

FluiBlend™ Bunker Blending – Technical Data Sheet

FluiMix™ has developed FluiBlend™ an In-line blending system that offers many advantages over traditional ratio controlled static mixer systems or in tank blending. Return on investment is typically less than 9 months generated from reduced give away. It offers huge savings and operational benefits to a bunker blender and allows an operator to **Blend On Demand**.

When compared to Traditional Trim Control blenders, the FluiBlend™ will generate savings in excess of \$15/tonne. For a 100,000 tpa production rate this could have a **potential saving of over \$1,500,000 per annum** in reduced raw material costs when compared to other blending systems.

Compared to traditional tank blending the savings can be as high as 30 – 40 USD per MT. FluiBlend™ systems do not need expensive Blend Tanks which would save \$5 - \$10 M in reduced capital or de-bottle necking costs.

FluiVisc™ - Viscosity Accuracy - FluiVisc™ uses extremely accurate temperature correction technology that recalibrates dynamically in real time to the blend being processed. Bespoke viscometer measurement achieves measurement accuracy +/- 1% of the desired viscosity. Traditional blenders use inaccurate temperature compensation based on pre-calibrated curves and viscosity measurement technology that is at best +/-1% of span. For a 60 cSt product produced from 380 cSt this improvement in accuracy will lead to significant savings. FluiVisc™ will measure to +/-0.6cSt whereas traditional technology will only achieve +/- 3.8 cSt before any temperature compensation error is considered.

Blending or Loading Rate Flexibility – The FluiBlend™ system develops a negligible pressure drop, irrespective of flow rates allowing a far greater range of loading or blending rates. This allows the operator to **handle any sized vessel** as quickly as possible whilst maintaining product quality.

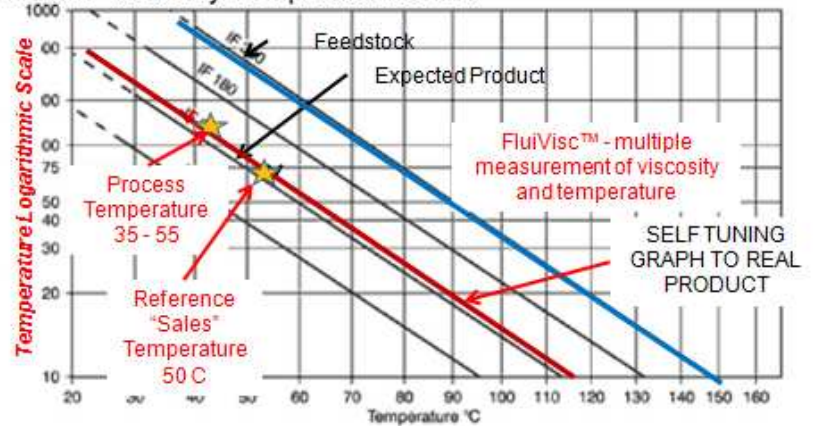
Flexibility in Product Range - FluiBlend™ has almost infinite turndown when compared to traditional static mixer systems and allows a **far wider range** and number of **finished product viscosities** to be produced (from high to low viscosity products) without any compromise in either blend accuracy or blend rate.

FluiSulf™ - Blending on Sulfur Level - FluiBlend can also be modified to blend away high sulfur batches. It encompasses unique technology to eliminate the error associated with trace water content for inline sulfur measurement. This allows blending to be accurate to within +/- 300 ppm.

Flow Proportional Sampling & MARPOL Regulations - FluiSulf™ automatically collects a flow proportional sample for quality control that complies with all the MARPOL and American Petroleum Institute Metering and Sampling Standards.

FluiVisc™ Dynamic Compensation

Below: Viscosity Temperature Chart



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Blend Ratio 60 cSt

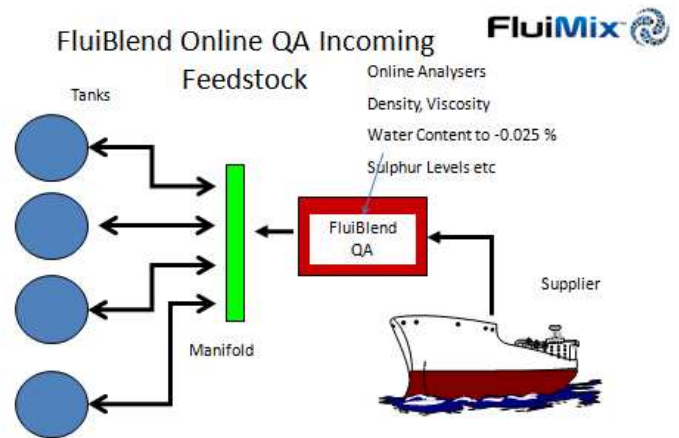
	Trad' Trim Control	Trad' Trim Control	FluiMix
Feed Stock	360	180	360
Error	+/- 3.6	+/- 1.8	+/- 0.6
Target Viscosity	51 cst	55 cst	58.5 cst
% Gas Oil	30	27.8	26.3
Increase in GO	14 %	6%	0

FluiBlend™ can be configured to sample your incoming raw materials helping you to assure your product quality from costly sulfur and heavy metal contamination as well as prevent excess water acceptance.

Direct Tanker Loading - FluiBlend™ can be jetty, barge, or trailer mounted to enable you to load directly onto your clients vessel.

FluiBlend™ offers potential savings in:

- FluiBlend™ can be utilized to easily monitor the quality of the incoming HFO – particularly BS&W. All HFO includes BS&W that without API compliant mixing at the sampling point on the incoming feedstock lines will result in significant quantities of water being bought at the price of HFO. Other parameters such as heavy metals and viscosity drift in raw material deliveries can be identified thereby preventing supplier quality issues creating problems for a terminal;
- Lower Tank usage – saving at least one blend tank;
- Improved stock control and raw material turnover;
- Minimal losses or flash-off of gas oil in traditional storage tanks;
- The ability to provide API compliant homogenous and representative samples means that you can guarantee that the product loaded conforms to the loading specification.



Same Blender Prevents your Suppliers Quality Problems Reaching You

FluiBlend™ for Bunker Fuel Blending



FluiControl on Viscosity & Sulphur Control

