

# FLUID MATICS

Giving you the power to see tomorrow's problems today.

**Reduce Hydraulic System Failures**

# Real-time Oil Condition Monitoring

The easiest way to start monitoring your oil.

The FluidMatics Remote Oil Contamination Sensor System (ROCS) provides continuous monitoring of particle contamination in many industrial fluids (hydraulic oil, gear oil, diesel fuel, clean lubricants, etc).



*Typical wall-mounted unit*

# Benefits of Real-time Oil Condition Monitoring

## 01

Monitor your equipment's oil condition in real-time versus periodic analyses.

## 02

Early detection of problems reduces maintenance, costly equipment failures and unscheduled downtime.

## 03

Real-time alerts allow you to be proactive versus reactive.

## 04

Trending data allows you to see events as they occur and helps to avoid catastrophic failures; and in conjunction with routine third party laboratory oil analysis, gives you insight into potential problems as they develop.

# 80%

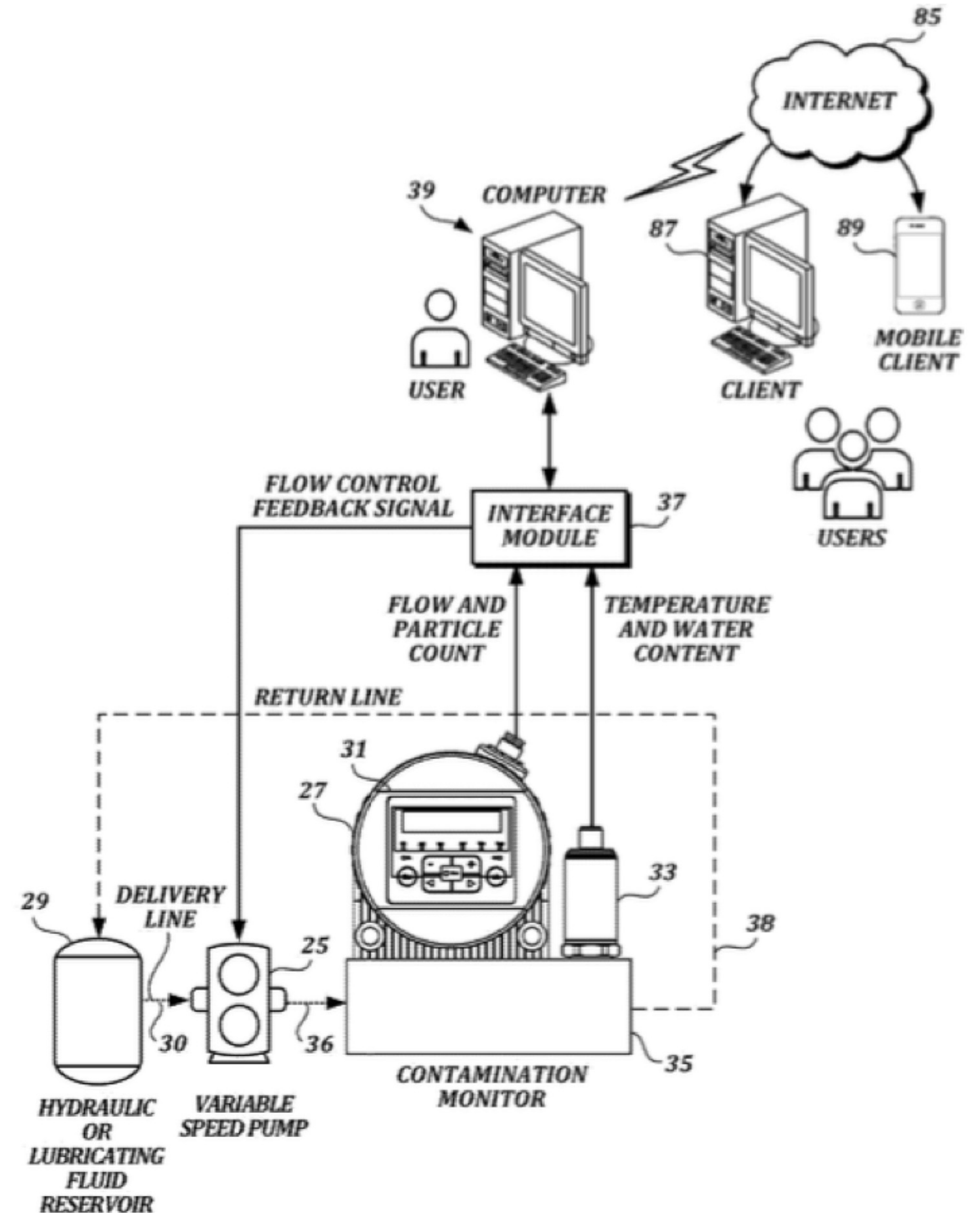
of hydraulic system failures and diesel fuel injector failures are related to particle contamination.

