



JCSE2-100

Sample Gas Compressor Cooler



APPLICATION

- Extractive gas analysis
- For hazardous area use ATEX zone 2
- Emission and process monitoring
- Continuous drying of sample gas to a precise low and constant outlet dew point
- Minimises water vapour cross sensitivities and volumetric errors
- II 3G Ex nA nC IIC T3 Gc

BENEFITS

- High flow rates and high water vapour dew points possible
- Easy to change heat exchangers
- Continuous condensate removal
- Low maintenance operation
- Various heat exchanger materials
- One or two independent gas paths
- Integrated condensate pump

FEATURES

- Proven and reliable technology
- Digital temperature indication
- Hot gas bypass compressor technology
- Temperature sensor monitoring
- High current volt free status relay outputs (direct pump switching)
- Long life fan with ball bearing
- Wall mount, optional free stand
- Small footprint
- Stainless steel housing
- Light weight



TECHNICAL DATA

MODEL

JCSE2-100

Description	sample gas compressor cooler (refrigerator)
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OPERATION

Number of heat exchangers / Sample gas paths	1 or 2
Material heat exchanger	coated aluminum, PVDF, Duran glass, SS316Ti
Integrated condensate pump	1 or 2
Temperature indication	digital temperature display
Sample gas flow rate*	max. 250 NI/hr
Sample gas inlet temperature*	max. 140 °C
Sample gas inlet dew point*	max. 80 °C
Sample gas outlet dew point	3° or 5 °C
Dew point stability (for constant inlet conditions)	±0.2 K
Ambient temperature	5° to 45 °C
Cooling capacity total	160 W
Operating pressure with condensate pump	0.2 to 2.2 bara
Max. operating pressure without condensate pump	2.5 bara / max. 19 bara with SS heat exchanger
Ready for operation	< 20 min
Pressure drop at 100 NI/hr	2 mbar

* Refers to reference data: flow rate: 100 l/h, inlet dew point: 60 °C (140 °F), gas temperature: 140 °C (284 °F), ambient temperature: 25 °C (77 °F), outlet dew point: 3 °C (37.4 °F)

CONSTRUCTION

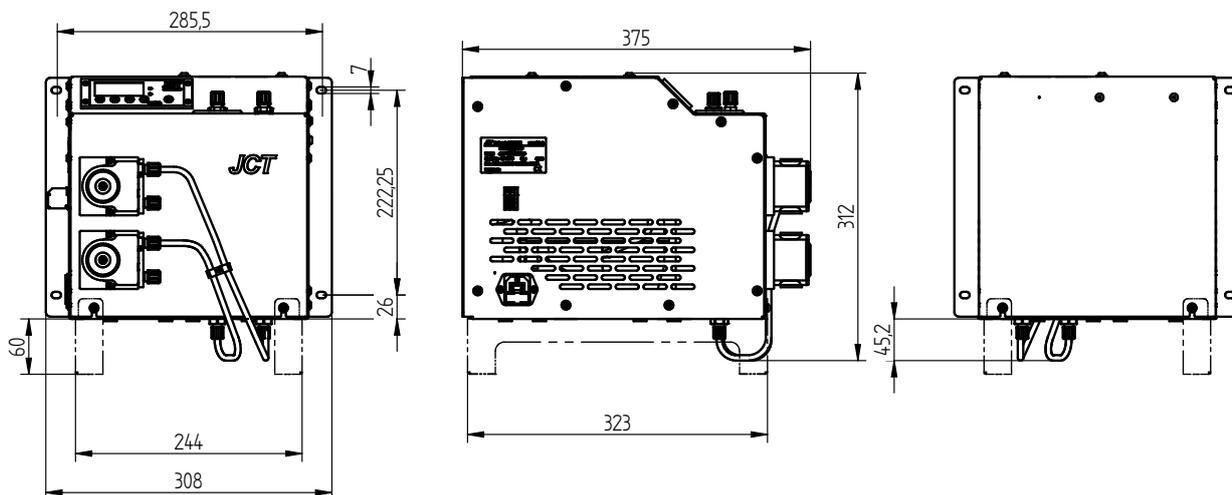
Dimensions over all (W x H x D)	308 x 312 x 375 mm
Installation	stand alone or wall mounting
Mounting	horizontal
Weight	17 kg
Housing / Colour	stainless steel
Sample gas wetted materials heat exchanger	glass GWT: Duran glass, PVDF, Viton ® or Aflas ® SS GWT: SS316Ti Al coated GWT: PFA/PVDF coated aluminum, PVDF, Viton ® or Aflas ® PVDF GWT: PVDF, Viton ® or Aflas ®
Dead volume per sample gas path	67 ml
Connection sample gas inlet and outlet	PVDF-hose fitting DN 4/6; for SS316 sample gas in/out 4/6 mm pipe stubs
Connection condensate outlet	1/4" NPTi or 3/8" NPTi
Type of protection	 II 3G Ex nA nC IIC T3 Gc
Approvals / Signs	CE

TECHNICAL DATA

ELECTRICS

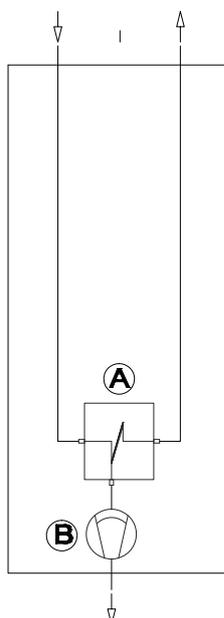
Power supply	220 to 240 VAC 50/60 Hz or 100 to 115 VAC 50/60 Hz
Power consumption (depending on load and ambient temperature)	190 VA
Connection power	IEC 60320 C14
Protection class (in default mounting position)	IP 20 (EN 60529)
Fusing	6.3 AT in IEC plug
On time	100 %
Status threshold	< 0.5 / > +10 °C
Status contact	volt free relay contact, 230 VAC / 2 A, min. 5 VADC / 5 mA
Connection terminals / Clamping range	spring type terminals 0.5 mm ² to 2.5 mm ²

DIMENSIONS

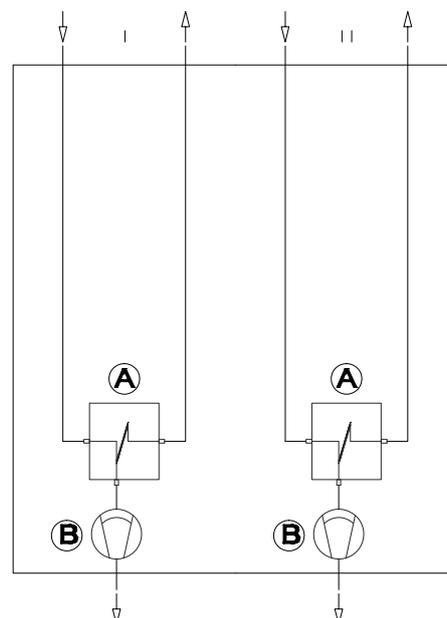


FLOW CHART

1 gas path



2 gas paths



A ... actively cooled heat exchanger
 B ... condensate pump (option)

