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CSA Z98:19
National Standard of Canada



Passenger ropeways and passenger conveyors



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passenger conveyors



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L.T. Blampied	Buller Ski Lifts Limited, Mt. Buller, Australia	<i>Non-voting</i>
L. Boulanger	Ski Sutton, Sutton, Québec, Canada <i>Category: User Interest</i>	
D. Bruce	Alberta Municipal Affairs, Edmonton, Alberta, Canada <i>Category: Regulatory Authority</i>	
N. Chahal	Technical Safety BC, New Westminster, British Columbia, Canada	<i>Non-voting</i>
M. Chan	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada <i>Category: Regulatory Authority</i>	
K. Clark	Ancam Solutions Company Ltd., Oakville, Ontario, Canada <i>Category: General Interest</i>	

J. Copeland	Leitner-Poma of America Inc., Grand Junction, Colorado, USA	<i>Non-voting</i>
S. Couture	Remontée mécanique Schippers, Saint-Basile-le-Grand, Québec, Canada <i>Category: Producer Interest</i>	
B. Désourdy	Bromont, montagne d'expériences, Bromont, Québec, Canada <i>Category: User Interest</i>	
P.J. Ehlert	Doppelmayr USA, Inc., Salt Lake City, Utah, USA <i>Category: Producer Interest</i>	
M. Ethier	Régie du bâtiment du Québec, Québec, Québec, Canada <i>Category: Regulatory Authority</i>	
R. Fehr	Fatzer AG Wire Ropes, Romanshorn, Switzerland	<i>Non-voting</i>
M. Frankcom	Blue Mountain Resorts LP, Barrie, Ontario, Canada	<i>Non-voting</i>
A. Gower	Manitoba Office of the Fire Commissioner, Winnipeg, Manitoba, Canada <i>Category: Regulatory Authority</i>	
C. Hackworth	Australian Ski Areas Association, Middle Park, Victoria, Australia	<i>Non-voting</i>
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B. Haynes	Ontario Snow Resorts Association, Collingwood, Ontario, Canada	<i>Non-voting</i>
A. Huter	Mount St. Louis-Moonstone Ski Resort Limited, Coldwater, Ontario, Canada <i>Category: User Interest</i>	
Y. Juneau	Québec Ski Areas Association, Terrebonne, Québec, Canada	<i>Non-voting</i>

M. Lane	National Ski Areas Association, Lakewood, Colorado, USA	<i>Non-voting</i>
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G. McCullough	Les Sommets, Saint-Sauveur, Québec, Canada <i>Category: User Interest</i>	
D. McKernon	Alberta Elevating Devices & Amusement Rides Safety Association, Calgary, Alberta, Canada	<i>Non-voting</i>
E. Meertens	Sun Peaks Resort LLP, Sun Peaks, British Columbia, Canada <i>Category: User Interest</i>	
L. Morgenthaler	Exminda Corp., Kamloops, British Columbia, Canada <i>Category: General Interest</i>	
D. Muirhead	Inter-Mtn. Testing Ltd., Kelowna, British Columbia, Canada <i>Category: Producer Interest</i>	
P. Munier	La Cie de remonte-pente Doppelmayr Canada Ltée, Saint-Jérôme, Québec, Canada	<i>Non-voting</i>
K.G. Nichol	Nichol Solutions North Inc., Meaford, Ontario, Canada <i>Category: General Interest</i>	
C. Nicolson	Canada West Ski Areas Association, Kelowna, British Columbia, Canada	<i>Non-voting</i>

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R. Petrut	Teora Engineering and Services Ltd., Barrie, Ontario, Canada	<i>Non-voting</i>
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Preface

This is the eighth edition of CSA Z98, *Passenger ropeways and passenger conveyors*. It supersedes the previous editions published in 2014 and 2007 under the same title, and in 2001, 1996, 1991, 1978, and 1968 under the title *Passenger ropeways*.

The notable changes from the previous edition include

- a) the addition of a new, informative Annex L featuring notes on clauses;
- b) updated requirements for the following:
 - i) end connections;
 - ii) covered passenger conveyors;
 - iii) track ropes;
 - iv) emergency brakes;
 - v) operating in wind or icing conditions;
 - vi) clearances;
 - vii) brakes on surface lifts;
 - viii) non-destructive testing [magnetic rope test (MRT)] for rope on T-bars;
 - ix) braking on rope tows;
 - x) ropeways for secondary carriers; and
 - xi) groove contamination; and
- c) updated reference standards.

Funding to develop and maintain this Standard was generously provided by the Canada West Ski Areas Association (CWSAA), Ontario Ski Resorts Association (OSRA), Association des stations de ski du Québec (ASSQ), and Atlantic Ski Area Association (ASAA).

This Standard was prepared by the Technical Committee on Passenger Ropeways and Passenger Conveyors, under the jurisdiction of the Strategic Steering Committee on Mechanical Industrial Equipment Safety, and has been formally approved by the Technical Committee.

This Code 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.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *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.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- 4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include “Request for interpretation” in the subject line:*
 - a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
 - b) *provide an explanation of circumstances surrounding the actual field condition; and*
 - c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at standardsactivities.csa.ca.

- 5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. 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.*

CSA Z98:19

Passenger ropeways and passenger conveyors

1 Scope

1.1 General

This Standard specifies requirements for the design, manufacture, construction, modification, operation, inspection, testing, and maintenance of passenger ropeways and passenger conveyors.

Requirements for abnormal or unusual conditions are not specifically provided for, nor are all details of engineering and construction prescribed. It is intended that all work performed within the scope of this Standard meet or exceed the safety standards expressed or implied in this Standard.

This Standard does not purport to address all safety issues associated with passenger ropeways and passenger conveyors. It is the responsibility of the users of this Standard to establish appropriate safety practices and to determine the applicability of any regulatory requirements or limitations.

1.2 Equipment covered

For this Standard, passenger ropeways and passenger conveyors include

- a) reversible passenger ropeways with single- or double-track ropes;
- b) fixed and detachable grip circulating above-surface monicable, bi-cable, and tri-cable ropeways, including cabin ropeways, chair ropeways, and similar devices;
- c) surface ropeways, including T-bar ropeways, J-bar ropeways, platter ropeways, and similar devices;
- d) tows, including wire and fibre rope tows;
- e) tows for secondary carriers; and
- f) devices with a moving flexible element that
 - i) transport persons uphill for recreational or sport activities; or
 - ii) are used as loading conveyors.

1.3 Freight

Freight may be carried on the equipment covered by this Standard, provided that allowance has been made in the design and appropriate precautions are taken.

1.4 Funicular railways

This Standard may be adopted for use with funicular railways and self-powered reversible passenger ropeways.

1.5 Terminology

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.