



Domestic Gas Meters

U6, SC6, and MDA16

Manchester has been associated with the manufacture of domestic Gas Meters for over 150 years. In that time, the basic principle of the diaphragm gas Meter has remained unchanged. Itron has continued to invest in modern manufacturing processes and have used the latest materials technology and design techniques to produce a range of meters for residential use.

General Description

The U6 and SC6 meters incorporate a measuring unit with a two litre cyclic volume designed to accurately meter volumes in all natural gas and LPG applications. The U16 uses two of the same measuring unit to cope with larger flows of the same second and third family gas

Design for life

The design features combine to give a meter with very large turndown ratio, high accuracy at low flow rates, and no maintenance requirements, all of

which provide an accurate and economical way of measuring both constant and fluctuating gas loads.

Construction for Reliability

The models available are constructed using a modern automated process with a capacity of more than one million meters per year. The extensive use of automation and precision engineering materials offers greater accuracy and increased reliability. Significant developments have allowed the number of components to be significantly reduced and the quality of the meter enhanced.

Long life synthetic diaphragms

The material used coupled to the well proven operational design, combine to give excellent stability and accuracy over the whole life of the meter. This is demonstrated by the use of this material since the late 1970's, with excellent results.

> Smart Ready

- High reliability pulse output module

> Proven Dependability

- Robust Construction
- Long term accuracy and stability

Fixed stroke measuring unit

The achievement of a fixed stroke mechanism is the result of precision and high quality workmanship, and eliminates the need for adjustment within the meter. This confines all registration adjustment to the accessible change wheels situated behind the index.

Integral reinforcing Meter Bar (Steel case U6/G4 Models).

The integral meter bar provides permanent and accurate spacing of connection centres and protects the meter case from bending and torsion stresses by reinforcing pipe connections. This is an advantage under all circumstances, and essential when connecting to rigid pipework in domestic installations.



Principle of Operation

The U6, SC6 and U16 meters are positive displacement diaphragm gas meters with twin chamber measuring units. These chambers are fitted with a gas-tight diaphragm which is driven by the differential pressure between the inlet and outlet of the meter.

The gas enters the diaphragm chamber via a radial valve, which is designed to slide cleanly under all operating conditions, and is assembled from self-lubricating materials. Gas enters one side of the diaphragm pan while the other side is exhausting through a separate port on the valve. When one side of the chamber is full, the valve moves on to the next position, allowing gas to fill the exhausted side. The radial valves are continuously in motion, controlled by a fixed tangent which transfer the reciprocating motion through the gearbox to the index.

Case Assembly Strength

The extreme strength of the case joint is achieved by rolling the lowercase edge over the upper case compressing the flanges into contact with a sealant applied between the faces. This forms a joint which is both gas tight and fire resistant, complying with the requirements of BS EN 1359

New Index Design

The new Pulse Ready index has been developed to simplify manufacture and maximise flexibility for the meter owner. The U6 and MDA16 use the index - the SC6 uses a variant of the index which has a water resistant pulse module with a tethered lead.

Manufacturing Location



Manchester has a long association with the manufacture of Gas meters. Parkinson Cowan opened the factory in 1919 and it was latterly part of the Schlumberger group of companies. Occupying about 4 Hectares, the Itron factory is located within 1 mile of both Old Trafford Football and Cricket grounds. Stretford's main function is the production of high volume quality diaphragm gas meters for domestic and commercial and industrial

applications with flow rates up to 160 m³/hr. Additionally, Stretford has facilities to test repair and badge R.P.D. and Turbine Gas Meters manufactured by sister companies, and also to manufacture Gas Metering Modules for commercial and industrial applications. Itron UK Water division is also based at the Stretford site.

> U6 Index



> U6

The U6/G4 is designed to meter gas usage from pilot light to central heating loads. The U6 is compact, with connection centres at 152 mm (6"), highly reliable, and built to the highest quality standards.



> SC6

The SC6 shares the same quality of manufacture and design as the U6, but has a plastic case and top viewing index, for better resistance to corrosion and easier readability when used in "Semi-concealed" applications. Indeed, there are many installations where the SC6 may spend much of its working life immersed in water.



Meter Model		U6	SC6	MDA16
Capacities				
Capacity	m ³ /h	6	6	16
Working Pressure	mbar	75	50	75
Pressure absorption	mbar	1.22	1.3	1.22
Pulse Significance	m ³ /pulse	0.01	0.01	0.1
Dimensions				
Depth	mm	197	170	346
Width	mm	230	240	343
Height	mm	270	302	283
Inlet Connection Size	mm	1" BS746	3/4" BS21	1 1/4" BS746
Outlet Connection Size	mm	1"BS746	1" BS21	1 1/4" BS746
Connection separation	mm	152.4	-	152.4
Connection Distance	mm	65	-	160
Weight	kg	3.5	3.8	9.5

> **MDA16**

The U16 is designed for use in larger homes and small commercial units. Two of the two-litre fixed stroke measuring units are combined to make the U16 is a cost-effective method of metering, offering excellent turn-down and low pressure drop.



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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