

IGEM/GM/PRS/40
Communication 1807

***Medium pressure meter installation kits
for flow rates not exceeding $6 \text{ m}^3 \text{ h}^{-1}$***



Founded 1863
Royal Charter 1929
Patron: Her Majesty the Queen



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Price Code: C3S
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SECTION 1 : INTRODUCTION

- 1.1 This Specification is part of a series of Institution of Gas Engineers and Managers (IGEM) publications, providing the purchasing requirements for Medium pressure meter installation kits with a capacity not exceeding $6 \text{ m}^3 \text{ h}^{-1}$, which will conform with the requirements of BS 6400-2. The document details:
- the components incorporated in the various kits
 - provides the relevant component specifications, and
 - where pre-assembly is necessary the requirements for jointing.
- 1.2 British Gas and latterly, National Grid Metering (NGM) developed a series of Specifications for key metering components based on its own product requirements. These documents were made available to meter installers and purchasers under the title of PRS "e" documents. Originally these Specifications were made available through Advantica, as they were known at the time.
- NGM has transferred the ownership of these documents to IGEM to make them available to the wider industry. It is some years since the original "e" documents were updated and these have been withdrawn.
- 1.3 This Specification has been drafted by an IGEM Working Group, appointed by IGEM's Gas Measurement Committee, and has been approved by IGEM's Technical Coordinating Committee on behalf of the Council of IGEM.
- 1.4 Changes to the design of any product being supplied (or under consideration by a prospective purchaser following an invitation to tender) are to be notified immediately to the purchaser.
- Full details are to be supplied with a fully dimensioned engineering drawing and test results, if appropriate, to:
- demonstrate that the product continues to satisfy the requirements of this document, and
 - allow the purchaser to determine whether the modification(s) are acceptable to them.
- 1.5 Terms such as "maximum operating pressure" (MOP), "maximum incidental pressure" (MIP) and "operating pressure" (OP) are used to reflect gas pressure terminology used in European standards. These terms will arise in all relevant IGEM Standards and, possibly, in other standards. Other terms have been introduced to assist in recognition of design information to be transferred between interested parties.
- 1.6 This Specification makes use of the term "must", "shall" and "should" when prescribing particular procedures.
- the term "must" identifies a requirement by law in Great Britain (GB) at the time of publication
 - the term "shall" prescribes a procedure which, it is intended, will be complied with in full and without deviation
 - the term "should" prescribes a procedure which, it is intended, will be complied with unless, after prior consideration, deviation is considered to be acceptable.
- Such a term may have different meanings when used in Legislation, or Health and Safety Executive (HSE) Approved Codes of Practice (ACoPs) or guidance, and reference needs to be made to such statutory Legislation or official guidance for information on legal obligations.
- 1.7 New and improved practices may be adopted prior to this Specification being updated. Amendments to this Specification will be issued when necessary and their publication will be announced in the Journal of IGEM (Gi) and elsewhere as appropriate.

- 1.8 Requests for interpretation of this Specification in relation to matters within its scope, but not precisely covered by the current text, are to be addressed to Technical Services, IGEM, IGEM House, High Street, Kegworth, Derbyshire, DE74 2DA or e-mail technical@igem.org.uk. Such requests will be submitted to the relevant Committee. Any advice given by or on behalf of IGEM does not imply acceptance of any liability, and does not relieve any party of their obligations.
- 1.9 This Specification was published in April 2019.

SECTION 2 : SCOPE

2.1 SCOPE

2.1.1 This Specification covers product requirements for medium pressure (MP) meter installation kits.

Note: As purchased, a kit excludes the meter and meter box, but provides a method of providing a connection from the outlet of an emergency control valve (ECV)/filter to the inlet of a meter and provides an appropriate method of sealing the meter outlet/connecting to the consumer's pipework.

2.1.2 The pre-assembled kits are designed to fit into meter boxes:

- wall mounted
- built in
- universal, or
- semi-concealed.

where there is a MP supply terminated by a ball valve with a male outlet to BS EN ISO 10806 and mating cap or a legacy ECV/filter.

Note: The kits may be installed in other types of housing, e.g. brick built, provided the requirements of BS6400-2 are satisfied.

2.1.3 An installed kit will provide:

- nominal 21 mbar metering pressure, and
- capacity of 6 m³ h⁻¹, and
- a range of outlet pressures that is compatible with standard European appliances.

Note 1: Details on the installation of medium pressure gas meter installations is given in BS 6400-2.

Note 2: European appliances.

2.1.4 Each kit design is for a pressure tier or range of tiers (see Table 1). The manufacturer declares the tier(s) and corresponding inlet pressure range for which each kit is designed.

PRESSURE TIER	OPERATIONAL PRESSURES AT THE OUTLET OF THE ECV			DESIGN PRESSURES AT THE OUTLET OF THE ECV	
	DESIGN MINIMUM PRESSURE (DmP)	LOWEST OPERATING PRESSURE (LOP)	MAXIMUM OPERATING PRESSURE (MOP)	DESIGN PRESSURE (DP)	DESIGN MAXIMUM INCIDENTAL PRESSURE (DMIP)
Medium ³⁵	35 mbar	35 mbar	185 mbar	2.0 bar	2.7 bar
Medium ⁶⁵	65 mbar	75 mbar	250 mbar	2.0 bar	2.7 bar
Medium ¹⁰⁵	105 mbar	105 mbar	1.1 bar	2.0 bar	2.7 bar
Medium ¹⁸⁰	180 mbar	180 mbar	1.6 bar	2.0 bar	2.7 bar
Medium ²⁷⁰	270 mbar	280 mbar	2.0 bar	2.0 bar	2.7 bar

TABLE 1 - STANDARD NETWORK TIERS AND CORRESPONDING PRESSURES