

- Multi-parameter on-line analyzer
- For waste water treatment plants, rivers, lakes and coastal waters

Applications

- **Total Nitrogen**

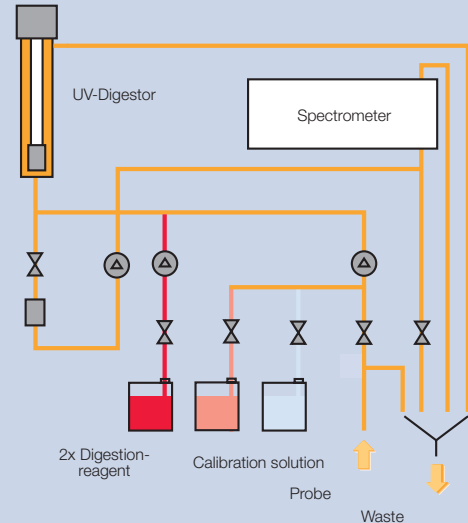
DiaMon analyzers are the pioneers of on-line process monitoring measuring several chemical parameters automatically in a single instrument.

DiaMon Total N



Increased awareness of the influence which nitrogen compounds have on the ecosystem has increased the emphasis on eliminating them in waste water treatment plants before the discharged water is returned to natural sources.

Regular measurement of the sum of all nitrogenous compounds in the final effluent is an essential part of water treatment plant performance monitoring. The DiaMon Total N performs this analysis continuously and fully automatically.



Flow diagram of the DiaMon Total N

Advantages

- One DiaMon replaces several single-parameter analyzers
- Precalibrated for quick and easy installation: needs only a simple on-site adjustment to local sample conditions
- Simple maintenance
- Low reagent consumption
- Long maintenance intervals
- Remote diagnostics and modem control

Technical Data

Typical ranges

(user-selectable)

0 - 5 mg N/l

0 - 50/100 mg N/l

(1-stage dilution)

0 - 500 mg N/l

(2-stage dilution)

Other ranges on request.

Analysis time

apprx. 25 min

Reproducibility¹⁾

≤ 2 % (0 - 5 mg N/l)

≤ 3 % (0 - 50/100 mg N/l)

≤ 5 % (0 - 500 mg N/l)

Drift per 24 h

≤ 1% of full range

¹⁾ compared to ion chromatography as reference method

Number of sample streams

max. 4

plus optional manual sampling point

No. of reagents

typ. 2

dimensions of canister: per 5 L
Reagents last for 4 - 8 weeks

Calibrants

typ. 2

dimensions of canister: per 5 L
Reagents last for 4 - 8 weeks

Sample

Pressure: zero to max 0.1 bar

Temperature: 0 - 35 °C

Consumption: min. 2 liters/h

Solids content: max. 30 mg/L

Connection:

Tubing: 3.2 x 1.6 mm

Operating Principle

Organic and inorganic nitrogen compounds are oxidized to nitrate by persulfate in a UV digester. A 15-minute digestion time ensures that even inert compounds are decomposed.

A UV-vis. diode-array spectrophotometer measures a complete spectrum of the digested sample. The sum of the nitrogen compounds can now be measured directly as nitrate, without the need for additional colour reagents. This method of measurement is extremely simple and robust.

Waste

pressure-free

Tubing: 10 x 2 mm

Environmental temperature:

5 - 35 °C

Hardware

Processor: 586 DX 133 MHz

Memory: 4 MB

Flashdisk: 16 MB

Floppy disk: optional

Modem

optional (for remote diagnosis)

Printer

optional (PCL3 compatible)

Outputs

Digital: 3 - 19

Potential-free contacts

Load 50 VAC, 60 V DC, 3 A

Analog (0/4 - 20 mA): 4 - 16

Burden 400 Ohms

Input signal

Digital: 1

Alarms

for all main instrument

functions, user-programmable

Interfaces

1 parallel,

2 serial RS 232; or

1 parallel,

1 serial RS 232,

1 serial RS 485

Remote control

via Windows based software

(optional)

Power requirement

115/230 V AC ±10 %

50/60 Hz ± 3 %

Power consumption

max. 150 VA

Protection class

IP54 (analyzer)

IP65 (electronics)

Dimensions (HxWxD)

1680 x 600 x 410 mm

Weight

ca. 112 kg