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# INTERNATIONAL STANDARD



# 3603

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Fittings for unplasticized polyvinyl chloride (PVC) pressure pipes with elastic sealing ring type joints — Pressure test for leakproofness

*Raccords à bagues d'étanchéité élastiques pour canalisations avec pression en polychlorure de vinyle (PVC) non plastifié — Essai d'étanchéité*

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**Descriptors:** piping, pressure pipes, plastic pipes, unplasticized polyvinyl chloride, pipe fittings, sealing rings, water-tightness tests, test equipment.

## FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3603 was developed by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and was circulated to the member bodies in December 1974.

It has been approved by the member bodies of the following countries :

Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
Canada	Japan	Sweden
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France	New Zealand	Turkey
Germany	Norway	U.S.A.
India	Poland	U.S.S.R.
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The member bodies of the following countries expressed disapproval of the document on technical grounds :

Denmark  
Netherlands  
United Kingdom

# Fittings for unplasticized polyvinyl chloride (PVC) pressure pipes with elastic sealing ring type joints – Pressure test for leakproofness

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the method for proof testing fittings with elastic sealing ring type joints for unplasticized polyvinyl chloride (PVC) pressure pipes, under internal hydrostatic pressure.

It specifies the minimum requirements of the tested joint, with a specified internal pressure higher than the nominal pressure for which the pipes are designed.

## 2 PRINCIPLE

Exposure of a specimen consisting of a pipe and fitting assembly having at least one joint of this type to a specified internal hydrostatic load at a specified temperature. Checking of the joint tightness during the test period, when the pressure is higher than the nominal pressure for which the pipe is designed.

## 3 SPECIFICATIONS

Testing shall be performed under an internal pressure of at least  $2 + \frac{0,2}{0}$  times the nominal pressure (PN) of the

polyvinyl chloride (PVC) pipe for which the joint is designed.

The test temperature shall be  $20 \pm 2$  °C.

The duration of the test shall be not less than 1 h, during which time the joint shall be free from leaks.

The joint shall satisfy the test requirements when the spigot and socket conform to the extreme limits of the respective tolerances (see clause 5).

## 4 APPARATUS

**4.1 Suitable device**, connected to the test specimen, capable of applying a constant internal water pressure of at least  $2 + \frac{0,2}{0}$  times the nominal pressure of the polyvinyl chloride (PVC) pipe for which the fitting is designed, for not less than 1 h.

**4.2 Suitable device**, to compensate for the axial stresses imposed by the application of internal hydrostatic pressure.

**4.3 Pressure gauge**, having an accuracy of  $\pm 2$  %.