

# **IGEM Standards**

October 2024



Founded 1863 Royal Charter 1929 Patron: His Majesty the King



#### **ABOUT IGEM STANDARDS**

Since the 1960s, IGEM has published technical Standards that are now recognised as trusted industry Standards, used to assist in compliance with national legislation and official approved codes of practice and guidance. 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 and guidance documents 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 and guidance documents are mostly available in hard copy. IGEM does also offer online access to the standards, the benefits of this service 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.

The price of this service is determined by what standards are required, for how many users.

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#### **ABOUT THIS LIST**

The list uses the following terms:

**Edition X** Where an edition number is stated, the previous edition is superseded i.e.

not current and is obsolete.

Set of

**Amendments** The edition is issued with separate amendments to bring it up to date.

These amendments are issued with every Standard purchased but, where this was purchased prior to issue of amendments, they are available for downloading for free from the IGEM website at <a href="www.igem.org.uk">www.igem.org.uk</a> or by

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

current.

## **IGEM STANDARDS**

ITEM and EDITION	TITLE (COMMUNICATION NO.)	DATE	STANDARD 2024 PRICE £	MEMBER/IA 2024 PRICE £
HYDROGEN				
IGEM/H/1 with amendments June 2022 and June 2023	Reference Standard for low pressure hydrogen utilisation (1877)  Download for free at www.igem.org.uk	2023	FREE	FREE
TRANSMISSION AND DISTR				
IGEM/TD/1 Ed 6 with Amendments May 2024	Steel pipelines for high pressure gas transmission (1892)	2024	411	275.37
IGEM/TD/1 Ed 6 Supplement 2	High pressure Hydrogen pipelines (1849)	2021	116	77.72
IGEM/TD/1 Ed 5 Supp 1 Ed 2	Handling, and storage of steel pipe, bends and transport fittings	2018	105	70.35
IGEM/TD/2 Ed 3	(1825) Assessing the risks from high pressure Natural Gas pipelines	2024	179	119.93
IGEM/TD/3 Ed 5 with Amendments October 2015	(1895) Steel and PE pipelines for gas distribution (1780)	2015	272	182.24
IGEM/TD/3 Ed 5 Supplement 1	Repurposing of Natural Gas (NG) pipelines with MOP not exceeding 7 bar for NG/Hydrogen blends (1856)	2022	116	77.72
IGEM/TD/4 Ed 5	PE and steel gas services and service pipework (1867)	2023	273	182.91
IGEM/TD/12 Ed 3	Pipework stress analysis for gas industry plant (1834)	2021	226	151.42
IGEM/TD/13 Ed 3	Pressure regulating and exceeding 7 bar pipeline installations' (1872)	2023	353	236.51
IGEM/TD/13 Ed 3 Supplement 1	Pressure regulating installations for hydrogen at pressures exceeding 7 bar (1889)	2024	116	77.72
IGEM/TD/13 Ed 3 Supplement 2	Pressure regulating installations (PRIs) for new and repurposing of existing PRIs for transmission of Natural Gas/Hydrogen blends for pressures not exceeding 7 bar (1890)	2024	116	77.72
IGEM/TD/16 Ed 2	Biomethane injection (1833)	2019	146	97.82
IGEM/TD/17	Steel and PE pipelines for biogas distribution (1769)	2014	105	70.35
IGEM/TD/19	Reinforced thermoplastic pipelines for high pressure gas transmission (1812)	2019	138	92.46
IGEM/TD/21	Reference Standard for Hydrogen distribution for new steel and PE mains and services (1879)	2023	201	134.67
IGEM/TD/22	Reference Standard for repurposing Natural Gas distribution mains and services for Hydrogen (1884)	2023	146	97.85
IGEM/TD/23	Reference Standard Hydrogen pressure regulating installations not exceeding 7 bar (1885)	2024	353	236.51
IGEM/TD/101 Ed 3	Adoption of pipe systems by GT- management of UIP activities (1802)	2018	138	92.46
GAS MEASUREMENT	•			
IGEM/GM/4 Ed 3	Flowmetering practices. Inlet pressure exceeding 38 bar and not exceeding 100 bar (1815)	2019	261	174.87
IGEM/GM/5 Ed 4	Electronic gas meter volume conversion systems (1817)	2023	168	112.56
IGEM/GM/6 Ed 3	Non-domestic meter installations. Standard designs (1864)	2022	261	174.87
IGEM/GM/7A Ed 2	Electrical connections for gas metering equipment (1803)	2018	146	97.82
IGEM/GM/7B Ed 2	Hazardous area classification for gas metering equipment (1804)	2018	185	123.95
IGEM/GM/8 Part 1 Ed 2	Non-domestic meter installations: Flow rate exceeding 6 m <sup>3</sup> h <sup>-1</sup> and inlet pressure not exceeding 38 bar Design (1795)	2016	261	174.87
IGEM/GM/8 Part 2 Ed 2	Locations, housings and compounds (1796)	2016	138	92.46
IGEM/GM/8 Part 3 Ed 2	Fabrication, installation, testing and commissioning (1797)	2016	168	112.56
IGEM/GM/8 Part 4 Ed 2	Operation and maintenance (1798)	2016	138	92.46
IGEM/GM/8 Part 5 Ed 2	Notices and labels (1799)	2016	138	92.46
IGEM/GM/PRS/1	Meter Installation fittings (1793)	2017	156	104.52

