INTERNATIONAL STANDARD

ISO
3019-3
Second edition
1988-11-01

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Hydraulic fluid power — Positive displacement pumps and motors — Dimensions and identification code for mounting flanges and shaft ends —

Part 3 :
Polygonal flanges (including circular flanges)

Transmissions hydrauliques — Pompes volumétriques et moteurs — Dimensions et code d'identification des flasques de montage et des bouts d'arbres —

Partie 3 : Flasques polygonaux (y compris les flasques circulaires)

Reference number
ISO 3019-3 : 1988 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3019-3 was prepared by Technical Committee ISO/TC 131, *Hydraulic fluid power.*

This second edition cancels and replaces the first edition (ISO 3019-3 : 1981), of which it constitutes a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Printed in Switzerland

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0 Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Pumps are components which convert mechanical power into hydraulic fluid power. Motors are components which convert hydraulic fluid power into mechanical power.

1 Scope and field of application

1.1 This part of ISO 3019 specifies dimensions and establishes an identification code for mounting flanges of positive displacement rotary hydraulic fluid power pumps and motors having a geometry which cannot accept a flange covered in ISO 3019-2.

1.2 This part of ISO 3019 also specifies dimensions and establishes an identification code for shaft ends of positive displacement rotary hydraulic fluid power pumps and motors of the following types :

— cylindrical shaft end with key;

— conical shaft end with key and external thread;

— cylindrical shaft end with metric involute spline.

1.3 This part of ISO 3019 establishes a metric series of mounting flanges and shaft ends for positive displacement rotary hydraulic fluid power pumps and motors.

1.4 This part of ISO 3019 provides

— a minimum number of flanges and shaft sizes to cover probable present and future requirements;

— dimensional interchangeability of flange and shaft end mountings;

— flange and spigot dimensions which allow for recommended sealing arrangements when sealing is required between a flange and its mating housing;

— identification codes for flanges and shaft ends — these codes can be used separately or in combination.

2 References

ISO 261, *ISO general purpose metric screw threads — General plan.*

ISO 286-2, *ISO system of limits and fits — Part 2 : Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO/R 773, *Rectangular or square parallel keys and their corresponding keyways (Dimensions in millimetres).*

ISO/R 775, *Cylindrical and* 1/10 *conical shaft ends.*

ISO 1101, *Technical drawings — Geometrical tolerancing — Tolerancing of form, orientation, location and run-out — Part 1 : Generalities, definitions, symbols, indications on drawings.*

ISO 1302, *Technical drawings — Method of indicating surface texture on drawings.*

ISO 3019-1, *Hydraulic fluid power — Positive displacement pumps and motors — Dimensions and identification code for mounting flanges and shaft ends — Part 1 : Inch series shown in metric units.*

ISO 3019-2, *Hydraulic fluid power — Positive displacement pumps and motors — Dimensions and identification code for mounting flanges and shaft ends — Part 2 : Two- and four-hole flanges and shaft ends — Metric series.*

ISO 3912, *Woodruff keys and keyways.*

ISO 4156, *Straight cylindrical involute splines — Metric module, side fit — Generalities, dimensions and inspection.*

ISO 5598, *Fluid power systems and components — Vocabulary.*

3 Definitions

For the purposes of this part of ISO 3019, the definitions given in ISO 5598 apply.

4 Dimensions

4.1 Tolerances

4.1.1 Dimensions shown without tolerances are nominal.

4.1.2 Tolerances of form and of position are shown in accordance with ISO 1101.

4.2 Selection of sizes

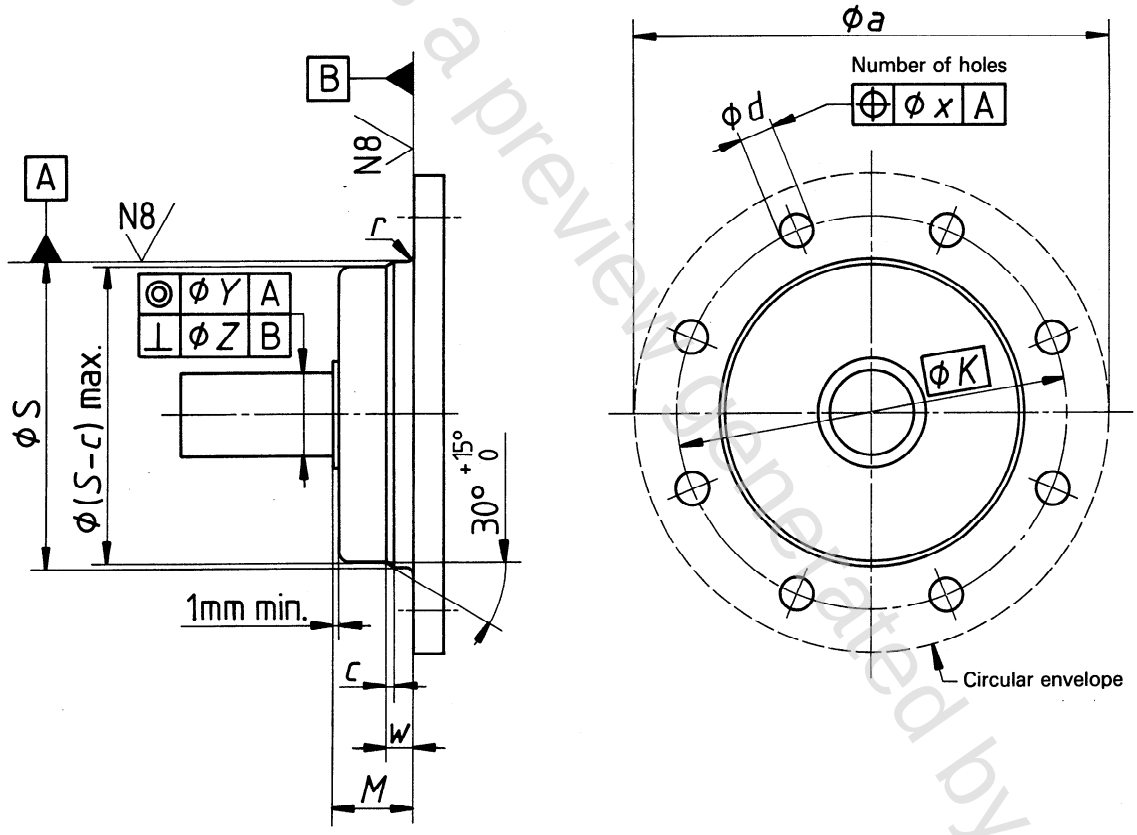
Mounting flanges and shaft dimensions for pumps and motors manufactured in accordance with this part of ISO 3019 shall be selected as follows :

— flanges from table 1;

— shaft ends from 4.4.

4.3 Mounting flanges — Polygonal and circular flanges

Mounting flange dimensions shall be selected from figure 1 and table 1.



NOTE — Surface roughness is indicated in accordance with ISO 1302.

Figure 1 — Basic layout of polygonal flanges