

SubArc Hercules™ System

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Submerged Arc
Welding System



Quick Specs

Heavy Industrial Applications

Pressure vessel
Process pipe
Structural steel
Shipbuilding
Wind tower

Processes

Submerged arc (SAW)

Input Power

Requires 3-phase power

Rated Output

SubArc DC 650/800: 650 A at 44 V, 100% duty cycle

SubArc DC 1000/1250: 1,000 A at 44 V, 100% duty cycle

SubArc AC/DC: 1,000 A at 44 V, 100% duty cycle

XMT® 450 SAW Hercules: 450 A at 10 V, 100% duty cycle

A game-changing, high-deposition submerged arc welding solution with filler metal, torch, and power source combined to deliver outstanding improvements to deposition rates and travel speed.



SubArc Hercules system.
All components sold separately.



Power source is warrantied for three years, parts and labor.
Original main power rectifier parts are warrantied for five years.
Torch warrantied for 90 days, parts and labor.



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f X y o i n



SubArc Hercules™ System

SubArc Hercules high-deposition submerged arc welding (SAW) is made possible by a combination of Hobart® and Miller®.

Hobart SubCOR® 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.

The SubArc Hercules torch features two separate contact tips that allow two sources of power input, enabling the high-deposition process by resistive conditioning of the wire. This torch was specifically created for the SubArc Hercules process to ensure smooth feeding performance at elevated wire temperatures and deposition rates.

SubArc Hercules switch kit provides the ability to alternate between a standard SAW process and SubArc Hercules with the flip of a switch.

Coordination of all the components along with the unique formulation of the filler metal wire is what makes the SubArc Hercules process work. Hercules customers have enjoyed on average 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 SubCOR™ wire

- Developed to achieve the highest-deposition rates possible
- SubCOR™ (1/8 and 5/32 in. diameters)
 - SubCOR EM13K-S MOD (70 ksi tensile)
 - SubCOR 92S (80 ksi tensile)
 - SubCOR N1-S (70 ksi tensile for weathering steel)
 - SubCOR 100F3-S (90 ksi tensile)
 - SubCOR 120-S (110 ksi tensile)



SubArc Hercules torch

- Based on standard Miller® OBT 1200 torch
- Air-cooled
- Two contact tips
 - Preheat contact tip (upper contact tip) is a standard OBT 600
 - Welding tip (lower contact tip) is a standard OBT 1200



SubArc power source

- Compatible with all SubArc equipment
 - SubArc DC 650 Digital
 - SubArc DC 1000 Digital
 - SubArc AC/DC Digital
 - Legacy 14-pin SubArc equipment



XMT® 450 SAW Hercules power source

- Provides secondary electrical current for SubArc Hercules process
- XMT 450 with modified software lower voltage (1–10 volts)
- CV only

Note: This power supply can only be used for SubArc Hercules. It will NOT support other processes.

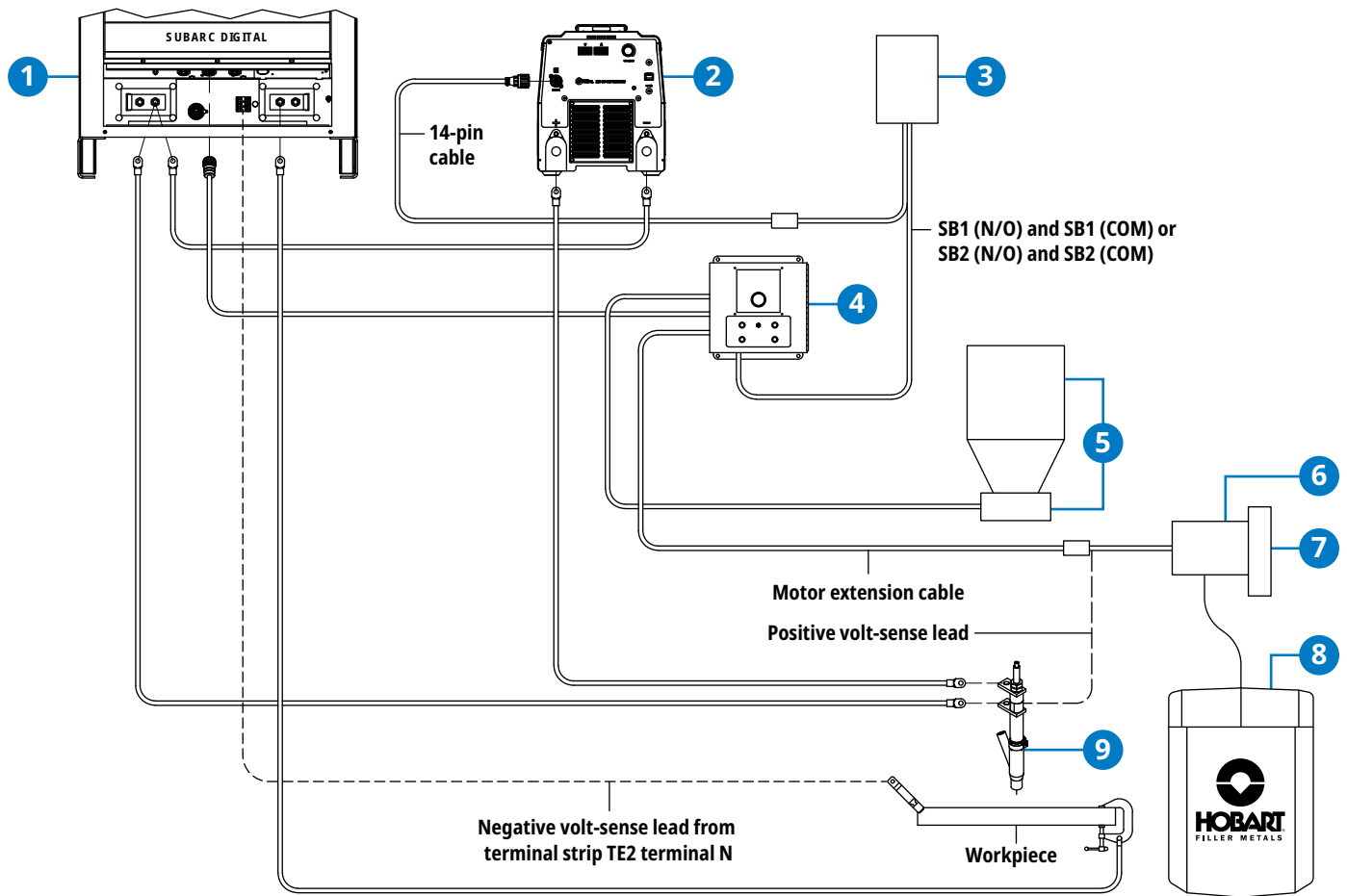


SubArc Hercules preheat switch

- Simple enable/disable switch
- LED on when enabled

No special wire drive or interface required.

SubArc Hercules™ System Components (All components sold separately.)



1 SubArc Digital Welding Power Source

Provides submerged arc welding current.

2 XMT® 450 SAW Hercules Power Source

Provides secondary electrical current for SubArc Hercules process.

3 SubArc Hercules Preheat Switch

Requires a 14-pin extension cable to connect interface to Hercules preheat power source.

4 SubArc Interface Digital Control

Requires a SubArc control cable to connect interface to SubArc Digital power source.

5 SubArc Flux Hopper

Includes 11-foot (3.3 m) power cord.

6 SubArc Wire Drive

SubArc Wire Drive 400 or 200 Digital Low Voltage. Includes 4-foot (1.2 m) motor control cable.

7 Motion Control Integration

SubArc Hercules system can be configured with supplier-integrated mechanized or automated means of motion control.

