



Relief Valves

RS Differential – NB 9.5mm

RVA In-line Differential – NB 6 to 19mm

RV Direct Acting – NB up to 9mm

LPR Low Pressure Differential – NB 8mm

We design, machine, build and test all our products on one site in Uxbridge. If you don't see what you want in our standard ranges, contact us and we'll do our best to meet your needs.

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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RS Differential Relief Valve (9.5mm)

Description

The RS series is a range of differential relief valves suitable for general industrial (compressed air) or for Oxygen applications.

The valve is operated by an internal piston that is larger than the flow area. The process pressure acts on the difference in these areas (hence “differential”). This means that the spring can be small for high pressures. It also means the valve snaps open to full bore because as soon as the valve starts to open the process pressure acts on the full piston area.

Each valve is adjustable within a range of pressures. The range depends on the size of the piston and the strength of the spring.

RS valves are available with either direct or banjo bolt mounting.



Standard Specification

See next page for specification of individual types

- Working pressure: up to 350 bar (5075 psi)
- Nominal Bore: 9.5 mm
- Exhaust port: G3/8 female (other ports such as NPT are available)
- Inlet port – direct mounting type: G3/8 female (other ports such as NPT are available)
- Inlet port – banjo bolt type: G3/8 male
- Temperature range: -20 to +70°C (extended temperature range versions can be supplied)

Options

Please contact us for details

- Ports: alternative port configurations can be supplied
- Operation: wire locked variants can be supplied
- Materials: suitable combinations of materials can be supplied for various applications such as marine or petrochemical (NACE).
- Certification: variants are available for ATEX service or as a “Safety Accessory” to PED Category 4

Standard Materials

Alternative materials can be supplied

- Body: Nickel Aluminium Bronze or Brass
- Valve/Piston: Stainless Steel or Phosphor Bronze
- Seals: Nitrile (a PTFE O ring is used on the piston in some variants)

Ordering Information

Please supply the following information when ordering

- Relief pressure range
- Relief set pressure – we can supply valves pre-set to your required pressure
- Wire locking required (please state set 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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RS Differential Relief Valve (9.5mm)

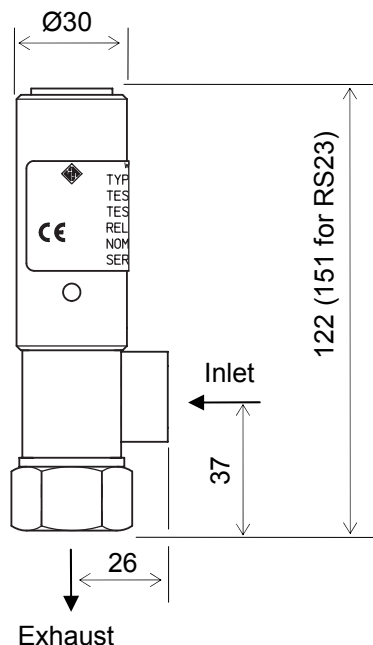
Specification

Type	RS9	RS11	RS12	RS23	RS32
Piston Size (inch)	11/16"	1/2"	7/16"	7/16"	7/16"
Piston Size (mm)	17.5	12.7	11.1	11.1	11.1
Pressure Ranges (bar)	3.5 to 7 7 to 17	17 to 34.5 34.5 to 69 69 to 120	120 to 172 172 to 248	248 to 310	251 to 350
Pressure Ranges (psi)	50 to 100 100 to 250	250 to 500 500 to 1000 1000 to 1750	1750 to 2500 2500 to 3600	3600 to 4500	3640 to 5075
Weight (kg)	0.5	0.5	0.5	0.8	1.1

