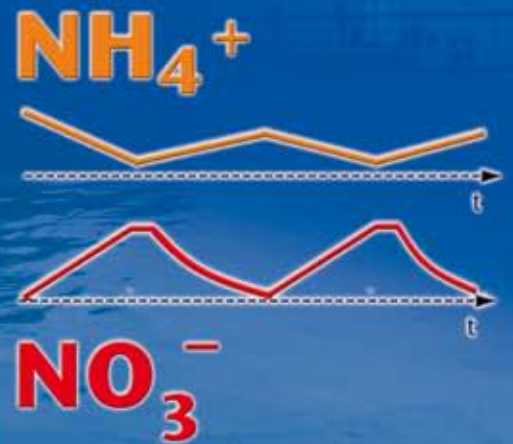


Optimize your aeration ...

... by measuring nitrogen parameters



Use the advantage of direct nitrogen measurement

- Improved discharge values
- Less power needed (up to 30%)
- Lower costs

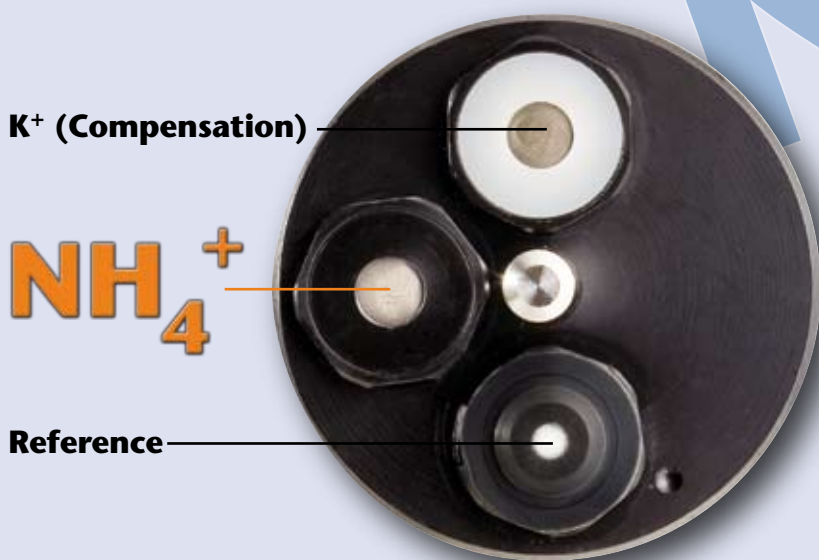
Three options for nitrogen measurement and control

VARiON® Plus

- Multiparameter in situ probe with short response time, variably applicable.
- Ideal for the fast measuring of Ammonium and Nitrate with dynamic compensation of potassium or chloride.



- As easy as pH measurement
- Calibration-free
- Convenient exchange of electrodes
- No chemicals required
- No sample preparation

