
**Medium-transfer units for tool
interfaces —**

Part 2:
**Transfer units for polygonal taper
interfaces in accordance with the ISO
26623 series**

Unités de transfert de fluide pour les interfaces d'outils —

*Partie 2: Unités de transfert pour interfaces à cône polygonal
conformes à la série ISO 26623*





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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with defined cutting edges, holding tools, cutting items, adaptive items and interfaces*.

A list of all parts in the ISO 22402 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Medium-transfer units for tool interfaces —

Part 2:

Transfer units for polygonal taper interfaces in accordance with the ISO 26623 series

1 Scope

This document specifies the dimensions of medium-transfer units for wet processing and interfaces machine tool with insert nuts, which are used in polygonal taper in accordance with the ISO 26623 series.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

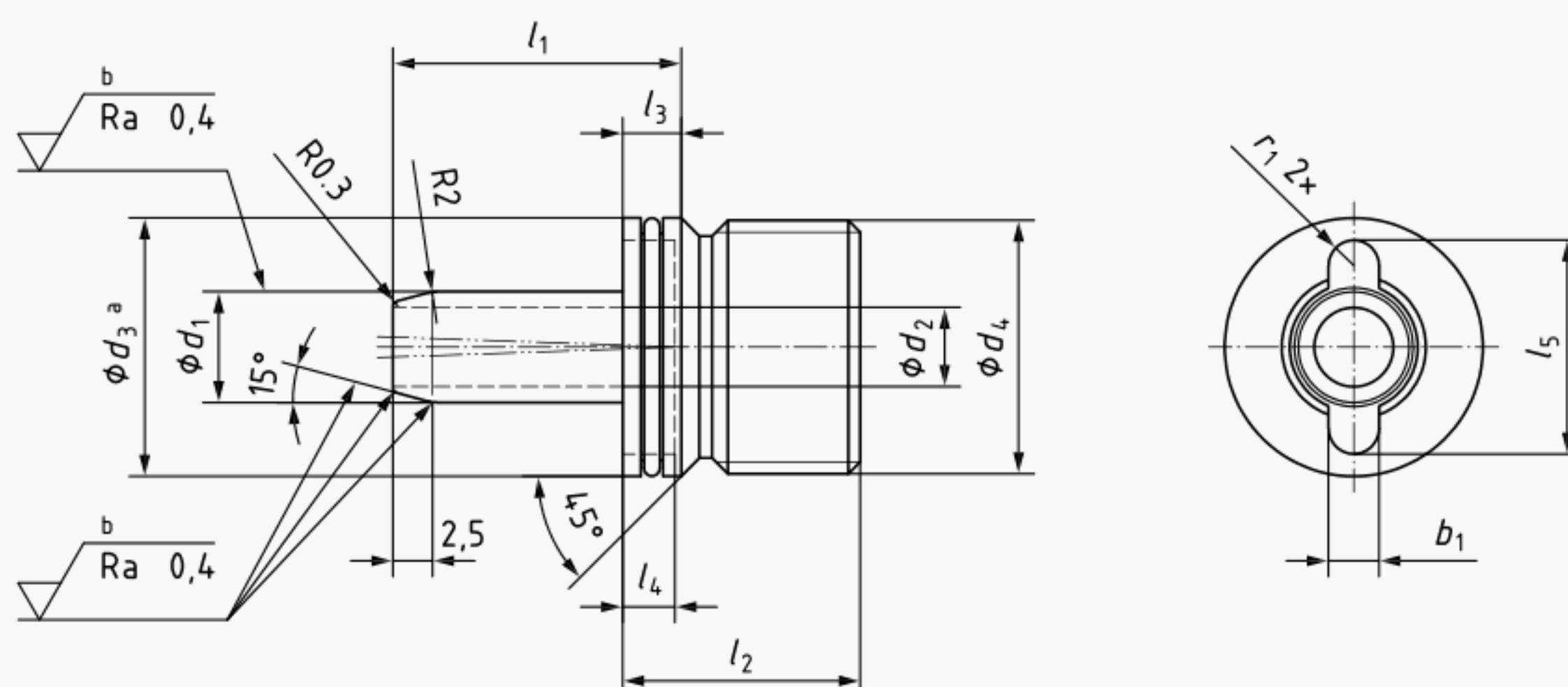
- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

