

Types of gas and the corresponding supply pressures according to Article 2(2) of Council Directive 90/396/EEC of 29 June 1990

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m ³ or kWh/m ³ (0 °C)	MJ/m ³ or kWh/m ³ (15 °C)	Minimum	Nominal	Maximum
AUSTRIA	SECOND					
	Group H	47,7–56,5 MJ/m ³		18	20	25
	THIRD					
	Group P		72,9–76,8 MJ/m ³	42,5	50	57,5
	Group B/P		72,9–87,3 MJ/m ³	42,5	50	57,5
				In leisure accommodation vehicles and boats		
				25	30	35 ⁽¹⁾
BELGIUM	SECOND					
	Group L ^(a)	12,19–13,03 kWh/m ³	11,56–12,35 kWh/m ³	18 ⁽²⁾	25 ⁽²⁾	30 ⁽²⁾
		(43,90–46,89 MJ/m ³)	(41,61–44,45 MJ/m ³)			
	Group H ^(a)	13,65–15,78 kWh/m ³	12,94–14,96 kWh/m ³	15 ⁽²⁾	20 ⁽²⁾	25 ⁽²⁾
		(49,13–56,82 MJ/m ³)	(46,57–53,86 MJ/m ³)			
	THIRD					
	Group P ^(a)	22,64 kWh/m ³ ⁽³⁾	21,46 kWh/m ³ ⁽³⁾	25 ⁽²⁾	37 ⁽²⁾	45 ⁽²⁾
		(81,5 MJ/m ³)	(77,26 MJ/m ³)	42,5 ^{(2) (4)}	50 ^{(2) (4)}	57,5 ^{(2) (4)}
	Group B ^(a)	25,64 kWh/m ³ ⁽⁵⁾	24,30 kWh/m ³ ⁽⁵⁾	20 ⁽²⁾	28–30 ⁽²⁾	35 ⁽²⁾
		(92,3 MJ/m ³)	(87,50 kWh/m ³)			

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
BULGARIA	SECOND					
	Group H	48,2–53,6 MJ/m³	45,7–54,7 MJ/m³	17	20	25
	THIRD					
	Group B/P		72,9–87,3 MJ/m³	25	30	35
CROATIA						
CYPRUS	THIRD		80,2–85,9 MJ/m³	20	28–30	35
CZECH REPUBLIC	SECOND					
	Group H		45,7–54,7 MJ/m³	17	20	25
	THIRD					
	Group B		81,8–87,3 MJ/m³	25	30	35
				42,5	50	57,5
	Group B/P		72,9–87,3 MJ/m³	25	30	35
				42,5	50	57,5
	Group P		72,9–76,8 MJ/m³	25	30	35
				25	37	45
				42,5	50	57,5
DENMARK	FIRST Group a	23,60–26,20 MJ/m³ 6,56–7,28 kWh/m³	22,37–24,84 MJ/m³ 6,21–6,90 kWh/m³	6 ⁽⁶⁾	8 ⁽⁶⁾	15 ⁽⁶⁾
	SECOND Group H	50,76–55,80 MJ/m³ ⁽⁵²⁾ ⁽⁵³⁾ 14,10–15,5 kWh/m³ ⁽⁵²⁾ ⁽⁵³⁾	48,12–52,90 MJ/m³ ⁽⁵²⁾ ⁽⁵³⁾ 13,37–14,69 kWh/m³ ⁽⁵²⁾ ⁽⁵³⁾	17 ⁽⁶⁾	20 ⁽⁶⁾	25 ⁽⁶⁾
	THIRD Group B/P	76,90–92,10 MJ/m³ 21,36–25,58 kWh/m³	72,90–87,31 MJ/m³ 20,25–24,25 kWh/m³	25 ⁽⁶⁾	30 ⁽⁶⁾	35 ⁽⁶⁾
ESTONIA	SECOND					
	Group H	52,99 MJ/m³		17	20	25
	THIRD	79,6–89,9 MJ/m³		25	30	35

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m ³ or kWh/m ³ (0 °C)	MJ/m ³ or kWh/m ³ (15 °C)	Minimum	Nominal	Maximum
FINLAND	SECOND					
	Group H	52,99 MJ/m ³		17	20	25
	THIRD	81,89 MJ/m ³		25	30	35
FRANCE	FIRST	24 MJ/m ³ ⁽⁷⁾			8	
		25,6 MJ/m ³ ⁽⁸⁾			8	
	SECOND	50 MJ/m ³ ⁽⁹⁾			20 ⁽¹⁰⁾	
	Group H	48,2–56,5 MJ/m ³			20 ⁽¹⁰⁾	
	Group L	42,5–46,8 MJ/m ³			25	
	THIRD					
	Group B	89,8 MJ/m ³ ⁽¹¹⁾		20	28/30	35
				42,5	50 ⁽¹²⁾	57,5
				60	112 ⁽¹³⁾	140
	Group B/P	79,6–89,9 MJ/m ³ ⁽¹⁵⁾		25	28/30 ⁽¹⁴⁾	35
	Group P	79,6 MJ/m ³ ⁽¹⁶⁾		25	37	45
				42,5	50 ⁽¹²⁾	57,5
				100	148 ⁽¹⁷⁾	180

