

G25 and G40 Diaphragm Meters

Through decades of knowledge in the field of commercial and industrial diaphragm gas meters, our G25 and G40 meter sizes combine accuracy of measurement and long life in the field.

Operating Principle

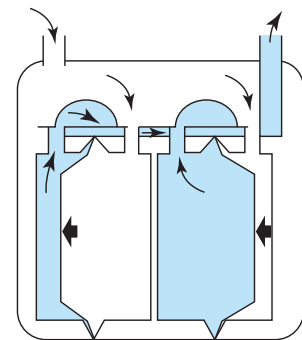
The movement of the diaphragm is caused by the pressure difference between the inlet and the outlet of the meter. The reciprocal filling is controlled by means of 2 sliding valves.

This oscillating movement is transformed into a rotational one and is mechanically transmitted to the totaliser through a magnetic coupling or a stuffing box.

Description

A diaphragm meter is made of 4 main parts

- > 1. The measuring unit mainly consisting in :
 - 4 measuring chambers
 - 2 sliding valves
 - an outlet pipe
- > 2. A steel casing where 1 or 2 connectors are fitted.
- > 3. A magnetic coupling or a stuffing box to transmit the movement of the measuring unit to the totalizer.
- > 4. A totalizer to register the counted gas.



> Working principle

Application

The G25-G40 diaphragm meters are used for applications requiring high precision and large rangeability at low pressure (below 1 bar gauge). Due to the volumetric principle of the diaphragm meter, its metrology is not influenced by installation conditions. The G25-G40 diaphragm meters are approved for fiscal use.



> Measuring unit



> Diaphragm Meter G25

- > Long term accuracy and reliability
- > Very low pressure loss
- > Robust, maintenance-free meter
- > Large cyclic volumes
- > Low Frequency transmitter retrofit

Features

Flow rate	G25: Qmin 0.25 m ³ /h - Qmax 40 m ³ /h G40: Qmin 0.40 m ³ /h - Qmax 65 m ³ /h
European Metrological Approval (04/22/EC)	Approval N° DE-10-MI002-PTB004
Metrology	In accordance with the EU and OIML standards. In line with the EN 1359 standard, the tolerance of acceptance is +/-3 % from Qmin to 0.1 Qmax and ± 1.5 % from 0.1 Qmax to Qmax.
Temperature range	Gas: -10°C to +40°C. Ambient: -10°C to +55°C. Storing temperature: -40°C to +70°C.
Maximum pressure	0.5 bar (1 bar optional)
Connections	Single pipe or 2 pipe connections. From DN40 to DN80 depending on the G-size, vertical connections for the G25, vertical or horizontal for the G40. Other connections available on request.



> Totaliser with Cyble target



> Totaliser with LF "cable"

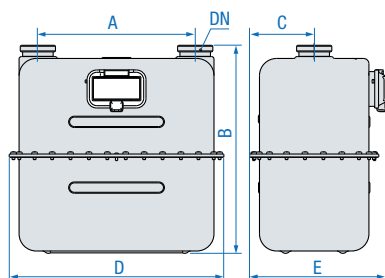


> Totaliser with Double LF "binder"

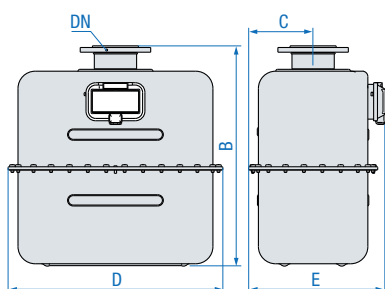


> Thermowell fitted onto an ACD standard

Dimensions



> G25 2 Pipe vertical drawn



> G25 Single Pipe vertical drawn

Features (cont'd)

Totalizer	8-digit index with IP54 protection. UV resistant cover. Fitted with a reflecting disc on the first drum. Prepared with a magnet in the first or second drum to allow the possibility for retrofitting an external Low Frequency transmitter. Upon customer request, the magnet can be fitted in the first drum (0.1 m ³ /pulse) or in the second drum (1 m ³ /pulse). Customised name plate (Bar code, Logo, Customer serial number..).
Transmitters	An external Low Frequency (LF) transmitter can be retrofitted without decommissioning the meter. Different versions are available
Cyclic volume	All the cyclic volumes are large enough to ensure long term accuracy and reliability G25: 20 dm ³ G40: 30 dm ³
Backrun stop	The whole range is equipped with a backrun stop as standard, to prevent tampering, by mounting the meter in the opposite direction.
Casing materials	Steel sheet, drawn or welded depending on the G-size. The use of a powder-coated painting guarantees long term protection against corrosion. All the casings are of a screw type to allow easy maintenance on the meter – no crimped casing.
Magnetic coupling	The meters are equipped with a magnetic coupling, as standard.
Stuffing box	As an option, a stuffing box version is also available.
High Temperature Loading (HTL)	The meters can be delivered, as an option, with a HTL version PNO.1.
AMR/AMI solution	The totaliser can be pre-equipped with a Cyble target instead of the magnet in one of the drums that allows communication and remote reading by a Cyble module available in different versions Pulse, M-Bus, AnyQuest (walk-by), EverBlu (fixed network, etc.).
Thermowell	The whole range can be supplied with a thermowell as an option, to allow the installation of an electronic temperature converter. A second thermowell for reference measurements is available on special request.
Pressure tapping	This device allows the gas pressure to be measured at a reference point.
Colour	Light Grey RAL 7035

