



EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL

Sustainable Growth and EU 2020
Standards for Boosting Competitiveness

Date of the draft: 19.06.2014¹

ANNEX

[to a Commission Implementing Decision]

M/XXX², Standardisation request to the European standardisation organisations pursuant to Article 10(1) of Regulation (EU) No 1025/2012 of the European Parliament and of the Council in support of implementation of Commission Regulation (EU) No xx/2014 of .././2014 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for ventilation units and Commission Delegated Regulation (EU) No yy/2014 of .././2014 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of residential ventilation units.

¹ This date identifies versions during preparation and is removed from the final draft submitted to the Committee on Standards (Reg. (EU) No 1025/2012 Committee)

² The reference number is given by ENTR before submitting to the Committee on Standards.

Table of Contents

1.	OBJECTIVES	3
1.1.	Requested standardisation activities.....	3
1.2.	Public interests and policy objectives.....	3
2.	ACCEPTANCE OF THE REQUEST	4
3.	EXPIRE	4
4.	DESCRIPTION OF THE REQUIREMENTS FOR THE REQUESTED DELIVERABLES AND FOR THE STANDARDISATION WORK	4
4.1.	Requirements for the harmonised standards.....	4
4.1.1.	Residential Ventilation Units (RVUs).....	4
4.1.2.	Non-Residential Ventilation Units (NRVUs).....	5
4.1.3.	Harmonised requirements for all Ventilation Units	Error! Bookmark not defined.
4.1.4.	Verification procedure for market surveillance purposes:	6
4.2.	Requirements for the standardisation work.....	7
4.2.1.	Project planning	7
4.2.2.	Programming	7
4.2.3.	Development of standards	8
5.	ARRANGEMENTS FOR THE EXECUTION OF THIS REQUEST	8
5.1.	General conditions for executing this standardisation request	8
5.2.	Project planning	8
5.3.	Programming	8
5.4.	Agreement on the mandated work programme	9
5.5.	Reporting	9
5.6.	Other provisions	9
6.	ANNEX: TABLE WITH OVERVIEW ON RELATED STANDARDS	9

1. OBJECTIVES

1.1. Requested standardisation activities

The Commission requests pursuant to Article 10(1) of Regulation (EU) No 1025/2012³ the European standardisation organisations⁴ (ESOs) to develop standards in support of:

- Commission Regulation (EU) No xx/2014 with regard to ecodesign requirements for ventilation units;
- Commission Delegated Regulation (EU) yy/2014 with regard to the energy labelling requirements for residential ventilation units.

Standardisation needs for harmonised standard(s) which cover(s) the requirements set in these Regulations need to be identified. The harmonised standard(s) shall incorporate relevant measurement and calculation methods, including measurement and calculation methods set out in Commission Communications which have been published for that purpose in the Official Journal of the European Union.

1.2. Public interests and policy objectives

The regulation xx/2014 is being adopted under Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products⁵. This Directive establishes the framework for the setting of Community ecodesign requirements for energy-related products with the aim of ensuring the free movement of such products within the internal market. It contributes to the sustainable development by increasing energy efficiency and the level of protection of the environment, while at the same time increasing the security of supply.

The Delegated Regulation yy/2014 is being adopted under Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products⁶. This Directive establishes a framework for the harmonisation of national measures on end-user information, particularly by means of labelling and standard product information, on the consumption of energy and where relevant other essential resources during use, and supplementary information concerning energy-related products, thereby allowing end-users to choose more efficient products.

³ OJ L 316, 14.11.2012, p. 12

⁴ Article 2(8) of Regulation (EU) No 1025/2012,

⁵ OJ L 285, 31.10.2009, p. 10.

⁶ OJ L 153, 18.6.2010, p. 1.

These two regulations (referred to below as "the regulations") require that the measurement and calculation procedures for establishing energy performances and other environmental impacts shall be reliable, accurate and reproducible and take into account the generally recognised state of the art, in order to ensure comparable measurement and calculation procedures for the product types in the scope of the regulations and to facilitate market surveillance activities.

2. ACCEPTANCE OF THE REQUEST

The ESOs are asked to inform the Commission within one month after the receipt of this request whether they accept it.

The acceptance reply may include a request for Union funding or may indicate if Union funding available for activities pursuant to Article 15 of Regulation (EU) No 1025/2012 is applied later and informing also on estimated amount needed and estimated date for a possible request. Such a funding request shall respect deadlines set in this standardisation request and in the mandated work programme, as agreed with the Commission according to clause 5.x, for the execution of the standardisation work.

3. EXPIRE

Where the standardisation request is not accepted by any of the ESOs, this request shall expire three (3) months after its notification to the ESOs.

