INTERNATIONAL STANDARD

ISO 7136

Third edition
2006-05-01

Earth-moving machinery — Pipelayers — Terminology and commercial specifications

Engins de terrassement — Tracteurs poseurs de canalisations — Terminologie et spécifications commerciales

Reference number
ISO 7136:2006(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 7136 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 4, *Commercial nomenclature, classification and rating*.

This third edition cancels and replaces the second edition (ISO 7136:1998), which has been technically revised.

Earth-moving machinery — Pipelayers — Terminology and commercial specifications

1 Scope

This International Standard establishes terminology and the content of commercial literature specifications for self-propelled pipelayers and their equipment. It is applicable to pipelayers as defined in ISO 6165.

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 6014, *Earth-moving machinery — Determination of ground speed*

ISO 6016:1998, *Earth-moving machinery — Methods of measuring the masses of whole machines, their equipment and components*

ISO 6165:2006, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 6746 (all parts), *Earth-moving machinery — Definitions of dimensions and codes*

ISO 9249, *Earth-moving machinery — Engine test code — Net power*

3 Terms and definitions

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

3.1 General

3.1.1
pipelayer
〈pipelayers with rigid upper structure〉 self-propelled crawler or wheeled machine, having pipe-laying equipment with main frame, load-hoist mechanism, vertically pivotable side boom and counterweight, primarily designed to handle and lay pipes

[ISO 6165:2006, definition 4.11]

3.1.2
rotating pipelayer
self-propelled crawler or wheeled machine, having pipe-laying equipment with main frame, load hoist mechanism with either a load hoist drum or a winch, vertically pivotable boom, fitted on a rotating upper structure, and counterweight, primarily designed to handle and lay pipes

[ISO 6165:2006, definition 4.12]

3.1.3
side boom
equipment added to a tractor or a loader (wheel or crawler type machine), which is designed to handle and lay pipes and carry pipe-laying equipment

NOTE The equipment includes boom and load hoist mechanisms and a vertically pivotable side boom. It can be with or without counterweights.

3.1.4
rotating upper structure
upper portion of the machine, capable of at least 90° rotation around a vertical axis passing through the longitudinal axis of the machine

NOTE It includes machine cab, boom and counterweight(s).

3.1.5
base machine
machine with a cab or canopy and operator-protective structures if required, without equipment and attachments but possessing the necessary mountings for such equipment and attachments

See Figure 1.

3.1.6
equipment
set of components (boom and counterweights) mounted onto the base machine to fulfil the primary design function of a pipelayer

NOTE Equipment for pipelayers includes load hoist mechanisms with either a load hoist drum or a winch and a vertically pivotable side boom.

3.1.7
boom
fixed length structural member that supports the load

3.1.8
counterweight
any additional removable weight and its removable (or fixed) support added to increase tipping load

NOTE There are two types of counterweights, defined in 3.1.8.1 and 3.1.8.2.

3.1.8.1
adjustable counterweight
that portion of the counterweight that is movable

3.1.8.2
nonadjustable counterweight
counterweight fixed in one location on the machine

3.1.9
attachment
assembly of components that can be mounted on the base machine, or equipment, for a specific use

3.1.10
component
part or an assembly of parts of a base machine, equipment or attachment

3.2 Masses

3.2.1
operating mass
mass of the base machine with equipment and empty attachment as specified by the manufacturer, and with the operator (75 kg), full fuel tank and all fluid systems at the levels specified by the manufacturer

[ISO 6016:1998, definition 3.2.1]

3.2.2
shipping mass
mass of the base machine without an operator, and with fuel level at 10 % of tank capacity, all fluid systems at their levels specified by the manufacturer and with or without equipment, attachment, cab, canopy, ROPS and/or FOPS, wheels and counterweights as stated by the manufacturer

[ISO 6016:1998, definition 3.2.5]

3.3 Dimensions

For definitions and codes of dimensions strictly related to pipelayers, the following apply. See also ISO 6746-1 and ISO 6746-2 for definitions of dimensions and codes.

3.3.1
overall width without counterweight
*W*1
overall width of the machine with the boom, counterweight, and counterweight support removed (if removable)

See Figure 1.

