

Conoflow® HP635 Series

High Pressure Regulator

ITT Conoflow's HP635 Series unit is a high-flow, high-purity regulator that is designed as a purge gas regulator and may be used in high purity gas systems involving corrosive and toxic media. All wetted components are of a 316 Stainless Steel construction having a maximum 35Ra surface finish. An optional brass model (NPT port only) is available for inert gas service.

This unit has a large main valve providing a flow capacity of Cv=1.8 at the valve. Connections are 1/2" NPT or 1/2" Tube Stubs with either style having a maximum supply pressure rating of 500 psig. Outlet pressure ranges of 0-25, 0-50, 0-100, 0-150 and 0-200 psig (0-0.173, 0-0.345, 0-0.69, 0-1.04, and 0-1.38 MPa) are available. The HP635 Regulator is offered with an inboard and across the seat leakage specification of 2×10^{-8} atm. cc/sec Helium. Also, there is an adjustable stop that may be set to limit pressure control settings for specific application requirements.

Standard Specifications

Maximum Supply Pressure:

500 PSIG (3.45 MPa)

Control Setting Ranges:

0-25, 0-50, 0-100, 0-150, 0-200 PSIG

(0-0.173, 0-0.345, 0-0.69, 0-1.04, 0-1.38 MPa)

Proof Pressure:

150% maximum operating

Burst Pressure:

400% maximum operating

Flow Capacity (refer to flow chart):

Cv 1.8 (at the main valve) Orifice diameter 0.391"

Temperature:

-40°F to +165°F (-40°C to +74°C)

Leakage (Regulators):

2×10^{-8} atm cc/sec Helium

(Inboard and Across Seat)

Supply Pressure Effect:

6.5 PSIG increase for 100 PSIG supply decrease

Max. Operating Torque:

25 in-lbs

Connections - Regulator:

1/2" NPT or 1/2" Tube Stub (2" long)

Weight:

5.0 lbs.

Control Kits

0-25 PSIG (0-0.173 MPa) - 83635-11

0-50 PSIG (0-0.345 MPa) - 83636-11

0-100 PSIG (0-0.69 MPa) - 83637-11

0-150 PSIG (0-1.04 MPa) - 83638-11

0-200 PSIG (0-1.38 MPa) - 83639-11



Ordering Sequence — Select desired option for each category

REGULATOR MODEL BREAKDOWN (CED CODE)

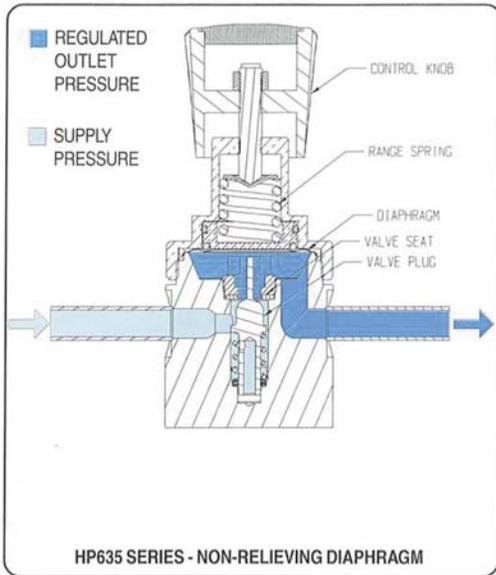
TEXT POSITION 1 through 5	OPTION CODE HP635	DEFINITION OF CHARACTER High Purity - Diaphragm Type
6	H 3 B	BODY / BONNET / TRIM 316SS / Nickel Plated Brass / 316SS - 35Ra surface finish 316SS / Nickel Plated Brass / 316SS - 15Ra surface finish Brass / Nickel Plated Brass / 316SS - 35Ra surface finish
7 - 8	11	DIAPHRAGM / MAIN VALVE SEAT 316 Stainless Steel / Kel-F
9	R	RELIEVING OPTIONS Non-Relieving
10 - 11	6T N3	INLET/OUTLET PORTS - NO GAUGE PORTS 1/2" Tube Stubs (2" Long) 1/2" NPT
12	N P	MOUNTING No Panel Mounting Nuts Panel Mounting (2-Nut)
13	A B C	CLEANING OPTIONS Regulator is cleaned to ITT Conoflow Specification ES8A 01 294 Oxygen Cleaning Customer Specified Cleaning
14	B	ADJUSTMENT SELECTIONS Handwheel (Large)
15	A B C D L	CONTROL RANGE SETTINGS - CONTROL KITS 0-25 PSIG (0-0.173 MPa) 0-50 PSIG (0-0.345 MPa) 0-100 PSIG (0-0.69 MPa) 0-150 PSIG (0-1.04 MPa) 0-200 PSIG (0-1.38 MPa)

Example



- Series - Regulator Base Model
- Body/Bonnet/Trim
- Diaphragm/Main Valve Seat
- Relieving Options
- Inlet/Outlet Ports
- Mounting
- Cleaning Options
- Adjustment Selections
- Control Range Settings

Principle of Operation



Regulator Options

OXYGEN CLEANING

Specifications of materials in regulators used for oxygen service is the **user's responsibility**. Cleaning for oxygen service (**Per ES8A 01 297**) to 3500 PSIG (24.20 MPa) is supplied by ITT Conoflow at no additional cost. Cleaning for service above 3500 PSIG (24.20 MPa) may be performed to the user's specifications at an additional cost through an outside source. For special cleaning requirements, the customer must supply specifications for desired level of cleanliness. Cost will be advised prior to performing the cleaning operation.

ELECTRONIC GRADE CLEANING

Available at additional cost. ITT Conoflow will perform electronic grade cleaning to customer supplied specifications. Cost will be advised prior to performing cleaning.

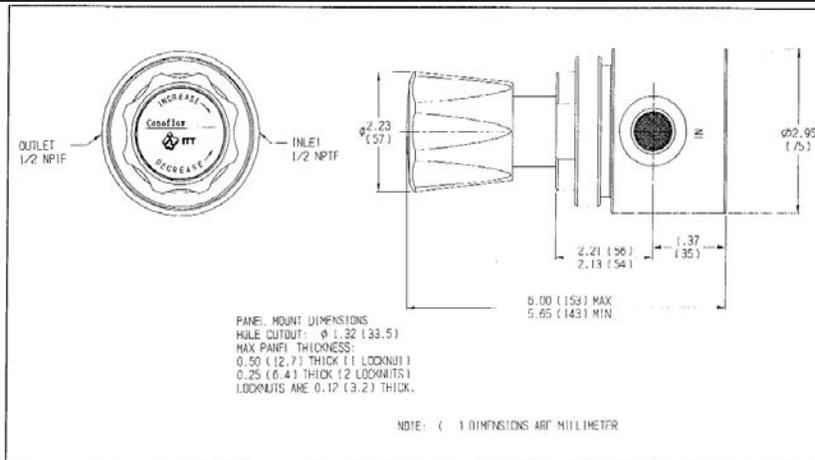
LEAK RATE CERTIFICATION (ES8A 01 295)

Available at additional cost. ITT Conoflow will certify a leak rate to 2×10^2 atm cc/sec of Helium.

INTERNAL SURFACE FINISH

Available at additional cost. ITT Conoflow can provide an internal surface finish, on wetted components, of 15 Ra microinch. Other surface finishes available, please consult the factory.

Dimensional Views



Flow Chart

