

HM-1400 TRX 2 Total Mercury Analyser

Continuous mercury analysis
in flue or process gas



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

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

Technical data

Analyser	
Measuring values	Total mercury concentration (Hg _{total}) or elemental mercury concentration (Hg ⁰)
Measuring principle	Atomic absorption spectroscopy with dual-beam photometer
Light source, spectral range	Mercury lamp, 253.7 nm
Measuring ranges	0 ... 15 ... 0 ... 400 µg/m ³
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

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	Variants: <ul style="list-style-type: none"> ▪ Unheated, length 1000 or 1500 mm ▪ 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