



## TURBIDITY



WATER QUALITY



**WATER QUALITY**

VALIDATED OVER THE YEARS  
IN A LARGE FIELD OF  
APPLICATION

Solvay

Rhodia

Ineos

FPG Taiwan

Ciba Geigy

Sanofi

Aventis

PPG

Arkema

Asahi Glass

De Nora

Total

Samsung

Coca Cola

Lafarge

Mitsubishi

Petro Bras

Alstom...

## APPLICATIONS

### Drinking water

Quality control at all stages :  
treatment, storage, distribution

### Surface water

Study and design of surface  
water monitoring stations

### Waste water

Monitoring of industrial  
or urban waste water

### Process water

Quality control of  
process water

### Oil & Water

Oil in Water Detection &  
Water in Oil storage tanks

## PARAMETERS

TOTAL CHLORINE  
FREE CHLORINE  
MORPHOLINE  
PHOSPHATES  
AMMONIA  
HYDRAZINE  
COLOUR  
PHENOLS  
SILICA...

CHROMIUM VI  
MANGANESE  
ALUMINIUM  
COPPER  
NICKEL  
IRON  
LEAD  
ZINC...

HARDNESS  
THT  
TA  
TAC ...

CHLORIDES  
CYANIDES  
FLUORIDES  
SULFIDES  
ARSENIC  
SULFATES ...

## CERTIFICATIONS

Environment Organizations, Water production & treatment, Oil & Gas, Petrochemical industry, Refineries, Power stations, Paper mills, Metal, food and other industries, Oil rigs, Tankers, Etc ...

## PROCESS CONTROL

Manufacturing industries

### Drinking water

ONLINE water quality monitoring solutions for upstream and downstream purification processes.

Ensure the optimal quality all along the manufacturing and distribution network.

### Process water

Integrated solutions for real-time water quality measurements suited to industrial processes.

## ENVIRONMENT

Environmental protection and pollution control.

### Surface water

REALTIME Monitoring stations or mobile laboratories, for the protection of surface water, spring water, rivers and groundwater.

### Sea water

Prevention of sea water by hydrocarbon wastes: Oil tankers, Oil Rigs, Refinery wastes.



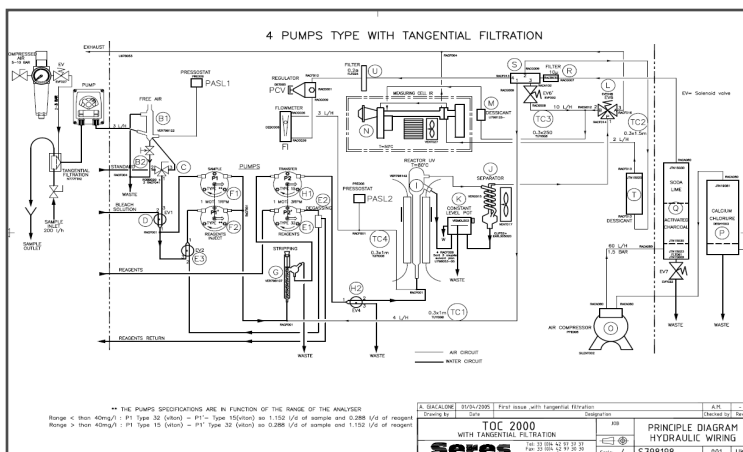
WATER QUALITY



## AquaGas Scope of supply

From a stand alone analyser to a complete monitoring station (stationary or mobile) , AquaGas supplies turnkey systems fully integrated meeting the Australian standards and matching the exact project requirements.

Our system are delivered with a full set of documentation and a minimum warranty of one year which includes 24h/7 days email and phone support.



## TURBISONDE WATER QUALITY ANALYSER

### INSITU WATER TURBIDITY MEASUREMENT

#### Description

The **TURBISONDE** is designed for fast and reliable **INSITU** measurement of medium and high turbidity in rough environmental conditions. The **INSITU** probe features an **automatic ultrasonic cleaning** eliminating the need for maintenance and empower instantaneous detection of change in turbidity.