4. DESCRIPTION OF THE REQUIREMENTS FOR THE REQUESTED DELIVERABLES AND FOR THE STANDARDISATION WORK

The Commission requests CEN, CENELEC and ETSI to elaborate reliable, accurate and reproducible European standards, which take into account the generally recognised state of the art, and/or to adopt or adapt existing European and international standards for ventilation units, laying down procedures and methods of measuring and calculating the energy consumption of these products. The prospective standards have also to include the necessary definitions of the product types and of the parameters to be measured and/or calculated. The standardisation tasks covered by this technical update are as follows

4.1. Requirements for the harmonised standards

The standardisation tasks covered by this technical update are as follows. New measurement and calculation methods or new products may be integrated in the extension of existing standards, as appropriate.

4.1.1. Residential Ventilation Units (RVUs)

The objectives of standards for procedures and methods for measurements and calculations are:

1. to ensure that the harmonised standards provide, where appropriate, revised and/or new definitions at least for the types and main characteristics of residential ventilation units, considering the parameters and definitions in the Ecodesign and complementary Energy Labelling Regulations;
2. to ensure that the harmonised standards provide procedures and methods to measure and calculate at least the following parameters:
 - a. the specific energy consumption SEC in [kWh/(m².a)]
 - b. the Specific Power Input SPI [kW/(m³/h)]
 - c. the thermal efficiency of heat recovery η_t in %
 - d. the sound power level (L_{WA}) in [dB];
3. to ensure that the harmonised standards provide, where appropriate, revised measurement and calculation parameters for information requirements including:
 - a. the maximum flow rate in [m³/h] and reference flow rate in [m³/s]
 - b. the reference pressure difference in [Pa]
 - c. the electric power input of the fan drive, including any motor control equipment, at maximum flow rate [W];
 - d. the internal and external leakage factors in % for bidirectional ventilation units, and the external leakage factors in % for ducted unidirectional ventilation units
 - e. the mixing rate of local bidirectional ventilation units with fixed air terminals
 - f. the airflow sensitivity to pressure variations at +20Pa and -20 Pa, for non-ducted units
 - g. the indoor/outdoor air tightness in [m³/h], for non-ducted units;
4. to ensure that the harmonised standards build on existing standards by taking into account improved measurement and calculation methods and new appliance types to better reflect the user behaviour and the state of the art at European and international level;
5. to take in particular into account the EN 13141 family "Ventilation for buildings". The standards shall consider unidirectional ventilation units (UVUs), as well as bidirectional ventilation units (BVUs), including heat recovery, within the scope of the above mentioned drafts;
6. to ensure that the prospective harmonised standards include tolerances, as defined in the draft above mentioned draft Regulations;
7. to ensure compliance with the energy consumption and noise levels identified in the above mentioned drafts.

4.1.2. *Non-Residential Ventilation Units (NRVUs)*

The objectives of standards for procedures and methods for measurements and calculations are

1. to ensure that the harmonised standards provide, where appropriate, revised and/or new definitions at least for the types and main characteristics of non-

residential ventilation units, considering the parameters and definitions in the Ecodesign Regulation;

2. to ensure that the harmonised standards provide procedures and methods to measure and calculate at least the following parameters:
 - a. the thermal efficiency η_{t_nrvu} of heat recovery systems in %
 - b. the fan efficiency for UVUs (η_{vu}) in %
 - c. the internal specific fan power of ventilation components (SFP_{int}) in $[W/(m^3/s)]$;
3. to ensure that the harmonised standards provide, where appropriate, revised measurement and calculation parameters for information requirements including:
 - a. the nominal flow rate in $[m^3/s]$
 - b. the face velocity in $[m/s]$,
 - c. the electric power input $[kW]$;
 - d. the nominal external pressure ($\Delta_{ps, ext}$) in $[Pa]$
 - e. the internal pressure drop of ventilation components ($\Delta_{ps, int}$) and of non-ventilation components ($\Delta_{ps, add}$) in $[Pa]$
 - f. the external leakage rate, in %, of the casing, and the internal leakage rate, in %, of bidirectional ventilation units or carry over
 - g. the casing sound power level (L_{WA}) in $[dB]$;
4. to ensure that the prospective harmonised standards build on existing standards by taking into account improved measurement and calculation methods and new appliance types to better reflect the user behaviour and the state of the art at European and international level.
5. To take in particular into account: the EN 13053, EN308, and EN13799. The standards shall consider UVUs (unidirectional ventilation units (UVUs), as well as bidirectional ventilation units (BVUs), including all heat recovery systems like run-around systems, within the scope of the above mentioned Draft Ecodesign Regulation.
6. to ensure that the prospective harmonised standards include tolerances, as defined in the draft above mentioned draft Regulations
7. to ensure compliance with the thermal efficiency requirements of heat recovery systems, the fan efficiency levels for UVUs, and the internal specific fan power levels of ventilation components (SFP_{int}) identified in the above mentioned draft.

