

# Hercules™

## High-Deposition Automated Welding System

### Quick Specs

#### Applications

High-deposition automated welding  
Long welds  
Flat or horizontal welding position

#### Process

Hercules high-deposition  
single-wire MIG (GMAW)

#### Wire Diameter and Type

.052 in. steel

#### Input Power

**Auto-Continuum™ 500**  
Auto-Line™ 230–575 V,  
3-phase, 50/60 Hz

#### XMT® 450

230/460 V,  
3-phase, 60 Hz

#### Rated Output at 104°F (40°C)

**Auto-Continuum™ 500**  
500 A at 39 V, 100% duty cycle

#### Power Source Output Range

**Auto-Continuum™ 500**  
20–600 A, 10–44 V

#### Duty Cycle Rating

**Tregaskiss Hercules Water-Cooled Torch**

100%: 600 A with mixed gases

*Ratings are based on tests that comply with IEC 60974-7 standards*

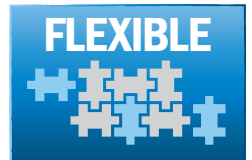
#### Robots

ABB®, Motoman®, FANUC®, Kawasaki®, KUKA®,  
and Panasonic®

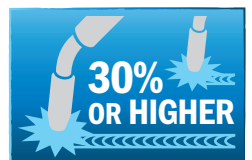
**You need to weld faster** to unlock pent up capacity elsewhere in your operations. You want to avoid major capital investment, requiring more floor space, and shutting down production to rearrange and install new technology. Hercules customers have enjoyed **up to 30 percent and often higher deposition rates**, without requiring more square footage on their factory floor and re-using much of their existing capital.



Easy to set up and install  
for EtherNet/IP™, DeviceNet  
or Analog protocols



Easy to add capabilities —  
integrates with your  
existing operations



Get farther faster with  
higher deposition rate



Power sources are warranted for three years, parts and labor.



#### Miller Welding Automation

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# Hercules™ System

**Hercules high-deposition welding is made possible by a combination of Hobart®, Tregaskiss® and Miller®.**

**Hobart FabCOR® Hercules cored filler metal wire** was developed to achieve the high-deposition rates possible. This unique Hobart filler metal was specially formulated to maintain arc stability at these high-deposition rates whereas other wire formulations lose arc stability and seize up over time.

**Tregaskiss Hercules water-cooled torch technology** provides a secondary contact for the Hercules process, enabling power input from both Miller® Auto-Continuum™ and XMT® power sources.

**Hercules drive** is a unique wire drive providing the speed and precision required for high-deposition welding that enables the Hercules process.

**Hercules process** controls the power input from the Auto-Continuum and the secondary XMT power source.

**Coordination of all the components along with the unique formulation of the filler metal wire is what makes the Hercules process work.**

Hercules customers have enjoyed up to 30 percent and often higher deposition rate improvement over welding processes they previously considered best in class, raising the bar for state-of-the-art, high-deposition-rate welding productivity.



#### Hobart FabCOR Hercules cored filler metal

- Unique formulation for Hercules
- Available in drums



#### Tregaskiss Hercules water-cooled torch

- Water-cooled
- Tregaskiss consumables
- High duty cycle enables Hercules process



#### Hercules Drive

- Controlled by Auto-Continuum
- Provides the speed and precision for Hercules wire



#### Auto-Continuum power source

- Stacks atop Continuum Cooler
- Welding processes include Accu-Pulse® and Versa-Pulse™ with profile-pulse modification
- Coordinates with XMT to enable Hercules process



#### Continuum Cooler

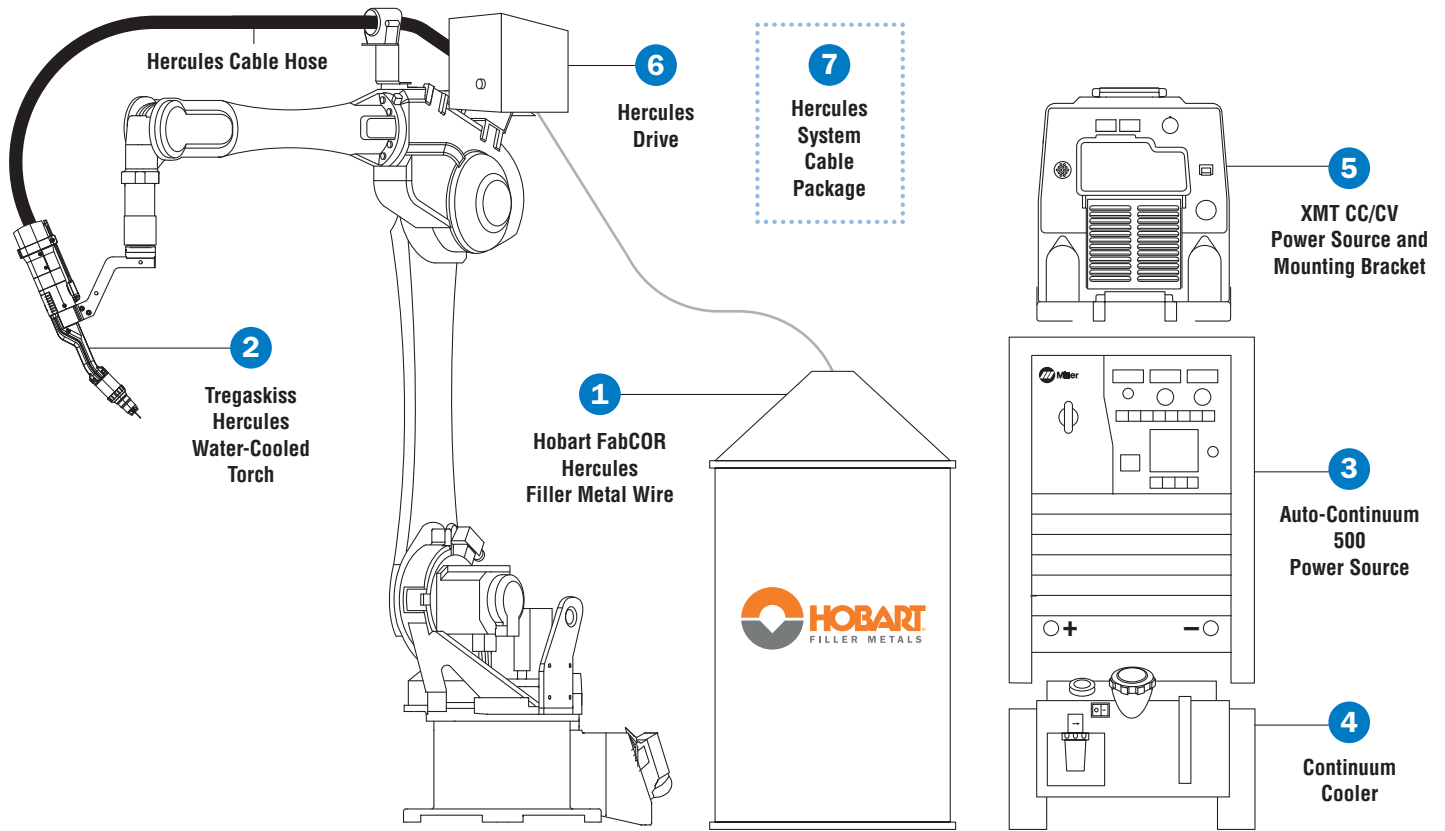
- Space-saving design operates on integrated power — turns on and off with the system
- Flow and temperature direction protection — protection from overheating
- Run-on-Demand — pump shuts off after delay when welding stops
- Options to use Coolmate™ or other coolers



#### XMT CC/CV power source

- Controlled by Auto-Continuum
- Provides secondary power input to enable Hercules process

# Hercules™ System Components



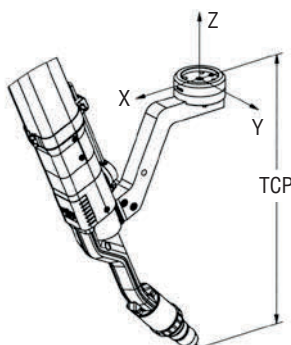
- 1 Hobart® FabCOR® Hercules Filler Metal Wire**  
See Hobart FabCOR Hercules Product Data Sheet for sizes and types of wire. FabCOR Hercules is a unique and proprietary formulation developed to achieve the Hercules deposition-rate improvements.
- 2 Tregaskiss® Hercules Water-Cooled Torch**  
Available in solid mount and clutch over-the-arm configurations. See Tregaskiss Hercules spec sheet HRC/1.1 for additional details.
- 3 Auto-Continuum™ 500 Power Source**  
Rated at 500 amps at 100-percent duty cycle.
- 4 Continuum™ Cooler**
- 5 XMT® CC/CV Power Source**  
Provides secondary power source required for Hercules process. Requires mounting bracket.

- 6 Hercules Drive**  
Mounting hardware available depending on robot model and brand. Work with Miller Welding Automation to assist with your robot cable dress needs.
- 7 Hercules System Cable Package**  
See schematics in Hercules Drive operating manual OM282962B for Hercules System cable package.  
**Hercules robot cell configuration** is determined by your cable package requirements, including lengths, connectors, fittings and communication protocols. Work with Miller Welding Automation to assist with your needs.

