SLOVENSKI STANDARD
SIST ENV 737-6:2003

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Sistemi napeljav za medicinske pline - 6. del: Mere in razporeditev sond za končne dele za stisnjene medicinske pline in podtlak

Medical gas pipeline systems - Part 6: Dimensions and allocation of probes for terminal units for compressed medical gases and vacuum

Rohrleistungssysteme für medizinische Gase - Teil 6: Maße und Zuordnung von Steckern für Entnahmestellen für medizinische Druckgase und Vakuum

Systeme de distribution de gaz médicaux - Partie 6: Dimensions et attribution des embouts pour prises murales pour gaz médicaux comprimés et pour le vide (aspiration)

Ta slovenski standard je istoveten z: **ENV 737-6:2003**

ICS:

11.040.10	Anestezijska, respiratorna in reanimacijska oprema	Anaesthetic, respiratory and reanimation equipment

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English version

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Système de distribution de gaz médicaux - Partie 6: Dimensions et attribution des embouts pour prises murales pour gaz médicaux comprimés et pour le vide (aspiration)

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This European Prestandard (ENV) was approved by CEN on 18 December 2002 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Contents

Foreword

This document (ENV 737-6:2003) has been prepared by Technical Committee CEN/TC 215 "Respiratory and anaesthetic equipment" the secretariat of which is held by BSI as a Special Status European Prestandard (ENV).

EN 737 consists of the following Parts under the general title “Medical gas pipeline systems”:

Part 1: *Terminal units for compressed medical gases and vacuum*

Part 2: *Anaesthetic gas scavenging disposal systems – Basic requirements*

Part 3: *Pipelines for compressed medical gases and vacuum*

Part 4: *Terminal units for anaesthetic gas scavenging systems*

Part 6: *Dimensions and allocation of probes for terminal units for compressed medical gases and vacuum*

Taking into account that:

- there are CEN member countries using terminal units and probes which comply with EN 737-1 and which have dimensions of probes complying with the national standards of Austria (ÖNORM 7387 series), France (AFNOR NF S 90-116), Germany (DIN 13260, Teil 2), Italy (UNI 9507), Sweden (SS 87 524 30) and United Kingdom (BS 5682);

- there are CEN member countries using terminal units and probes of existing proprietary design which comply with EN 737-1 and which have published gas-specific dimensions and tolerances;

- some of these national standards and proprietary designs have a special status defined by law or regulation and cannot therefore be changed or withdrawn;

this document is published as a Special Status European Prestandard (ENV) for the following reasons:

- CEN members will not be bound to implement the ENV; they need only make the ENV available at national level in the form of e.g. "Draft for development";

- the dimensions of probes given in the conflicting national standards listed above will not be withdrawn and may be kept in force in parallel to those given in the European Prestandard;

- terminal units and probes which comply with EN 737-1 and which have dimensions complying with the conflicting national standards listed above may continue to be installed and used for both new installations and extensions of existing installations as specified by appropriate National Authorities;

- terminal units and probes of existing proprietary design which comply with EN 737-1, which have published gas-specific dimensions and tolerances may continue to be installed and used for both new installations and extensions of existing installations as specified by appropriate National Authorities, provided that it is neither possible for probes complying with ENV 737-6 to lock into and/or release gas from sockets complying with each proprietary design nor possible for probes complying with each proprietary design to lock into and to release gas from sockets complying with ENV 737-6;

- it will be possible to install and use terminal units and probes complying with EN 737-1 and this European Prestandard for field trials in health care facilities by agreement with appropriate National Authorities.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Terminal units are the points on a medical gas supply system where the operator makes connections and disconnections for the supply of specified medical gases to anaesthetic machines, lung ventilators or other items of medical equipment, and where a wrong connection can create a hazard to the life of a patient. Connection of medical equipment to a terminal unit is made by inserting a gas-specific probe into a gas-specific connection point on the appropriate terminal unit. Both the probe and the terminal unit are be gas-specific to ensure that the correct gas is delivered to the medical equipment.

