

Anaesthetic and respiratory equipment — Conical connectors

Part 2. Screw-threaded, weight-bearing connectors

The European Standard EN 1281-2 : 1995 has the status of a
British Standard

ICS 11.040.10

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee CH/44, Anaesthetic machines, breathing attachments, medical gas pipeline systems and hose assemblies, upon which the following bodies were represented:

Association of Anaesthetists of Great Britain and Ireland
 Association of British Health-care Industries
 British Anaesthetic and Respiratory Equipment Manufacturers' Association
 Department of Health
 Medical Sterile Products Association

The following body was also represented in the drafting of the standard, through a subcommittee/panel:

Guild of Hospital Pharmacists

This British Standard, having been prepared under the direction of the Health and Environment Sector Board, was published under the authority of the Standards Board and comes into effect on 15 May 1996

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Amendments issued since publication

Amd. No.	Date	Text affected

The following BSI references relate to the work on this standard:
 Committee reference CH/44
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National foreword

This British Standard has been prepared by Technical Committee CH/44 and is the English language version of EN 1281-2 : 1995 *Anaesthetic and respiratory equipment — Conical connectors — Part 2: Screw-threaded weight-bearing connectors*, published by the European Committee for Standardization (CEN).

EN 1281-2 1995 is based upon ISO 5356-2 : 1987 *Anaesthetic and respiratory equipment — Conical connectors — Part 2: Screw-threaded weight-bearing connectors*, but differs by the addition of an endorsement notice giving common modifications to the text of ISO 5356-2 : 1987. The common modifications have been implemented at the appropriate places in the text and are indicated by a sideline in the margin.

Attention is drawn to BS 3849 : Part 2 : 1988, which implements ISO 5356-2 : 1987 as an identical, dual-numbered British Standard. BS 3849 : Part 2 : 1988 will remain extant until either the date of withdrawal (DOW) of national standards conflicting with EN 1281-2 : 1995 is reached (1998-06-13) or until EN 1281-1, addressing cones and sockets, is adopted as a BS EN, whereupon BS 3849 : Part 1 and Part 2 will be withdrawn.

Cross-references

Publication referred to	Corresponding British Standard
ISO 262 : 1973	BS 3643 <i>ISO metric screw threads</i> Part 1 : 1981 <i>Principles and basic data</i>
ISO 4135 : 1979	BS 6015 : 1980 <i>Glossary of terms used in anaesthesiology</i>
ISO 5356-1 : 1987	BS 3849 <i>Conical connectors for anaesthetic and respiratory equipment</i> Part 1 : 1988 <i>Specification for cones and sockets</i> (excluding 8.5 mm size)

It is expected that, upon publication, EN 1281-1 will be adopted as BS EN 1281-1.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

ICS 11.040.10

Descriptors: medical equipment, anaesthetic equipment, screwed connections, fittings, pipe fittings, specifications, dimensions

English version

**Anaesthetic and respiratory equipment —
Conical connectors—
Part 2: Screw-threaded weight-bearing connectors**

(ISO 5356-2 : 1987 modified)

Matériel respiratoire et d'anesthésie —

Raccords coniques —

Partie 2: Raccords à vis pouvant supporter un
certain poids

(ISO 5356-2 : 1987 modifiée)

Anästhesie- und Beatmungsgeräte —

Konische Konnektoren —

Teil 2: Gewichtstragende konische Konnektoren
mit Schraubgewinde

(ISO 5356-2 : 1987 geändert)

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Comité Européen de Normalisation
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Ref. No. EN 1281-2 : 1995 E

Foreword

The text of the International Standard ISO 5356-2 : 1987, from ISO/TC 121, Anaesthetic and respiratory equipment, of the International Organization for Standardization (ISO) has been taken over as a European Standard, EN 1281-2 : 1995, by the Technical Committee CEN/TC 215, Respiratory and anaesthetic equipment, with common modifications.

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 June 1996, and conflicting national standards shall be withdrawn at the latest by June 1998.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 5356-2 : 1987 has been approved by CEN as a European Standard with agreed common modifications, as indicated by a vertical line in the margin of the text.

Anaesthetic and respiratory equipment — Conical connectors —

Part 2 : Screw-threaded weight-bearing connectors

0 Introduction

0.1 ISO 5356 comprises the following two parts :

Part 1 : Cones and sockets.

