
**Clamping flanges for superabrasive
cutting-off wheels —**

**Part 2:
Building and construction**

Flasques pour meules de tronçonnage superabrasives —

Partie 2: Bâtiment et génie civil

STANDARDSISO.COM : Click to view the full PDF of ISO 21537-2:2004



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.

STANDARDSISO.COM : Click to view the full PDF of ISO 21537-2:2004

© 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 21537-2 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

ISO 21537 consists of the following parts, under the general title *Clamping flanges for superabrasive cutting-off wheels*:

- *Part 1: Natural stone*
- *Part 2: Building and construction*

Clamping flanges for superabrasive cutting-off wheels —

Part 2: Building and construction

1 Scope

This part of ISO 21537 specifies dimensions for clamping flanges for the mounting of superabrasive cutting-off wheels (diamond saws) for use on stationary cutting-off machines, mobile cutting-off machines and hand-held cutting-off machines for the cutting of mineral materials.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

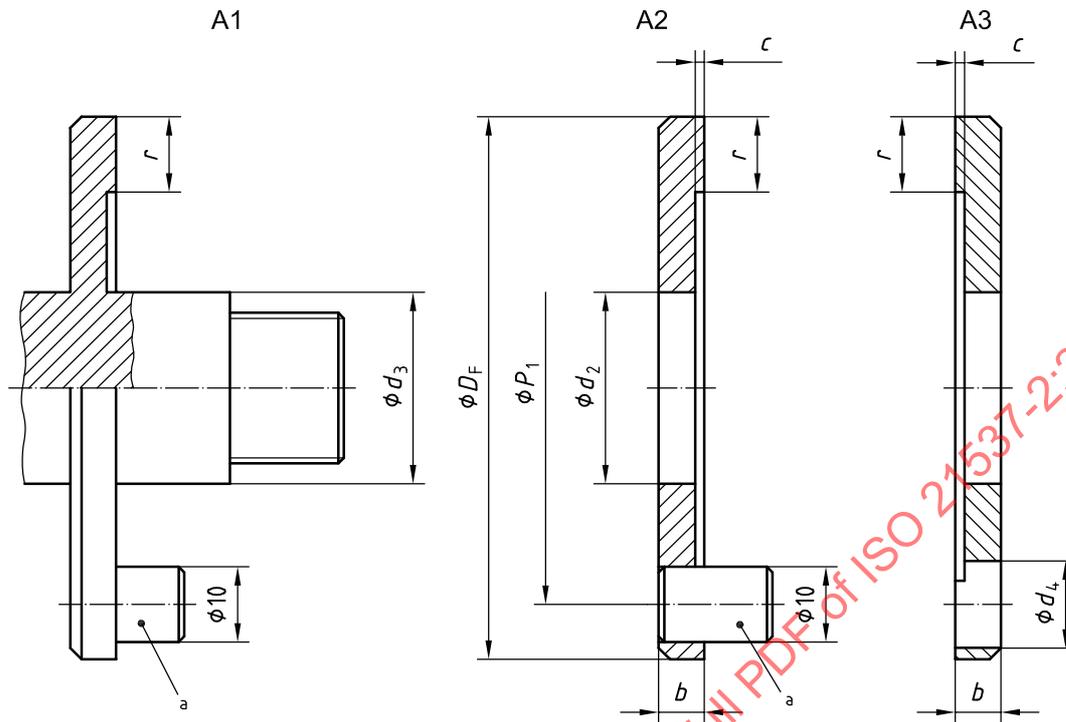
3 Dimensions

3.1 General

The dimensions of flanges used on hand-held cutting-off machines (type A), on masonry cutting-off machines (type B), on joint cutting machines (type C), on joint cutting machines (flush cuts) (type D) and on wall cutting-off machines (type E) for clamping superabrasive cutting-off wheels are shown in Figures 1 to 5 and given in Tables 1 to 5 respectively.

Details which are not specified shall be chosen according to need.

3.2 Type A



a Optional drive pin for cutting-off wheels $D > 230$ mm.

