



**Leaders in Hazard Protection**

# SVG-4 INLET AIR SHUT-OFF VALVE

INCORPORATING AN INLET FLAME  
ARRESTOR AND BUTTERFLY VALVE

**PRODUCT DATA SHEET: PDS 7043 - ISSUE 1**

## GENERAL INFORMATION

**DO NOT** modify the unit without authorisation from Pyroban. **Failure to observe any instructions in this Product Data Sheet may invalidate any certificate or warranty agreement.**

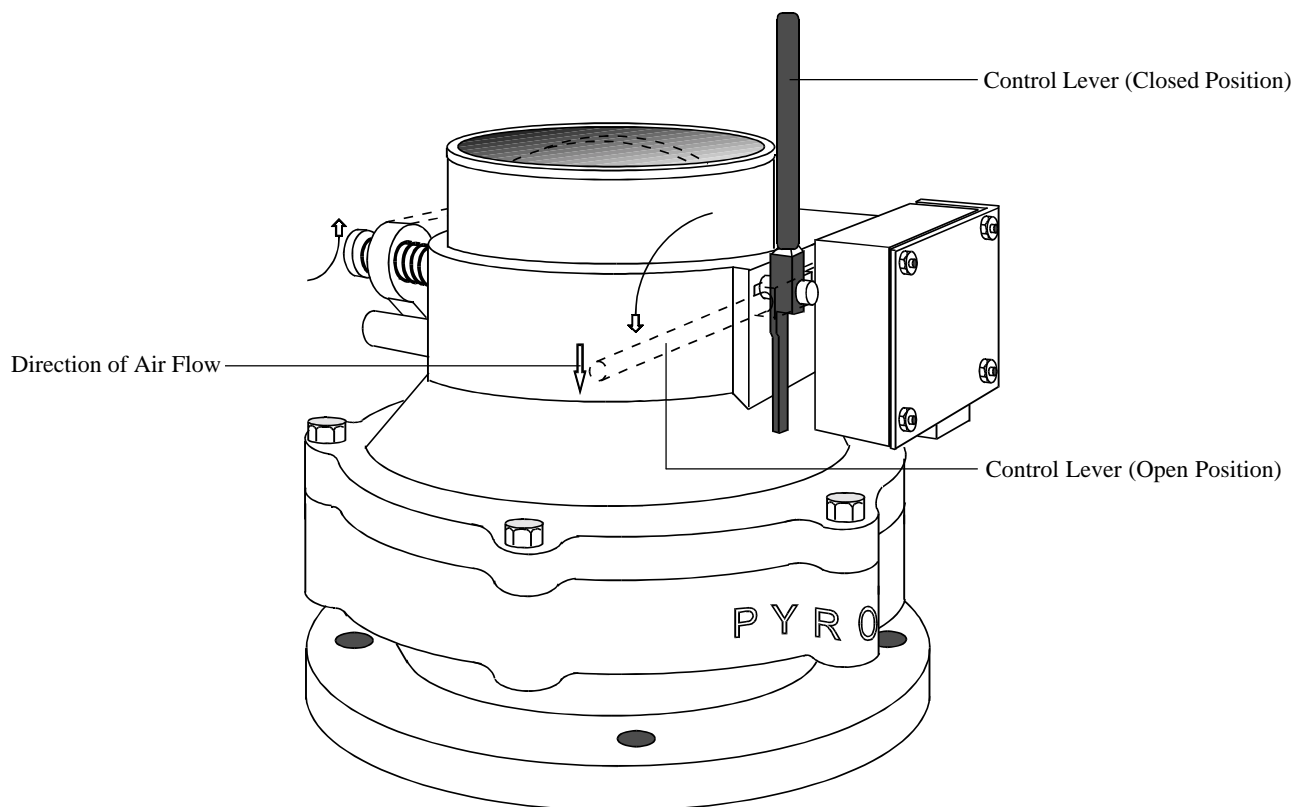
Suitable for use in hazardous areas when selected, installed and maintained correctly to BS EN60079. It must only be used as described in this data sheet. For specific applications, consult Pyroban Customer Services department.

**Note: Person in Authority:** Employee of a company taking full responsibility for the safety, welfare and supervision of all other employees under their control on the site.

## DESCRIPTION

The SVG-4 inlet air shut-off valve uses a rotating disc 'butterfly' valve to provide intake air shut-off and employs a free flow design which provides very low pressure drop to avoid any loss in engine shaft horsepower.

The SVG-4 inlet air shut-off valve is equipped with an oil controlled actuator which must be connected to a control system.



### WARNING - PLEASE NOTE

If the safety system trips whilst the engine is being used in a hazardous area, **DO NOT ATTEMPT TO RE-START**

until advice has been obtained from the person in authority and the cause of the shut-down found and corrected.

**If an explosion occurs in service, the SVG-4 inlet air shut-off valve must be exchanged for a new component or re-tested.**

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## INSTALLATION INSTRUCTIONS

It is vital that the following instructions are followed exactly.

Before installing the SVG-4 inlet air shut-off valve, ensure any packing material is blown clear.

The SVG-4 inlet air shut-off valve may be assembled in any orientation.

Fit with the inlet flame arrestor element on the engine side of the SVG-4 inlet air shut-off valve.

The SVG-4 inlet air shut-off valve operating mechanism is manufactured from stainless steel and must not be painted.

Fit the SVG-4 inlet air shut-off valve as close as possible to the engine. **The further the flame arrestor element from the engine, the less effective it is.**

Actual flame arresting performance can only be determined by means of a flame test in an arrangement accurately representing the final installation.