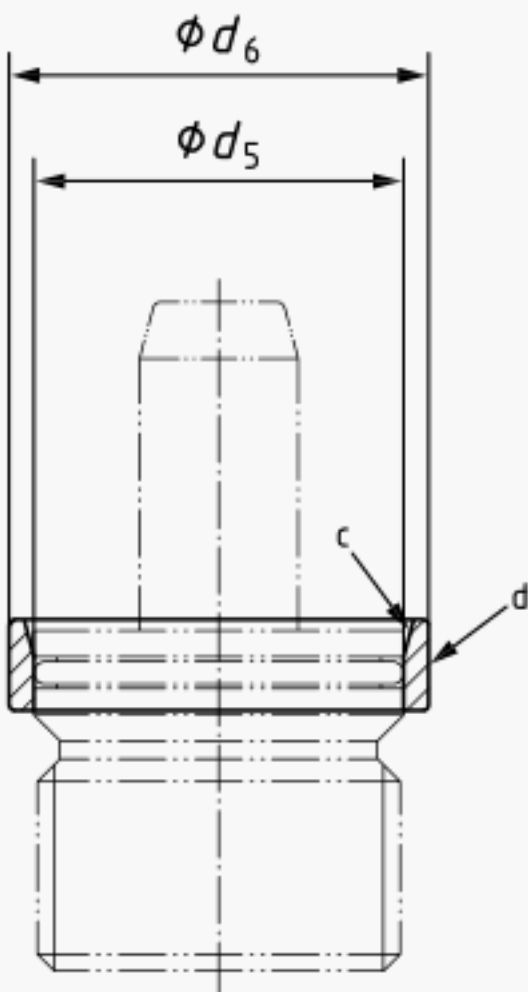
4 Transfer units for polygonal taper interfaces

4.1 Transfer unit for polygonal taper interface, nominal sizes 32 to 80

The transfer units for polygonal taper interfaces for nominal sizes 32 to 80 shall be carried out according to [Figure 1](#) and [Table 1](#).

