



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

NRS & NR series High-Pressure Non-Return Valve

Description

NRS and NR are ranges of spring-loaded, non-return or check valves. They are suitable for use with gases or liquids to prevent reverse flow in high-pressure lines.

The NRS range is sealed by an elastomer O ring. The NR range is hard seated.

The main closing force is provided by the process pressure. The spring ensures that the valve will close at any orientation.

The internal design of the valve ensures that there is minimal restriction to flow.



Standard Specification

See next page for specification of individual types

- Temperature range: -20 to +70°C (extended temperature range versions can be supplied)

Standard Materials

Alternative materials can be supplied

- Body: Nickel Aluminium Bronze, Brass, Monel or Inconel
- Spindle: Stainless Steel or Phosphor Bronze
- O rings: Nitrile, Viton or EPDM
- Hard seat: Copper

Options

Please contact us for details

- Ports: alternative port configurations can be supplied. Ports may be male or female or a combination of the two.
- Materials: suitable combinations of materials can be supplied for various applications such as Oxygen service or marine.
- Certification: variants are available approved for use with Oxygen, for medical Oxygen service or for ATEX service

Ordering Information

Please supply the following information when ordering

- Valve size
- Lift pressure
- Maximum working pressure
- Flow medium
- Port configuration
- Operating and storage temperature ranges
- Certification and QA requirements

In addition to our standard product range, we have an extensive range of special designs and offer a custom build service. Contact our Sales office if you don't see what you want in our catalogue.

The information contained within this catalogue is for reference purposes only and is subject to change.

When selecting a product, the total system design must be considered to ensure safe, trouble free performance. Component function, material compatibility, adequate ratings, proper installation, operation and maintenance are the responsibility of the system designer and user.

Hale Hamilton (Valves) Ltd
Cowley Road, Uxbridge, UB8 2AF, UK
Tel: 01895 236 525
www.halehamilton.com

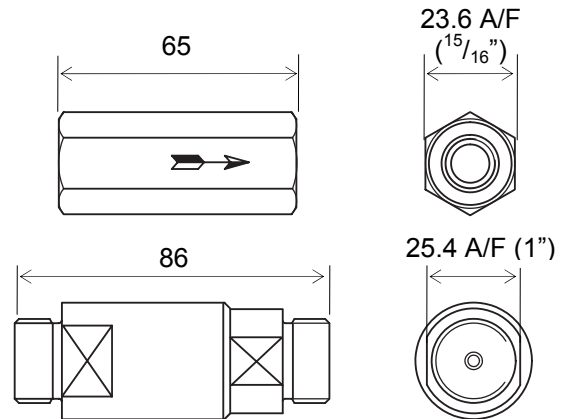
NRS1 (6mm soft seat)

Specification

- Nominal Bore 6 mm (1/4")
- Maximum working pressure 414 bar (6000 psi)
- Lift pressure 0.38 bar (5.5 psi)
- Flow factor (Cv) 0.9
- Weight: less than 0.2 kg
- Inlet & outlet Ports G1/4 female (upper drawing)
Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

in mm except where shown otherwise



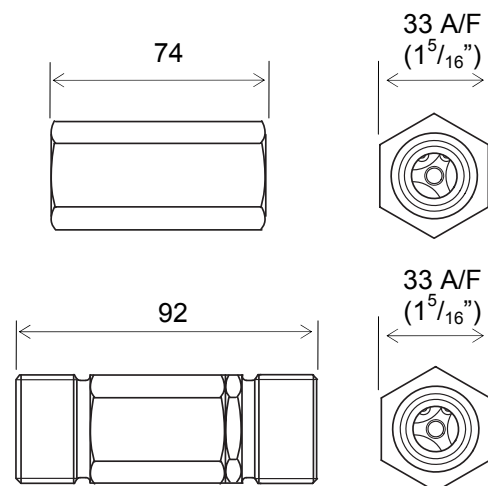
NRS38 (9mm soft seat)

Specification

- Nominal Bore 9 mm (3/8")
- Maximum working pressure 414 bar (6000 psi)
- Lift pressure 0.38 bar (5.5 psi)
- Flow factor (Cv) 1.5
- Weight: less than 0.2 kg
- Inlet & outlet Ports G1/2 female (upper drawing)
Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

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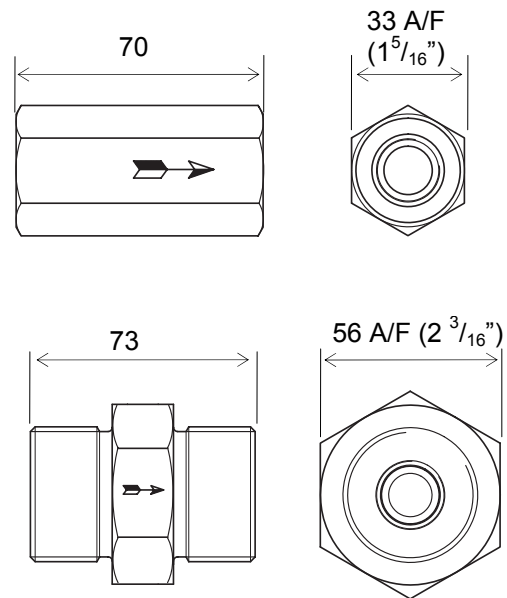
NRS2 (12mm soft seat)

