

Rotary positive displacement pumps - Technical requirements

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requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 14847:2001 sisaldab Euroopa standardi EN ISO 14847:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 14847:2001 consists of the English text of the European standard EN ISO 14847:1999.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies the technical requirements, other than testing, for rotary positive displacement pumps and rotary positive displacement pumps units. This standard does not apply to rotary positive displacement pumps for fluid power applications.</p>	<p>Scope:</p> <p>This standard specifies the technical requirements, other than testing, for rotary positive displacement pumps and rotary positive displacement pumps units. This standard does not apply to rotary positive displacement pumps for fluid power applications.</p>
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ICS 23.080

Võtmesõnad: definitions, design, information, installation, manutention, marking, name plates, positive displacement pumps, quality assurance, rotary pumps, technical data sheets, user supplier relations

English version

Rotary positive displacement pumps

Technical requirements
(ISO 14847 : 1999)

Pompes volumétriques à mouvement
rotatif – Prescriptions techniques
(ISO 14847 : 1999)

Rotierende Verdrängerpumpen –
Technische Anforderungen
(ISO 14847 : 1999)

This European Standard was approved by CEN on 1998-11-08.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 14847 : 1999 Rotary positive displacement pumps – Technical requirements (ISO 14847 : 1999), which was prepared by ISO/TC 115 'Pumps' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 197 'Pumps' as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by October 1999 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 14847 : 1999 was approved by CEN as a European Standard without any modification.

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Introduction

This European Standard specifies all the technical requirements for rotary positive displacement pumps and rotary positive displacement pump units with the exception of safety and testing. Safety and testing of positive displacement pumps and pump units are specified in the following European Standards:

EN 809	Pumps and pump units for liquids - General safety requirements
prEN 12162	Liquid pumps - Procedure for hydrostatic testing
EN	Positive displacement pumps and pump units - Code for acceptance tests [WI 0197018]
EN 12639	Liquid pumps and pump units - Noise test code - Grade 2 and 3 of accuracy

1 Scope

This standard specifies the technical requirements, other than safety and testing, for rotary positive displacement pumps and rotary positive displacement pump units.

This standard does not apply to rotary positive displacement pumps for fluid power applications.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 287-1	Approval testing of welders - Part 1: Steels
EN 287-2	Approval testing of welders - Part 2: Aluminium
EN 288-1	Approval of procedures for welding metallic materials - Part 1: General rules
EN 288-2	Approval of procedures for welding metallic materials - Part 2: Arc welding
EN 288-3	Approval of procedures for welding metallic materials - Part 3: Arc welding steels
EN 809	Pumps and rotary positive displacement pump units for liquids - General safety requirements
EN 20898-1	Mechanical properties of fasteners - Part 1: Bolts, screws and studs (ISO 898-1: 1988)
EN 20898-2	Mechanical properties of fasteners - Part 2: Nuts with specified proof load values - Course thread (ISO 898-2: 1992)
prEN 1956	Non-destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions
prEN 12162	Liquid pumps - Procedure for hydrostatic testing
prEN 12723	Liquid pumps - General terms for pumps and rotary positive displacement pump units, definitions, quantities, symbols and units

prEN ISO 4126-1	Safety devices for protection against excessive pressure - Part 1: Safety relief valves (ISO/DIS 4126-1: 1995)
prEN ISO 9934-1	Non-destructive testing - Magnetic particle inspection - General principles (ISO/DIS 9934-1: 1996)
ISO 7-1	Pipe threads where pressure-tight joints are made on the threads - Part 1: Designation, dimensions and tolerances
ISO 14	Straight-side splines for cylindrical shafts with internal centering - Dimensions, tolerances and verification
ISO 228-1	Pipe threads where pressure-tight joints are not made on the threads - Part 1: Designation, dimensions and tolerances
ISO/R 773	Rectangular or square parallel keys and their corresponding keyways (Dimensions in millimetres)
ISO/R 774	Taper keys with or without gib head and their corresponding keyways (Dimensions in millimetres)
ISO/R 775	Cylindrical and 1/10 conical shaft ends
ISO/775: ADD 1	Checking of the depth of keyways in conical shaft ends - Addendum 1
ISO 1027	Radiographic image quality indicators for non-destructive testing - Principles and identification
ISO 2491	Thin parallel keys and their corresponding keyways (Dimensions in millimetres)
ISO 2492	Thin taper keys with or without gib head and their corresponding keyways (Dimensions in millimetres)
ISO 3117	Tangential keys and keyways
ISO 3453	Non-destructive testing - Liquid penetrant inspection - Means of verification
ISO 3912	Woodruff keys and keyways.
ISO 4156	Straight cylindrical involute splines - Metric modules, side fit - Generalities, dimensions and inspection
ISO 7005-1	Metallic flanges - Part 1: Steel flanges
ISO 7005-2	Metallic flanges - Part 2: Cast iron flanges

ISO 7005-3	Metallic flanges - Part 3: Copper alloy and composite flanges
ISO 10375	Non-destructive testing - Ultrasonic inspection - Characterization of search unit and sound field

3 Definitions

For the purposes of this standard the definitions given in prEN 12723 apply together with the following:

3.1 rotary positive displacement pump: A machine in which liquid is trapped in confined volumes and transported from an inlet port to an outlet port by a rotational movement of the pumping element or elements.

NOTE: According to EN 809, pumps are defined as being terminated by their inlet and outlet branches as well as, in general, by their shaft ends without couplings.

3.2 rotary positive displacement pump unit: An assembly of a rotary positive displacement pump and its driver, with necessary transmission and structural supporting elements terminating at the connections for the inlet and outlet branches and at the energy supply to the driver.

4 Information and requirements to be confirmed, agreed and documented

4.1 Purchaser information

The purchaser shall provide the supplier with the information necessary for the proper selection of a pump or pump unit. To facilitate this the data sheet included as annex A can be used. The selection shall consider all received and relevant information on performance requirements, environment and intended operating conditions. Any missing information necessary for pump selection shall be requested by the supplier.

The purchaser's information shall include specification of options and items for special agreement according to this Standard and, where applicable, requests for deviations from this Standard. Clauses of this Standard referring to options and special agreements are listed in 4.2 and 4.3.

4.2 Optional requirements

If the purchaser wishes to include any of the optional requirements given in this standard such requirements shall be specified and documented at the time of enquiry and confirmed at the time of order. See clauses:

- 6.5.2 constant level oilers;
- 6.7.1 flanged or screwed connections;
- 6.7.1 studded flange facings;
- 6.7.1 alternative flange specifications;
- 6.7.1 alternative pipe thread specifications;
- 6.9.2 alternative connection specifications for auxiliary ports.