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
GERMANY	SECOND					
	Group H (c)	46,08–56,52 MJ/m³	43,70–53,56 MJ/m³	18	20	25
		12,80–15,70 kWh/m³	12,14–14,88 kWh/m³			
	Group L (c)	37,80–46,80 MJ/m³	35,83–44,36 MJ/m³	18	20	25
		10,50–13,00 kWh/m³	9,95–12,32 kWh/m³			
	THIRD					
	Group P (d)	79,00–81,70 MJ/m³	74,89–77,40 MJ/m³	42,5	50	57,5
		21,94–22,69 kWh/m³	20,80–21,51 kWh/m³			
	Group B/P	79,00–92,70 MJ/m³	74,89–87,87 MJ/m³	42,5	50	57,5
		21,94–25,75 kWh/m³	20,80–24,41 kWh/m³			
				In leisure accommodation vehicles and boats		
				25	30	35 (18)
GREECE	SECOND	48,75–53,92 MJ/m³		18		23
	THIRD		86,1–87,8 MJ/m³	28	30	
			77,0–80,0 MJ/m³			37
			88,0–88,4 MJ/m³			

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
HUNGARY	SECOND					
	Group H		45,66–54,76 MJ/m³	18	25 ⁽¹⁹⁾	33
				75	85 ⁽²⁰⁾	100
	Group S		36,29–41,58 MJ/m³	18	25 ⁽¹⁹⁾	33
				75	85 ⁽²⁰⁾	100
	THIRD					
	Group B	91,63 MJ/m³		25	29 ⁽²¹⁾	35
				42,5	50 ⁽²²⁾	57,5
	Group B/P	81,45–91,63 MJ/m³		25	29 ⁽²¹⁾	35
				42,5	50 ⁽²²⁾	57,5
Group P	81,45 MJ/m³		25	29 ⁽²¹⁾	35	
			42,5	50 ⁽²²⁾	57,5	
IRELAND	SECOND					
	Group H		45,7–54,7 MJ/m³	17	20	25
	THIRD		72,9–78,7 MJ/m³ ⁽²³⁾	25	37	45
			81,8–87,9 MJ/m³ ⁽²⁴⁾	20	28	35
ITALY	FIRST					
	Group A	21,76 MJ/m³	24,75 MJ/m³	6	8	15
	SECOND					
	Group H	53,16 MJ/m³	50,72 MJ/m³	17	20	25
	Group M ⁽²⁵⁾ (e)	44,76 MJ/m³	42,29 MJ/m³	17	20	25
	THIRD	80,58 MJ/m³	87,33 MJ/m³	20	28–30	35
		70,69 MJ/m³	76,84 MJ/m³	25	37	45
LATVIA	SECOND					
	Group H		41,2 – 54,4 MJ/m³ ⁽²⁶⁾	17	20	25

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m ³ or kWh/m ³ (0 °C)	MJ/m ³ or kWh/m ³ (15 °C)	Minimum	Nominal	Maximum
LITHUANIA	SECOND					
	Group H		50,33–50,48 MJ/m ³	17	20	25
	THIRD		76,6–87,8 MJ/m ³		30	
LUXEMBOURG	THIRD					
	Group H	41,866 MJ/m ³		30		100
MALTA	THIRD		80,02–86,06 MJ/m ³	28	30	35
NETHERLANDS	SECOND					
	Group L	43,9 MJ/m ³ ⁽²⁷⁾			25	
	Group H	53,6 MJ/m ³ ⁽²⁸⁾			25	
	⁽⁴⁶⁾	43,46–45,3 MJ/m ³ ⁽⁴⁷⁾		23,7 ⁽⁴⁸⁾	25 ⁽⁴⁸⁾	30 ⁽⁴⁸⁾
	Group E ⁽⁴⁹⁾	53,51 MJ/m ³		19 ⁽⁵¹⁾	20 ⁽⁵¹⁾	25 ⁽⁵¹⁾
		47,00–55,7 MJ/m ³ ⁽⁵⁰⁾			17–25 ⁽⁵¹⁾	
	THIRD	92,3 MJ/m ³ ⁽²⁹⁾			30	
		81,5 MJ/m ³ ⁽³⁰⁾			30 + 50	
POLAND	SECOND					
	Group E	45,1–54,1 MJ/m ³	42,7–51,2 MJ/m ³	16	20	25
	Gases combined with second family ⁽³¹⁾					
	Group Lm	23,1–27,1 MJ/m ³	21,8–25,6 MJ/m ³	6	8	11
	Group Ln	27,1–32,6 MJ/m ³	25,6–30,8 MJ/m ³	10,5	13	16
	Group Ls	32,6–37,6 MJ/m ³	30,8–35,6 MJ/m ³	10,5	13	16
	Group Lw	37,6–45,1 MJ/m ³	35,6–42,7 MJ/m ³	17,5	20	23
	THIRD	81,2–92,5 MJ/m ³	72,9–87,3 MJ/m ³	29	36	44

