

# 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

## APPLICATIONS

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

### All types of water

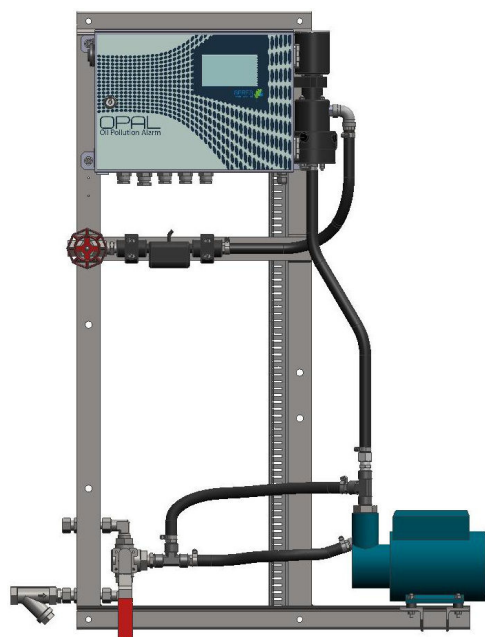
- condensate water, thermal exchangers,
- industrial water,
- urban & industrial waste water

### Wide range of fields

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

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



## ADVANTAGES

Compact system, fast & efficient

IR light scattering 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

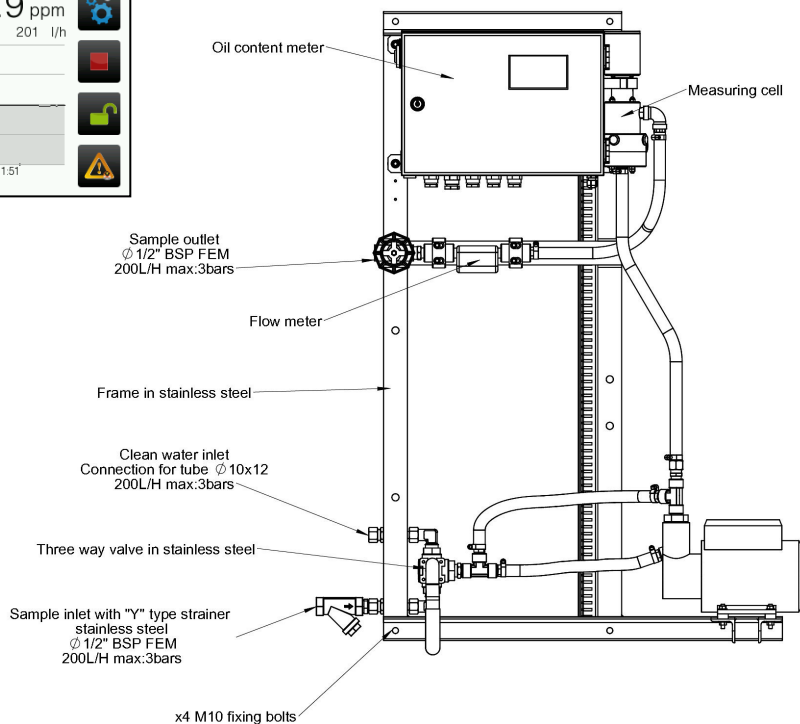
Engineered solutions



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 light scattering beam measurement Suspended hydrocarbons
Range	0 -10 up to 0 - 1000 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 conditioning 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, ... 