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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Earth-moving machinery — Definitions of dimensions and symbols —

Part 2 :
Equipment

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Engins de terrassement — Définitions des dimensions et des symboles —
[ISO 6746-2:1987](#)

Partie 2 : Équipements <https://standards.iteh.ai/catalog/standards/sist/a5a62d2e-c096-4413-a32b-801a902fc1eb/iso-6746-2-1987>

Reference number
ISO 6746-2: 1987 (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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6746-2 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*.

This second edition cancels and replaces the first edition (ISO 6746-2:1982), of which it constitutes a technical revision. <https://standards.iteh.ai/catalog/standards/sist/a5a62d2e-c096-4413-a32b-801a902fc1eb/iso-6746-2-1987>

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Earth-moving machinery — Definitions of dimensions and symbols —

Part 2 : Equipment

1 Scope and field of application

This part of ISO 6746 defines terms and symbols relating to dimensions of earth-moving machinery equipment.

It applies to the equipment of basic types of earth-moving machines as defined in ISO 6165.

2 References

ISO 6165, *Earth-moving machinery — Basic types Vocabulary*.

ISO 6746-1, *Earth-moving machinery — Definitions of dimensions and symbols — Part 1: Base machine*.

3 General definitions

For the purposes of this part of ISO 6746, the following definitions apply.

NOTE — Definitions 3.1, 3.2 and 3.3 are repeated from ISO 6746-1 for the convenience of the user.

3.1 three-dimensional reference system : See annex A.

3.2 ground reference plane (GRP) : Zero Z plane on which the machine is placed for the measurements.

The plane is :

- a) for wheeled machines, a hard level surface;
- b) for crawler machines :
 - 1) tractors, pipelayers
 - the face for grouser-type shoe (see H5),
 - 2) loaders, excavators
 - the tip of the grouser (see H5),
 - 3) low ground pressure
 - for triangular section shoe, one-half of the distance between the track link bolting surface and the tip of the grouser (see H5).

3.3 base machine : Machine, without equipment, as described by the manufacturer's specifications.

The machine should be provided with the necessary mountings to secure equipment as detailed in this part of ISO 6746.

3.4 equipment : Set of components mounted onto the base machine to fulfil the primary design function.

3.5 attachment : Optional assembly of components that can be mounted onto the base machine for a specific use.

3.6 component : Part or an assembly of parts of a base machine, equipment or an attachment.

4 General

Annexes B, C, D and E give the symbols and term definitions relating to dimensions of the equipment of earth-moving machines.

5 Coding system

Each dimension listed in annexes B, C, D and E is assigned a code which is composed of two capital letters (see 5.1) and an International Standard reference number (see 5.2).

5.1 Two capital letters indicate a dimension, as follows :

HH = height dimensions

WW = width dimensions

LL = length dimensions

RR = radial dimensions

AA = angle dimensions

5.2 An International Standard reference number indicates the specific machine (see ISO 6746-2, ISO 7131 and ISO 7134 as applicable).

Annex A

Three-dimensional reference system — Definitions

A.1 Reference system

This annex defines the three-dimensional reference system used to determine dimensions of equipment of earth-moving machines.

The system shall not be used for commercial documents.

A.2 Definitions

The following definitions are specific to the three-dimensional reference system.

A.2.1 zero Y plane : Vertical plane which passes through the longitudinal centreline of the machine.

A.2.2 X plane : Any vertical plane normal to the Y plane.

A.2.3 Z plane : Any horizontal plane normal to the X and Y planes.

A.2.4 positive coordinate : The positive direction is forward of the zero X plane, right of the zero Y plane, and above the zero Z plane.

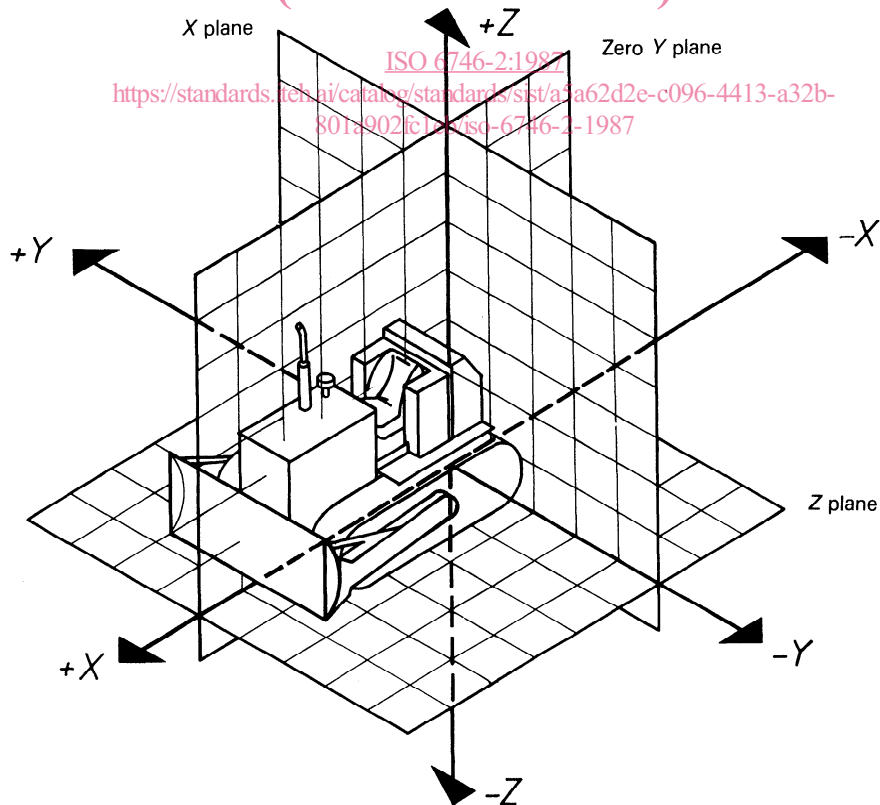
NOTES

1 The intersection of the X, Y, Z axes (zero planes) is normally located at a well defined base point (i.e. SIP for a seat; crankshaft centreline for an engine; sprocket or rear axle centreline for a tractor; ground line for machine measurements).

2 If only equipment for a machine (e.g. dozer, ripper) is shown, the location and positive direction of the axis from the intersection of the X, Y, Z axes (zero planes) assume the normally expected orientation of the equipment to a machine (i.e. the dozer cutting edge to the front of the machine, ripper to the rear).

3 If a machine and/or its equipment are shown, a machine driving from right to left shall be shown.

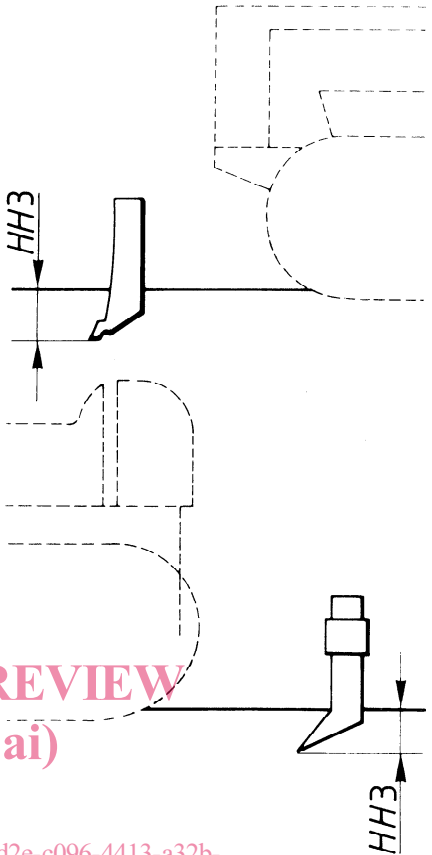
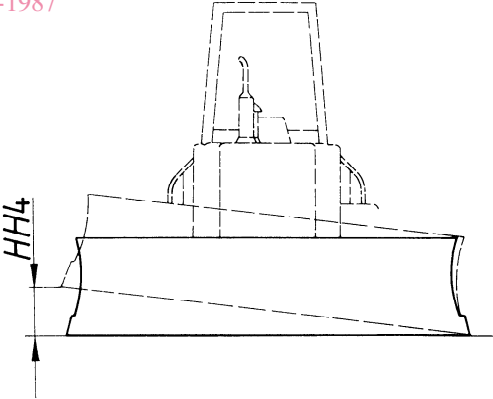
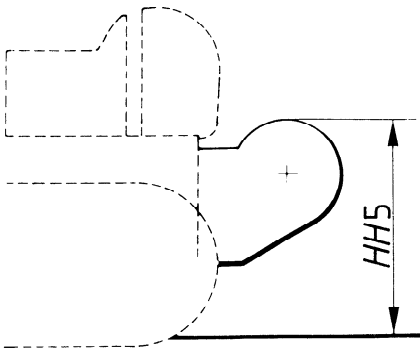
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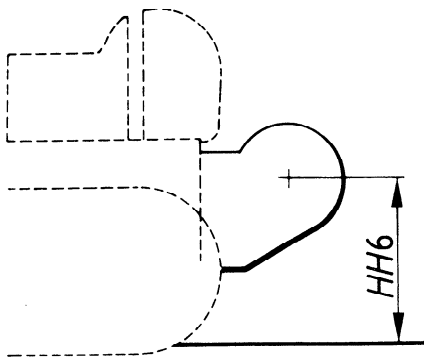
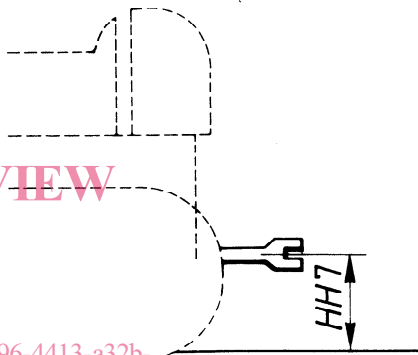
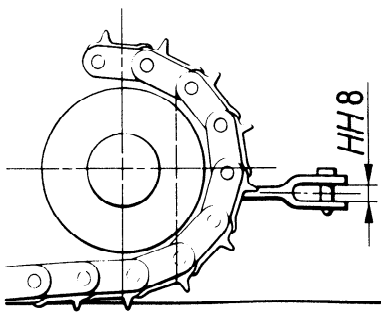


