

Introduction

Seetru Safety Valves must only be used for the purpose and manner for which they have been designed. Potential hazards exist with the selection, installation design, fitting, operation and maintenance of safety valves. Hazards can include catastrophic failure of the protected pressurised system resulting in death or serious injury or the emission of pressure medium, which may be noisy, hot, poisonous or aggressive. Inappropriate handling may present a risk of injury due to weight or sharp edges. Your attention is drawn to our joint responsibility to ensure that all statutory National regulations concerning Health and Safety including the Pressure Equipment Directive 97/23/EC are not contravened by incorrect installation, commissioning or servicing. Refer also to ISO 4126 or contact your supplier if you require further information regarding the use of safety valves.

Marking & Labelling

The valve you have been supplied with is marked with the minimum following information: -

- Batch number (please quote in case of query).
- Month and year of manufacture.
- Where appropriate, the CE mark and ID number of the notified body involved with the QMS.
- Set Pressure, (Pressure Setting).
- Manufacturer Code
- Product I.D.

Selection of Safety Valves

The safety valve discharge capacity must be such that once open, the mass flow through the valve will at least equal the mass flow into the protected system so that no further pressure rise can occur. Refer to flow charts on technical data sheets. Factors including gas or liquid type, phase, temperature and pressure affect rate of flow and must be taken into consideration.

The set pressure of the safety valve should be greater than the operating pressure of the protected system by at least 15% for gases / vapours and 25% for liquids. Safety valve materials of construction must be compatible with the pressure medium, temperature and operating environment.

Installation Design Requirements

Under normal circumstances safety valves should not be fitted with devices that will isolate or partially isolate the valve inlet or outlet from the system pressure.

The safety valve should be mounted in a vertical position. Consideration must be given to prevent vibration and pressure pulsation.

Do not paint or coat the installed safety valve.

When specified, lifting devices should be of the non-loadable type (Rota or Lever). Where loadable lifting devices (knobs, ring pull) are required, sufficient headroom to a minimum height of 50% of the size of the inlet bore (DN) must be allowed to enable full lift of the safety valve.

Due care must be exercised to ensure that no load is placed on loadable lifting devices which may prevent the valve from lifting.

Valve Inlet

The direction of flow is embossed on the body of the safety valve (piped discharge versions).

Inlet pipe-work must have a bore greater than or equal to the safety valve inlet bore (DN) and should be as short and straight as possible.

The inlet pipe-work should not allow a pressure drop greater than 3% of the fully open pressure of the safety valve.

Valve Outlet

The outlet of the discharge holes or pipe-work must not terminate in a position where discharged gas will cause a hazard.

Outlet pipe-work should be as short and straight as possible and not allow an accumulated backpressure to build up from a discharging safety valve of greater than 10% of the set pressure. Superimposed backpressure must not be allowed. Outlet pipe-work should be supported to prevent mechanical loading of the safety valve. A drain should be fitted to the lowest point of the outlet pipe-work, which must be kept dry and clean to prevent blockage.



Operation & Maintenance

Only trained and technically competent personnel should consider overhaul, re-set or performance testing of safety valves. The safety valve is supplied with either a lead security seal or crimped cover to deter unauthorised access to the pressure regulation device.

Under no circumstances should the set pressure of the safety valve be altered to a different pressure than that stamped on the valve without the permission of the installation designer.

If the set pressure must be altered then use only correct parts supplied by the Manufacturer and in accordance with the instructions available for the valve type.

Safety valves must be frequently tested and regularly maintained.

The set pressure should be periodically checked for accuracy.

When fitted, the lifting device should be operated at pressures not less than 75% of the set pressure to ensure free and easy movement of internal parts.

The frequency of inspection, test and maintenance (and indeed operational life)

tests is influenced by factors such as the severity of the operating environment and aggressiveness of the pressurised medium.

Soft seals and springs should be replaced as part of the maintenance procedure.

Do not paint or coat the installed valve as ingress into moving parts may impair operation.

Fitting

Safety valves should be stored in dry, clean conditions at ambient temperature.

Installation work must be carried out by competent personnel and in accordance with sound engineering practice.

Ensure system pressure is vented to atmospheric pressure before attempting to install or remove a safety valve.

Remove protective caps only immediately prior to installation.

The pressure system to which the safety valve is connected must be clean to prevent the ingress of dirt or other detritus that might damage the safety valve.

The use of P.T.F.E. tape is not recommended as strands may break off.

The safety valve should be fitted by use of the flats on the valve inlet seat using an appropriate spanner.

The recommended torque values for the given thread sizes should not be exceeded.

Thread Size	G 1/4	G 3/8	G 1/2 or Greater
Max Torque N.m	14	30	50

C.O.S.H.H. Data

A small quantity of synthetic rubber components may be present in the safety valve. Synthetic rubber represents a hazard to health when subject to elevated temperature (315°C) such as fire. It will show physical signs such as charring or black sticky deposits, toxic and/or corrosive fumes will also be given off. Treat with extreme caution if it has been subject to fire. Allow to cool before inspection. Avoid contact. Inform fire fighters of the presence of fluoroelastomer material.

Compliance with Environmental Protection Act is essential when disposing of residue.

Air supply respirators and acid resistant gloves must be worn if the above conditions apply.

SYNTHETIC COMPONENT MATERIAL	HYDROGEN CYANIDE [HCN]	CYANOGEN [C ₂ N ₂]	HYDROCHLORIC ACID [HCL GAS]	HYDROFLUORIC ACID [HF]	CARBON MONOXIDE [CO]	DIAMIDE SILICA [SiO ₂]	MONOMERIC ACRYLIC	RESIDUAL ASH	
								CORROSIVE	NON CORROSIVE
NITRILE	✓	✓							✓
NEOPRENE			✓					✓	
VITON				✓				✓	
BUTYL					✓				✓
SILICON						✓			✓
FLUORO SILICON				✓		✓		✓	
OTHER			✓		✓		✓	✓	