

Concerning Machinery Directive 2006/42/EC
Phone +49 69 66 03-13 96
Fax +49 69 66 03-23 96
E-Mail Frederik.king@eu-nited.net
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Machinery Directive Guideline

Guideline for the application of the Machinery Directive 2006/42/EC
for commercial cleaning machines

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Foreword

With the Machinery Directive 2006/42/EC which is applicable since 29th December 2009 it became necessary to revise all safety standards for cleaning machines with respect to the essential health and safety requirements of the Machinery Directive (ESHR of the MD¹). This was done during several meetings of CENELEC Working Group TC61 WG10 where the most important European manufacturers of commercial cleaning equipment were represented, together with the European consultants for safety of machinery as well as noise, starting January 2007. They are continuously maintained and updated based on the latest versions of the corresponding IEC standards developed by IEC SC61J.

At the end of or even after this revision process it became obvious that there is an additional need for a guideline as interpretation support for manufacturers applying the MD, besides the specification of requirements within relevant safety standards. Due to that, the Technical Committee of EUnited Cleaning decided to collect technical recommendations on all open issues which need to be specified or at least explained. The present document gives therefore these recommendations and might be amended in future where necessary.

Introduction

This document has been prepared by the Technical Committee of the European Cleaning Machines Association EUnited Cleaning, which represents the leading European manufacturer of commercial cleaning machines. I.e., by this Technical Recommendation the European cleaning machines industry defines requirements and recommends measures in addition to existing European and international standards.

For this document, the spirit of all relevant safety standards was considered as well as the state-of-the-art of accordant cleaning machines. Furthermore, the guideline for application of MD as published by the European Commission² was taken into consideration as far as applicable. This Technical Recommendation aims at facilitating the interpretation of the Machinery Directive and should be regarded as a reference to help all relevant parties apply this Directive regarding cleaning machines in a uniform manner.

It is intended to propose the clarification and interpretation guidance to the international standardisation committee IEC SC61J as well as the relevant European standardisation committee CENELEC TC61 WG10. After future revision of the quoted European standards this document may be redundant and therefore cancelled.

1 Scope

This document applies to cleaning machines within the scope of international standards of IEC SC 61J 'Electrical motor-operated cleaning appliances for commercial use' (see clause 2), for use in residential, commercial, light industry and industrial environments, within the single European market.

2 Normative references

This document refers to European and international standards. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

¹ Annex I of Directive 2006/42/EC.

² Guide to application of the Machinery Directive 2006/42/EC

EN 60335-2-67:2012, *Household and similar electrical appliances – Safety – Part 2-67: Particular requirements for floor treatment and floor cleaning machines for commercial use*

EN 60335-2-68:2012, *Household and similar electrical appliances – Safety – Part 2-68: Particular requirements for spray extraction machines for commercial use*

EN 60335-2-69:2012, *Household and similar electrical appliances – Safety – Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush, for commercial use*

EN 60335-2-72:2012, *Household and similar electrical appliances – Safety – Part 2-72: Particular requirements for automatic machines for floor treatment for commercial use*

EN 60335-2-79:2012, *Household and similar electrical appliances – Safety – Part 2-79: Particular requirements for high pressure cleaners and steam cleaners*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 60335-2-67, -68, -69, -72, -79, and the following apply.

3.1 Typical Operational Mass (TOM)

Mass of the most usual configuration of a machine ready for use, as specified in Clause 4.1.2.

3.2 Mobile machine

Machine equipped with wheels and which therefore has to be considered as mobile in accordance with Clause 3 of Annex I of the MD.

4 Marking of Machinery

4.1 Mass

The marking of machines in accordance with the Machinery Directive is specified in the relevant European Standards for cleaning machines; in cases where this specification might be not sufficient or mistakable, the following shall be used for the sake of clarification.

Declaration of further data, beyond the ones specified below, is not excluded, provided the attribute is unequivocally stated so that data of different manufacturers can be compared.

