

Innovation in Gas Analysis

JCM Sample Gas Peltier Cooler



APPLICATION

- For extractive gas analysis
- For emission and process monitoring
- For e.g. biogas plants
- Continuous drying of sample gas to a precise low and constant outlet dew point
- Minimises water vapour cross sensitivities and volumetric errors

BENEFITS

- Extremely precise long term stable dew point even under varying loads
- Maximum operational safety
- High flow rates and water vapour dew points possible
- Corrosion resistant PVDF heat exchanger
- Continuous condensate removal with integrated condensate pump
- Low maintenance operation
- Easy to maintain design

FEATURES

- Proven and reliable technology
- Performance optimised construction with high performance PVDF heat exchanger
- Digital control electronic
- Integrated condensate pump
- Integrated condensate monitoring
- Status contact
- Self monitoring
- Ready for operation in 15 minutes
- Compact design



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Analysentechnik
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Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate
Treatment

Accessories

Gas Conditioning
Systems

Sample Gas
Converters



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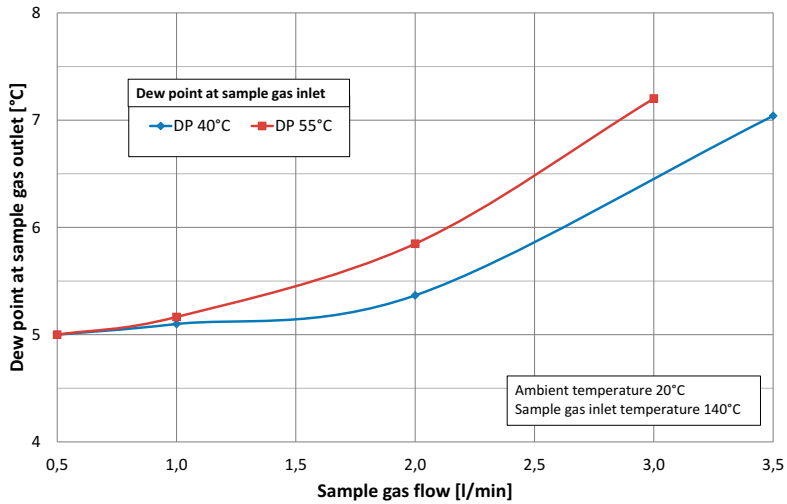
TECHNICAL DATA

Model	JCM	JCM-E	JCM-KE
Description	sample gas cooler		
Cooling principle	peltier cooling		
Number of heat exchangers / gas paths	1 / 1		
Integrated condensate pump	no	yes	yes
Integrated condensate detector	no	no	yes
Operation			
Gas flow rate	max. 180 NI/hr		
Max. Gas inlet temperature*	max. 140°C		
Max. Gas inlet dew point*	max. 70°C		
Gas outlet dew point	+3°C (ex works); adjustable from +0,5°C....+7,5°C		
Dew point stability (for constant inlet conditions)	±0,2K		
Ambient temperature	+5....+40°C		
Cooling capacity	>15 W		
Temperature alarm limits	<0 / >+10°C		
Operating pressure with condensate pump	0,2...2,2 bara		
Max. operating pressure without condensate pump	4,4 bara		
Ready for operation	<15 min		
Pressure drop at max. flow rate	5 mbar		
Construction			
Dimensions over all (W x H x D)	283 x 230 x 175 mm	300 x 230 x 213 mm	
Installation	stand alone or wall mounting		
Mounting position	horizontal		
Weight	4,8 kg	5,2 kg	
Housing, colour	natural aluminium, anodised		
Material heat exchanger	PVDF		
Dead volume per gas path	50 ml		
Connection sample gas and condensate outlet with condensate pump	PVDF-hose fitting DN 4/6		
Connection condensate outlet without condensate pump	PVDF-hose fitting DN 10/12		
Approvals / signs	CE		
Electrics			
Power supply	115 VAC 50/60 Hz +/- 10% or 230 VAC 50/60 Hz +/- 10%		
Power consumption (depending on load and ambient temperature)	30....160 VA		
Connection power	plug CEE 7/7 to IEC plug, 2,0 m cable		
Cooling element	peltier		
Protection class	IP 20 (EN 60529)		
Fusing (built in IEC socket)	safety fuse T2A		
On time	100 %		
Diagnostic- / operation indicator	1 x bicolour-LED	2 x bicolour-LED	
Alarm set points	<0 / >+10°C		
Alarm delay	0,5 s		
Status relay	volt free change over contact, 230 VAC / 2 A, min. 5 VADC / 5 mA		
Connection terminals / clamping range	tension clamps 0,5 mm ²4 mm ²		
Response threshold condensate detector			factory setting 12 kΩ; adjustable 2...30 kΩ