**The entire inlet system between the SVG-4 inlet air shut-off valve and the engine must withstand 10 bar pressure.**

All other inlets between the SVG-4 inlet air shut-off valve and the engine must be closed or rerouted to prevent ingress of air or gases after shutdown.

A dry type air filter must be fitted upstream of the SVG-4 inlet air shut-off valve. Regular attention to the air filter together with fitting of a service indicator will prevent fouling of the integral flame arrestor and subsequent attention-see maintenance information.

The control system pipework connection on the SVG-4 inlet air shut-off valve operator is made with a pipe thread fitting. **Any scale, dirt, etc. must be removed from the fittings and tubing before they are connected to the valve operator.**

Apply a quality thread sealant to the threaded pipe connection. **This sealant must not be permitted to enter the SVG-4 inlet air shut-off valve operator passage.** Alternatively, P.T.F.E. thread sealing tape may be used but **the tape must not be applied in a manner that enables shreds of tape to enter the SVG-4 inlet air shut-off valve operator.**

**WHEN ASSEMBLIES WITH FLANGED CONNECTIONS ARE DISMANTLED, GASKETS MUST ALWAYS BE RENEWED WHEN RE-ASSEMBLING.**

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## TO START THE ENGINE

Latch the SVG-4 inlet air shut-off valve open using the control lever mounted on the side of the valve (as shown on page 1).

Carry out the usual pre-start checks, then start the engine in accordance with the original engine manufacturers instructions.

When the engine oil pressure has built up, the SVG-4 inlet air shut-off valve will be held open by engine oil pressure only.

**It may not be possible to reset the SVG-4 inlet air shut-off valve for up to 30 seconds after shutdown due to high engine inlet system vacuum. Do not attempt to reset the SVG-4 inlet air shut-off valve against this vacuum as use of excessive force may damage the valve mechanism.**

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## TO STOP THE ENGINE

Stop the engine in accordance with the original engine manufacturers instructions. The oil pressure will drop and the SVG-4 inlet air shut-off valve will close.

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## INSPECTION AND MAINTENANCE

At monthly intervals (200 hours) inspect the control mechanism and ensure that it functions correctly.

Carry out an emergency stop test by selecting 'Emergency Stop' via the control system. Ensure that the SVG-4 air inlet shut-off valve closes correctly and shuts down the engine.

**If operation of the SVG-4 air shut-off valve appears to be satisfactory but the engine does not stop within a few seconds then the inlet manifold should be checked for leaks.**

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## LUBRICATION

At monthly intervals (200 hours) lubricate the control lever latch pin with a thin oil.

Periodically, apply a suitable light grease (e.g. Dow Corning MS4 or equivalent) to the 'O' ring in the periphery of the butterfly plate and to the mating conical surface inside the casting.

**Note that the SVG-4 inlet air shut-off valve shafts are permanently lubricated by the manufacturer.**

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## CLEANING THE INLET FLAME ARRESTOR ELEMENT

Provided the maintenance and servicing of the induction air filter is carried out regularly, the inlet flame arrestor need not be cleaned.

If the engine performance is affected due to a partially blocked inlet flame arrestor, the inlet flame arrestor can be washed in petrol or other suitable solvent, then blown through with compressed air. **Ensure that suitable eye protection is worn when using compressed air.**

**Do not attempt to remove the flame arrestor element from the SVG-4 inlet air shut-off valve.**

**Do not clean the inlet flame arrestor by inserting probes, as the fine passages could be enlarged thereby impairing the flame arrestor performance.**

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## ADDITIONAL SAFETY NOTES

The SVG-4 inlet air shut-off valve is a critical part of the safety system. **It is vital that the servicing requirements are strictly carried out.**

If there are any doubts about the proper operation of the valve it is **strongly recommended** that either a Pyroban Service Engineer is requested to service the valve or alternatively a service exchange unit be obtained from Pyroban and fitted.

In any case it is recommended that during major overhauls of the equipment provided by the SVG-4 inlet air shut-off valve a 'Service Exchange Unit' be fitted.

**The SVG-4 inlet air shut-off valve operating mechanism is manufactured from stainless steel and must not be painted.**

**The SVG-4 inlet air shut-off valve operating mechanism must not be interfered with in any manner that could cause the valve to remain open.**

**If an explosion occurs in service, the SVG-4 inlet air -shut-off valve must be exchanged for a new component or re-tested.**

**WHEN ASSEMBLIES WITH FLANGED CONNECTIONS ARE DISMANTLED, GASKETS MUST ALWAYS BE RENEWED WHEN RE-ASSEMBLING.**

### Important - Please Note

**If the SVG-4 inlet air shut-off valve is actuated without the trunking to the air cleaner in place, take great care not to allow fingers to be trapped by the butterfly valve when it closes.**

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## EQUIPMENT MARKINGS

The SVG-4 inlet air shut-off valve is stamped with an item part number and serial number.

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## REMOVAL FROM SERVICE AND DISPOSAL

Using information provided in this data sheet, advice should be obtained from the waste regulation authority whether special waste regulations apply.

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## ORDERING SPARE PARTS

Use only genuine Pyroban parts. Order spares or replacement parts directly from Pyroban quoting the Pyroban Part Number. Note that fitting of incorrect parts may invalidate certification.

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## OTHER INFORMATION

Nothing contained in this brochure is intended to extend any warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Pyroban's standard terms and conditions of sale for such products, which are available upon request. Specifications and machinery may be altered without notice at any time.

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