#### Applications

**Waste water treatment plant** water supply and effluents, activated or recirculation sludge tanks, clarifiers, sewerage network

**Manufacturing industries** Raw waste water effluents

**Environment** Surface water, water quality monitoring network

## MEDIUM and HIGH Turbidity



### Key FEATURES

- RESPONSE WITHIN FEW SECONDS
- WEATHER PROOF TRANSMITTER HOUSING SUITABLE FOR OUTDOOR INSTALLATION
- STAND-ALONE INSTRUMENT FOR CONTINUOUS OPERATION
- NO WEARING PARTS, NO MAINTENANCE OF THE SENSING PROBE
- NO DRIFT
- LIMITED CALIBRATION REQUIREMENTS (6MONTH)
- IIR MEASUREMENT BY NEPHELOMETRY
- INSITU SUBMERSIBLE PROBE (UP TO 1 BAR)
- AUTOMATIC ULTRASONIC CLEANING WITH ADJUSTABLE FREQUENCY
- USER CONFIGURABLE MEASURING RANGES FROM 0-50 TO 0-2000 NTU,
- OPTIONAL DUAL STREAM (2 PROBES FOR 1 CONTROL UNIT)
- PATENTED MEASUREMENT PRINCIPLE

# System Overview

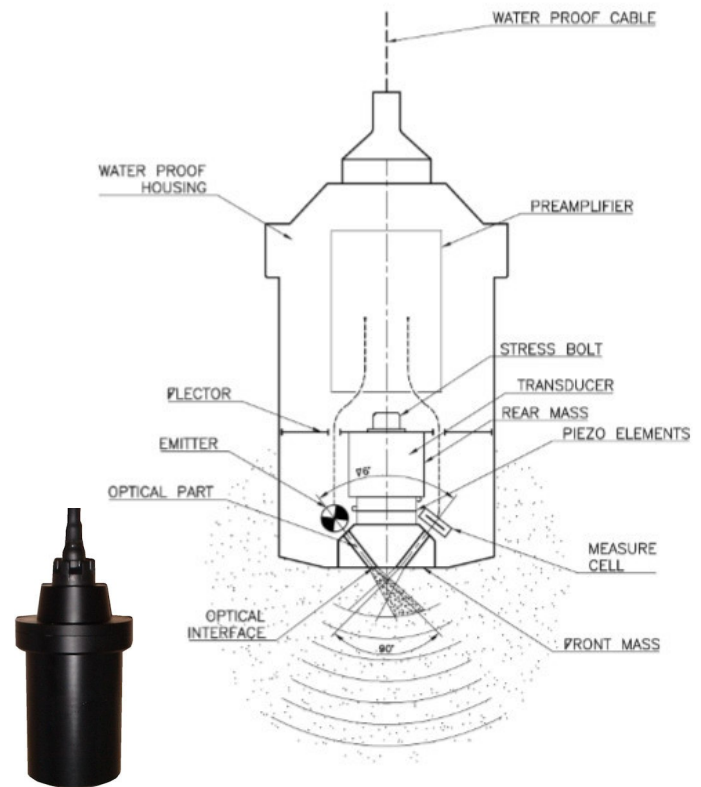
TURBISONDE operation is based on infra-red (IR) measurement by Nephelometry

- The light dispersed at 90 degrees from incident ray by suspended particles is detected by the measuring cell.
- The signal yielded is strictly proportional to the concentration of diffusing particles and water turbidity.

## TURBISONDE benefits

“True” zero : no signal is generated if water if turbidity-free.

No drift nor maintenance thanks to the automatic cleaning system of the submersible sensing probe : maximum ultrasonic efficiency (patented process).



