JCS-100 Sample Gas Compressor Cooler



APPLICATION

- · Extractive gas analysis
- · 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

BENEFITS

- High flow rates and high water vapour dew points possible
- Easy to change heat exchangers
- · Continuous condensate removal
- · Low maintenance operation

FEATURES

- Proven and reliable technology
- · Various heat exchanger materials
- One or two independent gas paths
- · Digital temperature indication
- · Integrated condensate pump
- Status contact with acoustic feedback
- · 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
- · Fully encapsulated temperature sensor
- · Small footprint
- · Stainless steel housing
- · Light weight



JCT Analysentechnik

> Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate Treatment

Accessories

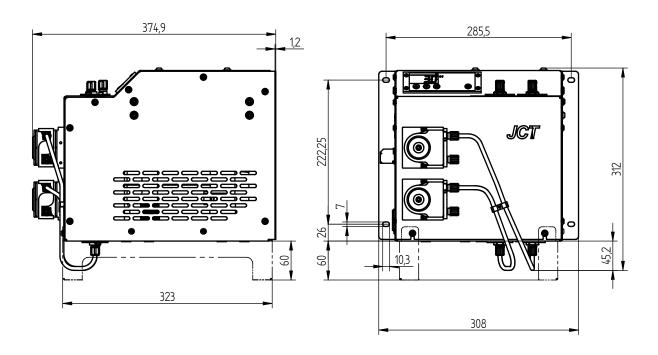
Gas Conditioning System

Sample Gas
Converters

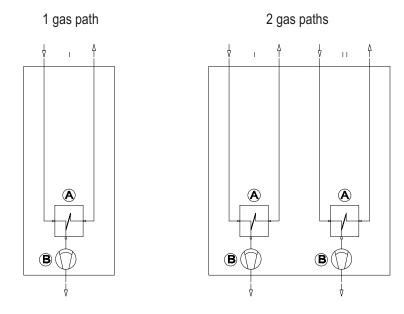
TECHNICAL DATA

Number of heat exchangers Gas paths 1 or 2	Description	sample gas compressor coolers						
Material heat exchangers Operation Max. gas flow rate* [Nihr] Max. gas flow rate* [Pihr] Max. gas linet temperature* [*C] Max. gas linet dew point* [*C] Gas outet dew point* [*C] Gas outet dew point* [*C] Gas outet dew point at sability flor constant inlet conditions) Another temperature For to 45 °C Cooling capacity Temperature aliam limits (0 /> +10 °C Operating pressure with Oz. 10 2,2 barra Max. operating pressure with Oz. 10 2,2 barra Max. operating pressure with Oz. 10 0,10 barra Max. operating pressure Max. oper	Cooling principle	compressor cooling						
Max. gas filow rate* [Nithir] Operation Max. gas linet temperature* [*C] 140 Max. gas linet dew point* [*C] 80 Gas outlet dew point* [*C] 80 Dave point stability ±0.2 K for constant litet conditions) ±10.2 K Architent interperature 5"to 45"C Cooling capacity 160.0 W Fernperature slaim limits <0.7 × ±10.0°C	Number of heat exchangers / Gas paths	1 or 2						
Max. gas flow rate* [Nikhr] 250 Max. gas inlet demperature* [*C] 140 Max. gas inlet demperature* [*C] 80 Gas cutlet dew pont 3" or 5" C Dew point stability 40,2 K Ambient temperature 6" to 45" C Cooling capacity 160 W Temperature alarm limits < 1/2 C	Material heat exchangers	coated aluminum, PVDF, Duran glass, SS316						
Max. gas inlet temperature* ["C] 140 Max. gas inlet dev point* ["C] 80 Gas outlet dev point* ["C] 80 Sea outlet dev point 3° or 5° C Dew point stability \$0.2 K for constant inlet conditions) 160 W Ambient temperature 5° to 45° C Cooling capacity 160 W Temperature alarm limits < 0/ > + 10° C Operating pressure with condensate pump 0.2 to 2.2 bara Max. Operating pressure with voluc condensate pump [para] 2.5 Ready for operation < 20 min.								
Max. gas inlet dew point "("C)" 80 Gas outlet dew point (pro point) 3" or 5" C Dew point stability (pro constant line) conditions) ±0,2 K Ambient temperature 5" to 45" C Cooling capacity 160 W Femperature alarm limits < 01 > ±10" C Operating pressure with conditional pressure with condensate pump (barra) 2,5 Max. operating pressure with condensate pump (barra) 2,5 Ready for operation < 20 min.	Max. gas flow rate* [NI/hr]	250						
Gas outlet dew point 3° or 5° C Dew point stability ±0,2 K Info constant inlet conditions) ±0,2 K Ambient temperature 5° to 45° C Cooling capacity 180 W Temperature alarm limits < 0,7 > +10 ° C Operating pressure with condensate pump (bara) 2,5 Ready for operation < 20 min.	Max. gas inlet temperature* [°C]	140						
Deep point stability ±0,2 K	Max. gas inlet dew point* [°C]	80						
Marchient temperature 5° to 45° C	Gas outlet dew point	3° or 5°C						
Cooling capacity	Dew point stability (for constant inlet conditions)	±0,2 K						
Temperature alarm limits	Ambient temperature	5° to 45 °C						
Operating pressure with condensate pump (bara) Awax operating pressure without condensate pump [bara] Ready for operation	Cooling capacity	160 W						
condensate pump 0.2 to 2.2 bata Max. operating pressure without condensate pump (bara) 2.5 Ready for operation < 20 min.	Temperature alarm limits	< 0 / > +10 °C						
Apart Apart	Operating pressure with condensate pump	0,2 to 2,2 bara						
Pressure drop at 100 NI/hr Construction Dimensions over all (W x H x D) Dimensions over all (Max. operating pressure without condensate pump [bara]	2,5						
Construction Dimensions over all (W x H x D) Installation Stand alone or wall mounting Mounting position Mounting position	Ready for operation	< 20 min.						
