

1 PURPOSE AND SCOPE OF APPLICATION

The field system is designed for high-precision in-situ measurement and registration of soil-gas parameters in real time, using installed software and an automated quality-control system for every measurement, enabling continuous verification of data against established quality criteria.

FIELD SYSTEMS ARE AVAILABLE IN 3 MODIFICATIONS:

- H-Logic2/24 with digital display
- H-Logic3/25 without digital display
- H-Logic4/26 without digital display, reduced dimensions

2 TECHNICAL SPECIFICATIONS

PARAMETER	VALUE
Type of analytical complex	Integrated hardware-software analytical complex
Measured component	Helium (He)
System type	Automated digital system for recording and processing analytical data
Quality-control type	Continuous automated (Real-Time QA/QC)
Measurement-cycle control	100% of measurements
Measurement method	Direct in-situ measurements in real time
Detection limit	not more than 0.01 ppm
Measurement concentration range	0.01-10 ppm
Analytical resolution	0.001 ppm
Analytical repeatability	not worse than +/-2%
Long-term metrological stability	at least 12 months without deterioration of metrological characteristics, subject to operating regulations
Full analytical-cycle duration	not more than 5 minutes
Primary analytical data recording	Continuous automatic
Automatic statistical processing	For each measurement cycle
Automatic quality control (QA/QC)	For each measurement

PARAMETER	VALUE
Automatic geographic referencing	GNSS
Automated data transmission	To cloud storage
Archiving of primary analytical data	100% of measurements
Analytical-complex control	Specialized NeuronOil software
Primary analytical data recording	Continuous
Geographic referencing of measurements	Automatic (GNSS)
Time synchronization	UTC
Primary-data recording frequency	at least 1 record per second
Recording of technological parameters	Continuous
Automatic statistical processing	For each measurement cycle
Automatic archiving of primary data	100% of measurements
Cloud-storage data transmission	Automatic
Operation within a multi-system complex	Up to 30 synchronized field laboratories
Automatic rejection of measurements if leak-tightness is violated	100% of cases
Monitoring of environmental parameters	Continuous
Compensation for influence of external factors	Automatic
Automatic registration of diagnostic parameters	For each measurement
Data-registration completeness control	Automatic
Analytical-data reliability control	Automatic
Technological-parameter control	Continuous
Compliance control against established quality criteria	For each measurement
Automatic recording of diagnostic parameters	For each measurement cycle
Transfer of QA/QC results to a centralized database	Automatic