

CST™ 280

Issued April 2010 • Index No. DC/29.55

Stick/TIG Welding
Power Source 

Quick Specs

Industrial Applications

Power Plant Construction
Petrochemical Construction
Maintenance and Repair
Shipbuilding

Processes

Stick (SMAW)
TIG (GTAW) Lift-Arc

Input Power Requires 3- or 1-Phase Power

Amperage Range 5–280 A

Max. Open-Circuit Voltage 77 V

Weight 41 lb (18.6 kg)

The Power of Blue.®

Superior Stick arc performance even on the difficult-to-run electrodes like E6010.

Adaptive Hot Start™ for Stick arc starts automatically increases the output amperage at the start of a weld should the start require it. Prevents the electrode from sticking and creating an inclusion.

Lift-Arc™ start provides TIG arc starting without the use of high frequency.

Easy to install with a new switch on the outside of the package, the machine can be changed between low and high input voltage ranges. Also, since the switch is on the back, input voltages can be changed without removal from inverter racks.



Optional 4- or 8-pack racks are available for multiple operator applications. These are commonly used in construction and shipyard applications. All CST controls including the power switch are located on front of the machine for easy access.

Portable in the shop or at the job site — at 41 lb the CST 280 is easily moved from location to location.

Remote amperage control provided through 14-pin receptacle on front of the machine. This permits use of standard remote amperage control devices.

Tweco® or Dinse-style connectors are available on the CST 280.

6-ft power cable included.

TRUE BLUE®
3YR. WARRANTY

Power source is warranted for 3 years, parts and labor.
Original main power rectified parts are warranted for 5 years.

MADE IN **USA**
APPLETON, WI **USA**



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Specifications (Subject to change without notice.)



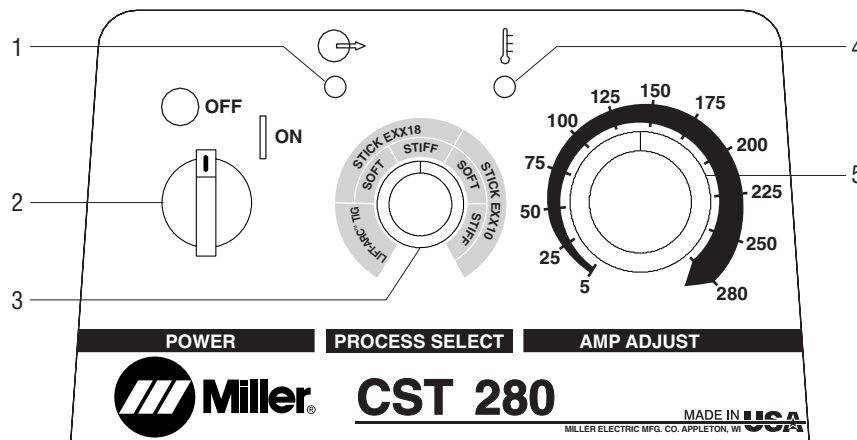
Description	Welding Mode	Input Power	Rated Output	Welding Amperage Range	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 50/60 Hz								KVA	KW	Dimensions	Net Weight
						208 V	220 V	230 V	400 V	440 V	460 V	575 V					
CST 280, 220-230/460-575 V Dinse	Stick (SMAW)	Three-Phase	280 A at 31.2 V, 35% Duty Cycle	5-280 A	77 VDC	—	35	34.2	—	—	17.8	14.7	14.6	10.2	H: 13-1/2 in (343 mm) W: 7-1/2 in (191 mm) D: 18 in (457 mm)	41 lb (18.6 kg)	
			—			23.3	22.5	—	—	11.7	9.7	9.6					6.4
	TIG (GTAW)	Single-Phase	200 A at 28 V, 100% Duty Cycle*			—	43.9	43	—	—	—		—	10.1			
			150 A at 26 V, 100% Duty Cycle*			—	32.7	32	—	—	—	—	7.3	4.6			
CST 280, 208-230/400-460 V Dinse	Stick (SMAW)	Three-Phase	280 A at 31.2 V, 35% Duty Cycle	5-280 A	67 VDC	36	33	22.8	19.8	18	17.5	—	14	10.2	H: 13-1/2 in (343 mm) W: 7-1/2 in (191 mm) D: 18 in (457 mm)	41 lb (18.6 kg)	
			23.5			23	22.8	13.5	12	12.7	—	10.2					6.9
	TIG (GTAW)	Single-Phase	200 A at 28 V, 100% Duty Cycle*			43.9	43.3	43	—	—	—		—	9.9			
			150 A at 26 V, 100% Duty Cycle*			35	33.9	32.9	—	—	—	—	7.6	4.8			

*Output ratings on 230 V single-phase are reduced to comply with CSA current limitation on input power cable.

CSA approval. 1P23M approval.

