



HALE HAMILTON®

Excellence in Pressure & Flow Control

A CIRCOR International, Inc. Company

Series 28-20 NACE Compatible Regulator for Hydraulic Oil or Gases

Description

Series 28 is a range of spring-loaded regulators that provide a flow of gas or liquid at controlled pressure. The outlet pressure is substantially unaffected by flow rate but it does drop slightly as the inlet pressure is increased.

The regulators are made using NACE compatible materials and are suitable for hydraulic oil or gas applications in sour gas and salt spray environments such as wellhead control panels.

The outlet pressure is set by turning the control knob. Depending on outlet pressure range, the internal mechanism uses either a piston or a diaphragm to isolate the process fluid from the spring compartment. The range of outlet pressure is set by the diameter of the piston or diaphragm and the strength of the spring. A locked outlet type is available which can be adjusted using a spanner.

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.

Additional outlet ports can be provided for gauges and/or relief valves. A panel mounting kit is available.



Standard Types

Alternative types are available

Series 28 consists of several types which have a consistent naming system. The type name is made up of two parts – letters and numbers:

- *nn* is “20” for the high flow rate version; for a lower flow rate see the “15” series

- GLD*nn* – diaphragm type – good sensitivity at low outlet pressures
- GLP*nn* – large piston type – suitable for intermediate outlet pressures
- GHP*nn* – small piston type – suitable for high outlet pressures
- GXP*nn* – extra small piston type – suitable for very high outlet pressures

Standard Specification

See next page for specification of individual types

- Inlet pressure: up to 465 bar (6750 psi) for gas, up to 690 bar (10000 psi) for liquid
- Temperature range: -20 to +70°C (extended temperature range versions can be supplied)
- Regulators for gas service have a filter in the inlet

Standard Materials

Alternative materials can be supplied

- Body: Stainless Steel
- Valve: Stainless Steel
- Valve Seat: PEEK
- O rings and Diaphragm: Nitrile
- Back up rings: PTFE

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



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Options

Please contact us for details

- Ports: alternative port configurations can be supplied including additional ports for gauges and relief valves
- Materials: suitable combinations of materials can be supplied for various applications such as Oxygen or Offshore service.
- Certification: variants are available approved for use with Oxygen, for medical Oxygen service or for ATEX service.
- The internal relieving valve can be omitted
- A back pressure maintaining variant is available

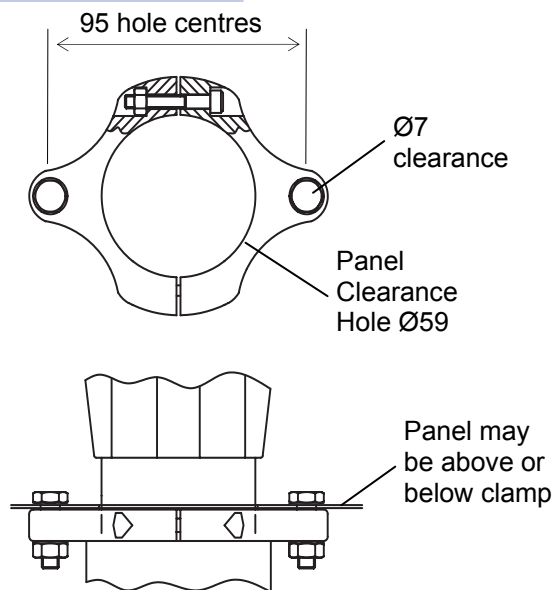
Ordering Information

Please supply the following information when ordering

- Outlet pressure range
- Flow medium
- Control knob or locked output (state required outlet pressure)
- Internal limit stops – state maximum pressure
- Port configuration
- Operating and storage temperature ranges
- Mounting kit required
- Certification and QA requirements

