Conoflow Series HPNGV5

ITT
ENGINEERED FOR LIFE

Natural Gas Vehicle Fuel Pressure Regulator

The HPNGV5 Series CNG Regulator is a new generation of the ITT Conoflow HPNGV series regulator. New materials, such as the proprietary Fluorosilicone rubber diaphragm, improve the resistance to heat and synthetic oils for improved life expectancy. Continuing the tradition of offering many configuration possibilities, additional options are now available, including heavy duty machined aluminum coolant bowls, a higher capacity solenoid shutoff valve, and larger coolant bowl fittings. This regulator meets the ISO 15500 and ANSI CSA NGV 3.1 standards, and is type approved to ECE R110.

Standard Specifications

Regulated Media:
Compressed natural gas

Inlet Pressure:
250 to 3600 psig (1.72 MPa to 24.84 MPa) to meet all performance specifications.

Nominal Output Pressure Range: Factory preset 50-150 PSIG (3.4-10.3 bar) Set Point. The typical range of delivery pressure is +15 / -10 psi from specified setting throughout the range of inlet pressure, temperature and flow.

Gas Flow Rate:
Up to 165 lb/hr (0-75 kg/hr) (flow varies by application, consult the factory for data)

Internal Filtration:
40 Micron Corrosion Proof Sintered Element

Leakage (Ambient and Valve):
Bubble Tight

Moisture Tolerance:
To 7 lbs Water per Million Standard Cubic Ft.

Temperature Range (Ambient, Inlet and Coolant):
-40ºF to +248ºF (-40ºC to 125ºC)

Vehicle Applications:
Normally aspirated or Turbocharged EFI Spark Ignition Engines

Porting:

Gas Inlet:
SAE-6 (9/16-18 Thread) per SAE Specification J1926

Gas Outlet:
SAE-8 (3/4-16 Thread) per SAE Specification J1926

Standard Coolant:
3/8" and 1/2 NPT
3/8" to 3/4" hose barbs

Mounting Threads:
M8 x 1.25 x 18mm, 2 Places 45.7mm Apart
Suitable for 15mm Bolts

Weight:
5 to 6.5 lb, Option Dependent

Approvals:
ECE R110
ISO 15500
ANSI/AGA CSA
NGV 3.1

U.S. Patents:
5,890,512
and 5,443,083

Ordering Sequence — Select desired option for each category

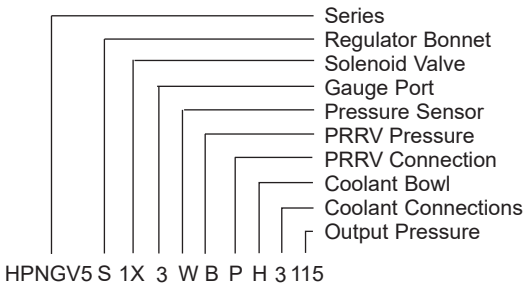
REGULATOR MODEL BREAKDOWN (CED CODE)

