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**Bureau de normalisation  
du Québec**

**BNQ-SPEC 1013-200/2022**

**Electric Ambulances —  
Vehicle Specifications**

**TECHNICAL SPECIFICATION**

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## BNQ-SPEC 1013-200/2022

### Electric Ambulances — Vehicle Specifications

*Ambulances électriques — Caractéristiques du véhicule*

ICS: 11.160; 43.120.

## Bureau de normalisation du Québec

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## INTRODUCTION

Given the growing demand for electric ambulances, the Bureau de normalisation du Québec (BNQ) has developed this technical specification on electric ambulances in order to provide a reliable reference for requirements.

Since its first edition in 1999, standard BNQ 1013-110 *Ambulances — Vehicle Specifications* has defined the requirements for ambulance features. However, since it was developed at a time when the electrification of transport was not a social and governmental concern, this standard has not allowed for technological innovation for the manufacture of electric ambulances.

In addition to covering the requirements for electric motors, this technical specification will revisit fundamental elements of standard BNQ 1013-110 for ambulances such as safety, identification or marking of ambulances and ambulance features. Wherever appropriate, requirements are set out in terms of performance in order to allow for innovation.

Development of this technical specification is in accordance with the process set out by the Standards Council of Canada (SCC) in the document *National Technical Specifications*.

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## FOREWORD

This technical specification was developed in compliance with the Standards Council of Canada (SCC)'s Requirements and Guidance for standards development organizations. Its publication was approved by a Standards Development Committee, whose members were:

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DUBÉ, Denis	Malley Industries
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1 At the time of publication of this technical specification, the aforementioned person no longer worked for the Bureau de normalisation du Québec (BNQ).

## Linguistic Review

TREMBLAY, Carole (Editor)

Bureau de normalisation du Québec (BNQ)

The development of this technical specification was made possible thanks to the financial support of the Ministère de l'Économie, de l'Innovation et de l'Énergie du Québec.

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## CONTENTS

	Page	
1	SCOPE	1
2	DEFINITIONS	1
3	GENERAL REQUIREMENTS	3
	3.1 REGULATORY REQUIREMENTS	3
	3.2 RESPONSIBILITIES OF THE ASSEMBLER AND THE MANUFACTURER	4
4	MOTOR ELECTRICAL SYSTEM	4
	4.1 HIGH-VOLTAGE BATTERY PACKS	4
	4.2 THERMAL MANAGEMENT SYSTEM	4
	4.3 CHARGING TYPE	5
	4.3.1 Charging socket	5
	4.3.2 Auxiliary battery bank charging	5
	4.4 ELECTROLYTE SPILLAGE AND ELECTRICAL SHOCK PROTECTION	5
5	PERFORMANCE	6
	5.1 CALCULATING AUTONOMY	6
	5.1.1 General information	6
	5.1.2 Additional measurements for calculating autonomy	7
	5.2 SPEED AND ACCELERATION	7
	5.3 VENTILATION, HEATING AND AIR CONDITIONING SYSTEMS	8
	5.3.1 Ventilation	8
	5.3.2 Heating	8
	5.3.3 Air conditioning	8
6	AUXILIARY ELECTRICAL SYSTEM	8
	6.1 AUXILIARY BATTERY BANKS	8
	6.1.1 Location	9
	6.1.2 Voltage alarm	9
	6.2 ELECTRONIC AND COMMUNICATION SYSTEMS COMPARTMENT	9
	6.3 ELECTRICAL COMPARTMENTS	9

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7	ELECTROMAGNETIC COMPATIBILITY	10
8	OTHER REQUIREMENTS	10
9	QUALITY SYSTEM	10
10	DOCUMENTATION	10
ANNEX A —	TEST METHOD — DETERMINING THE AUTONOMY OF AN ELECTRIC AMBULANCE	12
ANNEX B —	PROTECTION AGAINST ELECTRIC SHOCKS	15
ANNEX C —	OTHER REQUIREMENTS	21
	Figure C.1 — Electric ambulance — Warning light zones	33
	Figure C.2 — Sizes of the Star of life emblem	39
	Figure C.3 — Emergency number	42
ANNEX D —	NORMATIVE REFERENCES	44
ANNEX E —	INFORMATIVE REFERENCES	48
ANNEX F —	BIBLIOGRAPHY	49

## 1 SCOPE

This technical specification covers the requirements for electric motors in ambulances.

It covers, but is not limited to, the following aspects of an electric ambulance:

- a) motor electrical system;
- b) performance (autonomy, acceleration, heating and air conditioning);
- c) auxiliary electrical system;
- d) electromagnetic compatibility;
- e) other general aspects including the safety of occupants and of the public.

Finally, this technical specification defines the information that an assembler of electric ambulances shall provide to the purchaser.

NOTE — This information allows the purchaser of an electric ambulance to verify that the vehicle meets their needs in terms of autonomy and charging conditions.

This technical specification is intended for ambulance assemblers who modify electric ambulances.

It is also intended for the manufacturers of electric frames used by ambulance assemblers.

It may be used by public or private purchasers of ambulances as a purchasing specification.

## 2 DEFINITIONS

For the purpose of this technical specification, the following terms are defined as such:

ambulance, n. A motor vehicle composed of a cab for the driver and a section designed to accommodate one or more patients on a stretcher, where the patient(s) may be given pre-hospital emergency care during transit. French: *ambulance*.

ambulance in service condition, n. An ambulance ready to provide the services for which it was designed and planned, with all foreseeable occupants or equivalent elements, as the case may be, situated in their designated positions. French: *ambulance en état de service; ambulance en état d'exploitation*.

NOTE — Occupants may be replaced by weight equivalents in their normal locations. Likewise, accessories and equipment may be replaced by corresponding weights.