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

GB/T 38205.3-2019

**Hydraulic fluid power -- Mounting dimensions for single rod
cylinders, 16 MPa series -- Part 3: Compact series with bores
from 250 mm to 500 mm**

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Foreword

GB/T 38205 "Hydraulic Transmission 16MPa Series Single Rod Cylinder Installation Dimensions" is divided into the following three parts.

--- Part 1. Medium series;

--- Part 2. Compact series of cylinder diameter 25mm~220mm;

--- Part 3. Compact series with cylinder diameters from 250mm to 500mm.

This part is the third part of GB/T 38205.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafting method to modify the ISO 6020-3.2015 "hydraulic transmission 16MPa (160bar) series single rod cylinder safety

Mounting dimensions Part 3. Compact series with cylinder diameters from 250mm to 500mm.

The technical differences between this part and ISO 6020-3.2015 and their reasons are as follows.

--- Regarding the normative reference documents, this section has made technical adjustments to adapt to the technical conditions of China. Adjustment

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replace ISO 3320 with GB/T 2348 modified to international standards (see Chapter 5 and

Table 1 to Table 9 footnote a);

* Replace ISO 4395 with GB/T 2350 equivalent to the international standard (see 8.2 and Table 1 to Table 9 footnote a);

* Replace ISO 273 with GB/T 5277 equivalent to the international standard (see Tables 2 and 3);

* Replace ISO 6099 with GB/T 9094 equivalent to the international standard (see Chapters 4.3 and 7);

* Replace ISO 5598 with GB/T 17446 equivalent to the international standard (see Chapter 3);

* Removed ISO 6162-1 referenced in ISO 6020-3:2015 (see footnote b of Table 1 in ISO 6020-3:2015);

* Added reference to GB/T 34635 (see footnote b of Table 1).

--- Increased cylinder diameter and related data of 280mm and 450mm (see Table 1 to Table 9).

--- Modified the size "FB" in Fig. 2 and the size "phiFB" in Fig. 3 to "8 x phiFB".

--- Revised the tolerance of WF in Figure 2 and XG in Figure 7, related to piston stroke (see Table 10).

--- Removed the "Swing angle Z" column in Table 6, and added the table "Wobble angle Z to a minimum of 4°" in Table 6.

--- Modified the installation dimensional tolerances associated with the trip, and higher than the provisions of ISO 6020-3:2015, to adapt to our technical bar (see Chapter 6).

--- According to the newly divided range of travel, the limit deviation of the installation size determined by the stroke is modified, and most of the indicators are higher than

The provisions of ISO 6020-3:2015 (see Table 10).

This section also made the following editorial changes.

--- Removed the note in Chapter 1 of ISO 6020-3:2015 and added the content of Note 2 to the scope of the standard;

--- Removed the ISO 6020-3:2015 Chapter 5 cylinder diameter series, the series is listed in Table 1~Table 9;

--- Removed the footnote of Chapter 5 of ISO 6020-3:2015, which is described in Tables 1 to 9;

--- Deleted the MM column in Table 2~Table 9 and its footnote a, modified other footnote serial numbers, MM columns are listed in Table 1, in

MM is not shown in Figures 2-9.

This part was proposed by the China Machinery Industry Federation.

This part is under the jurisdiction of the National Hydraulic and Pneumatic Standardization Technical Committee (SAC/TC3).

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1 Scope

This part of GB/T 38205 specifies the installation dimensions of the 16MPa series compact single-rod hydraulic cylinder to meet the interchangeability of hydraulic cylinders.

Claim.

This section applies to square hydraulic cylinders with a cylinder diameter of 250mm~500mm.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2348 fluid transmission system and component bore and piston rod diameter (GB/T 2348-2018, ISO 3320.2013,

MOD)

GB/T 2350 Hydraulic and pneumatic systems and components piston rod thread type and size series (GB/T 2350-1980, eqvISO 4395.

1978)

GB/T 5277 fastener bolt and screw through hole (GB/T 5277-1985, eqvISO 273-1979)

GB/T 9094 hydraulic cylinder cylinder installation size and installation type code (GB/T 9094-2006, ISO 6099.2001, IDT)

GB/T 17446 fluid drive system and component vocabulary (GB/T 17446-2012, ISO 5598.2008, IDT)

GB/T 34635 flanged pipe joint

3 Terms and definitions

The terms and definitions defined in GB/T 17446 apply to this document.

4 size

4.1 The installation dimensions of the hydraulic cylinder are shown in Figures 1 to 9 and the corresponding Tables 1 to 9.

5 bore

The bores covered in this section shall comply with the provisions of GB/T 2348, see Table 1 to Table 9.

6 piston stroke tolerance

Piston stroke tolerances shall be in accordance with Table 11.