Characteristics G25

Model	G	Qmax	Qmin	Cyclic volume	DN	Threads Flange connection	Pressure loss (Air)	Pmax	Pmax HTL	A	B	C	D	E	Weight
	Size	m ³ /h	m ³ /h	dm ³	mm		mbar	bar	bar	mm	mm	mm	mm	mm	Kg

G25: 2 Pipe version

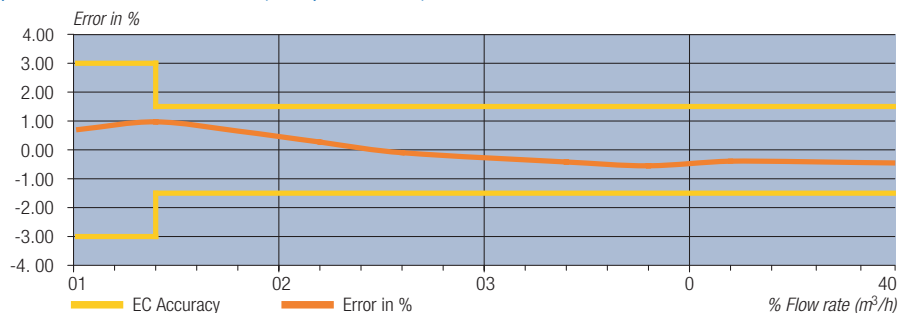
1	G25	40	0.25	20	50	G2 1/2" A	2.4	1	0.1	335	443	138	457	289	13.3
2	G25	40	0.25	20	40	G2" A	2.4	1	0.1	335	443	138	457	289	13.3
3	G25	40	0.25	20	50	G2 1/2" A	2.4	1	0.1	400	534	138	457	289	13.6

G25: Single Pipe version

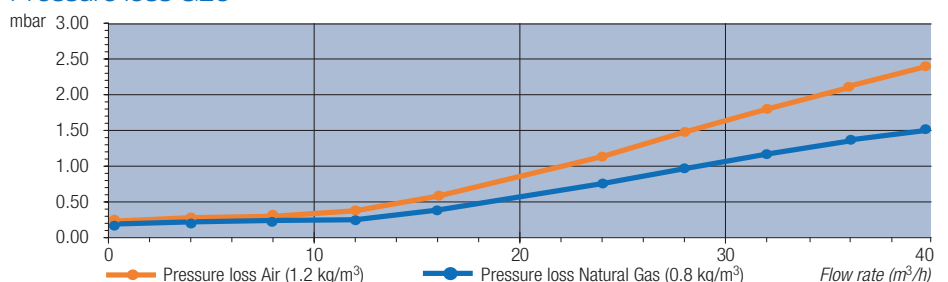
4	G25	40	0.25	20	50	ISO PN10	2.4	1	0.1	-	469	138	457	289	14.4
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Metrology

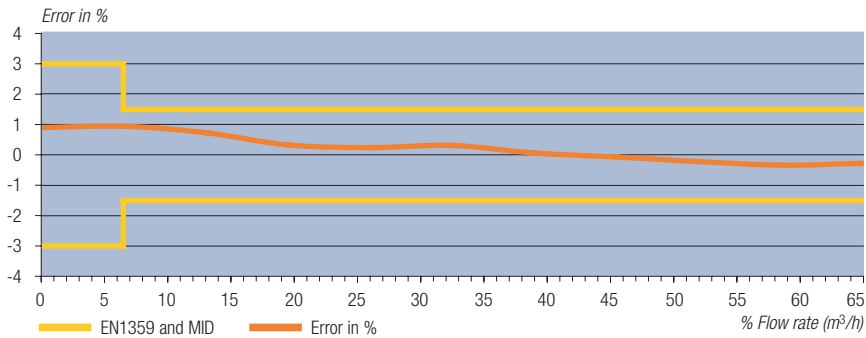
Typical error curve G25 (2 Pipe DN50)



