



**HALE HAMILTON®**

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

## RH5, 6, 7, 11, 15, 17 High-Pressure Dome-Loaded Proportional Regulators

### Description

RH5, 6, 7, 11, 15 & 17 are dome-loaded, proportional regulators that provide a flow of gas or liquid at controlled pressure. The outlet pressure is set by adjusting the pressure in the dome.

A flexible diaphragm in the dome acts on a piston which in turn is acted on by the outlet pressure. The ratio of the area of the diaphragm to the area of the piston gives a proportional loading on the regulator.

Except for RH5, the control pressure (i.e. the pressure in the dome) is always in the range 0 to 7bar (100psi). The range of outlet pressure that corresponds to this control pressure is selected by choosing an appropriately sized piston.

The outlet pressure is substantially unaffected by flow rate or by changes in the inlet pressure.

Additional outlet ports can be provided for convenient direct fitting of pressure gauges and/or relief valves.

We can provide suitable electro-pneumatic programmable controls for these regulators.



### Standard Specification

See next page for specification of individual types

- Control pressure range (except RH5): 0 to 7bar (0 to 100psi)
- Control port: G1/8 female
- Spill & Gauge ports: G3/8 female
- Temperature range: -20 to +70°C (extended temperature range versions can be supplied)

### Standard Materials

Alternative materials can be supplied

- Body: Stainless Steel, Nickel Aluminium Bronze, Brass, or Aluminium Alloy
- Dome: Brass, Aluminium Alloy or Steel
- Valve: Stainless Steel
- Diaphragm: Nitrile
- Valve Seat: PEEK or Stainless Steel
- O rings: Viton, Buna-N or EPDM

### 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.
- 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

- Body size (e.g. RH7)
- Maximum inlet pressure
- Outlet pressure range
- 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  
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# RH5, 6, 7, 11, 15, 17 High-Pressure Dome-Loaded Proportional Regulators

## RH6 (2mm) Relieving

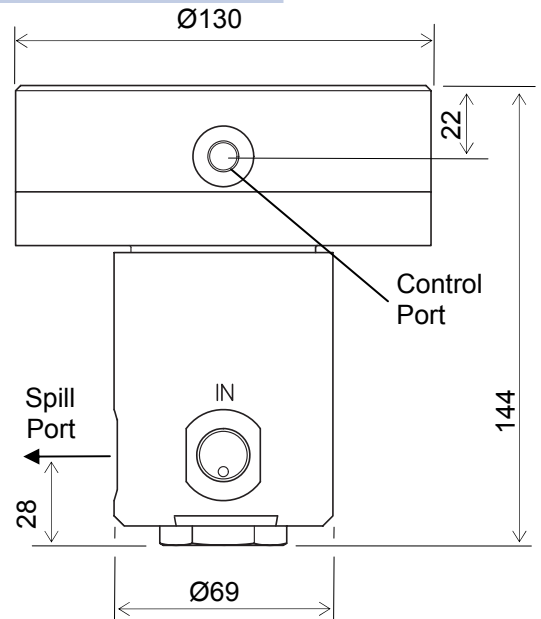
### Specification

A relieving valve is included in the mechanism. This vents the outlet pressure to a spill port if it is higher than the set pressure.

- Nominal Bore: 2 mm
- Flow capacity (Cv): 0.08
- Inlet pressure: up to 465 bar (6750 psi) for gas, up to 690 bar (10000 psi) for liquid
- Outlet pressure ranges: 0 to 90bar (1300psi), 0 to 140bar (2000psi), 0 to 240bar (3500psi), 0 to 300bar (4350psi), 0 to 400bar (5800psi)
- Weight: less than 2kg (Aluminium body)
- Inlet & outlet 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



