

CobraTig®
GTAW Orbital Tube Welder



Model 254-152

The CobraTig 150 SM is a portable, lightweight orbital welding power source with a digital controller that is the perfect solution for construction or rugged environments. User friendly LCD screen and simple menus guide users through powerful weld programming using SmartArc® logic, real-time data monitoring, plus a built-in thermal printer for weld data. Packaged for rugged construction environments or manufacturing work-cells.

- Provides automatic control for repeatability, verification and traceability.
- SmartArc software develops a near ideal weld procedure with Automatic Program Generator.
- Capable of going down to 0.1 Amps with MicroTig™ technology.
- High Voltage Pulse automatic arc starting from 0.5 to 25 Amps.
- Shipped in a sealed rugged case with wheels for easy mobility.
- Standard with extended memory.

Advanced Color Logic®
GTAW Orbital Power Supply / Controller



Model 254-202

The patented Advanced Color Logic delivers controlled welding current needed to perform high-integrity orbital tube welds and is the perfect package for manufacturing environments. Exclusive Auto Program Generator for easy weld setup and retrieval of saved procedures. Repeatability and precision, combined with real time data monitoring, traceability, and verification conform to most inspection and quality requirements. Pentium® class processor for the fastest real time on-screen visual display of all welding parameters. Playback entire weld graphically for analysis or download to offline computer.

- Digital control and real-time graphics provide ease of operation.
- Viewing the process in real time with 17" LCD flat screen monitor.
- Patented updated software now delivers more information, faster.
- USB equipped for moving, storing and transferring weld data and procedures.
- Programming is easy: just enter the tube diameter and wall thickness.
- Weld data monitoring can be printed or viewed as text, graphic on-screen displays or exported to a spreadsheet file.

CobraCooler®
Portable Coolant Recirculator



Model 250-153

This recirculator is a separate stand-alone unit that conveniently attaches mechanically to an MK Products CobraTig 150 SM welding power source.

- Mechanically integrated assembly latches tightly under CobraTig 150 SM power supply.
- Provides water cooling for any MK Water Cooled weldhead.
- Includes high impact shipping case.

Tungsten, Tube and Pipe*

- 2% Ceriated electrodes, pre-ground and cut to length,
- 18° included angle, .015" flat tip, .040", 1/16" or 3/32" diameter. See price book for part numbers.
- See Catalog for Offset Tungsten Layout Configuration.
- 10 pieces per package.



Shown: Several 1/16" dia

Collets, Flush and Extended*

- A set of collets is defined as top and bottom halves for each side of the weldhead.
- Typically, 2 sets are required per each weldhead.
- See price book for part numbers.



Locating Mandrels*

Locating mandrels are used for precise and repeatable tube and weld fitting positioning and alignment.



GTAW Weldheads
CopperHeads®, DiamondBack® and MiniMicro™



MiniMicro
Model 4000

DiamondBack
Model 5006

CopperHeads
5001 5002 5003

- Perfect for sanitary and high pressure tube and pipe jobs.
- Weld fitting collets, mandrels and special tooling available.
- CopperHead offers versatility and high-output production rates.
- Water Cooled, narrow profile CopperHeads ideal for awkward welds with limited access.
- DiamondBack great for high-pressure aerospace applications.
- Standard cable lengths of 25ft (7.6m).
- The MiniMicro™ weldhead is an "Ultra-Pure" weldhead ideal for welding tubes and fittings with controlled surface finishes and electropolished to meet ultra-pure system requirements.

MicroTig™ Manual Weld Kit*

Includes gas cooled hand TIG torch (80 Amps max), variable foot control, ground cable with clamp and carry case. (Part Number 005-0670)



CobraCoolant

- Aluminum Protection
- For improved performance with all orbital welding equipment like the CobraCooler and the CopperHeads
- Also for water cooled welding guns.
- 1 Gallon (3.78L) P/N 931-0060
- 1 Case (4 Gallons) P/N 931-0060-4



* Consult Factory for details.



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CURIOSITY ROVER
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EXPLORING MARS

MK Products
Welding Technology
Goes to Mars

www.mkproducts.com

Image Credit: NASA/JPL PIA14832 - Artist Rendition

(800) 787-9707

MK Products Welding Technology Goes to Mars Using the Cobra 150 Orbital Welding System

Products: CobraTig 150, CobraCooler, 5001 CopperHead and 4000 Mini Micro™ Weldheads

Application: NASA/JPL Mars Science Laboratory Curiosity Rover

Article By: John Francis

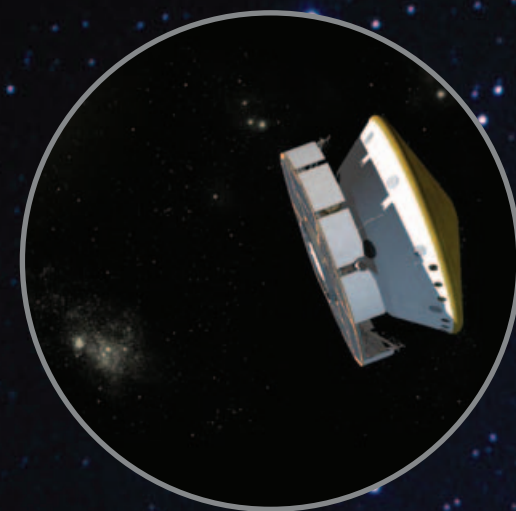
MK Products is proud that its welding technology is on its way to Mars.

