

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		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 (*)	
BELGIUM	SECOND					
	Group L (a)	12,19-13,03 kWh/m ³ (43,90-46,39 MJ/m ³)	11,56-12,35 kWh/m ³ (41,61-44,45 MJ/m ³)	18 (†)	25 (†)	30 (†)
	Group H (a)	13,65-15,78 kWh/m ³ (49,13-56,82 MJ/m ³)	12,94-14,96 kWh/m ³ (46,37-53,86 MJ/m ³)	15 (†)	20 (†)	25 (†)
	THIRD					
	Group P (a)	22,64 kWh/m ³ (†) (81,5 MJ/m ³)	21,46 kWh/m ³ (†) (77,26 MJ/m ³)	25 (†)	37 (†)	45 (†)
	Group B (a)	25,64 kWh/m ³ (†) (92,3 MJ/m ³)	24,30 kWh/m ³ (†) (87,50 kWh/m ³)	20 (†)	28-30 (†)	35 (†)
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	30	35
	Group E/P		72,9-87,3 MJ/m ³	25	30	35
			42,5	50	57,5	
			25	30	35	
			42,5	50	57,5	
			25	30	35	
			25	37	45	
			42,5	50	57,5	

Country	Gas family	Webbe index (gross in		Supply pressure in above		
		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 (°)	8 (°)	15 (°)
	SECOND Group H (b)	51,9-55,8 MJ/m ³		17 (°)	20 (°)	25 (°)
	THIRD Group B/P (b)	76,9-92,1 MJ/m ³		25 (°)	30 (°)	35 (°)
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 (°) 25,6 MJ/m ³ (°)			8 8	
	SECOND Group H	50 MJ/m ³ (°) 48,2-56,5 MJ/m ³			20 (°) 20 (°)	
	Group L	42,5-46,8 MJ/m ³			25	
	THIRD Group B	89,8 MJ/m ³ (°)		20 42,5 60	28/30 50 (°) 112 (°)	35 57,5 140
	Group B/P	79,6-89,9 MJ/m ³ (°)		25	28/30 (°)	35
	Group P	79,6 MJ/m ³ (°)		25 42,5 100	37 50 (°) 148 (°)	45 57,5 180
	GERMANY	SECOND Group H (c)	46,08-56,52 MJ/m ³ 12,80-15,70 kWh/m ³	43,70-55,56 MJ/m ³ 12,14-14,88 kWh/m ³	18	20
Group L (c)	37,80-46,80 MJ/m ³ 10,50-13,00 kWh/m ³	35,83-44,36 MJ/m ³ 9,95-12,32 kWh/m ³	18	20	25	
THIRD Group P (d)	79,00-81,70 MJ/m ³ 21,94-22,69 kWh/m ³	74,89-77,40 MJ/m ³ 20,80-21,51 kWh/m ³	42,5	50	57,5	
Group B/P	79,00-92,70 MJ/m ³ 21,94-25,75 kWh/m ³	74,89-87,87 MJ/m ³ 20,80-24,41 kWh/m ³	42,5	50	57,5	
				In leisure accommodation vehicles and boats		
			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
GREECE	SECOND	48,75-53,92 MJ/m ³	-	13		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 (P) 85 (P)	33 100
	Group S		36,29-41,58 MJ/m ³	18 75	25 (P) 85 (P)	33 100
	THIRD Group B	91,63 MJ/m ³		25 42,5	29 (P) 50 (P)	35 57,5
	Group B/P	81,45-91,63 MJ/m ³		25 42,5	29 (P) 50 (P)	35 57,5
	Group P	81,45 MJ/m ³		25 42,5	29 (P) 50 (P)	35 57,5
	IRELAND	SECOND Group H		45,7-54,7 MJ/m ³	17	20
	THIRD		72,9-78,7 MJ/m ³ (P) 81,8-87,9 MJ/m ³ (P)	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 (P) (P)	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 (P)	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 (9 °C)	MJ/m ³ or kWh/m ³ (15 °C)	Minimum	Nominal	Maximum
NETHERLANDS	SECOND					
	Group L	43,9 MJ/m ³ (9°)			25	
	Group H	53,6 MJ/m ³ (9°)			25 ¹⁾	
	THIRD	92,3 MJ/m ³ (9°) 81,5 MJ/m ³ (9°)			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 (9°)					
	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 (9°)			20	
	THIRD					
	Group P Group B		77,1 MJ/m ³ (9°) 86,1 MJ/m ³ (9°)		37 (9°) (9°) 30 (9°) (9°)	
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 42,5	30 50	35 57,5
	Group P			25 42,5	30 50	35 57,5
SLOVENIA	SECOND					
	Group H		45,7-54,7 MJ/m ³	17	20	25
	THIRD					
Group P Group B/P		72,9-76,8 MJ/m ³ 72,9-87,3 MJ/m ³	25 25	37 30	45 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 (9°) 50 (9°)	

