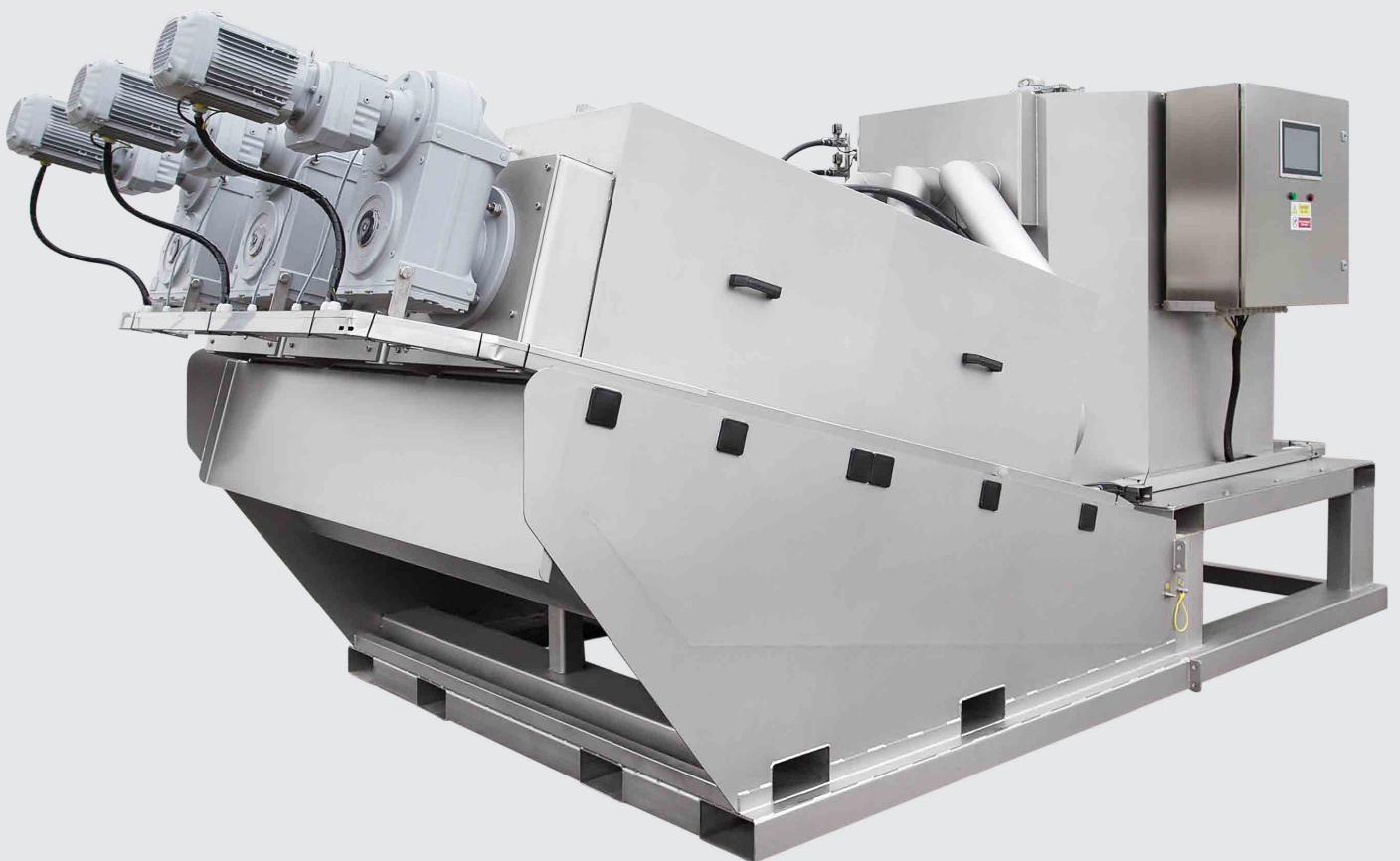


Sludge Treatment

High-performance modules
for the reliable dewatering of
municipal and industrial sludge

clearfox.com



ClearFox® Sludge Screw Press

Efficient dewatering system for sludge treatment and volume reduction

Advantages of the ClearFox® Screw Press

- Low energy consumption
- Efficient sludge thickening
- Simple installation and operation
- Suitable for both municipal and industrial applications
- Fully automatic operation



MP-DW Screw Press

The screw press offers an efficient and reliable solution for sludge treatment. This dewatering system significantly reduces operating costs while minimizing the need for continuous operator supervision.

Product Description

The screw press is a key component of modern wastewater treatment plants. It efficiently thickens and dewateres sludge, achieving dry solids content levels of 15–30%. Thanks to its versatile design, it is suitable for both municipal treatment facilities and industrial applications where sludge is generated.

Its robust construction, combined with high-quality AISI 304 stainless steel and a specialized surface treatment, ensures a long service life and reliable operation—even under demanding conditions.

