

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

**BS ISO 15818:2017**



**BSI Standards Publication**

# **Earth-moving machinery — Lifting and tying-down attachment points — Performance requirements**

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of ISO 15818:2017.

The UK participation in its preparation was entrusted to Technical Committee B/513/1, Earth moving machinery (International).

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017.  
Published by BSI Standards Limited 2017

ISBN 978 0 580 81228 6

ICS 53.100

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2017.

**Amendments/corrigenda issued since publication**

Date	Text affected
------	---------------

---

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

First edition  
2017-03

---

---

## **Earth-moving machinery — Lifting and tying-down attachment points — Performance requirements**

*Engins de terrassement — Points d'ancrage pour le levage et  
l'arrimage — Exigences de performance*



Reference number  
ISO 15818:2017(E)

© ISO 2017

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, 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  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

## 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>1</b>
<b>4 Lifting attachment points</b> .....	<b>4</b>
4.1 Location and number.....	4
4.2 Strength.....	4
<b>5 Tying-down attachment points</b> .....	<b>6</b>
5.1 Location and number.....	6
5.2 Acceleration coefficient.....	6
5.3 Strength.....	7
<b>6 Attachment points — Common requirements</b> .....	<b>9</b>
6.1 Common locational requirements.....	9
6.2 Material requirements.....	10
6.3 Pull-pin type devices.....	10
6.4 Common devices.....	10
<b>7 Identification</b> .....	<b>10</b>
<b>8 Lifting and tying-down instructions</b> .....	<b>11</b>
<b>9 Verification</b> .....	<b>12</b>
<b>Annex A (normative) Lifting and tying-down information for disassembled machines</b> .....	<b>13</b>
<b>Annex B (informative) Lifting, loading, tying down and transporting earth-moving machinery — Methods and recommendations</b> .....	<b>14</b>
<b>Annex C (informative) Method for calculation of forces on tying-down attachment points in diagonal lashing disposition</b> .....	<b>19</b>
<b>Bibliography</b> .....	<b>20</b>

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

## 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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html)

This document was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 3, *Machine characteristics, electrical and electronic systems, operation and maintenance*.

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

This document has been developed to define the performance requirements of lifting and tying-down attachment points fitted on, or incorporated into, earth-moving machinery for the purposes of its effective and safe transportation.

Although manufacturers of machines do not have direct responsibility for such transportation, the method and precautions necessary for lifting, tying down and disassembling for transportation are described in informative annexes which can be used by the manufacturer as guidance when preparing the operator's manual.

The tying-down requirements and recommendations given in this document are intended to match with widely applied practices such as those described in IMO/ILO/UNECE guidelines. However, where this is not the case, another or other supplemental methods for securing the machine can be provided in the operator's manual.

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

This is a preview of "BS ISO 15818:2017". [Click here to purchase the full version from the ANSI store.](#)

# Earth-moving machinery — Lifting and tying-down attachment points — Performance requirements

## 1 Scope

This document specifies the performance requirements for the lifting and tying-down attachment points of earth-moving machinery as defined in ISO 6165.

This document also applies to components and subassemblies of earth-moving machinery which the manufacturer intends to be lifted or tied down separately by using lifting or tying-down attachment points.

NOTE 1 Some components (e.g. tyres, tyres with wheels, track shoe assemblies, hydraulic cylinders) can be securely tied down without specific tying-down attachment points.

This document applies to the following modes of transport:

- lifting with cranes (e.g. mobile cranes, gantry cranes);
- road transport (e.g. truck, trailer);
- rail transport, including combined transport (e.g. wagons with containers, swap-bodies, semi-trailers, trucks);
- sea transport.

It is not applicable to

- airlift or transport by air, or
- rail transport of machines on wagons subject to shunting.

NOTE 2 National or local regulations can be more stringent.

This document does not include requirements for attaching the machine to a platform of the rail car, boat, etc., from which the machine is intended to work.

## 2 Normative references

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

ISO 2867, *Earth-moving machinery — Access systems*

ISO 6165, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 6405-1, *Earth-moving machinery — Symbols for operator controls and other displays — Part 1: Common symbols*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6165 and the following apply.