

## **RATIFICACIÓN DE DOCUMENTOS EUROPEOS JUNIO 2012**

### HOJA DE ANUNCIO

En cumplimiento del punto 11.2.6.4 de las Reglas Internas de CEN/CENELEC Parte 2, se ha otorgado el rango de norma española al Documento Europeo siguiente:

<b>Documento Europeo</b>	<b>Título</b>	<b>Fecha de Disponibilidad</b>
EN ISO 9906:2012	Bombas rotodinámicas. Ensayos de rendimiento hidráulico de aceptación. Niveles 1, 2 y 3 (ISO 9906:2012) (Ratificada por AENOR en junio de 2012.)	2012-05-01

Este anuncio causará efecto a partir del primer día del mes siguiente al de su publicación en la revista UNE. La correspondiente versión oficial de este documento se encuentra disponible en la sede de AENOR, Calle Génova 6, 28004 MADRID.

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English Version

Rotodynamic pumps - Hydraulic performance acceptance tests -  
Grades 1, 2 and 3 (ISO 9906:2012)

Pompes rotodynamiques - Essais de fonctionnement  
hydraulique pour la réception - Niveaux 1, 2 et 3 (ISO  
9906:2012)

Kreiselpumpen -Hydraulische Abnahmeprüfung - Klassen  
1, 2 und 3 (ISO 9906:2012)

This European Standard was approved by CEN on 16 March 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN ISO 9906:2012) has been prepared by Technical Committee ISO/TC 115 "Pumps" in collaboration with Technical Committee CEN/TC 197 "Pumps" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2012, and conflicting national standards shall be withdrawn at the latest by November 2012.

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.

This document supersedes EN ISO 9906:1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 9906:2012 has been approved by CEN as a EN ISO 9906:2012 without any modification.

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 9906 was prepared by Technical Committee ISO/TC 115, *Pumps*, Subcommittee SC 2, *Methods of measurement and testing*.

This second edition cancels and replaces the first edition (ISO 9906:1999), which has been technically revised.

## Introduction

The tests in this International Standard are intended to ascertain the performance of the pump and to compare this with the manufacturer's guarantee.

The nominated guarantee for any quantity is deemed to have been met if, where tested according to this International Standard, the measured performance falls within the tolerance specified for the particular quantity (see 4.4).

# Rotodynamic pumps — Hydraulic performance acceptance tests — Grades 1, 2 and 3

## 1 Scope

This International Standard specifies hydraulic performance tests for customers' acceptance of rotodynamic pumps (centrifugal, mixed flow and axial pumps, hereinafter "pumps").

This International Standard is intended to be used for pump acceptance testing at pump test facilities, such as manufacturers' pump test facilities or laboratories.

It can be applied to pumps of any size and to any pumped liquids which behave as clean, cold water.

This International Standard specifies three levels of acceptance:

- grades 1B, 1E and 1U with tighter tolerance;
- grades 2B and 2U with broader tolerance;
- grade 3B with even broader tolerance.

This International Standard applies either to a pump itself without any fittings or to a combination of a pump associated with all or part of its upstream and/or downstream fittings.

## 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 17769-1, *Liquid pumps and installation — General terms, definitions, quantities, letter symbols and units — Part 1: Liquid pumps*

ISO 17769-2, *Liquid pumps and installation — General terms, definitions, quantities, letter symbols and units — Part 2: Pumping system*

## 3 Terms, definitions, symbols and subscripts

### 3.1 Terms and definitions

For the purposes of this document, the terms, definitions, quantities and symbols given in ISO 17769-1 and 17769-2 and the following apply.

NOTE 1 Table 1 gives an alphabetical list of the symbols used and Table 2 gives a list of subscripts; see 3.3.

NOTE 2 All formulae are given in coherent SI units. For conversion of other units to SI units, see Annex I.

#### 3.1.1 General terms

NOTE All of the types of test in 3.1.1 apply to guarantee point to fulfil the customer's specification(s).

##### 3.1.1.1 guarantee point

flow/head ( $Q/H$ ) point, which a tested pump shall meet, within the tolerances of the agreed acceptance class