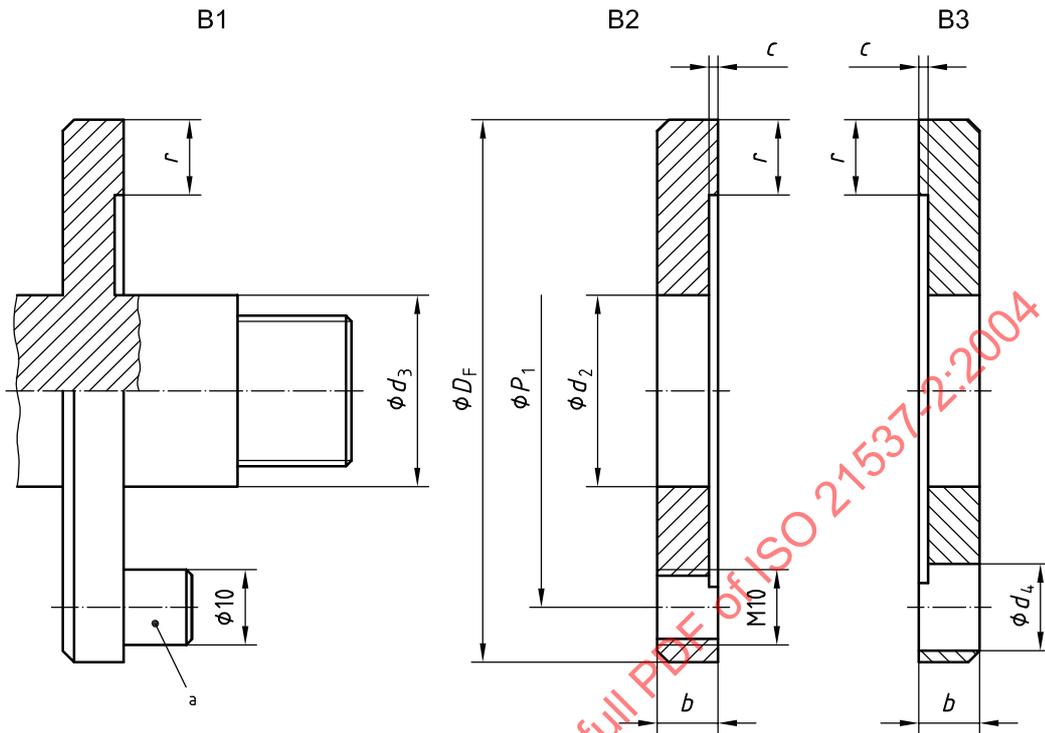
Figure 1 — Type A

Table 1 — Dimensions of clamping flanges for type A

Dimensions in millimetres
General tolerances ISO 2768 - m

Cutting-off wheel		Flange							
D	H	D_F	b	c min.	d_2 H7	d_3 g6	d_4	P_1 $\pm 0,1$	r
$D \leq 100$	16	41			16		—	—	5
$115 \leq D \leq 230$	22,23				22,23				
$230 < D \leq 400$	20	72	6	1	20		11,5	57,4	10
	22,23				22,23				
	25,4				25,4				

3.3 Type B



a Optional drive pin.

Figure 2 — Type B

Table 2 — Dimensions of clamping flanges for type B

Dimensions in millimetres
General tolerances ISO 2768 - m

Cutting-off wheel		Size	Flange									Number of pins					
D	H		D _F	b	c	d ₂	d ₃	d ₄	P ₁	r							
					min.	H7	g6		± 0,1								
D ≤ 250	20	1	41	8		20	20	—	—	5	—						
	25,4	2				25,4	25,4										
250 < D ≤ 400	25,4	3	72									25,4	25,4		57,4	10	1
	30	4										30	30				
400 < D ≤ 700	25,4	5	90			25,4	25,4										
	60	6				60	60										
700 < D ≤ 900	25,4	7	140	12	1	25,4	25,4	11,5		100	12	3 × 120°					
		8								120		1					
	60	9				100	1										
		10				100	3 × 120°										
900 < D ≤ 1 000	25,4	11	162			25,4	25,4			120		1					
		12								100		3 × 120°					
	60	13				120	1										
		14				100	3 × 120°										