IGEM/GM/PRS/3	Meter Regulators for gas flow rates not exceeding 6m <sup>3</sup> h <sup>-1</sup> and inlet pressures not exceeding 75 mbar (1859)	2022	98	65.66
with amendments July 2022 IGEM/GM/PRS/6	Meter connectors (1794)	2016	127	85.09
IGEM/GM/PRS/11	Purchasing specification for diaphragm gas meters (1853)	2024	112	74
		2016	120	02.46
IGEM/GM/PRS/28	Medium pressure single-stage regulators for gas flow rates not exceeding 6m³ h <sup>-1</sup> (1791)	2016	138	92.46
IGEM/GM/PRS/29	Medium pressure two-stage meter regulators for gas flow rates not exceeding 6m <sup>3</sup> h <sup>-1</sup> (1790)	2016	138	92.46
IGEM/GM/PRS/33	Meter regulators of nominal diameter 32mm (11/4 inch) and not exceeding 150mm (6 inch) and for inlet pressures not exceeding 75 mbar (1792)	2016	98	65.66
IGEM/GM/PRS/40	Medium pressure meter installation kits for flow rates not exceeding 6 m <sup>3</sup> h <sup>-1</sup> (1807)	2019	138	92.46
IGEM/GM/PRS/41	Low pressure meter installation kits (1808)	2019	138	92.46
IGEM/GM/PRS/50	Meter and converter serial numbering and model names	2019	98	65.66
UTILISATION	(1811)			
IGE/UP/1 Ed 2	Strength testing, tightness testing and direct purging of	2005		
Reprint with Amendments March 2005	industrial and commercial gas installations (1716)	2003	190	127.30
IGE/UP/1A Ed 2 Reprint with Amendments March 2005	Strength and tightness testing and direct purging of small low pressure industrial and commercial Natural Gas installations (1717)	2005	156	104.52
IGEM/UP/1B Ed 3 with Amendments October 2012	Tightness testing and direct purging of small Liquefied Petroleum Gas/Air, Natural Gas and Liquefied Petroleum Gas installations. (1759). Set of amendments issued 2012	2012	179	119.93
IGEM/UP/1C	Strength testing, tightness testing and direct purging of Natural Gas and LPG meter installations (1751)	2011	146	97.82
IGEM/UP/2 Ed 3	Installation pipework on industrial and commercial premises (1771)	2014	347	232.49
IGEM/UP/3 Ed 3	Gas fuelled spark ignition and dual fuel engines (1781)	2015	168	112.56
IGEM/UP/4 Ed 4	Commissioning of gas fired plant on industrial and commercial	2016	105	70.35
IGEM/UP/6 Ed 3	premises (1801) Application of compressors to Natural Gas fuel systems (1813)	2020	168	112.56
IGE/UP/7 Ed 2 with Amendments October 2008	Gas installations in timber framed and light steel framed buildings (1722). Set of amendments issued 2008.  Download for free at <a href="https://www.igem.org.uk">www.igem.org.uk</a>	2006	168	112.56
IGEM/UP/9 Ed 3	Application of Natural Gas and fuel oil systems to gas turbines	2022	168	112.56
IGEM/UP/10 Ed 4 with Amendments March 2016 and February 2017	and supplementary and auxiliary fired burners (1863)  Installation of flued gas appliances in industrial and commercial premises (1800)	2017	248	166.16
IGEM/UP/11 Ed 3	Gas installations for educational establishments (1821)	2018	146	97.82
IGEM/UP/11 Ed 3 Supplement 1	Operation and management of gas installations within educational establishments (1845)	2022	29	19.43
IGEM/UP/12 Ed 3	Application of burners and controls to gas fired process plant (1873)	2023	238	159.46
IGEM/UP/16 Ed 2 Amendments November 2023	Design for Natural Gas installations on industrial and commercial premises with respect to DSEAR (1882)  The amendments may be Downloaded for free at www.igem.org.uk	2023	138	92.46
IGEM/UP/17 Edition 2	Shared chimney and flue systems for domestic gas appliances (1826)	2018	179	119.93
IGEM/UP/18	Gas installations for vehicle repair and body shops (1758)	2012	104	69.68
IGEM/UP/19 Edition 2	Design and application of interlock devices and associated systems used with gas appliance installations in commercial catering establishments (1865).	2022	146	97.82
IGEM/UP/19 Edition 2 Supplement 1	Catering equipment engineers guide to relevant sections of IGEM/UP/19 (1876). <b>Download for free at www.igem.org.uk</b>	2024	28	18.76
IGEM/UP/20	CNG Fuelling Stations (1775)	2014	173	115.91
GAS LEGISLATION				
GAS LEGISLATION  IGEM/GL/1 Ed 3	Planning of gas distribution systems of MOP not exceeding 16 har (1847)	2021	146	97.82
	Planning of gas distribution systems of MOP not exceeding 16 bar (1847)  Planning of transmission and storage systems operating at pressures exceeding 16 bar (1816)	2021	146 105	97.82 70.35

