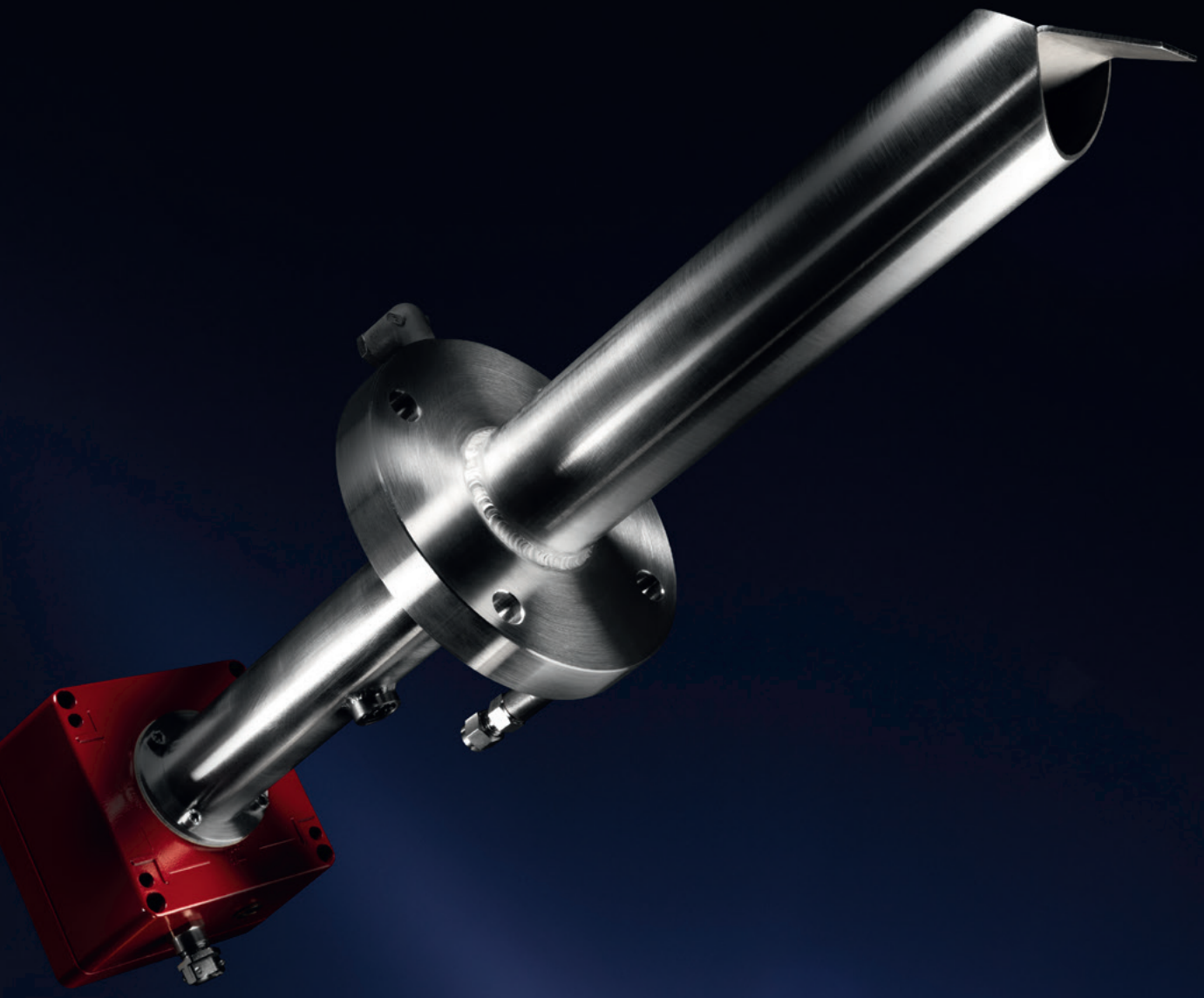
MRU – Competence in gas analysis. For over 35 years.

TOM 420 R

In situ real-time analysis of oxygen.

Reduce costs through combustion optimisation.



TOM 420 R

Real-time oxygen analysis on site

TOM 420 R provides continuous combustion optimisation at industrial boilers.

- Preferably for clean combustion with flue gas temperatures up to 1,000 °C
- Die-cast aluminium housing with electronics, LCD display and 2 operating keys
- Standard DN65 PN6 flange with variable probe tube length
  Ø 60 mm, 300 ... 2,000 mm

The device in detail

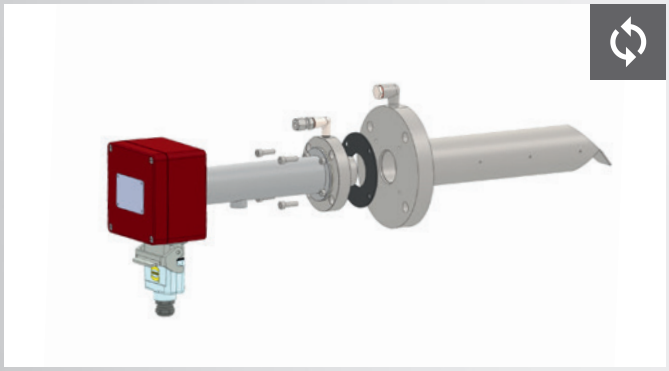
An overview of the special features

Transmitter

- Aluminium housing with corrosion-resistant, red textured paint
- Internal electronics with LCD display and operating keys
- RS 485 interface with Modbus RTU protocol for digital data transfer
- 4 ... 20 mA analog output
- Power supply: 24 Vdc, 100 W

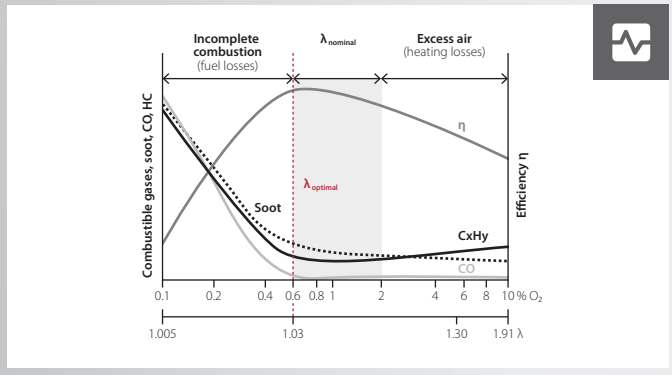
Gas supply and mechanics

- Gas flow principle
- Probe tube Ø 60 mm, 300 ... 2,000 mm long
- Made of Inconel steel for temperatures up to 1,000 °C
- Standard stainless steel flange, DN65 PN6
- Test gas connection 1/8"-6 mm



Service-friendly handling

The TOM 420 R transmitter with electronics, display and operating keys as well as the connection tube and the small sensor flange form one unit and are fixed to the probe flange with 4 screws. For service, inspection and repair work simply loosen these 4 screws and replace the complete transmitter within minutes.



Combustion optimisation

Continuous burner adjustment by means of optimum O_2 value ($\lambda_{optimal}$) in the flue gas avoids heating losses or incomplete combustion (fuel losses).

TOM 420 R

Technical data

Measured values	Measuring range	Resolution	Repeatability	Linearity
Oxygen (O_2)	0 ... 25.0 Vol.-% absolute	0.01 %	< 1 % full scale	< 1 % full scale

General technical data	
Warm-up time	min. 30 min.
Flange	DN65 PN6 flange, Ø 160 mm
Probe tube	Ø 60 mm, up to 2 m length
Flange temperature	min. +70 ... max. +150 °C (condensation moisture must be avoided)
Response time/T90	< 10 sec.
Analog output	4 ... 20 mA, linearised for 0 ... 25 % (without galvanic isolation), user-specific measuring range adjustment in 0.5 % steps possible
Digital output	RS 485 (with Modbus protocol, without galvanic isolation)
Electrical connection	2x PG fitting ■ PG9 cable 2 wires for 24 Vdc power supply plus 2 wires for 4 ... 20 mA analog output ■ PG9 cable 2 wires for RS 485 (optional)
Electronics of the transmitter	with microprocessor, LCD display and 2 operating keys
Connection for calibration	screw connection 1/8"-6 mm, manual calibration gas supply by user
Housing	aluminium casting
Operating data	-20 ... +60 °C
Power supply	18 ... 24 Vdc, 90 ... 100 W (supplied by user)
Protection class	IP65
Dimensions (W x H x D)	120 x 120 x 80 mm (housing), 200 mm length and Ø 50 mm (connecting tube)
Weight	approx. 3.5 kg (without probe and flange)

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