
**Bonded abrasive products —
Dimensions —**

**Part 15:
Cutting-off wheels on stationary or
mobile cutting-off machines**

Produits abrasifs agglomérés — Dimensions —

*Partie 15: Meules pour tronçonnage sur machines de tronçonnage
fixes ou mobiles*

ISO 603-15:2022

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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 5, *Grinding wheels and abrasives*.

This second edition cancels and replaces the first edition (ISO 603-15:1999), which has been technically revised.

The main changes are as follows:

- the title has been editorially corrected;
- the scope has been specified;
- [Clause 2](#) “Normative references” has been revised;
- [Clause 3](#) “Terms and definitions” has been added;
- in [Clause 4](#) (former [Clause 3](#)), introductory, explanatory sentences have been added for better understanding;
- for shape type 41, the most common dimensions have been given for mobile cutting-off machines ([Table 1](#)) and for stationary (fixed) cutting-off machines ([Table 2](#));
- the figures with shape types and dimensions have been adapted to ISO 525:2020 (e.g. in shape type 42, the dimension “F” for the elevation of depressed centre has been renamed “M”);
- the values in the tables have been adapted to the state of the art and the most common dimensions for imperial sizes have also been included for more global acceptance;
- [Clause 5](#) (former [Clause 4](#)) “Designation” has been revised with reference to ISO 525;
- former [Clause 5](#) “Specifications” has been removed and the reference to ISO 13942 (limit deviations and run out tolerances) has been given in the scope for information;
- the Bibliography has been revised.

A list of all parts in the ISO 603 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.

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Introduction

Dimensions and tolerances are expressed in millimetres, with dimensions in inches (in) shown between brackets.

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Bonded abrasive products — Dimensions —

Part 15: Cutting-off wheels on stationary or mobile cutting-off machines

1 Scope

This document specifies the most common nominal dimensions, in millimetres, of:

- shape type 41: flat cutting-off wheel;
- shape type 42: depressed centre cutting-off wheel.

These bonded abrasive products are intended to be used for cutting-off of any workpiece using stationary or mobile cutting-off machines, both manually and mechanically guided. In the application that is manually guided, the workpiece is firmly clamped or stabilized by its own weight. The cutting-off wheel is guided by the operator and the workpiece is fixed, or vice versa.

This document does not specify limit deviations and run-out tolerances, which are given in ISO 13942.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 525, *Bonded abrasive products — Shape types, designation and marking*

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 Shape types and dimensions

4.1 Shape type 41: flat cutting-off wheel

This subclause specifies the shape that a product shall have to be referred to as a flat cutting-off wheel (shape type 41 according to ISO 525) for mobile or stationary (fixed) cutting-off machines.

The symbols of the dimensions to describe a type 41 wheel are given in [Figure 1](#) in accordance with ISO 525.

[Table 1](#) gives the most common dimensions for mobile cutting-off machines. [Table 2](#) gives the most common dimensions for stationary (fixed) cutting-off machines.

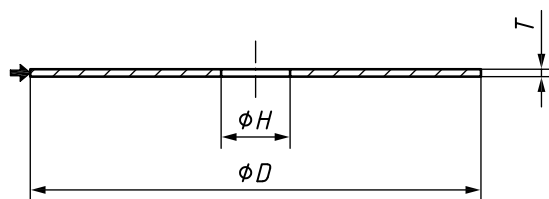


Figure 1 — Shape type 41

Table 1 — Dimensions of shape type 41 for mobile cutting-off machines

Outside diameter <i>D</i> mm (in)	Overall thickness <i>T</i> mm		Bore diameter <i>H</i> mm
	4,0	5,0	
300 / 305	X	—	25,40 / 31,75 / 32,00
350 / 356 (14.0)	X	—	
400 / 406 (16.0)	X	X	
450 / 457 (18.0)	X	X	

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Table 2 — Dimensions of shape type 41 for stationary (fixed) cutting-off machines

