INTERNATIONAL STANDARD

ISO 702-4

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Machine tools — Connecting dimensions of spindle noses and work holding chucks —

Part 4: Cylindrical connection

Machines-outils — Dimensions d'assemblage de nez de broches et mandrins porte-pièces —

Partie 4: Assemblage cylindrique

Reference number
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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 702-4 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 8, *Work holding spindles and chucks*.

ISO 702 consists of the following parts, under the general title *Machine tools — Connecting dimensions of spindle noses and work holding chucks*:

— *Part 1: Conical connection*

— *Part 2: Camlock type*

— *Part 3: Bayonet type*

— *Part 4: Cylindrical connection*

Machine tools — Connecting dimensions of spindle noses and work holding chucks —

Part 4: Cylindrical connection

1 Scope

This part of ISO 702 specifies the sizes for interchangeability of cylindrical spindle noses and corresponding connecting faces of face plates or work holding chucks.

NOTE The conical connection, “Camlock” and “bayonet” types are dealt with ISO 702-1, ISO 702-2 and ISO 702-3, respectively.

2 Sizes for interchangeability

2.1 Spindle nose

Only one bolt circle of diameter d_2 is considered in this part of ISO 702, with 6 holes for No. 3 and 12 holes for Nos. 4 to 28.

The dimensions are shown in Figure 1 and given in Table 1.

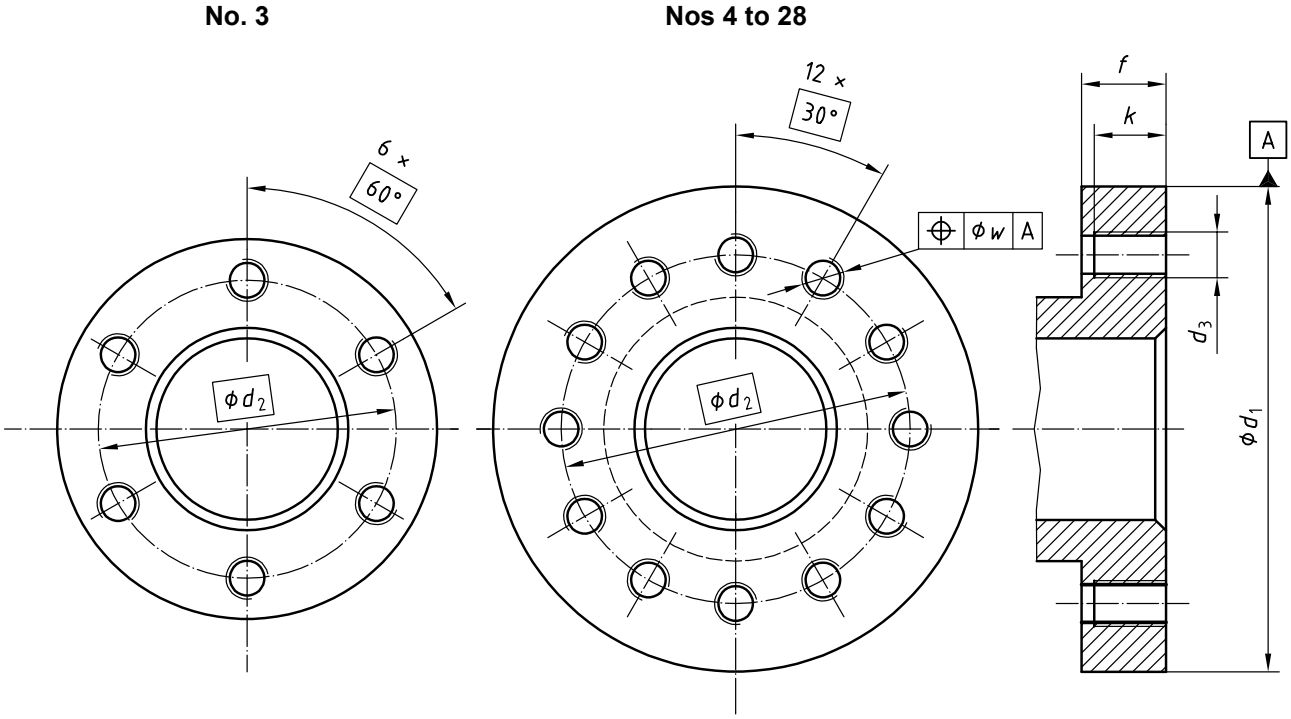

Figure 1 — Spindle nose

Table 1 — Dimensions of spindle nose

Dimensions in millimetres

Dimension		Size No.								
		3	4	5	6	8	11	15	20	28
d_1	nom.	90	115	140	170	220	300	380	520	720
	tol.	0 − 0,010	0 − 0,010	0 − 0,012	0 − 0,012	0 − 0,014	0 − 0,016	0 − 0,018	0 − 0,022	0 − 0,025
d_2		70,6	82,6	104,8	133,4	171,4	235	330,2	463,6	647,6
d_3		M10	M10	M10	M12	M16	M20	M24	M24	M30
f		16	20	22	25	28	35	42	48	56
k		14	17	19	22	25	32	37	42	50
w		0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,3

2.2 Connecting faces

The connecting face dimensions of the chuck or face plate corresponding to the spindle noses specified in 2.1 are shown in Figure 2 and given in Table 2.