Dimensions in millimetres



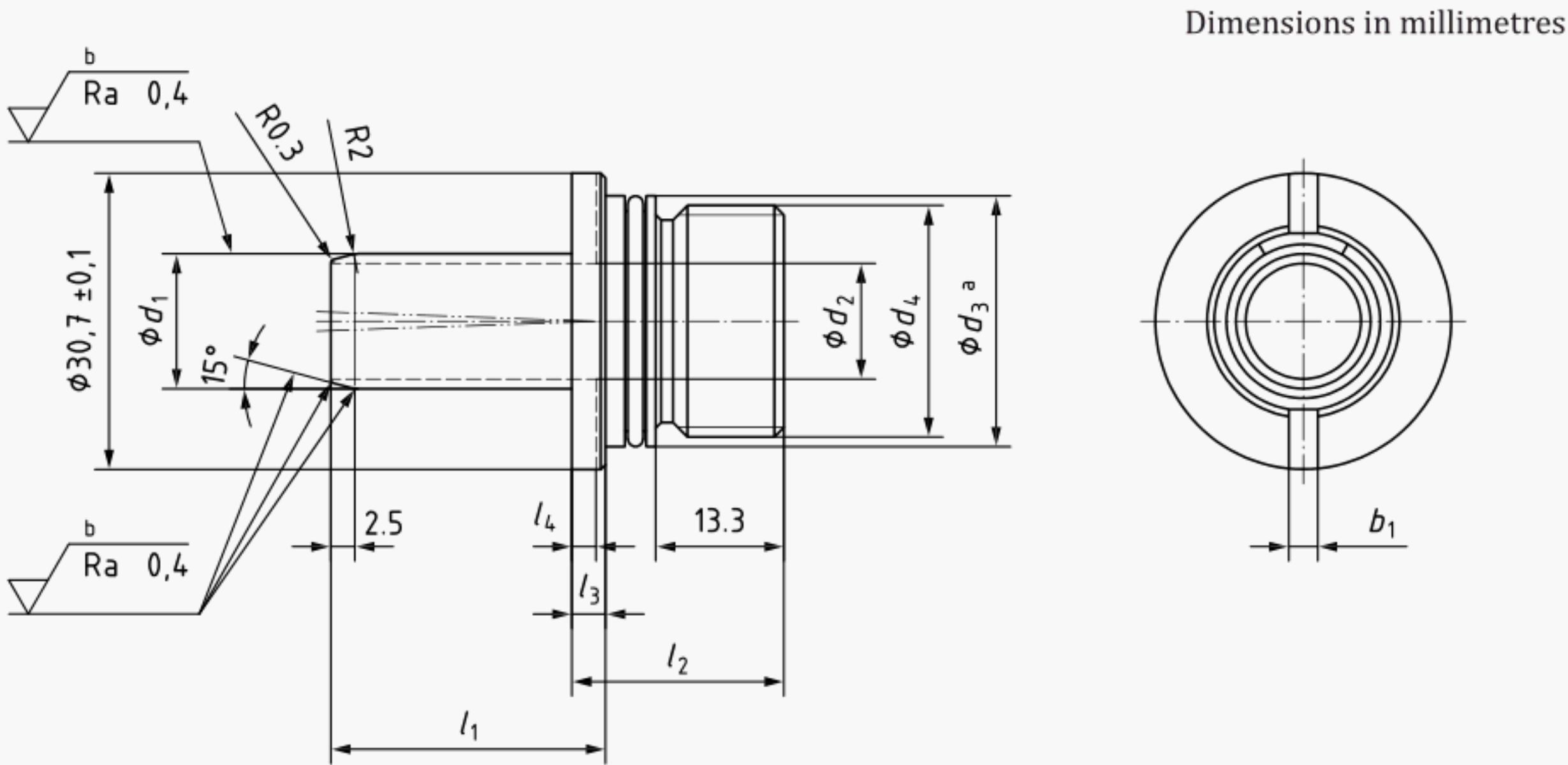


- Key**
- a Machined at the same set-up as d_4 .
 - b Polished.
 - c Lead-in chamfer for sealing.
 - d Sliding sleeve, only needed for mounting the transfer unit into a coupling of size 32 to 50. This sliding sleeve is replacing the lead-in chamfer inside the coupling due to limited unclamping surface.

Figure 1 — Transfer unit for polygonal taper interfaces — Nominal sizes 32 to 80

4.2 Transfer unit for polygonal taper interface, nominal size 100

The transfer unit for polygonal taper interfaces for nominal size 100 shall be carried out according to [Figure 2](#) and [Table 1](#).



- Key**
- a Machined at the same set-up as d_4 .
 - b Polished.

