

**Kummi- ja plastvoolikud ning voolikukomplektid.  
Hüdraulilise surveimpulsi katse ilma paindeta**

Rubber or plastics hoses and hose assemblies -  
Hydraulic-pressure impulse test without flexing

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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ICS 23.040.70

**Võtmesõnad:** hüdrauliline testimine, kummitooted, kummivoolikud, plasttooted, plastvoolikud, pulseeriv voolamine, surveteimid, testimine, voolikud

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English Version

Rubber or plastics hoses and hose assemblies - Hydraulic-  
pressure impulse test without flexing (ISO 6803:2008)

Tuyaux et flexibles en caoutchouc ou en plastique - Essai  
d'impulsions de pression hydraulique sans flexion (ISO  
6803:2008)

Gummi- und Kunststoffschläuche und -schlauchleitungen -  
Hydraulik-Druck-Impulsprüfung ohne Biegung (ISO  
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## Foreword

This document (EN ISO 6803:2008) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2009, and conflicting national standards shall be withdrawn at the latest by February 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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### Endorsement notice

The text of ISO 6803:2008 has been approved by CEN as a EN ISO 6803:2008 without any modification.

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# Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing

## 1 Scope

This International Standard describes hose impulse testing, without flexing, of rubber or plastics hydraulic hose assemblies at both high and low impulse pressures. The high-pressure testing is carried out at pressures greater than 3 MPa and the low-pressure testing at pressures from 1,5 MPa to 3 MPa. The test procedure is applicable to hydraulic hose assemblies that are subject to pulsating pressures in service which are included in the product requirements.

NOTE Impulse test procedures with flexing can be found in ISO 6802, *Rubber and plastics hoses and hose assemblies with wire reinforcements — Hydraulic impulse test with flexing*.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO/TR 11340, *Rubber and rubber products — Hydraulic hose assemblies — External leakage classification for hydraulic systems*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

## 4 Apparatus

**4.1 Pressure-application apparatus**, capable of applying an internal pulsating pressure to the test piece at a rate of  $1 \text{ Hz} \pm 0,25 \text{ Hz}$  using a hydraulic fluid circulating through the test hose, while the fluid is maintained at the required test temperature. Each pressure cycle shall be within the tolerances shown in Figure 2 (for high-pressure testing) or Figure 3 (for low-pressure testing). The nominal rate of pressure rise for high-pressure testing is given by Equation (1) in Figure 2. The rate of pressure rise for low-pressure testing shall be such that the pulse remains within the wave form envelope (see Figure 3).

**4.2 Graphical recorder, digital-storage facility or oscilloscope**, capable of measuring the pressure cycle to ensure that the wave form is within the envelope shown in Figure 2 or Figure 3. The recorder shall have a natural frequency of more than 250 Hz and shall be critically damped to give a response which is flat to within 5 % at up to 0,6 times the natural frequency.

## 5 Test fluid

Select a test fluid preferably with a kinematic viscosity from  $32 \text{ mm}^2/\text{s}$  to  $100 \text{ mm}^2/\text{s}$  at  $40^\circ\text{C}$  (i.e. from grade ISO VG 32 to ISO VG 100 as specified in ISO 3448), and circulate it at a rate sufficient to maintain a uniform