ZEEMS II
Modular Fuel Systems
Electronic Fuel Injection System
With Drive By Wire
Gasoline

ECU Mounting Bracket (Optional)
Electronic Control Unit (ECU)
Aluminum ECU Enclosure
Sealed Connector
Electronic Governor
Fuel Inlet
Tuned Flow Air Inlet
Integral Fuel Pressure Regulator
Fuel Return
EFI Module with Fuel Injector
MAP Sensor
Manifold Adaptor (Optional)
Injector Connector

Note: Water & Air Sensors Not Shown

14570 Industrial Park Road • Bristol • Virginia • 24202 • 276-669-5555
General Specifications

Electronic Fuel Injection

With Drive By Wire

Gasoline

Applications: Fixed RPM 1.0L-5.8L @ 1800 RPM*
Mobile 1.0L-5.8L @ 3200 RPM*

Generator Sets 5 kilowatt- 100 kilowatt

Throttle Bores: 1.023” / 1.181” / 1.297”/ 1.417”/ 1.535”
1.653”/ 1.771”/ 1.889”/ 1.968” / 2.165”

Flow Capability: 250 CFM @ 2.0” Hg

Power: 7 HP- 160 HP

Air Intake Size: 2.0” Outside Diameter, 90 Degree

Fuel Types: Gasoline, Gasohol

Fuel Injector Sizes: 33, 42, 50, 69 lb./hr @ 15 PSI

Operating Pressure: 20 PSI Maximum

Operating Temperature: -20° to 220 °F

Note: *See General System Application for more Information
Mixer Module Assembly
With Drive By Wire
Gaseous Fuel

ECU Mounting Bracket (Optional)
Electronic Control Unit
Aluminum ECU Enclosure
Sealed Connector
Governor Motor

Tuned Flow Air Inlet
Venturi Mixer Module
Manifold Adaptor (Optional)
Electronic Controlled Throttle Body

14570 Industrial Park Road • Bristol • Virginia • 24202 • 276-669-5555
General Specifications

Mixer Module Assembly

With Drive By Wire

Gaseous Fuel

Applications:  
- Fixed RPM 1.0L-5.8L @ 1800 RPM*
- Mobile 1.0L-5.8L @ 3200 RPM*

Generator Sets  
- 5 kilowatt-100 kilowatt

Flow Capability:  
- 250 CFM @ 2.0” Hg

Power:  
- 7 HP- 140 HP

Fuel Types:  
- Propane / Natural Gas

Venturi Sizes:  
- 14mm, 16mm, 18mm, 20mm, 22mm,
- 24mm, 26mm, 28mm, 30mm, 32mm,
- 34mm, 36mm, 38mm, 40mm, 42mm,
- 44mm, 46mm, 48mm, 50mm

Regulator:  
- Zero Pressure Regulator

Temperature:  
- -20° to 220 °F

Note: *See General System Application for more Information
Mixer Module Assembly
With Manual Actuator

Gaseous Fuel

- Tuned Flow Air Inlet
- Venturi Mixer Module
- Fuel Inlet
- Manual Throttle Body
- Manifold Adapter (Optional)
Mixer Module Assembly

With Manual Actuator

Gaseous Fuel

Applications: Fixed RPM 1.0L-5.8L @ 1800 RPM*
Generator Sets 5 kilowatt-100 kilowatt
Flow Capability: 255 CFM @ 2.0” Hg
Power: 7 HP- 140 HP
Fuel Types: Propane / Natural Gas
Venturi Sizes: 14mm, 16mm, 18mm, 20mm, 22mm,
               24mm, 26mm, 28mm, 30mm, 32mm,
               34mm, 36mm, 38mm, 40mm, 42mm,
               44mm, 46mm, 48mm, 50mm
Regulator: Zero Pressure Governor
Temperature: -20° to 220 °F

Note: *See General System Application for more Information
Multi-Function

Electronic Control Unit
( ECU )

- Heavy Duty Aluminum Enclosure
- Sealed Connector
- Connector Shield
- Multiple Mounting Methods
General Specifications

Electronic Control Unit

Power Input: 12 VDC (7-18 VDC)
Reverse Polarity Protection

Power Consumption: 65 W Maximum
Operating Temperature: -20° to 105 °C

Control Characteristics

Control: Microprocessor with CAN Bus
Speed Input: Magnetic Pickup, Ignition Coil Input or Digital Input
MPU Input: 100 to 12,000 Hz
IGN Input: 1, 2, 3, 4, 5, 6 & 8 Cylinder Engines with Rated Speeds of 50-5000 RPM
Engine Type: 2 Cycle or 4 Cycle: Gasoline or Gaseous Fuel
Target Speed: Programmable
Actuator: High-Efficiency Toroid Governor

14570 Industrial Park Road • Bristol • Virginia • 24202 • 276-669-5555
Dual Stage, Multi Function
Gaseous Fuel Regulator

- Unique Modular-Two Stage
- Coolant Inlet/Outlet
- High Efficiency Coolant Heat Exchanger
- Inlet Port
- Primary & Secondary Pressure-Adjustable or Tamper Resistant
General Specifications
Dual Stage, Multi Function
Gaseous Fuel Regulator

