

# Maxstar® 280 Multiprocess

Multiprocess Welding Power Source 

## Quick Specs



### Industrial Applications

Shipbuilding  
Construction  
Rental  
Maintenance and repair  
Heavy fabrication  
Pipe and tube fabrication  
Petrochemical

### Processes

DC TIG (GTAW)  
Pulsed TIG (GTAW-P)  
Stick (SMAW)  
Air carbon arc (CAC-A)  
MIG (GMAW)\*  
Flux-cored (FCAW)\*

**Input Power** 208–575 V, 1-phase or 3-phase power

**Amperage Range** 1–280 A (DC)

**Voltage Range** 14–28 V (DC)

**Rated Output** 200 A at 28 V, 60% duty cycle

**Net Weight** 47 lb. (21.3 kg)

*\*With ArcReach SuitCase feeder.*

**The Maxstar 280 Multiprocess, paired with an ArcReach® SuitCase® feeder, provides a superior solution for all portable applications.**

With multiprocess capabilities and features like Auto-Line™, pulse and high-frequency arc starts, the Maxstar 280 Multiprocess is the most versatile, portable machine in its class.



**More Jobsite Productivity and Efficiency**

DC CC/CV multiprocess equipment means always having the right equipment for the job. This also simplifies logistics and translates into less time locating and moving equipment and more time welding.



**Reduced Training Time**

Reduced training time by utilizing one piece of equipment, saving labor costs and helping to keep projects on schedule.



**More Operator Control**

Weld operators can quickly and easily adjust parameters, reducing the risk of operators trying to get by with less than ideal settings. Also, state-of-the-art TIG functions such as pulse, and high-frequency starting allow for optimization for virtually any material type.



**Improved Jobsite Safety**

Portable welding equipment allows for easy movement of equipment to point of use. The chances of slip, trip or fall injuries are virtually eliminated because there is no need to travel through multi-story and cluttered jobsites, since the power source is point of use.



**WIRELESS REMOTE COMPATIBLE**

**Maxstar 280 Multiprocess (907552001) shown with ArcReach SuitCase 12 feeder (951729).**

*Note: Maxstar 280 Multiprocess is not capable of ArcReach control.*



**Increased Uptime**

Low power draw can mean additional welding equipment on the same circuit, getting work done faster by reducing the chances of power outages from tripped breakers or blown fuses.



Power source is warranted for three years, parts and labor.



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# Weld Process Features

## DC TIG Features

**Pulse.** Pulsing can increase puddle agitation, arc stability and travel speeds while reducing heat input and distortion. DX models provide extended ranges.

**Exceptionally smooth** and precise arc for welding exotic materials.

## Blue Lightning™

**Blue Lightning** high-frequency (HF) arc starter for non-contact arc initiation. Provides more consistent arc starts and greater reliability compared to traditional HF arc starters.

## MIG

**CV output** of the power source gives this unit MIG process capabilities when paired with an ArcReach® SuitCase® feeder (or other voltage-sensing feeder). The feeder is powered off the arc voltage of the power source and can run both solid and flux-cored wires

## DC Stick

**DIG** control allows the arc characteristics to be changed for specific applications and electrodes. Lower the DIG setting for smooth running electrodes like E7018 and increase the DIG setting for stiffer, more penetrating electrodes like E6010.

**Hot Start™** adaptive control provides positive arc starts without sticking.

**Stick-Stuck** detects if the electrode is stuck to the part and turns the welding output off to safely and easily remove the electrode. Menu selectable.

## Tweco-Style Connectors

Tweco-style connectors are more commonly used on job sites.

# Specifications (Subject to change without notice.)



Welding Mode	Input Power	Welding Amperage Range	Rated Output at 60% Duty Cycle	Amps Input at Rated Load Output, 50/60 Hz						Max. Open-Circuit Voltage	Dimensions	Net Weight	
				208 V	230 V	400 V	460 V	575 V	KVA	KW			
TIG (GTAW)	3-phase	1–280 A	250 A at 20 V	21	19	11	9	7	7.6	7.3	60 VDC (11 VDC**)	H: 13.6 in. (346 mm) W: 8.6 in. (219 mm) D: 22.5 in. (569 mm)	47 lb. (21.3 kg)
	1-phase	1–280 A	250 A at 20 V	35	32	18	16	13	7.3	7.1			
Stick (SMAW)	3-phase	5–280 A	250 A at 30 V	*	*	14	13	10	9.9	9.6			
	1-phase	5–280 A	180 A at 27.2 V	32	29	*	*	*	6.7	6.5			
MIG (GMAW)/ Flux-cored (FCAW)	3-phase	5–280 A	250 A at 26.5 V	*	*	13	11	9	9.2	8.9			
	1-phase	5–280 A	200 A at 24 V	31	29	*	*	*	6.5	6.3			

