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conditioning systems

CONDITIONING SYSTEMS

Portable Gas Conditioner JCP



FEATURES

- ◆ Lightweight and compact sample gas conditioning unit
- ◆ All-purpose through modular design
- ◆ Proven and reliable technology
- ◆ Corrosion resistant gas paths

GENERAL

The efficient sample gas conditioning unit JCP is used to reduce the dew point of wet sample gases. The cooler reliably suppresses water vapours and particles from the sample gas and ensures reliable conditioning of sample gases to enhance analysis results. JCP sample gas conditioning systems are of modular design built into a portable housing. The basic unit includes the heat exchanger and a condensate pump for drain.

Proven modules are assembled into various instrument versions .

TECHNOLOGY

The condensate drain is carried out in a cylindrical PVDF body with aluminium core ,which is kept to a constant low temperature by a Peltier element.

A fan is used for continuously removal of waste heat to the environment.

Sophisticated control electronics provides by means of a temperature sensor a stable dew point.

FEATURES

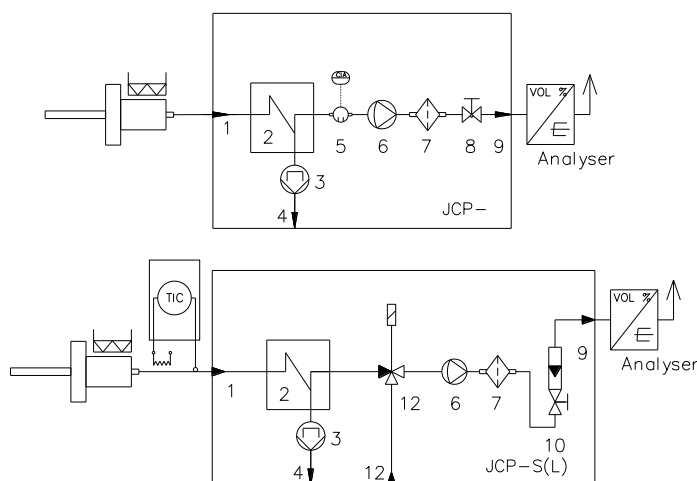
The JCP gas conditioning unit is integrated in a rugged, lightweight and portable aluminum chassis. The JCP ensures maximum security by constantly monitoring the temperature and drying efficiency of the heat exchanger.

Among the function modules are: filter element, sample gas pump, flow meter with needle valve, condensate control and solenoid valve.

Alarm conditions disable the diaphragm pump (option) as a protection to analytical instruments, whereas the front panel constantly displays sample pump and alarm status as well as the heat exchanger temperature.

The large housing can be equipped with a temperature controller for a heated sample line.

FLOW CHARTS



Sample gas connection inlet	1
Gas heat exchanger	2
Condensate pump	3
Condensate outlet	4
Condensate sensor KW1*	5
Sample gas pump*	6
Filter element	7
Flow control valve	8
Sample gas connection outlet	9
Flow meter with needle valve*	10
Solenoid valve*	11
Calibration port*	12

*..depending on model

TECHNICAL DATA

Flow rate	60l/h
Gas outlet dew point	+4°C

DEW POINT REFERENCE DATA

Gas temperature inlet	+140°C
Dew point inlet	+60°C
Ambient temperature	+20°C
Dew point stability	±0,2 K

MECHANICAL

Dimension over all (standard housing)	330x266x220mm (WxHxD)
Dimension over all (large housing)	448x266x220mm (WxHxD)
Mounting position Options	Stand alone wall mount or 19" rack
Alignment	horizontal
Weight (standard housing)	depending on model approx. 6,5-8,5
Weight (large housing)	approx. 13kg
Housing	Aluminium
Housing colour	Nature anodised
Heat exchanger material	PVDF
Dead volume per gas path	50ml
Connection sample gas inlet (standard housing) / condensate outlet with condensate pump/ calibration port	PVDF ID/AD 4/6
Connection sample gas inlet (large housing or option)	SS316 ID/AD 4/6
Approval / Sign	CE

OPERATION

Ready for operation	< 15 min
Pressure drop at max. flow rate	5mbar

OPERATING DATA MAX.