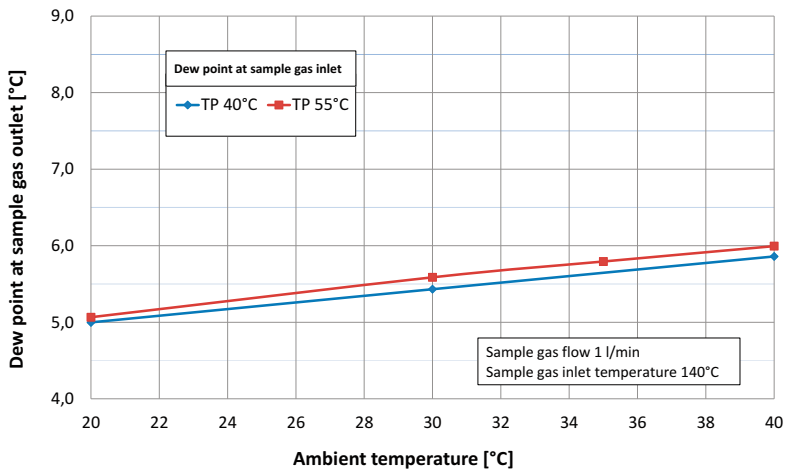
* Results from the effective cooling capacity at 25°C ambient temperature and 3°C outlet dew point and can be influenced by further operational parameters

TECHNICAL DATA

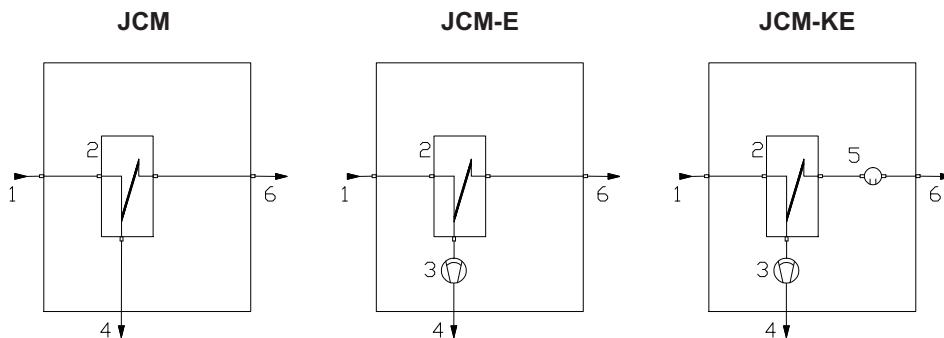
Outlet dew point in dependence on the sample gas flow



Outlet dew point in dependence on the ambient temperature



GAS FLOW DIAGRAMS

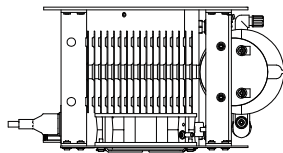
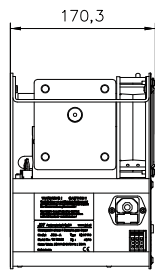
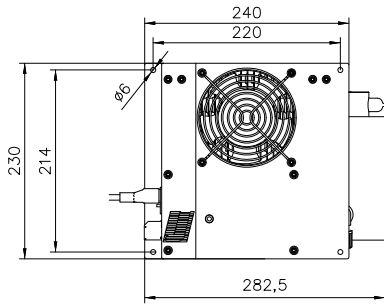


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| 1 | Sample gas inlet |
| 2 | Gas heat exchanger |
| 3 | Condensate pump |

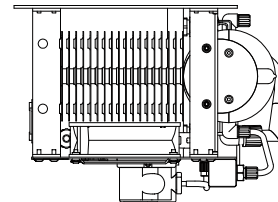
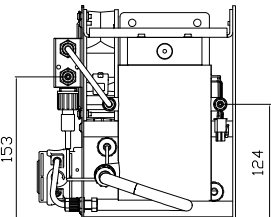
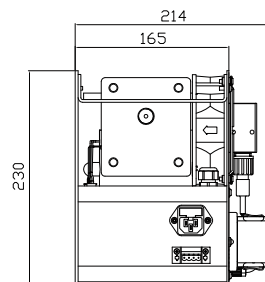
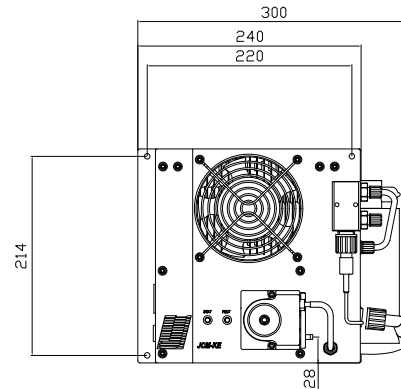
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| 4 | Condensate outlet |
| 5 | Condensate sensor KW-1 |
| 6 | Sample gas outlet |

DIMENSIONS

JCM



JCM-E and JCM-KE



Dimensions in mm

ORDER CODES

JCM / JCM-E / JCM-KE

Part No.	Model	Status contact temperature	Condensate pump JSR-25	Condensate sensor KW-1	230 VAC 50/60 Hz	115 VAC 50/60 Hz
12.01000	JCM	x			x	
12.01001	JCM/S	x				x
12.01200	JCM-E	x	x		x	
12.01201	JCM-E/S	x	x			x
12.01300	JCM-KE	x	x	x	x	
12.01301	JCM-KE/S	x	x	x		x

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