



Coriolis-Mass Flow Scale

CDW



General Information

The Brabender Coriolis Mass Flow Scale [CDW](#) is used for highly accurate, high capacity flow measurement of bulk materials.

The CDW is a dust-tight fully enclosed compact unit that measures [bulk material mass flow up](#) to 160 m³/h (1722.2 ft²/h) using the principle of Coriolis force measurement.

The operating principle of the CDW is based on measuring the torque created by ingredient passing through a rotating impellor. Ingredient must be uniformly pre-fed into the CDW, as the ingredient passes through the housing it encounters a rotating impellor and is deflected radially. The tangential coriolis force acts on the vanes of the impellor and creates a torque which is measured by a loadcell. The Congrav[®] controller calculates the instantaneous flow rate from torque and speed. The flow rate is displayed and available as a signal output.

The CDW has the following main components:

A cylindrical housing with a conical outlet, internally there is a independant ingredient guide cone leading to a rotating impellor driven by a gearmotor. A strain gauge loadcell is used in conjunction with a Congrav[®] controller and operator interface.

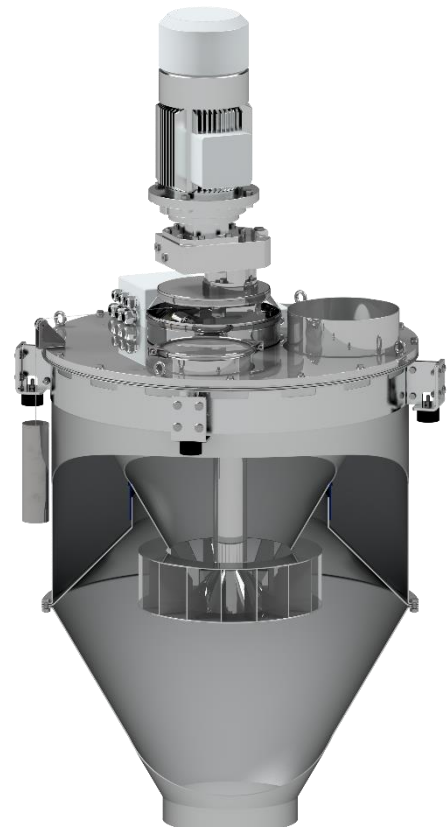
It is suitable for all free-flowing bulk materials with temperatures up to +70°C (158°) and features a good price-performance ratio. The scale features a small footprint combined with low maintenance requirements reduces installation and operating costs.

The actual value signal can be used to control an upstream, continuously controlled feeding device, e.g. a feeding screw or rotary feeder. Complete systems based on this principle are available.

The unit conforms to CE directives.

Model Specification

CDW350	Coriolis Mass Flow Scale
CDW350	Diameter Inlet (mm)





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Control

Control and speed modules are offered either mounted on the feeder ([Congrav® CM-E](#)) or are available for mounting in a separate control panel ([Congrav® CB-E](#) or [Congrav® CB-S](#)).

Controls can communicate directly to most host/PLC systems or to Brabender Technologie Congrav® Operator Interfaces.

Technical Drawings and Dimensions

Model	Power Range	Drawing
CDW150	2,000 – 40,000 dm ³ /h (70.6 – 1412.6 ft ³ /h)	CDW150
CDW250	3,000 – 100,000 dm ³ /h (105.9 – 3531. ft ³ /h)	CDW250
CDW350	10,000 – 160,000 dm ³ /h (353.2 – 5650.5 ft ³ /h)	CDW350

Technical Specification

Ambient temperature:	-20° C to +45° C (-4° F to 113° F)
Humidity:	40% - 70%, non-condensing
Product temperature:	up to +70° C (+158° F) *
Max. bulk density:	1,5 kg/dm ³ (93.6 lb/ft ³)*
Ingredient contact surfaces:	1.4301 (304SS)
Non-contact surfaces:	painted in light grey (RAL 7035)
Three-phase motor:	CDW150: 1,5 kW (2 HP), 1430 min ⁻¹ at 50 Hz (Operation at 25 Hz), IP65, ISO-class F CDW250: 3,0 kW (4 HP), 375 min ⁻¹ at 50 Hz, IP65, ISO-class F CDW350: 3,0 kW (4 HP), 348 min ⁻¹ at 50 Hz, IP55, ISO-class F
Power supply:	AC 230/400 V - 50Hz** (110VAC/460VAC – 60Hz)
Noise level:	<70 dB(A) in accordance with DIN 45635
* other values upon request	** Three-phase motors are designed for a power supply of: 230/400 V - 50 Hz, and for the operation in TT networks, TN networks or networks with earthed neutral. For different networks adaptation measures are necessary.

Options and Accessoires

- Explosion proof as per directive 2014/34/EU (ATEX)
- Combination with feeding screw or rotary feeder