



CSA C22.2 No. 60745-2-20:05
(IEC 60745-2-20:2003, IDT)
National Standard of Canada
(reaffirmed 2023)



CSA C22.2 No. 60745-2-20:05
Hand-held motor-operated electric tools — Safety — Part 2-20:
Particular requirements for band saws
(IEC 60745-2-20:2003, IDT)



Legal Notice for Standards

Canadian Standards Association (operating as “CSA Group”) develops standards through a consensus standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA Group administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document’s fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party’s intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document’s compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA Group is a private not-for-profit company that publishes voluntary standards and related documents. CSA Group has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

Intellectual property rights and ownership

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group’s and/or others’ intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by treaty or by law, CSA Group reserves all intellectual property rights in this document.

Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Authorized use of this document

This document is being provided by CSA Group for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF form.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way, or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA Group; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



Standards Update Service

CSA C22.2 No. 60745-2-20:05
March 2005

Title: *Hand-held motor-operated electric tools — Safety — Part 2-20: Particular requirements for band saws*

To register for e-mail notification about any updates to this publication

- go to www.csagroup.org/store/
- click on **CSA Update Service**

The **List ID** that you will need to register for updates to this publication is **Z 17 48**.

If you require assistance, please e-mail techsupport@csagroup.org or call 416-747-2233.

Visit CSA Group's policy on privacy at www.csagroup.org/legal to find out how we protect your personal information.

Canadian Standards Association (operating as “CSA Group”), under whose auspices this National Standard has been produced, was chartered in 1919 and accredited by the Standards Council of Canada to the National Standards system in 1973. It is a not-for-profit, nonstatutory, voluntary membership association engaged in standards development and certification activities.

CSA Group standards reflect a national consensus of producers and users — including manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies. The standards are used widely by industry and commerce and often adopted by municipal, provincial, and federal governments in their regulations, particularly in the fields of health, safety, building and construction, and the environment.

More than 10 000 members indicate their support for CSA Group’s standards development by volunteering their time and skills to Committee work.

CSA Group offers certification and testing services in support of and as an extension to its standards development activities. To ensure the integrity of its certification process, CSA Group regularly and continually audits and inspects products that bear the CSA Group Mark.

In addition to its head office and laboratory complex in Toronto, CSA Group has regional branch offices in major centres across Canada and inspection and testing agencies in fourteen countries. Since 1919, CSA Group has developed the necessary expertise to meet its corporate mission: CSA Group is an independent service organization whose mission is to provide an open and effective forum for activities facilitating the exchange of goods and services through the use of standards, certification and related services to meet national and international needs.

For further information on CSA Group services, write to
CSA Group
178 Rexdale Boulevard
Toronto, Ontario, M9W 1R3
Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada’s economic competitiveness and social wellbeing, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Standards Council of Canada
600-55 Metcalfe Street
Ottawa, Ontario, K1P 6L5
Canada



Cette Norme Nationale du Canada est disponible en versions française et anglaise.

Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

®A trademark of the Canadian Standards Association, operating as “CSA Group”



Canadian Standards Association
CAN/CSA-C22.2 No. 60745-2-20-05
First Edition
(IEC 60745-2-20:2003, IDT)



Underwriters Laboratories Inc.
UL 60745-2-20
First Edition

Hand-held motor-operated electric tools – Safety – Part 2-20:
Particular requirements for band saws

MARCH 21, 2005

This national standard is an adoption of IEC 60745-2-20. First Edition (2003).



ANSI/UL 60745-2-20-2005

Approved
by
Standards Council
of Canada



This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. The technical content of IEC and ISO publications is kept under constant review by IEC and ISO. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line.

- a) Standard designation (number);
- b) relevant clause, table, and/or figure number;
- c) wording of the proposed change; and
- d) rationale for the change.

Commitment for Amendments

This standard is issued jointly by the Canadian Standards Association (CSA) and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of CSA and UL. CSA and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

ISBN 1-55397-672-X

© 2005

Canadian Standards Association

All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission of the publisher.

ISBN 0-7629-1017-8

Copyright © 2005 Underwriters Laboratories Inc.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

The most recent designation of ANSI/UL 60745-2:2000 as an American National Standard (ANSI) occurred on March 18, 2005.

This ANSI/UL Standard for Safety, which consists of the Second edition, is under continuous maintenance, whereby each revision is ANSI approved upon publication. Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's Online Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

Technical Committee on Consumer and Commercial Products

J.P. Neu	Electro-Federation Canada, Mississauga, Ontario <i>Representing Manufacturers</i>	<i>Chair</i>
T. Olechna	Electrical Safety Authority, Mississauga, Ontario <i>Representing Regulatory Authorities</i>	<i>Vice-Chair</i>
M. Wilson	CSA, Mississauga, Ontario	<i>Project Manager</i>

Representing Regulatory Authorities

R. Cormier	Nova Scotia Department of Labour, Halifax, Nova Scotia
M.D. Gardener	City of Calgary, Calgary, Alberta
J.-L. Robert	Régie du bâtiment du Québec, Québec, Québec
A. Tsisserev	City of Vancouver, Vancouver, British Columbia

