SERES environnement

OPAL
Water Quality

HYDROCARBONS UNDER CONTROL

OPAL, A NEW GENERATION DETECTOR,

- on line, real time,
- IR scattering measurement,
- reagent free,

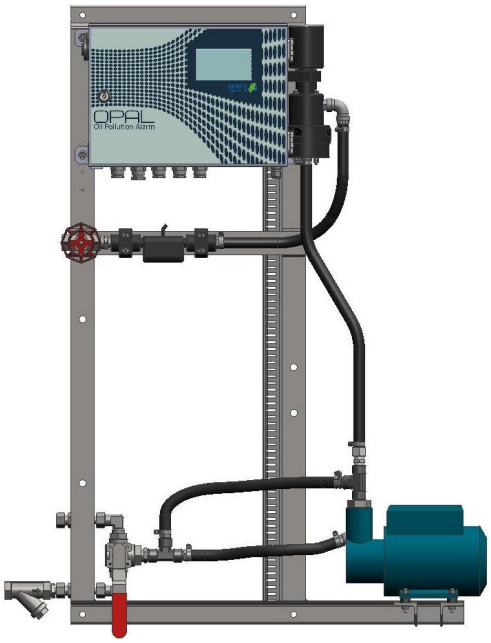
TO MONITOR SUSPENDED HYDROCARBON IN WATER.

Main benefits of OPAL :

- ✔ **Simple : installation & operation made easy**
- ✔ **Economical : low capital & maintenance costs**
- ✔ **Flexible : choice of options & customized versions**

Water & Hydrocarbons, a sphere of expertise at Seres.

The new OPAL infra-red is the best solution for an early detection of oil traces in water.



Option ATEX

APPLICATIONS

The fields of applications & references of the OPAL will match those of its forerunner, the Bwam S751.

All types of water

- condensate water, thermal exchangers,
- industrial water,
- urban & industrial waste water

Wide range of fields

- Onshore : refineries, oil drilling plants, energy, petrochemical and other industries, ...
- Offshore : oil platforms, ships, ...

ADVANTAGES

Compact system, fast & efficient
IR light diffusion detection, automatic, on line
Intuitive, touchscreen user interface
Extended choice of inputs & outputs
Automatic cleaning of measuring vessel
Easy, cost-efficient operation
No reagent, no cleaning product
Engineered solutions

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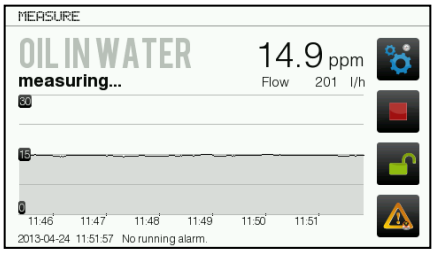
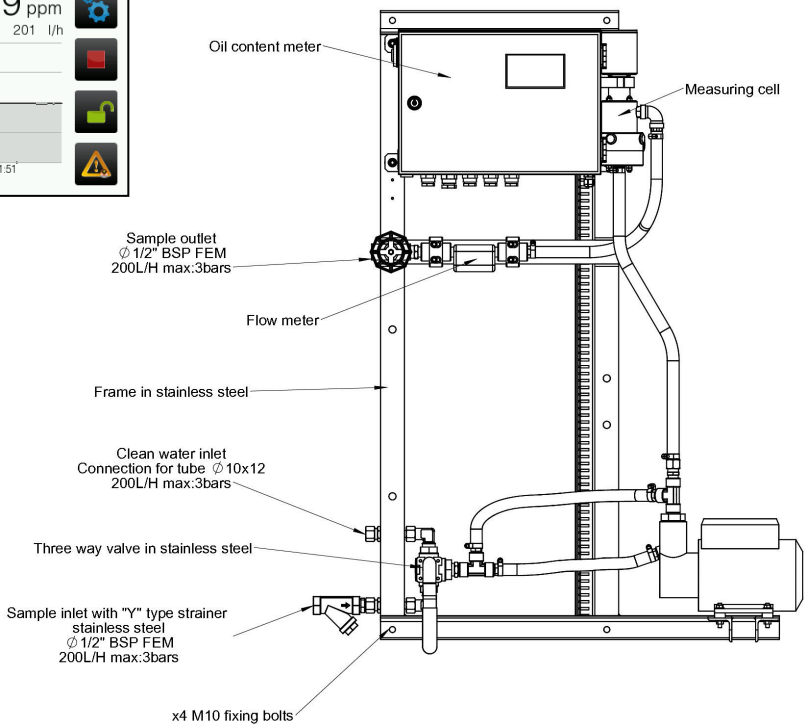


User interface

OPAL Bonus Features :

- ✓ Graphic interface : display of concentration & flow, easy setting, functional tests, etc...
- ✓ Compactness : lower weight & dimensions.
- ✓ Communication : wider selection of inputs / outputs.
- ✓ Options : cooler, hydrocyclon, multistream, engineering, ...



TECHNICAL DATA

CONSTRUCTION & ENVIRONMENT	
Dimensions (W x H x D)	Basic model on wall skid : 800 x 1055 x 250 mm Detector : 435 x 290 x 195 mm
Weight	Basic model on skid : 30 kg (45 kg with cooler)
Material	Wall skid : SS 304 / Detector : high impact PS Measuring vessel : Delrin & PVC Hydraulic circuit : flexible thermoplastic piping
Protection & Environment	IP65 Installation in safe & sheltered area, away from dust and corrosive atmospheres
Ext. temperature	5 to 55°C
Relative humidity	10 to 90%

ELECTRICAL UTILITIES	
Power supply	110 / 240 VAC 50 Hz / 60 Hz
Consumption	Typical 150 VA - Maximum 300 VA (OPAL basis)

ANALYSIS	
Method & Parameter	IR scattering beam measurement Suspended hydrocarbons
Range	0 -10 up to 0 - 500 ppm, others on request
Streams	1 stream of analysis (multistream on option)
Accuracy & Repeatability	1 to 2 % of end of range (depending on range)
Response time	Instantaneous, T90%C < 3 sec.

CONNECTIVITY & ALARMS	
User interface	Colour LCD graphic display 4.3'', touch screen
Data transfer	1 sealed USB connection for transfer on key
Output signal	7 dry contact output relays, 4 outputs TOR 24 V, 1 digital outputs RS232 1 digital outputs RS485 (JBUS protocol) 1 output 4-20 mA
Input signal	3 inputs TOR
Alarms	Hi/Lo thresholds, flow failure, analyzer failure, ...

OPERATION	
Calibration	Quick calibration, optical checking device
Zero	On clean, fresh water
Vessel cleaning	Automatic with recurrently actuated wiper jack
Clean water	200 l/h for 10 min, once a month, 0.5 to 3 bar

SAMPLE	
Preparation	Sample conditionning pump & filtration if needed
Interferent	Turbidity (auto-compensated on option)
Suspended	Max. 100 ppm (above with hydrocyclone option)
Pressure / Flow	Inlet : 0.5 to 3 bar maxi / Outlet = inlet / 200 l/h
Inlet T°	5 to 50°C (above with cooler option - consult)
Inlet / Outlet	1/2'' BSP female
OPTIONS :	**Cooler, protective or pressurized enclosure, ...** Ex

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