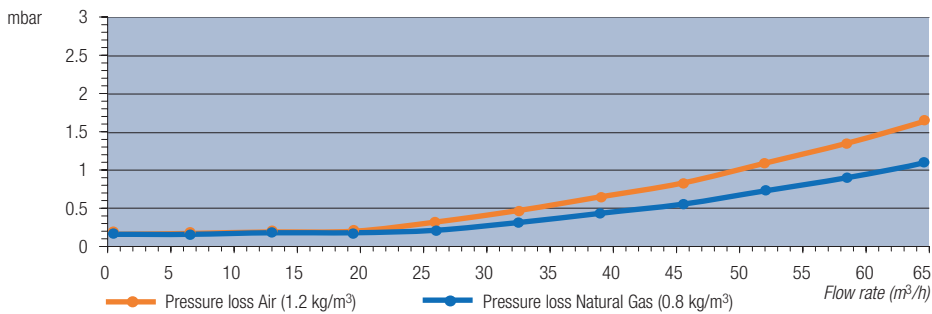
Pressure loss G25



Typical error G40 (2 Pipe DN80)



Pressure loss G40



Characteristics G40

Model	G	Qmax	Qmin	Cyclic volume	DN	Flange connection	Pressure loss (Air)	Pmax	Pmax HTL	A	B	C	D	E	F	Weight
	Size	m³/h	m³/h	dm³	mm		mbar	bar	bar	mm	mm	mm	mm	mm	mm	Kg

G40: 2 Pipe version - vertical drawn

1	G40	65	0.4	30	65	ISO PN10	1.7	1	0.1	430	661	185	612	384		42.0
2	G40	65	0.4	30	80	ISO PN10	1.7	1	0.1	430	661	185	612	384		42.0
3	G40	65	0.4	30	80	ISO PN10	1.7	1	0.1	500	719	185	612	384		41.0
4	G40	65	0.4	30	65	ISO PN10	1.7	1	0.1	510	719	185	612	384		41.0
5	G40	65	0.4	30	80	ISO PN10	1.7	1	0.1	510	719	185	612	384		41.0

G40: 2 Pipe version - horizontal welded

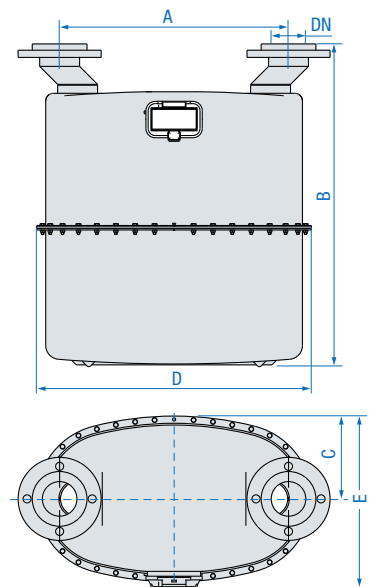
6	G40	65	0.4	30	65	ISO PN10	1.7	0.5	0.1	570	420	175	494	369	634	52.0
7	G40	65	0.4	30	80	ISO PN10	1.7	0.5	0.1	570	420	175	494	358	634	52.0

G40: Single pipe version

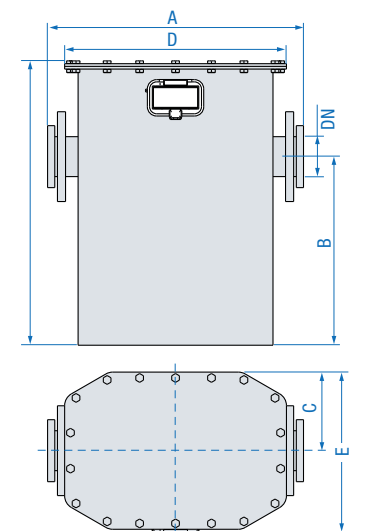
8	G40	65	0.4	30	65	ISO PN10	1.7	1	0.1	697	185	612	384			46.0
9	G40	65	0.4	30	80	ISO PN10	1.7	1	0.1	697	185	612	384			46.0



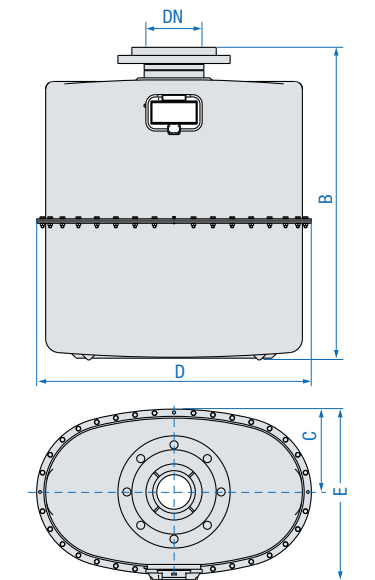
> G40 Double Pipe



> G40 2 Pipe vertical drawn



> G40 2 Pipe horizontal welded



> G40 Single Pipe vertical drawn

About Itron Inc.

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas and water meters, data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: www.itron.com

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