

IGEM Standards

November 2014





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ABOUT IGEM STANDARDS

Since the 1960s, IGEM has published technical Standards that are now recognized as trusted industry Standards, used to assist in compliance with national legislation and official approved codes of practice and quidance. IGEM Standards relate to aspects of the Pipelines Safety Regulations; Pressure Systems Safety Regulations; Gas Safety (Management) Regulations; Gas Safety (Installation and Use) Regulations; Dangerous Substances and Explosive Atmospheres Regulations; Reporting of Injuries, Diseases and Dangerous Occurrences Regulations; Building Regulations; Health and Safety at Work etc. Act; Management of Health and Safety at Work Regulations; Pressure Equipment Regulations, Electricity at Work Regulations and so on.

The Standards are drafted by expert Panels representing a cross-section of the relevant parts of the gas industry. Regulatory bodies such as HSE, Ofgem and Gas Safe Register contribute to the drafting process. The drafts are issued to the industry and other stakeholders for review and comment prior to publication and, thus, take into account the sometimes broad range of views on the content. The professional status of IGEM ensures its Standards reflect the best possible levels of safety, practice and quality within reasonable cost.

In general, IGEM Standards do not overlap the scope of British Standards (BS) but they do often mirror the scope of British European Standards (BS EN) adding much more detail in many cases. There is no intent to contradict other such standards, and it is IGEM's policy to ensure this does not occur.

IGEM's Standards are all available in hard copy. IGEM does also offer an Online Standards facility, which is provided under a three year license. Access is available through the IGEM Online Standards microsite with a valid e-mail address and password. The benefits of the online system are:

- The Standards are always up to date
- Search facility in the Standards is provided
- New publications onto the system are notified on the Home page
- The company does not have to manage a 'library'
- Is accessible through the internet, so not confined to the office
- A Help page is provided.

In order to subscribe to the full service please contact technical@igem.org.uk for a quotation.

The SCOPE (pages 4 and 5) allows an "at a glance" view of the subject of the Standards and aspects covered. In general, the advice is set at an intermediate to high level although some books, such as IGEM/GM/6, give detail on "standardised" installations and, hence, contain more prescription.

ABOUT THIS LIST

The list uses the following terms:

Edition X	Where an edition number is stated, the previous edition is superseded i.e. is
	not current and is obsolete.

Set of

The edition is issued with separate amendments to bring it up to date. These Amendments amendments are issued with every Standard purchased but, where this was purchased prior to issue of amendments, they are available for downloading from the IGEM website (www.igem.org.uk) or by technical@igem.org.uk.

Reprint with Amendments

The edition has been reprinted to contain amendments (and enhancements if applicable). Owners of the previous version of the same edition will have to insert amendments (see above) to bring that version up to date. It is not essential to insert enhancements.

Nth **Impression**

Refers to a re-print with enhancements. Previous impressions remain current.

