

DDE 4742

Decanter Centrifuge for Sludge Dewatering



THE PRODUCT The DDE 4742 is a decanter centrifuge: horizontal rotating bowl, 2-phase configuration, continuous discharge of sludge through scrolling conveyor, dual-drive type, variable differential speed.

THE APPLICATION The DDE 4742 has been designed by HAUS for municipal and industrial waste water treatment plants, or potable water plants. DDE 4742 removes suspended solids from the water, increasing the dryness of the sludge. Advance manufacturing and innovative design makes the DDE 4742 a competitive solution for any dewatering needs.

SPECIAL FEATURES The DDE 4742 is able to treat continuously waste water with high solid content, extracting the majority of suspended solid, and generating a dryer sludge.

This is possible thanks to design solutions, like:

- Highest g-force for maximum dewatering
- Adjustable Pond depth in the bowl to ensure the best possible balance between liquid clarity and solids dryness
- High L/D-ratio
- Adjustable scroll differential speed: to handle different solid throughput capacities with maximum dryness
- Dual Drive: a main motor for the bowl drive, a secondary motor for the scroll drive, both driven by Variable Frequency Drive (VFD) and linked by a high torque gearbox without friction clutch
- PLC with Human Machine Interface (HMI): ensures automatic operation of the decanter, automatic adjustment of process parameters in order to work at optimal operating point, all functions of the decanter can be controlled and monitored
- High stability frame: a robust steel structure painted with epoxy, with dampers and anchor plates for easy ground fixation
- High quality materials: the rotating parts are made in high grade stainless steel, while the conveyor tips and feed zone are protected with sprayed hard material for longer wear resistance
- Functional covers: main cover made of double-hull stainless steel with friction assisted hinges for easy opening, bowl inspection and cleaning; two separate smaller covers protecting the driving parts, allowing separate access for maintenance and inspection purposes

DDE 4742 ensures the highest efficiency in sludge dewatering with the lowest polymer and energy consumption.

APPLICATIONS

- Municipal WWTP
- Industrial WWTP
- Thickening
- Dewatering
- Potable water
- Aquaculture
- Bruckner sludge
- DAF sludge

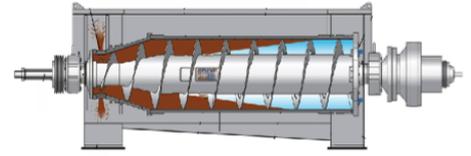
HIGHLIGHTS

- Solid load
- Efficiency
- Clarification
- Sludge dryness
- Heavy duty
- Energy saving
- Polymer saving
- Auto-regulation
- Wear resistance
- Easy service

OPERATING PRINCIPLE

The product mixture is gently fed from the center in to the bowl where it is accelerated. The solids and liquid phases are separated due to the differences in density. The solids (heavy phase) precipitate against the bowl wall and are transported within the bowl towards the conical side via the differential speed of the scroll. The liquid phase exits the bowl from the cylindrical side. The solids phase exits at the conical side via solids discharge outlets. The differential speed of the scroll defines the solid throughput capacity and the solids dryness while the Pond depth (liquid level) defines the liquid clarification level.

In the Dual Drive system, the speed of the scroll is determined by the speed of the secondary motor, that supplies also the required power. When the secondary motor is driven by frequency converter, adjusting the differential speed is possible even during operation.



Example of 2-phases bowl configuration



Example of Dual Drive system

STANDARD CONFIGURATION

- Decanter Standalone, 2 phase, Dual Drive
- Control Panel Standalone with PLC and Variable Frequency Drives for main and secondary motors
- Set of Tools
- Operator Manuals

ON REQUEST

- Polymer Make-Up unit
- Accessories: pumps, valves, probes, etc.
- Automatic Lubrication for bearings

TECHNICAL DATA

Hydraulic Capacity	35.000 L/h
Bowl Diameter - L/D ratio	470 - 4,25
Installed Power kW (main+sec.)	37 + 11
Optional (main)	45
Optional (sec.)	15
Gearbox Nominal Torque kNm	5.0
Optional	8.0
Weight Total	4.300 kg
Main Dimensions	4679 x 1295, H:1356 mm

MAIN MATERIALS

Bowl Body	Duplex EN1.4470
Bowl internal protection	AISI 316 Ti Liners
Frame	Steel structure, epoxy painted
Conveyor	AISI 304
optional	AISI316, Duplex EN 1.4470
Conveyor tip protection	Flame Sprayed TC*
optional	Replaceable Sintered TC Tiles
Conveyor Feed Zone	Flame Sprayed TC
Sludge Outlet Ports	Hardened Cast Iron
Replaceable Bushings	
optional coating	
optional material	Sintered TC
* TC = Tungsten Carbide	

