

CO₂ ADSORBERS

HIGH CAPACITY CO₂ ADSORBERS

For Dry, CO₂-Free Air to 4 SCFM



Compact, regenerative high capacity CO₂ adsorbers capable of delivering up to 4 SCFM (115 lpm) of dry, CO₂-free air at a dewpoint of -100°F (-73°C) and a CO₂-content of less than 1 ppm. Ideal for FTIR spectrometer purge and emissions monitoring applications. Units come standard with an inlet particulate filter, inlet coalescing filter, purge mufflers, wall-mount bracket and outlet filter-regulator assembly. Accessories include a moisture indicator, flow meter, and surge tank.

PRODUCT FEATURES

- CO₂-free air to less than 1 ppm
- Ultra-dry air to better than -100°F/-73°C dewpoint
- Continuous self-regenerative operation
- Outlet flow capacities to 4 SCFM (115 lpm)
- Operating pressures of 50 to 150 PSIG (345 to 1000 kPa)
- Compact, lightweight aluminum construction
- Low power requirement (10 watts) and NEMA 4 rating
- Standard purge mufflers ensure quiet operation
- Easy to install and no regular maintenance is required
- Ideal for laboratory, OEM and point-of-use applications

TYPICAL APPLICATIONS

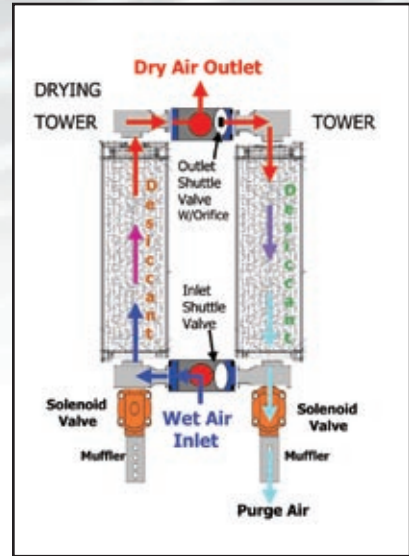
- Dilution air for stack gas emissions monitoring (CEMS)
- Spectrometer and optical purging
- Blanketing of chemicals and plastics
- Environmental chambers
- Analytical instruments and controls



HIGH CAPACITY CO₂ ADSORBER COMPRESSED AIR DRYERS

DESCRIPTION OF OPERATION

The CO₂ Adsorber employs Pressure Swing Adsorption (PSA) technology to remove water vapor & CO₂ from ordinary compressed air. The inlet (lower) shuttle valve directs the wet air into one of the two desiccant chambers where the water vapor & CO₂ is removed. The ultra-dry, CO₂-free air leaving the desiccant chamber passes through the outlet (upper) shuttle valve to the application. Both shuttle valves contain a wafer-like disk, which "shuttles" back and forth in the valve body based on the pressure differential created by the position of the two-way solenoid valves. A precision orifice in the outlet shuttle disk allows a portion of the purified air leaving the desiccant chamber to be redirected back through the off-line tower, purging it of the accumulated moisture & CO₂. The purge stream exits the unit through the open solenoid valve directly below the chamber being regenerated. A solid-state timer controls the process by opening and closing the solenoid valves.

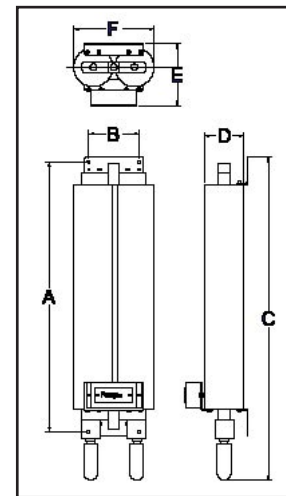


SPECIFICATIONS

Model	Outlet Flows in SCFM* at a purity better than 1 ppm CO ₂		
	80 PSIG	100 PSIG	120 PSIG
PCR S	2	3	4
PCR M	3	4	5

* Requires 10 scfm inlet flow

Model	A	B	C	D	E	F	Port Size	Weight (lbs.)
PCR S	18.625"	6"	25.5"	3.25"	5.5"	8.25"	1/2" NPT	20
PCR M	22.935"	6"	30"	4.25"	6.375"	9.25"	1/2" NPT	31



ORDERING INFORMATION

Bold Options are Standard Equipment

PCR MBX 1A 80 - F M

Components

PCR **Standard**

PCRG Tower Pressure Indicating Gauges

Tower Size/Color

SBX **Small Black**

SWX Small White

MBX **Medium Black**

MWX Medium White

Voltage

1A 110 VAC

2B 220 VAC

3C 12 VDC

4D 24 VDC

5E 24 VAC

Orifice Size

At 100 psig,
64 is std. for PCR S and
80 is std. for PCR M

Filter Options

- No Filter Options

F Complete Filters

B Inlet Filters

C Outlet Filter/Regulator

Accessory Options

- No Accessory Options

A BSP Thread Adaptors (2)

M Moisture Indicator

E Options A & M

D Fungus Proof

G Options M & D

H Options A, M & D

J Options A & D

P011048F16 - 2-yr Warranty Kit, PCR

P011048F24 - Annual Maintenance Kit, PCR

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