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SIST EN 50144-1:2000
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SIST EN 50260-2-7:2002

Varnost električnih ročnih orodij - Posebne zahteve za brizgalne pištole

Safety of hand-held electric motor operated tools - Particular requirements for spray guns

Sicherheit handgeführter motorbetriebener Elektrowerkzeuge - Besondere Anforderungen an Spritzpistolen

Sécurité des outils électroportatifs à moteur - Règles particulières pour les pistolets

Ta slovenski standard je istoveten z: **EN 50580:2012**

ICS:

25.140.20	Električna orodja	Electric tools
87.100	Oprema za nanašanje premazov	Paint coating equipment

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EUROPEAN STANDARD

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EN 50580

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ICS 25.140.20; 87.100

Supersedes EN 50144-1:1998 + A1:2002 + A2:2003, EN 50144-2-7:2000, EN 50260-1:2002, EN 50260-2-7:2002

English version

Safety of hand-held electric motor operated tools - Particular requirements for spray guns

Sécurité des outils électroportatifs à moteur - Règles particulières pour les pistolets

Sicherheit handgeführter motorbetriebener Elektrowerkzeuge - Besondere Anforderungen an Spritzpistolen

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CENELEC

European Committee for Electrotechnical Standardization
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Contents

Foreword

This document (EN 50580:2012) has been prepared by CLC/TC 116, "Safety of motor-operated electric tools".

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-01-09
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2015-01-09

This European Standard supersedes EN 50144-1:1998, EN 50144-1:1998/A1:2002, EN 50144-1:1998/A2:2003, EN 50144-2-7:2000, EN 50260-1:2002, and EN 50260-2-7:2002.

This project was submitted to the UAP under the reference FprEN 50144-2-7. CLC/TC 116 confirmed that this project is not linked to the EN 50144 series. EN 60745-1 is part 1 of this document.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2006/42/EC.

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

This standard is divided into two parts:

Part 1: General requirements which are common to most hand-held electric motor operated tools (for the purpose of this standard referred to simply as tools) which could come within the scope of this standard;

Part 2: Requirements for particular types of tools which either supplement or modify the requirements given in Part 1 to account for the particular hazards and characteristics of these specific tools.

Compliance with the clauses of Part 1 together with this Part 2 provides one means of conforming with the essential health and safety requirements of the Directive concerned.

Warning: Other requirements and other EU Directives can be applicable to the products falling within the scope of this standard.

This standard follows the overall requirements of EN ISO 12100.

EN 50580 is to be used in conjunction with EN 60745-1:2009. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

Subclauses and figures which are additional to those in Part 1 are numbered starting from 101.

NOTE In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

1 Scope

This clause of Part 1 is applicable except as follows:

Addition:

This European Standard applies to spray guns for non-flammable materials.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

Additional definitions:

3.101
spray gun
tool incorporating the motor in a hand-held unit with an unpressurized storage container intended for the mechanical spraying of liquid, paste or powdery substances

3.102
non-flammable material
material having a flash-point above 55 °C

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable.

6 Environmental requirements

This clause of Part 1 is applicable except as follows:

6.1.2.4 *Modification:*

The tool is suspended in such a way as to correspond to normal use.

6.1.2.5 *Addition:*

Spray guns are tested at no-load.

The result to be used shall be the arithmetic mean, rounded off to the nearest decibel, of the values obtained from three consecutive tests.

6.2.4.2 Location of the measurement

Addition:

Figure Z101 shows the position for spray guns.

6.2.6.3 Operating conditions

Modification:

Table Z101 – Operating conditions for spray guns

Orientation	Spray guns are tested at no load. The spray gun container shall be orientated up or down depending on type.
Grip force	Hold the machine with normal gripping force, avoiding excessive gripping force.
Test cycle	One test cycle is given when the tool is switched on for no load for more than 10 s and then switched off again. The measurement is conducted during 10 s within this period.
NOTE 1 It should be noted that even small differences in operating conditions can affect the vibration intensity. NOTE 2 The vibrations of the tool can be influenced by the operator, in particular the grip force has a considerable influence when the tool is very light.	

