

TURNER DESIGNS INSTRUMENTATION

Oil in water and chlorophyll measurement.

A practical guide to four field-proven instruments for continuous monitoring, portable analysis and water-quality control.

TD-120 | TD-550 | TD-560 | CF-200



TURNER DESIGNS

TD-120

Continuous oil in water monitoring, engineered for rapid response.

3 sec	5 ppb–6,000 ppm	4–20 mA
default response time	application-dependent range	standard process output

See change as it happens.

The TD-120 uses UV fluorescence to detect hydrocarbons continuously in process and environmental water. It gives operators an immediate, stable indication of oil concentration so spills, separator breakthrough and treatment-process changes can be identified early.

INDUSTRIES	Oil & gas	Refining	Power & utilities	Environmental

CONTINUOUS MONITOR

Reliable insight for process control and compliance.

A rugged wall-mounted instrument for unattended measurement. User-selectable ppm, ppb or raw fluorescence values support direct process integration and trend analysis.

Fast response | Low maintenance | HART option



Key features

- Continuous UV fluorescence measurement
- Adjustable response from 0.5 seconds
- Local display with simple calibration workflow
- Optional HART digital communications

Typical applications

- Produced water and discharge monitoring
- Oil-water separators and treatment systems
- Refinery, terminal and petrochemical effluent
- Cooling water, stormwater and spill detection

Technical specification

Measurement	UV fluorescence; ppm, ppb or raw fluorescence
Range	Low ppb to 6,000 ppm, application dependent
Response	3 seconds default; adjustable to 0.5 seconds
Sample conditions	0–50°C; 0.1–3 L/min (1–2 L/min recommended); 10–100 psig inlet
Outputs	4–20 mA; optional HART
Power / ambient	100–240 VAC; 0–55°C ambient
Size / weight	406 × 508 × 140 mm; 10.9 kg



TURNER DESIGNS

TD-550

Portable oil in water analysis for heavier hydrocarbons.

5 ppb–5,000 ppm
broad measurement range

6–8 hr
typical battery operation

EPA / ISO
method correlation support

Confident measurements, wherever the sample is.

The TD-550 brings laboratory-style fluorescence analysis to the field. It is suited to crude oil, diesel, lubricating oils and heavier refined products, with stored methods and site locations that make repeat measurements consistent across teams.

INDUSTRIES | Offshore | Wastewater | Remediation | Manufacturing

PORTABLE ANALYSER

Field-ready analysis without compromising method control.

A responsive touchscreen workflow guides routine measurements, calibration and result storage. Choose solvent or no-solvent preparation to suit the application and operating environment.

Touchscreen | Stored methods | USB / Micro SD



Key features

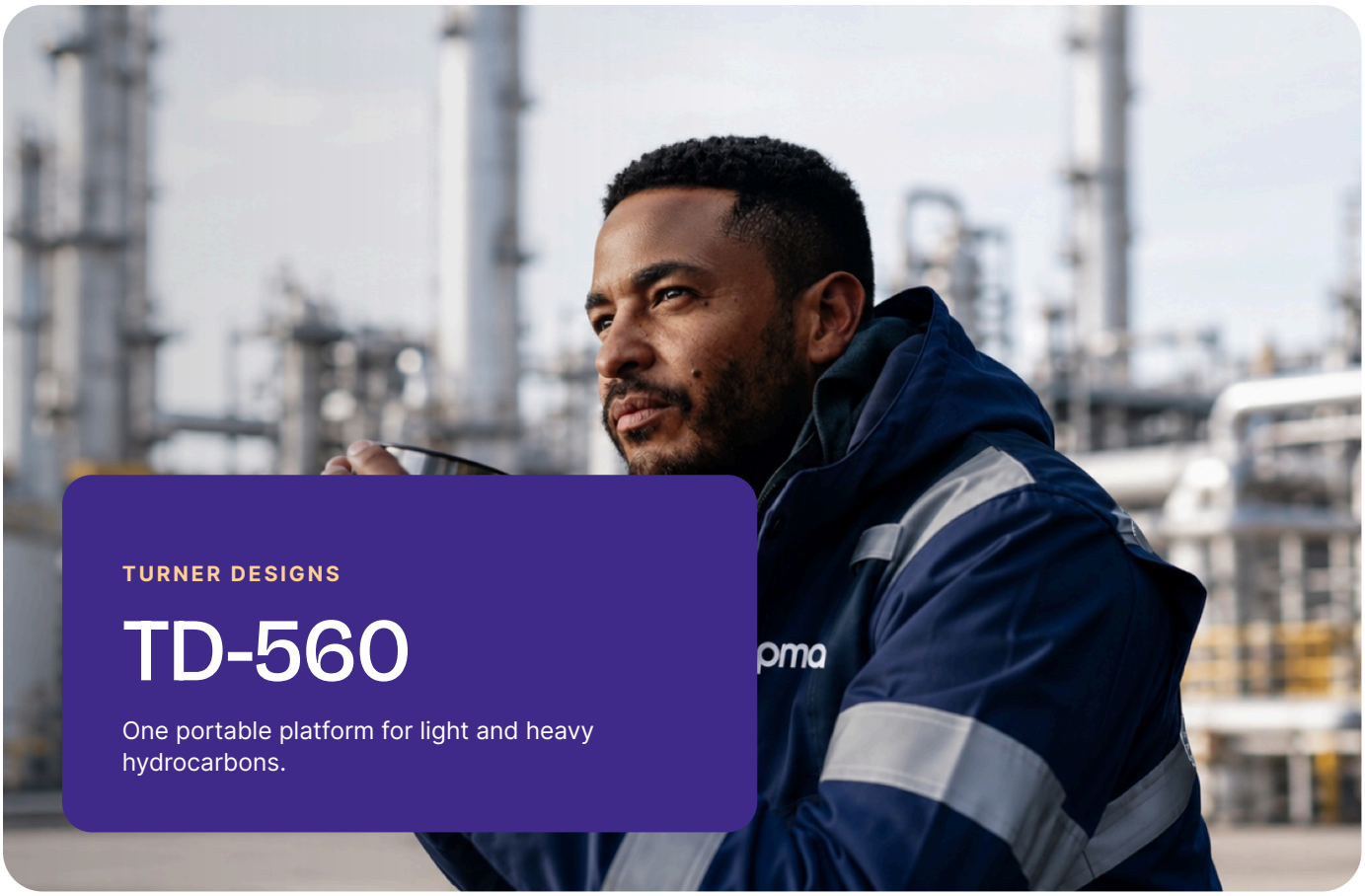
- Portable UV fluorescence analysis
- Solvent and no-solvent methods
- Stored calibrations, locations and history
- Data export by USB or Micro SD