3.4 Type C

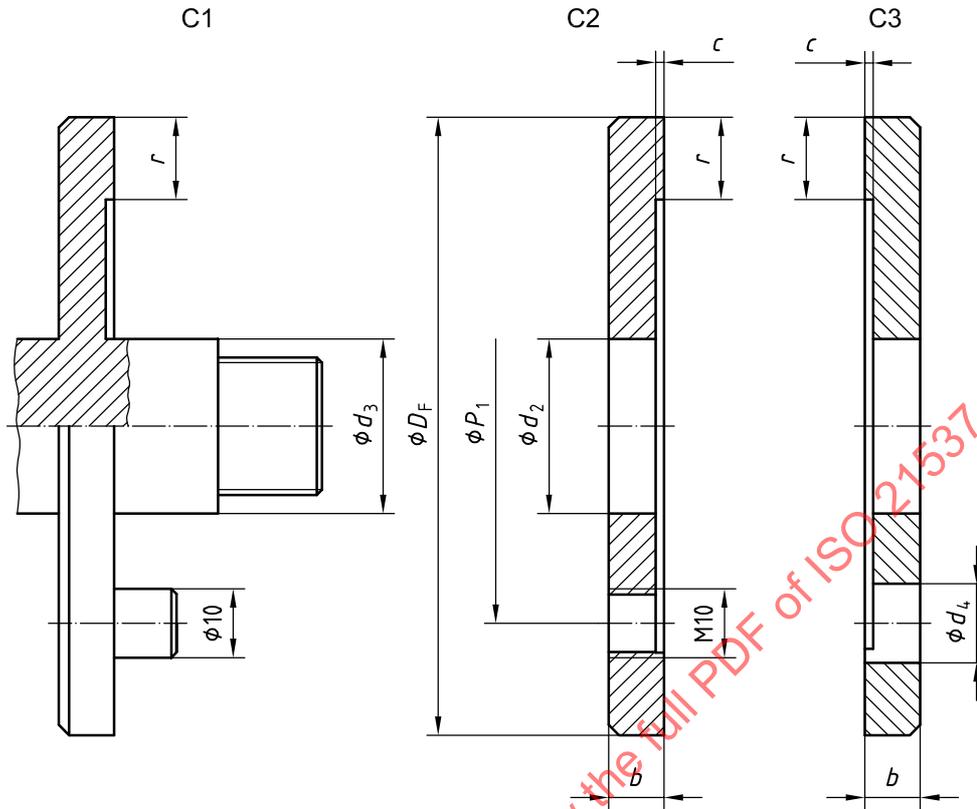


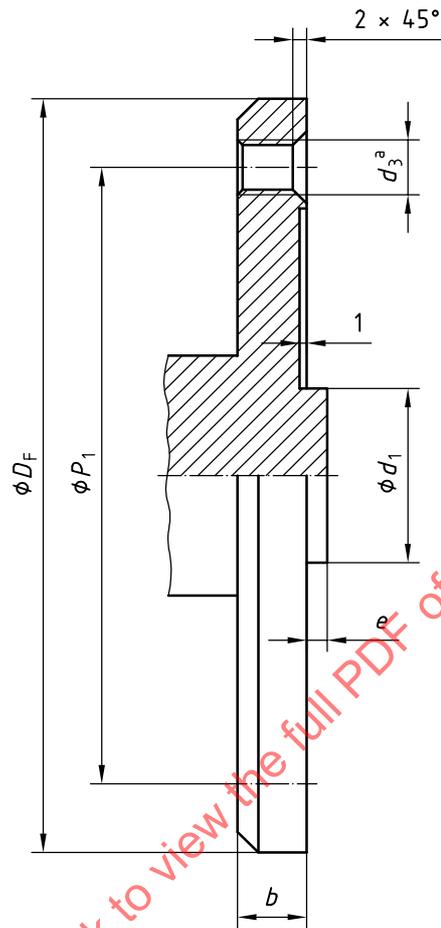
Figure 3 — Type C

Table 3 — Dimensions of clamping flanges for type C

Dimensions in millimetres
General tolerances ISO 2768 - m

Cutting-off wheel		Flange								Number of pins
D	H	D_F	b	c min.	d_2 H7	d_3 e8	d_4	P_1 $\pm 0,1$	r	
$D \leq 350$	25,4	80	8	1	25,4	11,5	—	—	10	1
$350 < D \leq 500$	25,4	90			25,4					
	35	140	35		12					
$500 < D \leq 900$	25,4		198						25,4	
	35	35								
$900 < D \leq 1\ 500$	25,4	50	25,4	—						
	35		35							
	50		50							

3.5 Type D



a $6 \times 60^\circ$

Figure 4

Table 4 — Dimensions of hub flanges for type D

Dimensions in millimetres
General tolerances ISO 2768 - m

Cutting-off wheel		Flange					
D	H	D_F	b	e	d_1	d_3	P_1
				$\begin{matrix} 0 \\ -0,1 \end{matrix}$	e8	and number of threaded holes	$\pm 0,1$
$D \leq 700$	25,4	110	10	3	25,4	M8 6 \times 60°	90
	35				35		
	50				50		
$700 < D \leq 1\ 200$	25,4	140	12	3,5	25,4	M8 6 \times 60°	110
	35				35		
	50				50		
$1\ 200 < D \leq 1\ 500$	25,4	198	16	3,5	25,4	M8 or M12 6 \times 60°	120
	35				35		
	50				50		