The ROCS system uses a novel and patented\* combination of commercially proven components combined with proprietary software, user-friendly graphics and cloud based data storage.

**Key Components include:**

- Laser based particle counter with built-in flow meter
- Variable speed pump/motor
- Aqua/temperature sensor
- Microprocessor & tablet display
- Cloud based telematics
- Plastic or fiberglass enclosure for wall mounting; or an optional hand-carry frame

\*US PATENT Nos. 10,976,231 and 11,181,457





First generation prototypes have been installed on industrial machinery in conjunction with a major filtration company to establish component compatibility.

Current "all-in-one" design developed for lower cost, improved graphics and cloud based storage. Available for strategic distributor and end-user trials during 1<sup>st</sup> quarter 2022.

Establishing license arrangements with third-parties for volume manufacturing.

Commercially robust design for construction, mining, barge and rail applications targeted for availability in 2<sup>nd</sup> quarter 2022. Will be packaged as "all-in-one" or *split boxes* to separate liquid train and electronics.



Local tablet displays data for one or six gauges (three particle sizes, temperature, saturation and flow).

Data is stored locally and sent to the cloud for graphical presentation and trending, and is also available in raw form from the cloud in a CSV format.

Direct download of data from the unit will be available from the USB port as a CSV file.



*Typical hand-carry unit allows easy monitoring of multiple pieces of equipment.*

The FluidMatics team has broad and extensive experience across multiple industrial sectors including: Hydraulic Repair, Filtration, Contamination Monitoring, Manufacturing, Power Generation, Diesel Engines and Sensors.

**Nick Nesland**

President, Founder and Chief Technology Officer with over 50 years experience in hydraulic repair, filtration and contamination monitoring. Built and sold a hydraulic repair business to a major private equity firm before founding FluidMatics, LLC in 2014.

**Don Brown**

Has over 40 years experience in Fluid Power Sales, Manufacturing and Business Development. He is working directly to establish a top-tier distribution network for FluidMatics. Don holds a BS in Engineering Science from the State University of NY at Oswego.

**Jim Valentine**

Business Development, Licensing and Intellectual Property; with over 35 years of industrial power generation experience. Former President and COO of several public companies. Co-inventor on over 30 patents/applications. BS/MS in Engineering from the University of Massachusetts and a Harvard MBA.

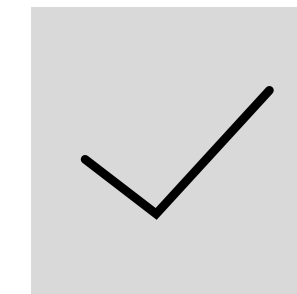
**Andy Hunwicks**

Provides direction on product development, cloud communications and manufacturing. As Managing Director of Westica Telematics, Andy has over 30 years experience in the manufacturing of sensor and telecommunications systems. He holds an MBA degree from the University of Warwick.

