Safety Shut-Off device (SSD)

Introduction

This Safe Use Guide provides instructions and safety information on pressure equipment so as to avoid any foreseeable risk during the use.

For further information refer to Types BM7/ Instruction Manual, n° 0196.

General Remark

The standard gas pressure devices (safety shut-off devices - SSD) are those used in the assemblies dealt with into EN 12186 and EN 12279 and their use has to be under the provisions into ENs 12186 & 12279.

In the safety shut-off devices manufactured by OMT Tartarini shall be used additionary pressure accessories (e.g. pilots or filters) manufactured and labeled by OMT Tartarini.

OMT Tartarini will be not responsible for any possible inefficiency due to installation of not own production additionary pressure accessories (e.g. pilots or filters).

When pressure containing parts of safety shut-off device (SSD) valve and pilot have different maximum allowable pressures, the SSD is differential strength type.

P.E.D. Categories and Fluid Group

According to EN 14382, only in integral strength type and Class A configuration (when both over and under pressure protections are set up), this safety shut-off device can be classified like a safety accessory according to PED.

The minimum PS between SSD valve and pilot shall be the PS of the safety accessory to comply the provisions of EN 14382 about integral strength type.

This product in its Class A and integral strength configuration is a safety accessory for pressure equipment in the following Pressure Equipment Directive 97/23/EC categories.

Product Size	Category	Fluid Group
DN 1 1/2”-2” and DN 40-50	IV	1

Possible built-in pressure accessories (e.g. pilots OS66/) conform to Pressure Equipment Directive (PED) 97/23/EC Article 3 section 3 and were designed and manufactured in accordance with sound engineering practice (SEP).

Per Article 3 section 3, these “SEP” products must not bear the CE marking.

Specifications

Body Sizes and End Connection Styles

DN 1 1/2” - 2” GAS inlet and outlet
DN 40 - 50 PN 16 UNI/DIN

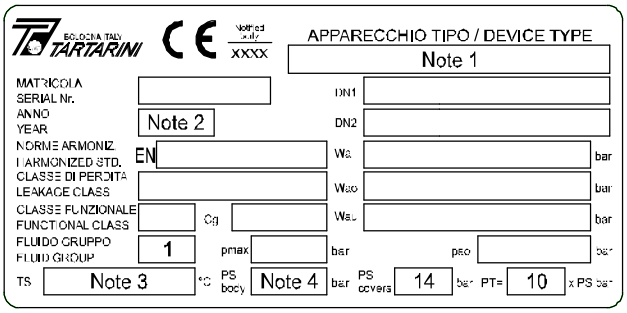
! WARNING !

Maximum Operating Inlet Pressure (1)
14 bar

Minimum/Maximum Allowable Temperature (TS) (1)
See nameplate

(1) : The pressure/temperature limits in this Safe Use Guide and any applicable standard or code limitation should not be exceeded.

Marking



Note 1: BM7/

Note 2: See page header

Note 3: Class 1: -10/+60 °C
Note: Over 10 bar the valve BM7/ series is differential strenght.

Overpressure Protection

The recommended maximum allowable pressures are stamped on the SSD nameplate.

Upstream overpressure protection shall be provided if the SSD inlet pressure is greater than the maximum operating inlet pressure.

Downstream side pressure after SSD's intervention shall stay within the actual maximum operating set-up range to avoid anomalous back pressures that can damage the SSD's pilot.

Downstream overpressure protection shall be also provided if the SSD outlet pressure can be greater than the PS of the pilot (differential strength type).

Safety shut-off device operation below the maximum pressure limitations does not preclude the possibility of damage from external sources or debris in the line.

The SSD should be inspected for damage after any intervention.

Transport and Handling

Established transport and handling procedures shall be followed to avoid any damage on the pressure containing parts and pilot by shocks or anomalous stresses.

Special care must be taken over avoiding any damage to pilot mechanism.

Installation

! WARNING !

Only qualified personnel should install or service a safety shut-off device.

Safety shut-off device should be installed, operated, and maintained in accordance with international and applicable codes and regulations, and O.M.T. Tartarini instructions.

Failure to take the safety shut-off device out of service immediately may create a hazardous condition.