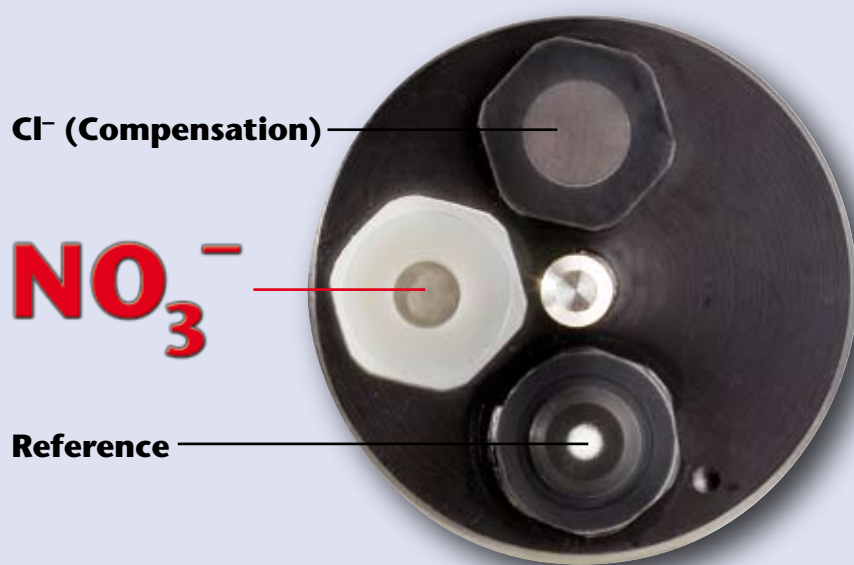


AmmoLyt® Plus

- Single parameter in situ probe for the measuring of Ammonium with dynamic compensation of potassium.

NitraLyt® Plus

- Single parameter in situ probe for the measuring of Nitrate with dynamic compensation of chloride.



New VARiON® technology in comparison to conventional analyzers

The VARiON® has been designed to operate in small and medium-sized wastewater treatment plants. Controlling discharge values for Nitrogen by a simple continuous ion-selective measurement has not been possible in the past.

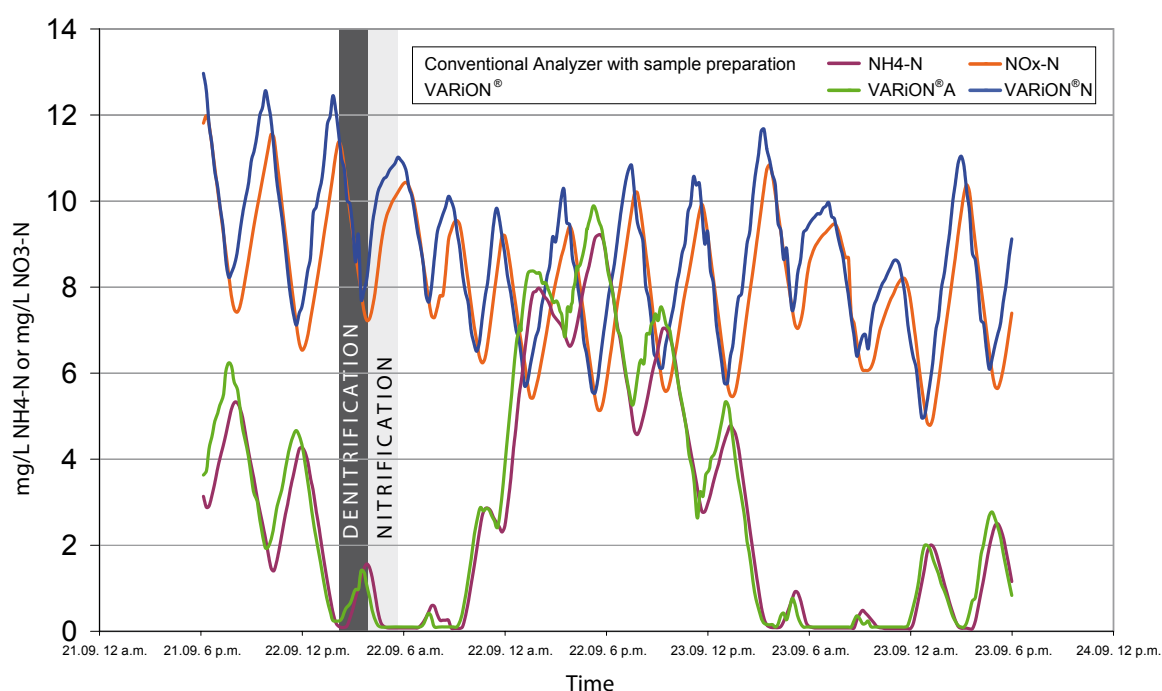
The VARiON® provides this basis for a specific nitrogen parameter process control. The benefits include :

- Low initial investment
- Operational costs reduced by up to 30%
- Improved discharge values
- Online help integrated in the sensor

During commissioning, the VARiON® Plus 700 IQ is adjusted to a reference value which was photometrically determined in the lab for the specific medium to be analysed. In this way, the matrix effects of the wastewater are recorded and automatically taken into account for all readings. The biggest result is that calibration against standards is no longer required.