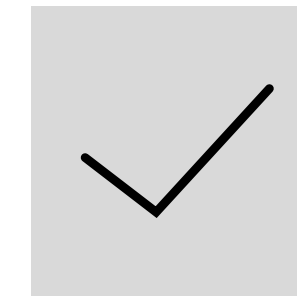


# Engineered to be a Fast & Easy Install.

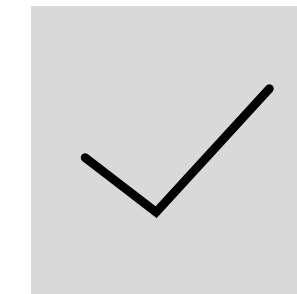
Our 'Dirt Gauge' system is extremely easy to install in any current equipment, machine or system and requires no special tools or lengthy expensive modifications. We like to summarize it into 3 points, that if you can answer these, then you can quickly and easily setup our 'Dirt Gauge' system and start seeing the benefits of real-time oil condition monitoring:



If you know where to take oil out...



If you know where to put oil back in...



If you know where to plug into 110v power...



# Specifications

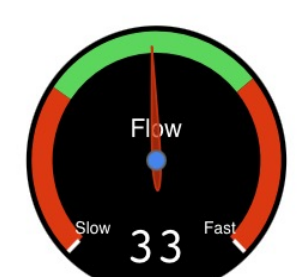
SPECIFICATIONS				
<b>Dimensions</b>	Height: 12"	Width: 8"	Depth: 6"	Weight: 7 lbs
<b>Connections</b>	Inlet: 3/8" JIC	Outlet: 1/4" JIC		
<b>Operating Temperature</b>	Fluid: 32°F to 185°F (0°C to 85°C)		Ambient: -22°F to 176°F (-30°C to 80°C)	
<b>Electric Connection</b>	100-240VAC   24 V DC   Other voltages optional (i.e. 240V-50CY)		6' (2.0 m) cord included with unit	
<b>Viscosity</b>	Max viscosity rated for 1,000 cSt @ 68°F (20°C)			
<b>Fluid Compatibility</b>	Petroleum and mineral based fluids (standard) I.e. Hydraulic, gear & diesel.			