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 (*)
	THIRD		81,8-87,9 MJ/m ³	20	28	35 (**)
			72,9-78,7 MJ/m ³	25	37	45 (**)
			72,9-78,7 MJ/m ³	42,5	50	57,5 (**)
		72,9-87,9 MJ/m ³	—	—	— (**)	
Group B/P (**)		72,9-87,3 MJ/m ³	20	28	35	

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

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

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

Wobbe index (gross) indicated at 0 °C is MJ/m³.

(k) 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 38 MJ/m³ (0 °C) respectively 34,13 MJ/m³ (15 °C).

(l) Additional footnote to 'group P'.

Supply from stationary tank only.

(m) Additional footnote to 'group M'.

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

(n) For existing gas appliances in leisure accommodation vehicles and boats 50 mbar are permitted.

(o) Pressure at the inlet of the gas appliance.

(p) Commercial propane conformed to the Royal Decree of 20 December 1999.

(q) Only for certain non-domestic appliances (catering etc.).

(r) Commercial butane conformed to the Royal Decree of 20 December 1999.

(s) Inlet pressure for the appliances in mbar.

(t) Butane/air mixture 1.

(u) Propane/air mixture 1.

(v) Propane/air mixture 2.

(w) Pressure level commonly used in the 'low pressure' distribution network. Some other higher pressure may be used, the most usual one is 300 mbar.

(x) Commercial butane, distributed by tanks or cylinders.

(y) Only for certain non-domestic appliances (catering etc.).

(z) This value will disappear in the domestic sector.

(aa) 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).

(ab) Mixture of commercial butane and commercial propane required for catering and used to supply domestic appliances found in motor homes.

(ac) Commercial propane, distributed by tanks or cylinders or in gas pipe networks.

(ad) This value is only available for gas distributed in tanks or cylinders and will disappear in the domestic sector.

(ae) For existing gas appliances in leisure accommodation vehicles and boats 50 mbar are permitted.

(af) For gas delivery for public sector.

(ag) Direct gas delivery for big users.

(ah) Standardised supply pressure of 28/30 mbar for domestic appliances only.

(ai) This value is only available for gas distributed in tanks or cylinders and will disappear in the domestic sector.

(aj) Propane.

(ak) Butane.

(al) LNG/air mixture.

(am) Conversion accordingly conditions for dry gas in Latvia are: temperature 20°C, atmospheric pressure 1.01325 bar.

(an) For gas delivery for public purposes.

(ao) Direct gas delivery for 'big users' (groenverbruik).

(ap) LPG gas (butane/propane mixture).

(aq) Gas group 3P for propane installations.

(ar) 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 1 or II family.

(as) Calculated under reference conditions 101,3 mbar and 0 °C in relation of the upper calorific value.

(at) Upper calorific value calculated under 15 °C reference temperature.

(au) In case of commercial propane.

(av) In case of commercial butane.

(aw) For catering appliances, the pressure of 50 mbar for commercial butane and 47 mbar for commercial propane are used.

(ax) Domestic use: 28 mbar butane, 37 mbar propane. Appliances may be designed to use both gases at the prescribed pressures.

(ay) Propane for industrial use.

(az) Meter outlet pressure.

(ba) Commercial butane.

(bb) Commercial propane.

(bc) Commercial propane.

(bd) Higher pressure, including vapour pressure, e.g. for camping use.

(be) 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		48,1-52,8 MJ/m ³	17	20	25
	THIRD Group B/P	41,7 MJ/m ³		25	30	35