## Additional Hercules Reference Materials

Hobart FabCOR Hercules Product Data Sheet  
Tregaskiss Hercules Spec Sheet – HRC/1.1

# Hercules™ Torch Configurations and Center of Mass



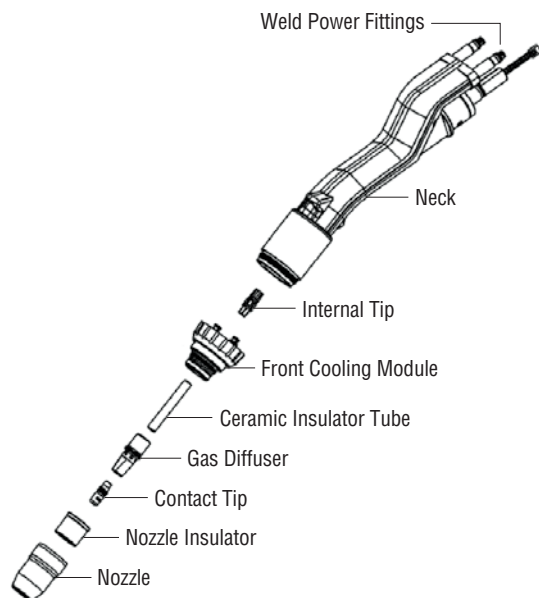
Hercules torch comes in two over the arm configurations. One with a clutch and the other a solid mount.

Neck	Tool Center Point (mm)	Mount Type	X (mm)	Y (mm)	Z (mm)	Weight (kg)
GHA-22L1	400	Clutch Mount	148.90	-1.01	-65.05	5.34
		Solid Mount	183.67	-1.20	-62.38	4.37

## Filler Metal, Spare Parts and Wear Items

Refer to the following literature for more detailed schematics showing spare parts and wear items:

Hobart FabCOR Hercules Product Data Sheet  
 Tregaskiss Hercules Spec Sheet – HRC/1.1  
 Hercules Drive Operating Manual – OM282962B  
 Miller Auto-Continuum Spec Sheet – AU/10.0



Hobart® Filler Metals		
Item	Stock Number	Description
FabCOR Hercules Wire	S279715-058	0.052 in., 1,000 lb. RX-Pk
Tregaskiss Hercules Gun Components (see gun spec sheet for availability in other quantities)		
Nozzles	N-H58T1-10	5/8 in. (15.9 mm) bore, flush, tapered, qty. 10
	N-H58T2-10	5/8 in. (15.9 mm) bore, stick-out, tapered, qty. 10
Contact Tip	T-H052WA-10	0.052 in., HDP, qty. 10
	T-H052CA-10	0.052 in., Cu, qty. 10
Internal Tip	T-H052WB-10	0.052 in., HDP, qty. 10
Gas Diffuser	D-HTL-05	Qty. 5
Nozzle Insulator	P-HA16-10	Qty. 10
Ceramic Insulator Tube	P-HA18-10	1/16 in. (1.6 mm), qty. 10
Conventional Liner	415-116-6	0.052–1/16 in. (1.3–1.6 mm), 6 ft. (1.8 m), qty. 1
	415-116-10	0.052–1/16 in. (1.3–1.6 mm), 10 ft. (3 m), qty. 1
	415-116-15	0.052–1/16 in. (1.3–1.6 mm), 15 ft. (5 m), qty. 1
Jump Liner	P-HA17	0.052–1/16 in. (1.3–1.6 mm), qty. 1
Torch Neck	GHA-22L1	22 degree, medium length, qty. 1
Front Cooling Module	P-HA02	For Hercules
Torch Checking Fixture	G-405CAH	Hercules 22L1, requires pointer below, qty. 1
Pointer	G-GHA-7	Required with G-405CAH above, qty. 1
Cutter Blade	RCT-01	For 5/8 in. (15.9 mm) bore, qty. 1
4-Sided V-Block	TR-2160	Qty. 1
Wire Cutter	WC-100	TT3A Reamer, qty. 1
	WC-100E	TT3E Reamer, qty. 1
Hercules Drive		
Drive Roll Kit	151054	.052 V-Knurled, 4 rolls
	151028	.052 V-Groove, 4 rolls
Volt Sense Cable	284375	For Hercules Drive (torch to drive), qty. 1
Extension Cable	282902020	For Hercules Drive (drive to XMT), 20 ft. (6 m). Note: Requires 242208xxx 14-pin extension for lengths longer than 20 feet, qty. 1

## Contact Us

Miller Welding Automation is your single point of contact for configuring and ordering your Hercules system.

Continued technical support can be counted on from Miller Welding Automation in Carol Stream, Illinois. Please call our hotline number: (630) 653-6819.

Spare parts, wear items and torch consumables are provided in your initial purchase of Hercules. Use the tables provided to order these items from Miller Welding Automation or your local distributor.

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