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

GB/T 47754-2026

**Connections for pneumatic fluid power - Plastic hoses
dimensions and specification**

气动连接 塑料软管的尺寸和要求

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO 11619:2024 "Pneumatics - Dimensions and requirements of polyurethane and polyamide tubing mainly used in pneumatic devices".

This document has undergone the following structural adjustments compared to ISO 11619:2024.

---5.2 corresponds to 5.1.3 in ISO 11619:2024;

---6.1.3 corresponds to 6.2 in ISO 11619:2024;

---6.2~6.5 correspond to 6.3~6.6 in ISO 11619:2024 respectively, and the next level of entries should be adjusted accordingly.

The technical differences between this document and ISO 11619:2024, and the reasons therefor, are as follows.

---The scope of the document (see Chapter 1) has been changed to suit my country's technical conditions and improve operability;

---ISO 8330 (see Chapter 3) has been replaced with the normatively referenced GB/T 7528 to adapt to my country's technical conditions and improve operability.

Actual nature;

---New hose sizes and corresponding parameters have been added (see Tables 1, 2, 5, 6, 9, 10, 13, 14, 17, and 18).

The hose dimensional tolerances and minimum wall thicknesses (see Tables 1-4) have been modified to adapt to my country's technical conditions and improve operability;

---ISO 1307 (see 5.2) has been replaced with the normatively referenced GB/T 9575 to adapt to my country's technical conditions and improve operability.

Actual nature;

Improve technical conditions and enhance operability;

---ISO 10619-1:2017 (see 6.4.1, 6.4.2) has been replaced with the normatively referenced GB/T 5565.1 to accommodate my country's technical requirements.

Conditions to improve operability.

The following editorial changes have been made to this document.

---The standard title has been changed to "Dimensions and Requirements for Pneumatic Connection Plastic Hoses";

---ISO 8331 has been replaced by GB/T 9576, which is used for informational purposes.

---ISO 14743 has been replaced with GB/T 33636, which is cited as information.

---Warning removed;

---The footnotes and their positions in Tables 1, 3, 13, and 15 have been changed;

---Footnotes for Tables 2, 4, 14, and 16 have been deleted;

---Footnotes have been added to Tables 5, 7, 9, 11, 17, and 19;

---The pressure unit "bar" and its corresponding value have been removed;

---The column numbers related to the items in Table A.1 have been deleted.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Hydraulics and Pneumatics (SAC/TC3).

1 Scope

This document specifies thermoplastic polyurethane tubing and polyamide tubing with outer diameters ranging from 2 mm to 16 mm (1/8 in to 5/8 in) for conveying compressed air.

Requirements for amine tubes.

This document applies to polyurethane pipes with an operating ambient temperature of -20°C to 60°C and those with an operating ambient temperature of -20°C to 80°C.

Polyamide tubing.

Note: When the polyurethane tubing applicable to this document is used in pipelines operating below 0°C, the supplier and user shall negotiate its use.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 5563 Test methods for hydrostatic pressure of rubber and plastic hoses and hose assemblies (GB/T 5563-2025, ISO 1402.

2021, IDT)

GB/T 5565.1 Measurement of flexibility and stiffness of rubber and plastic hoses and unreinforced hoses - Part 1: Room temperature bending test (GB/T 5565.1-2017, ISO 10619-1:2011, IDT) GB/T 7528 Terminology for rubber and plastic hoses and hose assemblies (GB/T 7528-2025, ISO 8330:2022, IDT) GB/T 9575 Rubber and Plastic Hoses - Specifications and Tolerances for Maximum and Minimum Inner Diameters and Cutting Lengths (GB/T 9575-2013) ISO 1307:2006, IDT

4 Materials and Structure

Polyurethane tubing should be made of polyester or polyether-based materials. When polyurethane tubing is used in humid or moisture-containing environments with temperatures above 40°C...

When exposed to the elements, the material should have good resistance to hydrolysis, and the user should inform the hose supplier.

Polyamide tubes should be made of polyamide materials, including but not limited to PA12, PA6, etc.

The hose material should be uniform and free of surface defects. The hose is extruded and can be colored according to the user's requirements.

5.1.1 Polyurethane pipe

The outer diameter, inner diameter, wall thickness, and deviation of the hose shall conform to the specifications in Tables 1 and 2.