



JCP-300 Portable Gas Conditioning System

JCT
Analysentechnik



Gas Sampling
Probes

Heated Sample
Lines

Sample Gas Coolers

Condensate
Treatment

Accessories

**Gas Conditioning
System**

Sample Gas
Converters

APPLICATION

- Mobile extractive gas analysis
- Emission and process monitoring
- Continuous sample gas conditioning of humid process gases
- Continuous drying of sample gas to a precise low and constant outlet dew point
- Minimizes water vapour cross sensitivities and volumetric errors

BENEFITS

- Very powerful compact and complete unit with condensate removal and monitoring
- High flow rates of up to 250 NI/h per gas path
- Very low wash out ratios even at high water vapour concentrations in the sample gas
- High inlet dew points up to 80 °C possible
- Reliable condensate separation even at very high ambient temperatures up to 50 °C
- Extremely precise long-term stable dew point even under varying loads
- Maximum operational safety
- Low maintenance operation
- Easy to maintain design

FEATURES

- New powerful modular designed compact solution
- JHEX-4 heat exchanger
- Intelligent digital control electronic
- Digital temperature display
- Applicable up to an ambient temperature of 50 °C (JCP-310)
- Integrated condensate pump
- Integrated sample gas pump
- Integrated acid dosing pump
- Integrated flow control
- Integrated fine dust filter
- Integrated condensate monitoring
- Temperature controller for heated sample line
- Visual alerting via LEDs and digital display
- Self monitoring with deactivation of the sample pump in case of alarm
- Ready for operation within less than 15 minutes

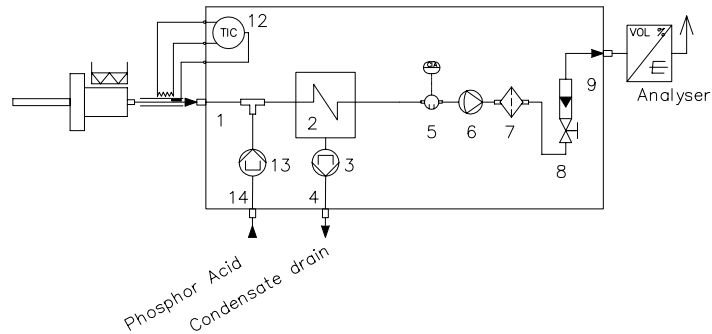
TECHNICAL DATA

Model	JCP-300	JCP-310
Performance of sample gas cooler	standard	high-performance
Cooling principle	peltier cooling	
Number of peltier elements per active gas paths	1	2
Heat dissipation unit	standard heat sink and fan	lagre area heat sink, high air flow fan
Operation		
Gas flow per gas path*	max. 250 NI/hr	
Gas inlet temperature*	max. 140 °C for PVDF and max. 180 °C for SS heat exchangers	
Gas inlet dew point*	max. 80 °C	
Gas outlet dew point	+5 °C (factory default); adjustable from +0,5 °C to +7,5 °C	
Dew point stability (for constant inlet conditions)	±0,1 K	
Ambient temperature	+5 °C to +40 °C	+5 °C to +50 °C
Cooling capacity total	max. 30 W	max. 60 W
Operating pressure with condensate pump	0,2 to 2,2 bara	
Max. operating pressure without condensate pump	4,0 bara; SS heat exchanger: max. 19 bara	
Ready for operation	< 15 min	
Pressure drop at max. flow rate	3 mbar	
Construction		
Dimensions over all (W x H x D)	560 x 455 x 265 mm	
Installation	portable	
Housing / Colour	hard case with trolley function, polypropylene, yellow	
Operating position	open case, vertical heat exchanger	
Weight	approx.18 kg, depending on configuration	approx.22 kg, depending on configuration
Gas wetted materials (depending on configuration)	aluminium coated, PVDF, SS316Ti, FFKM, Duran glass, PTFE, FPE	
Dead volume per gas path	67 ml	
Connection sample gas inlet	stainless steel compression fitting 6 mm	
Connection sample gas outlet, condensate outlet	PVDF-hose fitting DN 4/6	
Approvals / Signs	CE	
Electrics		
Power supply	230 VAC 50/60 Hz +/- 10 % or 115 VAC 50/60 Hz +/- 10 %	
Power consumption (without sample line) (depending on load and ambient temperature)	60VA up to 110VA	120VA up to 320 VA
Connection power	plug CEE 7/7 to IEC plug, with 2,0 m cable	
Protection class	transport in closed case: IP 67 (EN 60529) operation with open case: IP 20 (EN 60529)	
Fusing (rating depending on sample line)	built-in lead fuse	built-in lead fuse
On time	100 %	
Diagnostic / Operation indicator	2 x bicolour-LED	
Status threshold	< 0 / > +10 °C	
Status relay delay	0,5 s	
Status relay	volt free contact, 230 VAC / 2 A, min. 5 VADC / 5 mA	
Connection for heated sample line	7-pole plug, load of max. 2200 W or max. 10A	
Threshold condensate detector (option)	factory setting 12 kΩ, adjustable 2 to 30 kΩ	

* Results from the effective cooling capacity at 20 °C ambient temperature and 5 °C outlet dew point and can be influenced by further operational parameters

TECHNICAL DATA

Gas flow diagram JCP-300 / JCP-310



1	Sample gas inlet
2	Gas heat exchanger
3	Condensate pump JSR-25
4	Condensate drain
5	Condensate sensor KW-1 (option)
6	Sample gas pump (option)

7	Fine dust filter (option)
8	Flow meter with needle valve (option)
9	Sample gas outlet
12	Temperature controller for heated sample line (option)
13	Acid dosing pump (option)
14	Acid port (option)

ORDER CODE

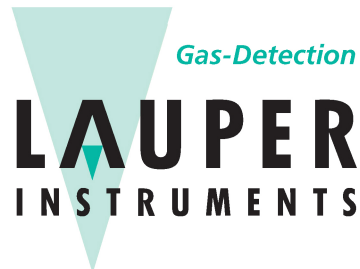
JCP-300 standard performance including JSR-25 condensate pump

Heat exchanger	JHEX-4 heat exchanger aluminium coated	1																			
	JHEX-4 heat exchanger PVDF	2																			
	JHEX-4 heat exchanger Duran glass	3																			
	Heat exchanger SS-GLY (helical style)	5																			
Filtration	without																				0
	fine dust filter JF-1																				1
Sample gas pump	without																				0
	sample gas pump JSP																				1
Flow meter with needle valve	without																				0
	flow meter with needle valve																				1
Condensate detector	without																				0
	condensate detector																				1
Temperature display for heat exchanger	without																				0
	temperature display for heat exchanger																				1
Acid dosing pump	without																				0
	acid dosing pump																				1
Temperature controller for heated sample line	without																				0
	temperature controller for heated sample line Pt100																				1
	temperature controller for heated sample line TC type K																				2
Power supply	230 VAC 50/60 Hz																				A
	115 VAC 50/60 Hz																				B
Special version																					XY
Order code																					
	JCP-300.																				

ORDER CODE

JCP-310 high performance including JSR-25 condensate pump

Heat exchanger	JHEX-4 heat exchanger aluminium coated											1	
	JHEX-4 heat exchanger PVDF											2	
	JHEX-4 heat exchanger Duran glass											3	
	JHEX-4 heat exchanger stainless steel											4	
Filtration	without											0	
	fine dust filter JF-1											1	
Sample gas pump	without											0	
	sample gas pump JSP											1	
Flow meter with needle valve	without											0	
	flow meter with needle valve											1	
Condensate detector	without											0	
	condensate detector											1	
Temperature display for heat exchanger	without											0	
	temperature display for heat exchanger											1	
Acid dosing pump	without											0	
	acid dosing pump											1	
Temperature controller for heated sample line	without											0	
	temperature controller for heated sample line Pt100											1	
	temperature controller for heated sample line TC type K											2	
Power supply	230 VAC 50/60 Hz											A	
	115 VAC 50/60 Hz											B	
Special version												XY	
Order code												JCP-31	



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