



The American Society of
Mechanical Engineers

A N A M E R I C A N N A T I O N A L S T A N D A R D

STEEL BUSHED ROLLERLESS CHAINS, ATTACHMENTS, AND SPROCKET TEETH

ASME B29.12M-1997

[Revision of ANSI/ASME B29.12M-1983 (R1988)]

Date of Issuance: September 1, 1997

This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda or written interpretations of the requirements of this Standard issued to this Edition.

ASME is the registered trademark of The American Society of Mechanical Engineers.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The Consensus Committee that approved the code or standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed code or standard was made available for public review and comment which provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "rate," or "endorse" any item, construction, proprietary device, or activity.

ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable Letters Patent, nor assume any such liability. Users of a code or standard are expressly advised that the determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations issued in accordance with governing ASME procedures and policies which preclude the issuance of interpretations by individual volunteers.

No part of this document may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.

The American Society of Mechanical Engineers
345 East 47th Street, New York, NY 10017

Copyright © 1997 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All Rights Reserved
Printed in U.S.A.

FOREWORD

(This Foreword is not part of ASME B29.12M-1997.)

Chains of the type covered by this Standard were introduced early in the 20th century. The chains met with considerable success on material conveyors and elevators, and manufacturers developed and marketed many sizes and types in the next several years.

The American Sprocket Chain Manufacturers Association (now the American Chain Association) recognized the need for standards which would provide for interchangeability by intercoupling chains of various manufacture. In November 1960, a working group of producers of the bushed rollerless chains was formed to accomplish standardization. This Standard is the result of the work of that group.

This Standard was presented to the USA (now ANSI) Standards Committee B29 on December 12, 1967, and, upon approval by the USA Standards Institute (now American National Standards Institute, Inc.), on October 18, 1968, was adopted and published. The 1974 revision included minor changes in metric units and the addition of caution notes to Table 1.

To facilitate the use of this Standard in the international market, the metric equivalents of all dimensions are given.

The current revision includes the addition of chain numbers S-856, S-857, S-859, and S-864 and attachments K-24, K-3, K-35, K-44, and K-443 for these chains. Also added is minimum bolt hole diameter required for the bolt diameter for a particular attachment. The *Minimum Ultimate Tensile Strength* definition (para. 2.1) has also been modified.

This revision was approved by the American National Standards Institute, Inc., on March 25, 1997.

ASME STANDARDS COMMITTEE B29
Chains, Attachments, and Sprockets for
Power Transmission and Conveying

(The following is the roster of the Committee at the time of approval of this Standard.)

OFFICERS

C. B. Norberg, *Chair*
R. H. Uttke, *Vice Chair*
J. L. Wright, *Vice Chair*
K. Wessely, *Secretary*

COMMITTEE PERSONNEL

E. B. Beardslee, Beardslee Transmission Equipment Co.
L. E. Hampel, Allied-Locke Industries, Inc.
J. M. Lewis, Webster Industries, Inc.
D. Moore, Jeffrey Chain
C. B. Norberg
V. D. Petershack
R. A. Reinfried, Conveyor Equipment Manufacturers Association
K. J. Smith, Drives, Inc.
R. H. Uttke, Rexnord, Inc.
J. L. Wright, Diamond Chain Co.
D. N. Zwiep, Worcester Polytechnic Institute
J. Kane, Alternate, U.S. Tsubaki, Inc.
C. McDonald, Alternate, Jervis B. Webb Co.

CONTENTS

Foreword	iii
Committee Roster	v

1 Nomenclature	1
2 General Chain Proportions and Designations	1
3 Chain Dimensions	3
4 Attachment Dimensions	6
5 Sprocket Tooth Form	14

Figures

1 Steel Bushed Rollerless Chain	2
2 Steel Bushed Rollerless Chain Nomenclature	2
3 Sprocket Tooth Form	14

Tables

1 General Chain Dimensions, M.U.T.S., Strand Length, and Measuring Load	3
2 Maximum and Minimum Controlling Dimensions for Interchangeable Chain Links	4
3 Chain Clearance Dimensions	5
4 A-1 Attachment	6
5 A-2 Attachment	7
6 A-22 Attachment	8
7 K-1 Attachment	9
8 K-2 Attachment	10
9 K-3 Attachment	11
10 K-35 Attachment	12
11 K-44 and K-443 Attachments	13
12 Sprockets—Maximum Eccentricity and Face Runout Tolerances	15
13 Sprocket Tooth Form Factors	15