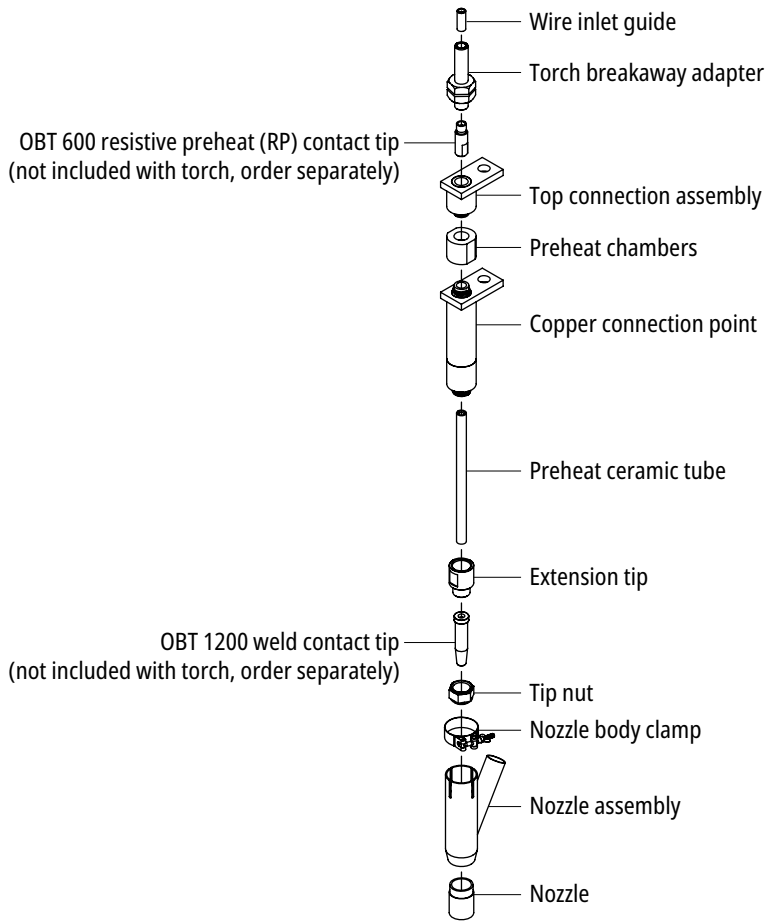
8 Hobart® SubCOR™ Filler Metal Wire

See Hobart SubCOR Hercules Product Data Sheet for sizes and types of wire.

9 SubArc Hercules Torch

Order OBT 600 and OBT 1200 contact tips separately (see page 4).

SubArc Hercules™ Torch Parts and Wear Items



SubArc Hercules Torch Components		
Wire Inlet Guide	81925 49740	1/16–1/8 in., qty. 1 5/32–1/4 in., qty. 1
Torch Breakaway Adapter	291480	
OBT 600 Resistive Preheat (RP) Contact Tips	192704 192705	1/8 in., qty. 1 5/32 in., qty. 1
Top Connection Assembly	290822	
Preheat Chambers	290820	
Copper Connection Point	290816	
Preheat Ceramic Tube	290819	
Extension Tip	291479	
OBT 1200 Weld Contact Tips	192143 192144	1/8 in., qty. 1 5/32 in., qty. 1
Tip Nut	192135	
Nozzle Body Clamp	192758	
Nozzle Assembly	192137	
Nozzle	192138	

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

- Hobart® SubCOR™ Product Data Sheet
- SubArc Hercules Torch – OM-294383A
- SubArc System Digital Accessories – OM-267533S
- XMT® 450 SAW Hercules – OM-296848
- SubArc Digital Series Spec Sheet – AD/7.3

Ordering Information

SubArc Hercules System	Stock No.	Description	Qty.	Price
XMT® 450 SAW Hercules™	907481005			
SubArc Hercules™ Torch	301725			
SubArc Hercules™ Switch Kit	301735			
SubArc Digital Series		See literature AD/7.3 for available SubArc power sources and accessories		
14-Pin Extension Cables	242208025 242208050 242208080	25 ft. (7.6 m) 50 ft. (15 m) 80 ft. (24.4 m)		
OBT 600 Resistive Preheat (RP) Contact Tips	192704 192705	1/8 in., qty. 1 5/32 in., qty. 1		
OBT 1200 Weld Contact Tips	192143 192144	1/8 in., qty. 1 5/32 in., qty. 1		

Date:

Total Quoted Price:

Distributed by:

