

IB & B SERVICE

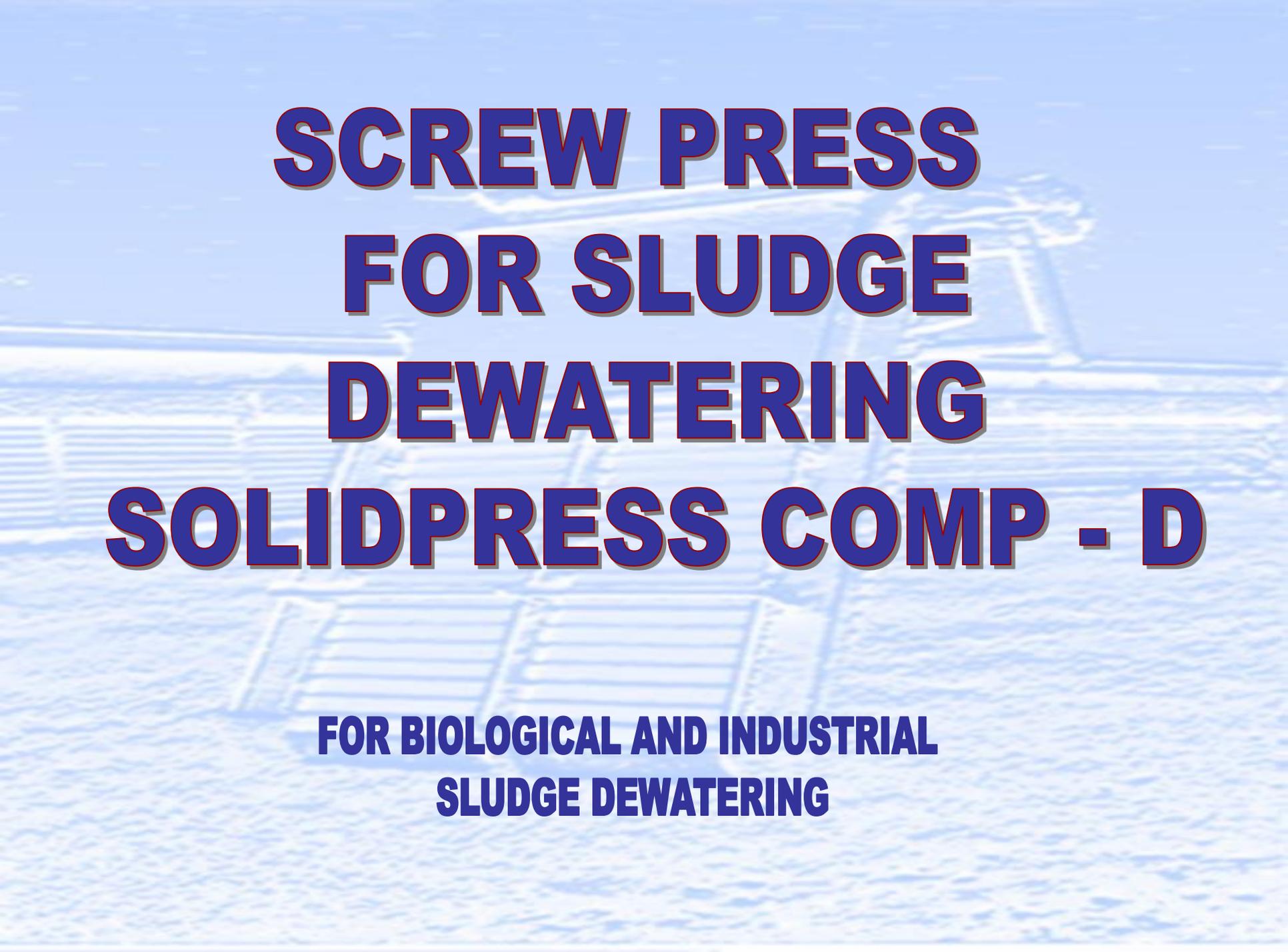
TECHNICAL EQUIPMENTS FOR WASTE WATER TREATMENT PLANTS



SOA



N°SC 13-3326
SISTEMA CERTIFICATO
UNI EN ISO9001:2008



**SCREW PRESS
FOR SLUDGE
DEWATERING
SOLIDPRESS COMP - D**

**FOR BIOLOGICAL AND INDUSTRIAL
SLUDGE DEWATERING**

SOLIDPRESS COMP - D

SOLIDPRESS COMP - D is a compact unit designed for the biological and industrial sludge dewatering in order to reduce investment cost, energy consumption with an easy and efficient equipment.



ADVANTAGES :

- Low investment costs
- Low installation cost
- Low power consumption
- Compact and safe design
- Small footprint
- Vibration free and noiseless
- Reliable operation and little operator attention
- Minimum wear and tear and low spare parts costs
- Low water consumption
- Completely automatic cycle for 24 h/d running
- Low polymer consumption
- High solids capture

SOLIDPRESS COMP - D

Applications

- ✓ Dewatering of civil and industrial biological sludge
- ✓ Dewatering of papermill primary sludge
- ✓ Dewatering of tannery sludge
- ✓ Dewatering of tertiary sludge



Technical data

- ✓ Inlet sludge concentration: from 0,7 % ST
- ✓ Max inlet flow : 2 to 10 m³/h
- ✓ Outlet cake dryness :18 – 25 %
- ✓ Installed power: from 0,55 to 2,2 kW
- ✓ Capacity: from 70 to 320 kgDS/h

Construction

- ✓ Cage: in trapezoidal bars in stainless steel AISI 304
- ✓ Screw: high resistance stainless steel auger with stainless shaft
- ✓ Frame: high thickness stainless steel AISI 304

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FEATURES AND FUNCTIONS

The sludge to be treated is flocculated in a special “venturi mixer” where, thanks to a special device, the mixing between sludge and polymer is optimized to get separation of the water.

The flocculated sludge is pumped into a cylindrical chamber at the beginning of the machine, where the water separation phase starts before enter in the cylindrical screen basket.



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FEATURES AND FUNCTIONS

The cylindrical screen is divided in three section and is made in stainless steel trapezoidal bars with different opening. The selection of the screen opening depends to the type of sludge to be treated.

Inside the cylindrical screen an auger slowly rotates. The diameter of the auger's shaft increases towards the end of the basket and the gap between the flights decreases.

In this way the transported sludge is proportionally pressed through the basket's screen by the volume reduction between shaft and the cylindrical screen.



The auger is machined in order to have a perfect coupling with the screen and minimum gap between flight and basket.

An high resistance rubber scraper on the flights cleans the screen from the inside during the rotation.

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FEATURES AND FUNCTIONS

The auger pushes the increasingly thicker sludge towards cylindrical basket. At the discharge, a cone is pressed against the sludge by pneumatic cylinder, to maintain a defined and adjustable pressure on the cake.



The dewatered sludge is discharged through the gap between the screen and the cone into a screw conveyors to be installed under the end of the press.



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FEATURES AND FUNCTIONS

An automatic washing cycle start after an adjustable time of operation (normally every 15 minutes). These two annular washing pipe with nozzles are moved by two pneumatic cylinder to clean the total surface of the basket.

The wash pressure needs is 7 bar, and there is a filter to protect the nozzles from particles.

