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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 45665.1-2025

**Anaesthetic and respiratory equipment - Conical connectors -
Part 1: Cones and sockets**

麻醉和呼吸设备 圆锥接头 第1部分：锥头和锥套

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 1 of GB/T 45665 "Conical connectors for anesthesia and respiratory equipment". GB/T 45665 has been published as follows part.

--- Part 1: Cone head and cone sleeve;

--- Part 2: Threaded load-bearing joints.

This document is equivalent to ISO 5356-1:2015 "Conical connectors for anesthetic and respiratory equipment - Part 1: Cone heads and sleeves".

A new chapter "Terms and Definitions" has been added to this document.

Introduction

GB/T 45665 "Conical connectors for anesthetic and respiratory equipment" is intended to consist of two parts.

--- Part 1: Cone head and cone sleeve. The purpose is to ensure that it is used to connect anesthesia and respiratory equipment (such as breathing systems, anesthetic gas purification System and evaporator) cone head and cone sleeve size and measurement requirements.

--- Part 2: Threaded load-bearing joints. The purpose is to ensure the threaded load-bearing conical joints used in inhalation anesthesia equipment and ventilators Size requirements, these couplings are used to equip heavy-duty accessories.

Clinically, it may be necessary to connect multiple respiratory accessories used in anesthesia and respiratory equipment together to form a suitable respiratory system.

Other medical equipment such as humidifiers or spirometers are often connected to the breathing system, which can also be connected to anesthesia gas these devices are often connected by cone heads and cone sleeves. If these connections lack standardization, different manufacturers this document specifies the requirements for cones and cone sleeves used in anesthesia and respiratory equipment.

and size.

It is important to consider that the cone connection needs to be secure but not prevent the operator from disconnecting it.

To minimize the risk of accidental uncoupling of the 22 mm connector, use Locking cone sleeve.

Appendix A contains illustrations and diagrams of plug and ring gauges used to inspect non-metallic tapers and sleeves. Appendix B, Appendix C, Appendix D

The test method for locking taper sleeves is described in Appendix E. It contains diagrams and charts of plug and ring gauges used for checking metal tapers and sleeves.

Note F gives recommendations for safety testing of locking taper sleeves.

The dimensions and tolerances of the taper head and taper sleeve in Figure 1 are specified in GB/T 15754.

Anesthesia and respiratory equipment conical connectors Part 1: Cone heads and sleeves

1 Scope

This document specifies the specifications for cones and cone sleeves used to connect anesthetic and respiratory equipment (such as breathing systems, anesthetic gas purification systems and vaporizers).

Therefore, the cone head and cone sleeve themselves are not considered as equipment.

This document applies to 8.5mm and 11.5mm cone heads and cone sleeves for neonatal and pediatric respiratory systems, and general use in respiratory systems.

15mm and 22mm cone heads and cone sleeves, 22mm locking cone sleeves (including performance requirements), 23mm cone sleeves for evaporators Head and cone sleeve (this specification is not applicable to breathing system) and 30mm cone for connection of breathing system and anesthesia gas purification system Head and cone sleeve.

This document does not specify the cones and sleeves that need to be provided on medical devices and accessories.

This document does not include the application requirements for cones and sleeves. These requirements are or will be included in the relevant standards for specific medical devices and accessories.

Given.

NOTE: ISO 5356-2 specifies the requirements for threaded load-bearing joints.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

Note 1: YY/T 0461-2003 Breathing circuits for anesthesia machines and ventilators (ISO 5367:2000, IDT)

NOTE 2 There are no technical differences between the referenced content of ISO 5367:2023 and the referenced content of ISO 5367:2014.

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4.1 General requirements

4.1.1

The metal cone head and cone sleeve should comply with the dimensional requirements of Figure 1 and Table 1 (if applicable).

Compliance with the requirements is checked by functional testing.

NOTE: Annex E contains illustrations and diagrams of plug and ring gauges used for checking metal tapers and sleeves.

4.1.2

The non-metallic cone head and cone sleeve shall comply with the dimensional requirements of Figure 1 and Table 1. Dimension A, dimension B and taper F may differ from the specified values.

different.

Compliance with the requirements shall be checked by the fit of the corresponding plug gauge or ring gauge with the taper head or taper sleeve as shown in Figure A.1 and Table A.1.

The 8.5mm, 11.5mm and 15mm cone heads or cone sleeves should be subjected to an axial force of (35 ± 3.5) N. For the 22mm and 30mm cone heads, the taper sleeve should apply an axial force of (50 ± 5) N, and while maintaining this force, rotate the joint $(20 \pm 5)^\circ$. The head end should be between the minimum and maximum of the gauge.