



**CUTAWAY—TYPICAL FILTER/SEPARATOR**

## FUNCTION OF FILTER/SEPARATOR ACCESSORIES

**Air Eliminator** – Provides air vent to permit escape of trapped air during filling of vessel. When unit is completely filled with fuel, air eliminator automatically closes.

**Check Valve** – Prevents air from siphoning into the vessel through the air eliminator.

**Pressure Relief Valve** – This valve can be set to open at a desired pressure to exhaust excess pressure built up in the system, due to thermal expansion in a non-flow condition.

**Coalescer Element** – Designed to remove solid contaminants, to break the emulsion of water in the product into droplets, and to enlarge these droplets so that they will drop out of the product. The flow is from the inside to the outside of the coalescer.

**Separator Element** – Repels coalesced water droplets and prevents them from going downstream. The flow is from the outside to the inside.

**Pressure Gauge** – The direct reading differential pressure gauge is used to measure the pressure difference between the inlet and outlet of a filter/separator, thus providing an indication of element condition.

**Float Control** – Rides the interface between fuel and water, and by its up and down movement, opens and closes ports to generate hydraulic signals to automatic valves. Velcon recommends the “ballast” type float control for easier checking of the integrity of the float ball.

**Slug Valve** – In the event of excessive water build-up, the slug valve, on signal from the float control, will shut down all flow through the system until excess water can be drained off. The slug valve can be provided with a rate-of-flow control which will prevent excessive flow rates through the filter/separator.

**Sampling Probe** – The purpose of the probe is to insure that fuel samples are representative of the fuel in the pipe. The probe penetrates through the pipe coupling that is welded to the pipe. There is no possibility of rust and dirt that usually collects in stagnant pockets reaching the filter membrane test capsule.

**Manual Drain** – Opened daily to remove any accumulated water and to sample the fuel in the sump. This also helps to evaluate the condition of the coalescer. It is also opened to completely drain the vessel when changing elements.



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