The number of holes depends upon the manufacturer's design; their pitch shall be a multiple of 30° in any combination to match the spindle holes.

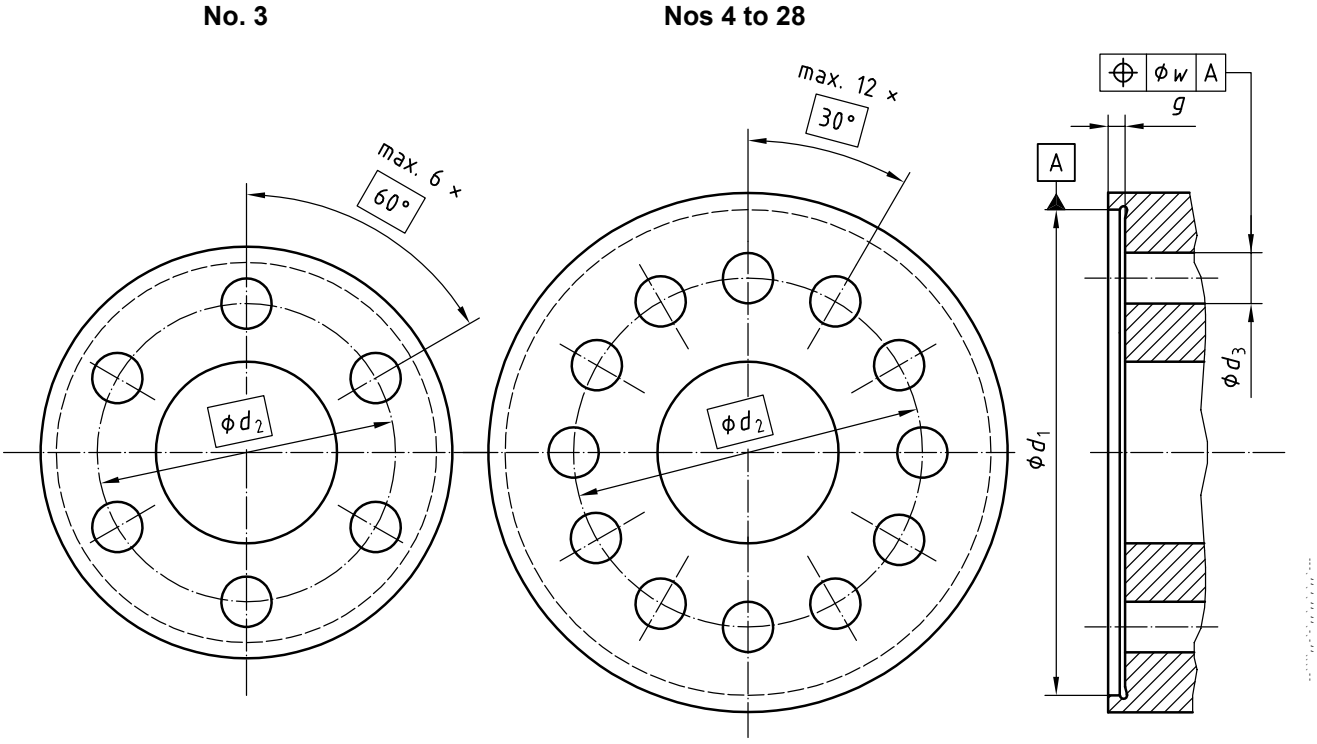

Figure 2 — Face plate

Table 2 — Connecting face dimensions

Dimensions in millimetres

Dimension		Size No								
		3	4	5	6	8	11	15	20	28
d_1	nom.	90	115	140	170	220	300	380	520	720
	tol.	+ 0,022 0	+ 0,022 0	+ 0,025 0	+ 0,025 0	+ 0,029 0	+ 0,032 0	+ 0,036 0	+ 0,044 0	+ 0,050 0
d_2		70,6	82,6	104,8	133,4	171,4	235	330,2	463,6	647,6
d_3		12	12	12	14	18	22	26	26	33
g_{min}		4	4	5	5	5	5	5	5	5
w		0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,3

3 Designation of cylindrical connections

A cylindrical connection in accordance with this part of ISO 702 is designated by

a) the number of this part of ISO 702; i.e. ISO 702-4;

b) the nominal size of the cylindrical connection.

EXAMPLE A connecting face of size No. 8 is designated as follows:

ISO 702-4 - No. 8

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Price based on 3 pages