



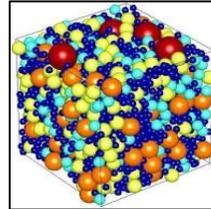
Fungilab  **fgb**

VEL INLINE PROCESS VISCOMETER

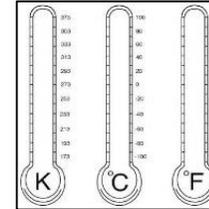
VEL Monitors in real time fluid's, density viscosity and temperature



VISCOSITY



DENSITY



TEMPERATURE

- Based on millimeter-scale, metal-made mechanics positioned across the flow line. Its reduced dimensions allow for a use with small tubings (<1/4") up to mainlines while providing excellent dynamic behavior and tolerance to particles, deposition, vibration and EM fields.
- It can also be used in static fluids, self-compensating the influence of fluid pressure & temperature changes in low power design.

PRECISE

SELF-COMPENSATING

LOW POWER

MINIATURIZED

FAST (1Hz) UPDATE

**AUTO
CLEANING**

AUTO-CALIBRATION

PTFE AND DLC COATED

Ex CERTIFIED

**INDUSTRY STANDARD
PROTOCOLS**

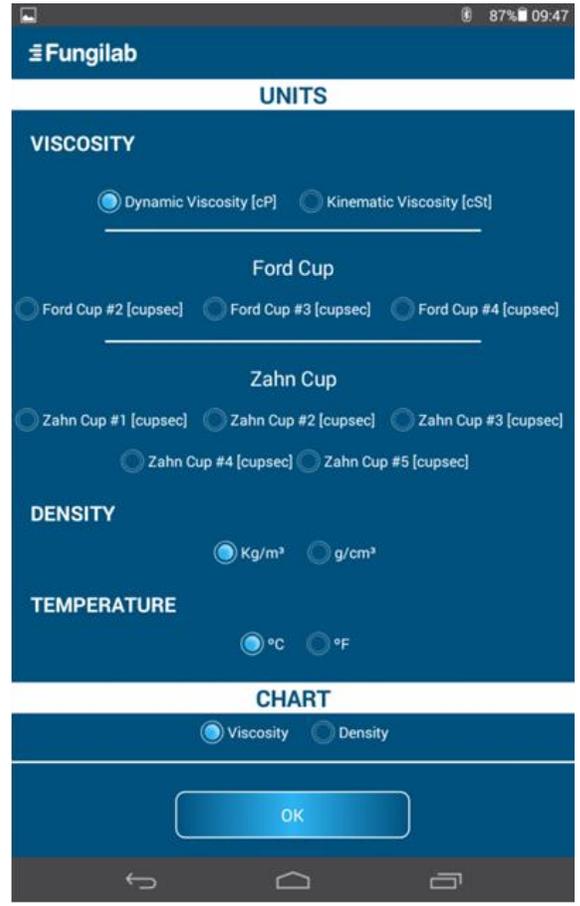
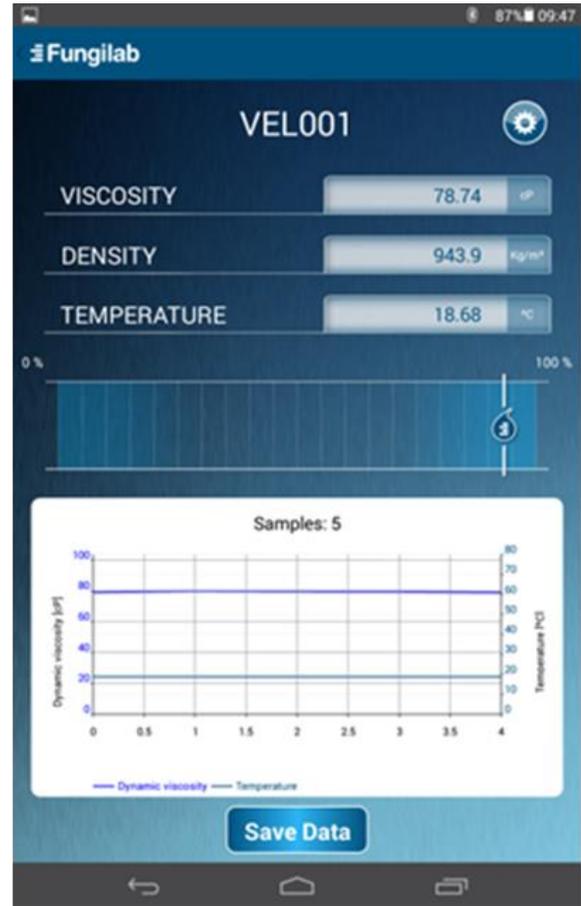


The future of viscosity control realized.

