

TECHNOLOGY

- High-temperature-combustion at 1,200°C
- No catalyst
- NDIR detection for CO₂
- ECD detection for TNb (optional: CLD/NDUV detection for TNb)
- Analytical methods TC, NPOC, TNb (TOCdiff, POC/VOC, TIC)
- DIN EN 1484 (TOC) compliant
DIN EN 12260 (TNb)
- 1 / 2 sample streams
- Cycle time TC/TOC <1 min
- No moving parts – valve system

PHYSICAL PROPERTIES

Weight: < 55 kg
Dimensions: 800 H × 600 W × 320 D mm
Power: AC110 – 230 V ±10 V
50/60 Hz Approx. 600 VA
Carrier gas: CO₂ free instrument air

MAINTENANCE

- Predictive maintenance / self-diagnosis
- Regular monthly maintenance < 0,5 h/month
- Reactor life time > 3 years
- Self-cleaning and back-wash function
- Separated analytical and electronical compartments

ANALYTICAL PERFORMANCE

Measurement ranges
Low Range: 0–1 ppm or 0-10 ppm
Standard Low: 0–200 ppm
Standard High: 0–2.000 ppm
High Range: 0–20.000 ppm
Ultra High Range: 0-50.000 ppm
Wide Range: 0-200 & 200-20.000 ppm

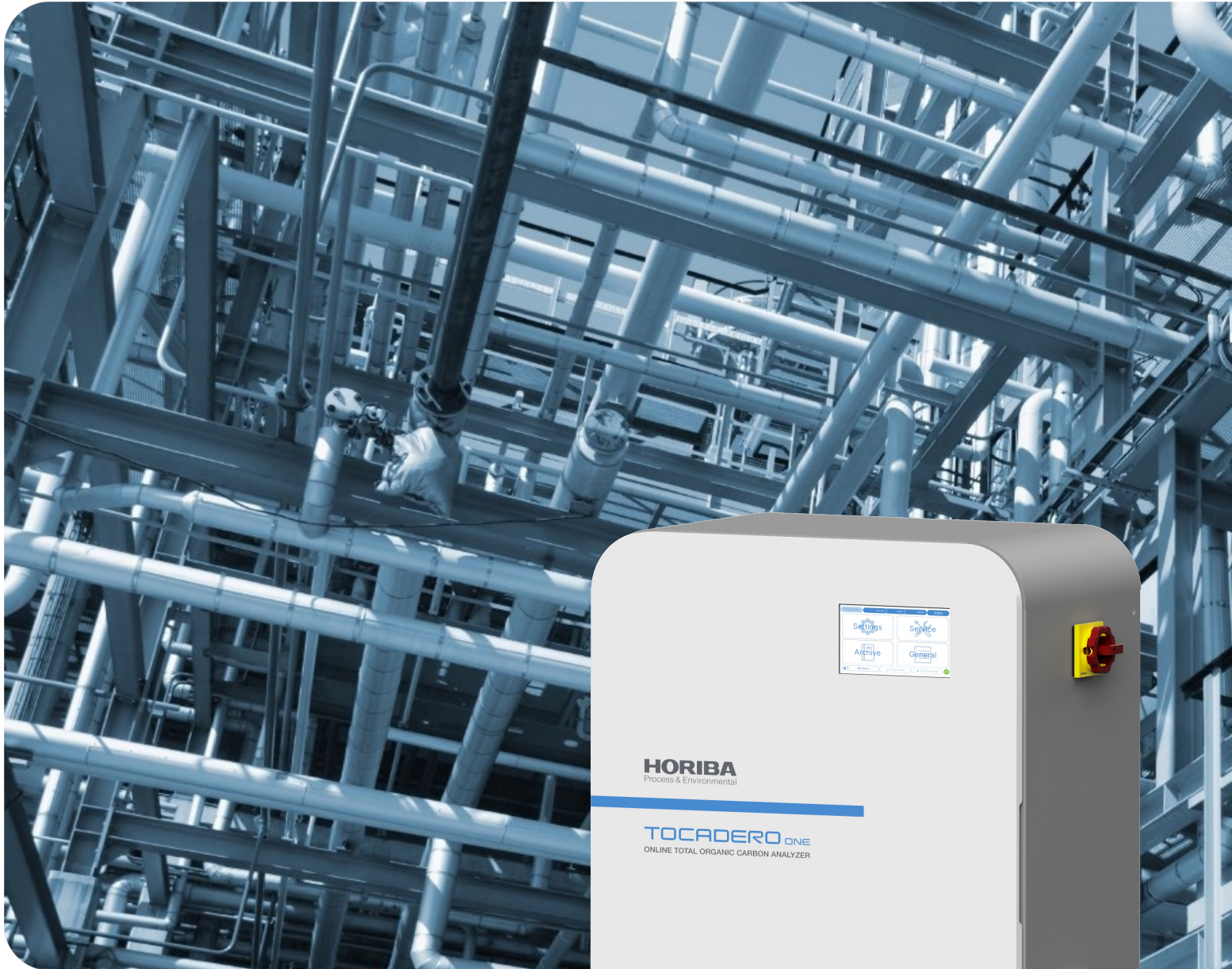
Limit of detection: 0,1 ppm
Cycle time TOC (NPOC): < 3 min.
Cycle time TC/TOC: < 1min.
Repeatability: ± 2 % end-of-range
TDS: up to 200 g/l (20% NaCl)
Particles: < 2.000 microns (optional: homogenizer and sample preparation)