## TURBISONDE Specifications

### CONSTRUCTION & ENVIRONMENT

Dimensions	Control unit (CU) 300 x 400 x 200 (W x H x D) mm Probe (P) L=140mm Diam. 60mm
Weight	CU:10kg P: 1kg
Material	CU: Polyester P: Moulded epoxy resin
Environment & Protection	CU: IP64 - EMC compliant P: up to 1 bar Probe connection lead: 10m Installation in safe area away from corrosive atmosphere
Ambient T°	-20 to +50°C

### ELECTRICAL UTILITIES

Power supply	110 - 240 VAC 50 / 60 Hz (25VDC on request)
--------------	---------------------------------------------

### ANALYSIS

Method	Continuous measurement by Nephelometry
Units	Water turbidity / NTU or FTU (other on request)
Range	Programmable 0-50 / 100 / 250 / 500 / 1000 / 2000 NTU (0-4000mg/l on request)
Number of streams	1 stream / sensor - max 2 streams / CU for 1 or 2 Turbidity range
Resolution	1 NTU for 0-1000NTU MR
Response time	3 sec
Accuracy	+/- 1 % full range
Repeatability	+/- 2 % full range

### CONNECTIVITY, ALARMS & COMMUNICATION

User interface	1 line alphanumeric display - 8 digits
Output signal	Serial output RS232 (option) 2 x 4 - 20 mA
Input signal	1 x input 4-20mA for acquisition of another parameter such as dissolved O2, conductivity, flow, redox...
Alarms	2 x programmable set point per stream 1 x analyser fault
Output contacts	Valve control / Oil detection / General alarm / Spare and Buzzer dedicated outputs in option

### OPERATION

Cleaning	Continuous on the optical surface of the probe sensor by ultrasounds, user programmable frequency (factory set at 10 min)
Sample temperature	+4 to + 40C
Drift	None
Calibration control	Manual using 1 or 2 standard solutions Frequency: every 6 months

### CONFORMITY

Conformity	Nephelometry: ISO 7027 / EN27027
Options	SS cranked probe holder  Extended probe connection lead (max.20m)



## TURBILIGHT II WATER QUALITY ANALYSER

### Extractive WATER TURBIDITY MEASUREMENT

#### Description

The **TURBILIGHT II** is designed for fast and reliable **automated measurement** of medium and low turbidity in rough environmental conditions. Easy to install, operate and service, endowed with an efficient self-cleaning dispositive, The **TURBILIGHT II** is designed for **online monitoring** of turbidity suited to a large range of applications.

