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

GB/T 2878-1993

Replacing GB/T 2878.1-2011

**Connections for hydraulic fluid power - Ports with truncated
housing and stud ends with metric threads - Part 1: Ports with
truncated housing
(English Translation)**

Issued on: March 28, 2025

Implemented on: March 28, 2025

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

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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 2878 "Hydraulic transmission connection ordinary threaded oil port and stud end". GB/T 2878 has been the following parts were published.

- Part 1: Oblique oil port;
- Part 2: Heavy duty stud ends (S series);
- Part 3: Lightweight stud ends (L series);
- Part 4: Hexagonal screw plugs.

This document replaces GB/T 2878.1-2011 "Hydraulic transmission connections with metric threads and O-ring seals, oil ports and stud ends" Part 1: Oil ports. Compared with GB/T 2878.1-2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- The L1 dimension of thread specifications "M8x1" and "M10x1" is changed from "1.6" to "2.2" (see Table 1, Table 1 of the 2011 edition);
- Added the requirement that "the user of this document should ensure that the material around the oil port is sufficient to withstand the maximum working pressure" (see Chapter 4);
- Added interchangeability warning (see Chapter 5);
- Changed the naming method of oil ports (see Chapter 7, Chapter 6 of the 2011 edition);
- Changed the identification method (see Chapter 8, Chapter 7 of the 2011 edition).

This document is equivalent to ISO 6149-1:2022 "Pipe fittings for hydraulic power and general purposes with ISO 261 metric threads and O-ring sealed oil ports and stud ends

Part 1: Oil ports with countersunk grooves for O-ring sealing.

The following minimal editorial changes were made to this document.

--- In order to coordinate with the existing standards, the standard name is changed to "Hydraulic transmission connection ordinary threaded oil port and stud end part 1.

Inclined oil port".

Introduction

In a hydraulic transmission system, power is transmitted and controlled by a pressurized fluid in a closed circuit. In general applications, the fluid can be the oil is delivered under pressure. The threaded oil port of the component is connected to the hard pipe or hose through a pipe joint or hose joint. The oil can be sealed by screwing in the screw plug.

The oil port is an integral part of the hydraulic transmission components (pumps, motors, valves, cylinders, etc.).

GB/T 2878 aims to determine the dimensions and performance requirements of common threaded oblique oil ports and stud ends, and is intended to consist of four parts.

--- Part 1: Oblique oil ports. The purpose is to determine the size and performance requirements of common thread oblique oil ports.

--- Part 2: Heavy stud ends (S series). The purpose is to determine the dimensions and properties of normal threaded heavy stud ends (S series) Require.

--- Part 3: Lightweight stud ends (L series). The purpose is to determine the dimensions and properties of ordinary threaded lightweight stud ends (L series) Require.

--- Part 4: Hexagonal screw plugs. The purpose is to determine the dimensions and performance requirements of hexagonal screw plugs with normal threads.

Hydraulic transmission connection ordinary threaded bevel oil port and stud end Part 1: Oblique oil ports

1 Scope

This document specifies the dimensions and requirements for common threaded bevel ports for hydraulic transmission connections and is applicable to ISO 6149-2 and ISO 6149-3.

Stud end connection as specified in.

The oil ports specified in this document are applicable to the maximum working pressure of 63MPa for the non-adjustable stud end and the maximum working pressure of 63MPa for the adjustable stud end.

The maximum working pressure is 40MPa. The allowable working pressure is determined by factors such as oil port size, material, structure, working conditions and application. Pressure level See ISO 6149-2 and ISO 6149-3.

Note: It is recommended that the oil ports given in this document be used for newly designed hydraulic systems.

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: GB/T 193-2003 Common thread diameter and pitch series (ISO 261:1998, MOD) ISO 965-1 ISO general purpose metric thread tolerances Part 1: Principles and basic data Note. GB/T 197-2018 General thread tolerances (ISO 965-1:2013, MOD) Note. GB/T 20330-2006 Diameter of twist drill for drilling before tapping (ISO 2306:1972, MOD) Note. GB/T 17446-2024 Fluid power systems and components vocabulary (ISO 5598:2020, MOD) ISO 6149-2 Pipe fittings for hydraulic power and general purposes - Oil ports and threaded connections with ISO 261 metric threads and O-ring seals Note. GB/T 2878.2-2011 Hydraulic transmission connections with metric threads and O-ring seals, oil ports and stud ends Part 2: Heavy duty stud ends (S series) (ISO 6149-2:2006, MOD) ISO 6149-3 Pipe fittings for hydraulic power and general purposes - Oil ports and threaded connections with ISO 261 metric threads and O-ring seals Note. GB/T 2878.3-2017 Hydraulic transmission connections with metric threads and O-ring seals, oil ports and stud ends Part 3: Light stud ends (L Series) (ISO 6149-3:2006, MOD)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 apply.