Typical applications

- Produced water and offshore discharge checks
- Environmental and industrial wastewater
- Oil spill assessment and remediation
- Separator performance and process surveys

Technical specification

Hydrocarbon target	Crude, diesel, lubricating and fuel oils
Range	5 ppb to 5,000 ppm, application dependent
Units	ppm, ppb, mg/L, µg/L and raw fluorescence
Methods	Solvent or no-solvent; supports correlation to USEPA 1664A and ISO 9377-1
Data	Stored calibrations, locations and history; USB and Micro SD export
Interface	Colour touchscreen
Power	Rechargeable battery, typically 6–8 hours; 90–240 VAC external supply



2 channels

light and heavy hydrocarbon optics

5 ppb–5,000 ppm

application-dependent range

6–8 hr

typical battery operation

Broader hydrocarbon coverage in a single analyser.

The TD-560 combines two optical channels to measure both heavier oils and lighter aromatic hydrocarbons. It gives teams one portable workflow for varied sites, samples and contamination profiles.

INDUSTRIES

- Refining
- Aviation
- Environmental
- Oil & gas

DUAL-CHANNEL ANALYSER

Measure complex hydrocarbon mixtures with one field instrument.

Separate optical channels extend measurement from crude and lubricating oils to gasoline, BTEX, condensate and jet fuel. Guided workflows support repeatable measurements between operators.

