



# Pressure Regulator Maintenance Guidance

Pressure regulators are essential to the safe and reliable operation of your fluid system. To ensure reliability, prevention of incidents and reduce the risk of downtime, users should familiarise themselves with the various regulations and guidance documents relating to pressure systems and equipment. This includes pressure regulators.

## The Regulations

The main regulations covering pressure equipment and pressure systems are the **Pressure Equipment (Safety) Regulations 2016**, **Pressure Systems Safety Regulations 2000** and the **Guide to Safety, Health and Welfare at Work Regulations 2012 (Pressure Systems)**. The British Compressed Gases Association (BCGA) Code of Practice reference guides and the Health and Safety Authority (HSA) (Ireland) are not legislative regulations but aim to provide further advice and guidance.

The above regulations are designed to establish parameters on the safe use of equipment including protective devices, knowing your operating conditions, establishing a suitable maintenance regime, personnel competency and training requirements, and equipment written scheme of examination requirements.



In most cases, pressure regulators are installed primarily for process control purposes. Regulators installed for this purpose should be regarded as pipework.

Any regulator installed with the primary function of protecting the system should be regarded as a protective device and the regulations would apply

accordingly. Note: if the system is fitted with a safety relief valve downstream, this is then the primary protection device.

## Written Scheme of Examination

The Pressure Systems Safety Regulations 2000 requires a written scheme of examination to be completed on pressure systems (subject to the system application).

The written scheme of examination must cover all protective devices. It must also include all pressure vessels and those parts of the pipeline and pipework which if they fail, may give rise to danger.

The written scheme must specify the nature and frequency of examinations and include any special measures that may be needed to prepare a system for safe examination.

The pressure system must also be examined in accordance with the written scheme, by a competent person. **However, a written scheme of examination does not replace regular inspection and maintenance of your pressure regulators.**

## Inspection and Maintenance

Inspection of your pressure regulators should occur at initial installation and system start-up, as well as periodic inspection supported by testing. Function testing, creep testing and leak testing will help determine maintenance requirements and regulator performance.

Maintaining your pressure systems and equipment can also maximise your system's performance and extend the life of your system components. Maintenance of your regulator specifically, can be determined by a testing and inspection regime and critically, the application it is used for (i.e. corrosive or non-corrosive).

**Based on the above, the life of a pressure regulator is variable and regulator replacement may not always be necessary and can be minimised by utilising the above disciplines.**

### Useful links:

[HSE, Pressure Systems, A Brief Guide to Safety](#)

[HSE, Safety of Pressure Systems, Pressure Systems Safety Regulations 2000. Approved Code of Practice and Guidance on Regulations](#)

[HSE, Written Schemes of Examination, Pressure Systems Safety Regulations 2000](#)

[Pressure Equipment \(Safety\) Regulations \(2016\)](#)

[Health and Safety Authority, Guide to Safety, Health and Welfare at Work Regulations 2012, Pressure Systems](#)

[BCGA](#)

## Help and Support

Consider correct regulator selection along with other associated components such as filters, bottle connections, pressure gauges, safety and proportional relief valves and hoses. Further consideration should also be given to purchasing maintenance kits when ordering your regulators.

Undertaking pressure regulator training would also help provide an understanding of pressure regulator function, typical failure modes and also testing and installation considerations to maximise system reliability. Speak to one of our representatives to discuss your requirements call **+44 (0)1224 759900**, [email](#) or visit our [website](#).