Personal injury, equipment damage, or leakage due to escaping fluid or bursting of pressure-containing parts may result if this safety shut-off device is over-pressured or is installed where service conditions could exceed the limits given in the Specifications section, or where conditions exceed any ratings of the adjacent piping or piping connections.

To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation, or standard) to prevent service conditions from exceeding limits.

Additionally, physical damage to the safety shut-off device could result in personal injury and property damage due to escaping fluid.

To avoid such injury and damage, install the safety shut-off device in a safe location.

Safety shut-off device is installed before pressure regulating systems (i.e. gas regulators).

Before installation, check shall be done if service conditions are consistent with use limitations and if its pilot(s) set-up is in accordance with service conditions of protected equipment .

All means for venting have to be provided in the assemblies where the pressure equipment are installed (ENs 12186 & 12279).

All means for draining have to be provided in the equipment installed before regulators & shut-off devices (ENs 12186 & 12279).

Further the ENs 12186 & 12279, where this product is used :

- provide the cathodic protection and electrical isolation to avoid any corrosion and
- in accordance with clause 7.3/7.2 of aforesaid standards, the gas shall be cleaned by proper filters/separators/scrubbers to avoid any technical & reasonable hazard of erosion or abrasion for pressure containing parts

Safety shut-off device shall be installed in non-seismic area and hasn't to undergo fire and thunderbolt action.

Clean out all pipelines before installation of the safety shut-off device and check to be sure the safety shut-off device has not been damaged or has collected foreign material during shipping.

For threaded bodies, apply pipe compound to the male pipe threads. For flanged bodies, use suitable line gaskets and approved piping and bolting practices.

Installation must to be done avoiding anomalous stresses on the body and using suitable joint means (bolts, flanges, …) according equipment dimensions and service conditions.

Install the shut-off device in any position desired, unless otherwise specified, but be sure flow through the body is in the direction indicated by the arrow on the body.

For a correct and safe use of the pilot's connections check also Instruction Manual and Bulletin before installation.

User has to check and carry out any protection suitable for assembly's specific environment.

Note : For outdoor installations, the safety shut-off device should be located away from vehicular traffic and positioned so that water, ice, and other foreign materials cannot enter into the pilot mechanism.

Avoid placing the safety shut-off device beneath eaves or downspouts, and be sure it is above the probable snow level.

Start-up

The safety shut-off pilot(s) is factory set at approximately the midpoint of the spring range or the pressure requested, so an initial adjustment may be required to give the desired results.

With proper installation completed and relief valves properly adjusted, slowly open the upstream and downstream line valves.

Pilot Adjustment

To change the set-points (overpressure and/or underpressure), remove the spring closing cap of the pilot and turn the adjusting screws clockwise to increase outlet pressure or counter-clockwise to decrease pressures.

Monitor the outlet pressure with a test gauge during the adjustment.

Replace the closing cap to maintain the desired setting.

Taking Out of Service (Shutdown)

! WARNING !

To avoid personal injury resulting from sudden release of pressure, isolate the shut-off device from all pressure before attempting disassembly and release trapped pressure from the equipment and pressure line.

In case of disassembly of main pressure retaining parts for checks and maintenance procedures, external and internal tightness tests have to be done according applicable codes.

Checks and Maintenance

Safety shut-off device parts are subject to normal wear and must be inspected periodically and replaced as necessary.

The frequency of inspection/checks and replacement depends upon the severity of service conditions and upon applicable National or Industry codes, standards and regulations/recommendations.

Maintenance is possible by following proper procedures detailed in the Instruction Manual.

In accordance with applicable National or Industry codes, standards and regulations/recommendations, all hazards covered by specific tests after final assembling before applying the CE marking, shall be covered also after every subsequent reassembly at installation site, in order to ensure that the equipment will be safe throughout its intended life.

Commissioning / de-commissioning

See Instruction Manual for proper operations.

Safety requirements are according “taking out of service” above information.

Spare parts

See Instruction Manual for spare parts tracing.

Spare parts storage shall be done by proper procedures according also national standard/rules to avoid too much aging or any damage

Emerson Process Management
Regulator Division
O.M.T. Officina Meccanica Tartarini s.r.l.
Via P. Fabbri, 1
I - 40013 Castel Maggiore (Bologna) Italy
Tel. : +39 – 0514190611
Fax: +39 - 0514190715
E-mail: tartarini@tartarini.it
www.tartarini.it