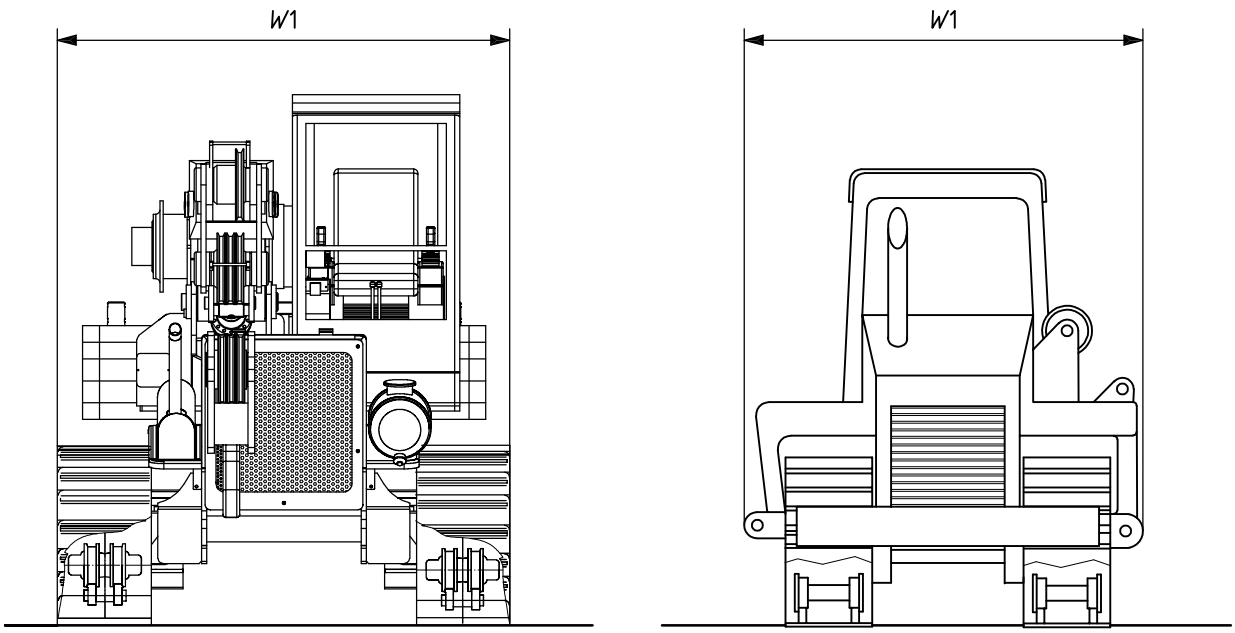
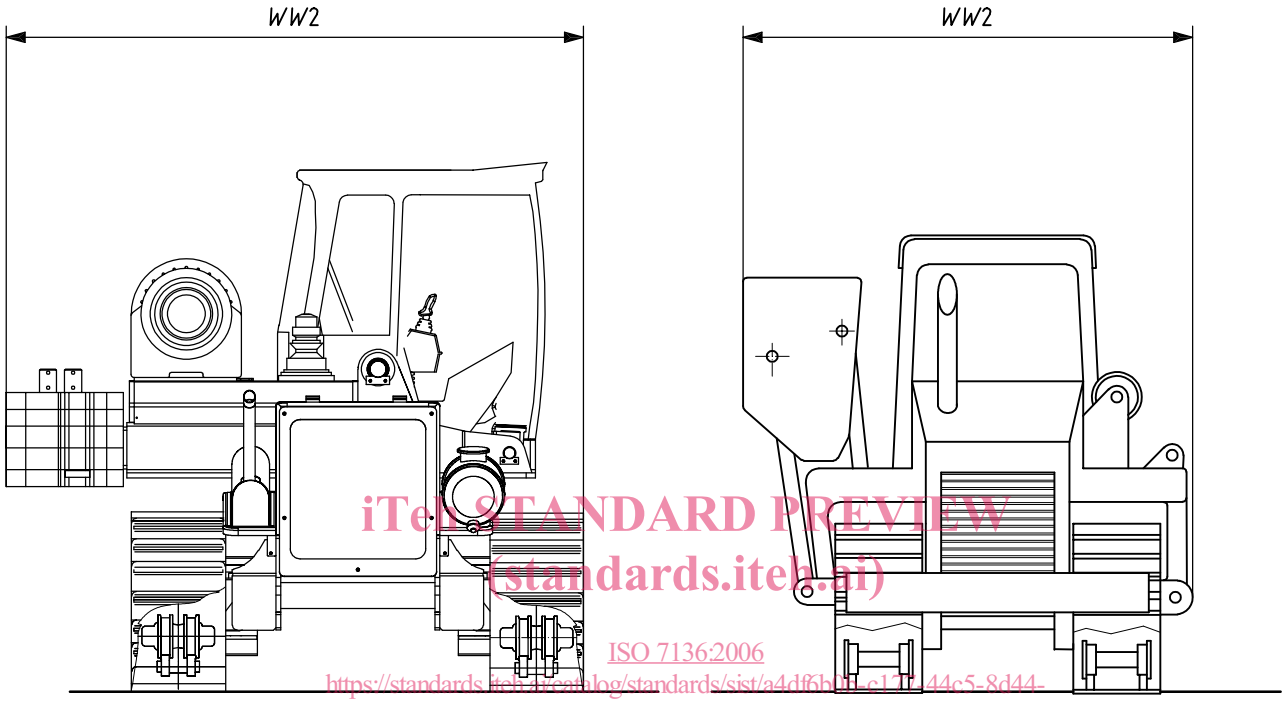