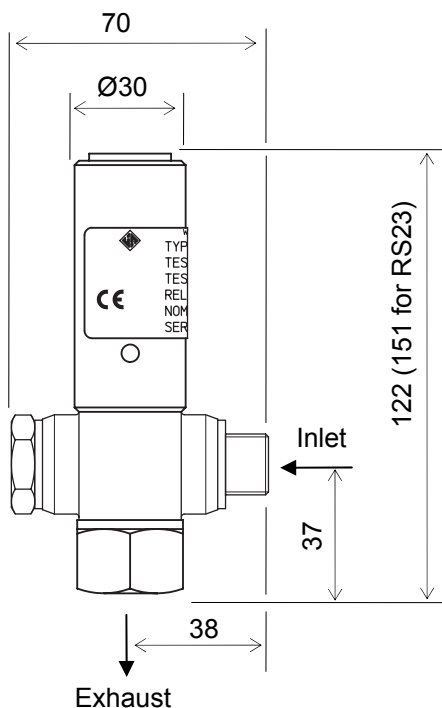
Typical Dimensions

in mm except where shown otherwise

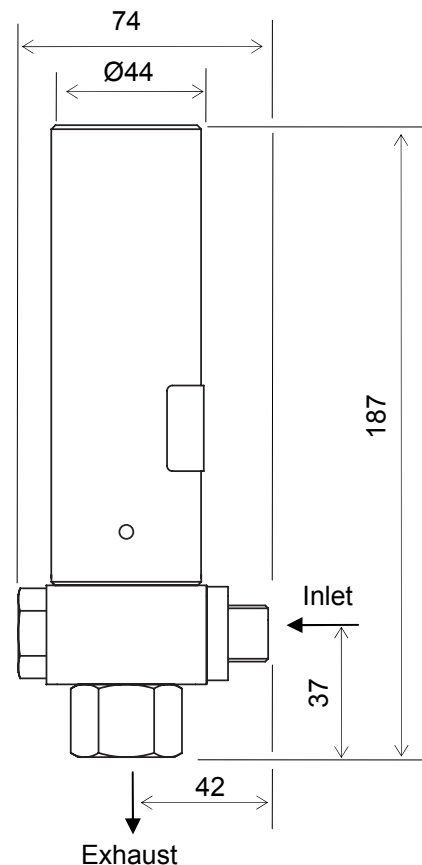
Direct Mounting Type



Banjo Bolt Type



RS32 only



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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RVA Series Differential Relief Valve

Description

The RVA series is a range of differential relief valves. The valve is operated by an internal piston or diaphragm that is larger than the flow area. The process pressure acts on the difference in these areas (hence "differential"). This means that the spring can be small for high pressures. It also means the valve snaps open to full bore because as soon as the valve starts to open the process pressure acts on the full operator area.

A lost motion device is included. This stops the spring overloading the valve seat and prevents chatter.

Each valve is adjustable within a range of pressures. The range depends on the size of the piston or diaphragm and the strength of the spring.

The valve is intended for fitting in a line and allows free flow through the side ports. The exhaust is at the bottom.



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 or Brass
- Valve: Stainless Steel
- Diaphragm: Neoprene
- Seals: Nitrile

Options

Please contact us for details

- Ports: alternative port configurations can be supplied
- Operation: wire locked variants can be supplied
- Materials: suitable combinations of materials can be supplied for various applications such as Oxygen service, marine or petrochemical (NACE).
- Certification: variants are available approved for use with Oxygen, for medical Oxygen service, for ATEX service or as a "Safety Accessory" to PED Category 4

Ordering Information

Please supply the following information when ordering

- Relief pressure range
- Relief set pressure – we can supply valves pre-set to your required pressure
- Wire locking required (please state set 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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RVA Series Differential Relief Valve

RVA10, 11 & 12

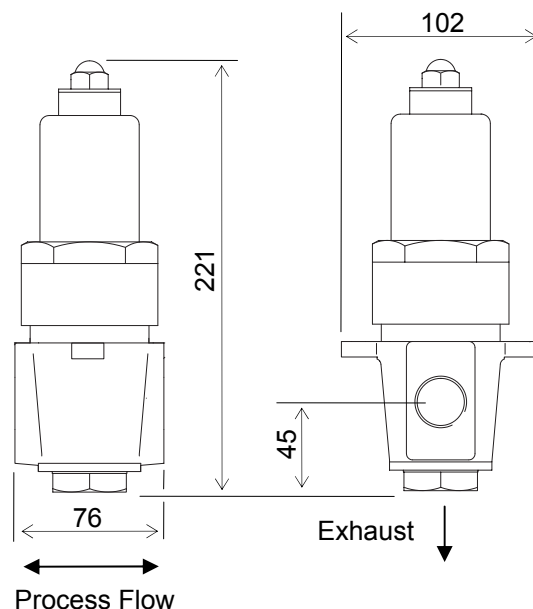
Specification

Type	RVA10	RVA11	RVA12
Nominal Bore	19mm (3/4")	14mm (9/16")	11mm (7/16")
Mechanism	Diaphragm	Piston	Piston
Pressure Ranges (bar)	1 to 3 3 to 10 10 to 34 34 to 69 69 to 103	103 to 207	207 to 310
Pressure Ranges (psi)	15 to 50 50 to 150 150 to 500 500 to 1000 1000 to 1500	1500 to 3000	3000 to 4500