Specification

- Nominal Bore 12 mm (1/2")
- Maximum working pressure 414 bar (6000 psi)
- Lift pressure 0.18 bar (2.5 psi)
- Flow factor (Cv) 2.9
- Weight: less than 0.4 kg
- Inlet & outlet Ports G1/2 female (upper drawing)
Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

in mm except where shown otherwise



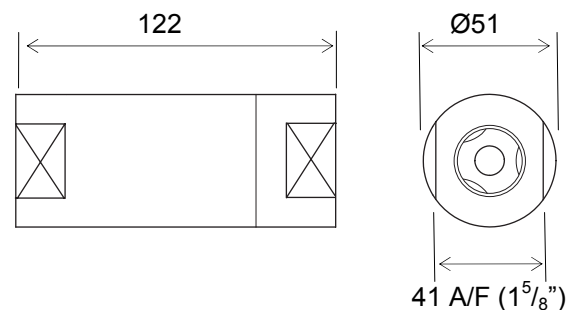
NR81 (12mm hard seat)

Specification

- Nominal Bore 12 mm (1/2")
- Maximum working pressure 400 bar (5800 psi)
- Lift pressure 1 bar (7 psi)
- Weight: less than 1.5 kg
- Inlet & outlet Ports G5/8 female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

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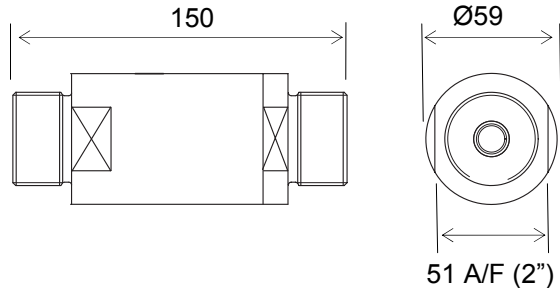
NR83 (16mm hard seat, High pressure)

Specification

- Nominal Bore 16 mm (5/8")
- Maximum working pressure 400 bar (5800 psi)
- Lift pressure 0.3 bar (4 psi)
- Weight: less than 2.2 kg
- Inlet & outlet Ports G1 1/4 male (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

in mm except where shown otherwise



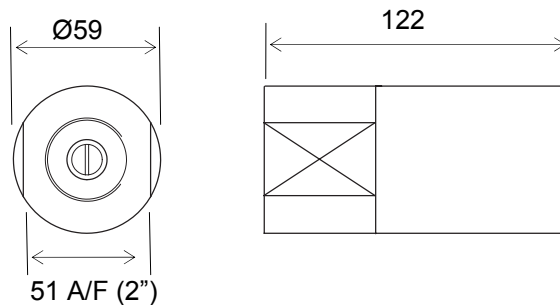
NR84 (16mm hard seat, low pressure)

Specification

- Nominal Bore 16 mm (5/8")
- Maximum working pressure 285 bar (4140 psi)
- Lift pressure 0.3 bar (4 psi)
- Weight: less than 1.8 kg
- Inlet port G1 female, Outlet port 1 1/2-12UNF female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

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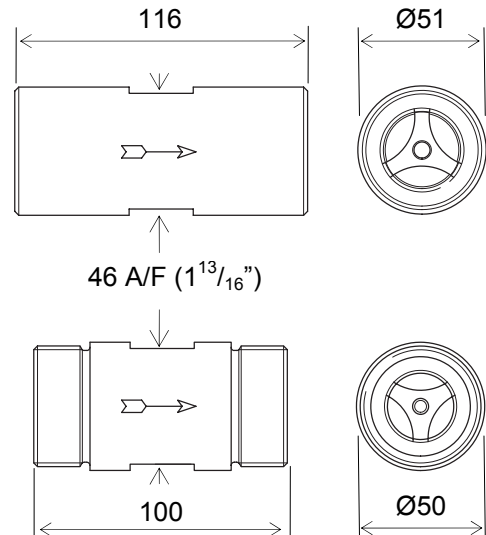
NRS3 (19mm soft seat)

Specification

- Nominal Bore 19 mm (3/4")
- Maximum working pressure 250 bar (3625 psi)
- Lift pressure 0.28 bar (4 psi)
- Weight: less than 1.3 kg
- Inlet & outlet Ports G3/4 female (upper drawing)
Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

in mm except where shown otherwise



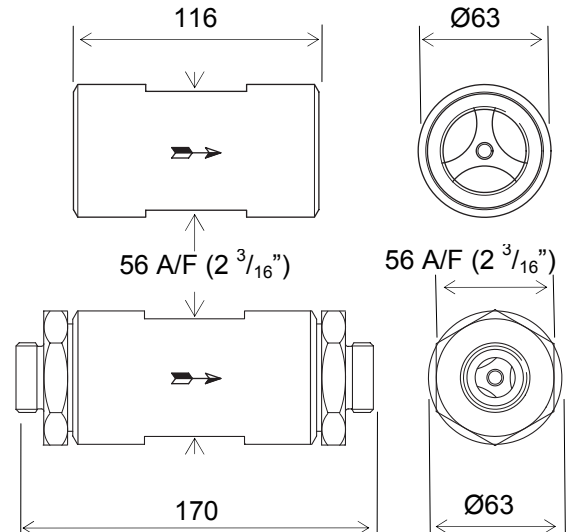
NRS4 (25mm soft seat)

Specification

- Nominal Bore 25 mm (1")
- Maximum working pressure 276 bar (4000 psi)
- Lift pressure 0.2 bar (3 psi)
- Flow factor (Cv) 8
- Weight: less than 1.5 kg
- Inlet & outlet Ports G1 1/4 female (upper drawing)
Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

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