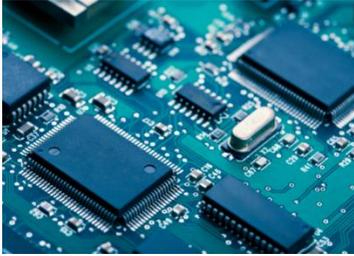


PARAMETER	VALUES	
> VISCOSITY		
Range	0.3 to 1000 cP	
Accuracy	0.8% of full scale (typ)	2% of full scale (max)
Repeatability	0.5% of full scale	
> TEMPERATURE		
Range	-55°C to 200°C	-67°F to 392°F
Accuracy	0.1°C	
Repeatability	0.1°C	
> DENSITY		
Range	600 to 2000 kg/m ³	0.6 to 2 g/cm ³
Accuracy	0.1% of full scale (typ)	0.5% of full scale (max)
Repeatability	0.1% of full scale	
> OPERATION ENVIRONMENT		
Operation temperature	-55°C to 200°C	
Operating pressure	Up to 150 bars	Up to 2000 PSI
> MECHANICAL		
Material	Stainless steel 316, Hastelloy	
L x W x H	6.35 x 6.35 x 30 mm	
Coating	PTFE, DLC	
Sample volume needed	< 2 ml	
> FEATURES		
Auto-cleaning	Yes	
Auto-range	Yes	
Update rate	1 Hz	
> COMMUNICATION	USB, RS232, Bluetooth, RS485 MODBUS RTU, MODBUS TCP IEC 62591 (others on demand).	
> CERTIFICATIONS		