\* Refer to owner's manual for complete ratings. \*\* Low OCV sense voltage for stick and Lift-Arc™ TIG.

**IP23 rating** — This equipment is designed for outdoor use. It may be stored, but is not intended to be used outside during precipitation unless sheltered.

Operating temperature range is 14 to 104°F (-10 to 40°C). Storage temperature range is -22 to 149°F (-30 to 65°C). Portions of the preceding text are contained in EN 60974-1: "Welding power sources for arc welding equipment."

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

# Performance Data

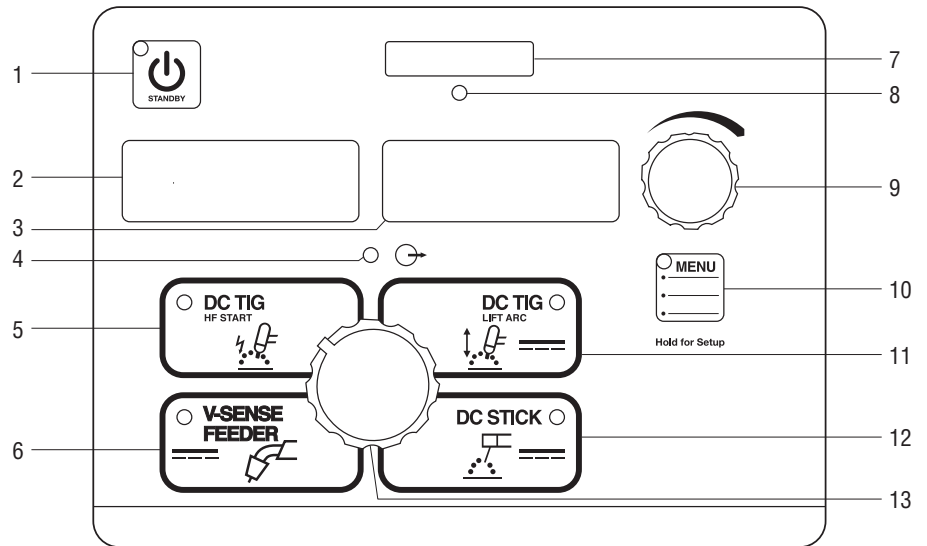
Input Power	TIG (GTAW) Duty Cycle	Stick (SMAW) Duty Cycle	MIG (GMAW)/ Flux-cored (FCAW) Duty Cycle	TIG Material Thickness Range	Stick Electrode Max. Diameter	Air Carbon Arc Gouging (CAC-A) Max.	MIG Ranges	Generator Requirement
380–575 V	280 A, 40% 250 A, 60% 200 A, 100%	280 A, 35% 250 A, 60% 200 A, 100%	280 A, 35% 250 A, 60% 200 A, 100%	0.004–3/8 in. (0.1–9.5 mm)	6010: 1/4 in. (6.4 mm)	3/16 in. (4.8 mm)	Voltage: 14–28 V Wire speed: 50–780 ipm (1.3–19.8 m/min.) Solid wire: .023–.052 in. (0.6–1.4 mm) Flux-cored: .030–.052 in. (0.8–1.4 mm)	12.5 kW
208–240 V	280 A, 40% 250 A, 60% 200 A, 100%	280 A, 15% 180 A, 60% 145 A, 100%	280 A, 20% 200 A, 60% 160 A, 100%		7018: 7/32 in. (5.6 mm) 7024: 3/16 in. (4.8 mm)			

Material Type	Wire Diameter						
	.024 in.	.030 in.	.035 in.	.045 in.   3/64 in. Al	.052 in.	1/16 in.	5/64 in.
Solid wire (steel/SS)	●	●	●	●	○		
Aluminum			●	●		●	
Dual (gas-) shielded flux-cored/metal core			●	●	●	●	○
Self-shielded flux-cored		●	●	●	●	●	●

● Recommended — refer to wire manufacturer specifications for output requirements. ● Gun length may affect feedability. ○ Limited capability.