Four years ago, the Jet Propulsion Laboratory in Pasadena, California obtained two complete orbital welding systems from MK Products for one of its latest and biggest projects, the Mars Science Laboratory (MSL) Program.



"Curiosity" Mars Science Laboratory - Artist's Concept
Image Credit: NASA/JPL-Caltech - PIA09201

MSL's Curiosity is a car sized rover equipped with cameras, environmental sensors, sample collecting tools, and lab quality geochemical instruments. It will use its diverse scientific payload to observe



Mars Science Laboratory spacecraft launched Nov 26, 2011 is scheduled to land on Mars on Aug 6, 2012 (EDT). Image Credit: NASA-JPL-Caltech - PIA14831

the environment, seek out interesting sites, and acquire dozens of samples of rock, soil, and atmosphere for onboard analysis, relaying its findings to scientists on Earth.

Mars Science Laboratory was launched on Nov. 26, 2011 and is scheduled to land on Mars on Aug. 6, 2012 (EDT). It is in route to Gale crater, a site thought to have had conditions that are favorable to sustain life. MSL will reach its target by steering through the atmosphere, slowing its descent on a parachute, and using a rocket powered sky crane to place the deployed rover directly on Martian soil. Once on

Mars, the rover is designed to explore many miles of terrain for at least two Earth years.

MK Products' orbital line of welding equipment, along with its legendary push-pull wire feeding systems, has earned a well deserved reputation that is second to none among many welding professionals.

MK Products has sold thousands of orbital power supplies and weldheads,

as well as coolers, custom tooling and production tooling for these orbital systems.

Many of these orbital welding systems are being used around the world. China, Europe, India, Canada, and Central America are but a few of these international locations. More of these orbital systems are working here in the U.S., from smaller specialist shops to larger aerospace and defense companies.

MK Product's portable CobraTig 150 power supply, CobraCooler, CopperHead 5001 and MiniMicro 4000 weldheads were used to create 367 flight welds on the MSL Spacecraft, 155 welds were on the Rover-Loop and 212 were on the Cruise Loop, plus hundreds of practice and qualifying welds. All welds were X-rayed and systems were proof pressured and helium leak checked.

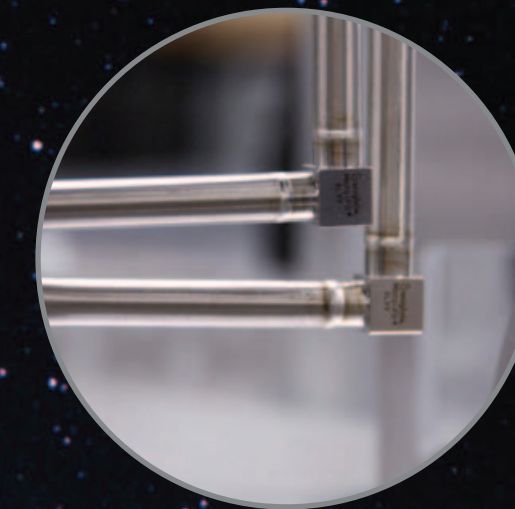
These orbital welding systems were set up in work



MK Products CobraTig Orbital welding system sits inside one of JPL's labs, ready to go to work.
Image Credit: Doug Kensrue MK-JPL-1030

cells, and since they are portable, they could also be moved to the spacecraft, as well, to perform orbital welds on actual flight hardware. These orbital welds were performed by JPL technicians to meet highly demanding specifications required for flight hardware.

The CobraTig 150 can also be easily converted to the manual TIG welding process, making this little brute of a power supply



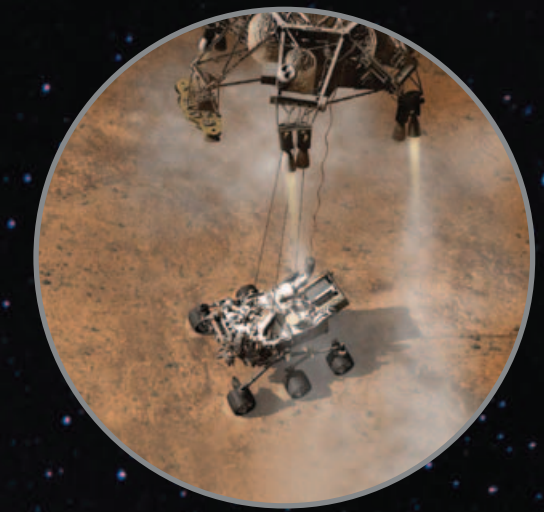
Welded micro fittings done by JPL's welding engineers using the CobraTig 150, CobraCooler, CopperHead 5001 and 4000 MiniMicro weld head. Image Credit: Doug Kensrue 309074

even more adaptable to many different welding applications. For more information on MK Product's state of the art orbital line of equipment, visit www.mkproducts.com. MK performs demonstrations of our equipment at our Irvine, California location, and will travel to your shop to provide demos and classes as well.



The Mars Rover spacecraft sits inside JPL's clean room and diagnostic area, fully assembled.
Image Credit: Doug Kensrue MK-JPL-1030

If your application requires perfect welds, and you need equipment that can stand up to both high production demands and



Artist's concept depicts NASA's Curiosity rover touching down. Curiosity is designed to explore many miles of terrain for two Earth years.
Image Credit: NASA-JPL-Caltech - PIA14840

specialized applications, then trust MK Orbital to perform and deliver.

Established in 1966, MK Products is the original inventor of Cobramatic push-pull wire feed technology and is recognized worldwide as the leader of aluminum welding systems. MK Products also manufactures orbital tube welding systems and table-top rotary positioners. ■

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