Text Position 1 through 6	Option Code HPNGV5	Definition of Character
		Natural Gas Vehicle Fuel Pressure Regulator
		REGULATOR BONNET OPTIONS
7	S	Standard Bonnet (No Map Bias Fitting)
	C	Captured Bonnet (3/16" Straight Hose Barb Bias Fitting)
	E	Captured Bonnet (1/4" Hose Elbow (Polyflo Tubing Type) Bias Fitting)
		INLET SOLENOID VALVE OPTIONS
8 - 9	NA	No Inlet Solenoid Valve
	12	Std. Capacity 12v Solenoid Valve
	24	Std. Capacity 24v Solenoid Valve
	1X	High Capacity 12v Solenoid Valve
	2X	High Capacity 24v Solenoid Valve
		GAUGE PORT OPTIONS
10	3	3 = SAE-3 Inlet Pressure Gauge Port
	4	4 = SAE-4 Inlet Pressure Gauge Port
	0	0 = SAE-4 Outlet Pressure Gauge Port (Not Available with Solenoid)
	N	N = No Pressure Gauge Port (Not Available with Solenoid)
	NOTES:	Note: Gauge ports will be shipped plugged if no sensor is ordered.
		PRESSURE SENSOR (FACTORY INSTALLED AND TESTED IN GAUGE PORT OPTION 3)
11	N	N = No Pressure Sensor
	P	P = 0.25 to 4.75 Volt Output (over 5000 psi range)
	W	W = 0.50 to 4.50 Volt Output (over 5000 psi range)
	NOTES:	Note: Sensor output with 5.0 vdc excitement
		INTEGRAL PRESSURE REGULATOR RELEIF VALVE (PRRV) OPENINIG PRESSURE
12	A	A = 200 +/- 40 psi
	B	B = 270 +/- 60 psi
	C	C = 350 +/- 60 psi
	NOTES:	Notes: 1. A 200 psi PRRV is not recommended for regulator set points above 120 psi. 2. The regulator PRRV is not suitable as a stand-alone safety relief valve. Other downstream protection must be employed for a robust system design.
		PRRV (RELIEF VALVE) DISCHARGE CONNECTION
13	P	P = 1/4" NPT Male Pipe Connection
	T	T = 1/2" Tube Stub Connection (for std tube fittings)
	X	X = Discharge to Atmosphere (no connection)
	NOTES:	Note: If regulator is located in a hazardous location, a PRRV capture pipe must be used to route discharge gas to a remote location.
		COOLANT CIRCULATION BOWL (MAY BE ROTATED BY USER)
14	H	H = Cast Aluminum bowl with 3/8" side ports (open towards gas outlet port)
	L	L = Machined Aluminum bowl with 1/2" NPT Bottom Ports
	M	M = Machined Aluminum bowl with 3/8" NPT Bottom Ports
		COOLANT CONNECTIONS
15	N	N = None
	3	3 = 3/8" straight hose connections
	4	4 = 1/2" straight hose connections
	5	5 = 5/8" straight hose connections
	6	6 = 3/4" straight hose connections
	A	A = 3/8" hose elbows
	B	B = 1/2" hose elbow
		OUTPUT PRESSURE SELECTION
16-18	115	Output pressure setting (psig). For values less than 100, use 0XX

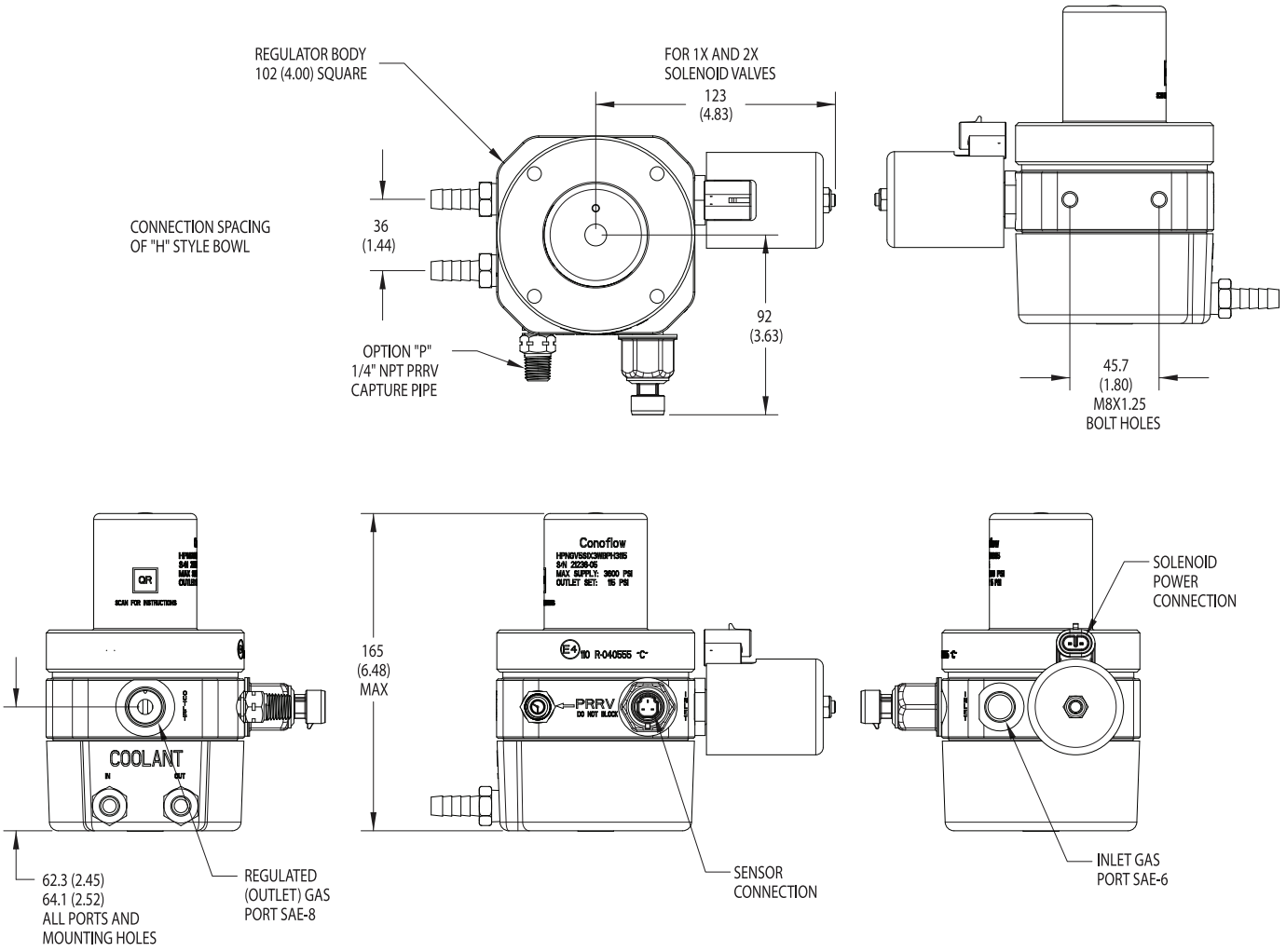
See next page for ordering example.