Figure 1 — Dimension *W*1

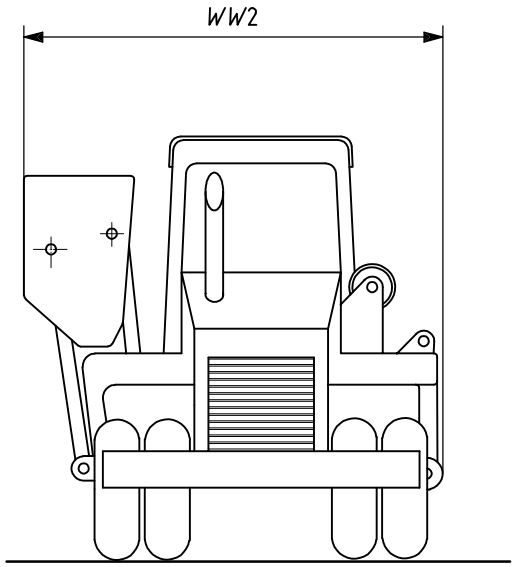
3.3.2
width with counterweight retracted
*WW*2
overall width of the machine with the boom removed and the adjustable counterweight retracted

NOTE The rotating upper structure is at 90°.

See Figure 2 a) and b).



a) Dimension *WW*2 for crawler machine



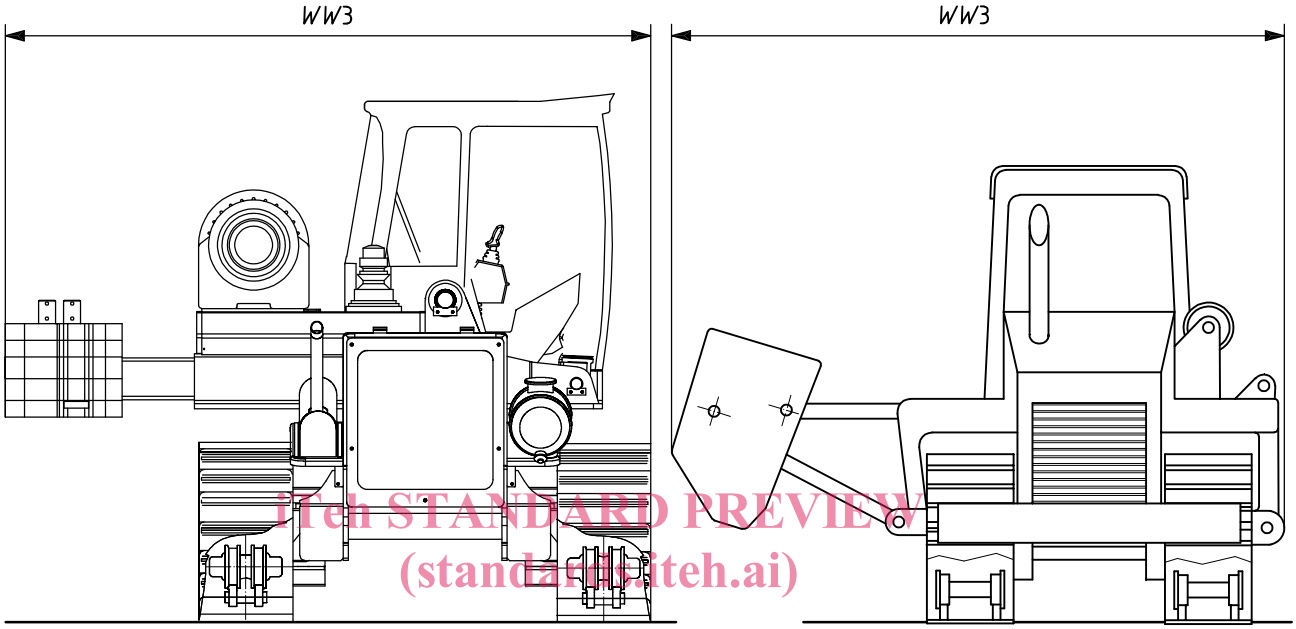
b) Dimension *WW*2 for wheeled machine

Figure 2 — Dimension *WW*2 for wheeled and crawler machines

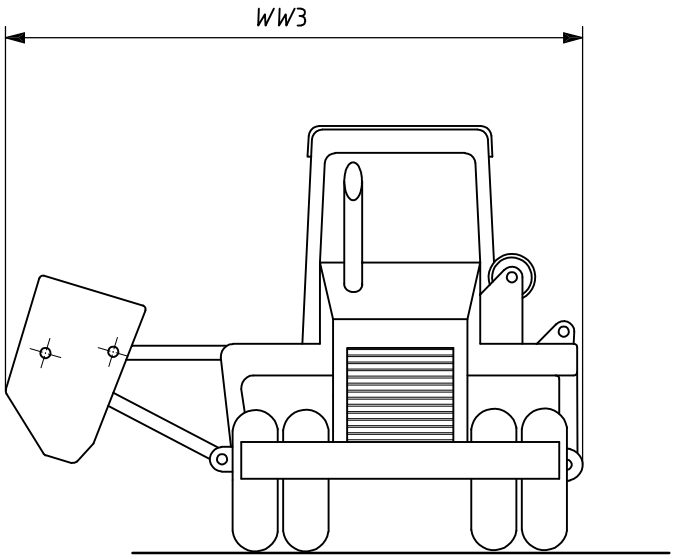
3.3.3
width with counterweight extended
*WW*3
overall width of the machine with the boom removed and the adjustable counterweight extended

NOTE The rotating upper structure is at 90°.

See Figure 3 a) and b).



a) Dimension *WW*3 for crawler machine



b) Dimension *WW*3 for wheeled machine

Figure 3 — Dimension *WW*3 for wheeled and crawler machines

3.3.4
load overhang distance
*WW*4
〈crawler machine〉 horizontal and perpendicular distance from the lift point line to the outer edge of the outer track link rail on the boom side of the machine

NOTE The rotating upper structure is positioned with the boom centreline perpendicular to the machine longitudinal axis.

See Figure 4.