VEL Integration Examples



OEM embedded in analyzers



Tanks & Terminals



Pipelines



Fuel Tankers

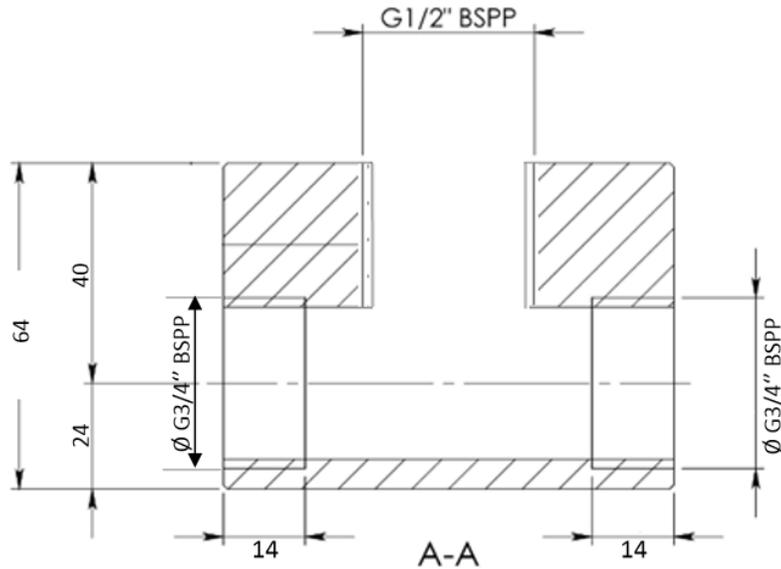


Marine Transport

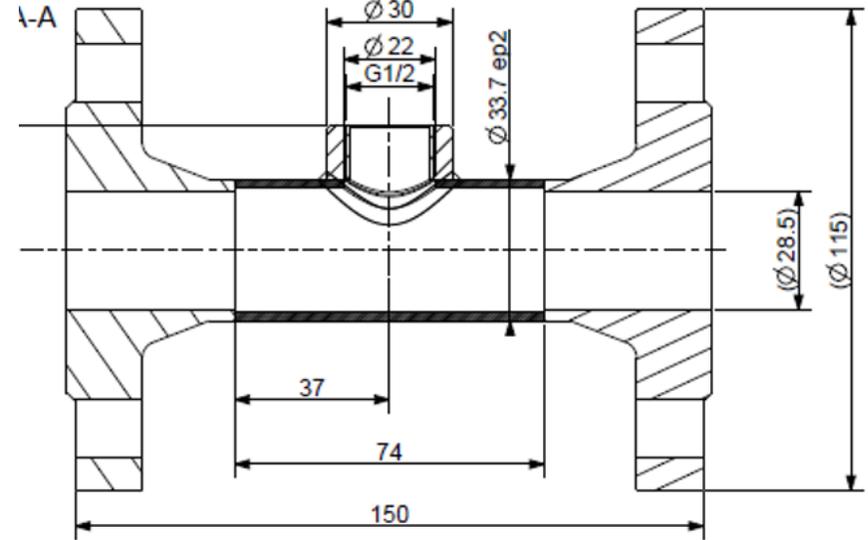


Deicing Trucks

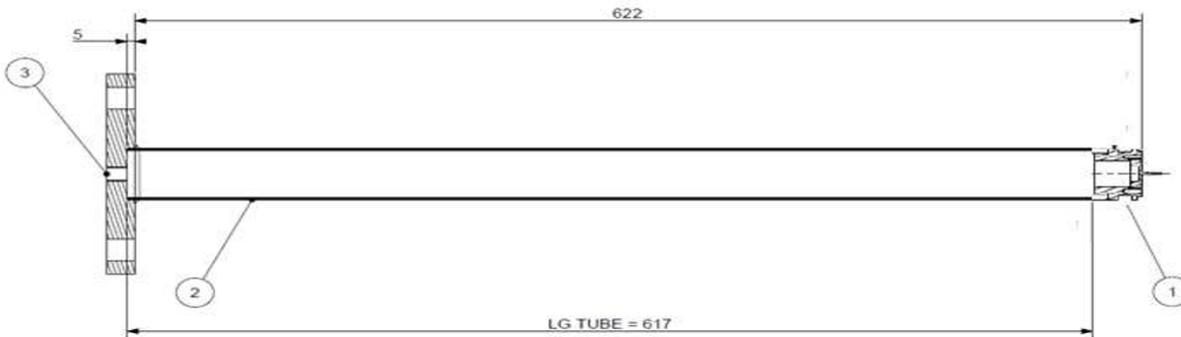
VEL Mechanical Installation



Baseplate for small pipes & bypass



Between flanges

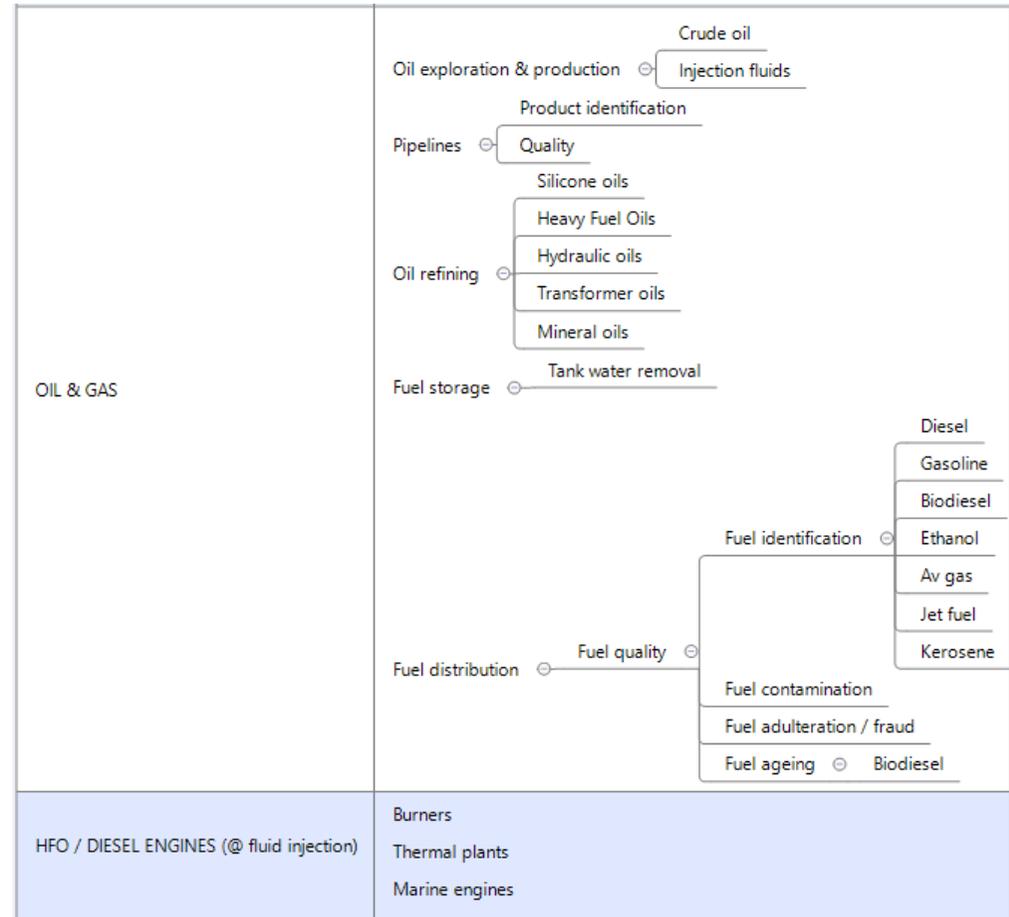


Flanged for insertion into tanks

Others mounting options:

- Threaded G 1/2"
- Customized baseplate in/out sizes
- Sanitary fittings, tri-clamp mountings
- Portable probe
- Between flanges for large pipes

INKS	<ul style="list-style-type: none"> In line In tank Reactor In line reactor <p>Flexography</p> <p>Printing press</p> <p>Lacker coating</p> <p>Bottle printing, container printing</p>
PAINTS	<p>Spray painting</p> <p>Open tank</p> <p>Paint coating</p> <p>Lasure (requires D+V)</p> <p>Laque (requires D+V)</p>
COATING	<p>Resins for organic composites</p> <p>Solder flux for wave soldering</p> <p>Conformal coating</p> <p>Flow coating</p> <p>Varnish for wire coating</p>
SOLVENTS	
POLYMERIZATION	<ul style="list-style-type: none"> PVC PC / PP / PE PMMA... <p>Polymers</p> <ul style="list-style-type: none"> Polyesters Polyamids <p>Resins</p> <p>Hyaluric acid</p>

