



# JCM Peltier Sample Gas Cooler

**JCT**  
Analysentechnik



Gas Sampling  
Probes

Heated Sample  
Lines

**Sample Gas Coolers**

Condensate  
Treatment

Accessories

Gas Conditioning  
System

Sample Gas  
Converters

## APPLICATION

- Extractive gas analysis
- 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 high 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

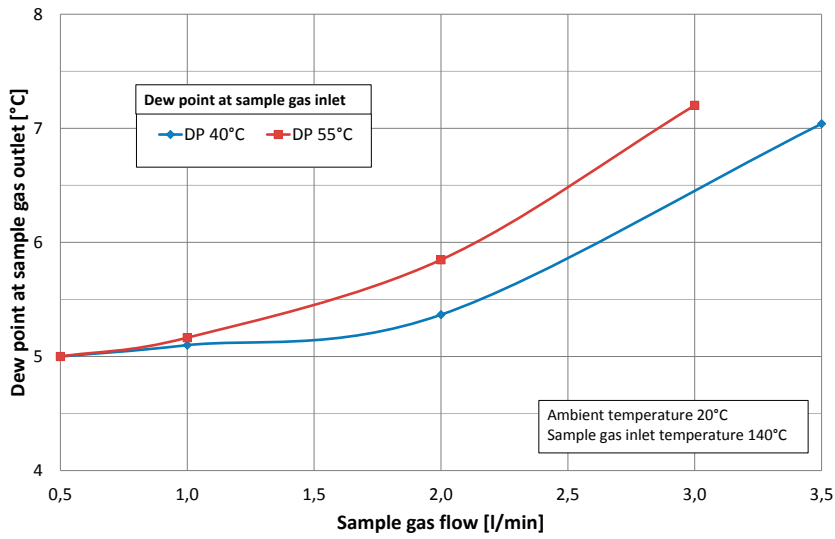
## TECHNICAL DATA

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
<b>Operation</b>			
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 to +7,5°C		
Dew point stability (for constant inlet conditions)	±0,2K		
Ambient temperature	+5 to +40°C		
Cooling capacity	> 15 W		
Temperature alarm limits	< 0 / > +10°C		
Operating pressure with condensate pump	0,2 to 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		
<b>Construction</b>			
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		
<b>Electrics</b>			
Power supply	115 VAC 50/60 Hz +/- 10 % or 230 VAC 50/60 Hz +/- 10 %		
Power consumption (depending on load and ambient temperature)	30 to 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 <sup>2</sup> to 4 mm <sup>2</sup>		
Response threshold condensate detector			factory setting 12 kΩ; adjustable 2 to 30 kΩ

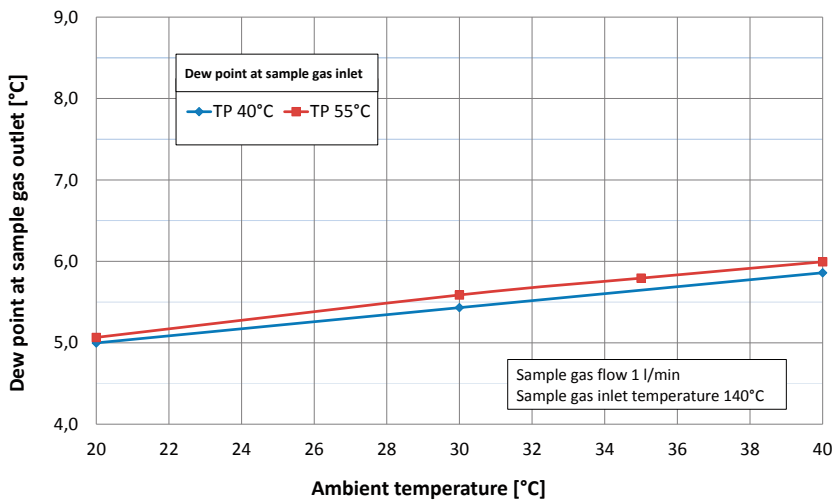
\* Results from the effective cooling capacity at 25°C ambient temperature and 3°C outlet dew point and can be influenced by further operational parameters