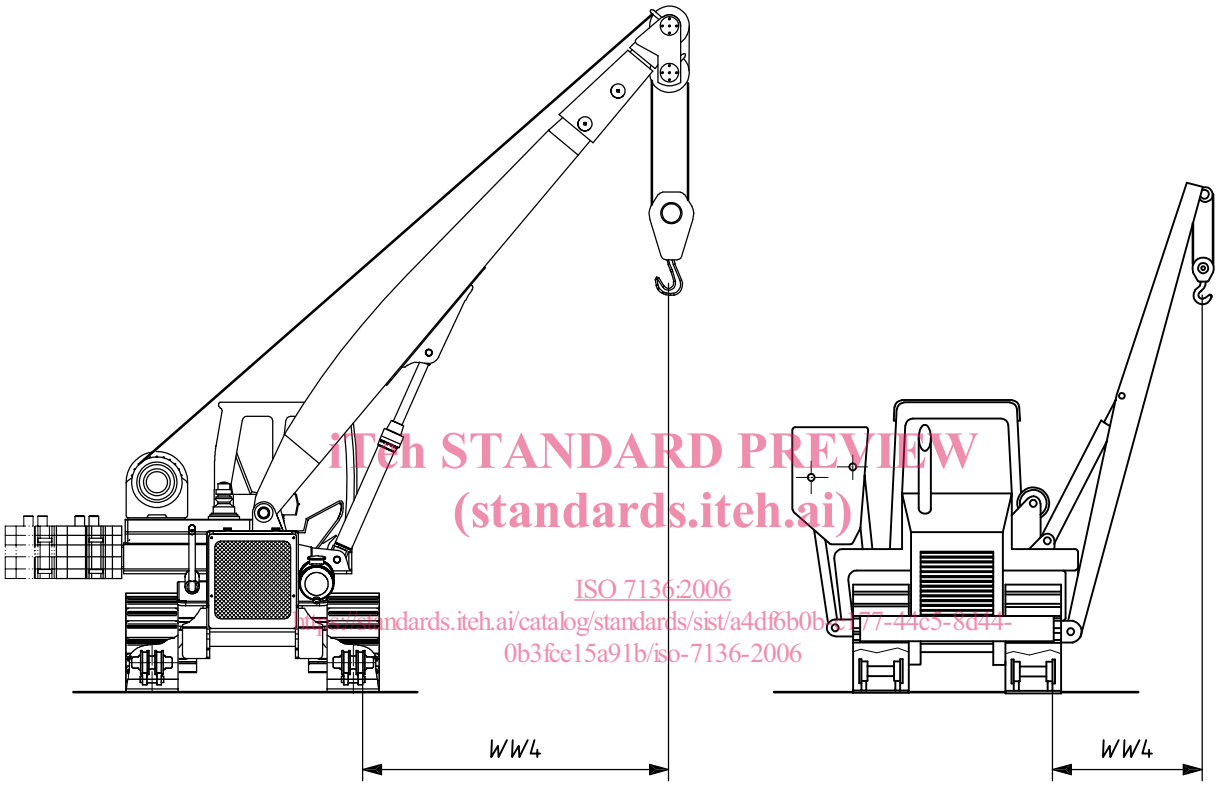
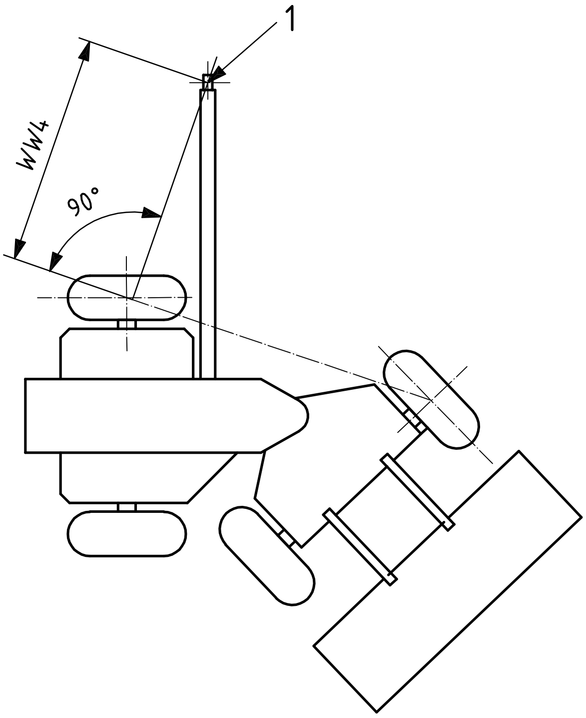


Figure 4 — Dimension *WW*4 for crawler machine

3.3.5
load overhang distance
*WW*4
〈wheeled machine〉 horizontal and perpendicular distance from the lift point line to a line connecting the centreline of the front and rear tires on the boom side of the machine

NOTE The rotating upper structure is positioned with the boom centreline perpendicular to the machine longitudinal axis.

See Figure 5.



a) Articulated wheeled tractor steered away from boom

b) Articulated wheeled tractor steered toward boom

Key

1 lift point

Figure 5 — Dimension *WW*4 for wheeled machine

3.3.6
load overhang distance
*WW*4
⟨machine with outriggers⟩ horizontal and perpendicular distance from the lift point to a line connecting the centreline of the outrigger pads in their most favourable position

See Figure 6.