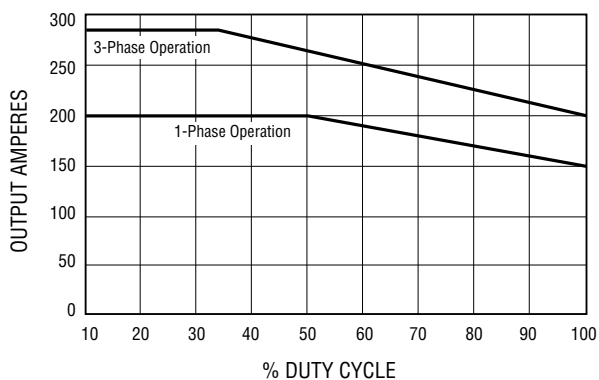
Control Panel

1. Output Light
2. On/Off Switch
3. Weld Process Selector Switch
4. Overtemp Light
5. Amperage Adjustment Control (5-280 Amps)

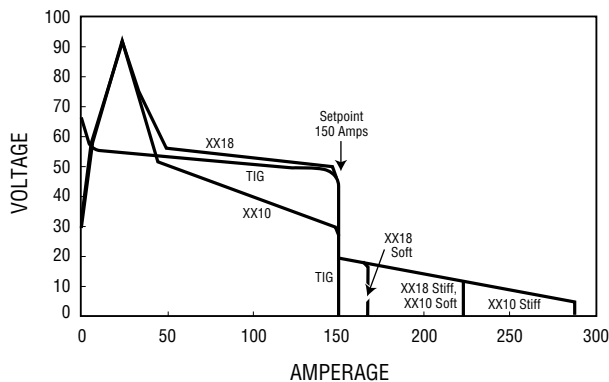


Performance Data

DUTY CYCLE CHART



VOLT/AMP CURVE AT 150 AMPS



Genuine Miller Accessories

TIG (GTAW) Torches



Weldcraft® TIG Torches

The Weldcraft line of TIG torches complements the most popular TIG power source line available today. The Weldcraft torch line includes both air-cooled and water-cooled models. Available with genuine Weldcraft parts.

- #WP-17V-12-2 150 A, 12 ft (3.7 m) air-cooled torch with valve, two-piece cable.
- #WP-17V-25-2 150 A, 25 ft (7.6 m) torch with valve, two-piece cable.
- #WP-26V-12-2 200 A, 12 ft (3.7 m) air-cooled torch with valve.
- #WP-26V-25-2 200 A, 25 ft (7.6 m) air-cooled torch with valve.

These two-cable TIG torches require the installation of a Dinse-Style Connector (#042 418) or Tweco-Style Connector (#195 115) depending on the CST model connector type.

Remote Controls



RCC-14 Remote Contactor and Current Control* #151 086 14-pin plug Side-to-side rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord. Great for production or contractors that need quick ramp-up.



RCCS-14 Remote Contactor and Current Control* #043 688 Up-and-down rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord. Great for applications that require a finer amperage control.



RHC-14 Hand Control* #129 340 Miniature hand control for remote current and contactor control. Dimensions: 4 x 4 x 3-1/4 in (102 x 102 x 82 mm). Includes 20 ft (6 m) cord and 14-pin plug.



RFCS-14 Foot Control* #043 554 Foot pedal provides remote current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.



RFCS-14 HD Foot Control* #194 744 For all Miller solid-state power sources after serial number JK674521. This new design increases stability with a larger base, and durability with a heavier cord. Maximum flexibility is accomplished with a reconfigurable cord that can exit the front, back or either side of the pedal. Foot pedal provides remote current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.



RPBS-14 Remote Control #300 666 Attaches to the TIG torch to remotely start and stop the TIG welding process.

**The remote controls provide amperage control only on the CST 280, no remote contactor control.*

Cable Connectors and Adapters

Note: The Dinse version of the CST 280 includes one set of male connectors. The Tweco version does not.

Dinse-Style Connector #042 418 Accepts #4 AWG to #1/0 cable size. Required if male plugs shipped with power source must be replaced or if additional plugs are needed. Kit includes one Dinse-style male plug which attaches to the work and/or weld cables and plugs into the Dinse-style receptacles on the power source.

Extension Kit for Dinse-Style Cable Connectors #042 419 Accepts #4 AWG to #1/0 size cable. Used to adapt or extend weld and/or work cables. Kit includes one male Dinse-style plug and one in-line female Dinse-style receptacle.



Dinse/Tweco® Adapter #042 465 A one-piece adapter which has an Dinse-style male plug (to power source) on one end and a female Tweco receptacle (for weld cable connection) on other end.



Dinse/Cam-Lok Adapter #042 466 A one-piece adapter which has an Dinse-style male plug (to power source) on one end and a Cam-Lok receptacle (for weld cable connection) on other end.



Tweco/Dinse Adapter #195 116 A one-piece adapter which has a Tweco-style male plug (to power source) on one end and a female Dinse-style receptacle (for weld cable connection) on other end.



