



Pneurop Position
Pneurop Committee 5 "Vacuum Technology"
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Vacuum Technology in WEEE and RoHS

Introduction

The enforcement of the WEEE¹ and the RoHS² directives has caused some uncertainties for users and manufacturers. Neither the descriptions in the directives themselves nor the FAQ- and Guidelines from the EU-commission or other institutions have provided precise information with respect to the applicability for Vacuum Technology products. This position paper will provide a basic position.

Important

This paper provides only an overview of our industry's product range and is limited to rough definitions. It is in the responsibility of each manufacturer to make decisions for his specific product range.

General

In general the regulation is applicable to equipment fulfilling the following preconditions:

- √ It is dependent on electric currents or electromagnetic fields
- √ It is designed for the use with a voltage rating exceeding 1000V a.c. or 1500 V d.c.
- √ It falls within one of the 10 categories in Annex 1A of the directives (Ro(H)S) Category 1-7 and 10)
- √ It is NOT explicitly excluded from the scope of the directives
- √ It is NOT part of another equipment that does not fall within the scope of the directives
- √ It is NOT a product which is intended for specifically military purposes.
- √ It is NOT covered by "specific Community waste management legislation"

The equipment categories of Annex 1A of the directives are as follows:

1. Large household appliances
2. Small household appliances

¹ DIRECTIVE 2002/96/EC OF ... of 27 January 2003 on waste electrical and electronic equipment

² DIRECTIVE 2002/95/EC OF ...on the restriction of the use of certain hazardous substances in electrical and electronic equipment

3. IT and telecommunications equipment
4. Consumer equipment
5. Lighting equipment
6. Electrical and electronic tools (with the exception of large-scale stationary industrial tools)
7. Toys, leisure and sports equipment
8. Medical devices (with the exception of all implanted and infected products)
9. Monitoring and control instruments
10. Automatic dispensers

Notes:

- The WEEE directive is a directive conforming with EC article 175 (Health and Safety). The consequence is, that member states can set higher requirements or wider scopes.
- Even in case of direct implementation into national legislation, there is the need of interpretation of the scope and the product categories. This interpretation can differ from member state to member state.
- The relevance of the directives for spare parts is related to the classification of the equipment in which the spare parts are intended to be fitted.
- The "ORGALIME Guide explains in its "practical Guide to understanding the scope of WEEE and RO(H)s" of January 2006 that equipment is not falling within the scope of the Act „...for example, if the equipment is part of a fixed installation...“. In respect of this the definition used in the EMC directive is quoted:“.. "Fixed Installation", in the broadest sense, is defined as a "combination of several (pieces of) equipment, systems, finished products and/or components assembled and/or erected by an assembler/installer at a given place to operate together in an expected environment to perform a specific task, but not intended to be placed on the market as a single functional or commercial unit".
This definition applies to Vacuum systems.
- The Vacuum Technology separates its products (according to the nomenclature of the international statistic program for the Vacuum Technology and according to the structure of the ISO/TC 112 "Vacuum Technology") into the following product groups
 - Vacuum pumps
 - Vacuum instrumentation
 - Vacuum hardware
 For detailed information see Annex

Vacuum pumps and controllers

Type of equipment	WEEE classification	Ro(H)s classification	Note
Vacuum pumps	NO	NO	Not in category 1-10 -> WEEE and Ro(H)S are not applicable to this equipment

Controls for individual vacuum pumps	NO	NO	Part of another equipment (Vacuum pumps) that does not fall within the scope of the directives
Master controllers	NO	NO	Normally part of a fixed installation (Vacuum system with several Vacuum pumps) and experts are needed to integrate them. This means that they do not fall within the scope of the WEEE und Ro(H)S directives.

Vacuum instrumentation and controllers

Type of equipment	WEEE classification	Ro(H)s classification	Note
Vacuum instrumentation	NO	NO	Part of a fixed installation
controllers, evaluation units	NO	NO	Part of another equipment (Vacuum instrumentation) that does not fall within the scope of the directives
Leak detectors / Leak detection systems stationary	NO	NO	Part of a fixed installation
Leak detectors mobile	YES	NO	WEEE: equipment category 9 Ro(H)s: equipment category 9 is excluded of Ro(H)s

Vacuum hardware and controllers

Type of equipment	WEEE classification	Ro(H)s classification	Note
Vacuum hardware	NO	NO	Part of a fixed installation
controllers	NO	NO	Part of another equipment (Vacuum hardware) that does not fall within the scope of the directives

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ANNEX

Vacuum pumps
Liquid ring pumps (including packages)
Side channel pumps (including packages)
Oil sealed rotary vane/piston pumps < 1 mbar (ultimate pressure)
Oil sealed rotary vane/piston pumps > 1 mbar (ultimate pressure)
Single stage roots pumps (separately sold)
Roots pumping packages, backed by oil sealed pumps
Radial blowers (including packages)
Ejector pumps - water, steam & compressed air (including packages)
Dry pumps (including packages) < 1 mbar (ultimate pressure)
Rough dry pumps (including packages) > 1 mbar (ultimate pressure)
Turbomolecular pumps and pumping packages (incl. compound and drag pumps)
Diffusion pumps (including packages)
Ion getter pumps (including packages)
Sublimation/sorption/getter pumps (including packages)
Cryopumps (<-160°C) (excl. water pumps)
Cryo water pumps (>-160°C)

Vacuum instrumentation	type
Total-pressure gauges (including controllers)	capacitance manometer (diaphragm gauges)
	thermal
	hot/cold cathode (including wide range)
RGA's (partial pressure gauges < 500 amu)	
Quartz crystal thickness measurement (incl. Deposition controllers) (excl. Crystals)	
Helium leak detectors (capability 10^{-4} mbar/s)	
Other vacuum instrumentation (includes Mc Leods, mechanical gauges and switches)	

Vacuum hardware	type
Valves (HV, UHV)	Gate valve
	Angle valve
	Butterfly valves
	Conductance valves
Flanges and fittings	
Motion and positioning devices	
Traps and baffles	
Electrical and other feedthroughs	
Vacuum chambers	
E-beam, ion-guns / ion sources, resistance evaporator sources with power supplies (for thin film deposition)	
Heaters and heater controllers	