

# P.E.D. directive

The PED directive (Directive 2014/68/UE) regulates the design, manufacturing and conformity valuation of pressure vessels and products submitted to a maximum allowable pressure "PS" over 0.5 bar. The CE directive aims to harmonize the national laws in the member states that relate to the valuation of the project, the production, the testing and the conformity of the pressurized vessels and products.

The directive concerns pressure vessels, heat exchangers, steam generators, heaters, industrial piping and safety equipment, used in residential and industrial settings (oil & gas, chemical, pharmaceuticals, plastic and rubber, alimentary, paper).

## Hazard category of the devices

This is an indication of the danger level of the pressure vessels which can be divided in the following categories: Article 4 section 3, I, II, III, IV. The category is determined on the grounds of numerous factors: typology of the fluid, (dangerous and not dangerous), max allowable temperature, pressure and capacity.

According to the PED, fluids are divided in 2 categories:

### **GROUP 1: includes dangerous fluids**

- Explosives
- Extremely flammable fluids
- Easily flammable fluid
- Flammable fluids (where the allowed maximum temperature is above flashpoint)
- Highly toxic fluids
- Toxic fluids
- Reactive fluids

### **GROUP 2: includes all fluids not listed in group 1 and therefore not considered dangerous.**

The following chart illustrates the typology of our products, in function of the used fluid and the temperature values. First you individuate the table which applies to the device in question, then you determine the hazard category of the device under the tested pressure.

### **Note**

- The five tables should be consulted per line.
- The pressure vessels which are not subject to Article 4 section 3 and belong to the  $\geq$  I category have to have the CE label in accordance with the PED directive
- **WATER, ETHYLENE GLYCOL AND PROPYLENE GLYCOL BELONG TO GROUP 2.**

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category	PED	CE label	Intervention by notified body	Additional costs
PS ≤ 0,5	Not applicable	No	No	No
Article 4 paragraph 3	Applicable	No	No	No
I	Applicable	Yes	No	Yes
II	Applicable	Yes	Project delivery without approval	Inspection visit
III	Applicable	Yes	Project approval	Inspection visit + project approval
IV	Applicable	Yes	Inspection visit + project approval	Inspection visit + project approval

**PS:** is the maximum allowed pressure, the maximum pressure for which the equipment is designed, specified by the manufacturer.

**V:** is the internal volume of a chamber, including the volume of nozzles to the first connection and excluding the volume of permanent internal parts.

**ARTICLE 4 PARAGRAPH 3:** the pressure equipment belongs to category <I and therefore should not bear the CE mark according to PED.

Note: please consult the technical department

- If a vessel is composed of several compartments, or if one compartment contains several fluids.
- If the fluid is different from those listed in NOTE 1.
- If the equipment belongs to a category ≥ I.
- If a vessel contains pressure equipment which belongs to a category ≥ I.
- In case of doubt or uncertainty.