

ICS 11.040.10

CCS C 46



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

**GB/T 45895-2025**

---

**Anaesthetic and respiratory equipment - Dimensions of  
non-interchangeable screw-threaded (NIST) low-pressure  
connectors for medical gases**

麻醉和呼吸设备 医用气体不可互换螺纹（NIST）低压接头的尺寸

**(English Translation)**

**Issued on: August 1, 2025**

**Implemented on: August 1, 2026**

---

**Issued by: State Administration for Market Regulation, Standardization  
Administration of China**

## Table of Contents

|                                                |
|------------------------------------------------|
| Preface                                        |
| Introduction                                   |
| 1 Scope                                        |
| 2 Normative references                         |
| 3 Terms and Definitions                        |
| 4 NIST Connector Dimensions and Configurations |
| 5 Mark                                         |
| 6 Marking durability test                      |
| Reference                                      |

## 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 modified to adopt ISO 18082:2014 "Non-interchangeable threaded (NIST) low-pressure connectors for medical gases for anesthetic and respiratory equipment" size".

This document adds a chapter on "Normative References".

The technical differences between this document and ISO 18082:2014 and their reasons are as follows.

--- The marking durability test method (see Chapter 6) has been changed to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

--- Incorporated the amendments to ISO 18082:2014/Amd1.2017, the outer margins of the clauses involved are indicated by vertical Double lines (||) are marked;

--- Replaced ISO 5359 with the informative reference GB/T 46042 (see Chapter 1);

---NIST body diameter and tolerance "A7" "Dimension D" changed from "1" to "14" (see Table 2);

--- Changed the drawing perspective (see Figure 3);

---Deleted some footnotes.

## Introduction

This standard is developed to meet the requirements of medical devices that are safely connected and supply medical gases to patients or drive gases to medical equipment.

Medical gases are usually stored in cylinders/cryogenic containers or produced on site; various devices can be installed between the gas source and such medical equipment.

Devices (such as pressure regulators, hose assemblies, flow meter assemblies, ventilators, anesthesia workstations). Each interface requires a gas-specific interface.

Ensure that medical gases are delivered to the patient correctly.

However, as the standards of various countries continue to increase and update, it may eventually lead to the danger of cross-mixing of components used for different gases.

Therefore, this document selects the medical gas non-interchangeable thread (NIST) fitting system to standardize the domestic thread fitting system to avoid cross Dangers of mixing.

Anesthesia and respiratory equipment medical gases are not interchangeable Dimensions of threaded (NIST) low-pressure fittings

## 1 Scope

This document specifies the intended use in medical gas systems with a maximum working pressure not exceeding 1400 kPa and an absolute pressure not exceeding 60 kPa.

Dimensions, configurations, and markings of non-interchangeable threaded (NIST) fittings for vacuum systems.

This document applies to medical gases [oxygen, nitrous oxide (laughing gas), medical air, helium, carbon dioxide, xenon, the special NIST connector for use with [standard gas mixture, 93% oxygen, air for driving surgical instruments, nitrogen for driving surgical instruments, vacuum].

**Note 1:** GB/T 46042 specifies low-pressure hose assemblies for medical gases and vacuum.

This document does not specify manufacturer-supplied information because the information used by NIST connectors permanently installed on each medical device is determined by each individual.

Provided by medical device manufacturers.

**Note 2:** Environmental impacts are addressed in the standards for medical devices used with NIST connectors.

## 2 Normative references

This document has no normative references.

## 3 Terms and Definitions

The following terms and definitions apply to this document.

gas-specific

It has the characteristic of preventing the connection between different gas facilities or vacuum facilities.

[Source. GB/T 44059.1-2024, 3.17] 3.2 medical gas any gas or substance used for the administration of a patient or for the application of a surgical instrument for the purpose of anesthesia, treatment, diagnosis or prevention of disease Mixed gas.

[Source. GB/T 4999-2003, 1.1.1, modified] 3.3 NIST connector A set of outer and inner joints with different diameters and left-hand or right-hand threads are connected to the matching joints of each specific gas to Keep the gas specific.

## 4 NIST Connector Dimensions and Configurations

The configuration of the NIST connector should comply with the requirements of Table 1.

The dimensions of the NIST body, mastoid connector, and nut shall conform to Figures 1, 2, 3, and 4 and Tables 2, 3, and 4.