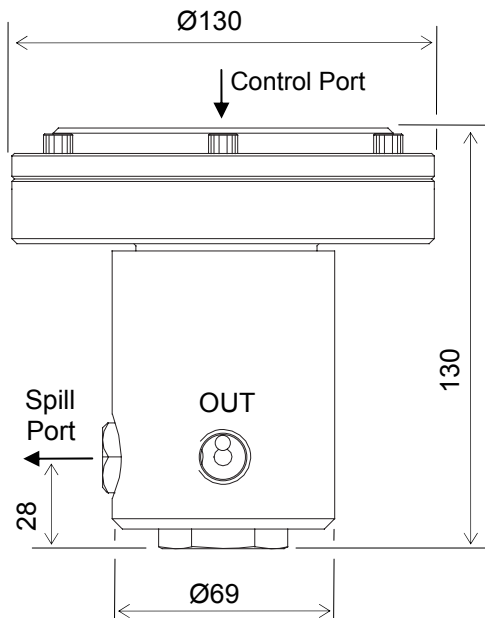
## RH7 (2mm) Non relieving

### Specification

- Nominal Bore: 2 mm
- Flow capacity (Cv): 0.08
- Inlet pressure: up to 465 bar (6750 psi) for gas, up to 690 bar (10000 psi) for liquid
- Outlet pressure ranges: 0 to 90bar (1300psi), 0 to 140bar (2000psi), 0 to 240bar (3500psi), 0 to 300bar (4350psi), 0 to 400bar (5800psi)
- Weight: less than 2kg (Aluminium body)
- Inlet & outlet 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



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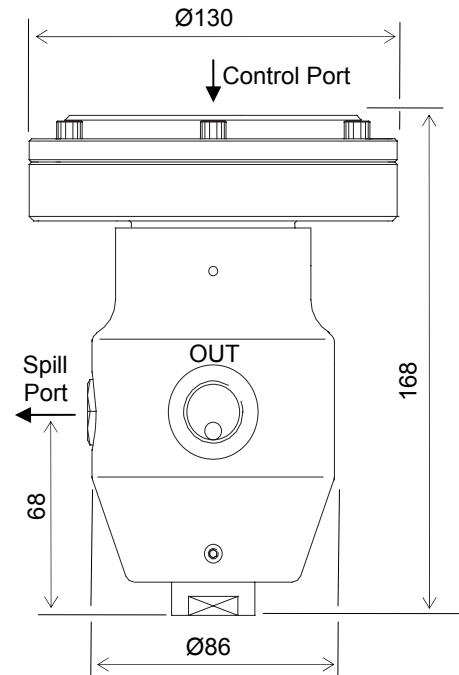
## RH11 (7mm) Non relieving

### Specification

- Nominal Bore: 7 mm
- Flow capacity (Cv): 0.6
- Inlet pressure: up to 465 bar (6750 psi) for gas, up to 690 bar (10000 psi) for liquid
- Outlet pressure ranges: 0 to 90bar (1300psi), 0 to 140bar (2000psi), 0 to 240bar (3500psi), 0 to 300bar (4350psi), 0 to 400bar (5800psi)
- Weight: less than 2.6kg (Aluminium body)
- Inlet & outlet Ports G1/2 female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

### Typical Dimensions

in mm except where shown otherwise



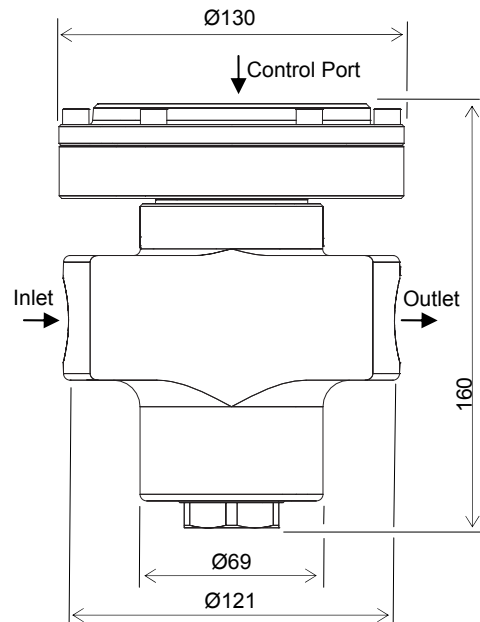
## RH15 (12mm) Non relieving

### Specification

- Nominal Bore: 12.7 mm (1/2")
- Flow capacity (Cv): 2.5
- Inlet pressure: up to 300 bar (4350 psi)
- Outlet pressure range: 0 to 50bar
- Temperature range: -20 to +70°C
- Weight: less than 3kg (Aluminium body)
- Inlet & outlet Ports G1/2 or 1/2" NPT female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

