

ICS 23.100.40

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

GB/T 14034.2-2023

**Connections for hydraulic fluid power - Metallic tube
connectors - Part 2: 37 degree flared connectors**

液压传动连接 金属管接头 第2部分：37°扩口式

Issued on: May 23, 2023

Implemented on: December 1, 2023

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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 2 of GB/T 14034 "Metal Pipe Fittings for Hydraulic Transmission Connections": GB/T 14034 has issued the following part:

--- Part 1: 24° cone;

--- Part 2: 37° flared type;

--- Part 4: 60 ° cone: This document is modified to adopt ISO 8434-2:2007 "Fluid power and general metal pipe fittings - Part 2: 37° flared pipe joints": Compared with ISO 8434-2:2007, this document has made the following structural adjustments:

--- Added "Table 2, Table 8, Table 10, Table 12, Table 14, Table 17, Table 18, Table 20, Table 22, Table 24, Table 26, Table 28, Table 30, Table 32, Table 34", "Table 3~Table 7, Table 9, Table 11, Table 13, Table 15, Table 16, Table 19, Table 21, Table 23, Table 25, Table 27, Table 29, Table 31, Table 33, and Table 35" respectively correspond to "Table 2~Table 20" of ISO 8434-2:2007;

--- "Figure 4" has been added, and the numbers of the original "Figure 4" and subsequent figures have been extended;

--- "15:1" corresponds to the "15:1 suspension section" of ISO 8434-2:2007, "15:2" is

added, and "15:2:1~15:2:5" corresponds to "15:1:1~15:1:5" of ISO 8434-2:2007, "15:2:6" corresponds to "15:2" of ISO 8434-2:2007;

--- Added "Table A:1, Table A:3", "Table A:2, Table A:4~Table A:9" corresponding to "Table A:1, Table A:9" of ISO 8434-2:2007 Table A:2~Table A:7": The technical differences between this document and ISO 8434-2:2007 and their reasons are as follows:

--- Replaced ISO 5598 (see Chapter 3) with the normatively quoted GB/T 17446 to adapt to my country's technical conditions and improve operability active;

--- Changed the terms and definitions (see Chapter 3, Chapter 3 of ISO 8434-2:2007);

--- Replaced ISO 6149-3 (see Figure 1, 9:6, Table 26~Table 29, Table A:8) with the normatively quoted GB/T 2878:3 to adapt to my country's technical conditions to improve operability;

--- Changed the pressure reduction ratio of stainless steel pipe joints at high temperature (see 5:3, 5:3 of ISO 8434-2:2007) to adapt to the technology of our country condition;

--- Replaced ISO 10763 (see 5:8) with the normatively quoted GB/T 41354 to adapt to my country's technical conditions and improve operability active;

---The flared end has increased the metric thread series (see Table 2) to improve operability;

1 Scope

GB/T 14034.2-2023 is Part 2 of the Chinese series on metallic tube connectors for hydraulic systems, and covers 37 degree flared fittings. The flared joint is the oldest and still the most trusted high pressure tube connection: the tube end is flared to a cone and clamped metal to metal between the fitting nose and the nut, with no seal to age. Its reliability depends entirely on the flare being made correctly and on the assembly torque, which is why the standard carries an assembly guide alongside the dimensions. It sets the materials, the pressure and temperature ratings, the designation of the fittings, the metal tube, the across-flats dimensions and tolerances, the design, the threads, the manufacture, the assembly guidance, the purchasing information, the marking, the performance requirements and qualification tests, and the marking instructions, with a normative annex on the length reduction of reducing fittings. It took effect on 1 December 2023.

This document specifies the general design requirements and basic dimensions for 37° flared pipe joints applicable to metal pipes with an outer diameter of 6 mm to 50.8 mm: Dimensional and performance requirements, as well as qualification tests, flared fittings are used for fluid transmission within the pressure and temperature ranges specified in this document and general applications: The pipe joints specified in this document are suitable for connecting metal pipes or hose joints with those in accordance with GB/T 2878:1, ISO 9974-1, ISO 1179-1 or The oil port of ISO 11926-1 is used for transition connection (refer to

GB/T 9065:5 for relevant hose joint specifications):

Note 1: For new application design, relevant requirements are given in 9:6: Where elastomeric seals are permitted, national standards and inclusion of elastomeric seals are preferred pipe joint design:

Note 2: Use under conditions outside the specified pressure and temperature ranges, see 5:5:

Note 3: Metric threaded flare ends and metric metal tubing are preferred: For unified thread flare ends, both metric and imperial pipes are applicable (see Figure 8), just change Just change the bushing:

Note 4: This type of pipe joint works under the working pressure given in Table 1, and realizes full flow connection through metal-to-metal sealing: due to many factors These values cannot be regarded as minimum guaranteed values: For each application, both the supplier and the purchaser need to conduct sufficient tests and evaluate the results: A review is performed to ensure that the fittings meet the required performance levels:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 193 Common thread diameter and pitch series (GB/T 193-2003, ISO 261:1998, MOD)

GB/T 196 Common thread basic dimensions (GB/T 196-2003, ISO 724:1993, MOD)

GB/T 197 Common thread tolerances (GB/T 197-2018, ISO 965-1:2013, MOD) GB/T 2878:

3 Hydraulic power connections with metric thread and O-ring seals on ports and stud ends - Part 3: Lightweight studs Terminal (L series) (GB/T 2878:3-2017, ISO 6149-3:2006, MOD) GB/T 3103:

1 Fastener tolerances for bolts, screws, studs and nuts (GB/T 3103:1-2002, idt ISO 4759-1:2000)

GB/T 3639 cold-drawn or cold-rolled precision seamless steel tubes

GB/T 7307 55°unsealed pipe thread (GB/T 7307-2001, eqv ISO 228-1:1994)

GB/T 10125 Artificial atmosphere corrosion test Salt spray test (GB/T 10125-2021, ISO 9227:2017, MOD)

GB/T 17446 Vocabulary for fluid transmission systems and components (GB/T 17446-2012, ISO 5598:2008, IDT)

GB/T 20669 unified thread profile (GB/T 20669-2006, ISO 68-2:1998, MOD)

GB/T 20670 Unified thread diameter and thread number series (GB/T 20670-2006, ISO 263:1973, MOD)

GB/T 26143 Test method for hydraulic pipe joints (GB/T 26143-2010, ISO 19879:2010, IDT)

GB/T 41354 Dimensions and nominal pressure of seamless or welded flat-ended precision steel pipes for hydraulic transmission (GB/T 41354-2022, ISO 10763:2020, MOD)