

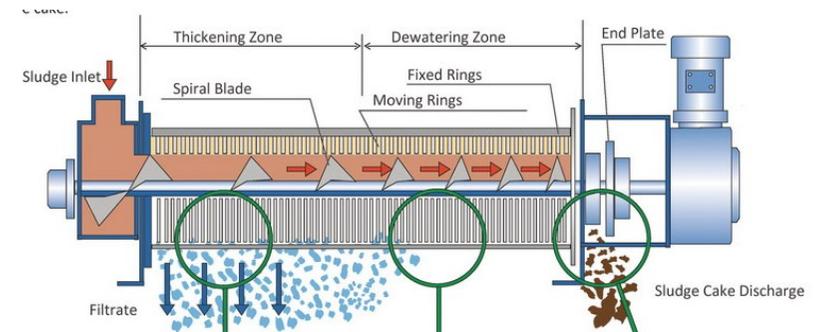
Data Sheet

Sludge screw press

Description

The screw press can automatically dewater sludge produced from:

- DAF (Dissolved Air Flotation)
- FBBR (Fixed Bed Biological Reactor)
- SBR (Sequencing Batch Reactor)



By reducing sludge amounts, there is a major cost saving on sludge disposal costs.

This sludge press has been specially designed for small flow rates from our systems. It can be used extensively for municipal sludge (such as primary, secondary, and mixed sludge), for dewatering slurry and digestate, and for sludge from industry. The following are pre-installed as standard: the press (including the integrated feed tank), the flocculation system and the collection container (e.g. debris trough) as storage for the pressed sludge.

The screw press consists of three dewatering zones: The processes there are 1) thickening, 2) filtration and 3) compression.

In the thickening zone of the dewatering drum, the solids are separated, and the liquid is discharged. This is followed by the dewatering zone, where the pressure increases due to the decreasing pitch of the screw and the smaller distances between the rings. Finally, the pressed sludge cake is discharged.

The sludge is continuously conveyed by means of a screw shaft inside the unit. The interaction of fixed and movable rings ensures self-cleaning, which prevents clogging. In a flocculation reactor with agitator, the sludge can first be conditioned with polymers. This achieves better dewatering results.

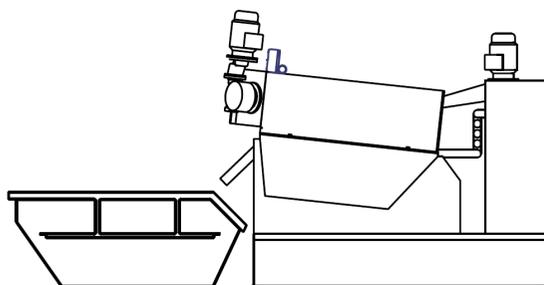


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The separated water is returned by gravity to the wastewater treatment plant. The pressed sludge is then automatically discharged and collected.

In our calculation we give an indication of how much volume this sludge is per day, for larger plants screw conveyors to another storage place are available.



Technical data (standard mini presses are listed here, larger ones on request)

Module	SCP 131	SCP 132	SCP 202
Sludge capacity of DAF (DM 5%)	0,4 m ³ /hr	0,8 m ³ /hr	1,6 m ³ /hr
=> Capacity of the dried DAF sludge	50-67 kg/hr	100-133 kg/hr	200-267 kg/hr
Sludge capacity from FBBR or SBR (DM 0,2%-0,8%)	2,0 m ³ /hr	4,0 m ³ /hr	8,0 m ³ /hr
=> Capacity of the dried FBBR or SBR sludge	40-53 kg/hr	80-107 kg/hr	160-213 kg/hr
Polymer requirement	10 l/hr	20 l/hr	40 l/hr
Screw shaft	1	2	2
Screw shaft diameter	130 mm	130 mm	200 mm
Length screw press	1980 mm	2082 mm	2515 mm
Wide screw press	758 mm	913 mm	938 mm
Height screw press	1050 mm	1050 mm	1285 mm
Net weight	225 kg	310 kg	525 kg
Current	0,2 kW	0,3 kW	0,8 kW

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Application

The standard application for this mini press from PPU is the treatment of sludge from:

- the DAF (30 - 50 L/hr sludge production per 1 m³ flooded wastewater) with 3 - 5% DM
- the biological treatment (secondary sludge) with 1% DM

The inlet sludge concentration can vary from 2 g/L up to 50 g/L.

The discharge sludge can have a TS of up to 30-40 %.

Options on request

Polymer dosing with mixing line and tank.

- Recommended for secondary sludge
- For DAF and mixed sludge, a possible polymer dosage depends on the previously dosed DAF polymer

Control cabinet

- The control cabinet can be omitted when integrated into the main control of the sewage treatment plant

Sludge screw press

Characteristics ClearFox[®] sludge screw presses:

- Continuous loading and operation all day!
- No clogging due to the highly effective annular space principle!
- Stable treatment capacity due to continuous pressure increase along the drainage zones!
- Easy maintenance of the system components!



Advantages for ClearFox[®] sludge screw presses:

- Fast commissioning, cost savings during installation, small space requirement
- Modular system, adaptable to any application
- High performance with high quality, Made in Germany
- Major cost savings for sludge disposal
- Flexible against underload and overload
- Suitable for industrial and municipal wastewater
- Stable and very robust process technology