ENVIRONMENTAL CONDITIONS

Indoors: 2 – 45 °C
Relative humidity: < 85 % (no condensation)
Housing: IP 54, IP 65 (optional: NEMA4X)
Ex p-Enclosure: Zone1 / 2, T3 and T4, ATEX & IECEx (available from 2021)

COMMUNICATION

Display: 7" Touch Panel
Supported protocols: OPC UA, Ethernet, Profinet, Modbus
Communication: Bluetooth, WLAN, GSM, 5G
Relays: 4 programmable - NAMUR standard
Languages: German, English, Japanese, Chinese, Korean



On-line TOC Analyzer

TOCADERO ONE



On-line water analytics with
HORIBATOCADERO

The TOCADERO ONE analyzer takes the evolution of modern online water analytics to the next level. The analyzer platform combines sophisticated water analytics, stringent requirements in terms of accuracy and reliability, and the latest sustainable and future-proof hardware and software solutions. Based on the unique platform architecture of the TOCADERO ONE, the range of available analytical parameters is being continuously expanded.

TOC & TNb analysis

The sum parameters TOC and TNb are some of the most important parameters in water and wastewater analysis. While the TOC (total organic carbon) provides information about the organic substance pollution in water, the TNb (total nitrogen bound) reflects the nitrogen pollution. The TOC is determined in accordance with DIN EN 1484 and the TNb in accordance with DIN EN 12260. The thermal oxidation at 1,200°C is particularly beneficial for determining both sum parameters.

- Detection of all organic compounds
- Quick and reliable detection of CO₂ using NDIR technology
- No catalyst
- Low use of chemicals

Next generation water analytics
IIoT / Industry 4.0

Conventional systems used for water analysis are usually inefficient, not very intuitive and require a lot of maintenance. The comprehensive expertise at **HORIBATOCADERO** and intensive product development carried out with our industry partners means that the new TOCADERO ONE analyzer platform is already meeting the requirements of the future.



User-friendly,
intuitive software



Precise status monitoring
using cutting-edge sensors



State-of-the-art communication
and interfaces



Status cockpits and
predictive maintenance



Small footprint and
low energy consumption



Reduced operating and
maintenance costs



Wide range of applications

Our platform-based TOCADERO ONE analysis system is flexible enough to deal with the multifaceted nature of modern water analytics. It is suitable for ultrapure water in the ppb range, through to wastewater and saline process water. The appropriate method for the analysis of water depends on the composition of the sample. The TOCADERO ONE can always be adapted to suit your specific measurement requirements.

TOC, TNb, TC, COD

TOC direct method
(NPOC)

TOC differential method
(TOC diff.)

Addition method,
POC/VOC

The TOCADERO ONE can be used anywhere that requires the quick, accurate and reliable determination of TOC and TNb.

- Wastewater
- Process water
- Ultrapure water (pharma, WFI, UPW)
- Cooling water
- Boiler feed water
- Drinking water
- Surface water
- Seawater

The advantages at a glance



Highest analytical performance with a
short measuring time



Catalyst-free high-temperature-combustion
at 1,200°C with fast-change technology



Unique particle treatment capability
up to 2 mm in diameter



Minimal consumable requirements and
support costs



No memory effects thanks to inert,
extremely smooth surfaces



Highest manufacturing quality
“Made in Germany”



IIoT implementation / Industry 4.0



Convincing cost of ownership