IGEM STANDARDS

ITEM and EDITION	TITLE (COMMUNICATION NO.)	DATE	STANDARD 2014 PRICE £	MEMBER/IA 2014 PRICE £
TRANSMISSION A	ND DISTRIBUTION			2
IGEM/TD/1 Ed 5	Steel pipelines for high pressure gas transmission (1735) Set of amendments issued 2009	2008	265	176
IGEM/TD/1 Ed 5 Supp 1	Handling, transport and storage of steel pipe, bends and fittings (1736)	2008	68	45
IGEM/TD/2 Ed 2	Assessing the risks from high pressure Natural Gas pipelines (1764)	2013	116	77
IGE/TD/3 Ed 5	Steel and PE pipelines for gas distribution (1770)	2014	175	116
IGE/TD/4 Ed 4	PE and steel gas services and service pipework (1725)	2007	175	116
IGE/TD/12 Ed 2 Reprint with Amds	Pipework stress analysis for gas industry plant (1757)	2012	141	93
IGEM/TD/13 Ed 2	Pressure regulating installations for Natural Gas, Liquefied Petroleum	2011	216	143
IGEM/TD/16	Gas and Liquefied Petroleum Gas/Air (1755) Biomethane injection (1768)	2014	93	61
IGEM/TD/17	Steel and PE pipelines for biogas distribution (1769)	2014	68	45
IGEM/TD/101 Ed 2	Adoption of pipe systems by a GT – management of UIP activities (1740)	2009	85	56
IGEM/TD/102	Competence framework (1761)	2012	85	56
GAS MEASUREMEN	Т			
IGE/GM/4 Ed 2	Flowmetering practices. Inlet pressure exceeding 38 bar and not	2006	168	111
IGEM/GM/5 Ed 3	exceeding 100 bar (1719) Electronic gas meter volume conversion systems (1730)	2008	107	71
IGEM/GM/6 Ed 2	Non-domestic meter installations. Standard designs (1750)	2011	168	111
IGEM/GM/7A	Electrical connections for gas metering equipment (1731)	2008	116	77
IGEM/GM/7B	Hazardous area classification for gas metering equipment (1732)	2008	93	61
IGE/GM/8 Part 1	Non-domestic meter installations. Flow rate exceeding 6 m ³ h ⁻¹ and inlet pressure not exceeding 38 bar	2005	175	116
IGE/GM/8 Part 2	Design (1706) Locations, housings and compounds (1707)	2005	85	56
IGE/GM/8 Part 3	Fabrication, installation, testing and commissioning (1708)	2006	107	71
IGE/GM/8 Part 4	Operation and maintenance (1709)	2006	85	56
IGE/GM/8 Part 5	Notices and labels (1710)	2005	85	56
UTILIZATION				
IGE/UP/1 Ed 2	Strength testing, tightness testing and direct purging of industrial and	2005	116	77
Reprint with Amds IGE/UP/1 Ed 2 Amds	commercial gas installations (1716) Set of amendments for IGE/UP/1 Ed 2 (1683)	2005	FREE*	FREE*
IGE/UP/1A Ed 2	Strength and tightness testing and direct purging of small low pressure	2005	93	61
Reprint with Amds	industrial and commercial Natural Gas installations (1717)			-
IGE/UP/1A Ed 2 Amds	Set of amendments for IGE/UP/1A Ed 2 (1701) Tightness testing and direct purging of small Liquefied Petroleum	2005	FREE*	FREE*
IGEM/UP/1B Ed 3	Gas/Air, Natural Gas and Liquefied Petroleum Gas installations. (1759). Set of amendments issued 2012	2012	107	71
IGEM/UP/1C	Strength testing, tightness testing and direct purging of Natural Gas and LPG meter installations (1751)	2011	93	61
IGEM/UP/2 Ed 3	Installation pipework on industrial and commercial premises (1771)	2014	210	139
IGE/UP/3 Ed 2	Gas fuelled spark ignition and dual fuel engines (1720)	2006	107	71
IGEM/UP/4 Ed 3	Commissioning of gas fired plant on industrial and commercial premises (1738)	2009	67	44
IGEM/UP/6 Ed 2	Application of compressors to Natural Gas fuel systems (1741)	2009	107	71
IGE/UP/7 Ed 2	Gas installations in timber framed and light steel framed buildings (1722). Set of amendments issued 2008	2006	107	71
IGE/UP/9 Ed 2	Application of Natural Gas and fuel oil systems to gas turbines and supplementary and auxiliary fired burners (1705)	2004	107	71
IGE/UP/10 Ed 3	Installation of flued gas appliances in industrial and commercial premises (1726). Set of amendments issued 2010	2007	152	101
IGEM/UP/11 Ed 2	Gas installations for educational establishments (1744)	2010	85	56
IGE/UP/12	Application of burners and controls to gas fired process plant (1713)	2006	152	101
IGEM/UP/16	Set of amendments issued 2009 Design for Natural Gas installations on industrial and commercial premises with respect to hazardous area classification and preparation of risk assessments (1756) Set of amendments issued 2013	2011	107	71
IGEM/UP/17	Shared chimney and flue systems for domestic gas appliances (1754)	2011	107	71
IGEM/UP/18	Gas installations for vehicle repair and body shops (1758)	2012	67	44
IGEM/UP/19	Design and application of interlock devices and associated systems used with gas appliance installations in commercial catering establishments	2014	93	85
GUIDANCE				
IGEM/UP/1101	Guidance on gas installations for the management and staff within educational establishments (1745)	2010	20	13

 $\mbox{Amds = Amendments.} \qquad \mbox{Ed = Edition.} \qquad \mbox{Imp = Impression.} \qquad \mbox{Supp = Supplement.}$

*Free as download only, unless stated otherwise or for amendments with its associated Standard.