Tweco-Style Connector #195 115 Accepts 1/0 to 2/0 size cable. Kit includes one Tweco-style male plug which attaches to the work and/or weld cables and plugs into the receptacle on the power source.

CST™ 280 Rack (See Index No. DC/18.82 for additional information.)



Shown with optional running gear.

- The rack provides a simple means of protecting and transporting welding power sources for construction, power plant turn-arounds and shipbuilding applications.
- The CST™ 280 Rack's low weight (340 lb fully loaded) enables use of elevators to move rack.
- Top cover to protect the machines from falling debris.
- Meets NEC requirements with appropriate fuses.
- Lift truck side and end fork pockets.
- Lifting eye simplifies transportation using crane or overhead lifting device.
- One main disconnect box with fused circuit breaker switches for each machine.
- Common output ground connection (for same polarity use only).
- CSTs can be paralleled for Air Carbon Arc cutting.
- Running Gear (optional).
- Dual Rack Kit (optional).

CST Rack Specifications (Subject to change without notice.)

Power Source	Input Power to Rack	Capacity	Dimensions	Net Weight
CST 280	220–230/460–575 VAC, 50/60 Hz, 3-Phase	4	H: 50-3/4 in (1289 mm) 4-Pack W: 25-1/2 in (648 mm)	355 lb (161 kg)
		8	8-Pack W: 46 in (1165 mm) D: 26-1/2 in (673 mm)	640 lb (290 kg)

Ordering Information

*The Dinse version of the CST 280 includes one set of male connectors. The Tweco version does not.

Power Source and Options	Stock No.	Description	Qty.	Price
CST™ 280 w/ Dinse-style connectors*	#907 244	220–230/460–575 VAC, 50/60 Hz		
CST™ 280 w/ Tweco-style connectors*	#907 244-01-1	220–230/460–575 VAC, 50/60 Hz		
CST™ 280 w/ Dinse-style connectors*	#907 251	208–230/400–460 VAC, 50/60 Hz		
CST™ 280 w/ Tweco-style connectors*	#907 251-01-1	208–230/400–460 VAC, 50/60 Hz		
CST™ 280 w/ Dinse-style connectors*	#907 251-01-2	208–230/400–460 VAC, 50/60 Hz with VRD capability		
Power Source Racks and Options				
CST™ 280 Rack w/ Dinse-style connectors*	#907 245	Rack with 4 CST 280, 220–230/460–575 VAC (Includes 25 A fuses for 460 V)		
CST™ 280 Rack w/ Tweco-style connectors*	#907 247	Rack with 4 CST 280, 220–230/460–575 (Includes 25 A fuses for 460 V)		
CST™ 280 Rack w/ Tweco-style connectors*	#907 365	Rack with 8 CST 280, 220–230/460–575 (Includes 25 A fuses for 460 V)		
CST™ 280 Rack w/ Dinse-style connectors, VRD*	#907 246	Rack with 4 CST 280, 220–230/400–460 VAC, with VRD capability		
Dual Rack Kit	#195 267	Connects two 4-pack racks to form one 8-pack rack		
Running Gear for Rack	#195 114 #195 436	For 4-pack rack For 8-pack rack		
Fuse	#199 795 #212 541	30 amp fuse for 220 or 230 V input (Order 12 per 4-pack rack or 24 per 8-pack rack) 20 amp fuse for 575 V input (Order 12 per 4-pack rack or 24 per 8-pack rack)		
Weldcraft® TIG Torches		See page 3		
Remote Controls				
RCC-14	#151 086	Remote current side-to-side rotary control		
RCCS-14	#043 688	Remote current up and down rotary control		
RHC-14	#129 340	Remote current hand control		
RFCS-14	#043 554	Remote current foot pedal control		
RFCS-14 HD	#194 744	Remote current foot pedal control with 20 ft (6 m) cord and 14-pin plug		
RPBS-14	#300 666	TIG welding on/off remote switch		
Extension Cord for Remote Controls	#122 973 #122 974 #122 975	25 ft (7.6 m) 50 ft (15.2 m) 75 ft (22.8 m)		
Cable Connectors and Adapters				
Dinse-Style Connector	#042 418	#4 AWG to #1/0 cable size		
Extension Kit for Dinse-Style Connector	#042 419	#4 AWG to #1/0 cable size		
Dinse/Tweco® Adapter	#042 465	One-piece adapter with Dinse-style male plug and Tweco-style female receptacle		
Dinse/Cam-Lok Adapter	#042 466	One-piece adapter with Dinse-style male plug and Cam-Lok receptacle		
Tweco-Style Connectors				
Tweco/Dinse Adapter	#195 116	One-piece adapter with Tweco-style male plug and Dinse-style female receptacle		
Tweco-Style Connector	#195 115	1/0 to 2/0 cable size		

Date:

Total Quoted Price:

Distributed by:

