
**Hot-finished structural hollow sections of
non-alloy and fine grain steels —**

**Part 2:
Dimensions and sectional properties**

Profils creux de construction finis à chaud, en acier non allié ou à grains fins —

Partie 2: Dimensions et caractéristiques du profil



This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from 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
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative reference	1
3 Terms and definitions	1
4 Symbols	1
5 Information to be supplied by the purchaser	2
5.1 Mandatory information	2
5.2 Options	2
6 Tolerances	3
7 Measurement of size and shape	4
7.1 General	4
7.2 Outside dimensions	4
7.3 Thickness	4
7.4 Out-of-roundness	5
7.5 Concavity and convexity	5
7.6 Squareness of sides	5
7.7 External corner profile	6
7.8 Twist	6
7.9 Straightness	7
8 Dimensions and sectional properties	8
Annex A (normative) Formulae for calculation of sectional properties	24

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 12633-2 was prepared by Technical Committee ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 1, *Steel tubes*.

This first edition of ISO 12633-2 cancels and replaces ISO 657-14:2000, of which it constitutes a minor revision. In particular, better grouping of several documents by subject area and minor editorial improvements have been carried out.

ISO 12633 consists of the following parts, under the general title *Hot-finished structural hollow sections of non-alloy and fine grain steels*:

- *Part 1: Technical delivery conditions*
- *Part 2: Dimensions and sectional properties*

Hot-finished structural hollow sections of non-alloy and fine grain steels —

Part 2: Dimensions and sectional properties

1 Scope

This part of ISO 12633 specifies the tolerances for hot-finished circular, square and rectangular structural hollow sections, and gives the dimensions and sectional properties for a range of standard sizes.

NOTE For the technical delivery requirements, see ISO 12633-1.

2 Normative reference

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 12633-1, *Hot-finished structural hollow sections of non-alloy and fine grain steels — Part 1: Technical delivery conditions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12633-1 apply.

4 Symbols

For the purposes of this document, the symbols given in Table 1 apply.

Table 1 — Symbols

Symbol	Unit	Definition
A	cm ²	Cross-sectional area
A_s	m ² /m	Surface area per unit length
B	mm	Nominal length of side of a square hollow section Nominal length of the shorter side of a rectangular hollow section
$C_1; C_2$	mm	Length of external corner profile of a square or rectangular hollow section
C_t	cm ³	Torsional-modulus constant
D	mm	Nominal outside diameter of a circular hollow section
$D_{\max}; D_{\min}$	mm	Maximum and minimum outside diameter of a circular hollow section, measured in the same plane