Series HPNGV5

Ordering Example



Dimensional Views

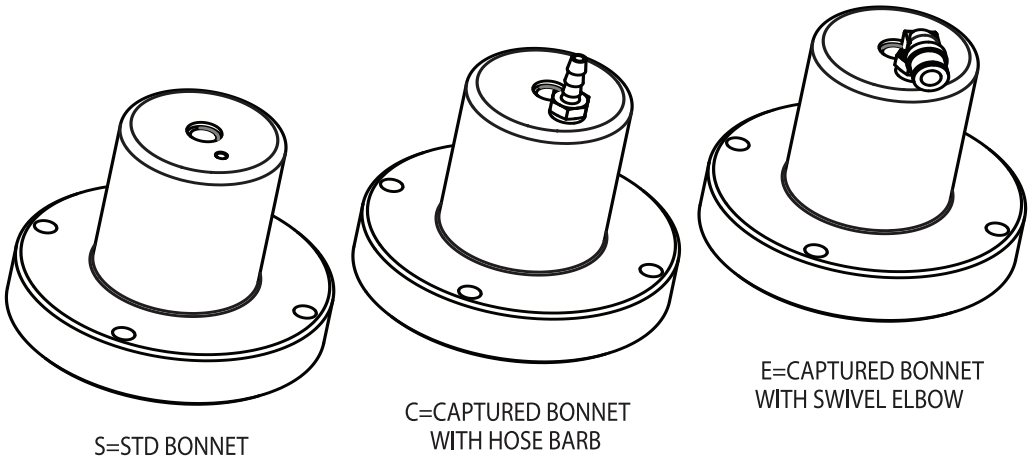


ELECTRICAL CONNECTIONS
Solenoid: Packard Weatherpak 2-conductor connection
Sensor: Packard Metripack 150 3-conductor connection

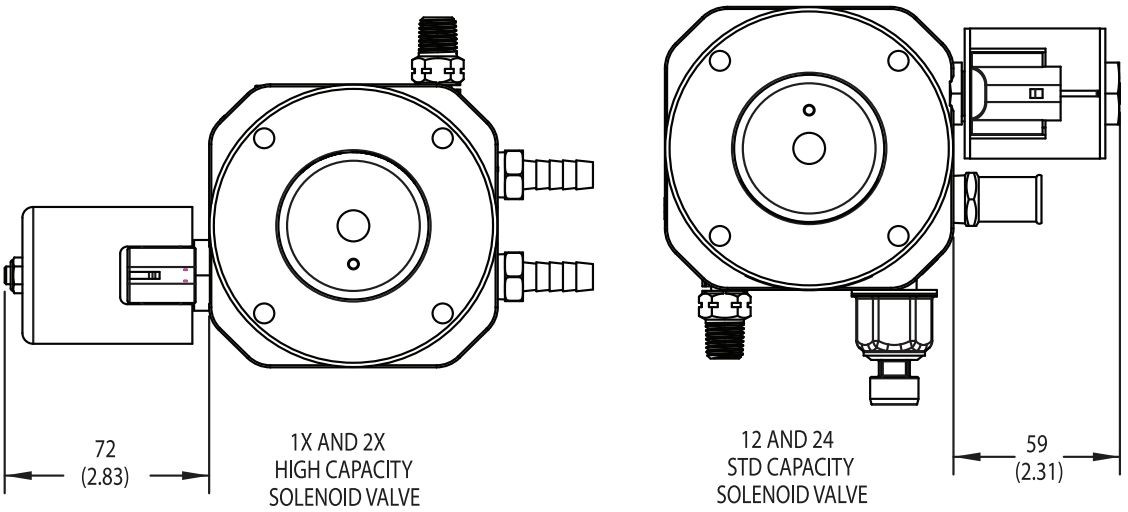
Dimensions in Millimeter
(Dimensions in Inches)

Series HPNGV5

Bonnet Options

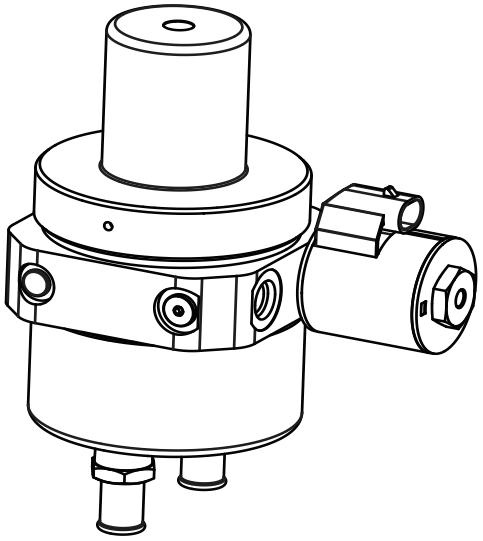


Inlet Solenoid Options

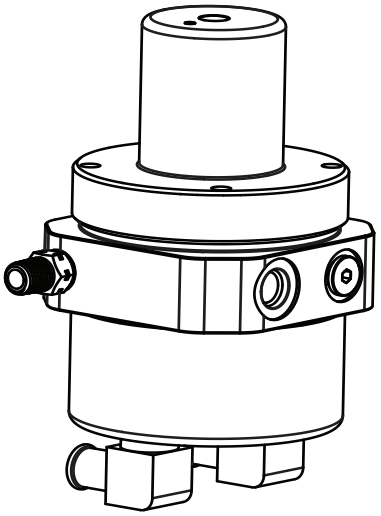


Series HPNGV5

Gauge Port Options

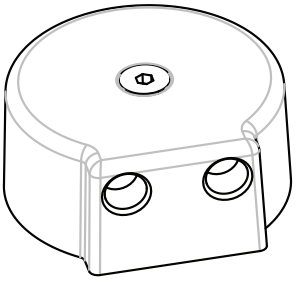


GAUGE PORT OPTIONS 3 & 4 (INLET) ARE LOCATED ON SIDE OPPOSITE MOUNTING BOLTS. PORT SHOWN WITH STANDARD PLUG IN PLACE

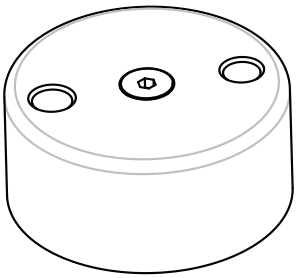


GAUGE PORT OPTION 0 (OUTLET) IS LOCATED ADJACENT TO INLET PORT, 90° FROM SIDE WITH MOUNTING BOLTS.

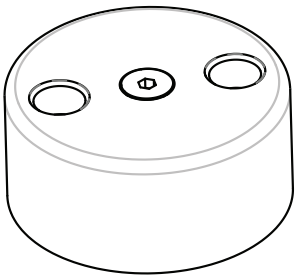
Coolant Bowl Options



TYPE "H"
3/8" NPT PORTS



TYPE "M"
3/8" NPT PORTS



TYPE "L"
1/2" NPT PORTS

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