Diaphragm Meters G10 – G40

- Long term accuracy and reliability
- Very low pressure loss
- Robust, maintenance-free meter
- Large cyclic volumes
- LF retrofit on the whole range

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

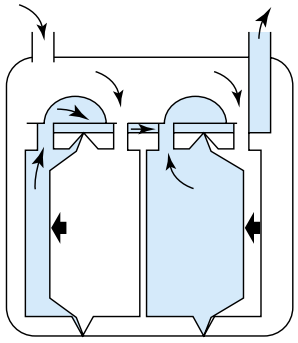
1. The measuring unit mainly consisting in :
   - 4 measuring chambers
   - 2 sliding valves
   - an outlet pipe
2. A steel casing where 1 or 2 connectors are fitted.
3. A magnetic coupling or a stuffing box to transmit the movement of the measuring unit to the totalizer.
4. A totalizer to register the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

Application

The G10-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 G10-G40 diaphragm meters are approved for fiscal use.

Diaphragm Meter G10

Measuring unit



Working principe

Features

Metrological approvals	EC (PTB) G10-G16:	1.33-3271.2-DUZ-E48
	G25:	1.33-3271.2-DUZ-E54
	G40:	1.33-3271.2-DUZ-E51
Flow rate	From 0.1 m^3/h to 65 m^3/h.	
Connections	Single pipe or two nozzle connections. From DN32 to 80mm depending on the G-size, vertical connections for all G-sizes, vertical or horizontal for the G40. Other connections available on request.	
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.	
Temperature range	Ambient	-20° C to +60° C.
	Gas	-10° C (-15° C)* to +50° C.
	Storing temperature	-40° C to +60°C.
Metrology	In accordance with the EU and OIML standards. In line with the EN 1359 standard, the tolerance of acceptation is +/-3 % from Qmin to 0.1 Qmax and ± 1.5 % from 0.1 Qmax to Qmax.	
Totalizer	8-digit index. UV resistant cover. Fitted with a reflecting disc on the first drum. Equipped as standard with a magnet to allow the possibility of retrofitting to an external LF. Upon customer request, the magnet can be fitted in the first drum (0.1 m^3/impulse) or in the second drum (1 m^3/ impulse). 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.	
Backrun stop	The whole range is equipped with a backrun stop as standard, to prevent tampering, by mounting the meter in the opposite direction.	
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 PN0.1.	
Thermowell	The whole range can be supplied with a thermowell as an option, to allow the installation of an electronic temperature converter.	

* - Upon request

▶ Totalizer

▶ Totalizer with “Binder” plug

Characteristics

Meter Size		G10		
Version		2-pipe		Single pipe
Qmax	m³/h	16		16
Qmin	m³/h	0.1		0.1
Cyclic volume	dm³	10		10
Pressure range	bar	1		1
Pressure range HTL	bar	0.1		0.1
Pressure loss	mbar	1.1		1.1
Admissible P loss following EN1359	mbar	3		3
DN = nominal width*	mm	32/40	32/40	40
A= Connection distance*	mm	250	280	-
B = Installation height	mm	369	369	382
C = Installation depth	mm	123	123	123
D = Body width	mm	396	396	396
E = Total depth	mm	259	259	259
Weight (Approx.)	kg	9.5	9.5	9.8

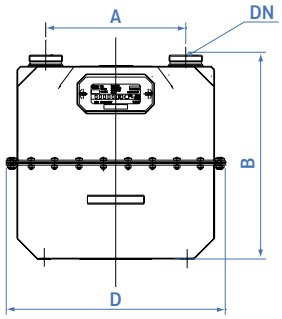
Meter Size		G16		
Version		2-pipe		Single pipe
Qmax	m³/h	25		25
Qmin	m³/h	0.16		0.16
Cyclic volume	dm³	10		10
Pressure range	bar	1		1
Pressure range HTL	bar	0.1		0.1
Pressure loss	mbar	2.3		2.3
Admissible P loss following EN1359	mbar	3		3
DN = nominal width*	mm	32/40	32/40	40
A= Connection distance*	mm	250	280	-
B = Installation height	mm	369	369	382
C = Installation depth	mm	123	123	123
D = Body width	mm	396	396	396
E = Total depth	mm	259	259	259
Weight (Approx.)	kg	9.5	9.5	9.8

