Process-Analytic-Cooler model GT5.65

- Robust transmitter design for industrial application
- Dust and splash water protection (degree IP 65/NEMA7)
- Easy to maintain construction with Quick-Change-System
- Effective industrial heat exchanger with 1200 mm length
- Temperature monitoring with alerting system
- Integrated Water-Trap with protective function

Functional description:
The Process-Analytic-Cooler model GT5 is used for the safe cooling of process, sample and flue gases in gas analysis technology. The gas to be measured is reduced reliably to a pre-set temperature/dew point via an industrial heat exchanger that is 1200 mm long (spiral form with additional turbulator) made of stainless steel.

The Process-Analytic-Cooler is available in two versions:

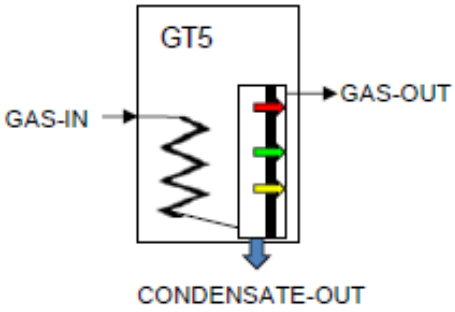
1. As a classical sample gas cooler, model GT5.65.**M**
2. For the precooling of external components, model GT5.65.V

Advantages at a glance:
- IP 65 degree of protection of the complete process analytic cooler
- Robust construction with rudimentary components. Low budget electronics that are liable to break down are consciously avoided
- Components can be replaced in a few minutes - easy to maintain (Quick-Change)
  Built by service technicians for service technicians
- Industrial heat exchanger made of acid-resistant high-performance stainless steel. Length 1200 mm in spiral form. Conventional sample gas coolers offer a distinctly shorter cooling path. The risk of condensate breakthrough therefore exists by "swallowing".
- Temperature monitoring via analogue indicator and electric changeover contact
- Integrated Water-Trap to protect against condensate penetration
- Fan enclosure for harsh conditions

Suitable for the following applications:
- Operative measurements with fossil fuels
- Operative measurements of waste incineration plants
- Biogas
- Room air monitoring
- Silo monitoring
- Heat treatments
- Cement, glass-, steel-, paper industries
- Combustion engines

Not suitable for the following applications:
- Official measurements such as TA-Luft and BImSchV measurements are only possible to a limited extent
- Applications with more than one heat exchanger

1. Process-Analytic-Cooler as classical sample gas cooler, model GT5.65.M

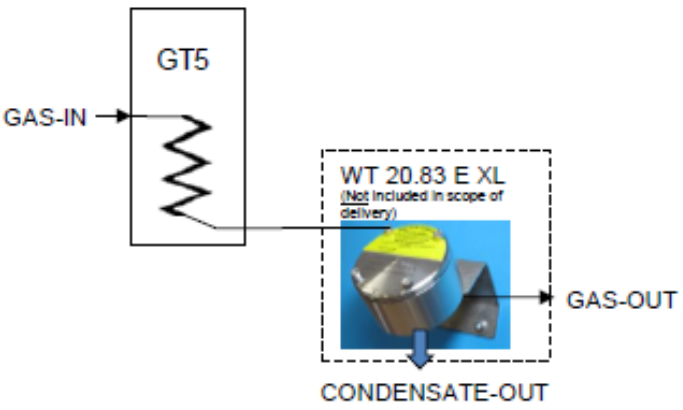


Water-Trap for protection
against condensate breakthrough

The Process-Analytic-Cooler model GT5 is used for the safe cooling of process, sample and flue gases in gas analysis technology. The gas to be measured is reduced reliably to a pre-set temperature/dew point via an industrial heat exchanger that is 1200 mm long (spiral form with additional turbulator) made of stainless steel.
The collected condensate is separated via the Water-Acid-Trap.
The Water-Acid-Trap offers an additional protection against condensate breakthrough and dust deposits with the integrated diaphragm technology of the SUN-Control-Analytik

After the Process-Analytic-Cooler model you have a dry and dust-free sample gas corresponding to dew point for your high quality gas analyser/gas sensor at your availability.

2. Process-Analytic-Cooler for the precooling of external components, model GT5.65.V



The Process-Analytic-Cooler model GT5 is used for the safe cooling of process, sample and flue gases in gas analysis technology. The gas to be measured is reduced reliably to a pre-set temperature/dew point via an industrial heat exchanger that is 1200 mm long (spiral form with additional turbulator) made of stainless steel.
The collected condensate is discharged via further SUN-Control-Analytik products, such as e.g. the Water-Oil-Trap model WT 20.83 EXL (not included in the scope of delivery)

Technical data model GT5.65.M (conventional sample gas cooler)

Scope of delivery:	Protective housing IP 65, heat sink, air blower IP65, ventilation system, Peltier element, temperature regulator, cooling dome, heat exchanger made of stainless steel, insulation for cooling unit, analogue bimetallic temperature indicator, temperature monitoring via alarm contact (changeover contact), Water-Acid-Trap
Degree of protection:	IP 65, NEMA 7
Power supply:	24 V/DC, 5.5 A 150 VA. Connecting terminal 0.7-1.5 mm², cable gland M16
Cooling technology:	Peltier
Heat exchanger:	Number 1, volume 20 ml, material stainless steel 1.4571 (option material certificate)
Flow rate:	0 - 250 L/h (0 – 500 L/h on request)
Operating pressure:	0 - 1.0 bar
Differential pressure:	15 mbar at 250L/h air
Gas input temperature:	+5°C to +140°C
Input dew point:	max. +70°C
Gas output dew point:	Adjustable from +5°C to +20°C, factory setting +8°C. Dew point stability:+/- 1.0°C
Ambient temperature:	+5°C to +45°C
Ready for operation:	30 minutes
Temperature alarm:	Single-pole potential-free changeover contact. Contact load 250 VAC/ 1 A Switch point adjustable from +5°C to +20°C, factory setting +12°C
Temperature display:	Analogue indicator bimetallic
Gas connections:	GAS-IN 6 mm pipe nozzle, GAS-OUT ¼" G-thread, CONDENSATE-OUT ¼" G-thread
Dimensions/Weight:	Width 330 mm Height 220 mm, Depth 270 mm, 12 kg
Assembly:	Wall assembly/assembly plate
Water-Acid-Trap:	Maximum water pressure (diaphragm) 1 bar, pore size diaphragm: < 0.1µm Effective filter surface: approx. 520 cm^2, housing volume: 200 ml, material PP
Note:	The technical data applies at +20°C ambient temperature. In the case of increasing ambient temperature a reduction in performance is to be expected. Water-soluble components, such as e.g. sulphur dioxide (SO2) and nitrogen dioxide (NO2), can be influenced by condensation.

The design is subject to a legal protection of utility patents (registered number DE 20 2017 103 071)

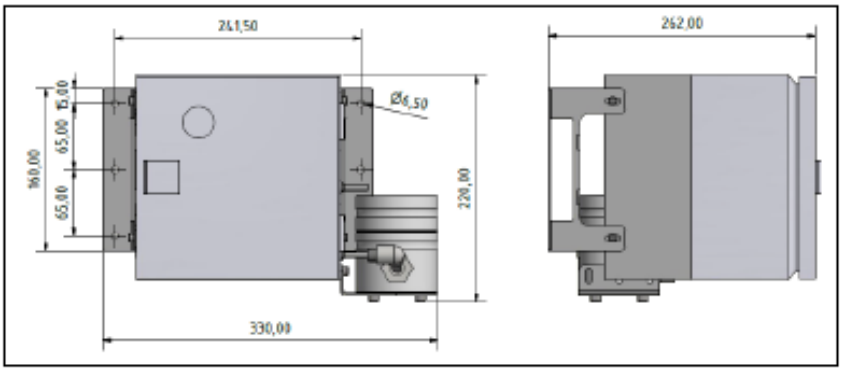
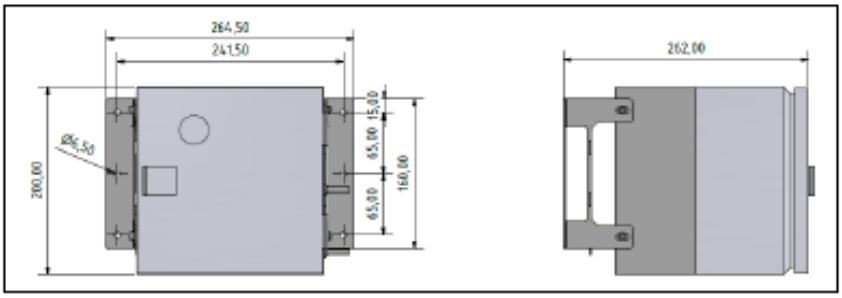
Technical data model GT5.65.V (precooler)

Scope of delivery:	Protective housing IP 65, heat sink, air blower IP65, ventilation system, Peltier element, temperature regulator, cooling dome, heat exchanger made of stainless steel, insulation for cooling unit, analogue bimetallic temperature indicator, temperature monitoring via alarm contact (changeover contact)
Degree of protection:	IP 65, NEMA 7
Power supply:	24 V/DC, 5.5 A 150 VA. Connecting terminal 0.7-1.5 mm², cable gland M16
Cooling technology:	Peltier
Heat exchanger:	Number 1, volume 20 ml, material stainless steel 1.4571 (option material certificate)
Flow rate:	0 - 250 L/h (0 – 500 L/h on request)
Operating pressure:	0 - 80 bar
Differential pressure:	5 mbar at 250L/h air
Gas input temperature:	+5°C to +140°C
Input dew point:	max. +70°C
Gas output dew point:	Adjustable from +5°C to +20°C, factory setting +8°C. Dew point stability:+/- 1.0°C
Ambient temperature:	+5°C to +45°C
Ready for operation:	30 minutes
Temperature alarm:	Single-pole potential-free changeover contact. Contact load 250 VAC/ 1 A Switch point adjustable from +5°C to +20°C, factory setting +12°C
Temperature display:	Analogue indicator bimetallic
Gas connections:	GAS-IN 6 mm pi nozzle pe , GAS-OUT 6 mm pipe nozzle
Dimensions/Weight:	Width 270 mm Height 210 mm, Depth 270 mm, 10 kg
Assembly:	Wall assembly/assembly plate
Note:	the technical data applies at +20°C ambient temperature. In the case of increasing ambient temperature a reduction in performance is to be expected. Water-soluble components, such as e.g. sulphur dioxide (SO2) and nitrogen dioxide (NO2), can be influenced by condensation.

The design is subject to a legal protection of utility patents (registered number DE 20 2017 103 071)

Prices and order numbers:

protection of utility patents DE 20 2017 103 071

Item	Article number	
Process-Analytic-Cooler as **classical sample gas cooler,** model GT5.65.M, according to technical data 	GT565M	
Process-Analytic-Cooler **for the precooling** of external components, model GT5.65.V, according to technical data 	GT565V	
Options:		
Set fittings for 6 mm PTFE-hose (gas input, gas output, condensate output)	VE1GT5M	
Sun protection roof made of stainless steel	SOSUGT5	
Fitting for purging the housing	SPUESTGT5	
Heat exchanger with material certificate 3.1 for stainless steel 1.4571	MATZGT5	
Material heat exchanger made of PTFE, PVDF or Hastelloy C		
Replacement parts:		
Cartridge Water-Acid-Trap	KAWT2048	
O-ring for Water-Acid-Trap, FKM (color green)	OR2048FKM	
Heat exchanger made of stainless steel 1.4571 with cooling dome	WAETGT5	
Air blower IP65	GEBLGT565	
Temperature regulator	TR1GT5	
Temperature monitoring	TU2GT5	
Cooling module with integrated Peltier element and temperature display	KUEHLGT5	
Gasket kit: 4 x lead through, 3 x blind plug, 1 x airration cell	GUDIGT5	