HAUS DDI 5342

Decanter centrifuge for industrial applications

HAUS DDI 5342 decanter centrifuge, supplied and supported in North America by Archer Separation Inc.



536 mm
Bowl diameter

3,200 rpm
Maximum bowl speed

3,050 g
Maximum G-force

55 + 15 kW
Main + back-drive motor, standard

6,200 kg
Total weight

OVERVIEW

The DDI 5342 is a decanter centrifuge with a horizontal solid bowl for two- or three-phase separation, a scroll conveyor that discharges the solids continuously, and a dual drive with variable differential speed. HAUS designed it for general industry (chemicals, pharmaceuticals, fats and oil extraction, protein extraction) and for heavy-duty work such as mining and oil and gas.

It separates a liquid mixture into one or two clean liquids and solids as dry as possible, for product recovery, by-product and produced-water treatment and recycling, with abrasive or non-abrasive feeds, hot or cold.

HOW IT WORKS

The feed enters along the axis and is brought up to speed inside the bowl. Centrifugal force separates the solids and liquids by their density; the solids settle against the bowl wall. The scroll, turning at a small differential speed, carries them to the conical end and out at a smaller radius, where they drain further.

The liquid leaves through outlets at the cylindrical end. The differential speed sets the solids conveying capacity and the dryness; the outlet radius sets the clarity of the liquid. In three-phase operation an adjustable pipe takes the lighter liquid from the inner diameter. The back-drive motor sets the scroll speed, which can be changed in operation.

STANDARD SUPPLY FROM HAUS

- Decanter, stand-alone, two-phase, dual drive
- Main and back-drive motors for variable frequency drive operation
- Set of tools
- Operator manuals

APPLICATIONS

- Animal fats and oils
- Vegetable oil extraction
- Protein extraction
- Oil and gas; oil recycling
- Chemical industry
- Pharmaceuticals
- Starch and yeast
- Technical products
- Process water

KEY FEATURES

- Flexible configuration; two- or three-phase separation, with a choice of materials, wear protection, motor power and gearbox torque.
- Adjustable liquid level and pond depth, for positive, neutral or negative hydraulic pressure and the best oil recovery for each product.
- Variable solids conveying speed, to handle changing solids loads at the 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 high-torque gearbox without a friction clutch.
- PLC with operator panel (HMI) for automatic operating modes, dryness and process settings, and alarm monitoring.
- High-grade stainless steel rotating parts; flight tips, feed zone, solids outlets and bowl wall protected by a harder material chosen for the abrasiveness of the product.
- Double-wall stainless steel casing with a hinged cover, separate drive guards, and an epoxy-painted steel base with dampers and anchor plates.

TECHNICAL DATA

Configuration	Two- or three-phase, dual drive, variable differential speed
Bowl diameter	536 mm
L/D ratio	4.27
Cone angle	10°
Maximum bowl speed	3,200 rpm
Maximum G-force	3,050 g
Main drive motor	55 kW standard; 75 or 90 kW optional
Back-drive motor	15 kW standard; 22 or 30 kW optional
Gearbox	Cycloidal or planetary, 7.96 kN·m nominal torque; 12.65 kN·m optional
Electrical supply	480 V or 600 V, 3-phase, 60 Hz, to suit the site
Noise level	LAeq ≤ 85 dB(A)
Total weight	6,200 kg; rotating assembly 1,800 kg
Dimensions L × W × H	5,354 × 1,510 × 1,564 mm (standard motors)
Clearance to lift the bowl	3,000 mm minimum
Feed inlet	Ø63 mm tube (DIN 11850) or DN 50 union (DIN 11851)
Polymer inlet; wash water	G 3/4 (ISO 228); 3/4 coupling (ISO 228)

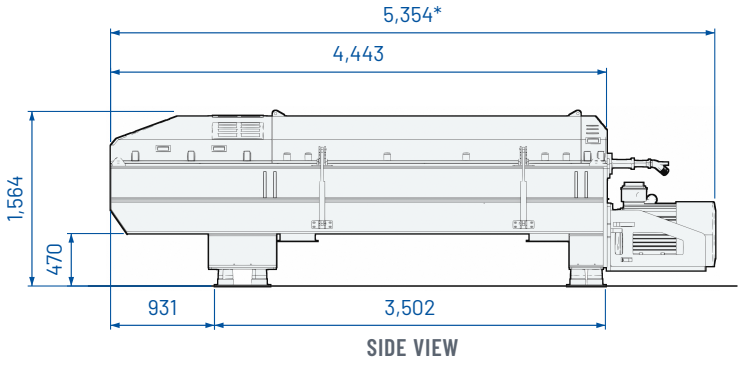
MATERIALS OF CONSTRUCTION

Bowl	Duplex stainless steel; super duplex optional; lean duplex for specific processes
Bowl wear liners	AISI 316Ti liners; super duplex optional
Scroll body and flights	AISI 304; AISI 316L, duplex or super duplex optional
Flight and feed zone protection	Selected to suit the product and the process
Solids discharge ports	Replaceable ceramic bushings; sintered tungsten carbide optional
Casing	Double-wall stainless steel
Frame	Carbon steel (ST 37), epoxy painted

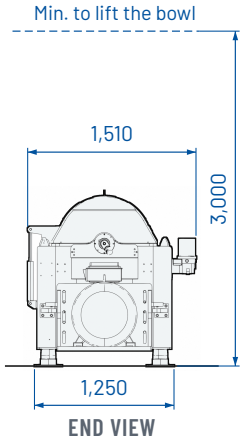
NORTH AMERICAN PACKAGE

- 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.
931 and 3,502 × 1,250: mounting plates for floor anchorage.
3,000: minimum clear height above the floor to lift out the bowl.
Main dimensions from the HAUS dimension drawing; use that drawing for installation. 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.
- Feed pump, valves, flowmeters and process instruments.
- Clean-in-place (CIP) system.
- Solids discharge chute or conveyor and liquid outlet tank.
- Flexible connections for the feed, liquid and solids.
- Automatic bearing lubrication.
- Remote monitoring of the machine and its process data.