National Standards Authority of Ireland

IRISH STANDARD

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ELECTROMAGNETIC COMPATIBILITY (EMC)

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PRODUCT FAMILY STANDARD FOR MACHINE TOOLS

PART 2: IMMUNITY

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English version

Electromagnetic compatibility (EMC) - Product family standard for machine tools Part 2: Immunity

Compatibilité électromagnétique (CEM) - Norme de famille de produits pour les machines-outils Partie 2: Immunité

Elektromagnetische Verträglichkeit (EMV) - Produktfamiliennorm für Werkzeugmaschinen Teil 2: Störfestigkeit

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC).

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50370-2 on 2002-11-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2003-11-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2005-11-01

This standard is intended for publication in the Official Journal of the European Communities as harmonized standard for the assessment of conformity with the protection requirements of the Electromagnetic Compatibility Directive (89/336/EEC).

The purpose of this product family standard is

- to establish uniform requirements for the electromagnetic immunity of the machine tools contained in the scope,
- to fix test specifications of immunity,
- to refer to basic standards for methods of testing,
- to standardise conditions during the tests, performance criteria and test report format for the assessment of conformity.

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, Annexes A, B and C are normative and Annexes D and E are informative.

Contents

1 Scope

This standard deals with the electromagnetic immunity of machine tools designed exclusively for industrial and similar purposes that use electricity, the rated voltage of the machine tool not exceeding 1 000 V a.c. or 1 500 V d.c. between lines.

Machine tools may incorporate motors, heating elements or their combination, may contain electric or electronic circuitry, and may be powered by the mains, or any other electrical power source.

This immunity standard may also be used for assessment of equipment used in other environments, which require less stringent immunity levels (residential, light industry...) than the industrial environment.

This standard is not intended for the EMC conformity assessment of modules to be placed on the market separately.

This standard is not intended for complying with Machinery Directive 98/37/EC. Hence safety considerations are not covered by this standard.

This standard does not cover fixed installations as defined in the Guide to the Application of Directive 89/336/EEC, published by the European Commission.

This standard does not apply to apparatus intended to be used in locations where special electromagnetic conditions prevail, such as the presence of high electromagnetic fields (e.g. in the vicinity of a broadcast transmitting station) or where high pulses occur on the power network (e.g. in a power generator station). In these instances special mitigation measures may have to be employed.

Immunity requirements in the frequency range 0 Hz to 400 GHz are covered. No measurements need to be performed at frequencies where no requirements are specified.

2 References

2.1 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 61000-4-2	Electromagnetic compatibility (EMC) — Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test (IEC 61000-4-2)
EN 61000-4-3	Electromagnetic compatibility (EMC) — Part 4-3: Testing and measurement techniques – Radiated, radio-frequency electromagnetic field immunity test (IEC 61000-4-3)
EN 61000-4-4	Electromagnetic compatibility (EMC) — Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test (IEC 61000-4-4)
EN 61000-4-5	Electromagnetic compatibility (EMC) — Part 4-5: Testing and measurement techniques – Surge immunity test (IEC 61000-4-5)