# Maxstar® 280 Multiprocess Control Panel

1. Standby Switch
2. Voltmeter Display
3. Ammeter Display
4. Output Contactor “On” Indicator
5. DC TIG (HF Start) Process Menu Parameters
  - Amperage 1–280 A\*\*
  - Pulse\* Off–250 PPS
  - Postflow Auto/Off–50 seconds
6. MIG Volt Sense Feeder
  - Voltage 14–28V
  - Arc Control 0–99% (solid wire - EP)  
(Inductance) Flux Core (flux-cored wire - EN)
7. Memory Card Port
8. Activity Indicator
9. Encoder Control
10. Menu Ranges
11. DC TIG (Lift-Arc) Process Menu Parameters
  - Amperage 1–280 A\*\*
  - Pulse\* Off–250 PPS
  - Postflow Auto/Off–50 seconds
12. DC Stick Process Menu Parameters
  - Amperage 5–280 A
  - DIG\* Off–100%
13. Process Selector



\*Pro-Set parameter selectable.  
\*\*Amperage range is tungsten-size dependent.

## ArcReach® SuitCase® 8 and 12 (Note: Maxstar 280 Multiprocess is not capable of ArcReach control.)



Voltage-sensing, portable feeders designed to run off of arc voltage from almost any welding power source, provide extreme reliability for construction and fabrication.

- Scaled wire pressure knob provides easy adjustment and consistent pressure on the drive rolls and wire
- Wire drive and motor assembly is specifically designed for mobile welding applications to provide smooth and consistent wire delivery
- Gun locking tab works with guns having corresponding locking grooves to prevent gun from being pulled out if the feeder is dragged by the gun
- Ultra-low drag inlet guide pins make loading the wire easy and do not deform the wire on the way into the drive rolls

Model	Input Power	Input Welding Circuit Rating	Wire Feed Speed	Wire Type and Diameter Capacity	Max. Spool Size Capacity	Dimensions	Net Weight
8	Operates on open-circuit voltage and arc voltage: 14–48 VDC/110 max. OCV	330 A at 60% duty cycle	50–780 ipm (1.3–19.8 m/min.) dependent on arc voltage	<b>Solid wire:</b> .023–.052 in. (0.6–1.4 mm) <b>Flux-cored:</b> .030–5/64 in. (0.8–2.0 mm)	8 in. (203 mm) 14 lb. (6.4 kg)	H: 12.75 in. (324 mm) W: 7.25 in. (184 mm) D: 18 in. (457 mm)	28 lb. (13 kg)
12		425 A at 60% duty cycle		<b>Solid wire:</b> .023–.052 in. (0.6–1.4 mm) <b>Flux-cored:</b> .030–5/64 in. (0.8–2.0 mm)	12 in. (305 mm) 45 lb. (20 kg)	H: 15.5 in. (394 mm) W: 9 in. (229 mm) D: 21 in. (533 mm)	35 lb. (15.9 kg)

## Consumables

Kits	Drive Rolls <i>Select drive rolls from chart according to type and wire size being used.</i>				Contact Tips Centerfire “T” Series (.35 in. O.D.)
	“V” groove for hard wire	“U” groove for soft wire or soft-shelled cored wires	“V” knurled for hard-shelled cored wires	“U” cogged for extremely soft wire or soft-shelled cored wires	
.035 and .045 in. (0.9 and 1.2 mm)	190300*	—	—	—	1580012 (3) .035 in., (2) .045 in. tips
.045 and 1/16 in. (1.2 and 1.6 mm)	—	—	301091*	—	1580015 (3) .045 in., (2) .052 in. tips
<b>Individual Rolls/Tips</b>					
.030 in. (0.8 mm)	053695	—	—	—	T-030
.035 in. (0.9 mm)	053700	072000	132958	—	T-035
.040 in. (1.0 mm)	053696	—	—	—	T-039
.045 in. (1.1/1.2 mm)	053697	053701	132957	083489	T-045
.052 in. (1.3/1.4 mm)	053698	053702	132956	083490	T-052
1/16 in. (1.6 mm)	053699	053706	132955	053708	T-062
.068/.072 in. (1.8 mm)	—	—	132959	—	T-072
5/64 in. (2.0 mm)	—	053704	132960	053710	T-078

\*Includes two dual-size reversible drive rolls. Note: ArcReach SuitCase feeders require two drive rolls. Wire inlet guide comes installed on ArcReach SuitCase wire feeders.

