

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

(2004/C 296/02)

(This publication is based on information received by the Commission services from the Member States)

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 (43,90-46,89 MJ/m ³)	11,56-12,35 kWh/m ³ (41,61-44,45 MJ/m ³)	18 ⁽²⁾	25 ⁽²⁾	30 ⁽²⁾
	Group H (a)	13,65-15,78 kWh/m ³ (49,13-56,82 MJ/m ³)	12,94-14,96 kWh/m ³ (46,57-53,86 MJ/m ³)	15 ⁽²⁾	20 ⁽²⁾	25 ⁽²⁾
	THIRD					
	Group P (a)	22,64 kWh/m ³ ⁽³⁾ (81,5 MJ/m ³)	21,46 kWh/m ³ ⁽³⁾ (77,26 MJ/m ³)	25 ⁽²⁾ 42,5 ⁽²⁾ ⁽⁴⁾	37 ⁽²⁾ 50 ⁽²⁾ ⁽⁴⁾	45 ⁽²⁾ 57,5 ⁽²⁾ ⁽⁴⁾
	Group B (a)	25,64 kWh/m ³ ⁽⁵⁾ (92,3 MJ/m ³)	24,30 kWh/m ³ ⁽⁵⁾ (87,50 kWh/m ³)	20 ⁽²⁾	28-30 ⁽²⁾	35 ⁽²⁾
CYPRUS	THIRD	88,2-89,4 MJ/m ³		20	28-30	35
CZECH REPUBLIC	SECOND					
	Group H		45,7-54,7 MJ/m ³	17	20	25
	THIRD					
	Group B		81,8-87,3 MJ/m ³	25 42,5	30 50	35 57,5
	Group B/P		72,9-87,3 MJ/m ³	25 42,5	30 50	35 57,5
	Group P		72,9-76,8 MJ/m ³	25 25 42,5	30 37 50	35 45 57,5

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	
DENMARK	FIRST Group a (b)	21,6-23,9 MJ/m ³		6 ⁽⁶⁾	8 ⁽⁶⁾	15 ⁽⁶⁾	
	SECOND Group H (b)	51,9-55,8 MJ/m ³		17 ⁽⁶⁾	20 ⁽⁶⁾	25 ⁽⁶⁾	
	THIRD Group B/P (b)	76,9-92,1 MJ/m ³		25 ⁽⁶⁾	30 ⁽⁶⁾	35 ⁽⁶⁾	
ESTONIA	SECOND Group H	52,99 MJ/m ³		17	20	25	
	THIRD	79,6-89,9 MJ/m ³		25	30	35	
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⁾ 25,6 MJ/m ³ ⁽⁸⁾			8 8		
	SECOND Group H Group L	50 MJ/m ³ ⁽⁹⁾ 48,2-56,5 MJ/m ³ 42,5-46,8 MJ/m ³			20 ⁽¹⁰⁾ 20 ⁽¹⁰⁾ 25		
	THIRD Group B	89,8 MJ/m ³ ⁽¹¹⁾		20 42,5 60	28/30 50 ⁽¹²⁾ 112 ⁽¹³⁾	35 57,5 140	
	Group B/P Group P	79,6-89,9 MJ/m ³ ⁽¹⁵⁾ 79,6 MJ/m ³ ⁽¹⁶⁾		25 25 42,5 100	28/30 ⁽¹⁴⁾ 37 50 ⁽¹²⁾ 148 ⁽¹⁷⁾	35 45 57,5 180	
	GERMANY	SECOND Group H (c) Group L (c)	46,08-56,52 MJ/m ³ 12,80-15,70 kWh/m ³ 37,80-46,80 MJ/m ³ 10,50-13,00 kWh/m ³	43,70-53,56 MJ/m ³ 12,14-14,88 kWh/m ³ 35,83-44,36 MJ/m ³ 9,95-12,32 kWh/m ³	18 18	20 20	25 25
	THIRD Group P (d) Group B/P	79,00-81,70 MJ/m ³ 21,94-22,69 kWh/m ³ 79,00-92,70 MJ/m ³ 21,94-25,75 kWh/m ³	74,89-77,40 MJ/m ³ 20,80-21,51 kWh/m ³ 74,89-87,87 MJ/m ³ 20,80-24,41 kWh/m ³	42,5 42,5	50 50	57,5 57,5	
					In leisure accommodation vehicles and boats		
			25	30	35 ⁽¹⁸⁾		