#### Applications

**Manufacturing industries** Process water supply and Raw waste water effluents

**Environment** Surface water, water quality monitoring network

**Food industry** Inlet & outlet water treatment station

LOW and  
MEDIUM Turbidity



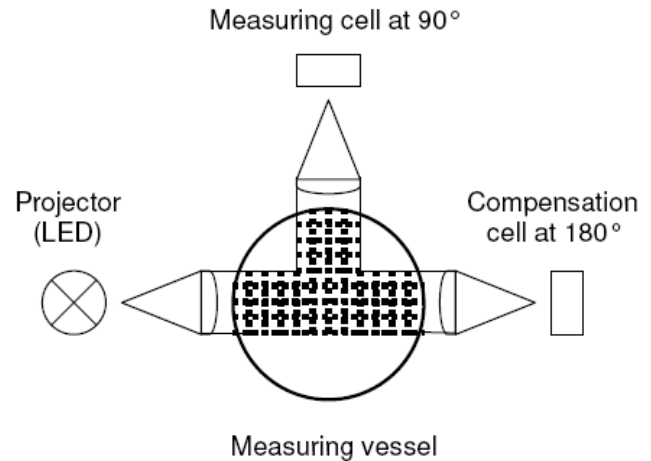
### Key FEATURES

- RESPONSE WITHIN FEW SECONDS
- PRESSURED MEASURING CELL TO ELIMINATE AIR INTERFERENCES
- STAND-ALONE INSTRUMENT FOR CONTINUOUS OPERATION
- INTUITIVE INTERFACE VIA TOUCHSCREEN, TRUE REAL-TIME, USB PORT
- NO DRIFT
- FACTORY CALIBRATED FOR QUICK AND EASY COMMISSIONING
- IIR MEASUREMENT BY NEPHELOMETRY
- PROGRAMMABLE AUTOMATIC CELL SELF CLEANING (PISTON OPERATED WIPER)
- AUTOMATIC ULTRASONIC CLEANING WITH ADJUSTABLE FREQUENCY
- USER CONFIGURABLE MEASURING RANGES FROM 0-2 TO 0-1000NTU
- HIGH RESOLUTION (0.001NTU ON 0-2 NTU MR)
- PATENTED MEASUREMENT PRINCIPLE

# System Overview

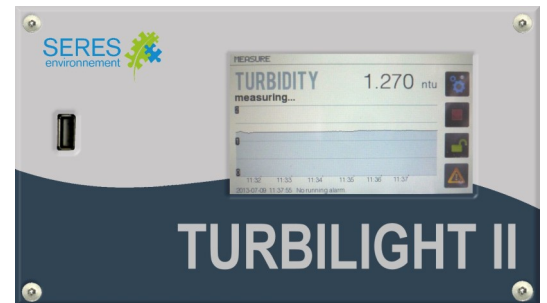
## TURBILIGHT II measures turbidity by IR Nephelometry :

- Measuring light diffused at an angle of 90° from collimated incident beam (projector).
- The resulting signal detected by the measuring cell is strictly proportional to the concentration of diffusing particles representative of water turbidity.
- Compensation of water colour and diode aging achieved via a measurement at 180°.



### Advanced user benefits

- ✓ **User-friendly interface** : large graphic touch-screen, intuitive scrolling menus, real-time display of turbidity value and curve with configurable time scale
- ✓ **Improved connectivity** : Data storage and transfer by USB / Historic available from menu / Output signal: 4 – 20 mA / Communication: RS232 / JBUS (support RS485)



## TURBILIGHT II Specifications

### CONSTRUCTION & ENVIRONMENT

<b>Dimensions</b>	Control unit (CU) 215 x 185 x 120 (W x H x D) mm
<b>Weight</b>	2Kg
<b>Material</b>	Enclosure ABS, RAL 7035 - transparent cover
<b>Installation</b>	Wall mounting assembly Overall dimensions 400 x 280 x 130 mm - 4kg approx.

<b>Environment &amp; Protection</b>	IP65 - Installation in safe area away from corrosive atmosphere
-------------------------------------	-----------------------------------------------------------------

### ELECTRICAL UTILITIES

<b>Power supply</b>	110 - 240 VAC 50 / 60 Hz (25VDC on request)
<b>consumption</b>	25W max.

### ANALYSIS

<b>Method</b>	Continuous measurement by IR Nephelometry
<b>Units</b>	Water turbidity / NTU (other on request)
<b>Range</b>	Programmable 0-50 / 100 / 250 / 500 / 1000 / 2000 NTU (0-4000mg/l on request)
<b>Resolution</b>	0.001 NTU for 0-2NTU MR
<b>Response time</b>	Continuous online monitoring Initial response time (cold start) in few seconds - T90<20sec.
<b>Accuracy</b>	+/- 2 % full range
<b>Repeatability</b>	+/- 2 % full range

### CONNECTIVITY, ALARMS & COMMUNICATION

<b>User interface</b>	Colour LCD display 4.3" touch screen
<b>Data storage and</b>	Built-in data logger equipped with USB port
<b>Input signal</b>	1 x input 4-20mA for acquisition of another parameter
<b>Alarms</b>	2 x programmable threshold
<b>Outputs</b>	1 x input 4-20mA 1 x serial output RS232 RS485 JBus (IO) as option