Flow rate	240 l/h
Gas temperature inlet	+150°C
Dew point inlet	+40°C
Permissible ambient temperature	+5°C...+40°C
Operation pressure	0,4...2,2bar abs.

ELECTRICAL

Supply voltage	115VAC or 230VAC/50/60Hz +/-10%
Power consumption	30...160 VA (depending on load and ambient temperature) + heated sample gas line max. 1800W
Power cord	Schuko to IEC Plug, 2m length
Cooling element	Peltier
Connection	IEC appliance plug
Protection class	IP 20 (EN 60529)
On - time	100%
Alarm set point	<0 / >+10°C
Connection heated sample gas line	7pin Binder series 693
Max. load heated sample gas line	230VAC 8A max. 1800W Thermocouple „K“ (Ni/CrNi)

Specification subject to change without notice.

MODEL OVERVIEW

Configuration	12.10000 JCP-E	12.10001 JCP-E	12.11050 JCP-FE	12.11051 JCP-FE	12.12100 JCP-FPE	12.12101 JCP-FPE	12.15000 JCP-S	12.15001 JCP-S	12.15100 JCP-SL	12.15101 JCP-SL
Filter JF1			X	X	X	X	X	X	X	X
Sample gas pump					X	X	X	X	X	X
Temperature display					X	X	X	X	X	X
Flowmeter with needle valve					X	X	X	X	X	X
Condensate detector							X	X	X	X
Large housing							X	X	X	X
Temperature controller sample line									X	X
Sample gas inlet stainless steel SS316							X	X	X	X
230VAC 50/60Hz	X		X		X		X		X	
115VAC 50/60Hz		X		X		X		X		X
additional options										
12.00003 C Sample gas inlet stainless steel SS316	X	X	X	X	X	X				
12.00065 KE Condensate detector			X	X	X	X				
12.00021 V Solenoid valve 230VAC *			X		X		X		X	
12.00021S V/S Solenoid valve 115VAC *				X		X		X		X
12.15120 WA Wall mounting set			X	X	X	X	X	X	X	X
12.15110 19" rack mounting set							X	X	X	X
12.15130 Leather protection case							X	X	X	X

