



# Gas type changes in the Netherlands

## What is the change?

In 2016 the Dutch government published the Netherlands Technical Agreement (NTA) 8837 which amends the Dutch Appliance Decree and the Dutch Commodities Act, with regards to the changing composition of gas in the Netherlands. Under the new regulation, a new low calorific gas 'G+' is planned for distribution in the future. To account for this the new gas category, group K has been created, which carries the code I2K, to certify appliances for the new low calorific gas type. In addition, the regulation requires appliances to be suitable for high calorific gas types (group H) and be covered by the existing gas category I2E.

New and existing gas Appliances previously certified for category I2L in the Netherlands must be tested and certified to meet the new requirement, I2EK, to ensure that they operate safely and that "when used normally, flame stability is assured and combustion products do not contain unacceptable concentrations of substances harmful to human health".

## Why the change?

The "L gas" used throughout the Netherlands is of a composition that is unique in Europe (having low heating value), with the natural gas used in other parts of Europe having a much higher calorific value. This difference in composition relates to the gas field where most of the Dutch gas originates.

However, some two-thirds of the natural gas in the Groningen field is estimated to have already been consumed, so, in order to make up for the predicted shortfall, natural gas will need to be imported from countries such as Russia and Norway. As this imported gas generally has a higher heating the composition of natural gas supplied to Dutch consumers is changing.

## Test Gases

For category I2E, the test gases and pressures (nominal 20 mbar) are defined in EN 437, so these have not be reproduced here. For the I2K category, the summary of test gases on page 2 must be applied, depending on the type of burner in the appliance under test. Manufacturers may choose to apply either set 1 or 2 as they are equivalent however set 1 is considered be more representative of the gas to be distributed.

## Key dates:

November 2016: The Dutch government begin to introduce import restrictions on gas appliances not certified to the new requirements.

January 2017: Only I2EK category will be considered acceptable for products placed on the market from this date .

## Test Gas Set 1

Purpose Risk	Reference Gas	Sooting Gas	Incomplete Combustion Gas	Flame Lift		Light-back	
				Type A	Type B	Type A	Type B
Designation	G25.3	G26.3	G26.3	G27.3A	G27.3B	G28.3A	G28.3B
Burner type							
Fully Premixed	X	-	X	X	-	X	-
Partially & non pre-mixed	X	X	X	X	-	-	X
Lift B Sensitive Burner	X	X	X	X	X	-	X
Test Gas Composition (%)							
Methane CH <sub>4</sub>	88.0	64.0	64.0	84.0	95.5	60.0	50.0
Ethane C <sub>2</sub> H <sub>6</sub>	-	22.0	22.0	-	-	17.0	17.0
Nitrogen N <sub>2</sub>	12.0	14.0	14.0	-	-	13.0	23.0
Carbon Dioxide CO <sub>2</sub>	-	-	-	16.0	4.5	-	-
Hydrogen H <sub>2</sub>	-	-	-	-	-	10.0	10.0

## Test Gas Set 2

Purpose Risk	Reference Gas	Sooting Gas	Incomplete Combustion Gas	Flame Lift		Light-back	
				Type A	Type B	Type A	Type B
Designation	G25.3	G26.3	G26.3	G27.3A	G27.3B	G28.3A	G28.3B
Burner type							
Fully Premixed	X	-	X	X	-	X	-
Partially & non pre-mixed	X	X	X	X	-	-	X
Lift B Sensitive Burner	X	X	X	X	X	-	X
Test Gas Composition (%)							
Methane CH <sub>4</sub>	88.0	75.0	75.0	78.0	95.0	67.0	68.0
Propane C <sub>3</sub> H <sub>8</sub>	-	11.0	11.0	-	-	10.0	-
Nitrogen N <sub>2</sub>	12.0	14.0	14.0	22.0	5.0	13.0	12.0
Hydrogen H <sub>2</sub>	-	-	-	-	-	10.0	20.0

## Test Pressures

For category I2E, the following test pressures must be used:

Gas Group	Pn	Pmin	Pmax
K	25 mbar	20mbar	30mbar
E	20mbar	17mbar	25mbar

## What do you need to do?

If you are supplying products into the Netherlands which are currently certified to work on gas type I2L, you should determine the impact, and what additional work and testing may be required to certify your products to the new gas category I2EK.



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