After commissioning it can be seen that the measurement data of the VARiON® matches completely with the Analyzer data; hence the dynamics of the nitrification/de-nitrification process can be easily and reliably tracked and optimised.

Comparison between VARiON® Plus and analyzer in an aeration tank (VARiON® Plus: after matrix adjustment)



Technical Data VARiON® Plus • AmmoLyt® Plus • NitraLyt® Plus

Maximum configuration	VARiON® Plus: Common reference electrode, two measuring electrodes, one compensation electrode AmmoLyt® Plus: Common reference electrode, Ammonium measuring electrodes, one compensation electrode NitraLyt® Plus: Common reference electrode, Nitrate measuring electrodes, one compensation electrode	
	Ammonium measurement	Nitrate measurement
Integrable Electrodes: Reference electrode	VARiON® Plus Ref	
Measuring electrode Compensation electrode	VARiON® Plus NH ₄ VARiON® Plus K	VARiON® Plus NO ₃ VARiON® Plus Cl
Measuring Ranges/ Resolution	NH ₄ -N: 1 ... 1000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0.1 mg/l NH ₄ ⁺ : 1 ... 1290 mg/l / 1 mg/l; 0.1 ... 129.0 mg/l / 0.1 mg/l	NO ₃ -N: 1 ... 1000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0.1 mg/l NO ₃ ⁻ : 5 ... 4500 mg/l / 5 mg/l; 0.5 ... 450.0 mg/l / 0.5 mg/l
Compensation Ranges	K ⁺ : 1 ... 1000 mg/l / 1 mg/l	Cl ⁻ : 1 ... 1000 mg/l / 1 mg/l
Temperature Measurement	Integrated NTC thermistor, Range 0 °C ... + 40 °C, Accuracy ± 0.5 K, Resolution 0.1 K	
Temperature Compensation	32 °F ... 104 °F (0 °C ... + 40 °C)	
Calibration Procedures	Calibration against any reference value, 2-point-calibration possible with multiple standard solution	
Ambient Conditions	Operating temperature: 32 °F ... 104 °F (0 °C ... + 40 °C), storing temperature: 32 °F ... 104 °F (0 °C ... + 40 °C)	
pH Range	pH 4 ... pH 8.5	pH 4 ... pH 11
Measuring Accuracy in laboratory standard solutions	± 5 % of measured value ± 0.5 mg/l	
Working Life (typically)	All electrodes: one year (in typical application - sewage plants)	
Mechanical	Sensor body: V4A Stainless Steel 1.4571 Protective cap: POM, Temp. sensor: V4A Stainless Steel 1.4571 Protection rating: IP 68 (0.2 bar, with installed electrodes) Electrode connector: POM	
Max. Pressure	Maximum 0.2 bar (incl. SACIQ sensor connection cable; with installed electrodes)	
Power Consumption	0.2 Watt	
Dimensions	15.43 x 1.57 in. (392 x 40 mm, length x diameter), incl. SACIQ sensor connection cable	
Weight	Approx. 1.48 lb (approx. 670 g, without electrodes, without SACIQ sensor connection cable)	
Guaranty	VARiON® Plus 700 IQ, AmmoLyt® Plus 700 IQ, NitraLyt® Plus 700 IQ: 2 years for defects of quality	

Ordering information

Sets, including Probe, reference electrode, corresponding measuring- and compensation electrode

		Bestell-Nr.
AmmoLyt® Plus SET/Comp	for the measurement of Ammonium with compensation electrode	107072
NitraLyt® Plus SET/Comp	for the measurement of Nitrate with compensation electrode	107082
VARiON® Plus AN/A comp SET	for the measurement of Ammonium with compensation, plus Nitrate measurement	107066
VARiON® Plus AN/N comp SET	for the measurement of Nitrate with compensation, plus Ammonium measurement	107068