



# JCL-304 | JCL-319

## Gas Conditioning Systems



### APPLICATION

- 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
- Minimises water vapour cross sensitivities and volumetric errors

### BENEFITS

- Complete solution for a great number of applications
- Longterm reliable reproducible measuring results
- Optimum operational safety due to self-monitoring
- Extremely precise long term stable dew point even under varying loads
- Fast response time due to low dead volume
- Two status contacts
- Very low dissolution rates
- Continuous condensate removal
- Low maintenance operation
- For wall or 19" rack mounting

### FEATURES

- Individual configuration due to modular design
- Basic device with high-performance compressor sample gas cooler
- One to four independent sample gas paths
- Integrated condensate pumps
- Speed controlled fan
- 11 status LEDs with event memory
- Additional options: high-performance corrosion resistant, sample gas pump, easy to maintain robust fine dust filter, corrosion resistant flowmeter with precise needle valve, reliable condensate monitoring, acid dosing pump, RS485 interface



## TECHNICAL DATA

MODEL	JCL-304	JCL-319
Description	sample gas conditioning system	
Cooling principle	compressor cooling with hot gas bypass	
Number of gas paths	1 to 4	

### OPERATION

Flow rate*	max. 120 NI/hr
Gas temperature inlet*	max. 140 °C (284 °F)
Dew point inlet*	max. 80 °C (176 °F)
Dew point outlet	3 °C (37.4 °F)
Dew point stability (for constant inlet conditions)	±0.1 K
Ambient temperature	5° to 45 °C (41° to 113 °F)
Operating pressure	0.2 to 2.2 bara
Ready for operation	< 10 min
Pressure drop at max. flow rate	2 mbar

### CONSTRUCTION

Dimensions over all (B x H x T)	440 x 300 x 408 mm (17.32 x 11.81 x 16.06 in)	483 x 310 x 408 mm (19.02 x 12.2 x 16.06 in)
Installation	stand alone or wall mounting	19" rack mounting
Mounting position	horizontal	
Weight	25 to 31 kg (55.12 to 68.34 lbs) (dependant on configuration)	
Housing / Colour	sheet steel 1.5 mm (0.06 in), powder coated, RAL 1016 S, front alu nature	
Material heat exchanger	PVDF	
Dead volume per gas path	48 ml	
Connection sample gas / Condensate outlet	PVDF hose fitting DN 4/6 mm	
Approvals / Signs	CE	

### ELECTRICS

Power supply	220 to 240 VAC 50/60 Hz or 100 to 115 VAC 50/60 Hz
Power consumption (depending on load, ambient temperature and configuration)	200 to 345 VA
Connection power / Status signal / Sample gas pump	3 x connector EN175301-803 form A / B with PG 9 panduit, 3/4 pole
Fusing	external on installation site, fuse characteristic C: 230 VAC 6 A; 115 VAC 10 A
Protection class	IP 20 (EN 60529)
On time	100 %
Alarm set points	< 0 / > +10 °C (50 °F)
Status relay	volt free changeover contact
Gas sample pump relay**	volt free contact NC
Switching capacity relays	max. 250 VAC / 8 A (1.5 A at 250 VDC); min. 5 VADC 5 mA
Data interface (option)	DB 9 female
Interface protocol (option)	RS485 / ST Bus
Bus cable length max.	1,000 m (0.62 mi)

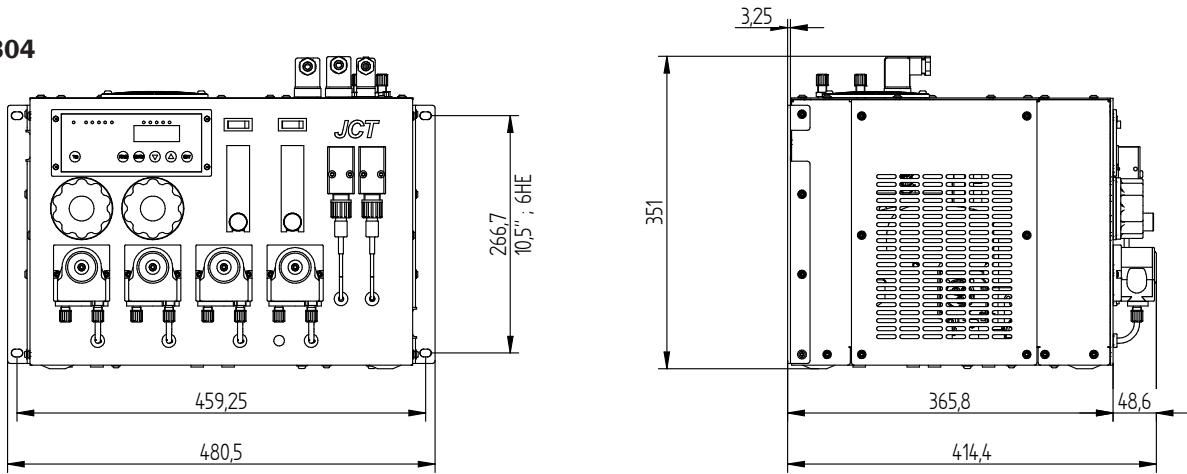
\* Results from the effective cooling capacity at 25 °C (77 °F) ambient temperature and 3 °C (37.4 °F) outlet dew point and can be influenced by further operational parameters

