



<https://enviroflex.at>

Multi-Disk Screw Press for Sludge Dewatering

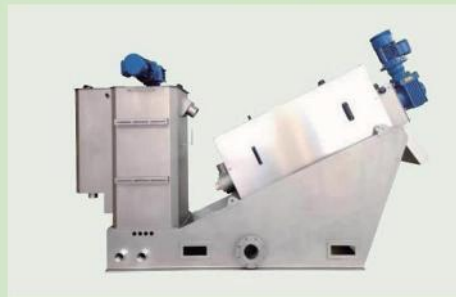
Enviroflex GmbH – Advanced Solutions for Sludge Thickening & Dewatering

Enviroflex GmbH, based in Austria, is a leading provider of innovative solid-liquid separation technologies. With years of expertise in the field, we specialize in complete, tailor-made solutions for municipal and industrial sludge treatment—from primary thickening to final dewatering. Our current catalogue focuses exclusively on our high-performance Multi-Disk Screw Presses, engineered to deliver reliable, efficient, and cost-effective results for a wide range of sludge types.

Main products - Sludge Thickening & Dewatering



Multi-Disk Screw Press
Sludge Dewatering Machine



Multi-Disk Screw Press
Sludge Thickener



Belt Filter Press & Belt Thickener



Continuous Polymer Preparation Unit
(PPU)



Batch Polymer Preparation Unit
(PE Tank)



Shaftless Screw Conveyor



Enviroflex GmbH
Sterngasse 3/2/6, 1010 Vienna, Austria
<https://enviroflex.at>



aeb@enviroflex.at
+43 664 9900 4772
+49 176 1511 2890

Multi-Disk Screw Press

Innovative, Compact & Energy-Efficient Sludge Dewatering Solution

The Multi-Disk Screw Press is a next-generation solid–liquid separation system designed for the efficient dewatering of various types of municipal and industrial sludges. It operates based on the screw extrusion principle, where the volume of the sludge is gradually reduced by a shaft screw, while water is filtered through a stack of fixed and moving rings (discs).

This design generates progressive compression along the dewatering zone by narrowing the pitch and increasing shaft diameter, while the self-cleaning filter structure (moving and stationary discs) prevents clogging and maintains consistent performance.



Key Features

✓ Clog-Free Design

Self-cleaning structure with alternating fixed and moving discs prevents blockages and ensures continuous operation—even with oily or fine particle sludges.

✓ Compact Footprint

Integrated design with flocculation tank (optional) requires minimal installation space and is suitable for indoor or mobile skid-mounted systems.

✓ Low Energy Consumption

Operates at low rotation speeds (typically ~2–5 rpm), significantly reducing power consumption compared to belt or centrifuge dewatering systems.

✓ Fully Automatic Operation

Automated control of feed, polymer dosing, cake discharge, and washing—ideal for unattended, continuous operation.

✓ Minimal Wash Water Usage

Requires only intermittent, low-volume washing—up to 90% less than belt presses.

✓ Low Noise & Vibration

Quiet operation (<60 dB), suitable for urban and enclosed facilities.

✓ Low Manpower Requirement

Simple maintenance, automated control, and low wear parts minimize operator workload.

