

Coriolis Mass Flow Meter - S

- Continuous mass flow measurement based on the Coriolis principle
- Direct weighing technology eliminates outside forces on measuring and feeding accuracy
- Compact design is perfect for applications with limited space requirements
- Highly accurate measuring principle
- Simple verification and calibration
- Dust tight housing reduces the risk of airborne materials

Application

Designed as an enclosed measuring system for the acquisition of flow rates and totalized amounts. The Coriolis Mass Flow Meter - S is suited for:

- throughput and consumption measurement
- totalizing
- batching of free to moderately flowing dry materials

When equipped with a controllable prefeeder (e.g. star feeder, flow gate or screw), the measuring system can also be used as a feed system.

Equipment

A Coriolis Mass Flow Meter - S consists of:

- dust tight stainless steel housing
- measuring wheel with guide vanes
- weighing modules
- cable junction box
- AC three phase gear motor
- 316 stainless steel contact parts



The inlet connection for attachment to the user's infeed line is equipped with DIN flange and the outlet cone is equipped with a flexible sleeve for connection to the user's feed line.

The weighing module is positioned outside the material casing enabling the system to be operated even at material temperatures up to 266 °F (130 °C).

Function

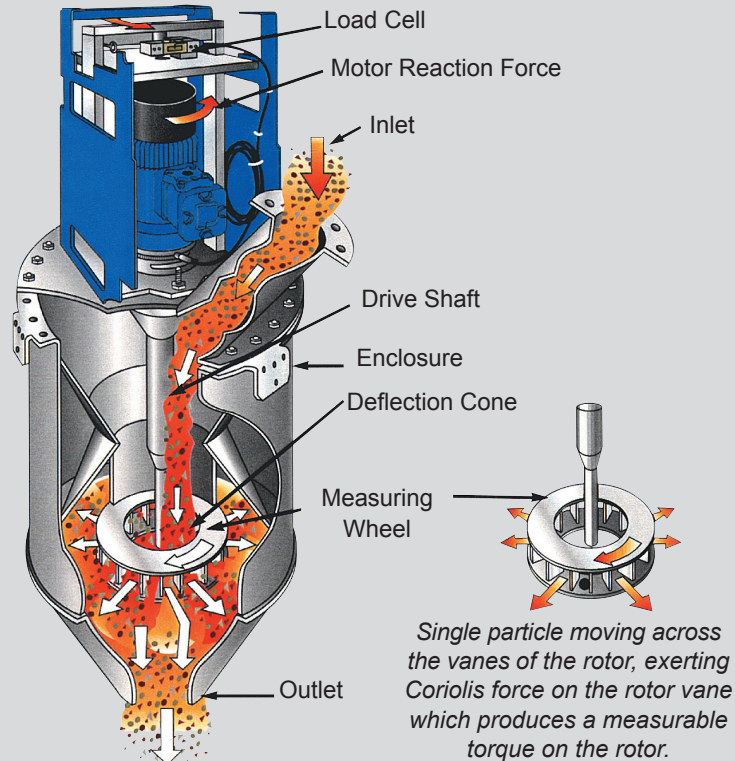
In operation, the Coriolis Mass Flow Meter - S utilizes a measuring wheel that rotates at a constant speed. Material entering the unit flows into the top of the measuring wheel and is deflected outward in a radial direction creating a "Coriolis Force."

The Coriolis Mass Flow Meter - S sees this force as a change in torque which is detected by a strain-gauge load cell. The output of the load cell is electronically processed to produce flow rate and total rate values at accuracies of $\pm 0.5\%$. Best of all, unlike other flow meters on the market, the performance of the Coriolis Mass Flow Meter - S is not affected by material density, friction or in-feed drop height.

