



BUSINESS PLAN

CEN/TC 232

COMPRESSORS, VACUUM PUMPS AND THEIR SYSTEMS

EXECUTIVE SUMMARY

CEN/TC 232 establishes European Standards for safety and environment for compressors and vacuum pumps, portable and stationary, for all compressible gases, and their systems.

This work does not apply to sealed motor compressors used in refrigerating and heat pump systems in which the refrigerant is evaporated and condensed in a closed circuit. They are covered by CEN/TC 182 (Refrigerating systems, safety and environmental requirements). Liaisons are set-up with CEN/TC 211 (Acoustics) and CEN/TC 234 (Gas infrastructure). The committee develops standards under the Vienna Agreement with ISO/TC118/SC6 (Air compressors and compressed air systems).

The standards under CEN/TC 232's responsibility assists free trade by harmonizing manufacturing, testing and environmental requirements; provide a common set of European standards and to draft suitable standards that are relevant to the essential requirements of EU Directives.

CEN/TC 232 has 18 participating countries, 4 published standards and 2 standards under development.

1 BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

Market Environment

Political, economical, social, technical, legal and international factors that either directly requires some or all of the standardisation activities proposed by the CEN/TC 232, or significantly influence the way these activities are carried out are the following:

- the increasing awareness and importance of the quality of compressed air

Market Situation

Compressed air is a highly reliable means of transmitting energy. Compressors are widely used in the industry but the use can be further development. They are already safely applied in a great diversity of applications.

Compressors are manufactured, on the one hand, by a limited number of major manufacturers with world-wide distribution and considerable resources and, on the other hand, by a large number of small manufacturers, who mainly serve local markets.

The market is considered mature for compressed air equipment. It can be found in all kinds of industrial applications, in large industries as well as in use by farmers and craftsmen. Compressed air is used both in process and for ancillary equipment.

Interested parties in compressors and vacuum pumps are users and manufacturers.

Legal factors

EU Directives involved in this field are;

- The Machinery Directive 2006/42/EC
- The ATEX Directive 2014/34/EU (on equipment and protective systems intended for use in potentially explosive atmospheres)
- The Directive 2009/105/EC, SPVD, Simple pressure vessels (will be replaced by 2014/14/EC in 2016)
- The Directive on outdoor noise, 2000/14/EC

The development of Mandates for the Ecodesign Directive, 2009/125/EC is carefully monitored.

1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN /TC:

Several studies have demonstrated that, generally, the energy consumption in the use phase is by far the strongest environmental impact of compressors and vacuum pumps. Therefore, environmental aspects in standards for compressors and vacuum pumps are mostly related to energy efficiency, which might be addressed through the Ecodesign Directive in a near future. If

such regulation is published, CEN/TC 232 will be in charge of the accompanying harmonized standard(s).

In the VHK report on "EcoDesign preparatory study on Electric Motor systems/compressors, ENER Lot 31 from 3 June 2014 the following data can be found:

Due to the Prodcom* data the total consumption (production+imports-experts) of compersors in the EU is over 60 million units (Of these are 36,6 millions for refrigeration (and possibly heat pump) appications). For the remaining share of the 23.5 million units a significant share is turbocompressors/single- stage (34% of 23.5), miscellaneous air/gas compressors (31%) and reciprocating compressors (25%).

Data from VDMA (from 2013) shows that Germany is the biggest exporter of compressor products, 16% of the global market. The export share for Europe is estimated to 43% of the global market export. The total global trade value for compressors, compressed air and vaccum technology was estimated to be 31 billion Euros in 2011.

The sales of standard air compressors was over 100 000 units in the 1990s. The market is still recovering from the economic crisis in 2008 and the sales are now (2015) back at the same levels as before the crisis. The estimated sales 2030 is just over 120 000 units.

* Eurostat provides data regarding European business statistics of manufactured goods generally referred to as 'Prodcom'.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

Compressed air equipment, their safety devices and the procedures covering their use in the field are subject to continous development aimed at improving its efficiency without disregarding safety. The standardization process has an important role to play in achieving this balance.

All available standards have already been cited in the Official Journal of the European Union under Directive 2006/42/EC and confer presumption of conformity with Essential Requirements of that Directive. Two additional standards are under respective development and approval and EN ISO 18623-1 is planned to be harmonized under the Machinery Directive and to be cited in the Official Journal.

3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC

Based on the considerations above, the CEN/TC 232 proposes the following objectives and strategic directions for its future work:

Elaboration of standards for compressors and vacuum pumps on:

- Safety requirements
- Noise measurement methods (in liaison with CEN/TC 211)
- Environmental requirements such as energy efficiency and eco design.

4.2 Identified strategies to achieve the CEN/TC.s defined objectives.

The work within the committee comprises four work items which have all been published as EN. The work on the standard on noise measurement was carried out in parallel with ISO under ISO lead.

CEN/TC 232- chairman: Mr. André Balliau and the secretary: Mrs. Lena Fagervall, SIS.

In accordance with CEN Internal Regulations, drafts for circulation at the enquiry stage and the formal vote stage and all other stages of review as well as comments, discussions and resolutions are carried out in the English language only.

The TC has developed EN standards before but has lately taken the strategic decision to work closer with ISO/TC118/SC6 in order to develop EN ISO standards under the Vienna Agreement with ISO lead. CEN/TC 232 is currently adopting the published standard ISO 11011 on energy efficiency (assessment) and prEN ISO18623-1 (safety requirements for air compressors) are under development.

Meetings of the TC are held when needed. The TC has not had any meetings for some years due to low activity. The decisions needed have been taken by correspondence.

Publications for CEN/TC 232:

EN 1012-1:1996

Compressors and vacuum pumps – Safety requirements – Part 1: Compressors

EN 1012-2

Compressors and vacuum pumps – Safety requirements – Part 2: Vacuum pumps

EN 1012-3

Compressors and vacuum pumps - Safety requirements - Part 3: Process compressors

EN ISO 2151:2004

Acoustics- Noise test code for compressors and vacuum pumps - Engineering method (Grade 2)

4.3 Environmental aspects

The environmental aspects are focused on energy efficiency and eco design. The areas are important for the industry and when compressors are included in a mandate for the eco design Directive all standards have to be reviewed due to the requirements.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

WGs are well supported by relevant manufacturers and other interested parties. Additional direct support from regulatory authorities would help minimize adverse comments at the enquiry and formal vote stage.

Much of detailed drafting is carried out by a small number of individual industry experts. Progress is therefore dependent on the limited time available to these experts and the necessary demands of their employers.

Changes in key personnel through retirement or redeployment can seriously affect the progress of a draft, particularly when this happens suddenly and no advance planning for a change has been possible. Most significantly this applies to project leaders, but changes to personnel in the secretariats and at CMC would also affect progress.

As drafted the texts reflect current good practice within the industry, however, occurrences in the field sometimes necessitate changes. If technical changes to the draft standards are necessary this can require additional consultations and hence delays.

The lack of contracts for the CEN-consultants affects the development negatively.