



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 16810:2024**  
**01-marec-2024**

---

**Neporušitvene preiskave - Ultrazvočne preiskave - Splošna načela (ISO/DIS 16810:2024)**

Non-destructive testing - Ultrasonic testing - General principles (ISO/DIS 16810:2024)

Zerstörungsfreie Prüfung - Ultraschallprüfung - Allgemeine Grundsätze (ISO/DIS 16810:2024)

Essais non destructifs - Contrôle par ultrasons - Principes généraux (ISO/DIS 16810:2024)

**Ta slovenski standard je istoveten z: prEN ISO 16810**

oSIST prEN ISO 16810:2024

<https://standards.iteh.ai/catalog/standards/sist/f2ab1f14-a3ce-4303-9f30-22a66dd93cf0/osist-pren-iso-16810-2024>

**ICS:**

19.100      Neporušitveno preskušanje      Non-destructive testing

**oSIST prEN ISO 16810:2024**

**en,fr,de**



# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 16810

ISO/TC 135/SC 3

Secretariat: DIN

Voting begins on:  
2024-01-23Voting terminates on:  
2024-04-16

---

---

## Non-destructive testing — Ultrasonic testing — General principles

*Essais non destructifs — Contrôle par ultrasons — Principes généraux*

ICS: 19.100

### iTeh Standards (<https://standards.iteh.ai>) Document Preview

[oSIST prEN ISO 16810:2024](https://standards.iteh.ai/catalog/standards/sist/f2ab1f14-a3ce-4303-9f30-22a66dd93cf0/osist-pren-iso-16810-2024)<https://standards.iteh.ai/catalog/standards/sist/f2ab1f14-a3ce-4303-9f30-22a66dd93cf0/osist-pren-iso-16810-2024>

This document is circulated as received from the committee secretariat.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

**ISO/CEN PARALLEL PROCESSING**



Reference number  
ISO/DIS 16810:2024(E)

© ISO 2024

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[oSIST prEN ISO 16810:2024](https://standards.iteh.ai/catalog/standards/sist/f2ab1f14-a3ce-4303-9f30-22a66dd93cf0/osist-pren-iso-16810-2024)

<https://standards.iteh.ai/catalog/standards/sist/f2ab1f14-a3ce-4303-9f30-22a66dd93cf0/osist-pren-iso-16810-2024>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Qualification and certification of test personnel</b> .....	<b>2</b>
<b>5 Information required prior to testing</b> .....	<b>2</b>
<b>6 Principles of ultrasonic testing (UT)</b> .....	<b>2</b>
6.1 General.....	2
6.2 Wave mode and direction of sound propagation.....	3
6.3 Through-transmission technique.....	3
6.4 Pulse-echo technique.....	3
<b>7 Test equipment</b> .....	<b>3</b>
7.1 Instrument.....	3
7.2 Probes.....	3
7.2.1 Probe selection.....	4
7.2.2 Frequency and dimensions of transducer.....	4
7.2.3 Dead zone.....	4
7.2.4 Damping.....	4
7.2.5 Focusing probes.....	4
7.3 Coupling media.....	5
7.4 Calibration blocks.....	5
7.5 Reference blocks.....	5
7.6 Specific test blocks.....	6
<b>8 Settings</b> .....	<b>6</b>
8.1 General.....	6
8.2 Range.....	6
8.3 Sensitivity.....	7
8.4 Pulse repetition frequency.....	7
<b>9 Preparation for testing</b> .....	<b>7</b>
9.1 Surface preparation.....	7
9.2 Identification and datum points.....	7
9.3 Application of transfer correction.....	7
<b>10 Testing</b> .....	<b>8</b>
10.1 Coverage of testing.....	8
10.2 Overlapping.....	8
10.3 Scanning speed.....	8
10.4 Evaluation and recording levels.....	8
10.4.1 General.....	8
10.4.2 Pulse-echo technique.....	9
10.4.3 Through-transmission technique.....	9
<b>11 Characterization of discontinuities</b> .....	<b>9</b>
11.1 Pulse-echo technique.....	9
11.2 Through-transmission technique.....	9
<b>12 Test procedure</b> .....	<b>9</b>
<b>13 Test report</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>11</b>

## ISO/DIS 16810:2023(E)

### 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](http://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](http://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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic testing*.

This second edition cancels and replaces the first edition (ISO 16810:2012), which has been technically revised.

The main changes are as follows:

- normative references have been updated;
- a new clause Terms and definitions has been introduced with a reference to ISO 5577;
- the readability of the document has been improved editorially e. g. by harmonizing the use of terms.

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](http://www.iso.org/members.html).