

# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 13105-1

ISO/TC 195/SC 1

Secretariat: JISC

Voting begins on:  
2014-01-14

Voting terminates on:  
2014-04-14

---

---

### Building construction machinery and equipment — Machinery for concrete surface floating and finishing — Part 1: Terms and commercial specifications

*Machines et matériels pour la construction des bâtiments — Talocheuses-lisseuses de mortier —  
Partie 1: Terminologie et spécifications commerciales*

ICS: 01.040.91;91.220

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/9b504254-c071-49b8-9aa2-f9cf9a2139cf/iso-13105-1-2014>

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.



Reference number  
ISO/DIS 13105-1:2013(E)

© ISO 2013

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/9b504254-c071-49b8-9aa2-f9cf9a2139cf/iso-13105-1-2014>

### Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

## Contents

Page

Foreword .....	iv
Introduction.....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Commercial specifications .....	2
4.1 General .....	2
4.2 Pedestrian controlled power trowel .....	3
4.3 Ride-on power trowel .....	3
Annex A (informative) Power Trowel Dimensions in Operating Mode .....	4
Bibliography .....	6

**iTeh STANDARD PREVIEW**  
 (standards.iteh.ai)  
 Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/9b504254-c071-49b8-9aa2-f9cf9a2139cf/iso-13105-1-2014>

## 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 13105-1 was prepared by Technical Committee ISO/TC 195, *Building construction machinery and equipment*, Subcommittee SC 1, *Machinery and equipment for concrete work*.

ISO 13105 consists of the following parts, under the general title *Building construction machinery and equipment — Machinery for concrete surface floating and finishing*:

- Part 1: *Terms and commercial specifications*
- Part 2: *Safety requirements (under development)*

## Introduction

This International Standard deals with machinery designed for smoothing and finishing concrete on construction sites. These machines are commonly referred to as "power trowels."

It provides terminology and definitions for those terms for the machine and for specific components of the machine.

It establishes requirements and parameters for stating values typically found in commercial literature in an effort to aid customers and users in product selection and comparison.

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/9b504254-c071-49b8-9aa2-f9cf9a2139cf/iso-13105-1-2014>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/9b504254-c071-49b8-9aa2-f9cf9a2139cf/iso-13105-1-2014>

# Building construction machinery and equipment — Machinery for concrete surface floating and finishing — Part 1: Terms and commercial specifications

## 1 Scope

This International Standard defines terms and commercial specifications for machines used for concrete surface floating and finishing. This includes pedestrian-controlled equipment and ride-on equipment.

This standard does not address strike-off type machines commonly known as screeds.

## 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.

## 3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

### 3.1

#### **power trowel**

motor powered machines with rotating tools for floating and finishing freshly placed concrete

### 3.2

#### **rotor**

rotating assembly including the blades and means to pitch blades

### 3.3

#### **blade**

working tool which contacts the concrete surface

### 3.4

#### **handle**

<pole>

device on pedestrian-controlled power trowel to enable the operator to hold and manoeuvre the machine

### 3.5

#### **retardant**

liquid finishing aid

### 3.6

#### **pitch**

included angle between the surface of the blade and the concrete surface

Note        Could be fixed or adjustable.

## 4 Commercial specifications

### 4.1 General

The following general data shall be presented:

- a) model and type
- b) manufacturer
- c) serial number
- d) prime mover (combustion engine or electric, pneumatic or hydraulic motor)
  - 1) if combustion engine:
    - type (spark ignition or compression ignition)
    - model
    - manufacturer
    - operating speed min<sup>-1</sup>
    - engine net power kW (or as specified by engine manufacturer)
    - fuel type
    - fuel tank capacity liters
  - 2) if electric motor:
    - model and type
    - rated power kW
    - rated current A
    - voltage and frequency V – Hz
    - number of speeds
    - speed range min<sup>-1</sup>
  - 3) if pneumatic or hydraulic motor:
    - model and type
    - rated power (pneumatic only) kW
    - displacement (hydraulic only) cc
    - rated pressure kpa
    - rated flow lpm
- e) number of blades per machine



f) pitch	range in degrees
g) rotor diameter (swept circle of rotor)	mm
h) rotor speed (min – max)	min <sup>-1</sup>
i) operating mass	kg
j) shipping mass	kg

#### 4.2 Pedestrian controlled power trowel

For pedestrian controlled machines, the following shall also be presented: (see Figure A.1)

a) handle type (i.e. short, long, foldable)	
b) handle height (if fixed height)	mm
c) handle height (if adjustable)	range min/max in mm
d) guard ring outer diameter	mm
e) overall length in operating mode	mm

#### 4.3 Ride-on power trowel

For ride-on machines, the following shall be also presented:

a) swept path width	mm
b) unswept distance between rotors	mm
c) retardant tank (if any) capacity	litres
d) battery capacity (if equipped)	Ah
e) type of transmission	(i.e. mechanical, hydraulic)
f) type of steering system	(i.e. mechanical, power-assisted)
g) overall dimensions (see Figure A.2):	
— length (left to right)	mm
— width (front to back)	mm
— height	mm
h) operator seat height (from work surface)	mm