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
GREECE	SECOND	48,75-53,92 MJ/m ³		18		23
	THIRD		86,1-87,8 MJ/m ³ 77,0-80,0 MJ/m ³ 88,0-88,4 MJ/m ³	28	30	37
HUNGARY	SECOND					
	Group H		45,66-54,76 MJ/m ³	18 75	25 ⁽¹⁹⁾ 85 ⁽²⁰⁾	33 100
	Group S		36,29-41,58 MJ/m ³	18 75	25 ⁽¹⁹⁾ 85 ⁽²⁰⁾	33 100
	THIRD					
	Group B	91,63 MJ/m ³		25 42,5	29 ⁽²¹⁾ 50 ⁽²²⁾	35 57,5
	Group B/P	81,45-91,63 MJ/m ³		25 42,5	29 ⁽²¹⁾ 50 ⁽²²⁾	35 57,5
	Group P	81,45 MJ/m ³		25 42,5	29 ⁽²¹⁾ 50 ⁽²²⁾	35 57,5
IRELAND	SECOND					
	Group H		45,7-54,7 MJ/m ³	17	20	25
	THIRD		72,9-78,7 MJ/m ³ ⁽²³⁾ 81,8-87,9 MJ/m ³ ⁽²⁴⁾	25 20	37 28	45 35
ITALY	FIRST					
	Group A	21,76 MJ/m ³	24,75 MJ/m ³	6	8	15
	SECOND					
	Group H	53,16 MJ/m ³	50,72 MJ/m ³	17	20	25
	Group M ⁽²⁵⁾ (e)	44,76 MJ/m ³	42,29 MJ/m ³	17	20	25
	THIRD	80,58 MJ/m ³ 70,69 MJ/m ³	87,33 MJ/m ³ 76,84 MJ/m ³	20 25	28-30 37	35 45
LATVIA	SECOND					
	Group H		41,2 – 54,4 MJ/m ³ ⁽²⁶⁾	17	20	25
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

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
NETHERLANDS	SECOND					
	Group L	43,9 MJ/m ³ ⁽²⁷⁾			25	
	Group H	53,6 MJ/m ³ ⁽²⁸⁾			25	
	THIRD	92,3 MJ/m ³ ⁽²⁹⁾ 81,5 MJ/m ³ ⁽³⁰⁾			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
PORTUGAL	SECOND					
	Group H	48,1-58,0 MJ/m ³ ⁽³²⁾			20	
	THIRD					
	Group P		77,1 MJ/m ³ ⁽³³⁾		37 ⁽³⁴⁾ ⁽³⁶⁾	
	Group B		86,1 MJ/m ³ ⁽³³⁾		30 ⁽³⁵⁾ ⁽³⁶⁾	
SLOVAKIA	SECOND					
	Group H		45,67-54,76 MJ/m ³	17	20	25
	THIRD					
	Group B		80,58-87,33 MJ/m ³	25 42,5	30 50	35 57,5
	Group B/P		72,90-87,33 MJ/m ³	25 42,5	30 50	35 57,5
	Group P		72,90-76,84 MJ/m ³	25 25 42,5	30 37 50	35 45 57,5
SLOVENIA	SECOND					
	Group H		45,7-54,7 MJ/m ³	17	20	25
	THIRD					
	Group P		72,9-76,8 MJ/m ³	25	37	45
	Group B/P		72,9-87,3 MJ/m ³	25	30	35
SPAIN	FIRST		22,4-24,8 MJ/m ³		8	
	SECOND		45,7-54,7 MJ/m ³	17	20	25
	THIRD		72,9-87,3 MJ/m ³		28 37 ⁽³⁷⁾ 50 ⁽³⁸⁾	

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
SWEDEN	FIRST	25,4-28,7 MJ/m ³		6	8	15
	SECOND	51,9-55,8 MJ/m ³		17	20	25
	THIRD	75,1-81,3 MJ/m ³		25	30	35
UNITED KINGDOM	SECOND					
	Group H		46,5-52,85 MJ/m ³	18,5		21 ⁽³⁹⁾
	THIRD		81,8-87,9 MJ/m ³	20	28	35 ⁽⁴⁰⁾
			72,9-78,7 MJ/m ³	25	37	45 ⁽⁴¹⁾
			72,9-78,7 MJ/m ³	42,5	50	57,5 ⁽⁴²⁾
Group B/P ⁽⁴⁴⁾		72,9-87,3 MJ/m ³	20	28	35	

- (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.
- (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) For gas delivery for public purposes.
- (28) Direct gas delivery for 'big users' (grootverbruikers).
- (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.

Non-EU members of the EEA

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
NORWAY	SECOND Group H		48,3-52,8 MJ/m ³	17	20	25
	THIRD Group B/P	81,7 MJ/m ³		25	30	35