



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.

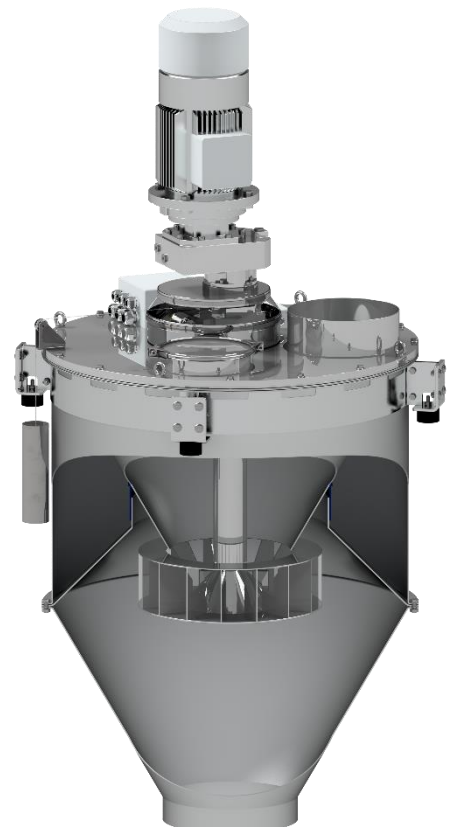
It is suitable for all free-flowing bulk materials with temperatures up to +70°C (158°) and features a good price-performance ratio. The scale features a small footprint combined with low maintenance requirements reduces installation and operating costs.

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)





Coriolis-Mass Flow Scale

CDW



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