- Process ports: G3/4 female (Alternative ports can be supplied)
- Exhaust port is normally free venting but threaded ports can be supplied (Note that alternative port configurations may affect the overall dimensions)
- Weight: approx. 3.6kg

Typical Dimensions

in mm except where shown otherwise



RVA14 & 15

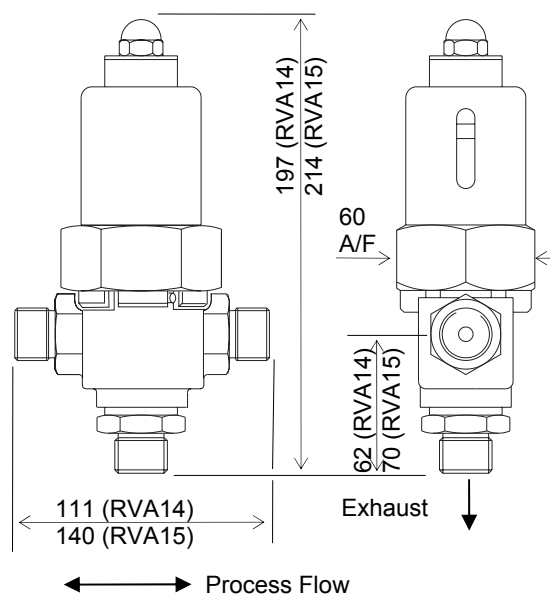
Specification

Type	RVA14	RVA15
Nominal Bore	6mm (1/4")	11mm (7/16")
Pressure Ranges (bar)	34 to 103 103 to 310 310 to 448	34 to 103 103 to 241 241 to 448
Pressure Ranges (psi)	500 to 1500 1500 to 4500 4500 to 6500	500 to 1500 1500 to 3500 3500 to 6500
Process & Exhaust Ports	G5/8 male	G1 male
Weight (kg)	2.3	3.2

- Mechanism: Piston
- Alternative ports can be supplied. (Note that alternative port configurations may affect the overall dimensions)

Typical Dimensions

in mm except where shown otherwise



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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RV Series Direct Acting Relief Valve

Description

The RV series is a range of direct acting relief valves. The valve is operated by the process pressure acting directly on the seal area.

Where sliding seals are used, their failure will not prevent the valve from operating safely. RV9, 10, and 105 do not have sliding seals.

RV105 is available approved to BS6759 and can be supplied cleaned for high purity applications.

Each valve is adjustable within a range of pressures. The range depends on the area of the seal and the strength of the spring.



Options

Please contact us for details

- Ports: alternative port configurations can be supplied
- Operation: wire locked variants can be supplied
- Materials: suitable combinations of materials can be supplied for various applications such as Oxygen service, marine or petrochemical (NACE).
- Certification: variants are available approved for use with Oxygen, for medical Oxygen service, for ATEX service or as a "Safety Accessory" to PED Category 4

Ordering Information

Please supply the following information when ordering

- Relief pressure range
- Relief set pressure – we can supply valves pre-set to your required pressure
- Wire locking required (please state set 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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RV Series Direct Acting Relief Valve

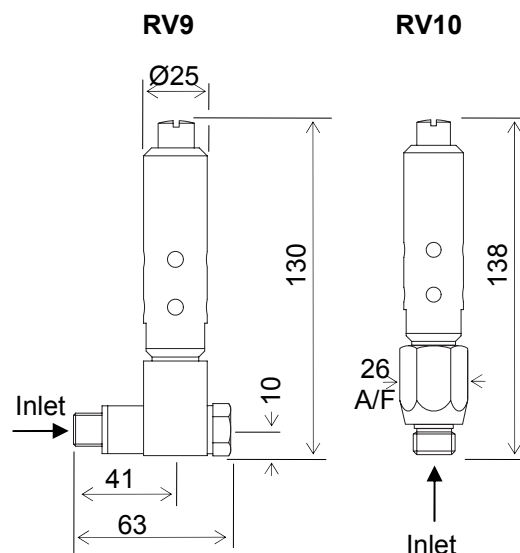
RV9 & 10 (8mm - Low Pressure)