3.6 Type E

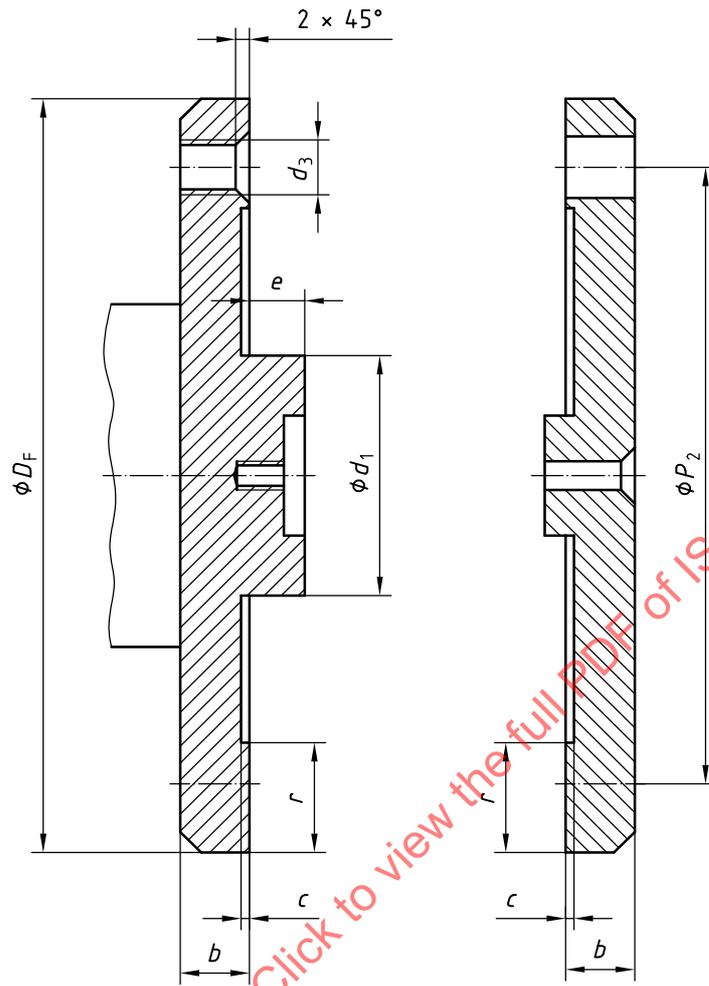


Figure 5 — Type E

STANDARDSISO.COM · Click to view the full PDF of ISO 21537-2:2004

Table 5 — Dimensions of hub flanges for type E

Dimensions in millimetres
General tolerances ISO 2768 - m

Cutting-off wheel		Flange																	
D	H	D_F	e	b	c	d_1	d_2	d_3 and number of threaded holes	P_2 $\pm 0,1$						r				
		min.	0 -0,1		min.	H7	e8		45	60	80	90	110	125	130				
$D \leq 400$	25,4	55	1,6	8	1	25,4	M5 4 × 90°	X	—	—	—	—	—	—	—	12			
	35	80						—	X	—	—	—	—	—	—	—			
$400 < D \leq 1\ 000$	25,4	110	2	10				25,4	M8 6 × 60°	—	—	X	—	—	—	—	—	—	16
	35							—		—	—	—	—	—					
	50				—	—	—	—		—	—								
	60				—	—	—	—		—	—								
$1\ 000 < D \leq 1\ 600$	25,4	127	3,5	12	1,5	25,4	M8 6 × 60°	—	—	X	X	—	—	—	—	25			
	35					—		—	—	—	—	—							
	50					—		—	—	—	—	—							
	60					—		—	—	—	—	—							
$1\ 600 < D \leq 2\ 000$	25,4	148	3,5	12	1,5	25,4	M8 6 × 60°	—	—	X	X	X	X	X	X	35			
	35					—		—	—	—	—	—							
	50					—		—	—	—	—	—							
	60					—		—	—	—	—	—							

4 Requirements

4.1 Material

Specifies to the manufacturer's choice, elastic limit for steel at least 300 MPa.

4.2 Design

Clamping flanges of types A1 to C3 are to be used in pairs in the combinations A1/A3, B1/B3, C1/C3, A2/A3, B2/B3 or C2/C3.

Types A2, B2 and C2 are equipped on the rear side with a closed driving pin for a connection to the wheel spindle which is resistant to torque.

For clamping flanges of types A to C the drive pins shall not project beyond the clamping flange.

4.3 Supply schedule

The supply schedule of the clamping flanges types A to C comprise a fixed and a loose flange. For flanges types A, B and C, the drive pins are pressed into the fixed flange.

The supply schedule of hub flanges type D comprises hexagon socket countersunk screws.

The supply schedule of hub flange E comprises hexagon screws threaded up to the head and additional hexagon socket countersunk screws.

Only the screws intended by the machine manufacturer shall be used.