Outside diameter <i>D</i> mm (in)	Overall thickness <i>T</i> mm													Bore diameter <i>H</i> mm		
	0,6	0,8	1,3	1,6	2,0	2,5	3,2	3,5	4,0	4,5	5,0	6,0	8,0			
76 (3.0)	X	X	X	X	X	—	—	—	—	—	—	—	—	—	—	9,53 ^a / 10,00 / 13,00
80	X	X	X	X	X	—	—	—	—	—	—	—	—	—	—	9,53 ^a / 10,00 / 13,00 / 20,00
100 (4.0)	X	X	X	X	X	—	—	—	—	—	—	—	—	—	—	13,00 / 20,00
125	X	X	X	X	X	X	—	—	—	—	—	—	—	—	—	20,00 / 31,75 ^a / 32,00
150	X	X	X	X	X	X	—	—	—	—	—	—	—	—	—	20,00 / 25,40 / 31,75 ^a / 32,00
200	—	—	—	X	X	X	X	—	—	—	—	—	—	—	—	25,40 / 31,75 ^a / 32,00 / 40,00
250	—	—	—	X	X	X	X	—	—	—	—	—	—	—	—	25,40 / 31,75 ^a / 32,00 / 40,00
300	—	—	—	—	—	X	X	X	X	—	—	—	—	—	—	25,40 / 31,75 ^a / 32,00 / 40,00
350 / 356 (14.0)	—	—	—	—	—	—	—	X	X	X	X	—	—	—	—	31,75 ^a / 32,00 / 40,00 / 60,00
400 / 406 (16.0)	—	—	—	—	—	—	—	X	X	X	X	X	—	—	—	31,75 ^a / 32,00 / 40,00 / 60,00
450 / 457 (18.0)	—	—	—	—	—	—	—	X	X	X	X	X	—	—	—	40,00 / 60,00
500 / 508 (20.0)	—	—	—	—	—	—	—	—	X	X	X	X	X	—	—	40,00 / 60,00 / 76,20
600 / 610 (24.0)	—	—	—	—	—	—	—	—	—	—	X	X	X	X	—	40,00 / 60,00 / 76,20

^a These bore sizes are for machines using imperial units only.

For products with outside diameter $D > 610$ mm (24 inches) there are no standardized thickness and bore diameter values.

4.2 Shape type 42: depressed centre cutting-off wheel

This subclause specifies the shape that a product shall have to be referred to as a depressed centre cutting-off wheel (shape type 42 according to ISO 525) for stationary (fixed) cutting-off machines.

The symbols of the dimensions to describe a type 42 wheel are given in [Figure 2](#) in accordance with ISO 525.

[Table 3](#) gives the most common dimensions for stationary (fixed) cutting-off machines.

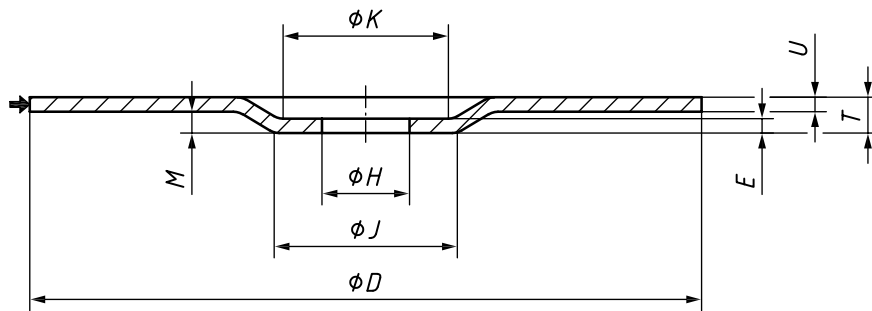


Figure 2 — Shape type 42

Table 3 — Dimensions of shape type 42 for stationary (fixed) machines

Outside diameter D mm (in)	Smallest thickness U mm					Bore diameter H mm	Minimum internal diameter of recess K_{min} mm	Minimum elevation of depressed centre M_{min} mm
	4,0	5,0	6,0	8,0	10,0			
400 / 406 (16.0)	X	X	X	—	—	40,0 / 76,2 / 80,0	≥ 122	≥ 7,5
450 / 457 (18.0)	X	X	X	—	—			
500 / 508 (20.0)	—	X	X	—	—	40,0 / 60,0 / 76,2 / 80,0	≥ 210	≥ 13,0
600 / 610 (24.0)	—	—	X	X	—	60,0 / 76,2 / 80,0 / 100,0		
800	—	—	—	X	X	80,0 / 100,0		

For products with outside diameter $D > 610$ mm (24 inches) there are no standardized thickness and bore diameter values.

5 Designation

The designation shall be done in accordance with ISO 525.