IGEM STANDARDS

ITEM and EDITION	TITLE (COMMUNICATION NO.)	DATE	STANDARD 2014 PRICE £	MEMBER/IA 2014 PRICE £
GAS LEGISLATION				
IGE/GL/1 Ed 2	Planning of gas distribution systems of MOP not exceeding 16 bar (1718)	2005	93	61
IGE/GL/2 Ed 2	Planning of transmission and storage systems operating at pressures exceeding 16 bar (1727)	2007	67	44
IGEM/GL/4 Ed 2	Gas system assets – risk management (1743)	2010	67	44
IGE/GL/5 Ed 2	Procedures for managing new works, modifications and repairs (1715)	2005	67	44
IGEM/GL/6 Ed 2	Permitry for the safe flow of gas (1747)	2010	85	56
IGE/GL/8 Ed 2	Reporting and investigation of gas related incidents (1721)	2007	107	71
IGE/GL/9	Guidance for large consumers in dealing with Natural Gas supply emergencies. Download at www.igem.org.uk	2006	FREE*	FREE*
GENERAL				
IGEM/G/1 Ed 2	Defining the end of the Network, a meter installation and installation pipework (1765). Download at www.igem.org.uk	2013	85	56
IGEM/G/4 Edition 2	Definitions for the gas industry (1763). Download at www.iqem.org.uk	2012	FREE*	FREE*
IGEM/G/5 Ed 2	Gas installations in multi-occupancy buildings (1762)	2012	141	93
IGEM/G/6	Gas supplies to mobile dwellings (1728)	2009	85	56
IGEM/G/8	Handling, transport and storage of PE pipe and fittings (1749)	2010	85	56
SAFETY				
IGEM/SR/4 Ed 3	Variable volume gasholders storing lighter than air gases (1752)	2011	128	85
IGEM/SR/14 Edition 2	Fixed volume storage for lighter than air gases (1742)	2010	107	71
IGEM/SR/15 Ed 5	Integrity of safety-related systems in the gas industry (1746)	2010	116	77
IGEM/SR/16 Ed 2	Odorant systems for gas transmission and distribution (1734)	2008	85	56
IGE/SR/18 Ed 2	Safe working practices to ensure the integrity of gas pipelines and associated installations (1678)	2002	67	44
IGE/SR/22	Purging operations for fuel gases in transmission, distribution and storage (1625)	1999	93	61
IGE/SR/23 2 nd Imp	Venting of Natural Gas (1623)	1995	93	61
IGE/SR/24	Risk assessment techniques (1655)	1999	85	56
IGEM/SR/25 Ed 2	Hazardous area classification of Natural Gas installations (1748) Set of amendments issued 2013	2010	178	118
IGEM/SR/28 Ed 2	Trenchless techniques (1753)	2011	128	85
IGEM/SR/29	Dealing with gas escapes (1760)	2012	85	56
	STRENGTH AND TIGHTNESS TESTING AND DIR EDITION 2 (shrink wrapped pads of 25 triplicat			UP/1 EDITION
StT/UP/1A	Certificate of strength testing for IGE/UP/1A	2004	20	13
TT/UP/1A	Certificate of tightness testing for IGE/UP/1A	2004	20	13
DP/UP/1A	Certificate of direct purging for IGE/UP/1A	2004	20	13
StT/UP/1	Certificate of strength testing for IGE/UP/1	2004	20	13
TT/UP/1	Certificate of tightness testing for IGE/UP/1	2004	20	13
DP/UP/1	Certificate of direct purging for IGE/UP/1	2004	20	13

 $\mbox{Amds} = \mbox{Amendments}. \quad \mbox{Ed} = \mbox{Edition}. \quad \mbox{Imp} = \mbox{Impression}.$