### Typical Dimensions

in mm except where shown otherwise



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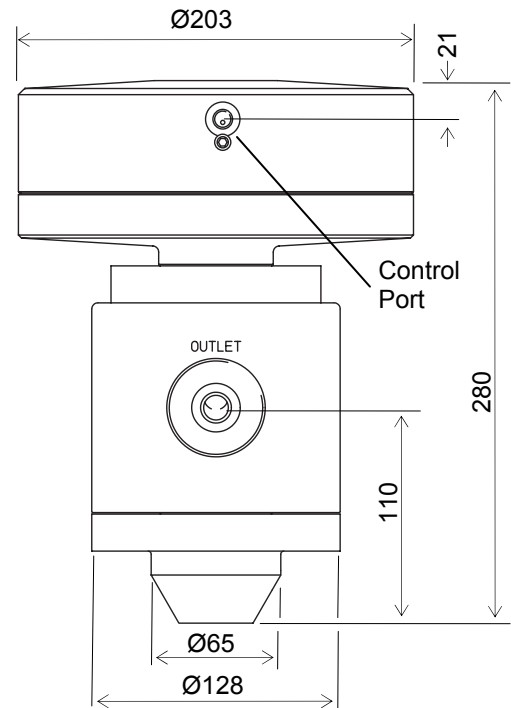
## RH5 (12mm) Non relieving

### Specification

- Nominal Bore: 12.7 mm (1/2")
- Flow capacity (Cv): 2.5
- Inlet pressure: up to 420 bar (6090 psi)
- Control pressure range: 2 to 20bar
- Outlet pressure range: 40 to 250bar
- Temperature range: -20 to +70°C, intermittent operation at -40°C
- Weight: less than 30kg (Brass body)
- Inlet & outlet Ports 2-12UN female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

### Typical Dimensions

in mm except where shown otherwise



## RH17 (20mm) Flow Applications

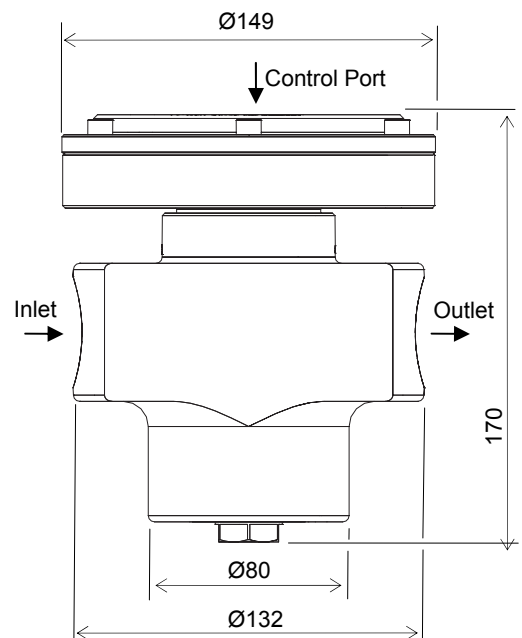
### Specification

This regulator does not have a gas tight seal at shut off so it is only suitable for flowing applications.

- Nominal Bore: 20 mm
- Flow capacity (Cv): 6
- Inlet pressure: up to 300 bar (4350 psi)
- Outlet pressure range: 0 to 50bar
- Temperature range: -20 to +70°C
- Weight: less than 7.3kg (Stainless steel body)
- Inlet & outlet Ports G1 female (alternative ports can be supplied. Note that alternative port configurations may affect the overall dimensions)

### Typical Dimensions

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