Annex B

Height dimensions — Terms and symbols

Symbol	Term	Definition	Drawing
<i>HH1</i>	Blade height	Distance on Z coordinate between GRP and the top of the blade (excluding name plate and spill guard) with the blade on the ground in mid-pitch position with no blade tilt or angle.	
<i>HH2</i>	Lift height	<p>Distance on Z coordinate between GRP and the lowest point of the cutting edge (in mid-pitch position with no blade tilt or angle) for blade or the lowest point for the ripper (in mid-pitch position) with the tooth in lifted position.</p> <p>https://standards.iteh.ai/catalog/standards/sist/a5a62d2e-c097-4413-a32b-801a902fc1eb/iso-6746-2-1987</p> <p>ISO 6746-2:1987</p>	

Symbol	Term	Definition	Drawing
HH3	Cutting depth	Distance on Z coordinate between GRP and the lowest point of the cutting edge (in mid-pitch position with no blade tilt or angle) for blade or the lowest point for the ripper with the tooth below ground.	 <p>The drawing illustrates the measurement of cutting depth (HH3) for two types of tools. On the left, a blade is shown in profile with a dashed line representing the ground reference plane (GRP) and a vertical arrow indicating the distance to the lowest point of the cutting edge. On the right, a ripper tooth is shown in profile with a similar dashed line for the GRP and a vertical arrow indicating the distance to the lowest point of the tooth. A watermark 'iTeh STANDARD PREVIEW (standards.iteh.ai)' is overlaid on the drawing.</p>
HH4	Tilt height	Distance on Z coordinate between GRP and the raised end bit with the other end bit on the GRP. If opposite ends vary, specify both.	 <p>The drawing shows a raised end bit with a trapezoidal shape. A dashed line represents the ground reference plane (GRP). A vertical arrow labeled HH4 indicates the distance from the GRP to the top of the raised end bit. The drawing also shows the bit's profile and a cross-section.</p>
HH5	Winch maximum height	Distance on Z coordinate between the GRP and the highest point of the winch.	 <p>The drawing shows a winch component with a curved top. A dashed line represents the ground reference plane (GRP). A vertical arrow labeled HH5 indicates the distance from the GRP to the highest point of the winch.</p>

Symbol	Term	Definition	Drawing
<i>HH6</i>	Winch centre of drum height	Distance on Z coordinate between the GRP and the centre of the drum.	
<i>HH7</i>	Drawbar height	Distance on Z coordinate between the GRP and the centreline of the drawbar clevis (fork).	
<i>HH8</i>	Clevis width	Distance on Z coordinate between two Z planes passing through the inside surface of the drawbar clevis (fork).	