### Optional Add-ons

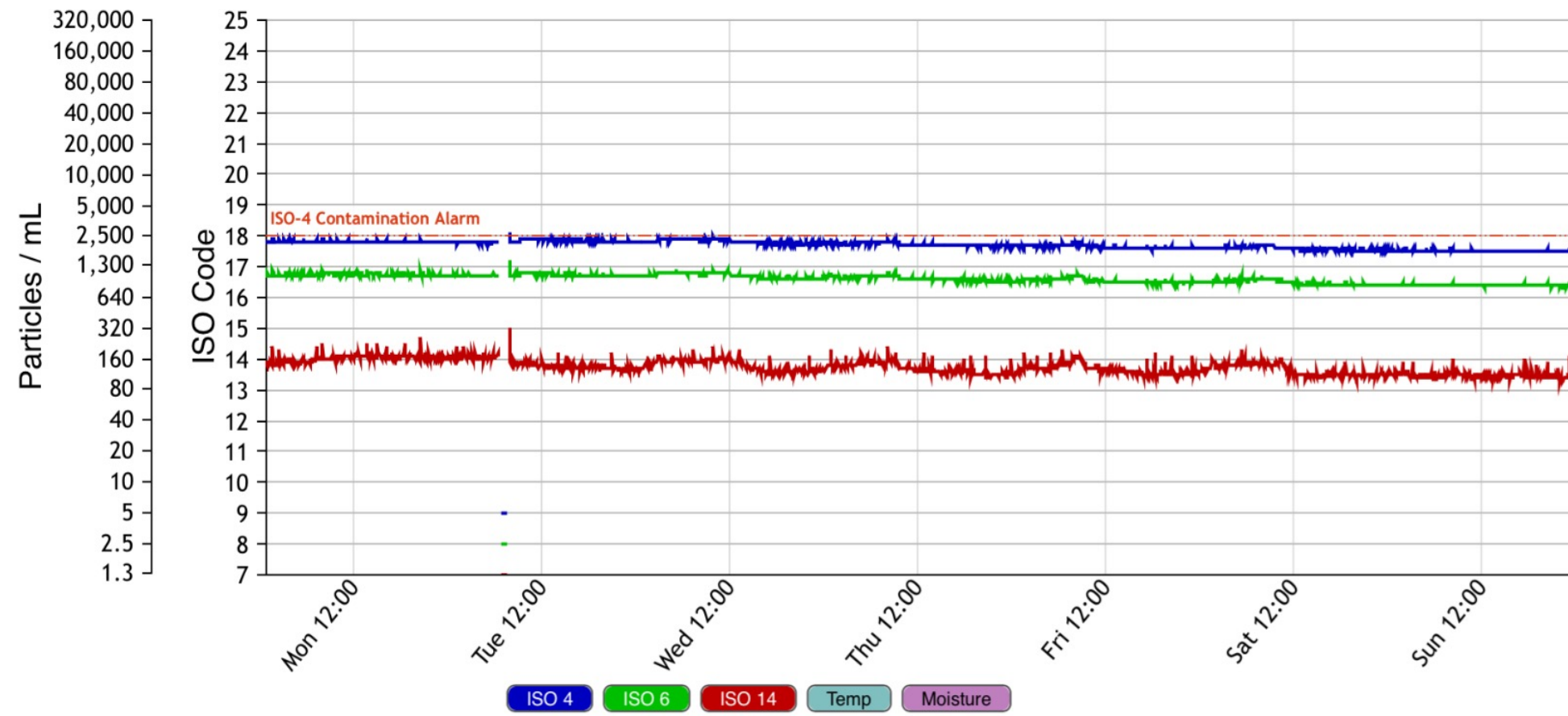
- Telematics - Add a telematics feature/capability to have reporting and live monitoring be cloud-based and accessible from anywhere.
- Aqua Sensor - Take advantage of an added aqua sensor that will enable you to detect and report moisture in your system's fluid.

Easy.  
