

DHR Series

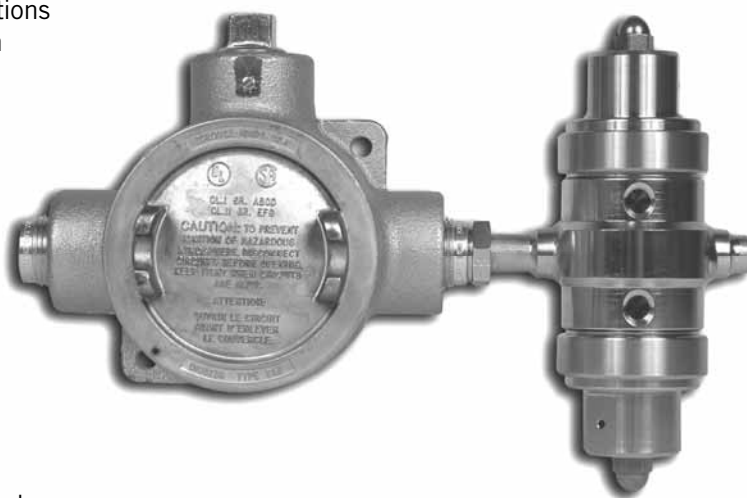
Electrically Heated Dual Pressure Regulators

Introduction

The Dual Heated Pressure Regulator is designed to supply heat to samples entering instrumentation systems. It can be used to preheat liquids, to prevent condensation of gases or to vaporize liquids prior to gas analysis. Significant space savings can be realized due to the utilization of two discrete regulators that are heated by a common source.

The modular design of the Dual Heated Regulator consists of a heating element and pressure control sections. The pressure control sections are patterned after the time proven design of the PR-1 pressure reducing regulator and provides the same excellent outlet pressure stability. The heat exchanger section is made up of a body and a heating element.

The Dual Heated Pressure Regulators are ATEX approved. The electrical components of this unit are securely housed in a Class A, B, C, D conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.



pressure regulators

Typical Applications

Analytical process sample conditioning systems:

- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

Technical Data

CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750, and 0-1000 psig
OPERATING TEMPERATURE	up to 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, 150, 200, and 250
C _v COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	ATEX Directive 94/9/EC Certification # TRL03ATEX11001X

Features & Benefits

- Optional HASTELLOY® C-276 and MONEL®
- Electropolished body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Available in 120VAC or 240VAC
- Optional TCO heating cartridge and proportional controller
- INCONEL® diaphragm standard

How to Order

Standard items in bold

DHR – 1 A C 3 I 1 C 3 G 1 4 1 1 1 1

Regulator A Regulator B

BODY MATERIAL

1 316L stainless steel, stainless steel diaphragm

C **316L stainless steel, INCONEL® diaphragm**

4 MONEL®, INCONEL® diaphragm

6 HASTELLOY® C, INCONEL® diaphragm

PORT CONFIGURATION

A **Standard**
For more configurations, see page 35

SEAT MATERIAL (REGULATOR A)

A Tefzel®

B CF PTFE

H PCTFE (formerly Kel-F® 81)

Q PEEK™

FLOW COEFFICIENT (REGULATOR A)

3 **0.06**

5 **0.2**

C **0.025**

OUTPUT RANGE (REGULATOR A)

C 0–10 psig

D 0–25 psig

E 0–50 psig

G 0–100 psig

I 0–250 psig

J 0–500 psig

W 0–750 psig

K 0–1000 psig (BP-6 Top Works)

CAP ASSEMBLY (REGULATOR A)

1 **Tamper-proof, stainless steel**

4 Tamper-proof, panel mount, stainless steel

7 Tamper-proof, captured vent, stainless steel

L T-handle, stainless steel

SEAT MATERIAL (REGULATOR B)

A Tefzel®

B CF PTFE

H PCTFE (formerly Kel-F® 81)

Q PEEK™

FLOW COEFFICIENT (REGULATOR B)

3 **0.06**

5 **0.2**

C **0.025**

OPTIONS (NOT REQUIRED)

B EB5 cleaning

D Helium leak test

E Pressure test certificate

F Certificate of Conformity

G CMTR

VOLTAGE

1 120 VAC

2 240 VAC

6 No electronics

THERMISTOR TYPE

1 Thermally protected (TCO)

2 **Non-thermally protected**

6 No electronics

CONTROLLER TYPE

1 **On/Off**

2 Proportional

6 No electronics

HEATER WATTAGE

1 40W

2 50W

3 100W

4 150W

8 200W

9 250W

6 No electronics

TEMPERATURE RANGE

1 55° F to 85° F

2 75° F to 175° F

3 130° F to 300° F

4 260° F to 380° F

6 No electronics

CAP ASSEMBLY (REGULATOR B)

1 **Tamper-proof, stainless steel**

4 Tamper-proof, panel mount, stainless steel

7 Tamper-proof, captured vent, stainless steel

L T-handle, stainless steel

OUTPUT RANGE (REGULATOR B)

C 0–10 psig

D 0–25 psig

E 0–50 psig

G 0–100 psig

I 0–250 psig

J 0–500 psig

W 0–750 psig

K 0–1000 psig (BP-6 topworks)

NOTE: Contact the factory for any additional requirements.

Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel® & CF PTFE	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F®)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)