IGEM/SR/29 Ed 2	Dealing with gas escapes (1827)	2019	138	92.46
IGEM/SR/28 Ed 2	volume Hydrogen in Natural Gas (1871) Trenchless techniques (1753)	2011	201	134.67
IGEM/SR/25 Ed 2 with Amendments- Hydrogen Supplement 1	Hazardous area classification of installations using Hydrogen or blends of up to and including 20% by	2022	171	193.63
IGEM/SR/25 Ed 2 with Amendments	Hazardous area classification of Natural Gas installations (1748). Set of amendments issued 2013	2013	289	193.63
IGE/SR/23 2 <sup>nd</sup> Impression	Venting of Natural Gas (1623)	1995	146	97.82
GE/SR/22 2 <sup>nd</sup> Impression	Purging operations for fuel gases in transmission, distribution and storage (1625)	1999	105 146	97.82
GEM/SR/18 Ed 3	Safe working practices to ensure the integrity of gas assets and associated installations (1828)	2019	105	70.35
GEM/SR/16 Ed 2	Set of amendments issued 2015  Odorant systems for gas transmission and distribution (1734)	2008	138	92.46
GEM/SR/15 Ed 5 with	Integrity of safety-related systems in the gas industry (1784).	2015	185	123.95
GEM/SR/14 Ed 2	(1752)  Fixed volume storage for lighter than air gases (1742)	2010	168	112.56
GEM/SR/4 Ed 3	Variable volume gasholders storing lighter than air gases	2011	203	136.01
SAFETY				
IGEM/G/14 (original version was IGEM/TD/102)	Competency framework (1886)	2024	138	92.46
IGEM/G/13 with amendments August 2023	outlet of the meter (1875)  Download for free at www.igem.org.uk		FREE	FREE
IGEM/G/12	Domestic supply capacity and operating pressure at the	2023	201	134.67
CEM (C /12	Download for Free at <u>www.igem.org.uk</u> Universally adopted graphical symbols (1852)	2023	201	40.45
GEM/G/11 Supplement 1	Responding to domestic CO alarm activations/reports of fumes after attendance by the emergency service provider or the Liquefied Petroleum Gas supplier (1851)	2022	FREE	FREE
GEM/G/11 Edition 2 ith amendments July 2019 and July 022	Gas Industry Unsafe Situations Procedure (1866)  Download for free at www.igem.org.uk	2022	FREE	FREE
GEM/G/11 Edition 2 h amendments July 2019 and July 2022	Gas Industry Unsafe Situations Procedure (1866).  Hard copy of this document is available at https://gassafetyshop.co.uk/	2022	57	38.19
GEM/G/10	Non-return valves (1785)	2016	98	65.66
GEM/G/8	Handling, transport and storage of PE pipe and fittings (1749)	2010	138	92.46
GEM/G/7	Risk assessment techniques (1787)	2016	196	131.32
GEM/G/6 Edition 2	Gas supplies to mobile dwellings (1862)	2024	138	92.46
GEM/G/4 Edition 2	Definitions for the gas industry (1763)	2012	FREE	FREE
GEM/G/5 Edition 3 vith amendments April 2023	Gas installations in multi-occupancy buildings (1874) Amendments are available to download for free at	2023	231	154.77
GEM/G/1 Edition 2	Defining the end of the Network, a meter installation and installation pipework (1765).  Download for free at <a href="https://www.igem.org.uk">www.igem.org.uk</a>	2013	146	97.82
GEM/G/0 Edition2	A standard for IGEM standards (1842)	2022	FREE	FREE
GENERAL				
GEM/GL/9 Ed 2	Guidance for large consumers in dealing with Natural Gas supply emergencies. (1806) <b>Download at</b> <b>www.igem.org.uk</b>	2018	FREE	FREE
GEM/GL/8 Ed 4	Reporting and investigation of gas related-incidents (1869)	2022	168	112.56
GEM/GL/6 Ed 3	Safe Control of Operations for Gas Networks (1814)	2018	168	112.56
GEM/GL/5 Ed 3	Procedures for managing new works, modifications and repairs (1783)	2015	127	85.09