6.2.7.2 Declaration of the vibration total value

Addition:

The vibration total value a_h of the handle and the uncertainty K shall be declared.

7 Classification

This clause of Part 1 is applicable.

8 Marking and instructions

This clause of Part 1 is applicable except as follows:

8.12.2 a) *Addition:*

101) Instruction not to use guns for spraying flammable materials.

102) Warning to be aware of any hazards presented by the material being sprayed and instruction to consult the markings on the container or the information supplied by the manufacturer of the material to be sprayed.

103) Instruction not to spray any material where the hazard is not known.

8.12.2 b) *Addition:*

101) Instruction to use appropriate personal protective equipment, such as dust mask.

8.12.2 c) *Addition:*

101) Instruction not to clean guns with flammable solvents.

9 Protection against access to live parts

This clause of Part 1 is applicable.

10 Starting

This clause of Part 1 is applicable.

11 Input and current

This clause of Part 1 is applicable.

12 Heating

This clause of Part 1 is applicable except as follows:

12.4 *Replacement:*

The tool is fitted with the smallest nozzle recommended by the manufacturer. The tool is operated at the rated voltage or at the upper limit of the rated voltage range through continuous cycles spraying for one hour or until temperatures stabilise, whichever is achieved first. Each cycle consists of spraying water until the volume of the largest recommended container is empty followed by a 1 min "off" period. The combination of controls, if any, is adjusted so as to achieve maximum input during the periods of operation. The temperature rises are measured at the end of the last "on" period. At the manufacturer's option, the tool may also be operated continuously until thermal stabilisation.

13 Leakage current

This clause of Part 1 is applicable.

14 Moisture resistance

This clause of Part 1 is applicable.

15 Electric strength

This clause of Part 1 is applicable.

16 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable.

17 Endurance

This clause of Part 1 is applicable except as follows:

17.2 *Replacement:*

The tool is fitted with the smallest nozzle recommended by the manufacturer. The tool is operated for 24 h of operation at a voltage equal to 1,1 times rated voltage, and then for 24 h at a supply voltage equal to 0,9 times rated voltage. The tool is operated through continuous cycles spraying. Each cycle

consists of spraying water until the volume of the largest recommended container is empty followed by a 5 min "off" period. The combination of controls, if any, is adjusted so as to achieve maximum input during the periods of operation.

The tool may be switched on and off by means of a switch other than that incorporated in the tool.

During this test, if applicable, replacement of the carbon brushes is allowed, and the tool is oiled and greased as in normal use.

If the temperature rise of any part of the tool exceeds the temperature rise determined during the test of 12.1, forced cooling or rest periods are applied, the rest periods being excluded from the specified operating time.

During these tests, overload protection devices shall not operate.

18 Abnormal operation

This clause of Part 1 is applicable.

19 Mechanical hazards

This clause of Part 1 is applicable except as follows:

19.1 *Addition:*

Spray guns where the material is ejected at high pressure shall be guarded at the nozzle from the side to prevent inadvertent contact with the orifice.

Compliance is checked by applying the test probe of Figure 101. With the longitudinal axis of the test probe perpendicular to the longitudinal axis of the nozzle, it shall not be possible to touch the orifice with the test probe.

20 Mechanical strength

This clause of Part 1 is applicable except as follows:

20.3 *Addition:*

A breakage of the container is disregarded.

21 Construction

This clause of Part 1 is applicable except as follows:

21.16 *Replacement:*

Spray guns shall be so constructed that, in any position of the gun, their electrical insulation cannot be affected by liquids which might leak from containers, hoses, couplings and the like.

Compliance is checked by inspection.

21.Z1 This clause of Part 1 is not applicable.