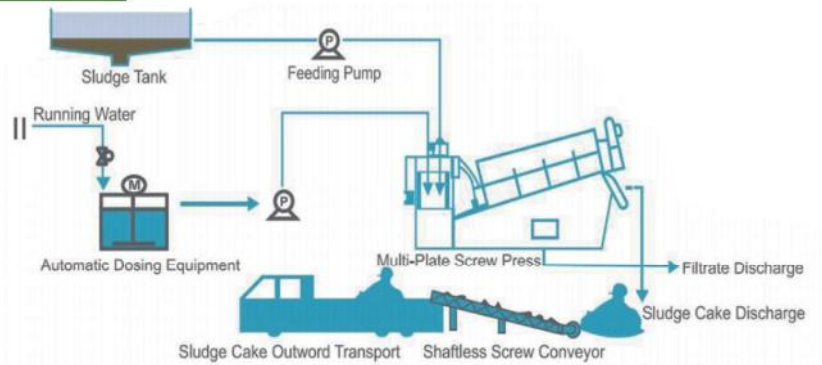
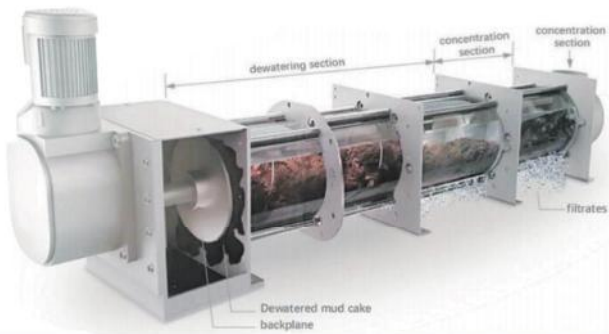
Applications

Suitable for a wide variety of sludge types:

- **Municipal Wastewater Sludge**
 - Waste Activated Sludge (WAS)
 - Primary Sludge
 - Digested Sludge
- **Industrial Sludge**
 - Food & Beverage (e.g. dairy, brewery, slaughterhouse)
 - Chemical & Pharmaceutical
 - Textile Industry
 - Paper & Pulp Sludge
 - Oil Refinery and Grease Sludge
- **Biogas Plants** – Digestate dewatering
- **DAF Sludge** – Especially effective with oily or light sludges



Structure & Dewatering Process



Models

Model	Dry Solid Sludge Capacity Dewatering	Hydraulic Sludge Dewatering Capacity/ Dry Solid Concentrator(%)					
		0.2%	1%	2%	3%	4%	5%
ENF-MDSP-051	1-2kg/h	0.5	0.15	0.125	0.1	0.074	0.07
ENF-MDSP-101	2-7kg/h	1	0.3	0.25	0.2	0.15	0.14
ENF-MDSP-131	4-14kg/h	2	0.6	0.5	0.4	0.3	0.28
ENF-MDSP-132	8-28kg/h	4	1.2	1	0.8	0.6	0.56
ENF-MDSP-201	8-20kg/h	4	1.2	0.75	0.6	0.5	0.4
ENF-MDSP-202	16-40kg/h	8	2.4	1.5	1.2	1	0.8
ENF-MDSP-203	24-60kg/h	12	3.6	2.25	1.8	1.5	1.2
ENF-MDSP-301	20-70kg/h	10	3	2.5	2	1.5	1.4
ENF-MDSP-302	40-140kg/h	20	6	5	4	3	2.8
ENF-MDSP-303	60-210kg/h	30	9	7.5	6	4.5	4.2
ENF-MDSP-304	80-280kg/h	40	12	10	8	6	5.6
ENF-MDSP-351	40-120kg/h	20	6	5	4	3	2.4
ENF-MDSP-352	80-240kg/h	40	12	10	8	6	4.8
ENF-MDSP-353	120-360kg/h	60	18	15	12	9	7.2
ENF-MDSP-354	160-480kg/h	80	24	20	18	12	9.6
ENF-MDSP-401	67.5-160kg/h	33.7	10	6.5	5	4	3.2
ENF-MDSP-402	135-320kg/h	67.5	20	13	10	8	6.4
ENF-MDSP-403	200-480kg/h	100	30	19.5	15	12	9.6
ENF-MDSP-404	266-640kg/h	133	40	26	20	16	12.8

Once these parameters are known, our technical team will recommend the most suitable model from our HTD series Multi-Disk Screw Presses, ensuring cost-effective and reliable dewatering performance tailored to your needs.

Model Selection Criteria

To ensure optimal performance and accurate sizing, please provide the following information:

- . Type and source of sludge
- . Sludge concentration (%DS or %TSS)
- . Sludge volume (m³/day or m³/h)
- . VSS or Ash Content of the sludge
- . Desired outlet cake dryness (%DS)
- . Operating schedule (hours/day)
- . Available utilities (compressed air, water, electricity)

Gallery

