

ICS 11.040.10

CCS C 46



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

**GB/T 45811-2025**

---

**Anaesthetic vaporizers - Agent-specific filling systems**

麻醉蒸发器 麻醉剂专用灌注系统

**(English Translation)**

**Issued on: May 30, 2025**

**Implemented on: June 1, 2026**

---

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

## Table of Contents

|                                                                           |
|---------------------------------------------------------------------------|
| Preface                                                                   |
| 1 Scope                                                                   |
| 2 Normative references                                                    |
| 3 Terms and Definitions                                                   |
| 4 Bottles                                                                 |
| 5 Bottleneck Ring                                                         |
| 6 Bottle adapter                                                          |
| 7 Filling socket                                                          |
| 8 Filling rate                                                            |
| 9 Leakage                                                                 |
| 10 Overfilling protection                                                 |
| 11 Color identification                                                   |
| 12 Availability                                                           |
| 13 Clinical evaluation                                                    |
| 14 Information provided by the manufacturer                               |
| 14.1 Identification                                                       |
| 14.2 Tags                                                                 |
| 14.3 User Manual                                                          |
| Appendix A (Informative) Recommendations on Materials                     |
| Appendix B (informative) Types of dedicated anesthetic filling systems    |
| Appendix C (Normative) Test of total leakage of anesthetic during filling |
| 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 5360:2016 "Specialized filling systems for anesthetic vaporizers".

The technical differences between this document and ISO 5360:2016 and their reasons are as follows.

--- ISO 1101 was replaced by the normative reference GB/T 1182 to adapt to my country's technical conditions (see Figure 1).

The following editorial changes were made to this document.

--- Added examples of Chinese color system (see Table 2);

--- Change the term dedicated anesthetic filling system to injection (see 3.2).

## 1 Scope

This document specifies the requirements, including dimensions, for filling systems for anesthetic agent-specific vaporizers used with anesthetic agent-specific vaporizers.

This document applies to dedicated filling systems for anesthetic agents.

Materials of construction are not specified in this document.

**Note 1:** For material recommendations, see Appendix A.

Due to the unique properties of desflurane, this document does not specify the dimensions of a dedicated filling system for this anesthetic agent.

**Note 2:** It is encouraged to design a connection system between a dedicated anesthetic bottle connector and an anesthetic bottle with a neck ring.

## 2 Normative references

The contents of the following documents constitute 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.

GB/T 1182 Product Geometric Specification (GPS) Geometric Tolerances Shape, Orientation, Position and Runout Tolerances (GB/T 1182-2018,ISO 1101:2017,MOD)

## 3 Terms and definitions

The following terms and definitions apply to this document.

Anesthetic agent-specific it has the specified structure and size and is specially designed for the specified liquid anesthetic.

Anesthetic agent filling system agent-specific filling system A functional system for identifying the connection between an anesthetic agent bottle and an anesthetic agent-specific (3.1) anesthetic vaporizer (3.3).

Note 1 to entry. It consists of a threaded neck (3.7) with a neck ring (3.5), a bottle connector (3.6),

an adapter plug (3.9) and a filling socket (3.8).

**Note 2:** Appendix B lists different types of dedicated anesthetic filling systems.

**Anesthesia vaporizer anaestheticvaporizer** A device that causes liquid anesthetic to become gaseous.

**Bottle adapterbottleadaptor** an assembly for connecting a bottle of liquid anesthetic agent and an anesthetic vaporizer (3.3) dedicated to anesthetic agent (3.1).

**Bottle Colar**

The anesthetic-only (3.1) component located at the bottleneck makes it anesthetic-only (3.1).