

ICS 25.100.70

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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4127.15-2025

Replacing GB/T 4127.15-2007

**Bonded abrasive products - Dimensions - Part 15: Cutting-off
wheels on stationary or mobile cutting-off machines**

(English Translation)

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation, Standardization
Administration of China**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 15 of GB/T 4127 "Dimensions of bonded abrasives". GB/T 4127 has been published in the following parts.

- Part 1: Cylindrical grinding wheels (workpiece clamped between centers);
- Part 2: Centerless external cylindrical grinding wheels;
- Part 3: Internal grinding wheels;
- Part 4: Peripheral grinding wheels for surface grinding;
- Part 5: End grinding wheels for surface grinding;
- Part 6: Grinding wheels for tool grinding and tool room use;
- Part 7: Manually operated grinding wheels;
- Part 8: Grinding wheels for deburring, rough grinding and rough grinding;
- Part 9: Heavy-duty grinding wheels;
- Part 10: Honing and superfinishing grinding stones;
- Part 11: Hand-held polishing stones;
- Part 12: Deburring and roughening wheels for straight grinders;
- Part 13: Deburring and roughening wheels for vertical grinding machines;
- Part 14: Deburring, roughing and grinding wheels for angle grinders;

- Part 15: Cutting wheels for fixed or mobile cutting machines;
- Part 16: Cutting wheels for hand-held power tools;
- Part 17: Grinding points with handle;
- Part 18: Grinding wheels for flat glass edging.

This document replaces GB/T 4127.15-2007 "Bonded abrasive tools - Dimensions - Part 15: Cutting abrasives for fixed or mobile cutting machines" Compared with GB/T 4127.15-2007, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The dimensions of the flat cutting wheel (type 41) have been changed (see 4.1, 3.1 of the 2007 edition);
- b) The dimensions of the cymbal-shaped cutting wheel (type 42) have been changed (see 4.2, 3.2 of the 2007 edition);
- c) Deleted the requirements (see Chapter 5 of the 2007 edition).

This document is modified to adopt ISO 603-15:2022 "Bonded abrasive tools - Dimensions - Part 15: Cutting abrasives for fixed or mobile cutting machines" wheel".

The technical differences between this document and ISO 603-15:2022 and their reasons are as follows.

- ISO 525 (see Chapter 4) has been replaced by the normative reference GB/T 2484 to adapt to my country's technical conditions;
- Changed the dimensions of the flat cutting wheel (type 41) (see 4.1). no distinction is made between the dimensions for mobile cutting machines and those for fixed cutting machines.

The size of the cutting machine is combined into one size table because it is not possible to distinguish them in actual application.

Size series to suit the actual situation in my country;

- Added the size series of cymbal-shaped cutting wheels (type 42) (see 4.2) to conform to my country's actual situation.

The following editorial changes have been made to this document.

- Deleted the imperial size representation of the outside diameter in the international standard;
- Deleted references to international standards.

Introduction

In order to facilitate the production, trade, application and technical exchange of bonded abrasives and make rational use of resources, it is necessary to establish a standardized bonded abrasive tool scale.

Bonded abrasives have various shapes and uses. Products with the same shape may have different uses, and products with the same use may also have different with the development of bonded abrasives industry, the advancement of technology and the change of market demand, its shapes and uses are constantly enriched, and its size is constantly increasing.

The size system of bonded abrasive tools is becoming increasingly large, and it is becoming increasingly difficult to establish a size system of bonded abrasive tools through a single standard, which is no longer realistic.

Since 1999, ISO/TC29/SC5 has established a new bonded abrasive tool size system through scientific and reasonable classification and released ISO 603 series standards. GB/T 4127 "Dimensions of bonded abrasives" has adopted ISO 603 series standards since its second revision.

Partial composition.

--- Part 1: External cylindrical grinding wheels (workpiece clamped between centers). The purpose is to specify external cylindrical grinding wheels (workpiece clamped between centers) Common nominal sizes.

--- Part 2: Centerless external cylindrical grinding wheels. The purpose is to specify the commonly used nominal dimensions of centerless external cylindrical grinding wheels.

--- Part 3: Internal grinding wheels. The purpose is to specify the commonly used nominal sizes of internal grinding wheels.

--- Part 4: Peripheral grinding wheels for surface grinding. The purpose is to specify the commonly used nominal sizes of peripheral grinding wheels for surface grinding.

--- Part 5: End grinding wheels for surface grinding. The purpose is to specify the commonly used nominal dimensions of end grinding wheels for surface grinding.

--- Part 6: Grinding wheels for tool grinding and tool room use. The purpose is to specify the commonly used nominal sizes of grinding wheels for tool grinding and tool room use.

--- Part 7: Manually operated grinding wheels. The purpose is to specify the commonly used nominal sizes of manually operated grinding wheels.

--- Part 8: Grinding wheels for deburring, roughing and rough grinding. The purpose is to specify the common nominal size.

--- Part 9: Heavy-duty grinding wheels. The purpose is to specify the commonly used nominal sizes of heavy-duty grinding wheels.

--- Part 10: Honing and superfinishing grinding stones. The purpose is to specify the commonly used nominal sizes of honing and superfinishing grinding stones.

--- Part 11: Hand-held polishing stones. The purpose is to specify the commonly used nominal sizes of hand-held polishing stones.

--- Part 12: Deburring and roughening wheels for straight grinders. The purpose is to specify deburring and roughening wheels for straight grinders.

Common nominal sizes.

--- Part 13: Deburring and roughening wheels for vertical grinding machines. The purpose is to specify deburring and roughening wheels for vertical grinding machines Common nominal sizes.

--- Part 14: Deburring, roughing and rough grinding wheels for angle grinders. The purpose is to specify the deburring, roughing and rough grinding wheels for angle grinders.

Common nominal sizes for rough and coarse grinding wheels.

--- Part 15: Cutting wheels for fixed or mobile cutting machines. The purpose is to specify the cutting wheels for fixed or mobile cutting machines.

Common nominal sizes of grinding wheels.

--- Part 16: Cutting wheels for hand-held power tools. The purpose is to specify the commonly used specifications for cutting wheels for hand-held power tools.

Weigh the size.

--- Part 17: Mounted grinding points. The purpose is to specify the commonly used nominal sizes of mounted grinding points.

--- Part 18: Grinding wheels for flat glass edging. The purpose is to specify the commonly used nominal sizes of grinding wheels for flat glass edging.

Dimensions of bonded abrasives - Part 15: Fixed or Cutting wheels for mobile cutting machines

1 Scope

This document specifies the commonly used nominal sizes and designations of the following bonded abrasive tools, in millimeters.

---Type 41.flat cutting wheel;

---Type 42.Cymbal-shaped cutting wheel.