# Genuine Miller® Accessories



**2-Wheel Trolley Cart 300971**  
Easy-to-maneuver two-wheel cart features single-cylinder rack, chain for cylinder, cable holders, torch holder, storage area, and filler rod storage area.

**Bernard® BTB Gun 300 A**  
**Q3015AE8XMC** .035/.045 in. wire size  
**Q3015AE8HMC** .052 in. wire size  
Rugged and reliable 300-amp MIG (GMAW) welding guns include 15-foot (4.5 m) cable, Miller® power pin and Centerfire™ consumables.



**RMS-14 On/Off Control 187208**  
Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications. Includes 26.5-foot (8 m) cord and 14-pin plug.

## TIG Torch

**Weldcraft™ A-250 TIG Torch**  
**301525025** No valve  
**301526025** With valve  
250-amp air-cooled two-piece torch with 25-foot (7.6 m) cable.  
*Note: Two-piece torches require Tweco-style connector 191981*

**Wireless Remote Foot Control 300429**  
For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller® machine. 90-foot (27.4 m) operating range.



**RCC-14 Remote Contactor and Current Control 151086**  
East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord and 14-pin plug.



**RHC-14 Hand Control 242211020**  
Miniature hand control for remote current and contactor control. Dimensions: 4 x 4 x 3.25 inches (102 x 102 x 83 mm). Includes 20-foot (6 m) cord and 14-pin plug.

## Wire Feeders and MIG Guns

**ArcReach® SuitCase® 8**  
**951726** With Bernard® BTB Gun 300 A  
**951728** With Bernard® Dura-Flux™ gun  
**ArcReach® SuitCase® 12**  
**951729** With Bernard® BTB Gun 300 A  
**951731** With Bernard® Dura-Flux™ gun

Portable feeder designed to run off of arc voltage. Holds up to an 8-inch (SuitCase 8) or 12-inch (SuitCase 12) spool of wire. See literature M/6.55.  
*Note: Maxstar 280 Multiprocess is not capable of ArcReach control.*

**RCCS-14 Remote Contactor and Current Control 043688**  
North/south rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord and 14-pin plug.



**Wireless Remote Hand Control 300430**  
For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller® machine. 300-foot (91.4 m) operating range.

## Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Maxstar® 280 Multiprocess</b>	<b>907552001</b>	Auto-Line™ 208–575 V, 50/60 Hz with Tweco-style connectors		
<b>Accessories</b>				
2-Wheel Trolley Cart	<b>300971</b>	For Dynasty/Maxstar 210 and 280 with or without Coolmate 1.3		
<b>TIG Torch</b>				
Weldcraft™ A-250 TIG Torch	<b>301525025</b> <b>301525026</b>	No valve. 25 ft. (7.6 m) cable. Requires <b>191981</b> Tweco connector With valve. 25 ft. (7.6 m) cable. Requires <b>191981</b> Tweco connector		
<b>Wire Feeders, MIG Guns and Consumables</b>				
ArcReach® SuitCase® 8 (see literature M/6.55)	<b>951726</b> <b>951728</b>	With Bernard® BTB Gun 300 A With Bernard® Dura-Flux™ gun		
ArcReach® SuitCase® 12 (see literature M/6.55)	<b>951729</b> <b>951731</b>	With Bernard® BTB Gun 300 A With Bernard® Dura-Flux™ gun		
Bernard® BTB Gun 300 A	<b>Q3015AE8XMC</b> <b>Q3015AE8HMC</b>	.035/.045 in. wire size .052 in. wire size		
Drive Rolls		See page 3		
Contact Tips		See page 3		
<b>Remote Controls</b>		See above		

Date:

Total Quoted Price:

Distributed by:

