

**NRV M40-M40****Item numbers covered by this datasheet**

305785-44 NRV M40-M40

**General**

The Non-Return Valve (NRV) is for use in Fire Eater extinguishing systems to shield off INERGEN cylinders from backpressure activation. The valve is intended for use in back-up systems or multiple zone systems. It is designed with a venting mechanism, which prevents pressure to slowly accumulate on the inlet side when the valve is closed. The vent will be leak tight when the valve is fully open. The valve has three ports for additional equipment on the outlet side.

**Attention!**

Unlike most non-return valves, the NRV M40-M40, is held open by the absolute pressure and not the differential pressure between the inlet and outlet. Therefore, it remains fully open until the system is depressurized, regardless of flow characteristics.

**Related components**

303552 Nipple sock 1/8-1/4"  
 305782 SV Pipe ext 138.5mm  
 305790 Bracket kit SV Ci MTn cyl-rail  
 530535 Tool: M40-3/8-1/4 NRV-M40 test  
 530820-3 Tool kit: FE SV 2015

**Specifications**

Temperature	-40°C to 70°C
Materials	Brass, Stainless steel
Diameter	Ø52mm
Length	120mm
Weight	1.5kg
Pressure	
Work, WP	40.0MPa
Proof (burst)	>120MPa
Opening pressure	<0.5MPa
Thread connections	
Inlet	M40x1.5 Female
Outlet	M40x1.5 Male
Equipment ports	ISO7/1 - Rc 1/8
Flow way (Ø; area)	Ø22.0mm; 380mm <sup>2</sup>
Special features	Protection against slow pressure build-up on inlet side Remains fully open till the end of discharge

**Document:**

305785 NRV M40-M40

Text

**Category:**

Control inert

Id: OLRA

Rev:2017.10.18



Vølundvej 17  
 DK- 3400 Hillerød  
 Tel +45 7022 2769  
 www.fire-eater.com

## Marking

Arrow indication flow direction, Logo + "Fire Eater"

NRV22 M40-M40, Item: 305785-44

Inert gas, 40.0 MPa, Flow way: 380 mm<sup>2</sup>, Sn. 123456-001

## Installation

Before assembly, make sure that the o-rings are lubricated, clean and placed correctly. The outlet of the NRV M40-M40 has two sealing options. When it is mounted on an orifice kit, the o-ring must be placed in the groove on the orifice kit. When it is mounted on a SV pipe or Ci manifold, the o-ring must be placed in the NRV M40-M40 internal groove. To support multiple manifold systems use "305790 Bracket kit SV Ci MTn cyl-rail".

