

## CPS BV MOD. I



Facet International have been involved around the world in liquid/liquid separation for many years, particularly in refineries, petrochemical industries and gas turbine fuels.

This expertise in liquid/liquid separation led to Facet International launching an oil water separator in 1968, which satisfied the IMO requirements put forward in 1972. Once again Facet is ahead and Facet Bilge water separators can meet the latest IMO Res. A 393(X) without any filter elements. We have found that many common systems using cartridges, or combinations of cartridges and gravity separators, require the equivalent of their initial capital cost each year in consumable cartridges.

Because of this high cost some ships do not replace cartridges - not at all satisfactory from a marine pollution viewpoint!

### DEVELOPMENT AND OPERATION

The patented coalescing plate separator packs, used in our Bilge water separator were developed during a seven year research and field trial program in the USA. The outcome of our research is an incredibly cost effective system to separate oil from water to better than 15 ppm effluent, without the use of consumables. The high efficiency of the coalescing plate packs is obtained by their use of both gravity separation and hydrodynamic coalescence. The plate shape, spacing and influent velocity have been combined to give complete removal of all oil particles of 20 microns and over.

The best level achieved by a conventional gravity separator is total removal of particles of 60 microns and over. The plate shape

promotes hydrodynamic collision of oil particles and these collisions also mean many particles between 5 and 20 microns are captured by the plates. Our technical specialists will explain this principle in more detail if required. The Facet unit is highly cost effective when seen as a total package. While its initial cost may be slightly more than conventional equipment, the Facet CPS-BV never requires replacement cartridges or other consumables.

NO REPLACEMENT CARTRIDGES REQUIRED

### CERTIFICATION

Certificates to IMO and MEPC.60 (33).

### OPERATING PRINCIPLE

The integrated vertical helical rotary pump draws the water/oil mixture from the bilge and delivers it into the inlet equalization chamber. The flow is then split into two almost vertical upward streams in which the gross oil is accelerated towards the oil collection area. The water, now only containing low concentration of oil, deflects towards the coalescing plate inlet section. In the plates, oil particles down to 15 micron are fully removed from the water-phase and transferred to the oil collection area through weep holes. A scavenging/dry run prevention line is provided between the water outlet compartment and the suction side of the pump. The field proven Facet level control device initiates automatic evacuation of separated oil to the slop tank.

**STANDARD SUPPLY**

(ready to operate)

- 1 Pump
- 1 Separator
- 1 Level sensor
- 1 Control box
- 1 Automatic oil outlet valve
- 1 Vent valve
- 2 Test cocks
- 1 Safety valve
- 1 Pressure gauge
- 1 Dry run prevention line.

Electrical connections:

380 V 50 cycl. 3 ph or 440 V 60 cycl. 3 ph.

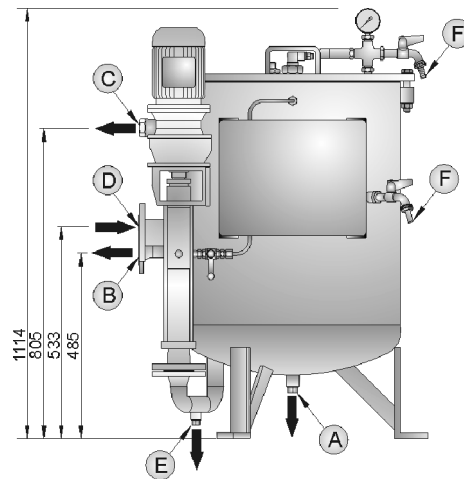
Control box is provided with connection for automatic start/stop with bilge level sensor.

Accessories: Heating in oil collection area  
 Bilge alarm monitor.

**SUMMARY**

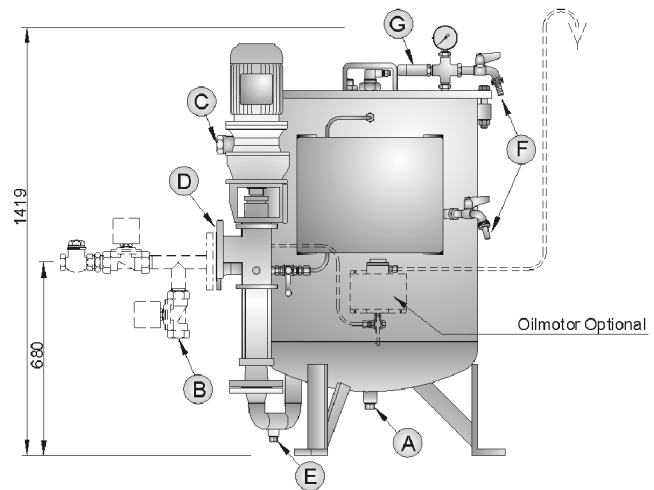
- For small flowrates: 0.5 & 1 m<sup>3</sup>/h
- At lowest price
- No replacement cost (no filters)
- Minimum space requirements
- Simple installation
- Fully hot-dipped galvanized
- Simple, but sophisticated
- Virtually maintenance free
- Worldwide support services

In excess of 500 units in operation in both Merchant. Marine and in Military Naval applications.



CPS-2,5 BV MOD. I

Above the highest point of vessel



CPS-5 BV MOD. I