Figure 2 — Transfer unit for polygonal taper interfaces — Nominal size 100

Table 1 — Transfer unit for polygonal interfaces, dimensions

| Nominal size | 32 | 40 | 50 | 63 | 80 | 100 |
|-----------------|-----------|-----------|-----------|---------|---------|---------|
| b_1 [mm] | 3,2 | 3,2 | 3,2 | 3,2 | 3,2 | 3,2 |
| d_1 f8 [mm] | 5 | 6 | 7 | 8 | 10 | 14 |
| d_2 [mm] | 3 | 4 | 5 | 6 | 8 | 12 |
| d_3 f7 [mm] | 12,3 | 14,3 | 16,3 | 20,3 | 20,3 | 26 |
| d_4 [mm] | M12 × 1,5 | M14 × 1,5 | M16 × 1,5 | M20 × 2 | M20 × 2 | M24 × 2 |
| d_5 H10 [mm] | 12,3 | 14,3 | 16,3 | — | — | — |
| d_6 [mm] | 14 | 16,5 | 18,5 | — | — | — |
| l_1 ±0,3 [mm] | 16,1 | 17,2 | 18,2 | 21,5 | 22 | 28,5 |
| l_2 [mm] | 11,5 | 14 | 15 | 17,5 | 18 | 22 |
| l_3 [mm] | 3,6 | 3,7 | 3,7 | 5,5 | 5,5 | 3,5 |
| l_4 [mm] | 3 | 3,5 | 3,5 | 5 | 5 | 2,5 |
| l_5 ±0,1 [mm] | 9,5 | 11,5 | 13,5 | 16 | 16 | — |
| r_1 [mm] | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | — |
| M_A [Nm] | 10 | 10 | 10 | 20 | 20 | 30 |

4.3 Design

4.3.1 General

The transfer unit shall seal a pressure of at least 70 bar¹⁾ and be neutral centred and allow an angular movement of $\pm 1^\circ$ with a small displacement force. Transfer unit for polygonal taper interface assembly model is described in [Annex A](#).

4.3.2 Hardness

The supply tube shall be surface hardened, hardness at least 56 HRC (Rockwell hardness C).

4.4 Designation

A transfer unit in accordance with this document shall be designated by:

- “Transfer unit”;
- reference to this document, i.e. ISO 22402-2;
- nominal size of the polygon-shank in mm (e.g. 50).

EXAMPLE Designation of a transfer unit for a polygon-shank with the nominal size 50 mm:

Transfer unit ISO 22402-2 — 50

1) 1 bar = 0,1 MPa = 10^5 Pa 1 MPa = 1 N/mm².

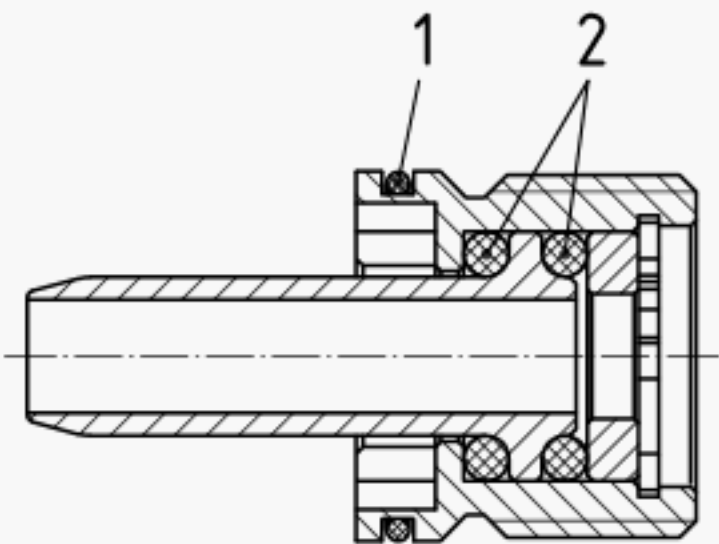
Annex A
(informative)

Transfer unit for polygonal taper interface assembly model

A.1 General

O-ring-dimensions and design for transfer units for polygonal taper interface are shown in [Figure A.1](#).

Dimensions in millimetres



| Nominal size | 32 | 40 | 50 | 63 | 80 | 100 |
|--------------|-----------|-------------|-----------|------------|------------|------------|
| O-ring 1 | 10 × 1 | 12 × 1 | 14 × 1 | 17,1 × 1,6 | 17,1 × 1,6 | 22,1 × 1,6 |
| O-ring 2 | 4,5 × 1,5 | 5,28 × 1,78 | 6,3 × 2,4 | 7,3 × 2,4 | 9,3 × 2,4 | 13,3 × 2,4 |

- Key
- 1 O-ring 1
 - 2 O-ring 2

Figure A.1 — Transfer unit assembly model

Bibliography

- [1] ISO 26623 (all parts), *Polygonal taper interface with flange contact surface*

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