Representing Manufacturers

G. Arnott	Heating, Refrigeration and Air Conditioning Institute of Canada, Mississauga, Ontario
J. Kube	Dimplex North America Limited, Cambridge, Ontario

Representing General Interests

I. Cleg'ron	The Home Depot Canada Inc., Scarborough, Ontario
A. Malone	21 st Olympiad Sales, Agincourt, Ontario
E. Nielsen	Richmond, Ontario
T. Palmer	Anthony Palmer Associates Inc., Brooklin, Ontario

Subcommittee on Safety of Hand-Held Motor-Operated Electric Tools

J.E. Evans	Black & Decker Canada Inc., Brockville, Ontario	<i>Chair</i>
U. Betten	Hilti Entwicklungsgesellschaft GmbH, Kaufering, Germany	
L. Crenshaw	Ryobi Technologies Incorporated, Pickens, South Carolina, USA	
P. Domeny	Robert Bosch Tool Corp., Mount Prospect, Illinois, USA	
C. Dyke	Black & Decker Canada Inc., Brockville, Ontario	
T. Gogoll	Black & Decker (U.S.) Inc., Towson, Maryland, USA	
N. Greensmith	Delta International Machinery, Guelph, Ontario	
R. Hilchey	MTD Products Limited, Kitchener, Ontario	
B. Jurek	Robert Bosch Inc., Mississauga, Ontario	
T. McElwaine	Ridge Tool Co. Elyria, Ohio, USA	
I. Milkovic	CSA, Toronto, Ontario	<i>Associate</i>
J.L. Montgomery	Milwaukee Electric Tool Corporation, Brookfield, Wisconsin, USA	
D.J. Murray	Burlington, Ontario	
R. O'Rourke	Construction Safety Association of Ontario, Toronto, Ontario	
I. Parker	Baldor Electric Company, Fort Smith, Arkansas, USA	
D. Peot	Ryobi Technologies Incorporated, Pickens, South Carolina, USA	

S. Ramachandra	The Colovos Company, Chicago, Illinois, USA	
S. Rodrigues	Makita U.S.A. Inc., Fremont, California, USA	
J.S. Stimitz	Underwriters Laboratories Inc., Melville, New York, USA	<i>Associate</i>
R.G. Stoll	Power Tool Institute, Cleveland, Ohio, USA	<i>Associate</i>
G. Tarseos	CSA, Toronto, Ontario	<i>Associate</i>
P.L. Turcott	Owen Sound, Ontario	
M. Wilson	CSA, Mississauga, Ontario	<i>Project Manager</i>

Currently in preview, click buy full version

CONTENTS

Preface	v
Foreword (CSA)	vii
Foreword (UL)	viii
IEC 60745-2-20, Hand-held motor-operated electric tools – Safety – Part 2-20: Particular requirements for band saws	
Foreword	2
1 Scope	4
2 Normative references	4
3 Definitions	4
4 General requirements	4
5 General conditions for the tests	4
6 Void	4
7 Classification	4
8 Marking and instructions	4
9 Protection against access to live parts	5
10 Starting	5
11 Input and current	5
12 Heating	5
13 Leakage current	5
14 Moisture resistance	5
15 Electric strength	5
16 Overload protection of transformers and associated circuits	5
17 Endurance	5
18 Abnormal operation	5
19 Mechanical hazards	5
20 Mechanical strength	5
21 Construction	6
22 Internal wiring	6
23 Components	6
24 Supply connection and external flexible cords	6
25 Terminals for external conductors	6
26 Provision for earthing	6
27 Screws and connections	6
28 Creepage distances, clearances and distances through insulation	6
29 Resistance to heat, fire and tracking	6
30 Resistance to rusting	6
31 Radiation, toxicity and similar hazards	6

Annexes 7

Annex K (normative) – Battery tools and battery packs 7

Annex L (normative) – Battery tools and battery packs provided with mains connection or non-isolated sources 7

Bibliography 7

Preface

This is the common CSA and UL standard for *Hand-held motor-operated electric tools — Safety — Part 2-20: Particular requirements for band saws*. It is the first edition of CAN/CSA-C22.2 No. 60745-2-20 and the first edition of UL 60745-2-20. This standard is an adoption of IEC 60745-2-20, first edition.

This Standard CAN/CSA-C22.2 No. 60745-2-20/UL 60745-2-20, first edition, supersedes the first edition of CAN/CSA-C22.2 No. 745-2-33/UL 745-2-33 published in 1995.

The standard number has been aligned to correspond with the equivalent IEC 60745-2-20 standard.

This common standard was prepared by the Canadian Standards Association (CSA) and Underwriters Laboratories Inc. (UL).

This standard was reviewed by the CSA Subcommittee on Safety of Hand-Held Motor-Operated Electric Tools, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

This standard has been approved as a National Standard of Canada by the Standards Council of Canada.

This standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

A UL standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

Where reference is made to a specific number of samples to be tested, the specified number shall be considered a minimum quantity.

Level of harmonization

This standard adopts the IEC text with no national differences. This standard is published as an identical standard for CSA and UL. An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one literal interpretation has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

CSA effective date

The effective date for CSA International will be announced through *CSA Informs* or a CSA certification notice.