Standalone? Of course

The standalone installation offers maximum flexibility and is ideally suited for integration into existing plant infrastructures. The screw press can be individually incorporated into current processes and precisely adapted to on-site conditions, enabling efficient implementation of specific wastewater treatment requirements.

Particularly for larger facilities or project-specific solutions, this configuration allows for flexible expansion and easy access for maintenance and servicing. It is the preferred choice when customized design, high capacities, and long-term scalability are key considerations.

We are happy to advise you!

Containerized? No Problem

The containerized solution integrates all essential components into a compact, pre-assembled unit, enabling rapid on-site commissioning. Factory pre-installation significantly reduces assembly effort, saving both time and costs during project implementation.

Thanks to its mobility, the containerized design is particularly well suited for temporary deployments, decentralized applications, or changing locations. At the same time, it provides a robust, self-contained system that operates reliably—independent of existing infrastructure.

Wir beraten Sie gern!



ClearFox® Dewatering Systems

Efficient sludge treatment using advanced screw press technology

Applications

The ClearFox® sludge screw press is a high-performance solution for mechanical dewatering in both industrial and municipal wastewater treatment. It reliably reduces sludge volume, making a significant contribution to lowering disposal and operating costs.

Thanks to its high level of flexibility, the system is suitable for a wide range of sludge types—from biological excess sludge to flotation sludge. In continuous operation, the sludge is simultaneously thickened and dewatered, ensuring an efficient and stable process.

Areas of Application

- Municipal wastewater treatment
- Plastic Recycling Industry
- Biogas plants
- Slaughterhouses
- Oil, gas, and mining industry
- Dairy and milk processing
- Wine and beverage production
- Distillery industry
- Food processing
- Grease separators
- Industrial waste processing

Advantages

Low energy consumption, resulting in reduced operating costs

Simple installation and user-friendly operation

High-strength surface treatment for enhanced durability

Replaceable wear protection on the screw shaft, minimizing future repair costs

Efficient sludge thickening: 0.5–5% DS at the inlet, 15–30% DS at the outlet

Low noise and vibration levels due to slow rotational speed

Versatile application across a wide range of industries

Fully automatic operation with little to no operator involvement

Short return on investment—often within a year in specific cases

Comprehensive technical support and service available

Spare parts readily available at all times

Accessories can be individually selected and customized

Operating Principle

Continuous sludge dewatering process flow

The sludge first enters the inlet chamber of the screw press, where it is evenly distributed and optimally prepared for the subsequent process. It then passes into the mixing chamber, where a flocculant (polymer) is precisely dosed. This causes fine suspended particles to bind into larger, stable flocs—creating the ideal conditions for efficient dewatering.

1

The sludge-floc mixture then enters the dewatering zone, where the process begins. A screw conveyor with variable pitch transports the sludge through a screening system composed of fixed and movable stainless steel plates. While the fixed elements provide structural stability, the moving plates ensure continuous self-cleaning and uninterrupted operation.

2

At the end of the screw, a spring-loaded pressure plate creates back pressure, intensifying the compression of the sludge. This enhances dewatering performance and ensures an optimal dry solids content. The separated water is reliably discharged, while the dewatered sludge is continuously conveyed in a compact form into a collection container.

