

# Mars™ Long Path Gas Cells



For applications that demand high performance, durability, reliability, simplicity, dependability and serviceability, Gemini™ Mars™ gas cells are the solution. Mars™ long path cells address the most demanding gas sampling requirements of industrial and field deployed FTIR and IR instrumentation with a robust series of metal bodied gas cells with electro-polished stainless steel or electro-less nickel plated aluminum bodies that outperform any gas cell on the market.

A key factor ensuring the durability and serviceability of each Mars™ cell is the use of stainless steel mirrors. These mirrors are extremely durable and they can be reconditioned many times at modest cost, thereby extending the service life of each Mars™ cell for many years. All mirrors are coated with our proprietary Gemgold™ multilayer gold coatings to insure the highest possible performance in demanding environments. Stainless steel optics are inherently superior to diamond turned aluminum mirrors, from the standpoint of longevity and serviceability. While 316 stainless steel tends to resist the corrosive effects of reactive gases, aluminum tends to react with many gases making aluminum subject to corrosion and therefore an inferior optical substrate.



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A more effective low cost option to aluminum mirrors is gold coated glass mirrors, which can be special ordered on Mars™ at a discount to the prices of cells with stainless steel mirrors. Mars™ cells feature modular designs with interchangeable and reconditionable components, enabling us to deliver gas cells that are both versatile and serviceable. Metal bodies and cell hardware can be constructed from many materials. Cells from materials such as stainless steel (passivated or electro polished), pure nickel, nickel coated aluminum, black anodized aluminum, and FEP or PTFE coated aluminum are all available and can be configured to user specifications.

Mars™ gas cells can be configured for high vacuum exceeding  $1 \times 10^{-9}$  Torr and high pressure applications. Each Mars™ cell is individually helium leak tested or hydrostatically tested and a helium leak test certificate can be supplied with any cell in option (Part No. 0009-9281).

Mars Cells can be configured with heating jackets and with user programmable temperature and pressure control and monitoring options.

Several common Mars™ cell configurations are shown, but custom configurations are available upon request. Prices include KBr windows, but other materials can be selected from our transmission window price list. RFQ for wedged windows to limit fringing. All Mars™ cells use 25 x 4mm windows. Cell mounting and other hardware, exclusive of the cell body material and valves, is black anodized aluminum.

0008-9282	Mars™ ALUMINUM ELECTROLESS NICKEL 2M PATHLENGTH-0.2L VOLUME	0.2 L
0008-7681	Mars™ ALUMINUM ELECTROLESS NICKEL 3M PATHLENGTH-0.375L VOLUME	0.375 L
0008-7682	Mars™ ALUMINUM ELECTROLESS NICKEL 6.4M PATHLENGTH-0.75L VOLUME	0.75 L
0008-9287	Mars™ ALUMINUM ELECTROLESS NICKEL 1.6-6.4M VARIABLE PATHLENGTH-0.75L VOLUME	0.75 L
0008-9289	Mars™ ALUMINUM ELECTROLESS NICKEL 10M PATHLENGTH-2L VOLUME	2 L
0008-9283	Mars™ 316SS ELECTROPOLISHED 2M PATHLENGTH-0.2L VOLUME	0.2 L
0008-9284	Mars™ 316SS ELECTROPOLISHED 3M PATHLENGTH-0.375L VOLUME	0.375 L
0008-9285	Mars™ 316SS ELECTROPOLISHED 4.8M PATHLENGTH-0.5L VOLUME	0.5 L
0008-7679	Mars™ 316SS ELECTROPOLISHED 6.4M PATHLENGTH-0.75L VOLUME	0.75 L
0008-9290	Mars™ 316SS ELECTROPOLISHED 10M PATHLENGTH-2L VOLUME	2 L
0008-9288	Mars™ 316SS ELECTROPOLISHED 1.6-6.4M VARIABLE PATHLENGTH-0.75L VOLUME	0.75 L
0008-9279	Spectrophotometer-Specific Interface for Gemini™ Mercury™, Venus™, Mars™, Earth™ or Saturn™ Gas Cells	
0008-9280	Replacement Valve Kit for Gemini™ Mercury™, Venus™, Mars™, Earth™ or Saturn™ Gas Cells	
0017-4804	High Stability PID Digital readout Temperature Controller, 230 volts, CE marked	
0008-7684	Heater Jacket for Mars™, Earth™ and Saturn™ Gas Cells	
0002J-9231	Pair of 25mm x 4mm ZnSe Optics, wedged, one side AR coated	