

**Oil in Water Analysers**  
**Solids in Water Analysers**  
**Particle Size Analysers**



**Process Imaging** $\pi$ **g**



## Process Imaging MEx1A\_SK



### Process Imaging MEx1A\_SK Zone 1 Certified Combined Analyser and Computer

This fixed skid based all in one unit combines the analyser and control computer into a single air purged enclosure with ATEX or IEC Ex Zone 1 certification. The unit weighs approximately 75 kgs; its compact nature and small footprint makes it easy to install on site for permanent continuous monitoring. The analyser comes with an integral keyboard and rollerball mouse.

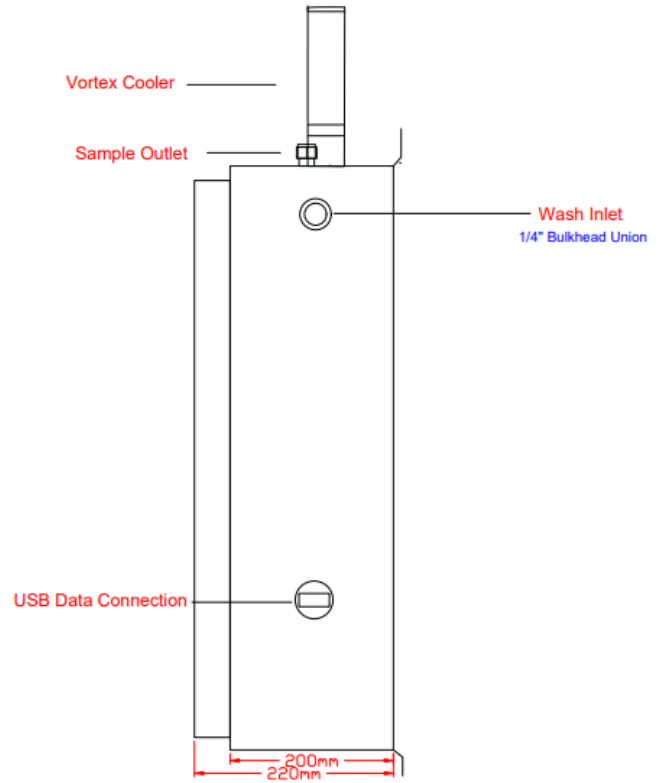
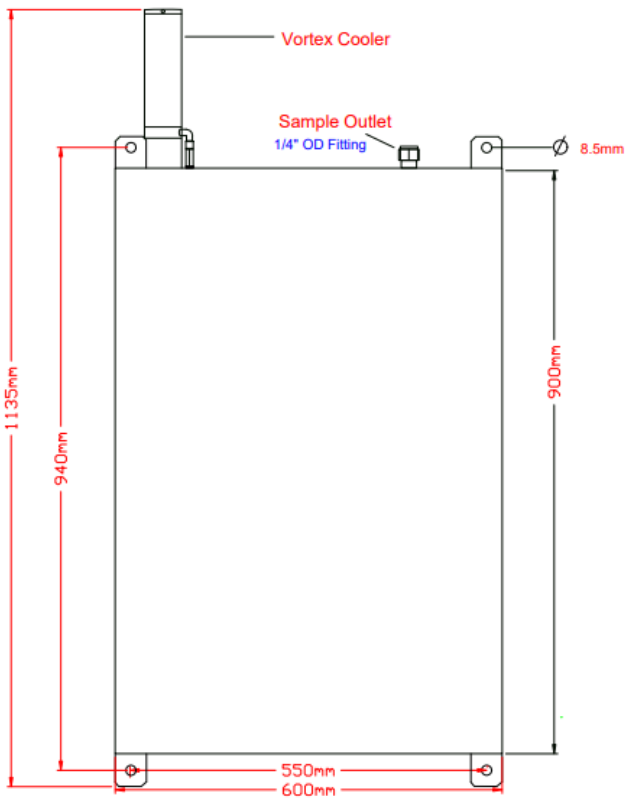
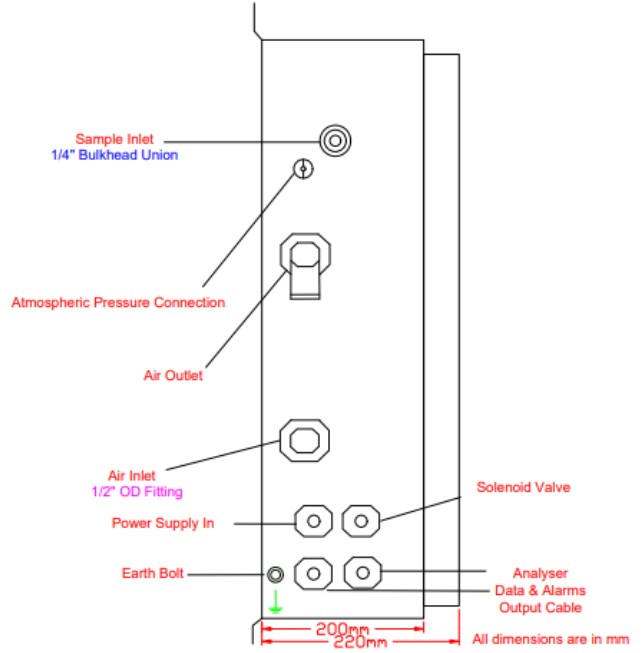
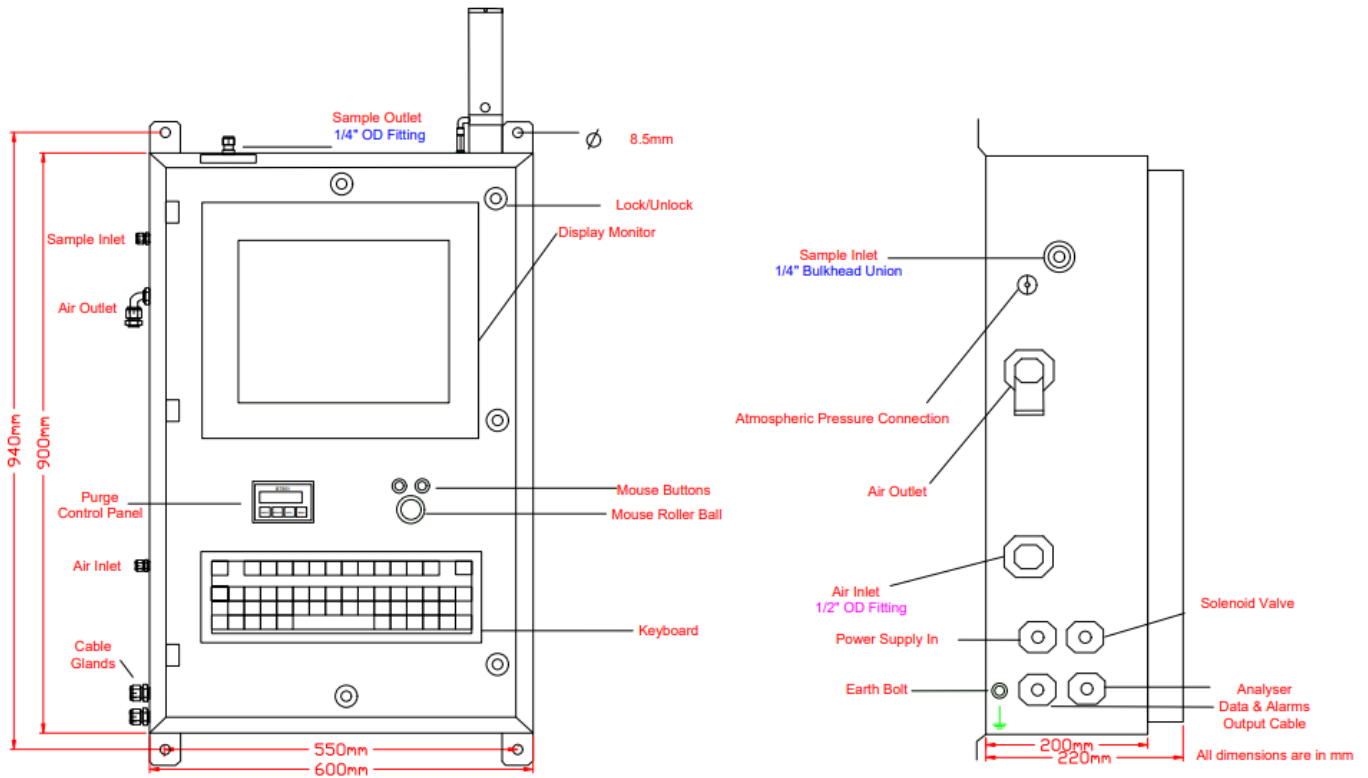
Its stainless steel construction and flow cell rated for continuous use at 120 Bar (1740 PSI/12000 kPa) with the capability to operate with process liquid temperatures of up to 120°C (248°F) make the analyser ideal for use in harsh environments. Options for higher rated temperatures and pressures are available on request.