Dimensions over all (W x H x D) Installation Installation Mounting position Mounting position Mounting position Mounting position Meight 17 kg Housing / Colour Stainless steel Dead volume per gas path Connection sample gas and condensate Dead volume per gas path Connection sample gas and condensate Dead volume per gas path Condensate pump Condensate pump Frotection class IP 20 (EN 60529) Approvals / Signs CE 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) Connection power / Status signal Fusing On time 100 % Temperature indication Status threshold Con/> +10 °C Status delay Volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA	Pressure drop at 100 NI/hr							
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Dead volume per gas path Connection sample gas and condensate outlet with condensate pump Condensate outlet with condensate pump Condensate outlet without condensate pump Protection class Approvals / Signs CE Electrics Power supply Power consumption (depending on load and ambient temperature) Connection power / Status signal Fusing On time 100 % Temperature indication Status threshold Contact in	Weight	17 kg						
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for SS316 sample gas in/out 4/6mm pipe stubs Condensate outlet with condensate pump 1/4" NPTi or 3/8" NPTi Protection class IP 20 (EN 60529) Approvals / Signs CE 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) Connection power / Status signal Fusing On time 100 % Temperature indication Status threshold Contact on the status signal Contact on the status signal Status delay Volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA	Dead volume per gas path	67 ml						
without condensate pump Protection class Approvals / Signs CE Electrics Power supply Power consumption (depending on load and ambient temperature) Connection power / Status signal Fusing On time Temperature indication Status delay Status relay Vol (EN 60529) CE Electrics 190 VA 220 to 240 VAC 50/60 Hz or 100 to 115 VAC 50/60 Hz Power consumption (190 VA 190 VA 190 VA 1EC plug 6,3 AT in IEC plug 0 digital display 5 of 3 of	Connection sample gas and condensate outlet with condensate pump							
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Connection power / Status signal Fusing 6,3 AT in IEC plug On time 100 % Temperature indication Status threshold Status delay Status relay Volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA	Power consumption (depending on load and ambient temperature)	190 VA						
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Status delay 0,5 s Status relay volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA	Temperature indication	digital display						
Status relay volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA	Status threshold							
·	Status delay	0,5 s						
Connection terminals / Clamping range spring type terminals 0,5 mm ² to ,5 mm ²	Status relay	volt free contact max. 230 VAC / 6 A min. 5 VADC / 5 mA						
	Connection terminals / Clamping range	spring type terminals 0,5 mm² to ,5 mm²						

^{*} Results from the effective cooling capacity at 25 °C ambient temperature and 3 °C outlet dew point and can be influenced by further operational parameters



GAS FLOW



Α	Actively cooled heat exchanger
В	Condensate pump (option)

ORDER CODE

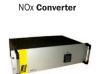
JCS-100 series

Order code		JCS-10							
			+	•	•	+	V	•	↓
woulding	with cooler stand								S
Mounting	without cooler stand								0
Power supply Dew point	dew point set up 5°							5	
	dew point set up 3°							3	
	115 VAC 50/60 Hz						В		
Device events	230 VAC 50/60 Hz						Α		
Condensate pump	without condensate pump JSR-25, 3/8" NPTf outlet					4			
	without condensate pump JSR-25, 1/4" NPTf outlet					3			
	2 condensate pumps JSR-25					2			
	1 condensate pump JSR-25					1			
Heat exchanger 2	2nd heat exchanger: JHEX-4 SS				4				
	2nd heat exchanger: JHEX-4 Duran glass				3				
	2nd heat exchanger: JHEX-4 PVDF				2				
	2nd heat exchanger: JHEX-4 aluminum coated				1				
	no heat exchanger		П		0				
	1st heat exchanger: JHEX-4 SS			4					
Heat exchanger 1	1st heat exchanger: JHEX-4 Duran glass			3					
	1st heat exchanger: JHEX-4 PVDF			2					
	1st heat exchanger: JHEX-4 aluminum coated			1					
Basic unit	2 heat exchangers / gas paths		2.						
	1 heat exchanger / gas path		1.						

Gas Sampling **Probes** Heated Sample Lines Sample Gas Coolers









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