

Application Report

QAL1-Certification

Certified measuring and evaluation instruments according to DIN EN 15267

Tested and certified measuring devices for the continuous measurement and monitoring of emissions and immissions establish the basis for optimum environmental protection. The HEITRONICS series KT19.69 II and KT15.69 IIP are certified by TÜV according to QAL1 in 2024 for monitoring the minimum temperature in combustion plants.

This allows HEITRONICS devices to be used for officially stipulated measurements and monitoring in accordance with DIN EN 14181 ("Stationary source emissions - Quality assurance of automated measuring systems").

The certification of measuring and evaluation equipment for the official monitoring of emissions and immissions is based on the European directive series DIN EN 15267 "Air quality - Certification of automated measuring systems".

Non-contact gas temperature measurement in combustion systems



Figure 1: HEITRONICS solution installed on a boiler wall in a waste incineration plant

The HEITRONICS Infrared Radiation Thermometers KT19.69 II and KT15.69 IIP operate in spectral ranges in which hot carbon dioxide (CO₂) has a high emissivity, but cold CO₂ is transparent. With the right choice of measuring wavelength, it is therefore possible to measure through the colder outer gas layers and essentially measure the core temperature of the gas layer. The KT19.69 II and KT15.69 IIP IR Radiation Thermometers are equipped with an infrared spectral filter optimally adapted to the respective application. Digital signal processing with direct digitalization of the detector signal ensures maximum measuring accuracy and reproducibility.

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A shock blower and an additional air purging device ensure the measuring aperture is kept permanently clear. Both analog (0/4 to 20 mA) and digital (RS 232, RS 485) output signals are available for displaying, archiving or controlling the measured temperatures.

Applications:

- Furnace temperature measurement
- SNCR control
- Firing capacity control
- Trimming of burners
- Temperature monitoring in accordance with BImSchV through TÜV certification in accordance with DIN EN 15267-2
- Grate firing

Devices and accessories

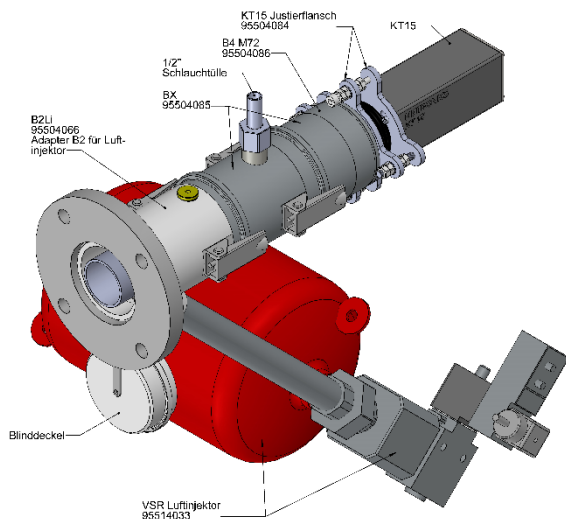


Figure 2: KT15 IIP with air purging device, adapter set BX and shock blower

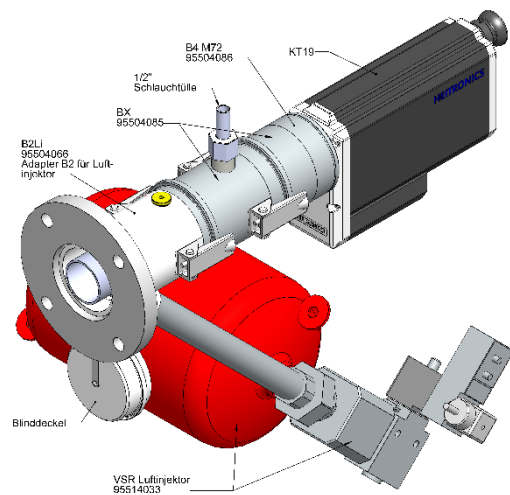


Figure 3: KT19 II with air purging device, adapter set BX and shock blower