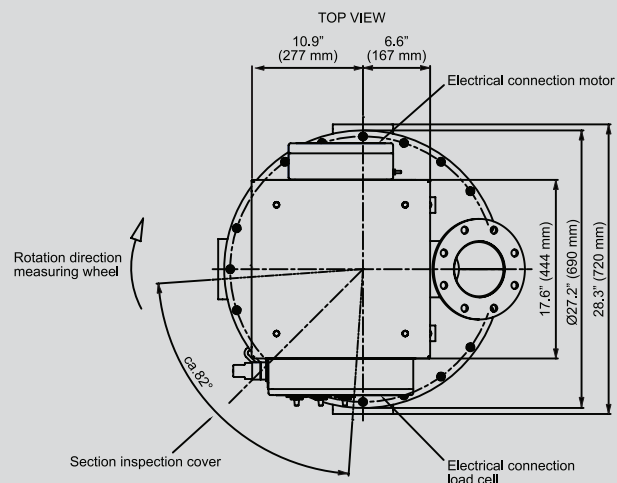
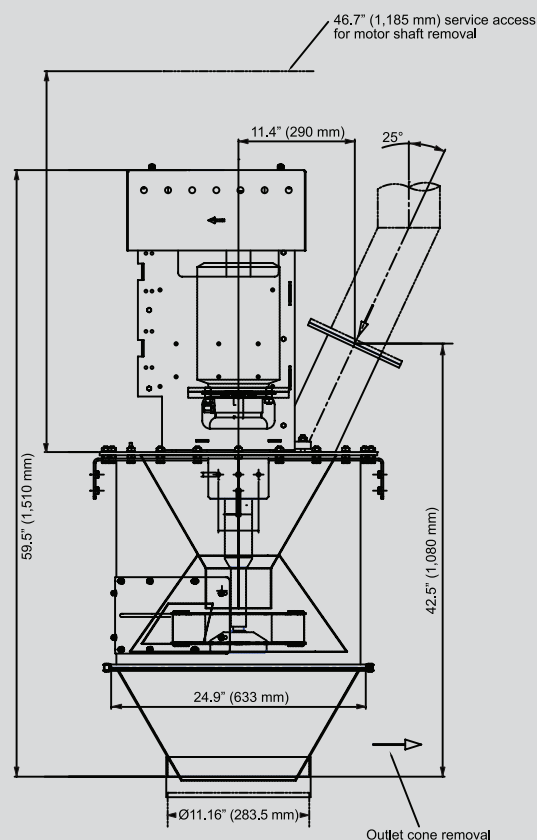
Dimensions

Coriolis Mass Flow Meter - S Operation

Coperion's Coriolis Mass Flow Meter - S line uses the science of particle acceleration and its resultant forces to measure flow rate and total rate at accuracies of $\pm 0.5\%$ or better. Space efficiency and overall reliability make the Coriolis Mass Flow Meter - S an ideal choice for feeding, measuring and batching applications involving free to moderately flowing dry materials.

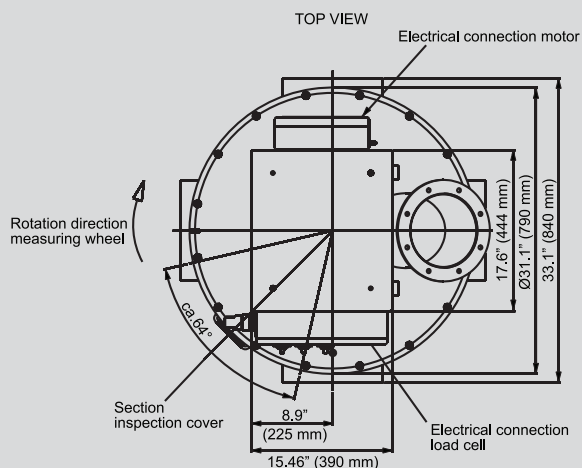
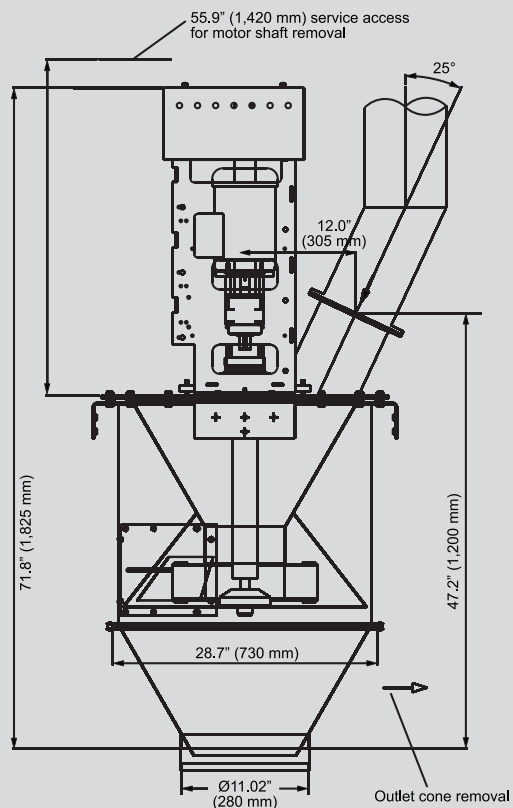