Dual optics | Portable | Method memory



Key features

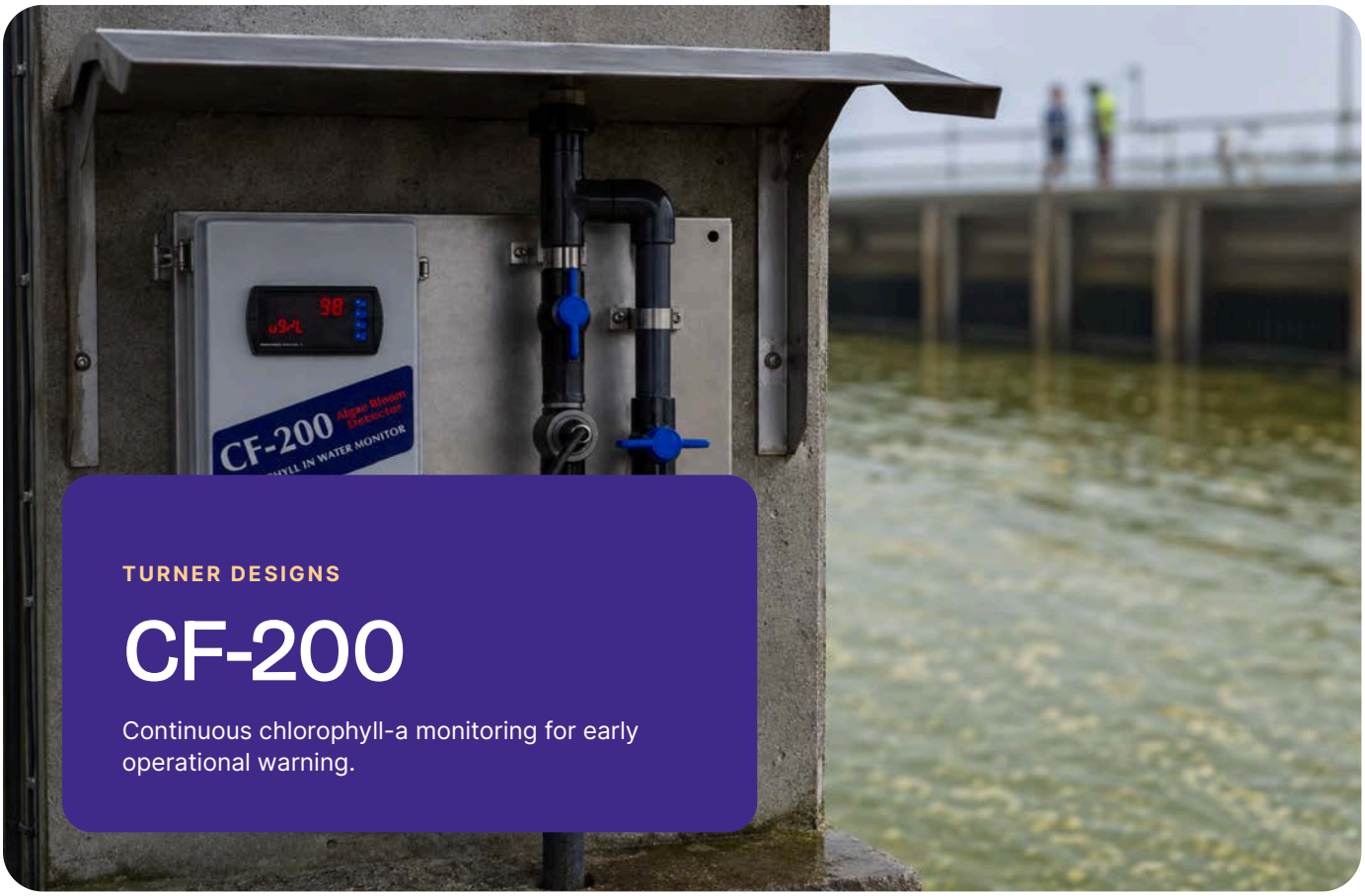
- Two independent fluorescence channels
- Single touchscreen workflow for both ranges
- Solvent and no-solvent methods
- Stored results with USB and Micro SD export

Typical applications

- Refineries, terminals and petrochemical sites
- Groundwater and environmental investigation
- Airport and aviation-fuel monitoring
- Produced water and spill-response surveys

Technical specification

Optical channels	Two channels for light and heavy hydrocarbon targets
Targets	Crude, diesel and lubricating oils; BTEX, gasoline, condensate and jet fuel
Range	5 ppb to 5,000 ppm, application dependent
Units	ppm, ppb, mg/L, µg/L and raw fluorescence
Data	Stored calibrations, locations and history; USB and Micro SD export
Interface	Colour touchscreen
Power	Rechargeable battery, typically 6–8 hours; 90–240 VAC external supply



TURNER DESIGNS

CF-200

Continuous chlorophyll-a monitoring for early operational warning.

0–100 µg/L
chlorophyll-a measurement range

3 bar
maximum process pressure

IP65
NEMA 4X front protection

Detect biological change before it becomes an operational problem.

The CF-200 provides continuous chlorophyll-a data for algae and biomass monitoring. It supports early warning, treatment optimisation and evidence-led water-quality management without waiting for intermittent laboratory results.

INDUSTRIES | Water utilities | Reservoirs | Aquaculture | Environmental

CHLOROPHYLL-A MONITOR

Continuous chlorophyll monitoring.

A compact C-Fluor flow-through probe with dual relays and a 4–20 mA output makes alarm and control integration straightforward.

In-line | Dual relays | 4–20 mA



Key features

- Continuous in-line chlorophyll-a measurement
- Compact C-Fluor optical probe
- Two-line local LED display
- Dual alarm relays plus 4–20 mA output

Typical applications

- Drinking-water intake and reservoir monitoring
- Algal bloom and eutrophication warning
- Aquaculture and hatchery water control
- Industrial and municipal treatment processes

Technical specification

Measurement	Chlorophyll-a by C-Fluor optical probe
Range	0–100 µg/L chlorophyll-a
Flow assembly	1 in PVC union; maximum 3 bar
Wetted materials	Titanium and CPVC; 316 stainless-steel backplate
Outputs	4–20 mA, maximum 700 Ω; two 3 A Form C relays
Environment	−40 to 65°C; NEMA 4X / IP65 front
Power	85–275 VAC; 20 W



APPLICATION-LED SUPPORT

Choose the right measurement. Keep it performing.

PMA supports instrument selection, application review, commissioning, calibration and ongoing service. Our team helps translate the measurement need into a practical system for the site.

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