It is important therefore that probes and the corresponding gas-specific connection points are designed and manufactured in such a way as to meet the requirements specified in this European Prestandard.

This European Prestandard gives the dimensions and allocation of probes and the corresponding gas-specific connection points, in order to ensure that only one design of probe is used for each specified medical gas.

1 Scope

This European Prestandard specifies the dimensions and allocation of probes intended to be connected to terminal units of medical gas pipeline systems specified in EN 737-3 for use with the following medical gases:

- oxygen;
- nitrous oxide;
- medical air;
- carbon dioxide;
- oxygen/nitrous oxide mixture (50/50 % V/V);
- air for driving surgical tools;
- nitrogen for driving surgical tools;
- vacuum.

It is intended to ensure that only gas-specific probes are used so as to prevent wrong connection of probes to terminal units for different gases.

This European Prestandard specifies the dimensions of the probe intended to be connected to terminal units of medical gas pipeline systems specified in EN 737-3 for supply and disposal of air for driving surgical tools.

This European Prestandard specifies the dimensions and allocation of each gas-specific connection point.

This European Prestandard does not specify the dimensions of NIST connectors. These dimensions are given in EN 739.

This European Prestandard does not specify the dimensions of probes intended to be connected to terminal units for anaesthetic gas scavenging systems. These dimensions are given in EN 737-4.

This European Prestandard does not specify the suitability of material, cleanliness, testing, gas-specificity, identification and information. These are specified in EN 737-1 which also applies to probes and gas-specific connection points.

2 Normative references

This European Prestandard incorporates, by dated or undated references, 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 revision of any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 20286-1, *ISO system of limits and fits - Part 1: Bases of tolerances, deviations and fits (ISO 286-1:1988).*

3 Terms and definitions

For the purposes of this European Prestandard, the following terms and definitions apply.

3.1
gas-specific
having characteristics which prevent interchangeability and thereby allow assignment to one gas or vacuum service only

3.2
gas-specific connection point
that part of the socket which is the receptor for a gas-specific probe

3.3
medical gas
any gas or mixture of gases intended to be administered to patients for therapeutic, diagnostic or prophylactic purposes, or for surgical tool application

3.4
medical gas pipeline system
central supply system with control equipment, a pipeline distribution system and terminal units at the points where medical gases or vacuum can be required

3.5
medical gas supply system
either

a medical gas pipeline system; or

any other installation having no permanent pipeline system but employing a medical gas supply source complete with pressure regulators

3.6
NIST (non-interchangeable screw-threaded) connector
range of male and female components intended to maintain gas specificity by the allocation of a set of different diameters and a left or right hand screw thread to the mating components for each particular gas

3.7
probe
non-interchangeable male component designed for acceptance by and retention in the socket

3.8
socket
that part of a terminal unit which is either integral or attached to the base block by a gas-specific interface and which contains the gas-specific connection point

3.9
terminal unit
outlet assembly (inlet for vacuum) of a medical gas supply system at which the operator makes connections and disconnections

3.10
terminal unit for supply and disposal of air for driving surgical tools
combination of an outlet assembly (for supply) and an inlet assembly (for disposal) which are connected to a supply system and to a disposal system respectively and at which the operator makes connections and disconnections by means of a combined probe

4 Uses of probes

Typical examples of the use of probes are given in Figure 1.

5 Dimensions

5.1 Dimensions of probes for compressed medical gases and vacuum shall comply with Figure 2 and Table 1.

5.2 Dimensions of gas-specific connection points for compressed medical gases and vacuum shall comply with Figure 3 and Table 2.

5.3 Dimensions of the probe for supply and disposal of air for driving surgical tools shall comply with Figure 4.

NOTE These dimensions are based on those in E DIN 13260, Teil 3.

5.4 Dimensions of the gas-specific connection point for supply and disposal of air for driving surgical tools shall comply with Figure 5.

5.5 Compliance with 5.1 to 5.4 shall be verified by measurement.

6 Allocation

6.1 Allocation of probes and gas-specific connection points for compressed medical gases and vacuum shall comply with Table 3.

6.2 Compliance with 6.1 shall be verified by visual inspection.