Unique Modular-Multi-Function, Two Stage

Inlet: Liquid Propane, Propane Vapor or Natural Gas

Operating Inlet Pressure: 312 PSI Maximum

Variable Positive Outlet Pressure or Zero Governor
Positive Pressure Regulator: (312 PSI to +15 PSI)
Zero Pressure Regulator: (312 PSI to <1 PSI)

Adjustable Pressure or Tamper Resistant

Capacity: 7HP-100 HP @ 15 PSI Output Pressure

Environmental Operating Range: -20° to 220 °F

High Efficiency Coolant Heat Exchanger

Integral Mounting Pads

Inlet Port: 1/4” or 3/8 FNPT

Outlet Port: 1/4”, 3/8 or 1/2” FNPT

Coolant Inlet/Outlet: 3/8” FNPT
FUEL CELL

Fuel Pump Replacement

Makes Return Lines to The Tank Obsolete

Inlet Port

Return Port

Heat Exchanger

Outlet Port

Internal Pump & Pressure Accumulator
## Engine Size

### General System

### Applications

<table>
<thead>
<tr>
<th>ENGINE DISPLACEMENT</th>
<th>MAXIMUM RPM 1800</th>
<th>MAXIMUM RPM 2400</th>
<th>MAXIMUM RPM 3200</th>
<th>MAXIMUM RPM 3600</th>
<th>MAXIMUM RPM 3800</th>
<th>MAXIMUM RPM 4000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Throttle Plate Size</td>
<td>Throttle Plate Size</td>
<td>Throttle Plate Size</td>
<td>Throttle Plate Size</td>
<td>Throttle Plate Size</td>
<td>Throttle Plate Size</td>
</tr>
<tr>
<td>Liter</td>
<td>Cubic Inch</td>
<td>0.865</td>
<td>0.865</td>
<td>1.023</td>
<td>1.181</td>
<td>1.181</td>
</tr>
<tr>
<td>1.0</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>73</td>
<td>1.023</td>
<td>1.023</td>
<td>1.181</td>
<td>1.181</td>
<td>1.181</td>
</tr>
<tr>
<td>1.3</td>
<td>79</td>
<td>1.023</td>
<td>1.023</td>
<td>1.181</td>
<td>1.181</td>
<td>1.181</td>
</tr>
<tr>
<td>1.5</td>
<td>92</td>
<td>1.023</td>
<td>1.181</td>
<td>1.297</td>
<td>1.297</td>
<td>1.297</td>
</tr>
<tr>
<td>1.6</td>
<td>98</td>
<td>1.023</td>
<td>1.181</td>
<td>1.297</td>
<td>1.297</td>
<td>1.417</td>
</tr>
<tr>
<td>2.0</td>
<td>122</td>
<td>1.297</td>
<td>1.297</td>
<td>1.417</td>
<td>1.417</td>
<td>1.417</td>
</tr>
<tr>
<td>2.5</td>
<td>153</td>
<td>1.297</td>
<td>1.297</td>
<td>1.535</td>
<td>1.535</td>
<td>1.535</td>
</tr>
<tr>
<td>3.0</td>
<td>183</td>
<td>1.297</td>
<td>1.417</td>
<td>1.653</td>
<td>1.653</td>
<td>1.771</td>
</tr>
<tr>
<td>4.2</td>
<td>256</td>
<td>1.535</td>
<td>1.653</td>
<td>1.889</td>
<td>1.968</td>
<td>1.968</td>
</tr>
<tr>
<td>4.3</td>
<td>262</td>
<td>1.535</td>
<td>1.653</td>
<td>1.889</td>
<td>1.968</td>
<td>1.968</td>
</tr>
<tr>
<td>5.0</td>
<td>305</td>
<td>1.535</td>
<td>1.771</td>
<td>1.968</td>
<td>2.165*</td>
<td>NA</td>
</tr>
<tr>
<td>5.7</td>
<td>350</td>
<td>1.653</td>
<td>1.889</td>
<td>2.165*</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>5.8</td>
<td>351</td>
<td>1.653</td>
<td>1.889</td>
<td>2.165*</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>7.0</td>
<td>427</td>
<td>1.889</td>
<td>2.165*</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>7.4</td>
<td>454</td>
<td>1.889</td>
<td>2.165*</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>7.5</td>
<td>460</td>
<td>1.889</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>8.1</td>
<td>496</td>
<td>1.968</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>8.2</td>
<td>502</td>
<td>1.968</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Note:** Use 2.0” 90 Degree OR Straight, Downdraft, Air Horn

**Note:** Use 2.0” Straight, Down Draft, Air Horn Only

---

14570 Industrial Park Road • Bristol • Virginia • 24202 • 276-669-5555
Options

ECU Mounting Brackets

Air Horn Types

Electric Fuel Pumps

Custom Manifold Adaptors

14570 Industrial Park Road • Bristol • Virginia • 24202 • 276-669-5555
Standard & Custom Wire Harnesses