



Oval Wheel Meter Innovations - from 1932 until today

Oval Wheel Meters of the Flowal® series: Technical innovation at a brilliant price

Sensors



Designed for the process :

- direct measurement of volume resp. volumetric flowrate
- robust construction
- high flexibility and adaptability
- high accuracy
- modular concept
- low installation costs

Measuring Principle

Meters of the Flowal® series are positive displacement flowmeters. Due to their modular design they can be adapted to a wide field of applications. The Flowal® Oval Wheel Meters are of a specially robust and simple design and impressively user-friendly. The innovative concept is the result of merging more than 70 years of experience with the latest technologies. The Flowal® Oval Meter comprises:

- universal connector for various connection types
- measuring chambers in different sizes
- pulse pick-up
- optional evaluation electronics

The Flowal® series is provided optionally with the following displays and output signals:

- LC-Display
- pulse output
- NAMUR output



Technical Data

accuracy*	<± 1% of the measured value without calibration <± 0,5% of the measured value with calibration
repeatability	0,1% of the measured value
operating temperature	-10°C to +80 °C
ambient temperature	up to +120°C in preparation -10 °C to +60°C (blind design) 0 °C to +70°C (compact design)
process connection	female thread G1/2 (Type 03 - 1), G1" (Type 5 - 10)
electrical connection	with accumulator (life-cycle 5 years), supply according to NAMUR or 10 – 24VDC
outputs	LC-display or/and pulse (open collector NPN/PNP or NAMUR)
materials	Measuring chamber: stainless steel, Aluminium Oval wheels: stainless steel or PPS
degree of protection	IP 67 (blind design) IP 65 (local display)

* At reference conditions

Measuring Ranges

Type	Measuring ranges
03	0,2 to 2 l/min
06	0,5 to 5 l/min
1	1 to 10 l/min
5	5 bis 50 l/min
10	10 bis 100 l/min

Applications

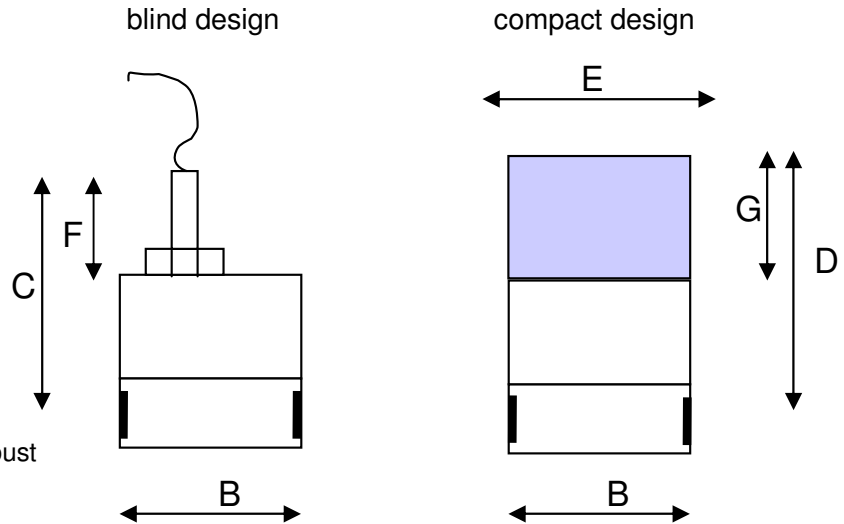
Simple, reliable and economic measurement of volume resp. volumetric flow rates in various industries: e.g. engineering, constructing, food, semi-conductor, environmental and car-industry. Due to the optional material combinations this series can be used for measuring even aggressive and corrosive media.

Advantages of the series Flowal® Oval Wheel Meter

... based on the proven principle of the positive displacement flowmeters

- direct measurement of volume and flowrate
- no extra piping for measuring purposes needed
- long service life and high reliability due to robust construction
- very high long-term stability
- highest accuracy / repeatability
- simple installation
- resistant to vibrations, pressure changes, pulsations, product viscosity

Main dimensions



Type	B	C	D	E	F	G
03	86	85	115	80	40	60
06	86	92	122	80	40	60
1	86	102	132	80	40	60
5	152	120	141	80	37	60
10	152	147	168	80	37	60

Dimensions in mm

... combined with the latest pulse pick up and attached electronics

- Hall-pulse pick-up with open collector output
- magnetic pulse pick-up (NAMUR) for hazardous area
- various additional electronics with on-site display, reset- and operation control keys
- with battery or with NAMUR pulse output

Flowal – the modular system

pulse pick-up (M12x1):

- Reed-contact
- Hall effect (original pulse, PNP or NPN)
- magnetic proximity switch (NAMUR)

Additional electronics with display reset- and operation control keys:
Series MFE (battery, 10 – 24 VDC or supply acc.NAMUR)

various connection types:
female flange G1/2", G1"

universal connector (stainless steel), no distortion of the measuring chamber

various measuring chamber sizes

thus ensuring easy adjustment of volume flow capacity

various materials:

Oval wheels: stainless steel / PPS

shafts: stainless steel

measuring chamber: stainless steel, Aluminium

subject to changes without notice