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
PORTUGAL	SECOND					
	Group H	48,1–58,0 MJ/m³ (32)			20	
	THIRD					
	Group P		77,1 MJ/m³ (33)		37 (34) (36)	
	Group B		86,1 MJ/m³ (33)		30 (35) (36)	
ROMANIA	SECOND					
	Group A (L)	37,8–46,8 MJ/m³	35,9–44,4 MJ/m³	15	20	25
	Group A (H)	46,1–56,6 MJ/m³	43,7–53,7 MJ/m³	15	20	25
	THIRD					
	Group P	Min. 64,9 MJ/m³		20	29	35
	Group B/P	Min. 70,7 MJ/m³		20	29	35
SLOVAKIA	SECOND					
	Group H		45,67–54,76 MJ/m³	17	20	25
	THIRD					
	Group B		80,58–87,33 MJ/m³	25	30	35
				42,5	50	57,5
	Group B/P		72,90–87,33 MJ/m³	25	30	35
				42,5	50	57,5
	Group P		72,90–76,84 MJ/m³	25	30	35
				25	37	45
				42,5	50	57,5

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
SLOVENIA	SECOND					
	Group H		45,7–54,7 MJ/m³	17	20	25
	THIRD					
	Group P		72,9–76,8 MJ/m³	25	37	45
	Group B/P		72,9–87,3 MJ/m³	25	30	35
SPAIN	FIRST		22,4–24,8 MJ/m³		8	
	SECOND		45,7–54,7 MJ/m³	17	20	25
	THIRD		72,9–87,3 MJ/m³		28	
					37 ⁽³⁷⁾	
					50 ⁽³⁸⁾	
SWEDEN	FIRST	22,4–24,8 MJ/m³		6	8	15
	SECOND	51,9–55,8 MJ/m³		17	20	25
	THIRD	75,1–81,3 MJ/m³		25	30	35
UNITED KINGDOM	SECOND					
	Group H		46,5–52,85 MJ/m³	18,5		21 ⁽³⁹⁾
	THIRD		81,8–87,9 MJ/m³	20	28	35 ⁽⁴⁰⁾
			72,9–78,7 MJ/m³	25	37	45 ⁽⁴¹⁾
			72,9–78,7 MJ/m³	42,5	50	57,5 ⁽⁴²⁾
			72,9–87,9 MJ/m³	—	—	— ⁽⁴³⁾
	Group B/P ⁽⁴⁴⁾		72,9–87,3 MJ/m³	20	28	35

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- (a) Additional footnote to 'group L', 'group H', 'group P' and 'group B'.

Wobbe index (gross) indicated at 0 °C and 15 °C are under pressure of 1013,25 mbar.

- (b) Additional footnote to 'group A', 'group H' and 'group P/B'.

Wobbe index (gross) indicated at 0 °C in MJ/m³n.

- (c) Additional footnote to 'group H' and 'group L'.

The safe operation of the gas appliances has to be ensured for group H up to at least 43,20 MJ/m³ (0 °C) respectively 40,95 MJ/m³ (15 °C) and for group L up to at least 36 MJ/m³ (0 °C) respectively 34,13 MJ/m³ (15 °C).

- (d) Additional footnote to 'group P'.

Supply from stationary tank only.

- (e) Additional footnote to 'group M'.

Group M is specific to Italy and is communicated by Italy. Group M is not adopted by CEN.

Non-EU members of the EEA

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
ICELAND						
NORWAY	SECOND					
	Group H		48,3–52,8 MJ/m³	17	20	25
	THIRD					
	Group B/P	81,7 MJ/m³		25	30	35
LIECHTENSTEIN						

Custom Union

Country	Gas family	Wobbe index (gross) in		Supply pressure in mbar ⁽²⁾		
		MJ/m³ or kWh/m³ (0 °C)	MJ/m³ or kWh/m³ (15 °C)	Minimum	Nominal	Maximum
TURKEY	SECOND					
	Group H		45,7–54,7 MJ/m³	17 ⁽¹⁰⁾	20 ⁽¹⁰⁾	25 ⁽¹⁰⁾
	THIRD					
	Group P		72,9–76,8 MJ/m³ ⁽⁴¹⁾	25	37	45
	Group B/P		72,9–87,3 MJ/m³ ⁽⁴⁵⁾	25	28–30	35

