

L181 Pressure Equipment Directive 97/23/EC

OUR GENERAL GUIDE

As a responsible representative of a major world class manufacturer we wish to outline our response to the PED 97/23/EC. This is currently a very confusing issue with many other responsible manufacturers and end users struggling to understand their legal requirements.

Manufacturers are legally responsible for compliance of goods leaving the factory.

Distributor / Suppliers are legally responsible for goods supplied into the application.

Compliance failure can lead to a £5k fine, 3 months in prison or both.

European Directive 97/23/EC was laid down by the European Parliament on 29th May 1997 and published on 9th July 1997 and referred to as Legislation L181 or the PED. It concerns the LAW of all member states relating to Pressure Equipment. Implementation of the directive is the responsibility of member states own authorities. It had to be in place by 29th May 1999 with a 3 year implementation period.

The Purpose is to ensure freedom of trade within the 18 states of the EEA and create an open market. This is common to all directives under the "New approach to technical harmonisation and standards" since May 1985; compliance with safety is inherently important and included in these directives.

Once a directive is laid down, a clarification process takes place handled by the various working parties. Each country has groups involved in implementation who raise questions on behalf of industry. These questions are registered with the working parties and official answers are given and are called "Working Party Guidelines".

The Health & Safety Inspectorate issued the Directive as SI 1999/2001 a little late on 29th November 1999 which was known as the Pressure Equipment Regulations (PER). The Department of Trade and Industry as required, issued the guidance notes for the UK Regulations. The PER became legally in force immediately but included a 3 year implementation period for manufacturers, resulting in a deadline of 30th May 2002 for product entering the supply chain.

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Does this mean everything is in place and finalised? NO ! Most manufacturers will have a statement ready for the deadline but they, along with authorities and consultants, are still unclear on exact interpretations. Some standpoints and legal arguments will change in the light of more experience.

There are some exclusions too. Although the Directive is generally meant to cover all pressure equipment, it is recognised that there will be some exceptions. General exclusions are:

- All products working below 0.5Bar because they do not pose sufficient hazard (L181/1-4 article 1 section 3.21).
- Equipment offered for sale outside the EEA.
- Second Hand Equipment (placed on the market before 22/11/99).
- Products already in use including service, repair or modification (unless significant).

There are also many specific exclusions such as Aerosols, Vehicle equipment, Military equipment etc. and these are detailed in Annex A of the PER guidelines.

To correctly determine the effects of the PED on a product we have to pass through a series of questions as follows:

1. What type of equipment is the product? These are defined as:
 - a. Vessel
 - b. Pipe
 - c. Steam Generator
 - d. Pressure Accessory
 - e. Safety Accessory
 - f. Assembly
2. What type of fluid do we have
 - a. Gas
 - b. Liquid
3. What group is the fluid
 - a. Group 1 (Dangerous substances)
 - b. Group 2 (Not part of Group 1)

The answers to these 3 questions leads us to a series of 9 charts or tables within the PED / PER and from the relevant chart we then plot pressure against volume to arrive at the applicable category for the product.

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There are five categories that could apply which are:

- SEP (Sound Engineering Practice) Products MUST NOT carry the CE mark under the PED.
- Category 1
- Category 2
- Category 3
- Category 4

From this you can see that for the same product being used in differing applications subject to different fluids at different pressures and volumes we can end up with different applicable categories. This is why suppliers now need to know more details about the application before they can determine if CE marking is applicable.

Having arrived at the applicable category, the directive then gives a choice of applicable modules. The modules detail the level of inspection, documentation and conformity assessment that must be applied. The higher the category, the more stringent the conformity assessment i.e. for SEP the only requirements are that the product be accompanied with adequate instructions for use and manufacturers identification markings. However products conforming to category 4 may need type examination, QA for design, product verification, final inspection and test. These additional measures will have a significant effect on final cost.

The directive also includes details covering essential safety requirements for all equipment, safety accessories or pressure accessories classified in category 1 to 4 and any assembly including at least one of these items. These details generally cover design, manufacture, checking, installation, strength, suitability etc and are detailed in Annex D of the PED.

It should be noted that this directive is only upon countries operating within the European Economic Area therefore many products coming from outside will not comply. The responsibility for these products lies with the representative or import agent for these products., Beware!

Our official statement regarding our own products is as follows:

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Denmark

Pressure Transmitters FlexBar HRT and 3501

We consider the pressure transmitters as sensors according to guideline 1/25 from the Commissions Working Group "Pressure" and consequently no CE marking is necessary due to the PED

Temperature Sensors CombiTemp

We consider the temperature sensors as sensors according to guideline 1/25 from the Commissions Working Group "Pressure" and consequently no CE marking is necessary due to the PED

In-Line Tubes

The In-Line tubes are manufactured according to sound engineering practice suitable for liquids as described in Article 3 section 3.1(b), first and second indent. The combination of pressure range and internal diameter do not require CE marking due to PED. The In-Line tubes are not suitable for gases mentioned in Article 1.3 (a) first and second indent

CombiConnect

We consider the CombiConnect as component parts of pressure equipment according to guideline 1/22 from the Commissions Working Group "Pressure" and consequently no CE marking is necessary due to PED

France

Pressure Gauges Up to 200 Bar

We consider the pressure gauges in all instances are to be covered by Article 3 section 3 Sound Engineering Practice and must not be CE marked. For contact gauges see comments under 'Pressure Switches'.

Pressure Gauges Over 200 Bar

We consider the pressure gauges should be category 1 but may be category 3 on customer request and therefore should be CE marked. For contact gauges see comments under 'Pressure Switches'.

Chemical Seals & Assemblies

Up to 200 Bar S.E.P. **No CE marking required** .

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Over 200 Bar as pressure gauges, assemblies classified by associated measurement.

D041/D29402 limited to 20Bar.

Homogeniser Seal for food use only.

D501/701 Discontinued & replaced by D820.

D107/108/118/119, D418/419, D618/619 suspended from sale and studied on a sale by sale basis.

D120/121, D15C, D020FP Suspended from sale to revise technical file.

For all seals a technical file must be held and a specific Installation / Operation / maintenance sheet must be supplied with goods.

Thermowells

These products are not covered under the PED as they are part of the installation and / or considered as a plug.

A 3.1.b material certificate is required by the client.

Temperature Sensors

These products are not covered by the PED either under guideline 1/25, sensors or, like thermowells are considered as a plug

Gas Expansion Thermometers

Should be used with Thermowells, contact versions are already covered under the Low Voltage Directive unless they are used in a safety function - please call us to discuss if this is the case.. previously

Pressure Transmitters

Consider in the same way as Pressure Gauges.

Pressure Switches

Excluded under Article 1 section 3.3, they are already covered under the Low Voltage Directive unless they are used in a safety function - please call us to discuss if this is the case.

Test & Calibration Equipment

Consider in the same way as Pressure Gauges.