

IFF NITRO

Total water control



Comprehensive real-time water analysis

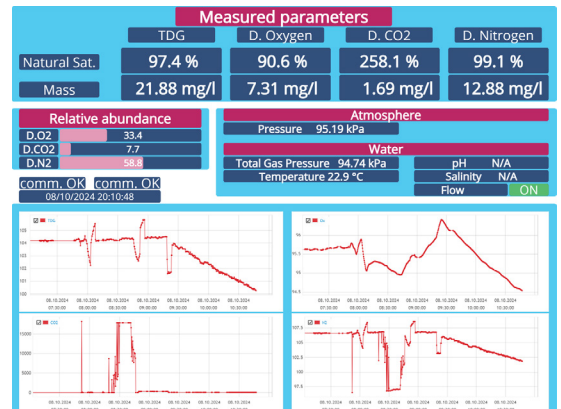
Determination of TDGP, O₂, CO₂ and N₂ with T90 < 15 minutes.

Control of energy-intensive processes

Degassing, ozonization, oxygenation.

Easy installation and maintenance

Designed for permanent operation in RAS with autonomous cleaning and calibration system.



“Accurate determination of TDGP, CO₂ and dissolved nitrogen concentration is a complex measurement process that cannot be achieved under operational conditions using conventional portable systems. Therefore, we decided to go the large analyzer route.”

Dipl. Ing. Marek Míša, Chief Design Engineer

NEXT-GEN RAS WATER MONITORING

01

Effective oxygenation requires nitrogen-free water, which enters the water in stage II of the biofilter.

The IFF Nitro system helps to control degassing performance, prevent dangerous levels of supersaturation and reduce oxygen

03

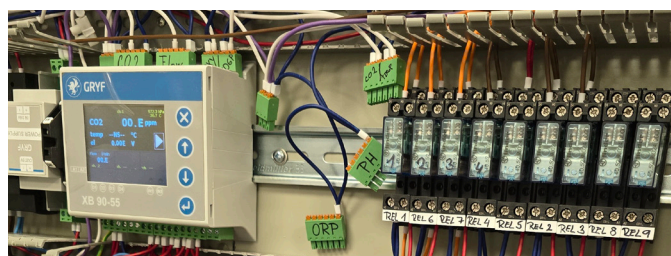
A system that responds to real customer needs.

Each system is custom built according to the needs of a specific application. The choice of sensors and the requirements for mechanical design are always at the customer's request.

02

A robust system does not mean complicated maintenance.

The IFF Nitro system includes a self-flushing filter and a sensor regeneration and calibration system.



CO₂

Range	0 - 60 mg/L
Resolution	0,1 mg/L
Accuracy	3 %

O₂

Range	0 - 20 mg/L
Resolution	0,1 mg/L
Accuracy	1 %

N₂

Range	0 - 30 mg/L
Resolution	0,02 mg/L
Accuracy	1 %

TDGP

Range	70-130 kPa
Resolution	0,01 kPa
Accuracy	0,2 %

pH

Range	1,000 ÷ 14,000 pH
Accuracy	± 0,01 %

ORP

Range	-1200,0 ÷ 1200,0 mV
Accuracy	± 0,01 %

Salinity

Range	0 ÷ 70 g/L; 2 ranges
Accuracy	0,5 %

Total T90

15 min

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CASE STUDY

Customer

MOWI / Faroe

Location

Hellur

Pilot installation of the IFF Nitro system in the Faroe Islands, the aim of which was a comprehensive test in real-world conditions before the official launch on the market.

System description: IFF Nitro Basic with TDGP, N₂, O₂, CO₂, pH and ORP measurement.

Unlike the commercial system, the installed model was not equipped with automatic filter flushing due to the clogging rate test of the 50µm filter in real farm conditions.

The installation took place on October 29-30, 2024, in cooperation with the local partner, LEIF MOHR. It included full integration into the farm's control system.

Evaluation

- ✓ The sensor part of the system met all the functional requirements in terms of measurement accuracy and reaction speed.
- ✓ Automatic regeneration and calibration of the sensors was originally set with a frequency of 24 hours, gradually adjusted to 72 hours during the experiment, where it was left (the sensors did not show any measurement deviations).
- ✓ For commercial applications, the system will be equipped with a dual filter with automatic rinsing.

Conclusion

The IFF Nitro system has met the requirements for accurate measurement of the specified parameters and is released for commercial use.





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