Convenient.  
Powerful.

ROCS-vUnj-4hPF



2 Hours
  1 Day
  1 Week
  1 Month
  1 Year
  Auto-Refresh



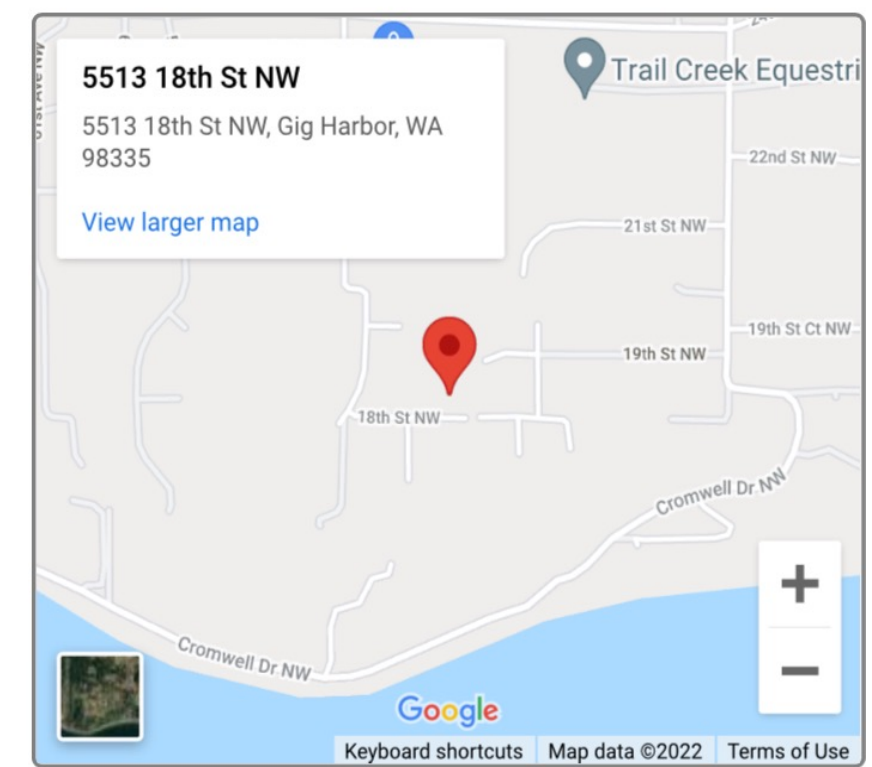
ISO Code	Parts Per mL Up To/Including
26	640,000
25	320,000
24	160,000
23	80,000
22	40,000
21	20,000
20	10,000
19	5,000
18	2,500
17	1,300
16	640
15	320
14	160
13	80
12	40
11	20
10	10
9	5
8	2.5
7	1.3