INDUSTRY GUIDANCE				
IGEM/IG/1 Edition 2	Standards of training in gas work (1839).  Download for free at <a href="https://www.igem.org.uk">www.igem.org.uk</a>	2021	34	22.78
IGEM/IG/1 Supplement 1	Non domestic training specification (1788).  Download for free at www.igem.org.uk	2016	34	22.78
IGEM/IG/1 Ed 2 Supplement 2	Domestic Natural Gas training specification (1846)  Download for free at www.igem.org.uk	2022	113	75.71
IGEM/IG/1 Ed 2 Supplement 3	Metering/emergency service provider Natural Gas training specification - Utilisation sector (1870) Download for free at www.igem.org.uk	2023	32	21.44
IGEM/IG/1 Ed 2 Supplement 5	Interim Hydrogen training specification (1878)  Download for free at www.igem.org.uk	2023	32	21.44
IGEM/IG/3	Response to LNG road tanker emergencies (1810)	2023	146	97.82
IGEM/IG/4 with amendments February 2024	Bulk transport of LNG – By Road (1883)	2024	146	97.82
	H AND TIGHTNESS TESTING AND DI 1A EDITION 2 (shrink wrapped pads			
StT/UP/1A	Certificate of strength testing for IGE/UP/1A	2004	29	19.43
TT/UP/1A	Certificate of tightness testing for IGE/UP/1A	2004	29	19.43
DP/UP/1A	Certificate of direct purging for IGE/UP/1A	2004	29	19.43
StT/UP/1	Certificate of strength testing for IGE/UP/1	2004	29	19.43
TT/UP/1	Certificate of tightness testing for IGE/UP/1	2004	29	19.43
DP/UP/1	Certificate of direct purging for IGE/UP/1	2004	29	19.43

Ed = Edition. Imp = Impression. Supp = Supplement.

