



## 8.2 Gas

### 1 General description

HENCO GAS is only allowed in countries where testing has taken place and when a corresponding certificate is available. The Henco system for gas has Kiwa gas

approval and is intended for the construction of gas installations within the home and for the transportation of gas according to NPR-3378-10/NEN 1078 part 10.

### 2 Materials and characteristics

#### 2.1 Pipes

##### 2.1.1 Composition

The pipes consist of 5 layers:

- ▶ Inner pipe of electron beam cross-linked polyethylene (PE-Xc), extruded from high density polyethylene granulates
- ▶ High quality connecting layer for a homogenous connection between the aluminium pipe and the PE-Xc inner pipe
- ▶ An aluminium pipe, longitudinally seamlessly welded and controlled by machine

- ▶ A high quality connecting layer for a homogenous connection between the aluminium pipe and the PE-Xc outer pipe
- ▶ An outer pipe of electron beam cross-linked polyethylene (PE-Xc), extruded from high density polyethylene granulates

The pipes are always coloured yellow.

##### 2.1.2 Technical profile

Outer diameter (mm)	16	20	26	32
Inner diameter (mm)	12	16	20	26
Wall thickness (mm)	2	2	3	3
Thickness of aluminium (mm)	0,4	0,4	0,5	0,7
Max. working temperature (°C)	95	95	95	95
Max. working pressure (bar)	10	10	10	10
Coefficient of thermal conduction (W/m/K)	0,43	0,43	0,43	0,43
Linear expansion coefficient (mm/m/K)	0,025	0,025	0,025	0,025
Surface roughness of inner pipe (µ)	7	7	7	7
Oxygen diffusion (mg/l)	0	0	0	0
Smallest bending radius manual / external spiral spring (mm)	5xDu	5xDu	5xDu	*
Smallest bending radius with internal spiral spring (mm)	3xDu	3xDu	3xDu	*
Degree of cross-linking (%)	60	60	60	60
Weight (kg/m)	0,125	0,147	0,252	0,39
Inhoud (l/m)	0,113	0,201	0,314	0,53
Per coil (m)	50	50	50	50
Per straight length	4-5	4-5	4-5	4-5

\* only elbow fittings

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# 8 SPECIFICATIONS

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## 2.1.3 Pipe with protective sleeve

The multilayer pipe and protective sleeve must be produced by the same manufacturer. The sleeve consists of polyethylene and has a yellow colour. In his laying instructions the manufacturer describes

when and in which conditions the pipe must be fitted with a sleeve. The pipe with protective sleeve must be available in the following sizes:

Pipe sleeve		
Measure	Coil length	Colour
16x2	50 m	yellow
20x2	50 m	yellow
26x3	50 m	yellow

## 3 Fittings

The installation is connected by press fittings of polyvinylidene fluoride (PVDF). The synthetic press fittings and the multilayer pipes must be produced by the same manufacturer. The PVDF press fittings must have specific O-rings for gas. The pressure sleeves must be stainless steel. They

are also provided with 3 openings for visual checks and a special rim that allows the perfect positioning of the fitting in the jaws specified by the manufacturer. The pressure sleeves must have a yellow imprint mentioning the brand name and KIWAGAS.

## 4 Fitting and pressure tests

Fitting and pressure testing must take place as provided for in the relative standard. In the Netherlands this is NPR 3378-10.

## 5 Insurance and guarantee

The manufacturer must be able to present a test certificate from the IKP university in Stuttgart demonstrating compliance with the DIN 4726 standard and/or DVGW approval and/or KIWA approval and/or ATG approval.

The pipe is insured against damage after delivery for a period of at least 10 years and for a sum of 3,000,000 euros per case of damage per year. A guarantee certificate is always supplied.