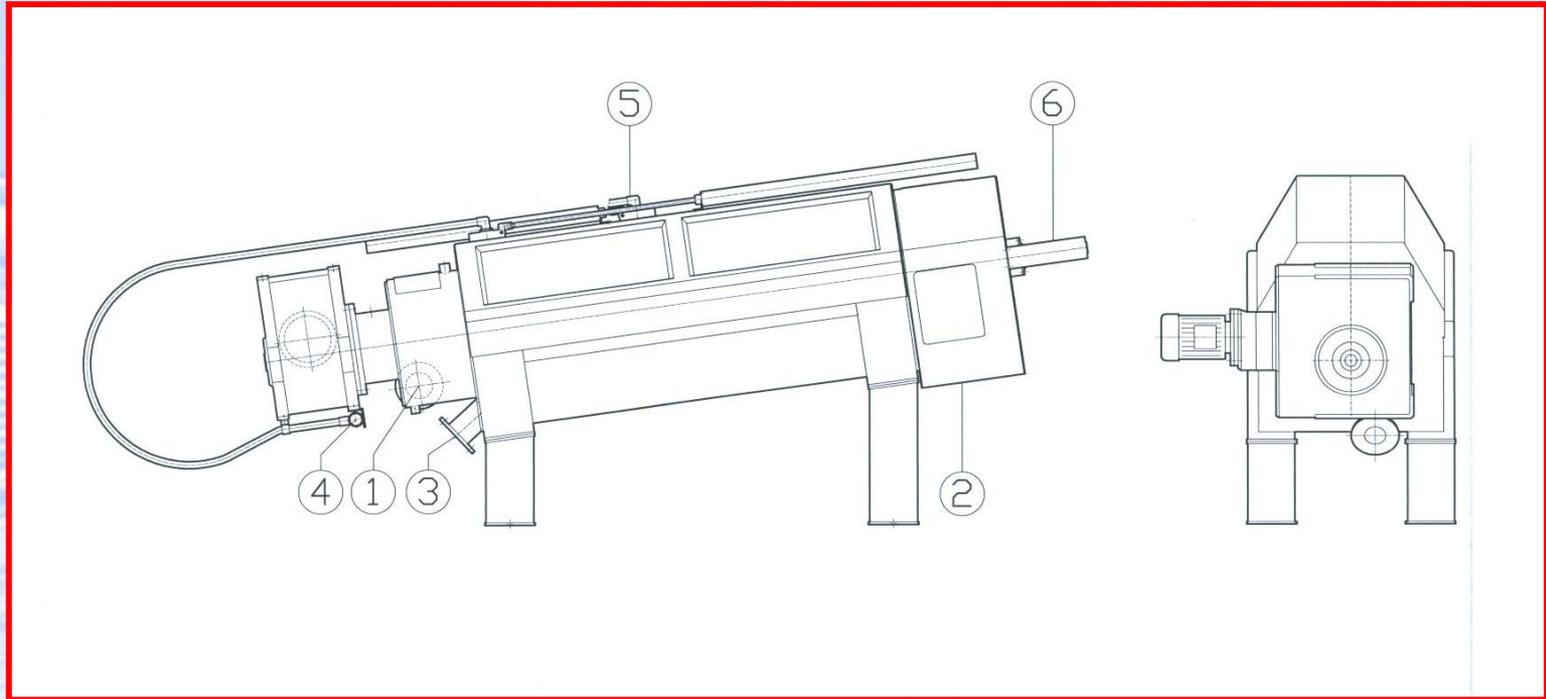
The machine is completely enclosed to contain odors and aerosols from the washing system.

The drainage and wash waters are collected in a tray and discharged with a DN 80 pipe.



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SCHEMATIC DIAGRAM



- 1 Sludge inlet DN 80
- 2 Cake discharge
- 3 Filtrate and wash water discharge DN 80

- 4 Wash water inlet
- 5 Washing system
- 6 Pneumatic cylinder for the cake pressing

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SOLIDPRESS MODELS

MODEL	CAPACITY	INSTALLED POWER
SOLIDPRESS-COMP 030 D	70- 100 KgDS/h	0,55 Kw
SOLIDPRESS-COMP 044 D	100-150 KgDS/h	1,50 Kw
SOLIDPRESS-COMP 065 D	200-320 KgDS/h	2,20 Kw

Technical data could be modified by the producer