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IGEM/TD/1 Ed 6		IGEM/GM/6 Ed 3		IGE/UP/7 Ed 2		IGEM/G/13 with amendments	
IGEM/TD/1 Ed 6 Supplement 2		IGEM/GM/7B Ed 2		IGEM/UP/12 Ed 3		IGEM/G/14	
IGEM/TD/1 Ed 5 Supp 1		IGEM/GM/8 Part 5 Ed 2		IGEM/UP/16 Ed 2 with Amendments November 2023		IGEM/SR/4 Ed 3	
IGEM/TD/2 Ed 3		IGEM/GM/PRS/1		IGEM/UP/17 Ed 2		IGEM/SR/14 Ed 2	
IGEM/TD/3 Ed 5		IGEM/GM/PRS/3		IGEM/UP/18		IGEM/SR/15 Ed 5	
IGEM/TD/3 Ed 5 Supp 1		IGEM/GM/PRS/6		IGEM/UP/19 Ed 2		IGEM/SR/16 Ed 2	
IGE/TD/4 Ed 5		IGEM/GM/PRS/28		IGEM/UP/19 Ed 2 S 1		IGE/SR/18 Ed 3	
IGEM/TD/12 Ed 3		IGEM/GM/PRS/29		IGEM/UP/20		IGE/SR/22	
IGEM/TD/13 Ed 3		IGEM/GM/PRS/33		IGEM/GL/1 Ed 3		IGE/SR/23	
IGEM/TD/13 Ed 3 Supplement 1		IGEM/GM/PRS/40		IGEM/GL/2 Ed 3		IGEM/SR/25 Ed 2	
IGEM/TD/13 Ed 3 Supplement 2		IGEM/GM/PRS/41		IGEM/GL/4 Ed 3		IGEM/SR/25 Ed 2 WA Hydrogen Supplement 1	
IGEM/TD/16 Ed 2		IGEM/GM/PRS/50		IGEM/GL/5 Ed 3		IGEM/SR/28 Ed 2	
IGEM/TD/17		IGE/UP/1 Ed 2		IGEM/GL/6 Ed 3		IGEM/SR/29 Ed 2	
IGEM/TD/19		IGE/UP/1A Ed 2		IGEM/GL/8 Ed 3		StT/UP/1A	
IGEM/TD/21		IGEM/UP/1B Ed 3		IGEM/GL/9 Ed 2		TT/UP/1A	
IGEM/TD/22		IGEM/UP/1C		IGEM/G/0 Ed 2		DP/UP/1A	
IGEM/TD/101 Ed 3		IGEM/UP/2 Ed 3		IGEM/G/1 Ed 2		StT/UP/1	
IGEM/TD/102		IGEM/UP/3 Ed 3		IGEM/G/4 Ed 2		TT/UP/1	
IGEM/GM/4 Ed 3		IGEM/UP/4 Ed 4		IGEM/G/5 Ed 3 with amendments April 2023		DP/UP/1	

IGEM/GM/7A Ed 2	IGE/UP/9 Ed 3	IGEM/G/6 Ed 2	IGEM/IG/1 Ed 2
IGEM/GM/8 Part 1 Ed 2	IGEM/UP/10 Ed 4	IGEM/G/7	IGEM/IG/1 Supp 1
IGEM/GM/8 Part 2 Ed 2	IGEM/UP/11 Ed 3	IGEM/G/8	IGEM/IG/1 Ed 2 Supp 2
IGEM/GM/8 Part 3 Ed 2	IGEM/UP/11 Ed 3 Supp 1	IGEM/G/10	IGEM/IG/1 Ed 2 Supp 3
IGEM/GM/8 Part 4 Ed 2		IGEM/G/11 Ed 2	IGEM/IG/1 Ed 2 Supp 5
		IGEM/G/11 Supp 1	IGEM/IG/3
			IGEM/IG/4 with amendments

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