Coriolis Mass Flow Meter - S40

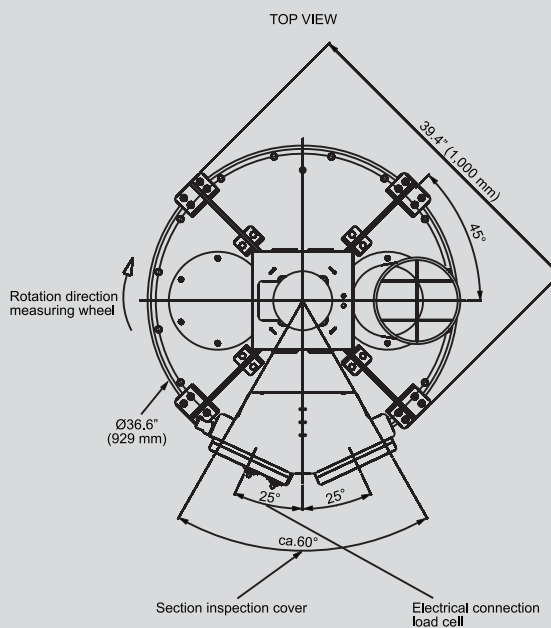
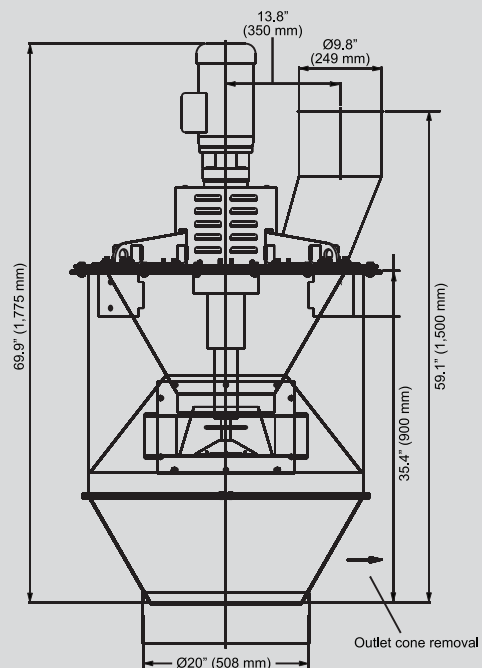


Dimensions

Coriolis Mass Flow Meter - S80



Coriolis Mass Flow Meter - S160



Specifications

Series	S40	S80	S160
Flow rate	0.5 t/h to 20 t/h (40 m³/h)	2 t/h to 60 t/h (80 m³/h)	6 t/h to 150 t/h (160 m³/h)
Accuracy	from ±0.5% (dependent upon system configuration)		
Setting range	1:10		
Operating pressure	-10 mbar ... +30 mbar		
Design pressure	-25 to 95 mbar		
Pressure variations	±5 mbar		
Inlet size	Ø5.51" (140 mm) (DIN 2501 DN 125)	Ø7.87" (200 mm) (DIN 24154)	Ø9.8" (249 mm) (JACOB pipe connection, flange nominal width 9.84" (250 mm))
Outlet connection dimensions	Ø14" (356 mm)	Ø14" (356 mm)	Ø20" (508 mm)
Weight	397 lbs. (180 kg)	507 lbs. (230 kg)	551 lbs. (250 kg)
Load cell capacity	66 lbs. (30 kg), 132 lbs. (60 kg)	220 lbs. (100 kg)	220 lbs. (100 kg), 661 lbs. (300 kg)
Ambient temperature	-13° F to 104° F (-25° C to 40° C). Consult factory for higher temperatures.		
Material temperature	max. 266° F (130° C)		
Bulk density	min. 18 lb/ft³ (0.3 t/m³)		
Particle size	min. 90% > 90 microns max 0.2" (5 mm)	min. 90% > 90 microns max. 0.2" (5 mm)	min. 90% > 90 microns max. 0.31 (8 mm)
Moisture	max. 1%		
Motor power	50 Hz : 1.1 kW (1.5 hp) 60 Hz : 1.3 kW (1.75 hp)	50 Hz : 1.5 kW (2 hp) 60 Hz : 1.8 kW (2.4 hp)	75 t/hr: 50 Hz : 2.2 kW (3 hp) 75 t/hr: 60 Hz : 2.6 kW (3.5 hp) 150 t/hr: 50 Hz : 3.0 kW (4 hp) 150 t/hr: 60 Hz : 3.6 kW (4.8 hp)
Motor voltage	230/400 VAC, 50 Hz 230/460 VAC, 60 Hz	230/400 VAC, 50 Hz 230/460 VAC, 60 Hz	230/400 VAC, 50 Hz 230/460 VAC, 60 Hz
Flow properties	free to moderately flowing dry materials, non-sticky, pulverized to granular		
Contact parts	housing, measuring wheel stainless steel 1.4404 (AISI SS 316 LN)		

Options:

- Wear resistant chromium carbide coating on rotor for abrasive materials
- Open top angel hair measuring wheel to reduce stringy material build up on rotor vanes
- Bottom cone gasket for sealing the inner cone to the housing
- Rubber lined inner cone for reducing the degradation of friable materials or improving the wear life of the inner cone

Coperion

7901 NW 107th Terrace
Kansas City, MO 64153
816-891-9300
info@coperion.com
www.coperion.com/fpm