3



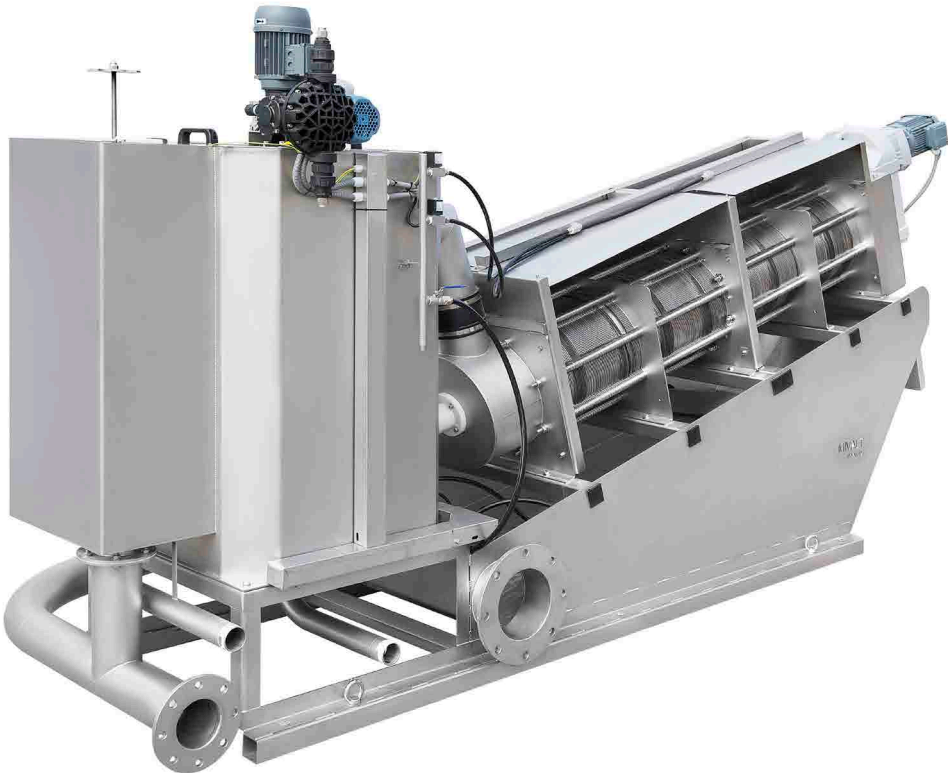
Technical Specifications

Performance data and specifications at a glance

Design-Relevant Data for Your Application

Model	Excess activated sludge, chemically precipitated sludge				Thickened excess secondary sludge				Mineral sludges (metals, mining, etc.)				Primary sludge, DAF sludge, industrial sludge				Sludges with high fat content, oily sludges			
	0.3%		1.0%		2.0%		3.0%		1.0%		2.0%		3.0%		6.0%		5.0%		10.0%	
	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)	(kg DS/ hr)	(m³/hr)
MP-DW-131	6	2,0	10	1,0	10	0,5	12	0,4	25	0,5	25	0,3	15	0,5	25	0,4	20	0,4	30	0,3
MP-DW-201	20	6,7	30	3,0	30	1,5	34	1,1	75	1,5	75	0,8	45	1,5	65	1,1	74	1,5	120	1,2
MP-DW-301	40	13,3	60	6,0	60	3,0	80	2,7	150	3,0	150	1,5	90	3,0	135	2,3	145	2,9	250	2,5
MP-DW-302	80	26,7	120	12,0	120	6,0	160	5,3	300	6,0	300	3,0	180	6,0	270	4,5	290	5,8	500	5
MP-DW-303	120	40,0	180	18,0	180	9,0	240	8,0	450	9,0	450	4,5	270	9,0	405	6,8	435	8,7	750	7,5
MP-DW-401	70	23,3	140	14,0	140	7,0	160	5,3	350	7,0	350	3,5	220	7,3	350	5,8	380	7,6	580	5,8
MP-DW-402	140	46,7	280	28,0	280	14,0	320	10,7	700	14,0	700	7,0	440	14,7	700	11,7	760	15,2	1160	11,6
MP-DW-403	210	70,0	420	42,0	420	21,0	480	16,0	1050	21,0	1050	10,5	660	22,0	1050	17,5	1140	22,8	1740	17,4

Model	Screw Dia- meter	D.S. Capacity [kg/hr]		Power	Weight	Dimensions		
	[mm]	Inlet Sludge Content		[kW]	[kg]	L [mm]	H [mm]	B [mm]
		0.2-0.5%	0.5-5%					
MP-DW-131	Ø 130	6	10	0.5	300	2200	1100	600
MP-DW-201	Ø 200	20	30	0.9	580	2900	1350	800
MP-DW-301	Ø 300	40	60	1.1	980	3600	1750	1000
MP-DW-302	2x Ø 300	80	120	1.9	1350	3800	1800	1300
MP-DW-303	3x Ø 300	120	180	2.7	1700	3950	1750	1750
MP-DW-401	Ø 400	100	140	1.9	1350	4350	1750	1250
MP-DW-402	2x Ø 400	200	280	3.4	2700	4900	2200	1600
MP-DW-403	3x Ø 400	300	420	4.9	3750	5100	2200	2200



**Do you have any questions?
We are happy to advise you!**
+49 (0) 921 1511 020-0
info@clearfox.com



Further information on our
sludge treatment modules
can be found here



Innovation made in Germany

PPU Umwelttechnik GmbH provides wastewater treatment to the private, municipal, industrial and decentralised sectors. Under the brand name ClearFox®, the company sells wastewater treatment plants produced in Bayreuth all over the world. The focus is on biological, chemical-physical and oxidising processes for wastewater treatment. PPU Umwelttechnik GmbH offers selected processes in ISO sea containers. This makes them compact, mobile, modular and available anywhere in the world within a very short time. Each containerised wastewater treatment plant is tailored to individual requirements, making each project unique.

As a general contractor, PPU takes on the planning, production and commissioning of each individual wastewater treatment plant. Every customer can count on reliable co-operation with PPU Umwelttechnik GmbH.

PPU Umwelttechnik GmbH

Carl-Kolb-Str. 6
D-95448 Bayreuth

T +49 (0) 921 1511 020-0
info@ppu-umwelttechnik.de
ppu-umwelttechnik.de
clearfox.com