Specification

- Nominal Bore: 8mm (5/16")
 - Pressure Ranges: 0.7 to 3.4bar (10 to 50psi), 3.4 to 10bar (50 to 150psi)
 - Inlet port: RV9 - G1/4 male banjo bolt, RV10 - G3/8 male
- (Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)
- Exhaust is free venting
 - Materials: Body – Mild Steel, Valve – Stainless Steel, Seal – Nitrile.
 - Temperature range: -20 to +70°C (extended temperature range versions can be supplied)
 - Weight: approx. 0.4kg

Typical Dimensions

in mm except where shown otherwise



RV105 (8mm - Low Pressure) To BS6759 Part 2

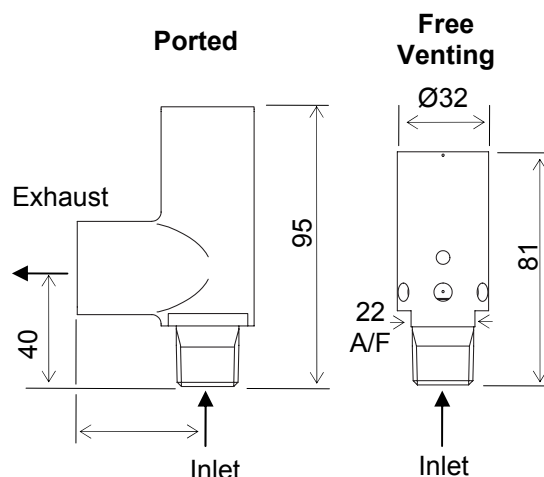
Specification

- Nominal Bore: 8mm (5/16")
 - Pressure Ranges:

Bar	Psi
2 to 5	30 to 75
5 to 7	75 to 100
7 to 9	100 to 130
9 to 12	130 to 175
 - Inlet port: 1/2NPT male
 - Exhaust port: 3/4NPT female or free venting
- (Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)
- Materials: Body – Stainless Steel or Lead Gunmetal, Valve – Stainless Steel, Seal – Nitrile.
 - Temperature range: -20 to +110°C (extended temperature range versions can be supplied)

Typical Dimensions

in mm except where shown otherwise



This valve is available approved to the requirements of BS6759 Pat 2: 1984. The following applies to the approved variants only.

- Approval: AOTC ref. TC92007
- Derated coefficient of discharge Kdr: 0.72
- Minimum lift at 10% overpressure: 1.7 mm
- Relieving pressure: 10% above set pressure
- Reseat pressure: 10% below set pressure

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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

RV Series Direct Acting Relief Valve

RV12, 13 & 14 (up to 9mm – Medium Pressure)

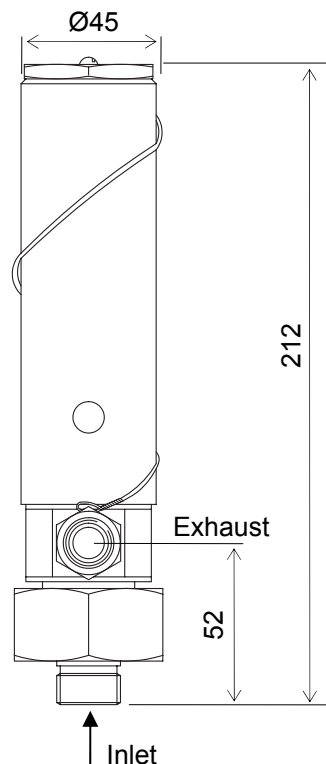
Specification

Type	RV12	RV13	RV14
Nominal Bore	9mm (3/8")	6mm (1/4")	5mm (3/16")
Pressure Ranges (bar)	10 to 103	103 to 276	276 to 379 379 to 483 (Gas) 379 to 552 (Liquid)
Pressure Ranges (psi)	150 to 1500	1500 to 4000	4000 to 5500 5500 to 7000 (Gas) 5500 to 8000 (Liquid)

- Inlet port: G1/2 male
 - Exhaust port: G3/8 male
- (Alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)
- Materials: Body – Mild Steel, Valve – Stainless Steel, Seals – Nitrile, Seat Nylon or Copper
 - Temperature range: -20 to +70°C (extended temperature range versions can be supplied)
 - Weight: approx. 1.7kg

Typical Dimensions

in mm except where shown otherwise



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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

LPR Low Pressure Relief Valve

Description

The LPR series is a range of differential relief valves. The valve is operated by an internal diaphragm that is much larger than the flow area. The process pressure acts on the difference in these areas (hence "differential").

