

Sample gas cooler EGK 10



Accurate measurements of gases 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

The regulating system provides a display showing the cooling block temperature and a relay-output indicating that the preset working range is reached.

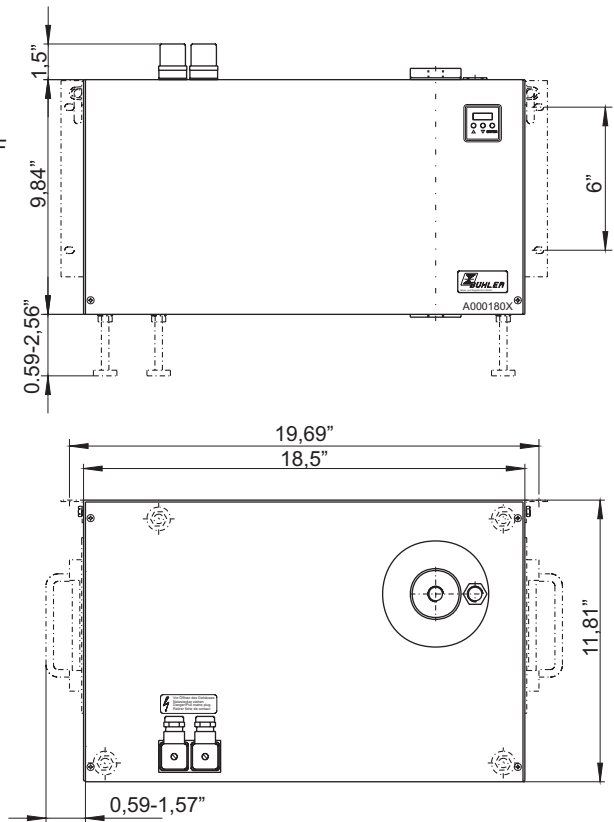
The cooler can be supplied with feet adjustable from about 1.5 to 6.6 cm and either mounting brackets or handles.

- **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**
- **Adjustable dew point and alarm thresholds**
- **Feet, handles or mounting brackets available**

Technical Data

Ready for operation	After max. 15 minutes
Cooling capacity (at 77°F)	1374 Btu/hr
Ambient temperature	40-120°F
Dew point adjustable	36 °F to 68 °F, factory setting 41 °F
Alarm threshold adjustable with respect to dew point	
upper alarm threshold	+1.8 °F to +12.6 °F, factory setting +5.4 °F
lower alarm threshold	-1.8 °F to -5.4 °F, factory setting -5.4 °F
Dew point variations static	0.2 K
Over full operation range	± 2 °C
Power supply	115 or 230 V, 50/60 Hz
Power consumption	750 VA
Cut-in current	12 A at 230 V, 28A at 115 V
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. 70 lb.

Dimensions (in.)



Flow Parameters

The values are given for gas with approx. 14 psig abs. pressure.
The flows are given in lpm at the cooler outlet !

Inlet dew point (moisture)	Ambient temperature	Gas inlet temperature					Water per min per 10 lpm
		140°F	176°F	212°F	284°F	356°F	
104°F (7 Vol%)	41...122 °F	65	58	52	43	37	2.6 cu. in.
122°F (12 Vol%)	50...113 °F	55	50	47	41	36	4.4 cu. in.
	41...122 °F	32	29	28	24	22	
131°F (16 Vol%)	72 ... 95 °F	50	47	44	39	35	5.5 cu. in.
	41...122 °F	25	23	23	20	18	
140°F (20 Vol%)	72 ... 95 °F	42	39	37	33	31	7.3 cu. in.
	41...122 °F	20	18	17	16	15	
149°F (25 Vol%)	72 ... 95 °F	-	30	29	27	24	9.7 cu. in.
	41...122 °F	-	14	14	13	12	
158°F (31 Vol%)	72 ... 95 °F	-	23	21	20	19	13.4 cu. in.
	41...122 °F	-	11	11	10	10	
176°F (47 Vol%)	72 ... 95 °F	-	12	12	11	10	26.7 cu. in.
	41...122 °F	-	6.0	5.8	5.5	5.3	

Example: The ambient can be held in a range of 72 - 95°F.

The gas inlet temperature is 284°F and the inlet dew point 140°F.

In the row dew point=140°F at ambient of 72 - 95°F from the column 284°F results in a value of 33l/min. Values of 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 38 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)
- 91 240 300 801* Peristaltic pump, 230 V 50/60 Hz, 1 l/h
- 91 240 300 831* Peristaltic pump, 115 V 50/60 Hz, 1 l/h

*Only available with wall mounting.

We reserve the right to amend specification