Facet International

- Series MV Diesel filter/water separator packages

Model	Flow rate l/h	Fuel	kW	Pump RPM	In-depth micro firlter + 2-stage coalescer/separator
MV-11-AD	600	MDF-MDO-MGO	0,55	950	1MCFD-MG10PJ
MV-11-AG	1200	MGO	0,55	950	VFCS-DC-201S-1C14
MV-22-AD	1200	MDF-MDO-MGO	0,55	950	2MCFD-MG10PJ
MV-22-AG	2400	MGO	0,55	950	VFCS-DC-202S-2C14

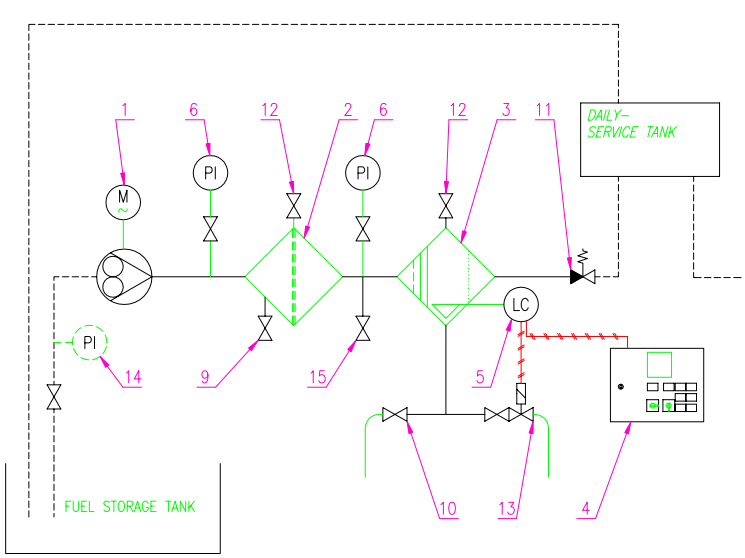
Introduction

Facet's many years of experience and development in the extremely demanding field of marine gas turbine fuel treatment applications have resulted in technology which has been embodied in the MV-11-A and MV-22-A packages. These ready to operate, automatic systems will take care of filtration, water separation and sodium removal from gas oil and light marine diesel fuel at flow rates of 10 and 20 l/m respectively. Because of their efficiency, they also substantially reduce microbiological activity in the fuel tanks and, therefore, prevent the deposition of biological slime. Being developed for gas turbines, the packages are obviously well suited to diesel engine applications.

Installation & Operation

The systems are gene-rally installed between the storage, or settling tank, and the daily service tank. The pump will continuously transfer sufficient fuel from tank to tank to keep the daily service tank full. (if needed, the system may be controlled by level sensors in the daily service tank). A microfilter and two-stage filter/separator installed on the delivery side of the pump, efficiently and economically remove dirt and water. An automatic water drain and an alarm system are fitted into the control box and connected to the level controller in the filter/ separator. The automatic drain system keeps the water level in the sump of the filter/separator between set points by opening and closing a solenoid drain valve. System status is indicated by a light system fitted to the control box. A green light indicates the water sump valve is open and a red light gives a visual indication that water build-up has exceeded the safe capacity of the system. A remote alarm can be powered from connections fitted inside the box. In addition, the control box is provided with a "Power-On" light and a "Pump-Running" light.