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SCOPE OF IGEM STANDARDS

TD series	Upstream of and including ECV	Planning/design/ construction	Testing/ commissioning	Operation maintenance	Natural Gas	LPG	Other gases	Other fuels	Operational safety	Operational management	Risk and safety assessments	Load/stress analysis	Labelling/ marking	Records	Corrosion and damage	Alterations	Connections	Legal & Standards	Steel pipe	PE pipe	Other pipe materials	Electrical	Pipe/ meter sizing
TD/1 Ed 5	Transmission pipelines and associated installations. MOP > 16 bar																						
TD/1 Ed 5 S1	Steel pipe and components. Storage and transportation																						
TD/2 Ed 2	Transmission pipelines. Risk assessment for developments.																						
TD/3 Ed 5	Distribution pipelines. MOP ≤ 16 bar																						
TD/4 Ed 4	Services. MOP ≤ 16 bar																						
TD/12 Ed 2 RWA	Stress analysis																						
TD/16	Biomethane injection																						
TD/17	Steel and PE pipelines for biogas distribution																						
TD/13 Ed 2	Pressure regulating installations																						
TD/101 Ed 2	Management of UIP activities																						
TD/102	Competence framework																						
GM series	Metering Flow metering practice.											<u> </u>										<u> </u>	<u> </u>
GM/4 Ed 2	MOP > 38 ≤ 100 bar (I&C)																						
GM/5 Ed 3	Electronic gas meter volume conversion systems (D, I&C) Meter installations.																						
GM/6	(I&C) Flow > 6 m ³ h ⁻¹ MOP ≤ 75 mbar																						
GM/7A	Electrical connections. (D, I&C) MOP ≤ 100 bar																						
GM/7B	Hazardous area classification. MOP ≤ 75 bar																						
GM/8 Pt 1	Meter installations. (I&C) – Design. MOP ≤ 38 bar																						
GM/8 Pt 2	Meter installations. (I&C) – Location and housing.																						
GM/8 Pt 3	Meter installations. (I&C) – Installation and commissioning. Meter installations.																						
GM/8 Pt 4	(I&C) – Operation and Maintenance. Meter installations.																						
GM/8 Pt 5	(I&C) – Notices and labels. MOP ≤ 38 bar																						
UP series	Downstream of ECV Strength testing,																						
UP/1 Ed 2 RWA	tightness testing and purging MOP ≤ 16 bar (I&C)																						
UP/1A Ed 2 RWA	Strength testing, tightness testing and purging MOP ≤ 40 mbar (I&C)																						
UP/1B Ed 3	Tightness testing and purging (D).																						
UP/1C	Strength testing, tightness testing and purging Meters (I&C)																						
UP/2 Ed 3	MOP ≤ 7 bar Installation pipework MOP ≤ 60 bar (I&C)																						
UP/3 Ed 2	Gas fuelled spark ignition and dual fuel engines. MOP ≤ 400 bar (I&C)																						
UP/4 Ed 3	Commissioning of gas fired plant (I&C)																						
UP/6 Ed 2	Compressors. MOP ≤ 400 bar (I&C)																						
UP/7 Ed 2	Gas installations in framed buildings (D, I&C)																						
UP/9 Ed 2	Gas turbines (I&C)																						
UP/10 Ed 3	Gas appliances in industrial and commercial premises (I&C)																						
UP/11 Ed 2	Gas for educational establishments (C)																						
UP/12	Gas fired process plant (I)																						
UP/16	Hazardous area classification (I&C)																						+

UP/17	Shared flues (D)											
UP/18	Vehicle repair shops (I&C)											

D is Domestic. I is industrial. C is commercial.