4.1.1 Floor treatment machines in accordance with EN 60335-2-72

For floor treatment machines the weight shall be given as Gross vehicle weight (GVW) in accordance with EN 60335-2-72. Even as weight is the incorrect physical unit to describe the mass given in kg, GVW is well established term and defined in this standard that it was chosen to keep it for the time being.

4.1.2 Other mobile cleaning machines

All other **mobile machines** shall be marked, in accordance with the Machinery Directive as well as the relevant safety standards EN 60335-2-67, -68, -69, and -79 with the mass of the most usual configuration in kg. In catalogues and/or operating instructions, the attribute shall be designated as **TOM**, for cordless products as **TOM** including batteries. The **TOM** is specified as follows:

Mass of the machine ready for operation in kg, rounded to one decimal place,

- with cable/cord;

- with all standard equipment necessary for normal use ;
- if equipment is needed but different options exist, e.g. large/small battery, the version shall be chosen as recommended by the manufacturer.

The following specification, in particular with regard to the standard equipment, shall be taken into consideration for the different types of cleaning machines.

a) Single- and multidisc machines in accordance with EN 60335-2-67

The mass of the machine as stated above, including the pad drive and a typical pad and including the suction unit and spray unit without liquids, where applicable.

b) Spray extraction machines in accordance with EN 60335-2-68

The mass of the machine as stated above, including the following:

- Suction hose
- Bend
- Tube
- Floor nozzle, but no further nozzles or brushes
- Filter(s)
- Dirt water tank (empty)
- Filled fresh water tank
- Filled cleaning agent tank, where applicable

c) Vacuum cleaning machines in accordance with EN 60335-2-69

The mass of the machine as stated above, including the following:

- Suction hose
- Bend
- Tube
- Floor nozzle, but no further nozzles or brushes
- Filter(s)
- Dust container (empty)

d) High pressure cleaners in accordance with EN 60335-2-79

The mass of the machine as stated above, including the following:

- Hose
- Spraying device
- Standard nozzle, but no further nozzles
- Machine and hoses completely empty
- Fuel tank filled
- Tank for descaling detergent is filled
- Tank for cleaning agent, where applicable, is not filled

5 Safety related issues

5.1 Guards

The MD requires guards or protective devices to protect persons against the hazards generated by moving parts; those guards may be fixed or moveable, depending on their

purpose and their design. EN 60335-2-72³ as well as EN 60335-2-67 and -79⁴ detail the requirements for guards in a general way. In addition, for cleaning machines, the following specifications shall apply.

5.1.1 Fixed guards

Fixed guards are required where frequent access is not envisaged. Those guards shall be fixed by systems that can be opened or removed only with tools. The guards themselves may be able to be moved or even removed after loosening their fixing systems, and their fixing systems shall remain attached to the guards or to the machine when the guards are removed. In accordance with [2] this requirement does not necessarily apply to fixed guards that are only liable to be removed, for example, when the machine is completely overhauled, is subject to major repairs or is dismantled for transfer to another site. For the same reason, it may not be necessary to apply the requirement to the casings of machinery intended for use by consumers, where the manufacturer's instructions specify that the repairs requiring removal of these casings are only to be carried out in a specialist repair workshop. In that case, fixing systems should be used that are not easy to remove.

Guards shall be incapable of remaining in place without their fixings, if applicable. A tool in this context shall be an implement such as a key or wrench designed to operate a fastener. An improvised implement such as a coin or nailfile cannot be considered to be a tool⁵.

5.1.2 Interlocking moveable guards

Interlocking movable guards are required where frequent access is envisaged. Detailed requirements for interlocking moveable guards are given in Clause 1.4.2.2. of Annex I of the MD.

6 Bibliography

In the preparation of this document, use was made of a number of documents for reference purposes. These informative references are cited at the appropriate places in the text and the publications are listed hereafter.

- [1] EN 953, *Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards*
- [2] *Guide to application of the Machinery Directive*, 1st Edition December 2009, European Commission – Enterprise and Industry, General Editor Ian Fraser

³ See Clauses 20.2 and 22.Z102 of EN 60335-2-72

⁴ See Clause 22.Z103 of EN 60335-2-67 and Clause 22.Z102 of EN 60335-2-79.

⁵ See EN 953