

BS ISO 606:2015



BSI Standards Publication

Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of ISO 606:2015.

The UK participation in its preparation was entrusted to Technical Committee MCE/1, Chains and chain sprockets for power transmission.

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 2015.

Published by BSI Standards Limited 2015

ISBN 978 0 580 82025 0

ICS 21.220.30

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 31 August 2015.

Amendments/corrigenda issued since publication

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

INTERNATIONAL
STANDARD

BS ISO 606:2015

ISO
606

Fourth edition
2015-08-15

**Short-pitch transmission precision
roller and bush chains, attachments
and associated chain sprockets**

*Chaînes de transmission de précision à rouleaux et à douilles, plaques-
attaches et roues dentées correspondantes*



Reference number
ISO 606:2015(E)

© ISO 2015



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, 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

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Chains	2
3.1 Nomenclature of assemblies and components.....	2
3.2 Designation.....	4
3.3 Dimensions.....	4
3.4 Performance requirements.....	6
3.4.1 General.....	6
3.4.2 Tensile testing.....	7
3.4.3 Preloading.....	7
3.4.4 Length validation.....	7
3.4.5 Dynamic testing.....	7
3.5 Marking.....	8
3.6 Cranked links.....	8
4 Attachments	12
4.1 Nomenclature.....	12
4.2 General.....	13
4.3 Designation.....	13
4.4 Dimensions.....	14
4.5 Manufacture.....	14
4.6 Marking.....	14
5 Chain sprockets	16
5.1 General.....	16
5.2 Nomenclature.....	16
5.3 Diametral dimensions of sprocket rim.....	19
5.3.1 Nomenclature.....	19
5.3.2 Dimensions.....	19
5.4 Sprocket tooth gap forms.....	20
5.4.1 Nomenclature.....	20
5.4.2 Dimensions.....	20
5.5 Tooth heights and tip diameters.....	21
5.5.1 Nomenclature.....	21
5.5.2 Dimensions.....	21
5.6 Sprocket rim profiles.....	22
5.6.1 Nomenclature.....	22
5.6.2 Dimensions.....	22
5.7 Radial run-out.....	22
5.8 Axial run-out (wobble).....	23
5.9 Pitch accuracy of sprocket teeth.....	23
5.10 Number of teeth.....	23
5.11 Bore tolerance.....	23
5.12 Marking.....	23
Annex A (normative) Pitch circle diameters	24
Annex B (informative) Equivalent chain designations	26
Annex C (informative) Method of calculating chain minimum dynamic strength	27
Annex D (informative) Method of determining maximum test force F_{\max} when conducting dynamic strength conformance test	30
Annex E (informative) Examples of methods used to avoid an excessive increase in the rate	

of stress during the tensile test	31
Annex F (informative) Methods used to approximate the minimum dynamic test values for multiplex chains	34
Bibliography	35

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).

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).

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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 100, *Chains and chain sprockets for power transmission and conveyors*.

This fourth edition cancels and replaces the third edition (ISO 606:2004), which has been technically revised. It also incorporates Technical Corrigendum ISO 606:2004/Cor. 1:2006.

Introduction

The provisions of this revised International Standard have been established by including sizes of chains used by the majority of countries in the world, and by unifying dimensions, strengths and other data which differed in current national standards, while eliminating those for which it was considered a universal usage had not been established.

The whole field of application open to this medium of transmission has been covered by the ranges of chains already established. To achieve this, the sizes of 6,35 mm pitch to 76,2 mm pitch inclusive have been duplicated, on the one hand, by the inclusion of chains derived from standards originating and centred around ANSI, and on the other by chains representing the unification of the principal standards originating in Europe, the two being complementary for the coverage of the widest possible field of application.

The ANSI chain reference numbers (25, 35, 40, 50, etc.) are used world-wide and these numbers have now been introduced into this International Standard in place of the previous ISO reference numbers (04C, 06C, 08A, 10A, etc.) To assist in cross-referencing the ANSI and previous ISO numbers, details are included in [Annex B](#) of this International Standard.

The ANSI heavy series of chains (suffix H) are specified in this International Standard. The ANSI heavy series of chains differs from the ANSI standard series in that thicker plates are used.

The ANSI extra heavy series of chains (suffix HE) are now included. The ANSI extra heavy series are dimensionally as the ANSI heavy series (suffix H) but have a higher minimum ultimate tensile strength.

[Clause 4](#) covers specification details for K and M attachments, and extended pin attachments for use with short-pitch transmission roller and bush chains conforming with this International Standard.

[Clause 5](#), covering chain sprockets, represents the unification of all the relevant national standards in the world and includes, in particular, complete tolerances relating to tooth form.

The inclusion of the dimensions of the chains specified ensures complete interchangeability of any given size and provides interchangeability of individual links of chains.

Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets

1 Scope

This International Standard specifies the characteristics of short-pitch precision roller and bush chains with associated sprockets suitable for the mechanical transmission of power and allied applications. It covers dimensions, tolerances, length measurement, preloading, minimum tensile strengths and minimum dynamic strength.

Although [Clause 5](#) applies to chain sprockets for cycles and motor cycles, this International Standard is not applicable to their chains, which are covered by ISO 9633 and ISO 10190, respectively.

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 286-2:2010, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 15654, *Fatigue test method for transmission precision roller chains*