The valve snaps open to full bore because as soon as the valve starts to open the process pressure acts on the full diaphragm area.

Each valve is adjustable within a range of pressures. The range depends on the strength of the spring.



Standard Specification

See next page for specification of individual types

- Nominal Bore: 8mm (5/16")
- Pressure ranges: 0.03 to 0.35 bar (0.5 to 5 psi), 0.35 to 2 bar (5 to 30 psi), 2 to 4 bar (30 to 60 psi)
- Temperature range: -20 to +70°C (extended temperature range versions can be supplied)
- Weight: approx 0.4 kg

Standard Materials

Alternative materials can be supplied

- Body: Aluminium Alloy, Nickel Aluminium Bronze or Brass
- Diaphragm: Neoprene, Viton or PTFE

Options

Please contact us for details

- Ports: alternative port configurations can be supplied
- 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, for ATEX service or as "Safety Accessories" to PED Category 4

Ordering Information

Please supply the following information when ordering

- Relief pressure range
- Relief set pressure – we can supply valves pre-set to your required 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



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

LPR Low Pressure Relief Valve

LPR1

Specification

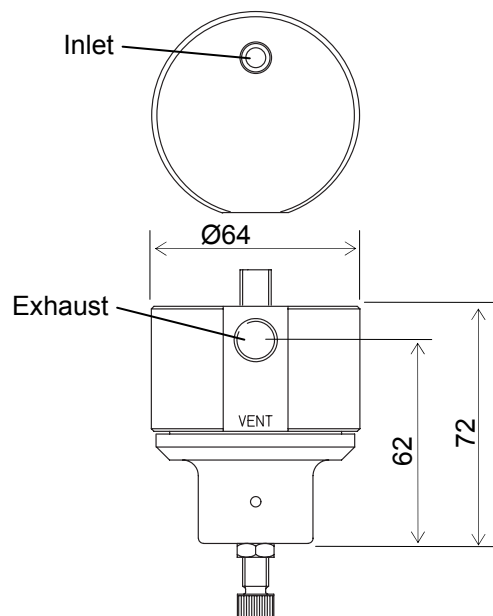
LPR1 is for direct fitting into a threaded port and can be close coupled with our RL series of regulators.

- Inlet port: G3/8 male
- Exhaust port G1/4 female

Alternative ports can be supplied Note that alternative port configurations may affect the overall dimensions

Typical Dimensions

in mm except where shown otherwise



LPR2

Specification

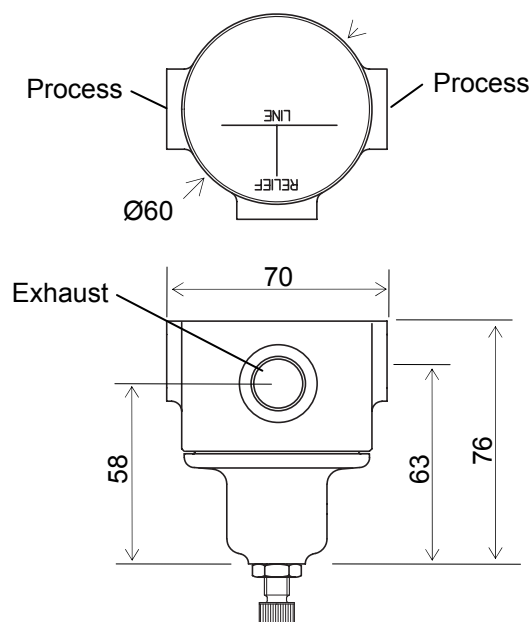
LPR2 is intended for fitting in a line and allows free flow through the side ports. The exhaust is at the right angles to the flow direction.

- Process and Exhaust ports: G3/8 female

Alternative ports can be supplied Note that alternative port configurations may affect the overall dimensions

Typical Dimensions

in mm except where shown otherwise



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