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- (1) For existing gas appliances in leisure accommodation vehicles and boats 50 mbar are permitted.
 - (2) Pressure at the inlet of the gas appliance.
 - (3) Commercial propane conformed to the Royal Decree of 20 December 1999.
 - (4) Only for certain non-domestic appliances (catering etc.).
 - (5) Commercial butane conformed to the Royal Decree of 20 December 1999.
 - (6) Inlet pressure for the appliances in mbar.
 - (7) Butane/air mixture.
 - (8) Propane/air mixture 1.
 - (9) Propane/air mixture 2.
 - (10) Pressure level commonly used in the 'low pressure' distribution network. Some other higher pressures may be used, the most usual one is 300 mbar.
 - (11) Commercial butane, distributed by tanks or cylinders.
 - (12) Only for certain non-domestic appliances (catering etc.).
 - (13) This value will disappear in the domestic sector.
 - (14) Standardised supply pressure of 28/30 mbar for domestic appliances equipping leisure vehicles which can use equally commercial butane or commercial propane or a mixture of the two gases (LPG fuel).
 - (15) Mixture of commercial butane and commercial propane required for carburetting and used to supply domestic appliances found in motor homes.
 - (16) Commercial propane, distributed by tanks or cylinders or in gas pipe networks.
 - (17) This value is only available for gas distributed in tanks or cylinders and will disappear in the domestic sector.
 - (18) For existing gas appliances in leisure accommodation vehicles and boats 50 mbar are permitted.
 - (19) For gas delivery for public sector.
 - (20) Direct gas delivery for big users.
 - (21) Standardised supply pressure of 28/30 mbar for domestic appliances only.
 - (22) This value is only available for gas distributed in tanks or cylinders and will disappear in the domestic sector.
 - (23) Propane.
 - (24) Butane.
 - (25) LPG/air mixture.
 - (26) Convention accordingly conditions for dry gas in Latvia are: temperature 20°C, atmospheric pressure 1,01325 bar.
 - (27) Gas delivery for public purposes.
 - (28) Direct gas delivery for "big users".
 - (29) LPG gas (butane/propane mixture).
 - (30) Gas group 3P for propane installations.
 - (31) Gases described as combined with second family are not defined in standard EN 437. However this standard foresees in appendix B 'National situations' such peculiar gases combined with I or II

family.

- (32) Calculated under reference conditions 1013 mbar and 0 °C in relation of the upper calorific value.
 - (33) Upper calorific value calculated under 15 °C reference temperature.
 - (34) In case of commercial propane.
 - (35) In case of commercial butane.
 - (36) For catering appliances, the pressure of 50 mbar for commercial butane and 67 mbar for commercial propane are used.
 - (37) Domestic use: 28 mbar butane, 37 mbar propane. Appliances must be designed to use both gases at the prescribed pressures.
 - (38) Propane for industrial use.
 - (39) Meter outlet pressure.
 - (40) Commercial butane.
 - (41) Commercial propane.
 - (42) Commercial propane.
 - (43) Higher pressure, including vapour pressure, e.g. for camping use.
 - (44) This category only for use in appliances installed in caravans and motor caravans.
 - (45) Commercial propane-butane mixture.
 - (46) This group is specific to the Netherlands. It involves gases with a low Wobbe index which may contain a relatively high proportion of higher hydrocarbons and carbon dioxide. It was not included in annex B of EN 437. This nameless specific group of low calorific gas will not be supplied before 1 January 2022 at the earliest.
 - (47) The safe operation of gas appliances in this group must be guaranteed for gases which contain a high level of carbon dioxide, molecular hydrogen or higher hydrocarbons. A higher Wobbe index may apply for users in exceptional geographical locations, which effectively means that a different gas group is applicable.
 - (48) Supply pressures indicate the gas pressure, after the gas has passed through any gas pressure regulator, for the gas meter installed on the premises of the end consumer. Supply pressures to industrial consumers may be considerably higher.
 - (49) Group E gas will not be supplied to current users of low calorific gas before 1 January 2030 at the earliest.
 - (50) This is the national Wobbe-index bandwidth.
 - (51) For domestic consumers, supply pressures reflects the pressure on entry into the meter. Supply pressures to non-domestic consumers may be considerably higher.
 - (52) Abnormal supply conditions: provided that the Danish Safety Technology Authority has approved a special contingency plan allowing supply in an abnormal supply range, the Wobbe index can be between 50,04 and 50,76 MJ/mn3 (0 °C) / 13,9-14,1 kWh/mn3 (0 °C).
 - (53) It is permitted to inject biogas upgraded to natural gas quality, i.e. upgraded biogas with a Wobbe index between a minimum of 50,76 MJ/mn3 (0 °C)/and a maximum of 55,80 MJ/mn3 (0 °C).
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