

Dimension™ NT 450

Issued August 2006 • Index No. DC/19.5

Multiprocess Welding Power Source 

Quick Specs

Heavy Industrial Applications

Fabrication and Construction
MRO-Maintenance Repair
Pressure Tank/Vessel Fabrication
Pipe Welding and Shipbuilding
Refineries and Foundries
Railcar Manufacturing
Heavy Equipment Manufacturing

Processes

MIG (GMAW)
Stick (SMAW)
TIG (GTAW)
Flux Cored (FCAW)
Air Carbon Arc Cutting and Gouging (CAC-A) (max 5/16 in carbons)

Input Power 3-Phase Power

Rated Output 450 A at 38 VDC, 100% Duty Cycle

Weight 376 lb (171 kg)

The Power of Blue.®

DC multi-process capability provides versatility and outstanding arc performance in CV (MIG) and CC (Stick and TIG).

Internal digital voltage control (DVC) enables operator to preset weld voltage in the CV mode before striking an arc.

Process selector switch automatically sets contactor requirements, eliminating confusion caused by several switch combinations and making this machine very "operator-friendly."

Lift-Arc™ allows TIG starting without the use of high-frequency. Starts the arc without contaminating the weld with tungsten.

Line voltage compensation keeps power constant even if power input varies by ±10%.

Thermal overload protection helps prevent machine damage if the duty cycle is exceeded or airflow is restricted.



New!

NEW! Inductance/Dig Control with pre-settable digital display to optimize MIG/Stick performance.

Fan-On-Demand™ which operates only when needed. This feature reduces noise, energy use and the amount of contaminants pulled through machine.

115 VAC duplex receptacle provides 15 amps of auxiliary power.

Enhanced environmental protection: all critical components housed in protective enclosures.

Help codes help troubleshoot and service power source. Help codes are displayed on the volt/amp meters. Reduces the time needed to get the machine back into service.

Excellent power efficiency for exceptional value and return on your investment.

Specifications (Subject to change without notice.)

CC CV 3 Phase

Rated Output at 100% Duty Cycle	Amperage Range	Voltage Range	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 60 Hz, 3-Phase					Dimensions	Weight
				230 V	460 V	575 V	KVA	KW		
450 A at 38 VDC	5–500 A in CC mode	10–38 V in CV mode	80 VDC in CC and CV mode	57 2.18*	29 1.04*	23 0.84*	22.6 0.87*	21.0 0.29*	H: 32-1/2 in (826 mm) including lift eye W: 23 in (585 mm) D: 38 in (966 mm)**	Net: 376 lb (171 kg)

 Certified to both the Canadian and U.S. Standards for welding equipment.

*While idling. **Including strain relief.

TRUE BLUE
3 YR. 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**



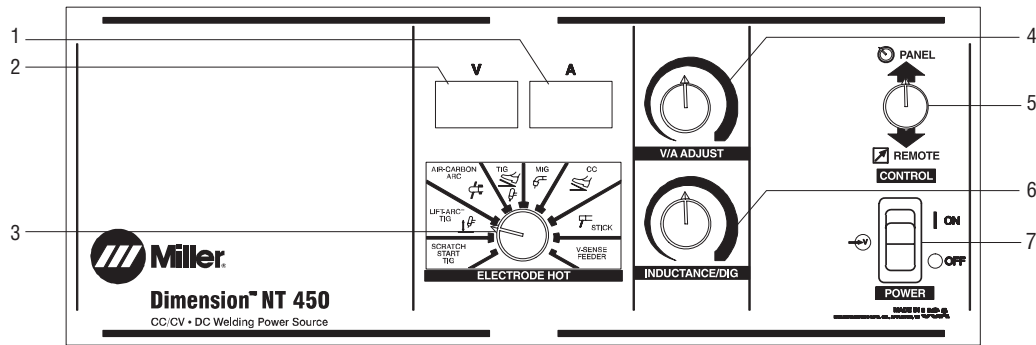
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An Illinois Tool Works Company
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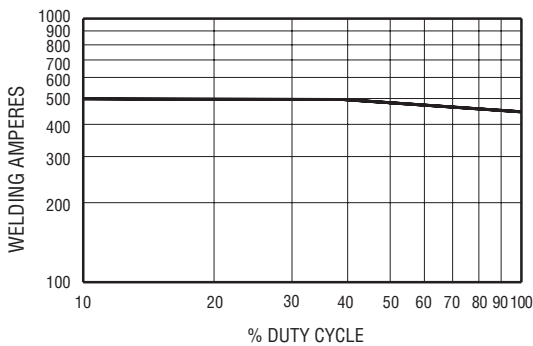
Control Panel