\*\* With internal sample gas pump use pump relay for release of this internal pump

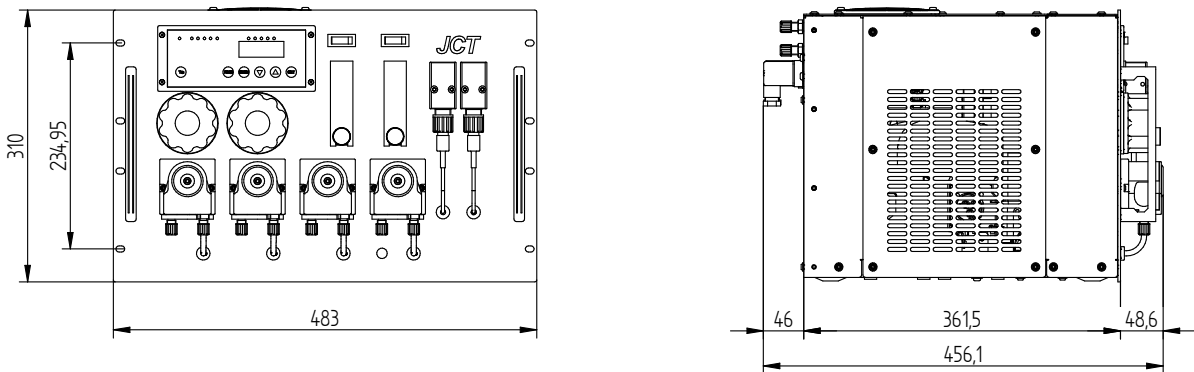
## DIMENSIONS

dimensions in mm

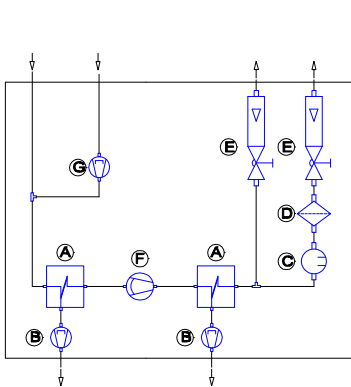
### JCL-304



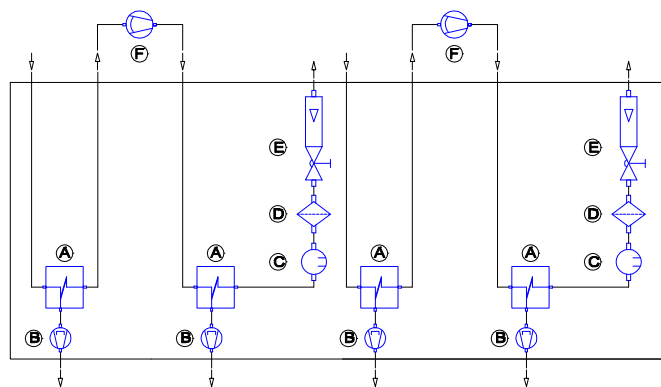
### JCL-319



## APPLICATION EXAMPLES | GAS FLOW DIAGRAMS



Part No. JCL-304.22611210  
Part No. JCL-319.22611210



Part No. JCL-304.24422200  
Part No. JCL-319.24422200

A	Gas heat exchanger
B	Condensate pump
C	Condensate sensor
D	Fine dust filter

E	Flow meter with needle valve
F	External sample gas pump (not included, suitable sample pumps are to be found in chapter 5)
G	Dosing pump

## ORDER CODE

### JCL-304 and JCL-319

Housing	Stand alone / wall mounting	304.																			
	19" rack mounting	319.																			
Power supply	115 VAC 50/60 Hz																			1	
	230 VAC 50/60 Hz																			2	
Gas heat exchangers	1 Gas heat exchanger																			A1	
	2 Gas heat exchangers																			A2	
	3 Gas heat exchangers																			A3	
	4 Gas heat exchangers																			A4	
Condensate pumps	1 Condensate pump JSR-25																			B1	
	2 Condensate pumps JSR-25																			B2	
	3 Condensate pumps JSR-25																			B3	
	4 Condensate pumps JSR-25																			B4	
	1 Dosing pump JSR-25 + 1 Condensate pump JSR-25																			B5	
	1 Dosing pump JSR-25 + 2 Condensate pumps JSR-25																				B6
	1 Dosing pump JSR-25 + 3 Condensate pumps JSR-25																				B7
Fine dust filter	Without fine dust filter																			D0	
	1 Fine dust filter JF-1 incl. PTFE filter element																			D1	
	2 Fine dust filter JF-1 incl. PTFE filter element																			D2	
Condensate detectors	Without condensate detector																			C0	
	1 Condensate detector KW-2 with 1 sensor																			C1	
	1 Condensate detector KW-2 with 2 sensors																			C2	
Flowmeter with needle valve	Without flowmeter																			E0	
	1 Flowmeter 10 to 100 NI/hr																			E1	
	2 Flowmeter 10 to 100 NI/hr																			E2	
Sample gas pump	Without sample gas pump																			0	
	1 Sample gas pump JSP-86																			1	
Option	Without additional options																			0	
	JCT VISU-System, software, remote control,																			1	

**Order code**

**JCL-**

Some possible combinations of options are technically futile and therefore not available. Please ask the **JCT** sales team for advice.