PSG Process Cooler

BCR02

Application

The compact high performance and low maintenance compressor coolers series **BCR02** are used for continuous extractive gas analysis. They serve primarily for exact constant lowering of the sample gas dew point and thus for drying of the humid sample gas flow. In this way water vapour cross sensitivities and volumetric errors are minimized and damages of the sensible analyzer are avoided. With optional integrated peristaltic pumps for condensate removal complete devices series **BCR02** are quick and simple integrable in sample gas conditioning systems.

Technology

The precise proportional temperature control in combination with the long-lasting hot-gas bypass system and the innovative corrosion resistant heat exchangers achieves low extremely constant dew points. Also load fluctuations and high thermal stress is compensated reliably. The mono or dual heat exchanger with one or two gas paths is built in a solid aluminum cylinder which guarantees an optimal energy exchange between sample gas and cooling medium. In addition, the aluminum cylinder is an effective cold storage that supports the compensation of unfavorable operating conditions. The **BCR02** is equipped with an exchangeable heat exchanger which allows an easy replacement without dismantling the device.

Functions

The cooling system is filled with FCKW-free refrigerant R134a. As heat-exchanger materials PVDF, glass or stainless-steel are available. The sample gas cooler is equipped with a digital display for temperature monitoring and with a potential-free alarm contact. Two brackets allow a quick and easy wall mounting of the device. Even mobile versions of the **BCR02** with handle are available.

- ✔ High performance compressor cooler
- ✔ 1 - 2 gas paths
- ✔ High performance heat exchanger
- ✔ Long-lasting hot-gas bypass system without switching the compressor
- ✔ Corrosion resistant easy to change PTFE / PVDF, stainless steel or glass heat exchanger
- ✔ Compact design
- ✔ Digital display for temperature and alarm
- ✔ Alarm contact
- ✔ Integrated condensate pumps optionally
- ✔ Wall mounting or portable housing

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PSG Perfect Sample Gas

Technical Data

BCR02						
Gas paths		1			2	
Heat exchanger		Mono			Dual	
Heat exchanger material		PVDF	Glas	SS316	PVDF	SS316
Gas flow Vn[1)]	l/h	180	200	350	2 x 90	2 x 150
Gas inlet dew point	°C	65	65	80	65	80
Gas inlet temperature max.	°C	140	160	180	140	180
Ambient temperature	°C	+5 bis +45				
Operating pressure with condensate pump	bar	0,2 – 2,2	0,2 – 2,0	0,2 – 2,2		
Operating pressure without condensate pump	bar	2,5	2,0	100,0	2,5	100,0
Gas outlet dew point[1)]	°C	3,0 ± 0,5				
Dead volume per gas path	ml	67	98	67	2 x 55	
Ready for start up	min	5				
Cooling capacity	KJ/h	774				
Design data						
Dimensions (B x H x T) [mm]	mm	230 x 300 x 355				
Weight without options	kg	18,5			19,0	
Housing		wall mounting (rear or side panel) / mobile (with handle) / RAL 7035				
Gas / condensate connections		DN 4/6 / without integrated peristaltic pump condensate outlet at bottom D12				
Electrical data						
Power supply		230V 50/60 Hz or 115V 50/60Hz				
Temperature display		digital				
Alarm set-points	°C	< +2.0 / > +10.0				
Protection rate		IP 20 EN 60529 / EN 61010				
Power consumption	W	190 at 230VAC – start-up current 6,3A				
Alarm contact		250V AC / 1,5A / 375VA				

1) at standard conditions, dew point 65°C inlet temperature, 10-25°C ambient temperature

Order numbers												
Gas paths	Mono		1									
	Dual		2									
Heat exchanger material	PVDF			1								
	SS316			2								
	Glass			3								
Integrated condensate pumps	without	2			0							
	with one	1			1							
	with two	1			2							
Housing	wall mounting						1					
	portable						4					
Power supply	230V 50/60Hz											F
	115V 50/60Hz											B
Bestellnummer	**BCR02 –**					-		-	0	0	-	

BCR02 portable, with on/off switch and fuse on front plate

Order example : **BCR02-2120-1-00-F** ➔ Sample gas compressor cooler **BCR02** with mono heat exchanger made of SS316, without integrated condensate pump, condensate connection at bottom D12, in wall mounting housing and with power supply 230V 50/60Hz

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