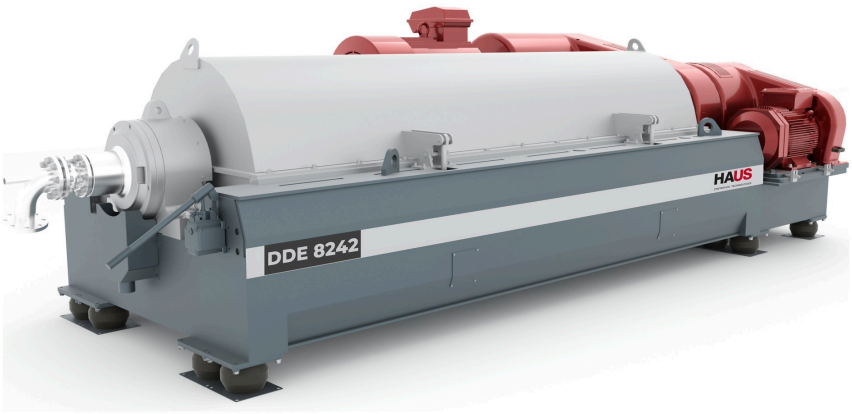
HAUS DDE 8242

Decanter centrifuge for sludge dewatering

HAUS DDE 8242 decanter centrifuge, supplied and supported in North America by Archer Separation Inc.



820 mm
Bowl diameter

2,600 rpm
Maximum bowl speed

3,000 g
Maximum G-force

160 + 37 kW
Main + back-drive motor, standard

15,500 kg
Total weight

OVERVIEW

The DDE 8242 is a two-phase decanter centrifuge with a horizontal solid bowl and a scroll conveyor that discharges the separated solids continuously. HAUS designed it for municipal and industrial wastewater treatment plants and potable water plants.

It removes most of the suspended solids from the feed and produces a drier cake. Two motors, each on its own variable frequency drive, turn the bowl and the scroll, so the bowl speed and the differential speed can both be changed while the machine runs.

HOW IT WORKS

The feed enters along the axis and is brought up to speed inside the bowl. Centrifugal force settles the solids against the bowl wall. The scroll, turning slightly faster or slower than the bowl, carries them to the conical end and out through the cake ports at a smaller radius, where they drain further.

The clarified liquid, the centrate, leaves over weir plates at the cylindrical end. The differential speed sets the solids conveying capacity and the cake dryness; the weir diameter sets the pond depth and the clarity of the centrate. The back-drive motor sets the scroll speed and can be adjusted during operation.

STANDARD SUPPLY FROM HAUS

- Decanter, stand-alone, two-phase, dual drive
- Control panel with PLC and variable frequency drives for the main and back-drive motors
- Set of tools
- Operator manuals

APPLICATIONS

- Municipal wastewater sludge
- Industrial wastewater sludge
- Sludge thickening
- Sludge dewatering
- Potable water plant residuals
- Aquaculture
- DAF float

KEY FEATURES

- High G-force from a slender bowl turning at high speed.
- Adjustable pond depth for positive, neutral or negative operation.
- Variable scroll differential speed, to handle changing solids loads at the cake dryness wanted.
- Dual drive: a main motor on the bowl and a back-drive motor on the scroll, each on a variable frequency drive, joined by a gearbox without a friction clutch.
- PLC with operator panel (HMI) for automatic operating modes, cake dryness and process settings, and alarms.
- Rigid steel base frame, epoxy painted, with vibration dampers and anchor plates for floor mounting.
- Stainless steel rotating parts; scroll flight tips and feed zone protected by sprayed hard-facing against wear.
- Double-wall stainless steel casing with a hinged cover for bowl inspection and cleaning, and separate guards over the drives for maintenance access.

TECHNICAL DATA

Configuration	Two-phase, dual drive, variable differential speed
Bowl diameter	820 mm
L/D ratio	4.06
Cone angle	10°
Maximum bowl speed	2,600 rpm
Maximum G-force	3,000 g
Hydraulic capacity, biological sludge	50 to 150 m^3/h [1]
Solids capacity	900 to 4,000 kg DS/h nominal; 4,200 kg DS/h maximum [1]
Main drive motor	160 kW standard; 132 kW optional
Back-drive motor	37 kW
Gearbox	Cycloidal, 25.8 kN·m nominal torque; 32.48 kN·m optional
Electrical supply	480 V or 600 V, 3-phase, 60 Hz, to suit the site
Noise level	82 dB(A) maximum at 1 m, dry factory test
Total weight	15,500 kg
Dimensions L × W × H	6,135 × 2,465 × 1,750 mm

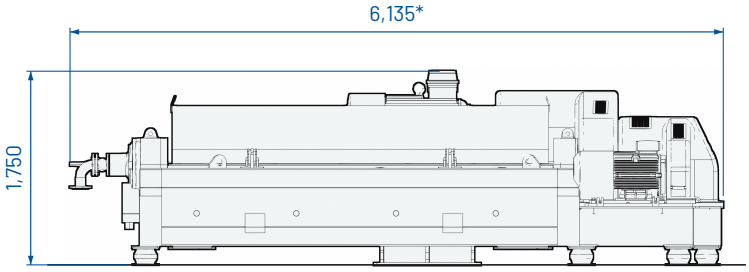
MATERIALS OF CONSTRUCTION

Bowl	Duplex EN 1.4470; super duplex EN 1.4410 optional
Bowl wear liners	AISI 316Ti; super duplex optional
Scroll body and flights	AISI 304; AISI 316, duplex or super duplex optional
Flight and feed zone protection	Sprayed tungsten carbide; carbide-coated feed zone plate; sintered carbide tiles optional
Solids discharge ports	Replaceable hardened cast iron bushings; sintered tungsten carbide optional
Casing	Double-wall stainless steel
Frame	Steel structure, epoxy painted

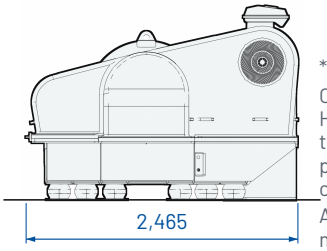
NORTH AMERICAN PACKAGE

- Main and back-drive motors supplied for the site voltage, 480 V or 600 V, 3-phase, 60 Hz.
- Control panel offered with a CSA or cUL label.
- Panel and field enclosures rated to NEMA / EEMAC types to suit the installation.
- Installation supervision, start-up, operator training, parts and service from Archer, Port Coquitlam, BC.

MAIN DIMENSIONS (MM)



SIDE VIEW



END VIEW

* Varies with the motor option. Overall dimensions from the HAUS datasheet. Ask Archer for the installation drawing (anchor points, connections, bowl lifting clearance).

All connections to the machine must be flexible.

OPTIONS SUPPLIED BY ARCHER

- Control panel with PLC, operator panel (HMI) and variable frequency drives for both motors.
- Cake discharge chute and diverter gate.
- Centrate chute and flexible connections.
- Polymer make-up and dosing system.
- Sludge feed pump, polymer pumps, valves, flowmeters and instruments.
- Automatic bearing lubrication.
- Remote monitoring of the machine and its process data.

[1] HAUS rating under the best conditions. Capacity depends on the sludge and the polymer; Archer confirms it for each project from tests on the sludge.