## TECHNICAL DATA

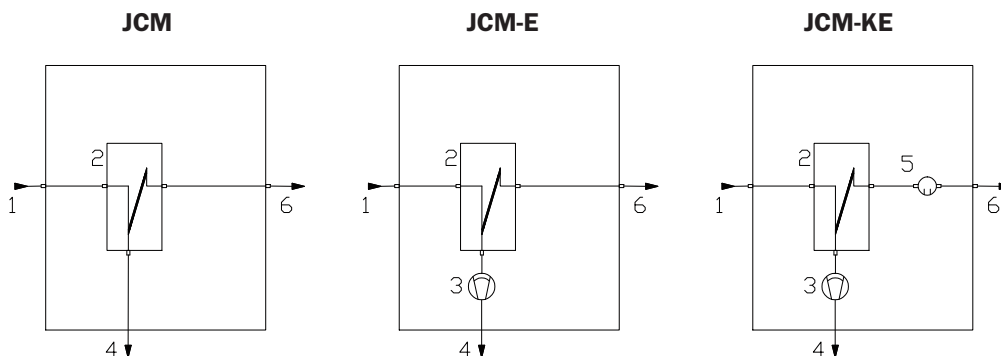
### Outlet dew point in dependence on the sample gas flow



### Outlet dew point in dependence on the ambient temperature



## GAS FLOW DIAGRAMS



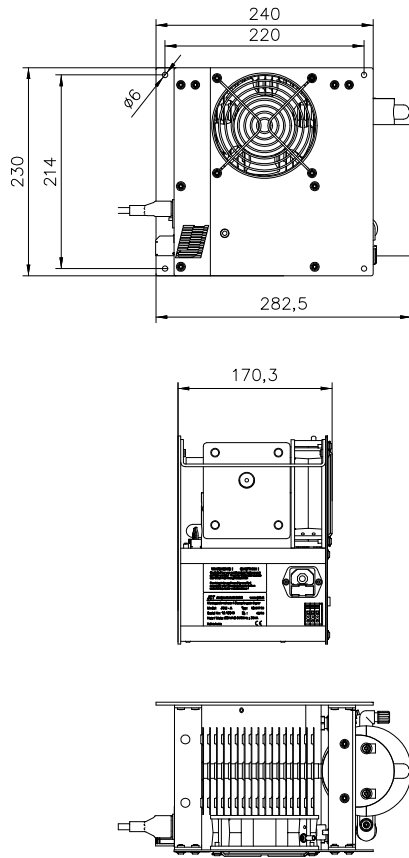
1	Sample gas inlet
2	Gas heat exchanger
3	Condensate pump

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

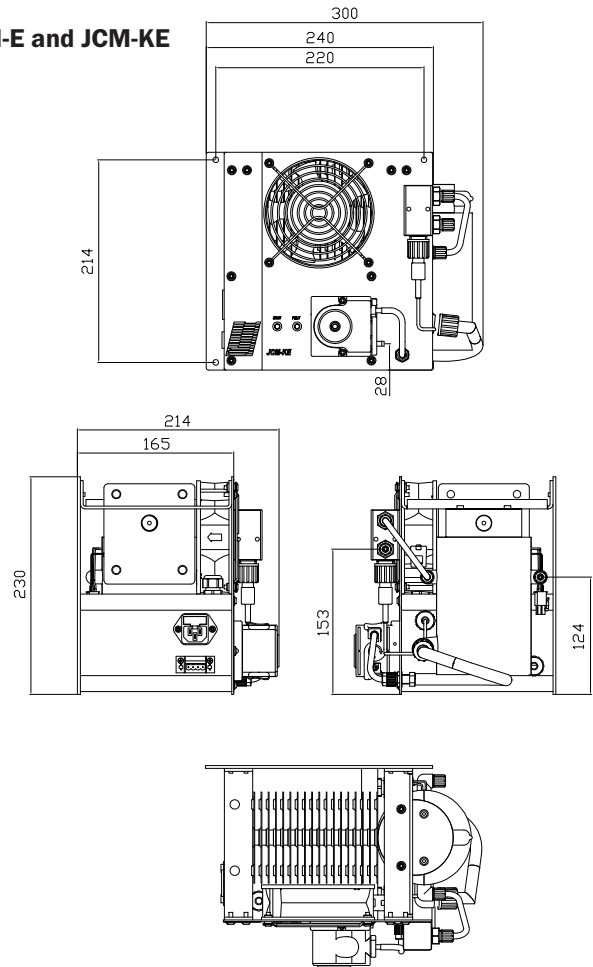
## DIMENSIONS

Dimensions in mm

### JCM



### JCM-E and JCM-KE

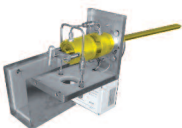


## ORDER CODE

### 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

Gas Sampling Probes



Heated Sample Lines



Sample Gas Coolers



Gas Conditioning Systems



NOx Converter



and solutions for

