

## IPCO FID Injector

### Water-in-Fuel Conditioning Before the Engine

The IPCO FID Injector Plus is designed to create a stable water-in-fuel emulsion before injection. Using IPCO Power's high-shear homogenization technology, comparable to a "coffee grinder for fuel", the system mechanically conditions the fuel and water mixture prior to combustion.

By improving fuel atomization and fuel-oxygen interaction, the FID Injector Plus supports cleaner combustion, reduced emissions, and more stable engine operation.

### Key Benefits

- Creates a stable water-in-fuel emulsion
- Supports improved combustion efficiency
- Reduces NO<sub>x</sub>, smoke and particulate emissions
- Supports cleaner combustion chambers and exhaust systems
- Improves fuel atomization before injection
- Mechanical treatment only — no additives required
- Designed for continuous 24/7 operation
- Suitable for HFO



### How It Works

The IPCO homogenizer mechanically conditions the fuel and water mixture using high shear forces inside the homogenizing chamber. This creates a stable and uniform emulsion, supporting improved atomization and combustion performance.

The system includes integrated PLC control and high-accuracy Emerson Coriolis mass flow measurement for fuel and water monitoring.

### Technical Features

- High-shear vertical homogenizer
- Aluminum 7075-T6 housing
- Proprietary hard-coat protection
- Magnetic coupling (no mechanical seals)
- Self-lubricating homogenizing chamber
- Integrated high-pressure water pump
- Emerson Coriolis mass flow meters
- PLC-controlled water injection system
- Continuous-duty marine design

### Capacity and power:

Higher capacities are available on request

FID Type	Capacity l/h	Power kW
FID 045	4.500	15
FID 090	9.000	15
FID 120	12.000	15

### General Specifications

- Max pressure: 12 bar
- Minimum fuel temperature for HFO: 90°C
- Power supply: 400 / 440 / 460V or 690V
- Control panel: 230V @ 50Hz / 250V @ 60Hz
- Protection class: IP54

- Flange connections: DN50 and SAE flange (Counter SAE flange supplied)
- Frame paint system: RAL7016

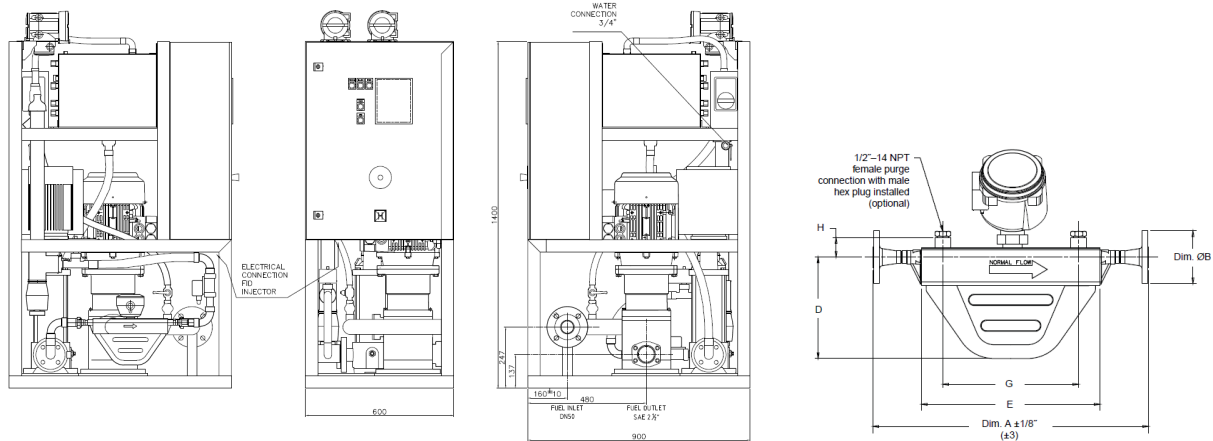
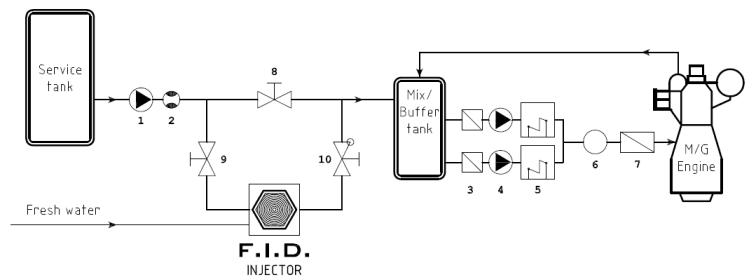
### External Connections

- ESD to ship
- ESD from ship
- Running contact
- Fault contact
- Water-in-fuel percentage output

External connections are optional for standalone operation.

### Installation Position

Designed for installation before the circulation system before the engine.



### Separate Emerson F200 to installed in fuel line towards FID Injector

A = 600 mm | B = 165 mm | D = 319 mm | E = 454 mm | F = 143 mm | G = 356 mm | H = 61 mm