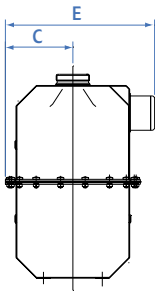
Meter Size		G25		
Version		2-pipe		Single pipe
Qmax	m³/h	40		40
Qmin	m³/h	0.25		0.25
Cyclic volume	dm³	20	20	
Pressure range	bar	1		1
Pressure range HTL	bar	0.1		0.1
Pressure loss	mbar	2.8		2.8
Admissible P loss following EN1359	mbar	3		3
DN = nominal width*	mm	50	50	50
A= Connection distance*	mm	335	400	-
B = Installation height	mm	443	534	469
C = Installation depth	mm	138	138	138
D = Body width	mm	457	457	457
E = Total depth	mm	289	289	289
Weight (Approx.)	kg	13.3	13.6	14.2

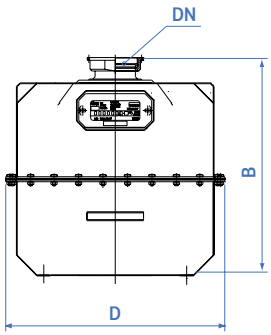
* Other connections available on request.

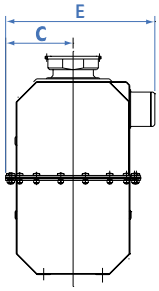
Dimensions

G10 - G25 Vertical drawn



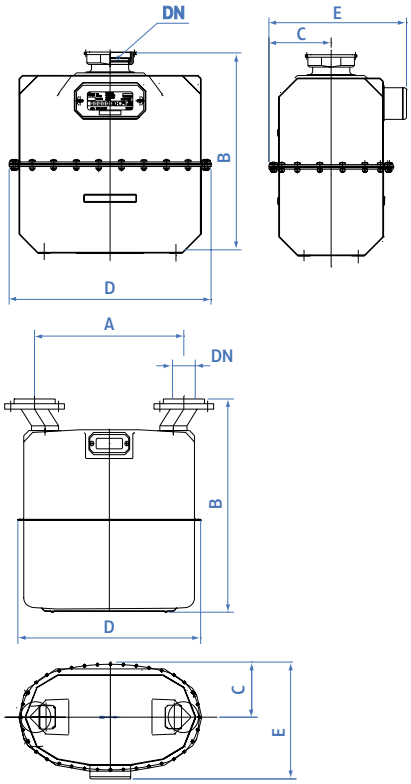




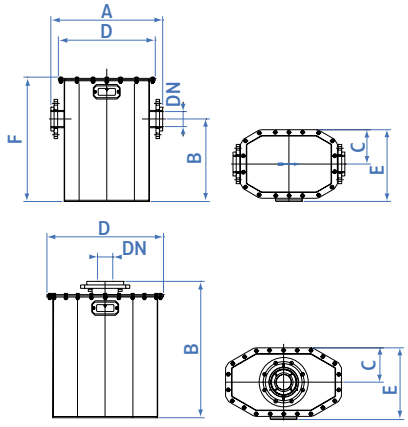


Dimensions

▶ G40 Vertical



▶ G40 Vertical monopipe welded & Horizontal welded



Characteristics

G40 Vertical drawn

Meter Size		G40			
Version		2-pipe			Single pipe
Qmax	m³/h	65			65
Qmin	m³/h	0.4			0.4
Cyclic volume	dm³	30			30
Pressure range	bar	1			1
Pressure range HTL	bar	0.1			0.1
Pressure loss	mbar	2			2
Admissible P loss following EN1359	mbar	3			3
DN = nominal width*	mm	65/80	80	80	65/80
A= Connection distance*	mm	430	500	510	-
B = Installation height	mm	657	715	715	697
C = Installation depth	mm	185	185	185	185
D = Body width	mm	612	612	612	612
E = Total depth	mm	384	384	384	384
Weight (Approx.)	kg	42	45	45	46

G40 Vertical monopipe welded & Horizontal welded

Meter Size		G40	
Version		2-pipe	Single pipe
Qmax	m³/h	65	65
Qmin	m³/h	0.4	0.4
Cyclic volume	dm³	30	30
Pressure range	bar	0.5	0;5
Pressure range HTL	bar	0.1	0.1
Pressure loss	mbar	2	2
Admissible P loss following EN1359	mbar	3	3
DN = nominal width*	mm	65/80	65/80
A= Connection distance*	mm	570	-
B = Installation height	mm	420	698
C = Installation depth	mm	175	175
D = Body width	mm	494	594
E = Total depth	mm	369	369
F = Body height	mm	634	-
Weight (Approx.)	kg	52	55

* Other connections available on request.

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