

# DENSITY SENSITIVE SERVO VALVE FUEL GRADE MONITOR

## Key Benefits

- Automatically isolates flow should incorrect fuel be delivered
- Density monitoring for automatic fuel shut-off
- Simple, robust, self contained
- No power required
- No maintenance and easy to install
- Sensitive to a 1% change in density
- Suitable for pumped applications

## Application

When dealing with multiple fuel grades of white oils and/or multiple tanks, the possibility may exist of delivering the wrong fuel into the wrong tank or fuel of an incorrect density. The AMS brand Fuel Grade Monitor & Control Valve monitors the fuel on delivery and automatically shuts off the valve if the incorrect fuel density is detected. The valve is designed to detect and respond to changes of 1% in fuel density, thus preventing incorrect fuel or liquid delivery.

This dual feature of continuous monitoring and control makes it ideally suitable in eliminating errors in fuel delivery.

Typical applications:

- **Airport fuel delivery to storage tanks**
- **Fuel delivery at fuel storage terminals**
- **Mixed product storage facilities**



## Operation

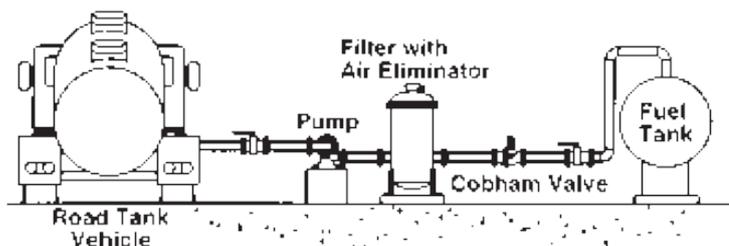
The fuel grade monitor is directly mounted to a servo control valve and consists of one or two floats, depending on the application, with their density corresponding to the upper or lower limits of the liquid flowing through it. The two floats are vertically mounted in glass tubes which are linked to the valve chamber in a bypass. The tubes can also be linked to an air eliminator chamber which allows any entrained air or gas to be removed.

Fuel must flow through the bypass monitor for the servo control valve to open. When fuel of the correct density is flowing through the monitor, the two floats remain in their rest positions and the valve remains open. If fuel of an incorrect density passes through, the corresponding float will rise (or fall) and close the by-pass flow, thereby causing the valve to close.

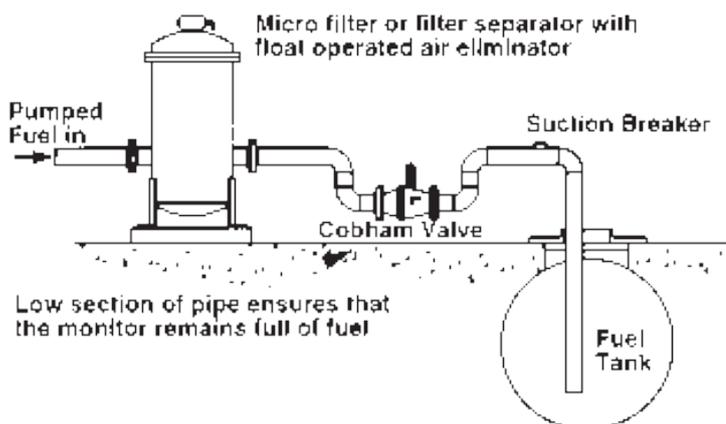
Once the monitor becomes saturated with this incorrect fuel the valve will remain closed and cannot be bypassed. The monitor can only be re-set by thorough cleaning, thus ensuring against fuel contamination.

## Typical application

### Above Ground tank:



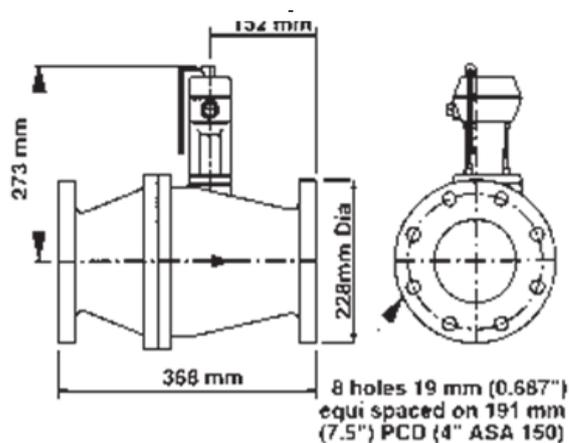
### Underground tank:



## Specification

The monitor valve is only suitable for pumped systems and is not recommended for gravity discharge systems (see Density Sensitive Valve for gravity discharge).

The valve is installed horizontally in the pipeline and it is recommended that air is removed before it enters the valve by an air separator. The valve should always remain full of fuel.



Materials:	Anodised Aluminium Alloy (2" St/St possible on request)
Max working pressure:	10 Bar
Maximum flow rate::	2" – 600 Litres/Min; 4" – 4,500 Litres/Min
Temperature:	80 DegC
Flange sizes(Std):	2" – 150mm OD with 4 x 5/8" YNF Tapped holes on 114.3mm PCD 4" – 229mm OD with 8 x 19mm holes on 191mm PCD (NB: Flange size can be made to suit customers requirements)
Documentation:	A range of documentation can be available to suit customer requirements

## Part number

SV2027	2" Fuel Grade Monitor	SV4639	3" Fuel Grade Monitor	SV4606	4" Fuel Grade Monitor
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