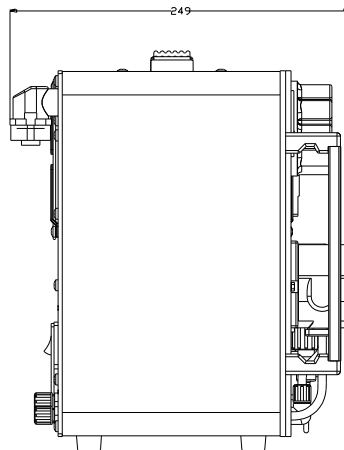
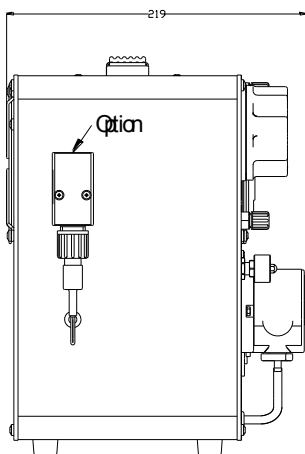
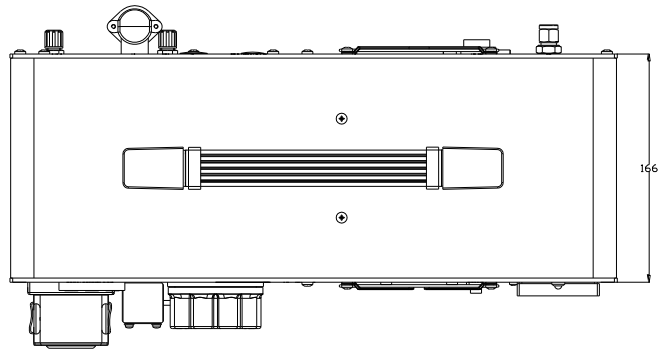
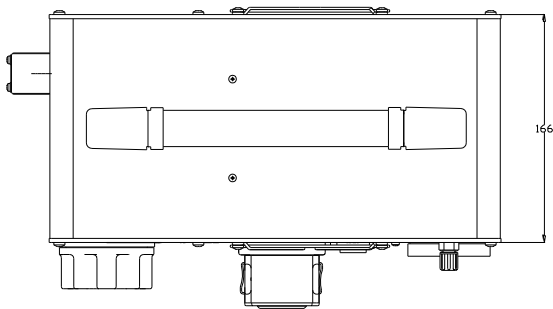
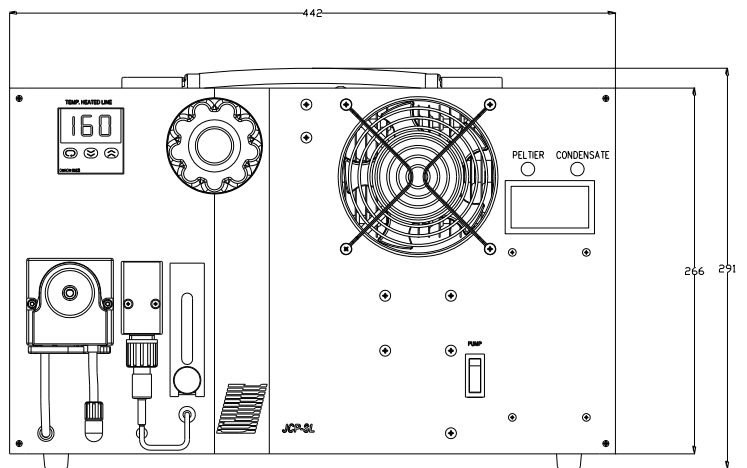
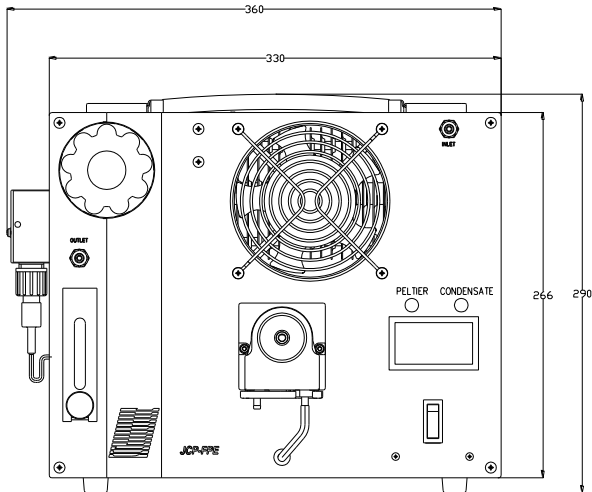
* only combined with condensate detector

SPARE PARTS

K1004600	Fan 230VAC
K1004605	Fan 115VAC
K1204323	Peltier – controller JPCU1
K1204360	Condensate detector electronic KW2
17.040000	Condensate sensor KW1
K1250010	Temperature sensor
K1233002A	Condensate pump complete

12.90392	Hose set condensate pump
K1233009A	Pulley holder condensate pump
B1253000	Gas heat exchanger PVDF
K1233011	Tubing cover
17.00002	Filter element glass fibre (pkg unit 5p.)
17.00003	Filter element PTFE (pkg unit 3p.)
K1001000	O-ring seal for filter housing (pkg unit 3p.)

DIMENSIONS



All dimensions in mm

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PDS_D_JCP_v1.0

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