
**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



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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*

.....

1

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.

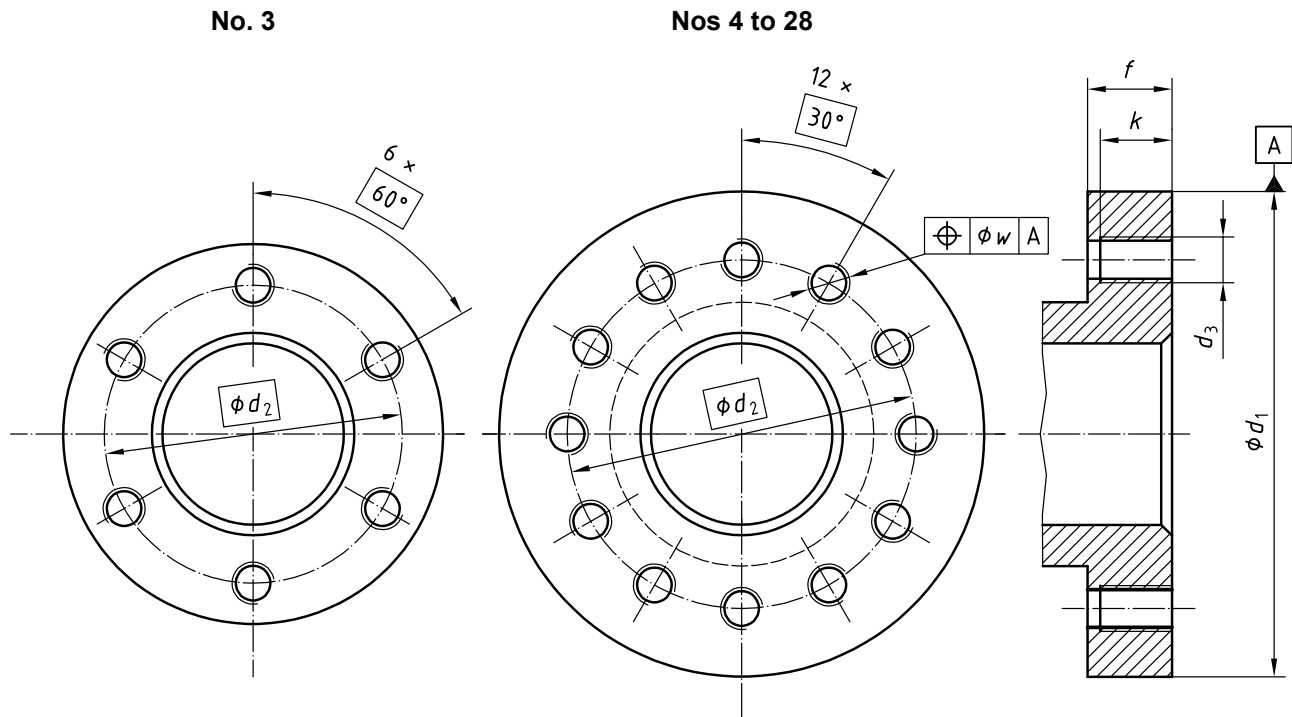


Figure 1 — Spindle nose

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.

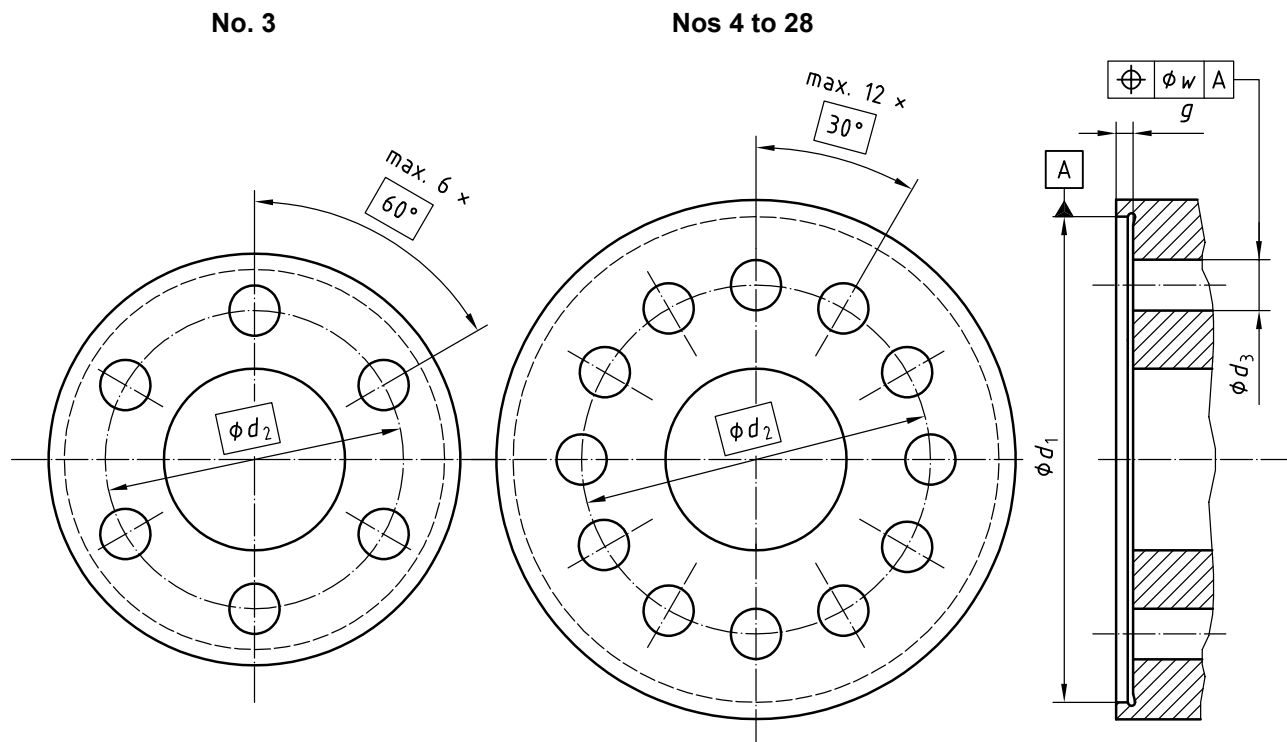


Figure 2 — Face plate

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