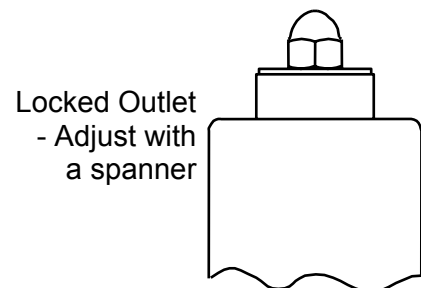
Panel Mounting

Dimensions in mm



Locked Output Variants

Locking mechanism replaces control knob



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Gxx20 – 1/2” ports

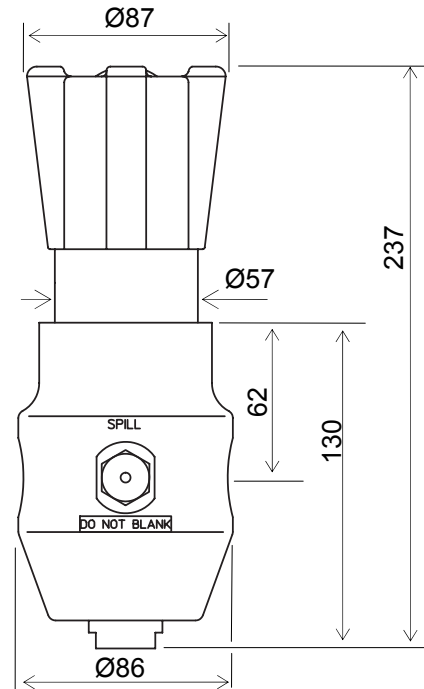
Typical Dimensions

in mm except where shown otherwise

Specification

Type	GLD			GLP		GHP
Min outlet pressure*	10	16	25	48	96	220
bar psi	150	230	370	670	1400	3200
Max outlet pressure	17	27	58	103	241	414
bar psi	250	400	850	1500	3500	6000
Pressure Variation**	1.25%			6.5%		12%

- Nominal Bore 7mm (outlet passage)
- Flow factor (Cv) 0.6
- GLD and GLP are available with alternative springs to give a selection of pressure ranges
- Inlet & outlet ports 1/2” NPT, spill port 3/8” NPT, gauge ports 1/4” NPT
- Weight: less than 5kg Stainless Steel body



* Recommended minimum outlet pressure. All regulators can be turned down to approximately zero pressure but sensitivity is low below the recommended value.

** Pressure variation is the RISE in outlet pressure for a DROP in inlet pressure

Part Numbers and Spares Kits

Please refer to Service Instruction SI302 available on request

Part Number	Type Number	Pressure Range	Gauge Ports	Medium	Spares Kit
NB28157/1	GLD20 MK7	10 to 17	No	Gas	K244/2
NB28157/2	GLD20 MK7	16 to 27	No	Gas	K244/2
NB28157/3	GLD20 MK7	25 to 58	No	Gas	K244/2
NB28157/10	GLD20 MK7/HYD	10 to 17	No	Hydraulic Oil	K244/1
NB28157/11	GLD20 MK7/HYD	16 to 27	No	Hydraulic Oil	K244/1
NB28157/12	GLD20 MK7/HYD	25 to 58	No	Hydraulic Oil	K244/1
NB28158/1	GLD20 MK8	10 to 17	Yes	Gas	K244/2
NB28158/2	GLD20 MK8	16 to 27	Yes	Gas	K244/2
NB28158/3	GLD20 MK8	25 to 58	Yes	Gas	K244/2
NB28158/10	GLD20 MK8/HYD	10 to 17	Yes	Hydraulic Oil	K244/1
NB28158/11	GLD20 MK8/HYD	16 to 27	Yes	Hydraulic Oil	K244/1
NB28158/12	GLD20 MK8/HYD	25 to 58	Yes	Hydraulic Oil	K244/1
NB28207/1	GLP20 MK7	48 to 103	No	Gas	K248
NB28207/2	GLP20 MK7	96 to 241	No	Gas	K248
NB28207/7	GLP20 MK7/HYD	48 to 103	No	Hydraulic Oil	K1084
NB28207/8	GLP20 MK7/HYD	96 to 241	No	Hydraulic Oil	K1084

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Series 28-20

NACE Compatible Regulator for Hydraulic Oil or Gases

Part Numbers and Spares Kits continued

Part Number	Type Number	Pressure Range	Gauge Ports	Medium	Spares Kit
NB28208/1	GLP20 MK8	48 to 103	Yes	Gas	K248
NB28208/2	GLP20 MK8	96 to 241	Yes	Gas	K248
NB28208/7	GLP20 MK8/HYD	48 to 103	Yes	Hydraulic Oil	K1084
NB28208/8	GLP20 MK8/HYD	96 to 241	Yes	Hydraulic Oil	K1084
NB28257/1	GHP20 MK7	220 to 414	No	Gas	K252/2
NB28257/4	GHP20 MK7/HYD	220 to 414	No	Hydraulic Oil	K252/1
NB28258/1	GHP20 MK8	220 to 414	Yes	Gas	K252/2
NB28258/4	GHP20 MK8/HYD	220 to 414	Yes	Hydraulic Oil	K252/1

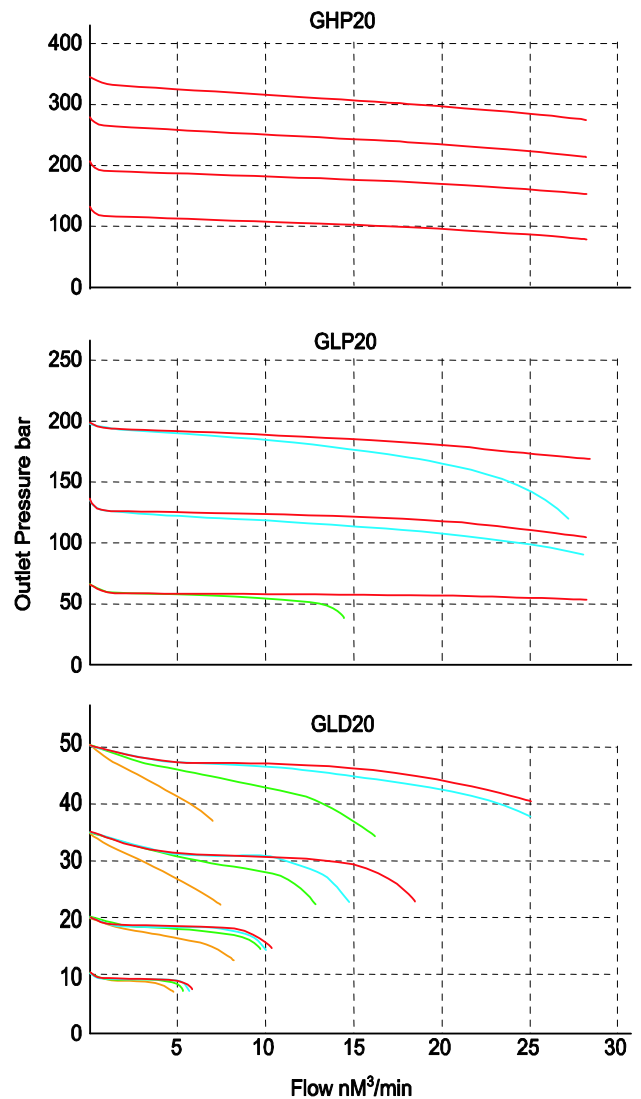
Flow Characteristics

Typical characteristics of sample regulators. Detail design changes may affect these characteristics

The regulator is set to a desired outlet pressure at zero flow using the control knob. Flow is induced by opening a metering valve downstream and the change in outlet pressure is measured without adjusting the knob. This is repeated for various inlet pressures

Key to inlet pressures

- 400 bar
- 275 bar
- 140 bar
- 70 bar



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