

**Non-destructive testing - Ultrasonic testing -
Characterization and sizing of discontinuities (ISO
16827:2012)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 16827:2014 sisaldab Euroopa standardi EN ISO 16827:2014 inglisekeelset teksti.	This Estonian standard EVS-EN ISO 16827:2014 consists of the English text of the European standard EN ISO 16827:2014.
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English Version

**Non-destructive testing - Ultrasonic testing - Characterization
and sizing of discontinuities (ISO 16827:2012)**

Essais non destructifs - Contrôle par ultrasons -
Caractérisation et dimensionnement des discontinuités (ISO
16827:2012)

Zerstörungsfreie Prüfung - Ultraschallprüfung -
Beschreibung und Größenbestimmung von
Inhomogenitäten (ISO 16827:2012)

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Foreword

The text of ISO 16827:2012 has been prepared by Technical Committee ISO/TC 135 “Non-destructive testing” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 16827:2014 by Technical Committee CEN/TC 138 “Non-destructive testing” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2014, and conflicting national standards shall be withdrawn at the latest by September 2014.

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Endorsement notice

The text of ISO 16827:2012 has been approved by CEN as EN ISO 16827:2014 without any modification.

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Introduction

This International Standard is based on EN 583-5:2000+A1:2003, *Non-destructive testing — Ultrasonic examination — Part 5: Characterization and sizing of discontinuities*.

The following International Standards are linked.

ISO 16810, *Non-destructive testing — Ultrasonic testing — General principles*

ISO 16811, *Non-destructive testing — Ultrasonic testing — Sensitivity and range setting*

ISO 16823, *Non-destructive testing — Ultrasonic testing — Transmission technique*

ISO 16826, *Non-destructive testing — Ultrasonic testing — Examination for discontinuities perpendicular to the surface*

ISO 16827, *Non-destructive testing — Ultrasonic testing — Characterization and sizing of discontinuities*

ISO 16828, *Non-destructive testing — Ultrasonic testing — Time-of-flight diffraction technique as a method for detection and sizing of discontinuities*

Non-destructive testing — Ultrasonic testing — Characterization and sizing of discontinuities

1 Scope

This document specifies the general principles and techniques for the characterization and sizing of previously detected discontinuities in order to ensure their evaluation against applicable acceptance criteria. It is applicable, in general terms, to discontinuities in those materials and applications covered by ISO 16810.

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 16810:2012, *Non-destructive testing — Ultrasonic testing — General principles*

ISO 16811, *Non-destructive testing — Ultrasonic testing — Sensitivity and range setting*

ISO 16823, *Non-destructive testing — Ultrasonic testing — Transmission technique*

ISO 16828, *Non-destructive testing — Ultrasonic testing — Time-of-flight diffraction technique as a method for detection and sizing of discontinuities*

ISO 23279, *Non-destructive testing of welds — Ultrasonic testing — Characterization of indications in welds*

3 Principles of characterization of discontinuities

3.1 General

Characterization of a discontinuity involves the determination of those features which are necessary for its evaluation with respect to known acceptance criteria.

Characterization of a discontinuity may include:

- a) determination of basic ultrasonic parameters (echo height, time of flight);
- b) determination of its basic shape and orientation;
- c) sizing, which may take the form of either:
 - i) the measurement of one or more dimensions (or area/volume), within the limitations of the methods; or
 - ii) the measurement of some agreed parameter e.g. echo height, where this is taken as representative of its physical size;
- d) location e.g. the proximity to the surface or to other discontinuities;
- e) determination of any other parameters or characteristics that may be necessary for complete evaluation;