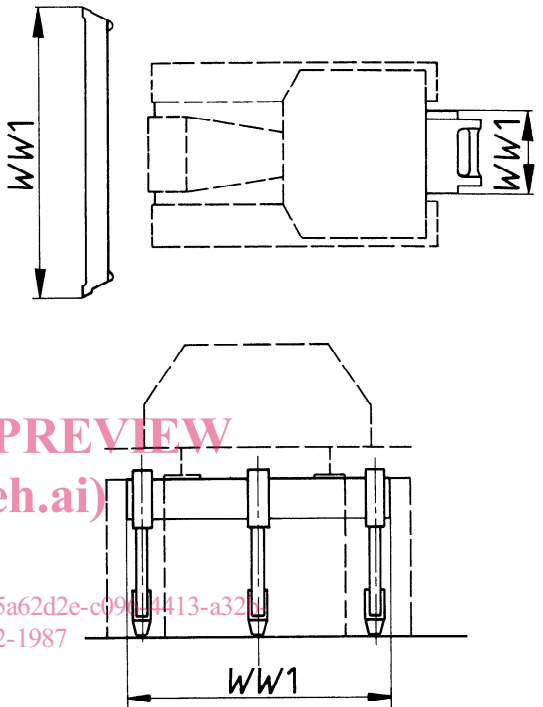
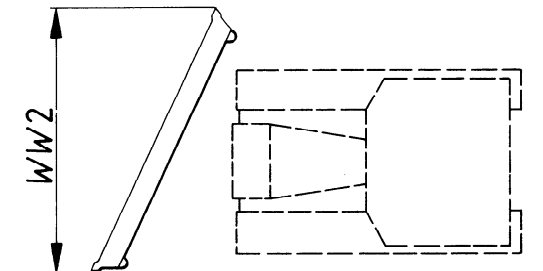
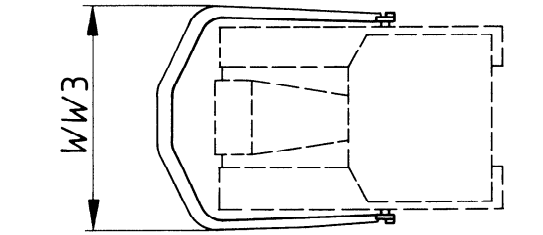
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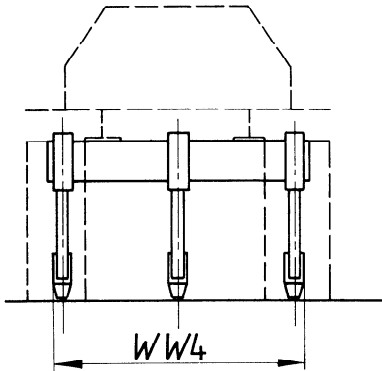
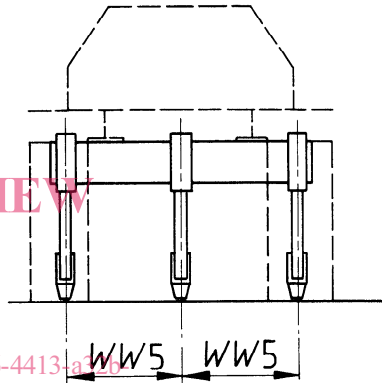
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Annex C

Width dimensions – Terms and symbols

Symbol	Term	Definition	Drawing
WW1	Maximum width	Distance on Y coordinate between two Y planes passing through the farthest points of the equipment.	
WW2	Angle blade width	Distance on Y coordinate between two Y planes passing through the farthest points of the blade when the blade is at the maximum angle and resting on the GRP.	
WW3	C-frame width	Distance on Y coordinate between two Y planes passing through the farthest points of the C-frame.	

Symbol	Term	Definition	Drawing
WW4	Shanks working width	Distance on Y coordinate between two Y planes passing through the outermost points of the teeth of the external shanks.	
WW5	Shanks centre distance	Distance on Y coordinate between the centreline of two adjoining shanks.	

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