

Concerning

SV manifolds. Necessary service actions after system activation.

Summary

In rare cases it has been found that the tightness of the integrated non return valves in the manifolds has been damaged by an activation.

It is found that the issue only affects the performance of the system **after the first discharge** and can be completely mitigated by leak testing and possibly replacing or repairing the SV manifolds **before** fitting new or refilled cylinders.

Fault consequences

Consecutive discharges of SV manifolds without testing

A manifold with faulty non return valve, will be able to provide backpressure to other cylinders for zones that should not activate, thus activating to many cylinders in the system.

Service actions

The following procedure must be performed after each discharge of SV manifold systems as **part of the system servicing**:

- All non-return valves must be checked for leak tightness. To easily do that Fire Eater has developed a new test tool (part number 530534). The test tools allow you to test every manifold quickly and safely.
- If a leak is found, an add-on Non-Return Valve (part number 306350) can swiftly be mounted on the identified connector on the installed manifold.

This procedure must be performed **before** fitting refilled or new cylinders to the system.

See Attached datasheet for the test tool and non-return valve.

Affected products

The above information is related to the SV22 MT manifold and manifold kits.
Fire Eater Part numbers, 305172-305178 and 305272-305278

Hillerød, 2022-12-08

A handwritten signature in blue ink, appearing to be "Per Friis-Jensen".

Per Friis-Jensen
CTO, Chief Technical Officer

Ci SV Non-return valve

Item numbers covered by this datasheet

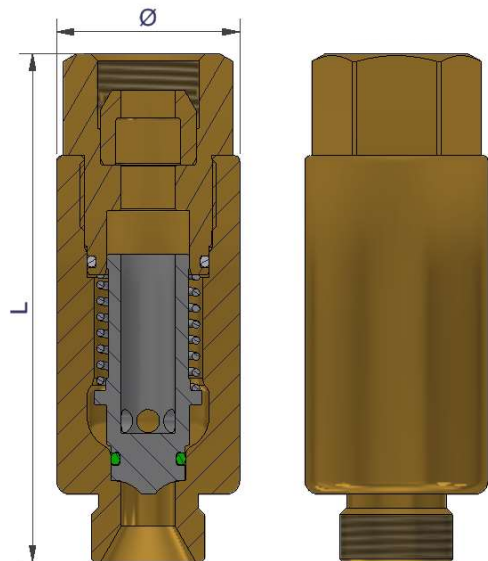
306350 Ci SV NRV add-on

General

Non-return valve (NRV) for use in SV manifold systems as an add-on between the discharge hose and the SV manifold. The NRV valve is intended to be used if leakage is detected in the built-in non-return valve(s) of an SV-manifold. It prevents the unintended discharge of cylinders, due to the back pressure activation function of the Ci IV8 valve.

Specifications

Temperature:	-50 °C – 70 °C
Materials	Brass, Stainless steel, PU
Dimensions (L x Ø)	74,9 mm x Ø27 mm
Weight	0,25 kg
Pressure	
Work	40 MPa
Proof (burst)	>120 MPa
Thread connections	ISO 228-1 G 3/8"
Flow way (Ø; area)	Ø8 mm; 50 mm ²



Markings

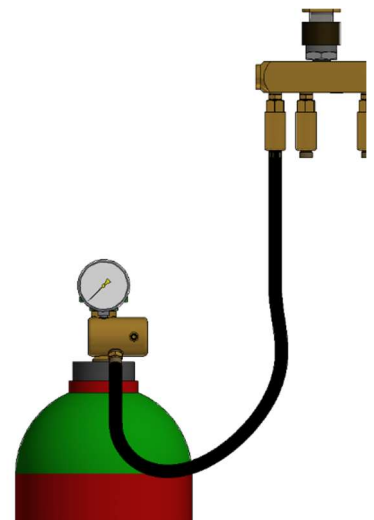
Fire Eater logo, “Ci SV NRV”, “WP=400bar”, “Flow way 50 mm²”, serial number, arrow indicating flow direction.

Installation

The non-return valve is designed to be directly installed on the manifold inlet, using the internal thread on the valve. The discharge valve is connected to the non-return valve via a high-pressure hose (representation on right).

Maintenance

The non-return valve is corrosion protected and permanently lubricated. Do not attempt to disassemble the valve. Leak tightness may be checked using 3 to 10 bar pressure in the blocking direction, or using a special vacuum test tool on the valve inlet. Pushing the piston manually back against the stop should not require more than 15 N force, when performing this test do not use tools which could damage the sealing surfaces. If any parts are damaged or leaking, the complete valve must be replaced.



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Non-return valve tester

Item numbers covered by this datasheet

530534 Tool: Non-return valve tester

General

The non-return valve tester is used to test if the non-return valves are leak-proof in the blocking direction.

This tool is designed to be used on non-return valves on the SV MT manifolds (30527x), manifold kits (30517x) and the Ci SV NRV (306350)

Specifications

Materials:

Handle: Anodized Blue Aluminium
 Adapter: Stainless steel
 Vacuum pump: PVC

Dimensions

Handle: Ø38 x 22 mm
 Flow way: Ø6 mm

Thread connections:

ISO228/1-G 3/8" to the non-return valve

Vacuum

Work: 0 - -1000 mbar

Marking

"530534 NRV test tool"



Operating

Make sure the o-ring is in place, plastic piping is properly attached to the pump and secured in the fitting. Attach the tool to the non-return valve, tightening only by hand.

With the tool properly attached press the vacuum pump so that a vacuum is developed.

If the gauge does not show a lowering value after 30 seconds the valve is leak-proof.

If the gauge value lowers it is a sign of leakage.

Maintenance

As needed o-ring (8.1x1.6) must be replaced when worn, otherwise no further maintenance.



Document:
INTEC 530534 Tool Non-return valve tester

Category: Tools and service
Id: OV
Rev: 2022.12.08



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