

HM-1400 TRX 2 Total Mercury Analyser

Continuous mercury analysis in flue or process gas

- QAL1 certified according to EN 15267
- Measuring principle allows specification
- Automatic reference point check with internal reference gas generator



Features

- Continuous mercury analysis
- Smallest certified measuring range 0...15 µg/m³*
- Simple design
- Process control of mercury mitigation measures with speciation option
- Low instrument air consumption
- Internal reference gas generator for automatic reference point measurement
- Maintenance: fast system cooling and heating

Technical data

Analyser	
Measuring values	Total mercury concentration (Hg _{total}) or elemental mercury concentration (Hg ⁰)
Measuring principle	Atomic absorption spectroscopy
Light source, spectral range	Mercury lamp, 253.7 nm
Measuring ranges	0 ... 15 µg/m ³ , 0 ... 400 µg/m ³ , 0 ... 3.000 µg/m ³ (depending on design)
Certified measuring ranges	0 ... 15 µg/m ³ *, 0 ... 45 µg/m ³ , 0 ... 75 µg/m ³
Certificates	CE, QAL1 EN 15267-1, EN 15267-2, EN 15267-3, EN 14181, MCERTS
Flue gas temperature	Up to +300 °C
Relative humidity flue gas	0 ... 100% rH
Inner duct pressure (gauge)	-50 ... +20 hPa
Inner duct diameter	>0.5 m
Ambient temperature	0 ... +50 °C
Automatic control functions	Leak test, zero point measurement, reference point measurement with HgCl ₂ reference gas
Conversion	Thermocatalytic reduction at 300 °C, two chambers per reactor with manual or automatic switch, cartridge exchange during operation
Analogue output	3x 4 ... 20 mA, max. 500 Ohm, configurable parameters
Digital input	8x status input, configurable parameters
Digital output	9x relay contact, NO (normally open), configurable parameters

* for large combustion plants and waste incinerators

** discontinuous operation, not approved for QAL3

Benefits

- Stable measured values and maximum of daily average values
- Suitable for daily average values < 10 µg/m³
- Easy operation
- Cost savings due to process optimization
- Reduced operational cost
- High availability of the device
- Efficient service as a result of reduced maintenance requirements

Operation	Display and operating unit in front door, remote access for DURAG service by TCP/IP
Instrument air supply	Only in operation with dilution or for internal drift check with reference gas (HgCl ₂) <ul style="list-style-type: none"> • Dilution: 3 ... 13 bar, max. 100 l/h • Internal drift check**: 3 ... 8 bar, max. 500 l/h (corresponds to 680 l/week)
Operating voltage	230/400 V 3x25A, N, PE, 50 Hz, max. 10 kVA
Energy demand at continuous operation	0.5 kWh/h (corresponds to 4500 kWh p.a.)
IP class (IEC 60529)	IP54
Material	Sheet steel cabinet, painted
Dimensions (h x w x d)	1700 x 800 x 500 mm
Weight	220 kg

Sampling system	
Components	<ul style="list-style-type: none"> • Sampling probe • Sampling tube • Heated sample gas line
Sampling probe	Heated with integrated temperature sensor, regulated and supplied by analyser
Sampling tube	Heated, length 600, 1000 or 1500 mm, regulated and supplied by analyser
Sample gas line	Temperature-regulated, min. 185 °C (365 °F), IP65, operating voltage: 230 V L, N, PE, 50–60 Hz, energy demand: 0.095 kWh/m, max. length: 40 m (supplied by analyser)
Process connection	Flange DN65 PN6