

PRESSURE EQUIPMENT DIRECTIVE-PED 97/23/EC

Customers have asked if our products comply with the Pressure Equipment Directive (PED), and if we could provide a Declaration of Conformity. Some have asked specifically about Category IV as defined in the PED. This communication is to help understand the PED and answer the questions that have been raised.

- **What is the PED?**

The **Pressure Equipment Directive** is a document (97/23/EC) issued by the European Community that deals with the design, manufacture and use of pressure equipment and assemblies. According to the PED, "Pressure equipment means vessels, piping, safety accessories and pressure accessories." Based on our review of the document, we consider our products as pressure accessories.

- **When did the PED take effect?**

On May 29, 2002 the directive became obligatory throughout the European Member States (all of Europe including the UK, excluding Switzerland). All European customers and OEM's shipping product to a member country must comply with the PED.

- **How does it apply to our products?**

In order to determine how the PED applies to specific products, we the manufacturer, need to review our product designs and classify the products into one of four **Conformity Assessment Categories**. These Categories (I, II, III & IV) are determined based on the pressurized volume, pressure range, and intended use of the product. In general, the greater the pressurized volume and applied pressure the higher the category. Higher categories are used for hazardous fluids or for safety related applications.

- **How are pressure gauges, pressure switches and transducers classified?**

According to our conformity assessment, pressure gauges, pressure switches and transducers should be treated as stated below in 1.) and 2.).

- 1.) No Applicable Category; Products Not CE Marked**

- **Pressure ranges less than or equal to 200 bar (2900 psi)** and volume less than 0.1 liters are not subject to any Category designation but require the application of "Sound Engineering Practices" (SEP) during their design and manufacture. No CE mark or third party approvals are allowed. Note: Some of our products within these ranges (transducers, pressure switches and digital gauges) do have CE marks. These marks indicate compliance with other applicable directive(s) of the European Union, but not the PED.

2.) Category I; Products CE Marked

- **Pressure ranges greater than 200 bar (2900 psi)** and volume less than 0.1 liters fall into Category I of the PED. These products must meet the Essential Safety Requirements in Annex I and also comply with the appropriate “Conformity Assessment Procedures” in Annex III. Module A, entitled “Internal Production Control” is the Conformity Assessment Procedure to be used for Category I products. Module A stipulates that the manufacturer meet specific requirements related to documentation on design, testing and manufacturing and to keep a **Declaration of Conformity** on file for each product. The Module A conformity assessment can be completed by the manufacturer of the product.

3.) Category II, III, and IV; Products CE Marked with a four digit code

- **Products with internal volumes greater than or equal to 0.1 liter**, applications on safety accessories fall into one of the higher Categories, II, III, or IV. The Conformity Assessment must be performed by a third party “Notified Body” for all products classified as Category II, III, or IV products. The “CE” Mark for these products will also bear the four-digit identification number for the Notified Body. We have determined that our products do not conform to these Categories.

At this time, we will be able to declare conformity on all diaphragm seal offerings except types 106, 206 and all types with the XHP variation.

- **What if a customer has an application or assembly that requires a category higher than Category I?**

If the end user has a Category II, III, or IV assembly and wants to utilize one of our Category I products classified as a pressure accessory, they should apply the requirements for PED to their assembly.

- **Why don't Ashcroft® switches comply with Category IV requirements for safety accessories?**

The PED has some conflicting statements. Although Ashcroft® pressure switches seem to be covered as safety accessories in Article 1; Section 2.1.3 of the Scope and Definitions, they do not meet the requirements in Annex I; Section 2.11 of the Essential Safety Requirements. This section requires safety accessories to include, “fail-safe modes, redundancy, diversity and self diagnosis.” It is our position that Ashcroft® pressure switches do not meet these requirements and therefore should not be considered safety accessories.

- **What if a customer wants to use an Ashcroft pressure switch as a safety accessory?**

Annex II states the following, “The safety accessories defined in Article 1, Section 2.1.3, and referred to in Article 3, Section 1.4, are classified in category IV. However, by way of exception, safety accessories manufactured for specific equipment may be classified in the same category as the equipment they protect.” This means that all of our products, including switches, can be used on equipment classified in Category I regardless of the PED conflicting statements regarding safety accessories.

- **How are diaphragm seals classified?**

The classification of diaphragm seals or diaphragm seals attached to gauges, switches or transducers will depend upon the pressure rating and the total pressurized volume. In most cases our conformity assessment will treat them either as the No Applicable Category or Category I as described in 1.) and 2.) above. However, there are a few product configurations where the internal volumes are greater than or equal to 0.1 liter. This combined with high-pressure rating will put the product into one of the higher Categories, i.e. Categories II, III, or IV. In these cases, a third party (Notified Body) must perform the conformity assessment.

- **What about CE marks?**

A CE mark on a product indicates compliance with some European directive. In some cases it will indicate compliance with the PED; in others it could be some other directive or directives. For example, pressure switches and digital gauges have CE marks indicating compliance with the low voltage directive of the European Union. A Declaration of Conformity will state the appropriate directive(s) that apply to the product.

- **What is a Declaration of Conformity and how can a customer request one?**

A declaration of conformity is a certificate prepared by us that states the compliance of the product to the PED and any other directives that apply for the specific product category. For example, for switch products, both the Low Voltage Directive and now the Pressure Equipment Directive apply. Declarations of conformity are available at by specifying variation "XC7" on the order. These forms will accompany shipment.