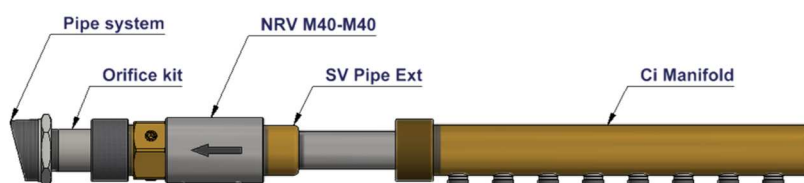
### Example 1

*Back-up system*



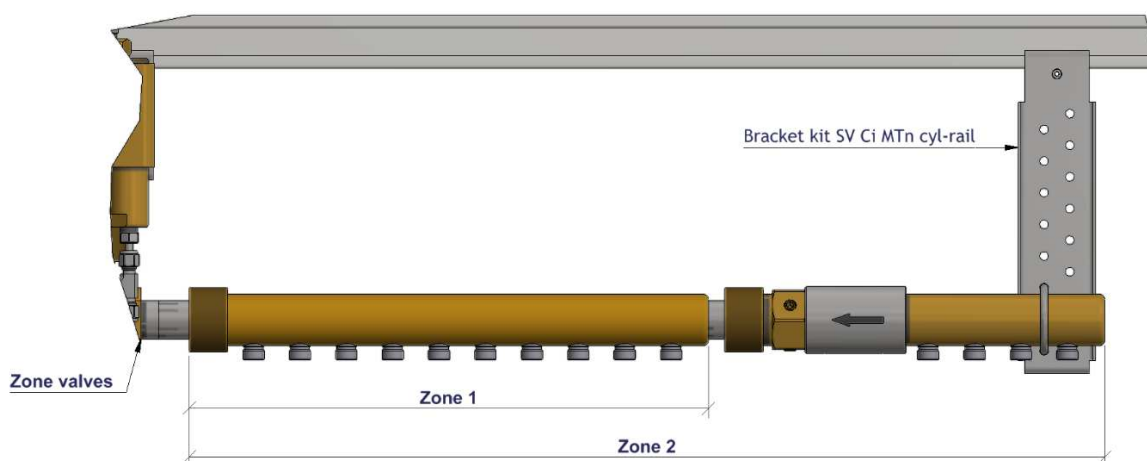
### Example 2

*Back-up system, the manifold can be safely be removed on an active system without removing hoses.*



### Example 3

*Zone system*



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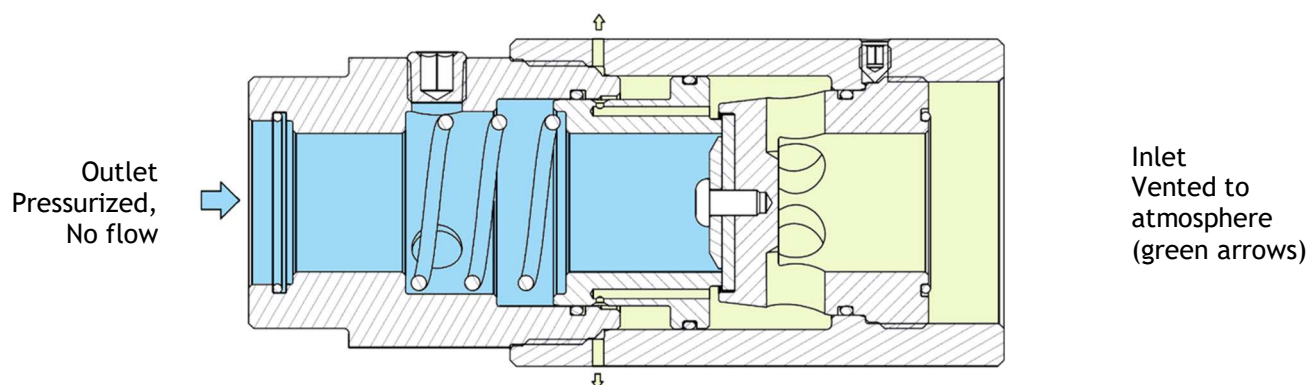
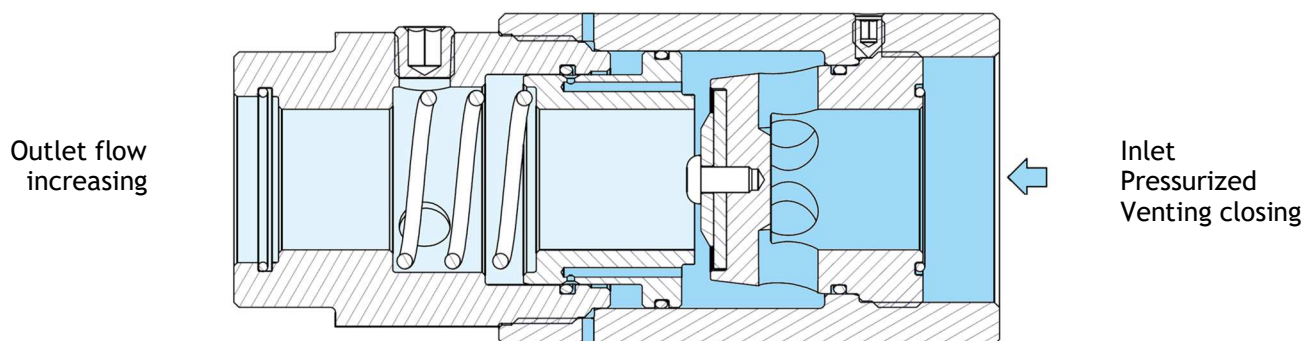