Part 2 : Screw-threaded weight-bearing connectors.

0.2 While the conical connectors specified in ISO 5356-1 are satisfactory for lightweight breathing attachments, there is also a need for more substantial connectors to support heavy or fragile components. Factors governing the design of these connectors include robustness, simplicity, ease of sterilization, and ease of engagement and disengagement by hand. They should also be compatible with connectors meeting the requirements laid down in ISO 5356-1 and should, if possible, eliminate the likelihood of inadvertent misconnection, although it has to remain the responsibility of the user to check that any system in which they are used is correctly assembled before use.

Screw-threaded weight-bearing connectors specified in this part of ISO 5356 may be used for attachments within the breathing system and at the common gas outlet.

1 Scope and field of application

This part of ISO 5356 specifies requirements for screw-threaded weight-bearing conical connectors intended for use with inhalation anaesthesia apparatus and ventilators; such connectors are intended for mounting heavy accessories.

2 References

ISO 262, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts*.

ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2 : Limits of sizes for general purpose bolt and nut threads — Medium quality*.

ISO 5356-1, *Anaesthetic and respiratory equipment — Conical connectors — Part 1 : Cones and sockets*.

prEN 1281-1, *Anaesthetic and respiratory equipment — Conical connectors — Part 1 : Cones and sockets*.

3 Definitions

For the purposes of this part of ISO 5356, the following definitions apply.

NOTE — Definitions have been taken from ISO 4135.

3.1 inhalation anaesthesia apparatus : Equipment intended for dispensing and delivering anaesthetic gases and vapours into a breathing system for delivery to the patient.

3.2 breathing attachments : Components intended to make up or complete a breathing system.

3.3 breathing system : Those gas pathways continuously or intermittently in communication with the patient's respiratory tract during any form of ventilation.

NOTES

- 1 In practice a breathing system usually extends from
 - a) the point of supply¹⁾ of a controlled gas mixture, for example the common gas outlet of an anaesthetic machine, or
 - b) the fresh-gas inlet of a circle system, lung ventilator, T-piece, etc., or
 - c) the fresh-gas inlet of a manually-operated resuscitator.
- 2 It usually extends to the point at which gas mixture escapes to atmosphere or a gas scavenging system, for example from an APL valve, the open end of a T-piece, etc.
- 3 Gas pathways exclusively concerned with gas scavenging systems are not regarded as part of the breathing system.

4 Materials

Materials used in the manufacture of screw-threaded weight-bearing connectors shall be as specified in ISO 5356-1.

1) In some situations, particularly in lung ventilators, this point may be inside a piece of equipment and should not be confused with a connection port fitted elsewhere, for example on the casing of a ventilator.

5 Design

The dimensions of the components of screw-threaded weight-bearing connectors shall be as shown in the figure.

