# Sample Gas Conditioning You Can Trust



# 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 replaceable heat exchangers
- · Continuous condensate removal
- · Low maintenance operation
- · Integrated condensate pump
- Wall mount, optional free stand or stand alone
- · Light weight

# **FEATURES**

- Proven and reliable technology
- Various heat exchanger materials
- · One or two independent gas paths
- Digital temperature display
- Status contact
- Analog temperature output
- Hot gas bypass compressor technology
- · Temperature sensor monitoring
- · Long life fan with ball bearing
- Fully encapsulated temperature sensor
- Small footprint
- · Stainless steel housing

















**JCT** Analysentechnik

# **TECHNICAL DATA**

MODEL JCS-100

#### **OPERATION**

Number of heat exchangers / Sample gas paths	1 or 2					
Material heat exchanger	coated aluminum, PVDF, Duran® glass, SS316					
Integrated condensate pump	02					
Temperature indication	digital temperature display					
Sample gas flow rate*	max. 250 NI/h per gas path					
Sample gas inlet temperature*	max. 140 °C (284 °F); SS heat exchanger: max. 180 °C (356 °F)					
Sample gas inlet dew point*	max. 80 °C (176 °F)					
Sample gas outlet dew point	3° or 5 °C (37.4° to 41 °F) (factroy default, others on request)					
Dew point stability (for constant inlet conditions)	±0.2 K					
Ambient temperature	5° to 45 °C (41° to 113 °F)					
Cooling capacity total	max. 160 W					
Operating pressure with condensate pump	0.2 to 2.2 bara					
Max. operating pressure without condensate pump	5 bara SS heat exchanger: 19 bara					
Ready for operation	< 20 min					
Pressure drop at 100 NI/hr	approx. 2 mbara					
Pressure drop at max. flow rate	2 mbar					

<sup>\*</sup> 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 (W x H x D)	308 x 312 x 375 mm (12.13 x 12.28 x 14.76 inch)
Installation	stand alone or wall mounting
Mounting	horizontal
Weight	17 kg (37.48 lbs)
Housing / Colour	stainless steel
Sample gas wetted materials heat exchanger	glass: Duran <sup>®</sup> glass, PVDF, O-rings: Viton <sup>®</sup> or Aflas <sup>®</sup> SS: SS316Ti aluminum coated: PFA/PVDF coated aluminum, PVDF, O-rings: Viton <sup>®</sup> or Aflas <sup>®</sup> PVDF: PVDF, O-rings: Viton <sup>®</sup> or Aflas <sup>®</sup>
Dead volume per sample gas path	67 ml
Connection sample gas inlet and outlet	4/6 mm PVDF hose fitting or 1/4" OD hose fitting for SS heat exchanger: pipe stubs 6 mm / 1/4" OD
Connection condensate outlet	including condensate pump: 4/6 mm hose fitting or 1/4" OD hose fitting without condenstae pump: 1/4" NPTf or 3/8" NPTf
Approvals / Signs	CE

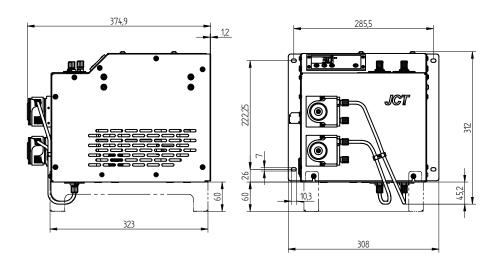
# **TECHNICAL DATA**

#### **ELECTRICS**

Power supply	220240 VAC 50/60 Hz or 100115 VAC 50/60 Hz
Power consumption (depending on load and ambient temperature)	190 VA
Connection power	IEC 60320 C14 plug
Protection class (in default mounting position)	IP20 (EN 60529)
Fusing	6.3 AT in IEC plug
On time	100 %
Diagnostic / Operation indicator	multicolor display
Status contact	volt free contact, max. 230 VAC / 2 A, min. 5 VADC / 5 mA
Status threshold	< 0 °C (32°F) / > +10 °C (50 °F)
Analogue output	operating temperature via 0/420 mA (sink)
Connection terminals / Clamping range	spring type terminals 0.52.5 mm² (2014 AWG)

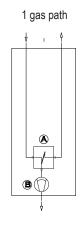
# **DIMENSIONS**

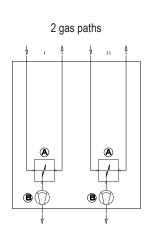
dimensions in mr



# **GAS FLOW**

- A Actively cooled heat exchanger
- **B** Condensate pump (option)





# **ORDER CODE**

#### JCS-100 series

Basic unit	1 heat exchanger / gas path		1.								
Heat exchanger 1	2 heat exchangers / gas paths		2.								
	1st heat exchanger: JHEX-4 aluminum coated, Viton®O-rings			1							
	1st heat exchanger: JHEX-4 PVDF, Viton®O-rings			2							
	1st heat exchanger: JHEX-4 Duran® glass, Viton® O-rings			3							
	1st heat exchanger: JHEX-4 SS316Ti			4							
	1st heat exchanger: JHEX-4 aluminum coated, Aflas® O-rings			5							
	1st heat exchanger: JHEX-4 PVDF, Aflas®O-rings			6							
	1st heat exchanger: JHEX-4 Duran® glass, Aflas® O-rings			7							
	no heat exchanger				0						
	2nd heat exchanger: JHEX-4 aluminum coated, Viton®O-rings				1						
	2nd heat exchanger: JHEX-4 PVDF, Viton®O-rings				2						
Heat avalences 0	2nd heat exchanger: JHEX-4 Duran® glass, Viton® O-rings				3						
Heat exchanger 2	2nd heat exchanger: JHEX-4 SS316Ti				4						
	2nd heat exchanger: JHEX-4 aluminum coated, Aflas®O-rings				5						
	2nd heat exchanger: JHEX-4 PVDF, Aflas® O-rings				6						
Condensate pump	2nd heat exchanger: Duran® glass, Aflas® O-rings				7						
	1 condensate pump JSR-25					1					
	2 condensate pumps JSR-25					2					
	without condensate pump JSR-25, 1/4" NPTf outlet					3					
Power gunnly	without condensate pump JSR-25, 3/8" NPTf outlet					4					
	230 VAC 50/60 Hz						Α				
Power supply	115 VAC 50/60 Hz						В				
Dew point	dew point set up 3 °C (37.4 °F)							3			
Mounting	dew point set up 5 °C (41 °F)							5			
	without cooler stand								0		
Interface	with cooler stand								S		
	relais contact									0	
	current output 0/420 mA (sink)									1	
Connections	relais contact & current output 0/420 mA (sink)									2	
	metric										M
	imperial										I
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Order code		JCS-10	,	-		Ť	ľ		,		•





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