4.1.3. Verification procedure for market surveillance purposes:

The objectives of standards for procedures and methods for measurements and calculations are as follows:

1. to ensure that the prospective harmonised standards identify and control the sources of variability influencing measurement uncertainties to be considered for market surveillance purposes;
2. to provide values for measurement uncertainties for the purposes of the verification procedure for the measured parameters taking into account the different sources of variability to be considered when a specific product is taken

- from the market and measured for market surveillance purposes;
3. to verify if, in order to reduce the impact of variability to the system, the standards should include specific criteria to be met by laboratories involved in the verification of the declared data (e.g. quality management system, qualification system, personnel training...).
 4. to define templates for test reports for RVUs and NRVUs indicating the information to be declared by the manufacturers to fulfill at least the ecodesign requirements set out by the Draft Regulation.

4.2. Requirements for the standardisation work

4.2.1. Project planning

The Relevant ESO shall ensure that an appropriate and continuous overall project planning is in place for the execution of this standardisation request. A work plan which describes, among others things, tasks, milestones, estimated or allocated resources, estimated or actual deadlines and timeframes as well as contact points shall be made accessible for the Commission.

4.2.2. Programming

CEN, CENELEC and ETSI are requested to communicate to the Commission, within 2 months of the acceptance of this request, a preliminary work programme for the execution of the above mentioned standardisation tasks, indicating the standards requiring revision or amendment, and the new standards that would need to be developed, if any, including the proposed timetable for the completion of the proposed standards

CEN, CENELEC and ETSI are requested to communicate to the Commission after 12 months from the acceptance of this request an interim report on the progress of the tasks set out in this request indicating any eventual difficulties encountered and communicating details of any standards that has been taken into consideration and modified to answer to the needs of the Mandate.

CEN, CENELEC and ETSI are requested to provide, in the working languages of the ESOs, a copy of the standards developed under this request within 15 months.

CEN, CENELEC and ETSI are requested to forward the titles of the standards developed or adapted under this request in all the official languages of the European Union.

CEN, CENELEC and ETSI are requested to draw up the work plan and execute the above mentioned tasks in close cooperation in order to ensure consistency and avoid overlapping standards.

Wherever possible the tasks should be executed within the framework of the Vienna and Dresden Agreements with a view to duly take into consideration the activities already done or in process at international level.

CEN, CENELEC and ETSI are requested to indicate the relationship between the clauses of the standard and the essential requirements covered.

On the basis of the requirements given in this request the relevant ESO shall prepare a **preliminary work programme** indicating all requested work items, responsible technical bodies and a tentative timetable for the execution of the work.

4.2.3. *Development of standards*

The **mandated work programme** as agreed with the Commission according to clause 5.4 will be the basis for the standardisation work.

Relevant ESO shall report to the Commission on the execution of the mandated work programme.

New work items can be added in the mandated work programme provided such work items are within the scope and objectives of this standardisation request.

Relevant ESO shall inform the Commission before a work item is added to from the agreed work programme together with a rationale. Adding a new work item in the work programme is subject to the Commission agreement with the exception of revisions to deliverables already covered by this standardisation request.

5. ARRANGEMENTS FOR THE EXECUTION OF THIS REQUEST

5.1. General conditions for executing this standardisation request

General conditions for the execution of this standardisation request are given in the “*Vademecum (full title here)*”⁷. Relevant applicable requirements given in that document are integral part of this standardisation request.

Within the context of this standardisation request requirements and principles for the development of harmonised standards apply also to developing European standards which are within the scope of this request.

5.2. Project planning

The **work plan** shall be made available for the Commission at the same time when communicating [interim and] annual reports according to clause(s) 5.x.

5.3. Programming

The **preliminary work programme** shall be sent to the Commission no later than **two (2)** months after the notification of this standardisation request by the Commission.

⁷ Relevant reference information comes here [NOTE: As long as this Vademecum is not available appropriateness of this clause will be checked by ENTR B.5 before finalizing relevant mandate].

An **interim report** shall be sent to the Commission **twelve (12)** months after the notification of this standardisation request by the Commission.

5.4. Agreement on the mandated work programme

The Commission will inform relevant ESO no later than **one (1)** month(s) after receiving the preliminary work programme on the work items to be included in the mandated work programme including any priorities to be observed during the work.

5.5. Reporting

Relevant ESO shall give the **interim report** twelve (12) months after the notification of this standardisation request by the Commission.

Relevant ESO shall give the **final report** sixteen (16) months after notification of this standardisation request by the Commission.

5.6. Other provisions

Relevant ESO shall maintain continuous liaisons with the Commission service responsible for this standardisation request during the execution of the request.