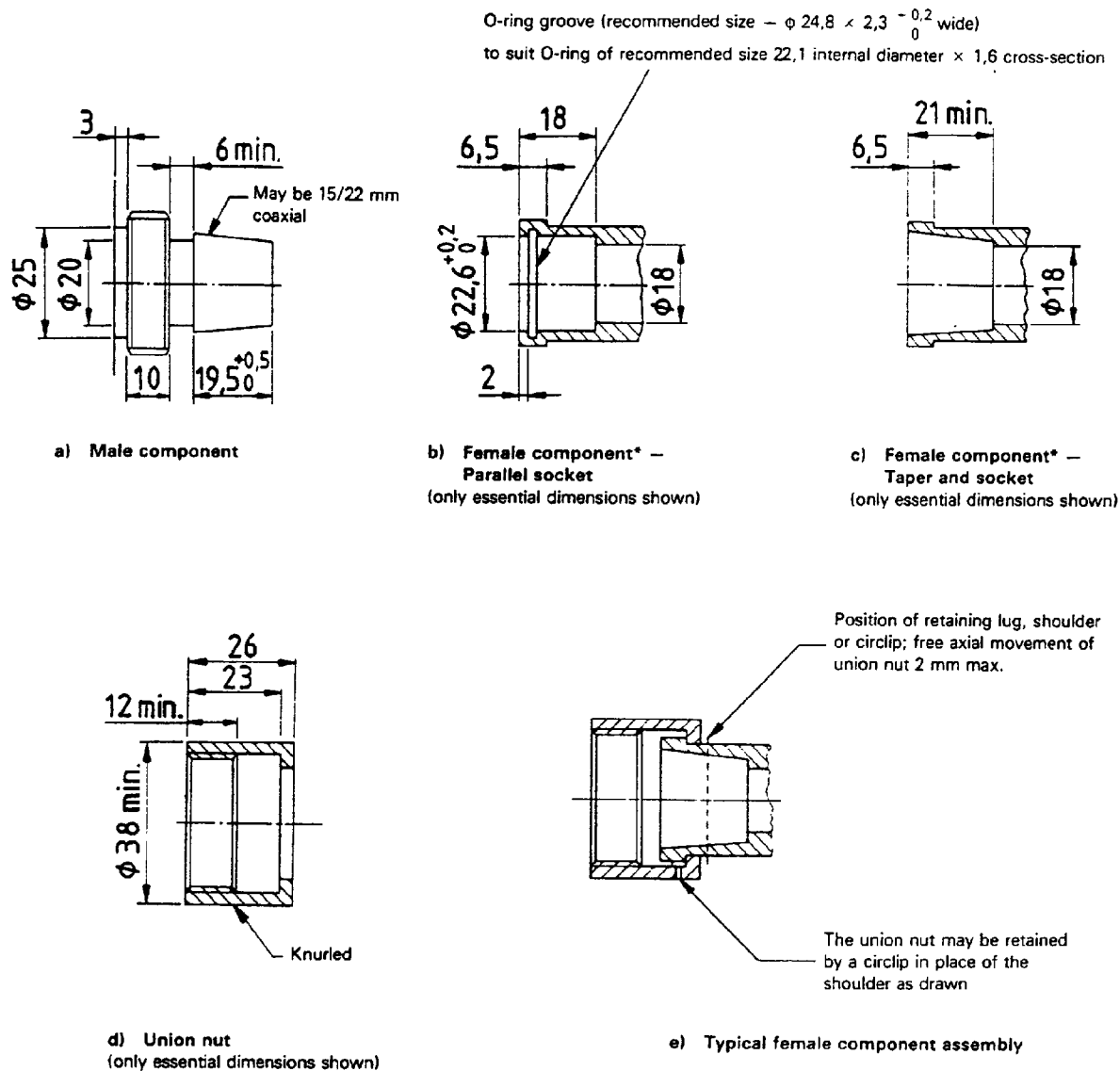
The free axial movement of the union nut on the female component shall be not more than 2 mm in order that, when the connectors are unscrewed, the male and female components shall be forced apart.

All male screw threads shall be $M33 \times 2-6g$ and all female screw threads shall be $M33 \times 2-6H$ in accordance with ISO 262 and ISO 965-2.

6 Marking and information to be supplied

Screw-threaded weight-bearing connectors shall comply with clauses 9 and 10 of prEN 1281-1.

Dimensions in millimetres



NOTES

- 1 All male screw threads : M33 \times 2-6g
All female screw threads : M33 \times 2-6H
- 2 All conical tapers as specified for 22 mm size connectors in ISO 5356-1.

Figure — Components for screw-threaded weight-bearing connectors

* 18 mm diameter intended for use within breathing systems.

Annex ZA (informative)**Clauses of this European Standard addressing essential requirements or other provisions of EU Directive(s)**

This European Standard has been prepared under a mandate given to CEN/CENELEC by the European Commission and the European Free Trade Association and supports essential requirements of EU Directive 93/42/EEC.

WARNING: Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

The following clauses of this standard, as detailed in table ZA.1, are likely to support requirements of Directive 93/42/EEC.

Compliance with the clauses of this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

Table ZA.1 Correspondence between this European Standard and EU Directives		
Clauses/sub-clauses of this European Standard	Corresponding annexes/paragraphs of Directive 93/42/EEC	Comments
0	2	
1	2	
2	2	
3	2	
4		See appropriate device standard
5	1; 2; 9.1	
Figure 1	2; 9.1	

List of references

See national foreword.

BS EN
1281-2 : 1996

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