

**AR 52**

February 2019

# Approval requirement 52

Valves for gas distribution systems with a maximum operation pressure less than or equal to 16 bar



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# Foreword

This GASTEC QA Approval requirement has been approved by the Board of Experts product certification GASTEC QA, in which relevant parties in the field of gas related products are represented. This Board of Experts supervises the certification activities and where necessary require the GASTEC QA Approval requirement to be revised. All references to Board of Experts in this GASTEC QA Approval requirement pertain to the above mentioned Board of Experts.

This GASTEC QA Approval requirement will be used by Kiwa Nederland BV in conjunction with the GASTEC QA general requirements and the KIWA regulations for product certification. This regulation details the method employed by Kiwa during product certification.

Approved by Board of Experts : February 10, 2019

Accepted by Kiwa Nederland B.V. : February 10, 2019

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# 1 Introduction

## 1.1 General

This GASTEC QA approval requirement in combination with the GASTEC QA general requirements include all relevant requirements, which are adhered by Kiwa as the basis for the issue and maintenance of a GASTEC QA certificate for Valves for gas distribution systems with maximum operating pressure less than or equal to 16 bar.

This GASTEC QA Approval requirements replace the GASTEC QA Approval Requirements 52, Valves for gas distribution systems with maximum operating pressure less than or equal to 16 bar, dated March 2015.

List of changes:

- Update to the new format for GASTEC QA approval requirements
- These approval requirements have been fully reviewed textually.
- All general requirements have been deleted and included in the GASTEC QA general requirements document
- Change of paragraphs
- The requirement in article 3.3 is changed to ISO 17885, 9.3.3.4. (no re-test required)

The product requirements have not changed

## 1.2 Scope

These approval requirements apply to gas distribution valves with a maximum operating pressure less than or equal to 16 bar. Valves with socket joints for connection with PVC pipes have a maximum operating pressure of 200 mbar.

The valves are intended for use with 2<sup>nd</sup> and 3<sup>rd</sup> family gasses according to EN 437.

## 2 Definitions

In this approval requirement, the following terms and definitions are applicable:

**Board of Experts:** The Board of Experts Gastec QA.

**Maximum operating pressure:** Maximum pressure that a component is capable of withstanding continuously in service under normal operating conditions.

# 3 Product requirements

## 3.1 General

The products shall comply with the following standard:

NEN-EN 13774 Valves for gas distribution systems with maximum operating pressure less than or equal to 16 bar.

With the exception of the test mentioned in article 5.12, Resistance to wear.

In addition to EN 13774 the following requirements shall be met:

## 3.2 Stem or shaft

In addition to EN 13774 article 5.2.3. The stem or shaft shall have a corrosion resistance at least or equal to that of steel alloyed with 13% Cr. The copper alloys CUZn 40 Pb3 and CuZn 40 Ni are considered to be equivalent.

## 3.3 Leak tightness under tensile loading for valves with a polyethylene pipe end

Valve bodies with polyethylene spigot ends shall comply with ISO 17885 article 9.3.3.4

## 3.4 Socket joints for connection PVC pipes

Valve bodies with socket joints for the connection of PVC pipes shall comply with NEN 7231 articles 4.2.5/ 4.3.1/ 4.4/ 5.1.

## 4 Marking, instructions and packaging

### 4.1 Marking

In addition to EN 13774 article 6, the product shall be marked with the GASTEC QA word mark, logo or punch mark.

In case of valve bodies with socket joints for the connection of PVC pipes the valve shall additionally be marked with:

- MOP 200 mbar.
- Nominal connection size

### 4.2 Instructions

The supplier shall provide instructions with the product. These instructions shall be in the Dutch language and contain information about:

- The use and installation of the product
- The conditions under which the product shall be used
- The control method, to determine whether the product is properly installed
- The way of storage of the product

### 4.3 Packaging

The product shall be packed in such a way that contamination and damage is not possible.

## 5 Quality system requirements

The supplier shall make a risk assessment of the product and production process according to chapter 3.1.1.1 and 3.1.2.1 of the GASTEC QA general requirements. The risk assessments shall be available to Kiwa for review.



## 6 Summary of tests

This chapter contains a summary of tests to be carried out during:

- The initial product assessment;
- The periodic product verification;

### 6.1 Test matrix

Description of requirement	Clause (EN 13774)	Test within the scope of		
		Initial product assessment	Product verification	
			Verification	Frequency
Materials	5.2	X		
Design	5.3	X		
Dimensions	5.4	X		
Operability	5.5.1	X	X	Each year
Endurance	5.5.2	X		
Strength of the stops	5.6	X	X	Each year
Mechanical resistance against excessive actuating forces	5.7	X		
Resistance of the obturator to static differential pressure	5.8	X	X	Each year
Shell strength	5.9	X		
External leak tightness	5.10	X	X	Each year
Internal leak tightness	5.11	X	X	Each year
Reference flow rate	5.13	X		
Cleanliness	5.14	X		
Storage	5.15	X		
Marking	6	X	X	Each year
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Stem or shaft	3.2	X		
Leak tightness under tensile loading for valves with a polyethylene pipe end	3.3	X	X	Each year
Socket joints for connection PVC pipes	3.4	X		
Marking, instructions, packaging	4	X	X	Each year

# 7 List of referenced documents and source

## 7.1 Standards / normative documents

All normative references in this Approval Requirement refer to the editions of the standards as mentioned in the list below.

EN 437: 2003+A1: 2009	Test gases- test pressure – appliance categories
EN 13774: 2013	Valves for gas distribution systems with maximum operating pressure less than or equal to 16 bar
ISO 17885:2015/A1:2016	Plastics piping systems - Mechanical fittings for pressure piping systems – Specifications
NEN 7231: 2011	Kunststofleidingssystemen voor gasvoorziening – hulpstukken van slagvast polyvinylchloride – eisen en beproevingsmethoden.