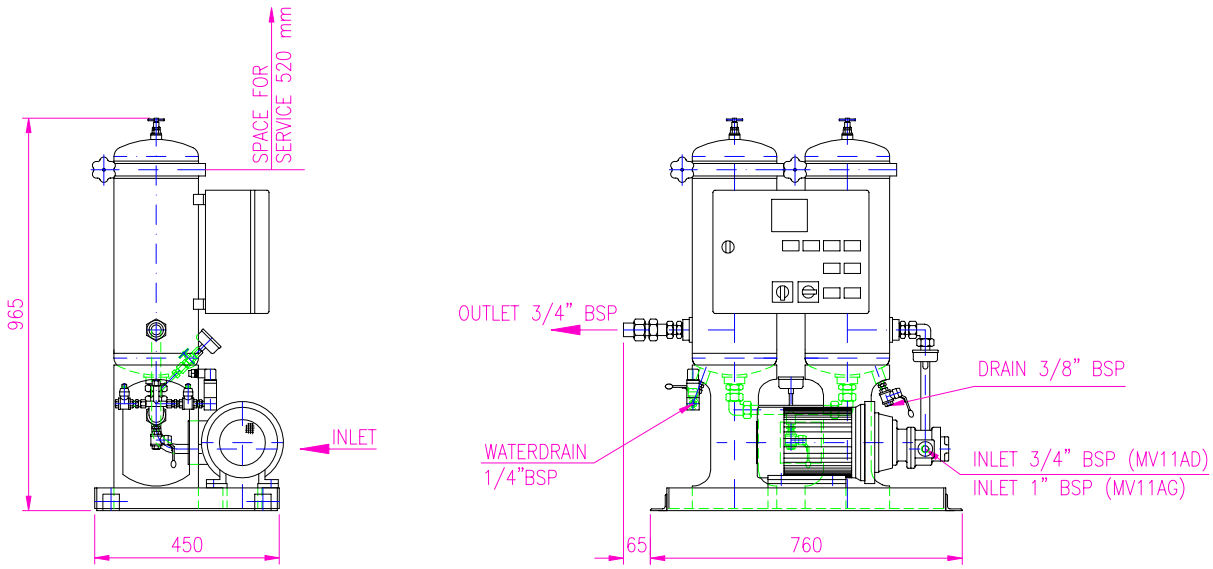
Flow Diagram



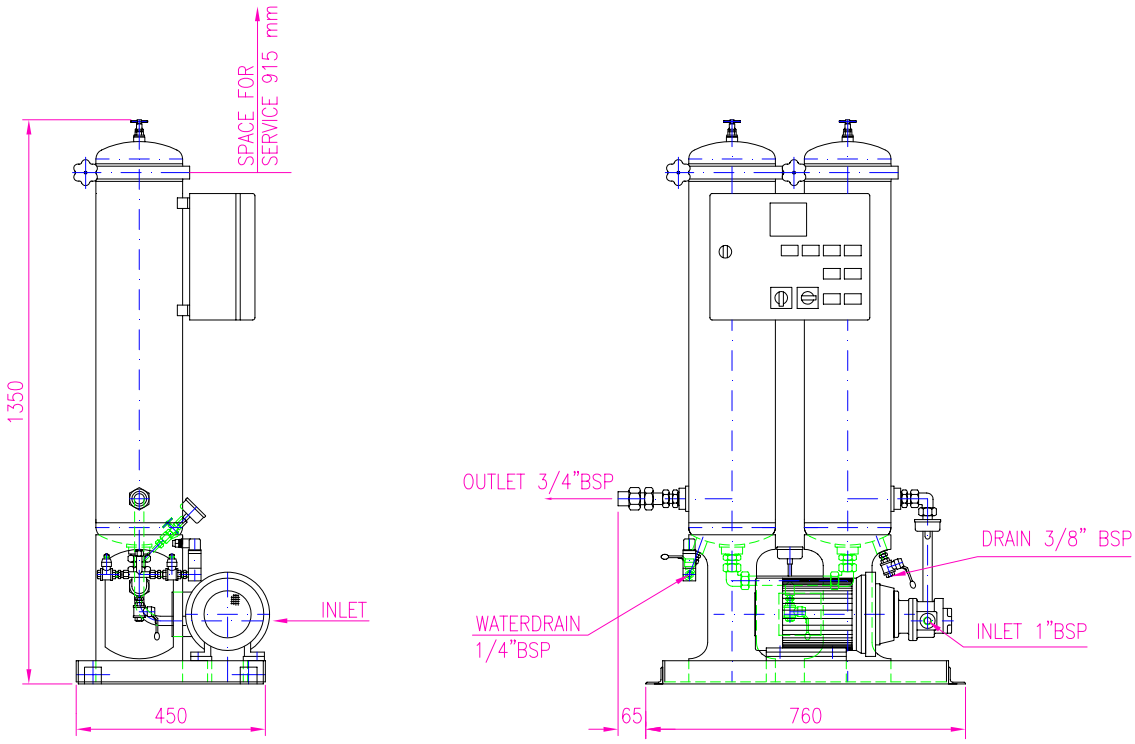
DESCRIPTION

1) GEARPUMP
2) MICROFILTER
3) TWO–STAGE COALESCER/SEPARATOR
4) CONTROL BOX
5) WATERLEVEL ELECTRODE
6) PRESSURE GAUGE
9) DRAIN– AND SLUDGE OUTLET VALVE ON MICROFILTER
10) DRAIN VALVE ON COALESCER/SEPARATOR
11) PRESSURE CONTROL/CHECK VALVE
12) VENT VALVE
13) AUTOMATIC WATER DRAIN
14) VACUUM GAUGE
15) DRAIN VALVE

Dimensions MV-11-AD(AG)



Dimensions MV-22-AD(AG)



Models & Main components

The MV Series packages come in two basic sizes for two different flow rates which depend upon the type of fuel being handled. The packages generally comprise the following main components:

1. Gear pump
2. Depth type micro-filter
3. Two-stage coalescer/separator
4. Control box IP 56
5. Automatic water drain system
   Sensor: Intrinsically safe
   Solenoid Valve
6. Pressure gauges
7. Drain- and sludge outlet valve on micro-filter
8. Drain valve on coalescer/separator
9. Pressure control/check valve
10. 2 Vent valves
11. V-Band quick closures
12. Integral Drip Tray

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What is a coalescer/separator?

High efficiency coalescers comprise a multi-layered bed of generally water wettable micro-fibres in the form of replaceable cartridges (see inset). These can transform minute water droplets into larger ones of up to 6 mm diameter which separate rapidly. In order to increase flow rates further, a water repellent membrane (called a separator or stripper) is often used to shorten the settling path. This highly efficient combination is usually called a coalescer/separator and can reduce water levels to just a few parts per million whilst, at the same time, also reducing the mainly waterborne sodium levels below 0,5 parts per million. As a result they offer the optimum protection for diesel engines and gas turbines, whether in the air, at sea, off-shore or on land.