Particle size: >4µm/>6µm/>14µm  
 17/16/14 = 1,300 to 641 parts per mL 4µm or larger, 640 to 321 parts per mL 6µm or larger, and 160 to 81 parts per mL 14µm or larger.

Count	Date	Time	ISO 4	ISO 6	ISO 14	Temp °F	Saturation %
6646018	01/02/22	12:41:55	17.5	16.3	13.4	90.1	21
6646010	01/02/22	12:36:54	17.5	16.3	13.4	90.1	21
6646002	01/02/22	12:31:54	17.5	16.3	13.4	90.1	21
6645998	01/02/22	12:26:54	17.5	16.3	13.4	90.1	21
6645989	01/02/22	12:21:54	17.4	16.3	13.3	90.1	21
6645980	01/02/22	12:16:54	17.5	16.4	13.4	90.1	21
6645973	01/02/22	12:11:54	17.5	16.4	13.4	90.1	21
6645967	01/02/22	12:06:53	17.5	16.4	13.4	90.1	21
6645961	01/02/22	12:01:53	17.5	16.3	13.4	90.1	21
6645954	01/02/22	11:56:53	17.5	16.3	13.3	90.1	21
6645946	01/02/22	11:51:53	17.5	16.4	13.5	90.1	20

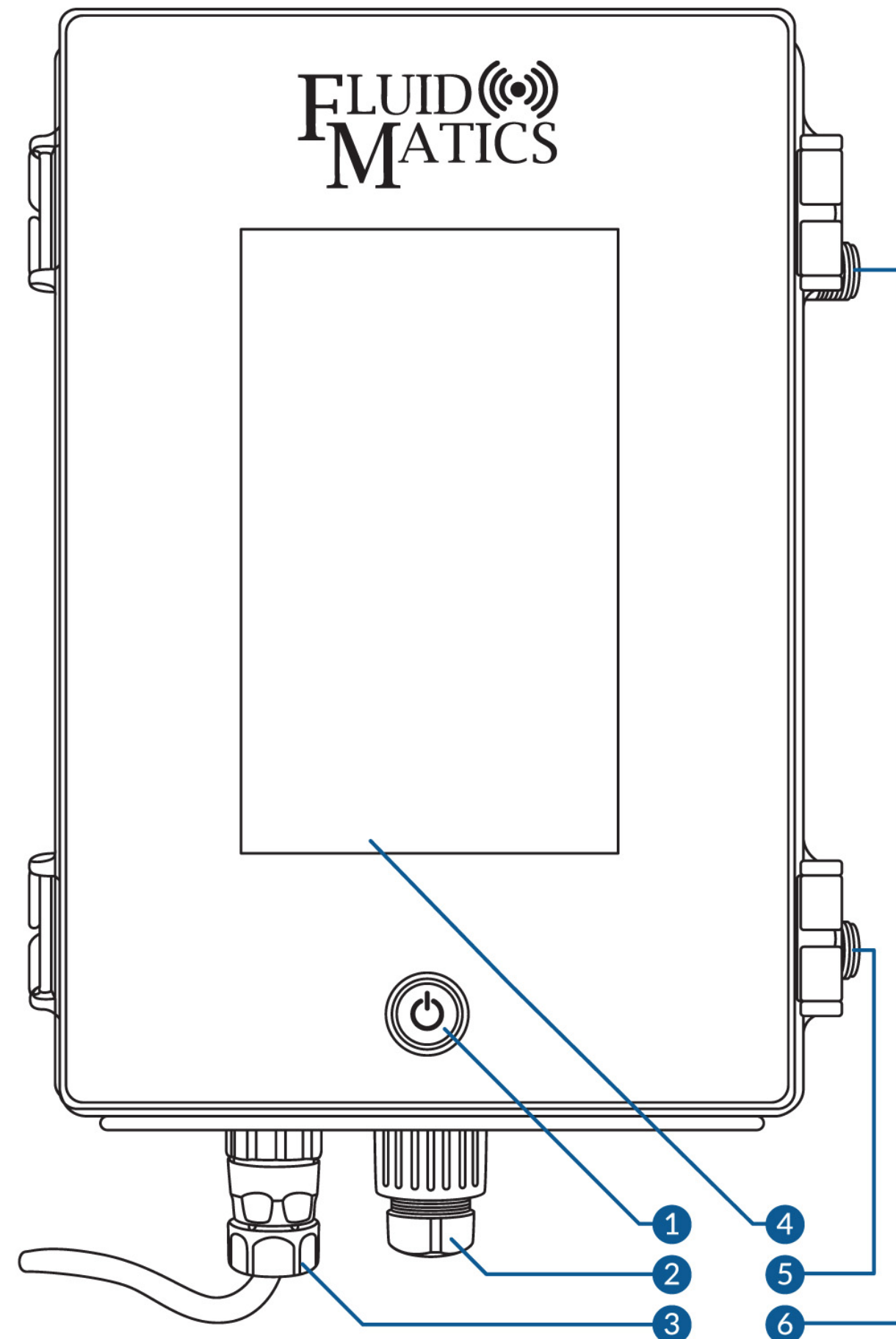
Alerts & Notifications

Max Min  
 ISO 4 (4 µm) 18   
 ISO 6 (6 µm) 18   
 ISO 14 (14 µm) 16   
 Temp (°F) 140   
 Saturation (%) 70



Telematics dashboard when logged in – view multiple pieces of equipment, data and trends.