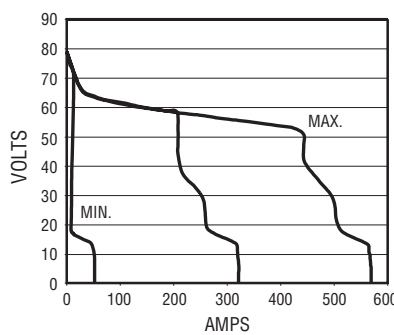
1. Ammeter
2. Voltmeter
3. Mode Switch
4. Voltage/Amperage Adjust Control
5. Remote/Panel Switch
6. Inductance/Dig Control
7. Power Switch

Performance Data

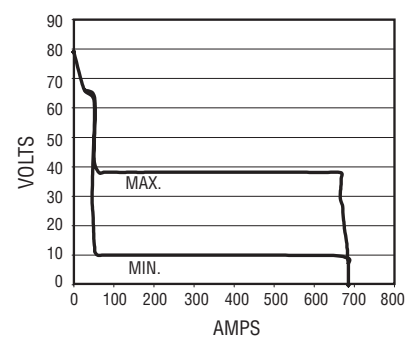
DUTY CYCLE CHART



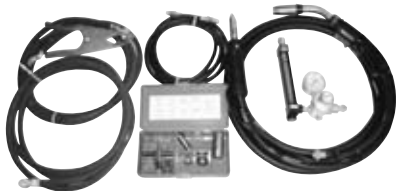
CC VOLT/AMP CURVE



CV VOLT/AMP CURVE



Genuine Miller Accessories



Industrial MIG Kit #195 197

Includes 15 ft (4.6 m), 2/0 power cable and work lead with clamp, regulator/flow meter with 15 ft (4.6 m) gas hose, 15 ft (4.6 m) MIG gun and consumable kit.

Polarity Control #042 871

This dual-function control is designed for use with dual wire feeders or any application where electrical isolation and/or polarity reversing of weld current is required. Both functions can be used at the same time.

Extension Cables for 14-Pin Plugs to 14-Pin Sockets

- #122 973 25 ft (7.6 m)
- #122 974 50 ft (15.2 m)
- #122 975 75 ft (22.8 m)

This extension cord makes a direct connection between the power source and the accessory control or wire feeder. No messy splicing or adapting required.



Standard Running Gear #042 886

The large 10 in (254 mm) rear wheels and 5 in (127 mm) front casters on this running gear provide excellent mobility on the shop floor, making it easier to move the power source around and over cables and cracks. Very easy to install. Handles double as weld cable holder.

Standard Cylinder Rack #042 887

Holds two cylinders. Only installs on Standard Running Gear.



HF-251D-1 High-Frequency Arc Starter/Stabilizer #042 388

This portable 250 amp, 60% duty cycle unit adds high frequency to the welding circuit to help start the arc when using the TIG (GTAW) process. Operates on 115 VAC 50/60/100 Hz. See Lit. Index No. AY 5.1.

Water Coolant Systems

For more information, see Miller Coolant Systems Lit. Index No. AY/7.2.



Coolmate™ 3

#043 007 115 VAC
#043 008 230 VAC

For use with water-cooled torches rated up to 600 amps. Unique paddle-wheel indicator, external filter and easy fill spout.

Coolmate™ V3 #043 009 115 VAC

For use with water-cooled torches rated up to 500 amps. Vertical design conveniently mounts to Miller cylinder rack in place of one cylinder.

Coolmate™ 4 #042 288 115 VAC

For use with water-cooled torches rated up to 600 amps. Tough molded polyethylene case with carrying handle.

Coolant #043 810

Sold in cases of four 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37°F (-38°C) or boiling to 227°F (108°C). Also contains a compound that resists algae growth.

Wire Feeders



70 Series

D-74S #195 060
D-74D #195 061
D-74DX #195 062

Heavy-duty, industrial, constant-speed 24 VAC semiautomatic wire feeders in dual models, with available digital meters. Ideal for high-duty-cycle MIG welding (GMAW) and Flux Cored welding (FCAW). Accommodates a wide variety of wire sizes and types. See Lit. Index No. M/3.0.



NEW! 75 Series

S-75S #300 114 Standard Speed
S-75S #300 115 Low Speed
S-75D #300 116 Standard Speed
S-75D #300 117 Low Speed
S-75DX #300 118 Standard Speed
S-75DX #300 119 Low Speed
S-75DXA #300 120 Standard Speed *for use with .035 in aluminum wire*
S-75DXA #300 121 Standard Speed *for use with 3/64 in aluminum wire*
S-75DXA #300 122 Standard Speed *for use with 1/16 in aluminum wire*

Wire feeder features *NEW!* Accu-Mate™ connection and PD (Precision Drive) wire feed assembly. Available in standard- and low-speed models. Handles a variety of wire diameters up to 1/8 in. Comes with FREE Bernard® Q™-Gun! See Lit. Index No. M/3.5.



