Sample Gas Cooler
EGK 10

Accurate measurements of gaes require gas samples with stable dew points even under harsh ambient conditions.

The EGK 10 is designed for high flow applications.

The heart of any cooling system is the cooling block. The EGK 10 gas cooler features a cooling block made of aluminum which accommodates a highly efficient stainless steel heat exchanger. The temperature of the cooling block is regulated by the **Bühler Constant Regulating System** featuring a straight and constant temperature value. Maintenance-free models accommodating either one, two, or up to eight gas streams are available

A display shows the cooling block temperature and an LED blinks until the cooler reaches the desired temperature range.

The cooler can be supplied with feet adjustable from about 1.5 to 6.6 cm and either mounting brackets or handles.

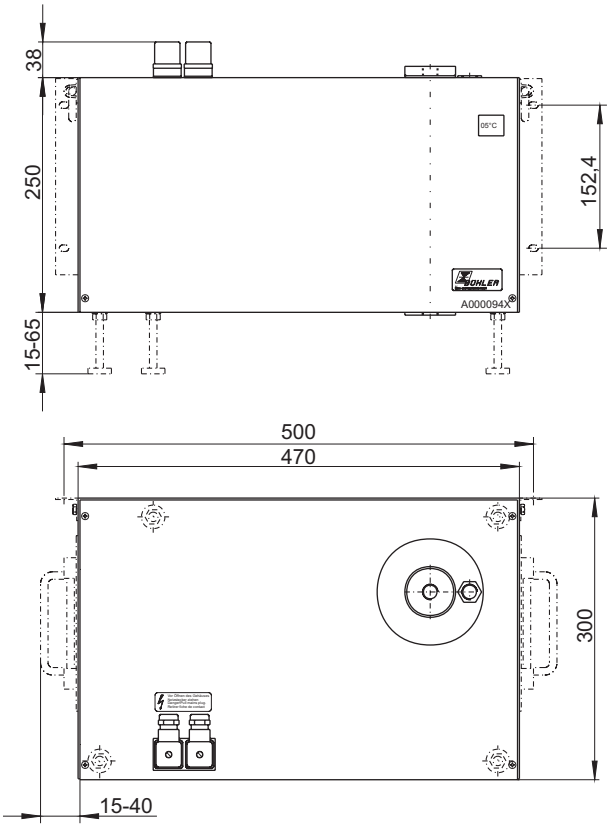
- **Compact design**
- **Easy installation**
- **Wall or table mountable**
- **Reliable cooling system**
- **Fluorocarbon-free coolant**
- **Stainless steel heat exchanger**
- **Nominal capacity 1450 kJ/h**
- **Dew point stability ± 0.2 K**
- **Temperature display for cooling block**
- **Feet, handles or mounting brackets available**

DE45 0007
12/2006

Bühler Technologies GmbH
D - 40880 Ratingen, Harkortstr. 29
Tel.: + 49 (0) 2102 / 4989-0 Fax: + 49 (0) 2102 / 4989-20
e-mail: analyse@buehler-ratingen.com

Technical Data:

Ready for operation	After max. 15 minutes
Cooling capacity (at 25°C)	1450 kJ/h
Ambient temperature	+5..50°C
Dew point (set at factory)	approx. 5 °C
Dew point variations static	0,2 K
Over full operation range	± 2 °C
Power supply	115 or 230V, 50/60 Hz
Power consumption	750 VA
Cut-in current	12 A at 230V, 28A at 115V
Alarm output	250 VAC/ 150 VDC,
change over contact	2 A, 30 VA
Protection class	IP 20
Housing	Stainless steel
Weight incl. heat exchanger	approx. 32 kg



Flow parameters

The values are given for gas with appr. 1bar abs. pressure.
The flows are given in l/h at the cooler outlet !

Inlet dew piont (moisture)	Ambient temperature	Gas inlet temperature 60°C	80°C	100°C	140°C	180°C	Water per h per 1000l/h
40°C (7 Vol%)	5...50 °C	3900	3500	3100	2600	2200	70 ml
50°C (12 Vol%)	10...45 °C	3300	3000	2800	2450	2150	120 ml
	5...50 °C	1900	1750	1650	1450	1300	
55°C (16 Vol%)	22...35 °C	3000	2800	2650	2350	2100	150 ml
	5...50 °C	1500	1400	1350	1200	1100	
60°C (20 Vol%)	22...35 °C	2500	2350	2200	2000	1850	200 ml
	5...50 °C	1200	1100	1040	980	900	
65°C (25 Vol%)	22...35 °C	-	1800	1750	1600	1450	265 ml
	5...50 °C	-	850	820	790	730	
70°C (31 Vol%)	22...35 °C	-	1350	1280	1200	1150	365 ml
	5...50 °C	-	670	650	600	570	
80°C (47 Vol%)	22...35 °C	-	720	700	650	630	730 ml
	5...50 °C	-	360	350	330	320	

Example: The ambient can be held in a range of 22...35°C.

The gas inlet temperature is 140°C and the inlet dew point 60°C.
In the line dew point=60°C at ambient of 22...35°C from the column 140°C results in a value of 2000l/h. Values of the gas temperature between the columns can be linearly interpolated.

Please indicate with order:

Basic unit without heat exchanger
45 81 999 Cooler EGK 10, 115 V / 60 Hz
45 80 999 Cooler EGK 10, 230 V / 50 Hz

Heat exchanger
45 100 33 Heat exchanger TS10 ports NPT3/8”
45 100 34 Heat exchanger TS10 ports G3/8”
45 100 28 Heat exchanger TS10-GB ports NPT3/8”
Inside with glass coating

Accessories: see separate data sheets
45 70 001 Wall mount brackets, stainless steel
45 70 002 2 Handles (mounted)
45 70 003 4 adjustable feet (added)