge characteristics;
- There is no precise limit of maximum inlet as long as the sludge is fluid and pumpable;
- Non-binding indicative data to be checked with our technical department for each application of specific process.



REMOTE CONTROL (OPTIONAL)

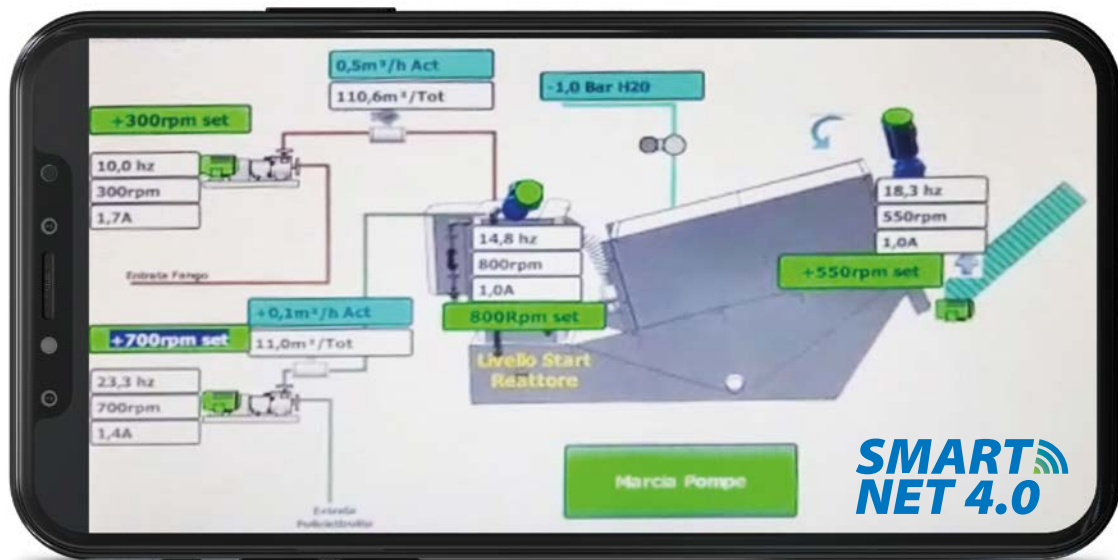
SCAE Smart Net 4.0

The Smart Net 4.0 Remote Control System has been specially developed by SCAE to take advantage of the legal benefits of Industry 4.0. With this service, the mechanical and electrical functionality of the Disc Press is monitored 24/7.

The customer can check anywhere and at any time the correct operation of the machinery by receiving real-time maintenance notifications and those of any anomalies. In addition, thanks to Telecontrol, SCAE Service can make preventive diagnoses remotely, can provide telephone assistance quickly with a greater degree of effectiveness as well as propose process optimizations for the benefit of the customer.

Telecontrol is a guarantee of long press life, maintenance cost savings and reduced downtime.

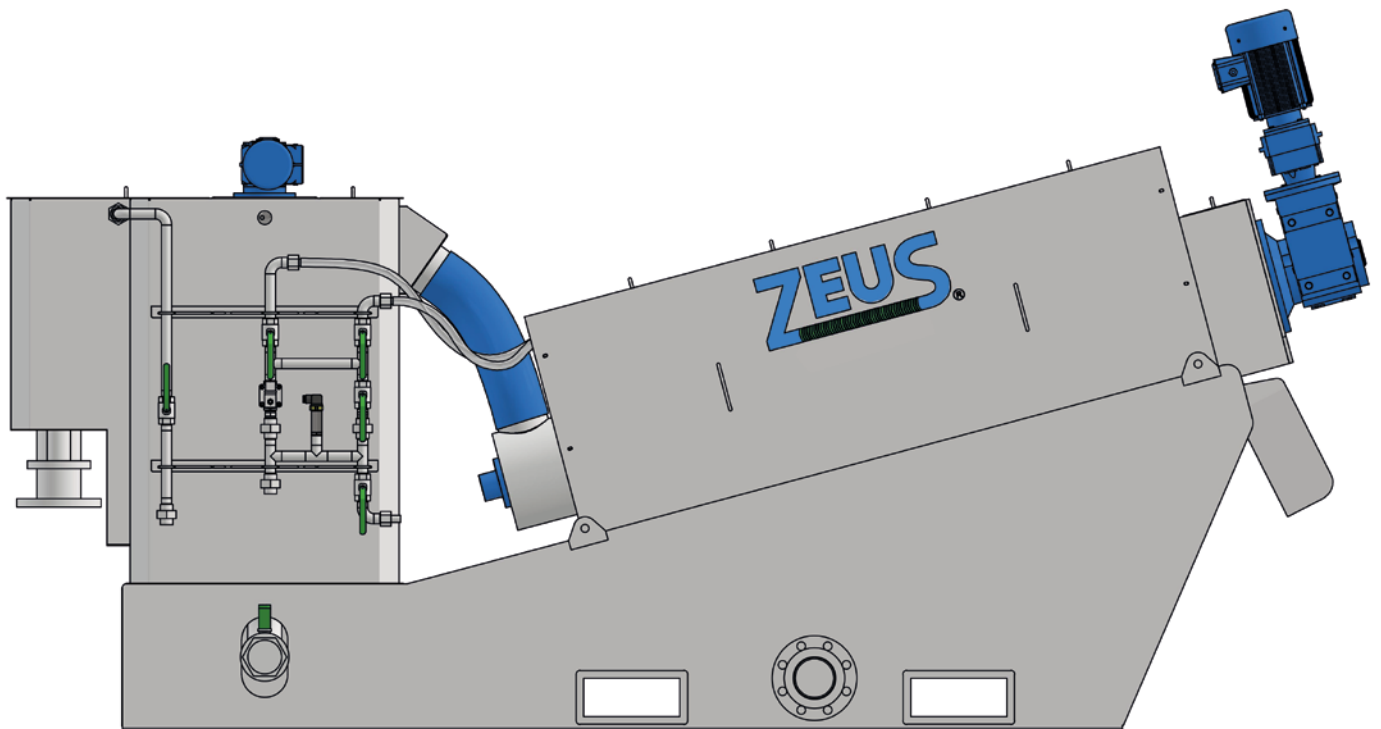
App



Benefits

1. Remote viewing of operating parameters.
2. Optimization of preventive component replacements, performed only when strictly necessary.
3. Ability to diagnose (and in many cases solve) problems remotely with SCAE Service, without the need of direct intervention in the field.
4. Notifications of maintenance and any anomalies via e-mail and/or via App.
5. Ability to archive operating data and configuration parameters of the disc press.





SCAE reserves the right to include updated drawings or changes to the materials shown without prior notice or obligation. Design features, construction materials and dimensional data are given for "informational" purposes only and may be ratified in writing by SCAE if required.

Please contact your local agents for product availability.

For more information, please visit scae.eco

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