SCOPE OF IGEM STANDARDS

GL Series	All upstream except GL/8 (also downstream) and GL/9 (downstream)	Planning	Design	Construction	Pipework	Commissioning	Natural Gas	LPG	Other gases	Operational safety	Operational management	Risk and safety assessments	Operations	Maintenance	Labelling/marking	Records	Standards	Legal	Electrical
GL/1 Ed 2	Planning distribution systems. MOP ≤ 16 bar																		
GL/2 Ed 2	Planning transmission MOP > 16 bar																		
GL/4 Ed 2	Gas system assets - risk management																		
GL/5 Ed 2	Managing new works, modifications and repairs																		
GL/6 Ed 2	Permitry for the safe flow of gas																		
GL/8 Ed 2	Reporting and investigating incidents																		
GL/9	Responding to cessation of gas supply																		
G series	"Upstream" and "downstream"																		
G/1	Defining the end of the Network, meter installation, etc,																		
G/4	Definitions for the gas industry																		
G/5	Gas installations in multi-occupancy buildings																		
G/6	Gas supplies to mobile dwellings																		
G/8	PE pipe and components. Storage and transportation																		
SR series	Most apply to "upstream" and "downstream" situations																		
SR/4 Ed 3	Variable volume gasholders storing lighter than air gases																		
SR/14 Ed 2	Fixed volume storage for lighter than air gases																		
SR/15 Ed 5 SR/16 Ed 2	Integrity of safety-related systems Odorant systems for gas																		
	transmission and distribution Safe working for the																		
SR/18 Ed 2	integrity of pipelines and installations																		
SR/22 SR/23	Purging fuel gases Venting Natural Gas																		
SR/23 SR/24	Risk assessments																	П	
SR/25 Ed 2	Hazardous area																		
SR/28 Ed 2	classification Trenchless techniques	П															П	П	
SR/29	Dealing with gas escapes																		

PLACING ORDERS (Subject to availability of the Standard)

An Order Form is provided on Page 8. Orders can be placed using the following methods:

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ORDERING IGEM STANDARDS

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Standard	Quantity	Standard	Quantity	Standard	Quantity	Standard	Quantity
IGEM/TD/1 Edition 5		IGE/GM/8 Pt 3		IGEM/UP/18		IGE/SR/24	🔲
IGEM/TD/1 Edition 5 Supp	p 1	IGE/GM/8 Pt 4		IGEM/G/1 Edition		IGEM/SR/25 E	
IGEM/TD/2 Edition 2 IGE/TD/3 Edition 5		IGE/GM/8 Pt 5 IGE/UP/1 Edition 2 R	214/4	IGEM/G/5 Edition IGEM/G/6	on 2	IGEM/SR/28 E IGEM/SR/29	dition 2
IGE/TD/3 Edition 3		IGE/UP/1A Edition 2		IGEM/G/8		1GLM/3K/29	
IGE/TD/12 Edition 2 RWA	. —	IGEM/UP/1B Edition		IGE/GL/1 Edition	n 2	StT/UP/1	
IGEM/TD/13 Edition 2		IGEM/UP/1C		IGE/GL/2 Edition		TT/UP/1	
IGEM/TD/16		IGEM/UP/2 Edition 3		IGEM/GL/4 Editi		DP/UP/1	
IGEM/TD/17		IGE/UP/3 Edition 2		IGE/GL/5 Edition	n 2	StT/UP/1A	
IGEM/TD/101 Edition 2		TOEM/UD/A Edition 2		TOEM (CL. (C. E. I'')		TT/UP/1A	
IGEM/TD/102 IGE/GM/4 Edition 2		IGEM/UP/4 Edition 3 IGEM/UP/6 Edition 2		IGEM/GL/6 Editi		DP/UP/1A	
IGEM/GM/5 Edition 3		IGE/UP/7 Edition 2		IGEM/SR/4 Edit			
IGEM/GM/6 Edition 2		IGE/UP/9 Edition 2		IGEM/SR/14 Edi			
IGEM/GM/7A		IGE/UP/10 Edition 3		IGEM/SR/15 Edi	tion 5		
IGEM/GM/7B		IGEM/UP/11 Edition	2	IGEM/SR/16 Edi			
IGE/GM/8 Pt 1		IGE/UP/12		IGE/SR/18 Editi	on 2		
IGE/GM/8 Pt 2		IGEM/UP/16		IGE/SR/22			
		IGEM/UP/17		IGE/SR/23			
Credit Card Or	ders:						
Type of card (Mast		sa)	Car	d Name			
Expiry Date/		•		d Address			
CARD NUMBER							
Valid/Start date	•						
Security Number*							
* the 3 digit securi	ty code a	t the back of the	card				
ALL Orders: Contact Name Address to which I Address to which o	NVOICE s	hould be sent (if	different f	rom above)			
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Rest of the world			1 st Class -	£9.95 □ Co	urier - £4	8	
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