

# PCO2 Next Generation: Adsorbent Cartridge Life Explained

## Summary

The Parker PCO2 quality incident protection system is a static adsorption bed constructed from specially selected adsorbents designed to remove trace contamination from CO<sub>2</sub>. Each model of PCO2 has a known operational bed life for adsorbing contaminants. The safe and efficient operating life of each model varies and is dependant to the total bed size of the system.

Similar to a motor vehicle service, Parker recommend that the adsorbent cartridges and filter elements are exchanged within the recommended 12-month period or before the recorded cumulative mass of the unit has been exceeded, whichever comes first.



The Maximum Mass Flow of each model is detailed in Figure 1.

PCO2 Model Number	Max Op. Pressure Bar / PSI	Flow kg/h @ Max Op. Pressure	Max Mass over 12 Months: KG	Flow lb/h @ Max Op. Pressure	Max Mass over 12 Months: lb	Max Mass over 12 Months: Tonne (Metric Ton)
PCO2-800	24. Barg / 350 PSIG	363	3171168	800	6988800	3170
PCO2-1600	24. Barg / 350 PSIG	726	6342336	1600	13977600	6340
PCO2-2400	24. Barg / 350 PSIG	1089	9513504	2400	20966400	9510
PCO2-3200	24. Barg / 350 PSIG	1451	12675936	3200	27955200	12680
PCO2-4000	24. Barg / 350 PSIG	1814	15847104	4000	34944000	15850
PCO2-4800	24. Barg / 350 PSIG	2177	19018272	4800	41932800	19020
PCO2-3200-Duplex	24. Barg / 350 PSIG	2903	25360608	6400	55910400	25361
PCO2-4000-Duplex	24. Barg / 350 PSIG	3628	31694208	8000	69888000	31701
PCO2-4800-Duplex	24. Barg / 350 PSIG	4354	38036544	9600	83865600	38041

Figure 1



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## Mass Flow Meters

There is a requirement for the end user to monitor the mass flow of CO<sub>2</sub> gas that is flowed through the system, the maximum operational life of 12 months, from the time of installation will only be provided if the gas flow is monitored, failure to do so will revert back to a 6-month operational life/change out as provided with the Mark I model.

The recommended mass flow meter positioning is post PCO<sub>2</sub> outlet, see **Figure 2**.

**For further details on mass flow meter requirements please contact Parker.**

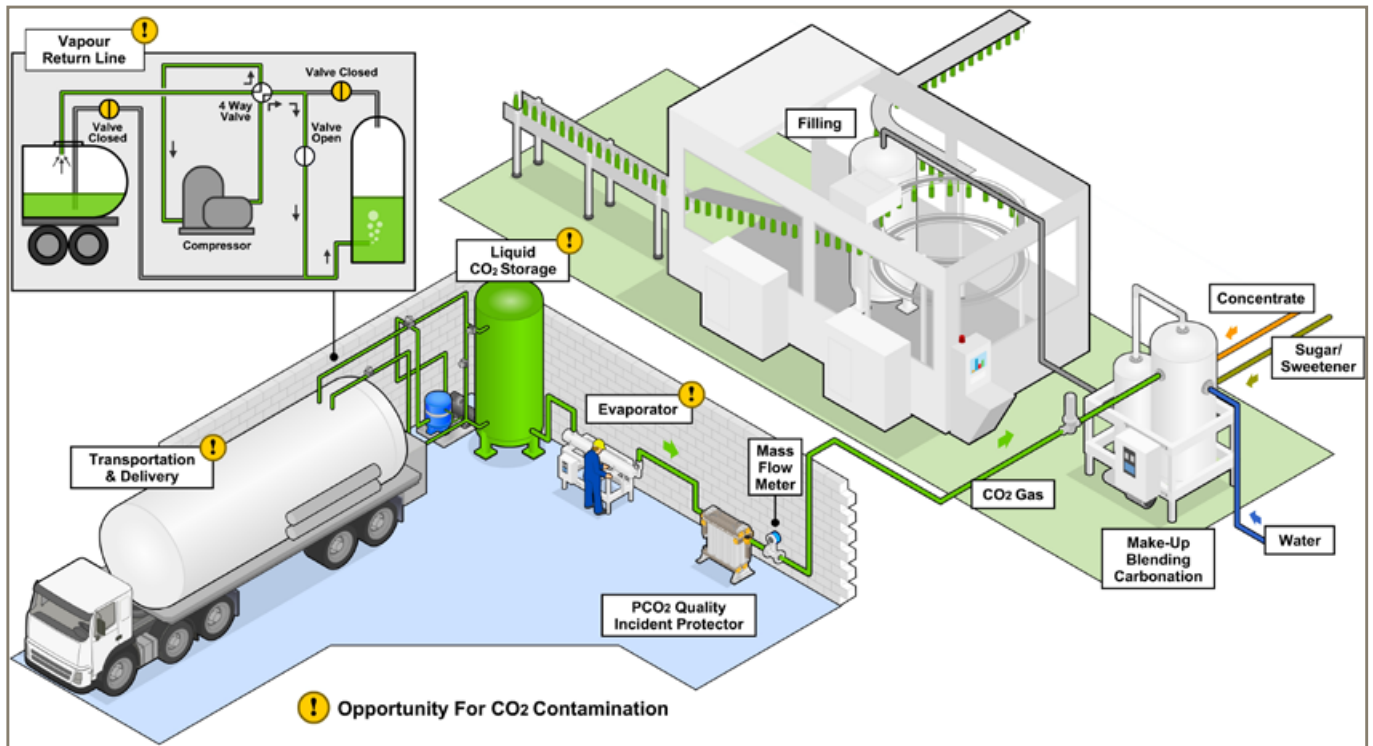


Figure 2

## ONLY USE PARKER GENUINE PARTS



### Warning

The use of Parker genuine parts is essential in maintaining product performance and failure to do so may result in:

- Increased contamination in process streams
- Spoilage and potential recall
- Audit failure
- Invalidate warranty
- Manufacturing downtime

Parker cannot provide support for non-original manufactured parts used with our PCO<sub>2</sub> systems and is not responsible for loss of revenue or quality concerns resulting from non-compliance.