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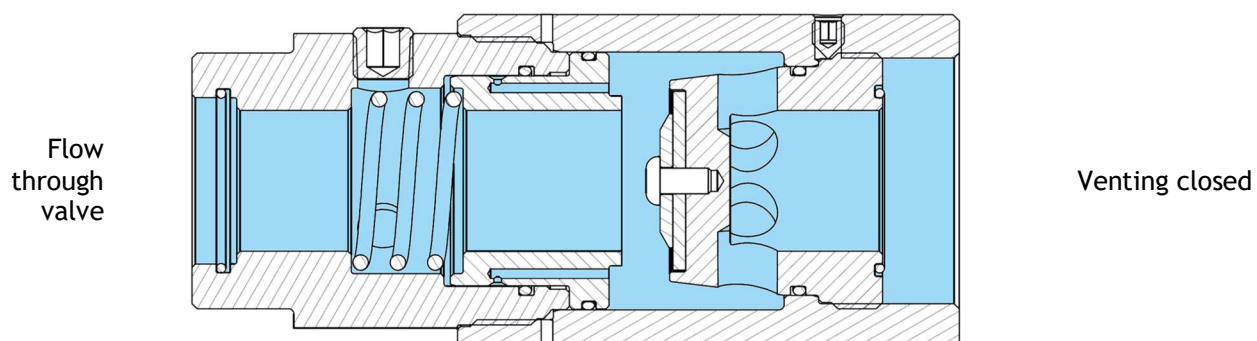
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**Section drawings**

The section drawings illustrates the valve in closed and open position and shows how the inlet side is protected against pressure building up from minor leakages.

**Valve closed****Valve opening****Valve fully open and pressurized.**

Remains fully open until the absolute pressure drops below 0.5MPa regardless of flow direction



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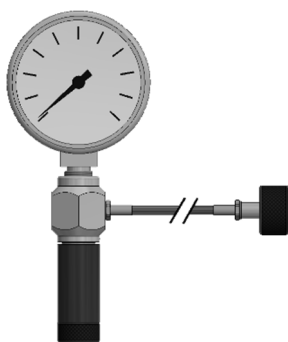
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**Routine testing**

The valve is tested at system installation and after system discharge. Use eq. "530535 Tool: M40-3/8-1/4 NRV-M40 test" with the APTB Tool from the tool kit "Tool kit: FE SV 2015".

Connect both the test plugs to the NRV M40-M40 valve

1. Test venting: Pressurize the inlet at <1.0 bar. Flow must come through the side holes
2. Test opening: Pressurize the inlet to >5.0 bar. The side holes must close as the valve opens
3. Test leakage: Pressurize the outlet to >10.0 bar. No leakage allowed.



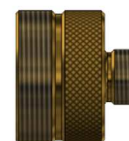
APTB Tool



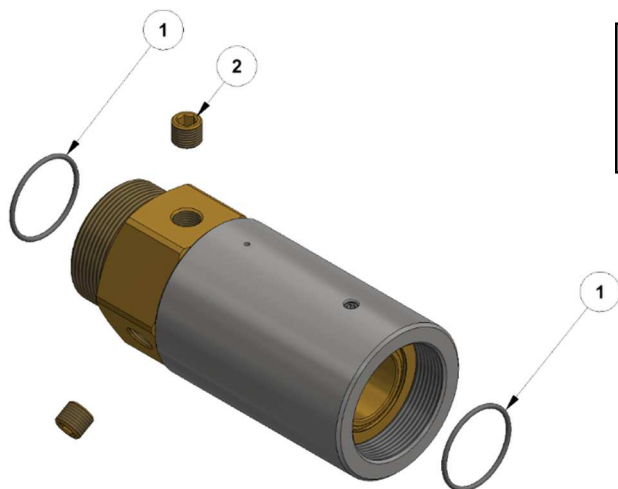
Outlet



NRV M40-M40



Inlet

**Replaceable parts****Recommended replacement parts**

Pos.	Item	Description	Material
1	2260152	O-ring 26.0 x 1.5	PU
2	302083	Plug 1/8"BSPT	Brass

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