### OPERATION

<b>Cleaning</b>	Measuring cell equipped with an automatic cleaning system - Piston operated wiper. User programmable frequency.
<b>Sample supply</b>	Temperature +4 to + 40C Flow 50 l/h min. Pressure 0.1 to 3 bar
<b>Connections</b>	Sample inlet: semi-rigid tubing 6x8mm
<b>Calibration</b>	Factory calibrated
<b>Maintenance</b>	Routine calibration recommended every 6 months Preventive replacement of wiper and desiccant once a year

### CONFORMITY

<b>Conformity</b>	Nephelometry: ISO 7027 / EN27027
<b>Options</b>	Sample conditioning unit for low sample pressure application

## PROCESS CONTROL

*Manufacturing industries*

### **Drinking water**

ONLINE water quality monitoring solutions for up-stream and downstream purification processes.

Ensure the optimal quality all along the manufacturing and distribution network.

### **Process water**

Integrated solutions for real-time water quality measurements suited to industrial processes.

## ENVIRONMENT

*Environmental protection and pollution control.*

### **Surface water**

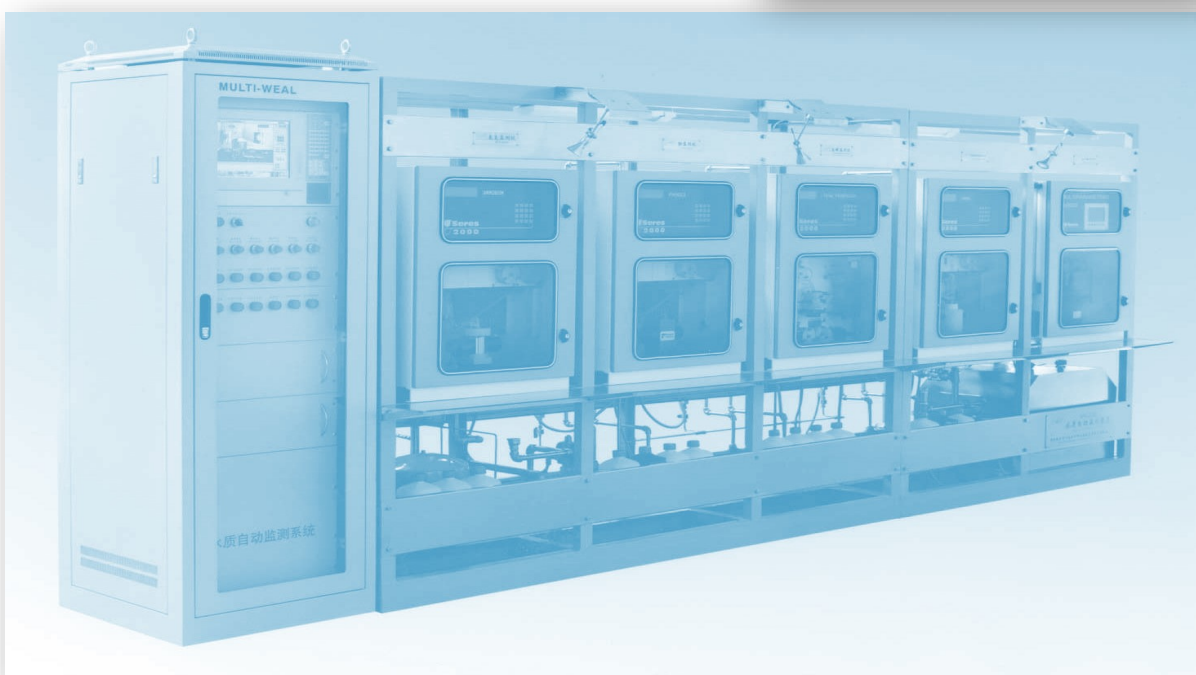
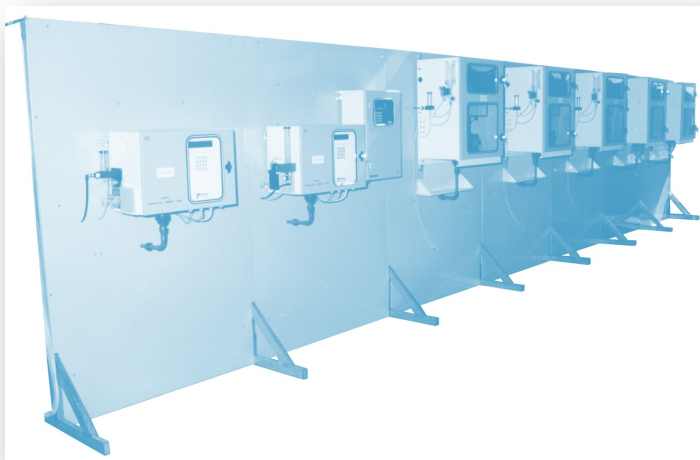
REALTIME Monitoring stations or mobile laboratories, for the protection of surface water, spring water, rivers and groundwater.