The compact nature of the analyser enclosure allows installation very close to the sample point to ensure the best possible sampling is achieved and the ability to work with flow velocities of up to 5ms<sup>-1</sup> ensure great response to process changes and minimal flow control requirements. There is no upstream sample conditioning required.

It is supplied with fully featured control software capable of complex particle analysis and has an easily accessible USB port for transferring data from the analyser when required with the use of a Ex rated USB memory stick.

Available for either 230V 50Hz or 110V 60Hz power supplies, the MEx1A\_SK uses instrument air to achieve the hazardous area rating. The MEx1A\_SK is supplied with a thermostatically controlled vortex cooler that uses the same instrument air supply to maintain a constant temperature within the enclosure despite the external hot working environment. This allows for operation in tropical and desert locations.

The analyser can also be fitted with an automated cleaning function utilising a wash pump to deliver high pressure fluid to effectively jet wash the analyser flow cell windows. The fully automated version of this is called the MEx1A\_SK\_W. The fully automated skid can be installed either into a cabinet with sun shade or on a flat mounting plate with the pump mounted to the base.



All dimensions are in mm

### Process Imaging MEx1A\_SK General Arrangement Drawing

Top—Front and Left view

Bottom—Back and Right view



## Process Imaging MEx1A\_SK Data Sheet

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General			
1.01	Type	Droplet & Particle Analyser	
1.02	Manufacturer	Process Imaging Limited	
1.03	Model	MEx1A_SK	
1.04	Sample Temp Limits	0 – 120°C (32 – 248 °F)	
1.05	Max Operating Pressure	120 Bar (1740 PSI)	
1.06	System Description	Fixed skid based ATEX or IEC Ex Zone 1 certified analyser unit	1
1.07	Tag Number	TBC	
1.08	Instrument Fittings	Swagelok SS316 1/4 and 1/2"	2
Instrument Characteristics			
2.01	Accuracy	±2% Full Scale	
2.02	Repeatability	±1.5%	
2.03	Linearity	±7.5% in range 0 – 400PPM	
2.04	Drop Size Range	1.2 – 150 microns	
2.05	Particle Size Range	1.2 – 150 microns	
2.06	Concentration	0 – 2500 ppmV	
2.07	Data Outputs	Data displayed on control computer screen and can be transferred to the provided Zone 1 rated USB Memory Stick. All data and alarms can also be outputted via Modbus or 4-20mA to safe area.	3
2.08	Flow Rates	Flow through analyser	Up to 4 litres/min
Physical Characteristics			
3.01	Sample Feed	Typically ½" instrument tubing	
3.02	Analyser Drain	Typically ½" instrument tubing	
3.03	Wash Connection	Typically ½" instrument tubing	
3.04	Instrument Air Connection	Typically ½" instrument tubing	
3.05	Mounting	Analyser	Analyser Field Enclosure
		Control Computer	Within analyser enclosure
3.06	Weights (dry)	Analyser Enclosure	~ 75 Kgs
3.07	Materials	Analyser Wetted	316SS, Viton, Industrial Sapphire
		Analyser Enclosure	316 SS
3.08	Enclosure Rating	Analyser	IP55
3.09	Hazardous Area	Zone 1	
3.10	Classifications	Ex II 2 G Ex px II T4	
3.11	Cable Gland	M20	
3.12	Environment	Analyser Enclosure	-20 – 55°C Ambient
Electrical Data			
4.01	Supply Voltage	Analyser Field Cabinet	230V 50 Hz <b>OR</b> 110V 60 Hz
4.02	Consumption	Analyser Field Cabinet	200 Watts (Peak)
Supply Requirements			
5.01	Instrument Air for Purge	Clean dry air, minimum 1.3 litres/second @ 4 – 6 bar	
Notes			
1	Certification by MDoC from Gönheimer Elektronik GmbH in accordance with ATEX or IEC Ex for Zone 1		
2	Alternate wetted materials can be supplied to meet fluid specifications by request		
3	Modbus or 4-20mA data and alarms output only available provided site installs the necessary signal cable between analyser on site and safe area such as control room.		
4	Power supply is single voltage (either 110 or 230V only) and must be specified at the time of order		



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