**FLUIDMATICS DIRT GAUGE SYSTEM:**



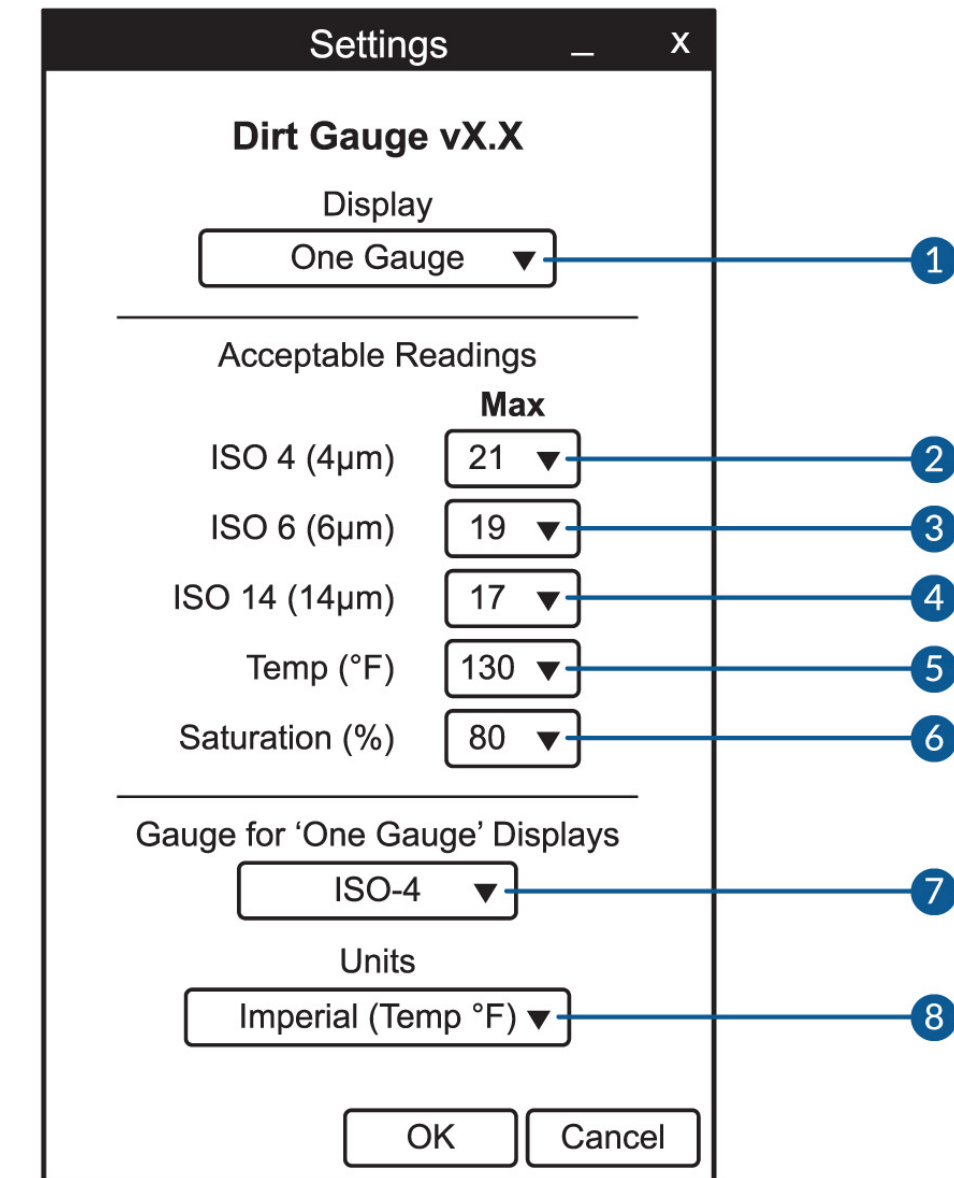
**FEATURES:**

1	Power Button	Push in to turn on/off.
2	Future Connections	-
3	Power Cord	Plug into a source of power.
4	Touch Screen Display	Data display screen.
5	Inlet Hook-up	3/8" JIC
6	Outlet Hook-up	1/4" JIC

**Setting up Display**

You can customize the display of the Dirt Gauge to have it display the data you want to view, as well as setup the ISO Code parameters necessary for your equipment. To do this:

1. Turn on the included keyboard by hitting the power switch on the back of the keyboard.
2. Using the touch pad located on the keyboard, select/click the 'Settings' button on the lower right side of the display screen.
3. Clicking the 'Settings' button will display a pop-up window screen like below.
4. To view available options, click the appropriate button or drop-down arrow on a specific setting. Refer to the right to see what options are available.



Item	Setting	Options/Info
1	Display	One Gauge, One Gauge + Data Box, Six Gauges
2	ISO 4	Set your Red line limit setting for ISO-4
3	ISO 6	Set your Red line limit setting for ISO-6
4	ISO 14	Set your Red line limit setting for ISO-14
5	Temperature	Set your Red line limit setting for Temperature
6	Saturation	Set your Red line limit setting for Saturation
7	One Gauge Display Selection	Specify what Gauge displays when the top 'Display' setting is set to 'One Gauge'
8	Units Measurement	Imperial or Metric



- Railroad
- Marine
- Wind Power
- Oil & Gas
- Industrial Equipment
- Construction & Mining



# A Solution for Multiple Industries

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