### **Sea water**

Prevention of sea water by hydrocarbon wastes: Oil tankers, Oil Rigs, Refinery wastes.

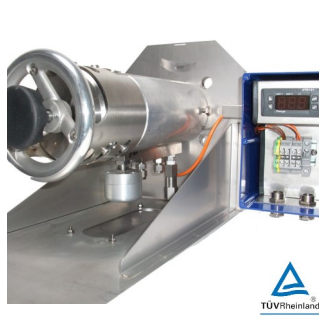


**WATER QUALITY**



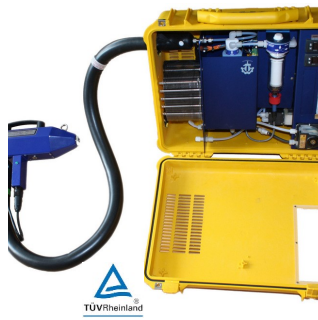


# AquaGas Products and Services



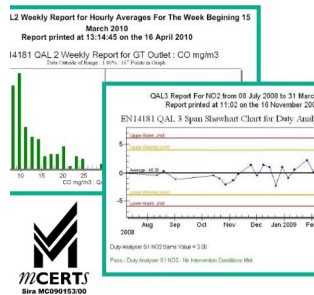
## CEMS

System INTEGRATION  
& Innovative  
SAMPLING solutions



## STACK TESTING

Portable equipment  
for short term  
measurement



## DATA ACQUISITION

States EPA approved  
Data Acquisition and  
Handling Software



## ONSITE

Maintenance  
commissioning  
Training



*"For the Environnement,  
excellence comes as a standard"*

## AQUAGAS SYSTEM INTEGRATION

More than 14 years of experience in **environmental monitoring**, AquaGas commitment in implementing innovative, reliable and cost effective solutions is undeniable. Our main focus is to meet your application requirements in due time while maintaining high quality service and relationship.

We have the **skills, products and services** in house with a full dedication to your monitoring needs, so please contact us when it comes to **environmental monitoring and industrial analysis**.

## SERES Environnement analysers

SERES Environnement (FRANCE) is one of the major actors in the field of online analysis dedicated to **Water Quality Monitoring** in the industry and the environment. Outstanding experience, attentiveness, innovative and effective solutions are the strengths of SERES while meeting everyday challenges.

The ideal partner for Australian water quality monitoring.

## Contact Us

Give us a call for more  
information about our  
services and products

## AQUAGAS Pty Ltd

### OFFICE BRISBANE

Unit 3

3 Wirranina Place

CURRUMBIN QLD4223

**1300 850 862**

(07) 5525 0600

Visit us on the web at  
[www.aquagas.com.au](http://www.aquagas.com.au)



INTEGRATED SOLUTIONS TO MONITOR OUR ENVIRONMENT