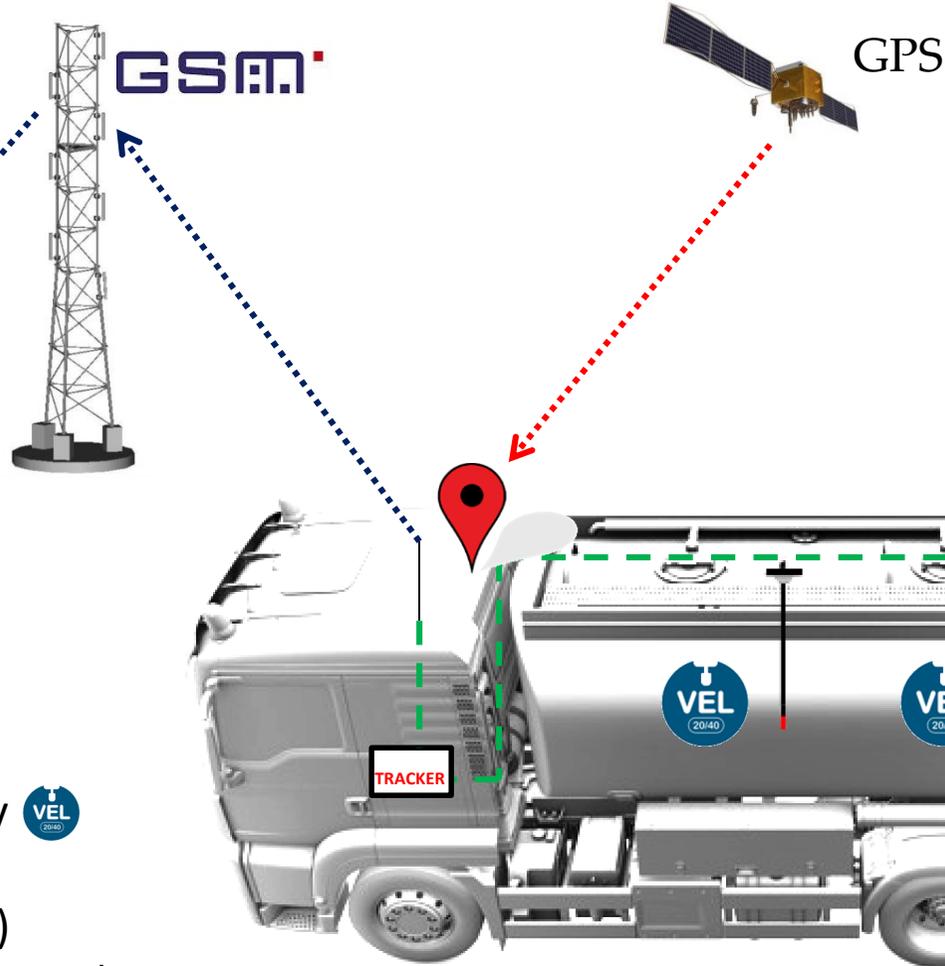


FOOD & BEVERAGE	<ul style="list-style-type: none"> Fruit juices Soups Food oils <ul style="list-style-type: none"> Palm oils Olive oils ... Milk Wort Liqueurs Wine Concentration of <ul style="list-style-type: none"> Proteins Enzymes Flavours Sugar boilers (crystalization control)
HEALTH	<ul style="list-style-type: none"> Plasma Serum
BIOTECH	<ul style="list-style-type: none"> Gels Bioremediation Microbial concentration Cellulose nitrates
ICE DETECTION	

HFO / DIESEL ENGINES (@ fluid injection)	<ul style="list-style-type: none"> Burners Thermal plants Marine engines
LUBRICANT MONITORING	<ul style="list-style-type: none"> Thermal plants Marine engines Hydroelectric plants Rail powertrains Wind turbines Gas turbines Rotating machineries (industrial)
COSMETICS	<ul style="list-style-type: none"> Lotions Perfumes Detergents

CUSTODY TRANSFER	Aircraft refueling <ul style="list-style-type: none"> Onboard planes Fueling trucks
REFINING	Light fuel refining <ul style="list-style-type: none"> Jet 100LL Kerozene Jet A1 Gasoline <p>API density</p> <p>Diesel oil refining</p> <p>Tank emptying</p> <p>Water removal</p>
PIPELINE MONITORING	
CRUDE OIL	Specific gravity
CHEMISTRY	<p>Concentration of additives <ul style="list-style-type: none"> coating ... </p> <p>Binary mixes <ul style="list-style-type: none"> Sulfuric acid in battery packs pharma mixes of two liquid phases ... </p> <p>Distillation monitoring</p> <p>Phase changes detection</p> <p>Reaction monitoring <ul style="list-style-type: none"> polymerization ... </p>

FOOD & BEVERAGE	<p>° BRIX <ul style="list-style-type: none"> Fruit juices Brewing Wine making Carbonated beverages ... </p> <p>Milk</p>
SOLVENTS	Concentration analysis
AIRCRAFT DEICING	<p>Type I Propylene Glycol</p> <p>Type I Ethylene Glycol</p> <p>Type IV Propylene Glycol</p> <p>Type IV Ethylene Glycol</p>
FUELS	<p>Fuel quality <ul style="list-style-type: none"> Fuel contamination Fuel adulteration / fraud Fuel ageing <ul style="list-style-type: none"> Biodiesel </p> <p>Fuel identification <ul style="list-style-type: none"> Diesel Gasoline Biodiesel Ethanol Av gas Jet fuel Kerosene </p>



Real time monitoring of:

- Fuel density & viscosity 
- Fuel temperature 
- Fuel level (level sensor)
- Truck location (GPS receiver)



EMERGENCY SUPPORT

Receive timely assistance on all repairs and inquiries.

WARRANTY

Our policies ensure only the best service for all our customers. Give us a call and find out how your instrument is supported.

TRAINING

Improve productivity and accuracy with our instructional sessions.

MAINTENANCE AND REPAIRS

Consistent servicing ensures that your instrument remains precise and accurate. Contact a Fungilab representative for all questions concerning your equipment.