Possible disagreements and disputes on the interpretations of the requirements given in this standardisation request shall be addressed to the Commission service responsible for this standardisation requests and always informing the standardisation unit of Enterprise and Industry Directorate General.

Relevant ESO shall provide to the Commission the titles of harmonised standards in all the official languages of the European Union.

6. ANNEX: TABLE WITH OVERVIEW ON RELATED STANDARDS

Measured parameter	Reference	Title
<i>non-residential unit performance</i>	EN 13053:2006 and EN13053/A1:2010.	Ventilation for buildings — Air handling units — Rating and performance for units, components and sections
<i>RVU parameters: effective power input,</i>	EN 13141-4:2004	Ventilation for buildings – Performance testing of components/products for residential ventilation – Part 4: Fans used in residential ventilation systems
<i>reference and maximum flow rate,</i>	EN 13141-6:2004	Ventilation for buildings – Performance testing of components/products for residential ventilation – Part 6: Exhaust ventilation system

<i>flow rate/pressure diagram,</i>		packages used in a single dwelling
<i>RVU thermal efficiency of HRS (η_{t_rvu}), SPI, external and internal leakage rates,</i>	EN 13141-7:2009	Ventilation for buildings – Performance testing of components/products for residential ventilation – Part 7: Performance testing of components/products of mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings
<i>mixing rate defined specifically per product type for UVUs (EN 13141-6), central BVU (EN 13141-7), local BVUs (EN 131141-8), including main referenced standards (EN 13142, EN 13141-4).</i>	prEN 13141-8:2011	Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 8: Performance testing of unducted mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for a single room, CEN/TC 156, May 2011.
	EN 13142:2013	Ventilation for buildings – Components/products for residential ventilation – Required and optional Performance Characteristics. 2013
<i>NRVU thermal efficiency of HRS (η_{t_rvu}), HRS external and internal leakage rates</i>	EN 308:1997	Heat exchangers - Test procedures for establishing performance of air to air and flue gases heat recovery devices
<i>filter performance (test for M5 and F7)</i>	EN 779:2012	Particulate air filters for general ventilation - Determination of the filtration performance
	Eurovent 4/11, Jan. 2011	Energy efficiency classification of air filters for general ventilation purpose
<i>NRVU internal and external leakage</i>	EN 1886:2007	Ventilation for buildings - Air handling units - Mechanical performance. 2007
<i>SFPint background document (not SFPint definition)</i>	EN 13799: 2007	Ventilation for non-residential buildings; Performance requirements for ventilation and room-conditioning systems
<i>NRVU fan efficiency</i>	EN ISO 13348:2007	Industrial fans - Tolerances, methods of conversion and technical data presentation

	ISO 12759:2010	Fans -- Efficiency classification for fans
	EN 5801:2008	Industrial fans - Performance testing using standardized airways
	Commission Regulation (EU) 327/2011	
<i>RVU acoustics</i>	EN 3741:1999	Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for reverberation rooms
	EN 3744:1994	Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane
	EN 3746:1995	Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane
	EN 10140:2010	Acoustics - Laboratory measurement of sound insulation of building elements. Parts 1 to 5, especially Part 2: Measurement of airborne sound insulation. Part 4: Measurement procedures and requirements(replaces EN 20140:1992 and ISO 140:1991)
<i>SEC calculation background documents (only informative)</i>	EN 15665:2009	Ventilation in buildings – Determining performance criteria for residential ventilation systems
	EN 15251:2007	Indoor environmental input parameters for design and assessment of energy performance of buildings, addressing indoor air quality, thermal environment, lighting and acoustics
	EN 15242:2007	Ventilation for buildings – Calculation methods for the determination of air flow rates in buildings including infiltration
	EN 15241:2007	Ventilation for buildings – Calculation methods for energy losses due to ventilation and infiltration in commercial buildings
	EN 15243:2007	Ventilation for Buildings – Calculation of room temperatures and of load and energy for buildings with room conditioning systems

	CEN/TR 14788:2006	Ventilation for buildings – Design and dimensioning for residential ventilation systems
	EN 13465:2004	Ventilation for buildings – Calculation methods for the determination of air flow rates in dwellings
<i>Market surveillance for on-site testing</i>	EN 14134:2004	Ventilation for buildings - Performance testing and installation checks of residential ventilation systems.
	EN 12599: 2012	Ventilation for buildings - Test procedures and measuring methods for handing over installed ventilation and air conditioning systems .
	EN 15239:2007	Ventilation for buildings - Energy performance of buildings - Guidelines for inspection of ventilation systems

The organisation publishing references with prefix 'EN' is CEN. References with prefix 'ISO' are published by ISO. Reference 'Eurovent 4/11' is published by Eurovent.