

PCR

Portable Calibration Rig

The PCR from Michell is a transportable gas blender in a flight case, suitable for calibrating a multitude of gas analyzers at virtually any location and has been designed to allow the blending of two or three gases to the required concentration. High quality 'Select Series' Mass Flow Controllers have been utilized to allow the best accuracy of the blend and allow the user to switch between background gases. Each channel has a filter, isolation valve, needle, valve, pressure gauge and a flame arrestor for added safety. The blending chamber ensures a complete mix without laminar flow. Swagelok® quick-connect fittings are employed for speed and ease of use. The unit is supplied with a small universal power supply and weighing just 23kg (50.7 lbs) with wheels and a retractable handle means it is suitable and convenient for air travel.



Highlights

- Blends two or three gases from Air, O₂, N₂, CO₂, CH₄ & H₂
- Select series MFC's programmed with all the above gases
- Flame arrestors fitted for additional safety
- Quick-Connect fittings, wheels and retractable handle for ease of use
- Rugged case that is water-tight (with lid closed & locked)

Applications

- Field calibration of gas analyzers
- Blending of gases to mimic process variations in a laboratory
- Reduction of gas cylinders required on site

Technical Specifications

Performance	
Gases available*	Air, O ₂ , N ₂ , CO ₂ , CH ₄ & H ₂
Flow rate	30 to 1500 ml/min (0.06 to 3.17 scfh) per MFC
Blend time	Allow 5 mins for each blend to stabilize and flush through the mixing chamber and transit line
Ambient temperature	0 to +45°C (+32 to +113°F)
Ingress protection	IP66 with lid closed and locked
Warm-up time	30 minutes
Dimensions	624 x 498 x 297mm (24.5 x 19.6 x 11.7) (h x w x d) (lid closed)
Weight	23kg (50.7 lbs)
Pressure	Safe working pressure: 3 barg (43.5 psig)
Power supply	15 V DC from a universal power supply
Gas connections	QC4 bulkhead stem with shut off - 6mm Primary + O/P SCII cleaned

*Other gases may be programmed by the user if required

Accessories

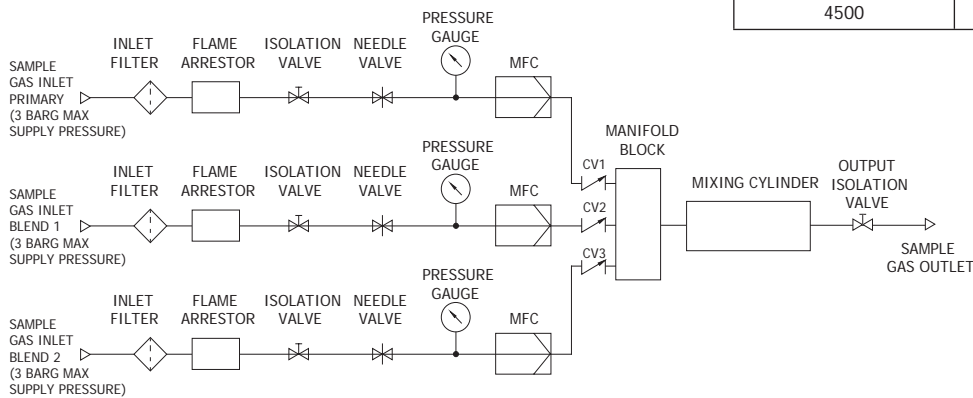
Quick connect part numbers	O ₂ cleaned Swagelok®	PCR-QC02 SS-QC4-B-6MØ-SC11**
	Standard Swagelok®	PCR-QC SS-QC4-B-6MØ**
PCR-BH	Braided hose (1.8m (5.9'))	

**Order direct from Swagelok®

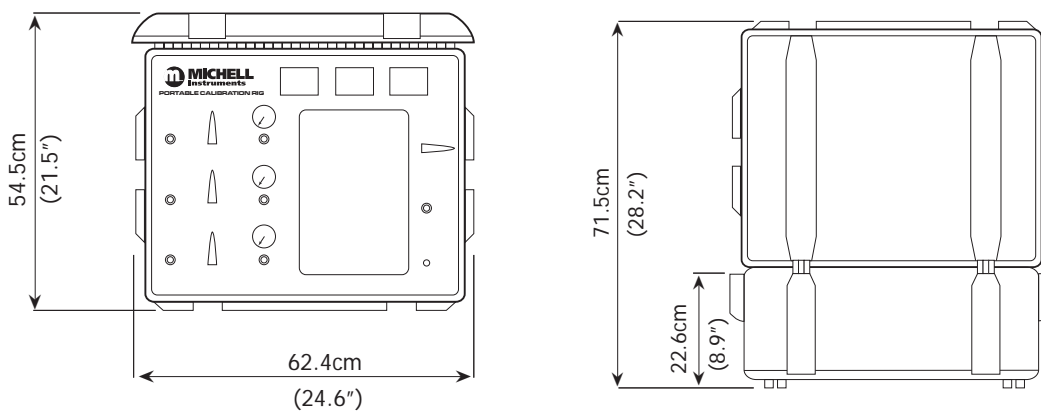
Blend Accuracy

Total Flow (ml/min)	2 MFC	3 MFC
	Blend Accuracy (±)	Blend Accuracy (±)
300	1.10%	1.19%
600	0.78%	0.80%
900	0.68%	0.68%
1200	0.63%	0.63%
1500	0.60%	0.60%
2000	0.57%	0.57%
2500	0.56%	0.56%
3000	0.55%	0.55%
4500	XXX	0.53%

Flow Schematic



Dimensions



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Michell Instruments adopts a continuous development programme which sometimes necessitates specification changes without notice.
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