22A #193 066

Simple, reliable, 24 VAC constant-speed semiautomatic wire feeder, best suited for small diameter wires.

Accommodates up to 60 lb (27.2 kg) spool of welding wire when using optional wire reel assembly. Comes with FREE Bernard® Q™-Gun! See Lit. Index No. M/11.0.



24A #195 112

Simple, reliable, 24 VAC constant-speed semiautomatic wire feeder, best suited for small diameter wires.

Remote voltage is standard. Features four gear-driven drive rolls for larger wire sizes. Accommodates up to 60 lb (27.2 kg) spool of welding wire when using optional wire reel assembly. Comes with FREE Bernard® Q™-Gun! See Lit. Index No. M/11.0.



SuitCase™ 8VS #194 890

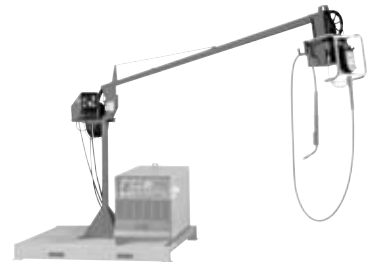
SuitCase™ X-TREME™ 12VS #195 500

Lightweight, portable, voltage-sensing wire feeders include secondary contactor and gas valve. Require drive roll kit. See Lit. Index Nos. M/6.4 and M/6.41.



XR™-Control #181 538

Push-pull wire feed system offers unparalleled performance for aluminum MIG welding. See Lit. Index No. M/1.7.



Swingarc™ Boom-Mounted Wire Feeders

Single and dual 24 VAC semiautomatic wire feeders are available with 12 ft (3.7 m) and 16 ft (4.9 m) booms. Ideal for long reach and complete maneuverability when working on large weldments, or in hard-to-reach areas. See Lit. Index No. M/13.0.

Remote Controls and Switches

Remote On/Off Control #042 869

Allows you to turn your power source on or off from a distance of 20 ft (6 m). This is especially useful if your power source is located up in a mezzanine.



RMLS-14 #129 337

Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and back for momentary contact. Includes 20 ft (6 m) cord and 14-pin plug.

Genuine Miller Accessories (Continued)



RCC-14 Remote Contactor and Current Control #151 086

Rotary-motion (side to side) fingertip control. Fastens to TIG torch using two Velcro strips. Allows complete current and contactor control at operator's fingertips. Includes 28 ft (8.5 m) cord and plug.



RCCS-14 Remote Contactor and Current Control #043 688

Up-and-down rotary-motion fingertip control. Great for applications that require a finer amperage control. Includes 28 ft (8.5 m) control cord.



RHC-14 Hand Control #129 340 20 ft (6 m) cord #129 340 0010305 100 ft (30.5 m) cord

Miniature hand control with 14-pin plug for remote current and contactor control. Dimensions: 4 x 4 x 3-1/4 in (102 x 102 x 82 mm).



RFCS-14 Foot Control #043 554

Heavy-duty foot current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.

Ordering Information

Equipment	Stock No.	Description	Qty.	Price
Dimension™ NT 450	#907 256	230/460/575 V, 60 Hz		
Recommended Wire Feeders				
70 and 75 Series		See page 3		
22A/24A	#193 066/#195 112	See Lit. Index No. M/11.0		
SuitCase™ 8VS	#194 890	See Lit. Index No. M/6.4		
SuitCase™ X-TREME™ 12VS	#195 500	See Lit. Index No. M/6.41		
XR™-Control	#181 538	See Lit. Index No. M/1.7		
Swingarc™ Boom Feeders		See Lit. Index No. M/13.0		
Remote Controls				
Remote On/Off Control	#042 869			
RMLS-14	#129 337	Rocker switch		
RCC-14	#151 086	Fingertip control (side to side)		
RCCS-14	#043 688	Fingertip control (up and down)		
RHC-14	#129 340 #129 340 0010305	Hand control w/20 ft (6 m) cord and 14-pin plug Hand control w/100 ft (30.5 m) cord and 14-pin plug		
RFCS-14	#043 554	Foot control		
Miscellaneous				
Industrial MIG Kit	#195 197	Includes 15 ft (4.6 m), 2/0 power cable and work lead with clamp, regulator/flow meter with 15 ft (4.6 m) gas hose, 15 ft (4.6 m) MIG gun and consumables kit		
Polarity Control	#042 871			
Extension Cables		See page 2		
Standard Running Gear	#042 886			
Standard Cylinder Rack	#042 887			
HF-251D-1 Starter/Stabilizer	#042 388	See Lit. Index No. AY/5.1		
Coolant Systems		See page 3		
Coolant	#043 810			
Primary Power Cable				
Secondary Welding Cables				
Work Cable and Clamp				

Date:

Total Quoted Price:

Distributed by:

