ALL CONTROLS

RF1

Residential Diaphragm Gas Meter

The robust and tamper-prove RF1 gas meter is the best choice for customers focusing on a reliable and proven measuring concept. A member of the RF1 product family, the new aluminium version is a compact residential gas meter designed for highest measuring accuracy and reliability. Its future-proof design minimises installation costs and enables future field upgrades.

KEY BENEFITS

» Reliable Product Platform
» High Flow Rate
» Low Pressure loss
» Multi-range Application
» AMR-ready Meter

APPLICATION

The RF1 long-term metrology stability and robust design makes it the right choice for residential gas markets.

METER DESCRIPTION

The RF1 gas meter meets strict metrological requirements AS4647, OIML R137-1 and European EN1359 as well as a number of national requirements and standards.

The RF1 is a combination of proven and reliable gas meter concepts and includes:

» A reciprocating synthetic diaphragm
» Crank-controlled and oscillating slides
» Robust and tight connections between components
» The use of precise, light-weight and operating noise optimised plastic parts

OPERATING PRINCIPLE

The RF1 is a positive displacement diaphragm gas meter with a stand-alone twin chamber measuring unit. A transmission gear and a magnetic coupling transfer the reciprocating motion to the mechanical index.

The measuring unit is housed in a robust powder coated gas-tight die-cast aluminium casing.

ENGINEERING DIFFERENCE
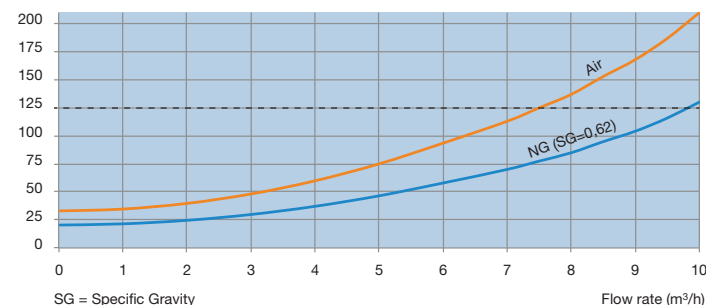
Reliable platforms

The new RF1 aluminium version is built on the RF1 well-proven product platforms. More than 12 M units of the RF1 group have been produced and sold across the world over the last 20 years. With a measuring unit platform made in Germany it is the best choice for an accurate, reliable and durable gas consumption measurement.

AMR-ready meter

The mechanical index is equipped with a Cyble target for retrofittable AMR communication systems. This standard Itron meter interface allows the adaptation of different Cyble modules as a communication device (such as pulse, M-Bus or radio frequency wireless links).

Pressure loss curve

Mean Pressure loss (mbar)

SG = Specific Gravity

Flow rate (m³/h)

Durability

The RF1 is synonymic for long-term accuracy and reliability. With its robust 2 dm³ measuring unit, the RF1 shows a minimal drift over the full measuring range after an endurance period of 10,000 hours. The new designed meter body is built to resist the harshest environment conditions.
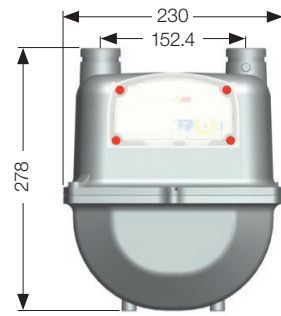
Tamper proof

The RF1 has a number of security features. This proven concept against fraud includes:

» Key meter parts are unable to be magnetically manipulated
» Tamper proof index cover

Technical Specification

Gas Type	Natural Gas (NG), air, propane, butane, nitrogen and all non-corrosive gases
Metrology	Meter conforming to AS4647, OIML R137-1 and EN1359
Accuracy	Maximum permissible errors (% of measurement) +/- 3% from Qmin. to 0.1 Qmax. +/- 1.5% from 0.1 Qmax. to Qmax.
Cyclic Volume	2 dm³
Measuring Range (air)	Q_{min} = 0.016 m³/h Q_{max} = 7 m³/h
Pressure drop	125Pa @ 7 m³/h & 200Pa @ 9,5 m³/h (air) 125Pa @ 9 m³/h & 200Pa @ 12.5 m³/h (NG)
Temperature range	Operating: -10°C to +60°C Storage: -40°C to +70°C
Maximum Operating Pressure	50kPa (Optional 100kPa and 150kPa)
Casing Material	Aluminium die-cast case with grounding and polyester powder painting (passing 1000h salt spray test)
Totalizer	Mechanical index with 8 drums (3 decimals)
Pulse Rate	0.01 m³ / rotation
Pulse System	Cyble™ target
Approval	Australian NMI-R137
Dust and rain protection	IP67 (according EN60529) with hydrophilic coating
Connections	1" (BS746), G 1 ¼" (ISO 228-1) and PT 1 ¼" (ISO 7-1)
Flow Direction	Left to Right
Colour	Mushroom color (Y65 in accordance with AS2700-2011)
Back Flow Protection	Back run stop
Transmission	Magnetic coupling
Weight	3 kg
Pressure tap	Outlet connector - Thread no.2 B.A. (Ø4,7) according to PRS 11

DIMENSIONS (mm)

CONSTRUCTION

RF1 parts

RF1 with wireless Cyble module