



Description:

Sludge from DAF (dissolved air flotation) and FBR, SBR (biological aerobic treatment) produces liquid sludge; the solids in the sludge have to be removed in order to reduce the total liquid volume. This mini sludge press is especially designed to handle small flow rates out of our systems. It can be widely applied to municipal sludge (such as primary, secondary and mixed sludge), dewatering of slurry and digestate as well as sludge from industry. As standard pre-installed in a container there are 3 modules: the press, flocculation system, bypass, storage for dried sludge,

The screw press consists of three dewatering zones: The processes there are thickening, filtration and compression. In the thickening zone of the dewatering drum the solids are separated and the liquid is discharged. The dewatering zone follows where the pressure rises due to the decreasing pitch of the screw and smaller gaps between the rings. Finally dry sludge cake is discharged. The sludge is continuously conveyed by means of a screw shaft inside the device. The cooperation of fixed and moving rings ensures self-cleaning preventing clogging. The sludge can initially be conditioned with polymers in a flocculation reactor including an agitator. Therefore better results for dewatering are achieved. The drained water is led back into the buffer (pump sump) of the treatment system by gravity. The dried sludge - removed out of the system - is not more pumpable. A skip (as in picture above) could be in our calculation we give an advice how many volume of this sludge is per day, for bigger systems will be conveyor screws to another storage place the choice.

Technical Specifications (listed here the standard mini presses, bigger on request):

Module	SCP 051	SCP 101	SCP 131	SCP 132	SCP 202
Capacity sludge from DAF (DM 5%)	0,08 m ³ /h	0,2 m ³ /h	0,4 m ³ /h	0,8 m ³ /h	1,6 m ³ /h
=> dried sludge capacity	4 kg/h	10 kg/h	20 kg/h	40 kg/h	80 kg/h
capacity raw wastewater, biological sludge (DM 0,2%-0,8%)	0,25 m ³ h	1,0 m ³ h	2,0 m ³ h	4,0 m ³ h	8,0 m ³ h
=> dried sludge capacity	0,5 kg/h	2,0 kg/h	4,0 kg/h	8,0 kg/h	16 kg/h
screw shaft	1	1	1	2	2
screw shaft diameter	100 mm	100 mm	130 mm	130 mm	200 mm
equipment length	1130 mm	1820 mm	1980 mm	2082 mm	2515 mm
equipment width	520 mm	758 mm	758 mm	913 mm	938 mm
equipment height	640 mm	1050 mm	1050 mm	1050 mm	1285 mm
net weight	100 kg	205 kg	225 kg	310 kg	525 kg
power	0,2 kW	0,2 kW	0,2 kW	0,3 kW	0,8 kW

Application:

The standard application for this mini press of PPU is the treatment of sludge from the DAF (20 - 40 L/h (per each 1 m³ floated wastewater) with DM 3 - 5% and secondary sludge from the biological treatment with DM 1%.

The inlet sludge concentration can vary from 2 g/L up to 50 g/L.
The outlet sludge can have a DS up to 30-40%

Advantages:

- Continuous load over 24h, German HP motor supplies with a 100% duty cycle!
- No clogging, due to ring space principle
- Stable treatment capacity, due to step by step zones
- Easy to maintain --> unique technology which needs every day maximum 10 minutes service, this cannot be achieved with any other press