

Dimension™ NT 450/500

Issued Jan. 2015 • 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) (5/16-in. carbons max.)

Input Power 3-Phase Power

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

Net Weight 376 lb. (171 kg)

DC multiprocess capability provides versatility and outstanding arc performance in CV (MIG) and CC (Stick, TIG, CAC-A).

Inductance/DIG control with presettable digital display to optimize MIG/Stick performance.

Internal digital voltage control (DVC) enables operator to preset weld voltage in the CV mode prior to welding.

Line voltage compensation ensures consistent weld performance by keeping output power constant even if primary input power varies by ± 10 percent.

Power efficient for exceptional value and return on your investment.

115 VAC duplex receptacle provides 15 amps of auxiliary power.

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



Dimension™ NT 450 MIGRunner™ Package shown.



Build your own system at MillerWelds.com/equiptoweld or see the **Stationary and MIGRunner™ Packages** (page 3).

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

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

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

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.



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



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Specifications (Subject to change without notice.)

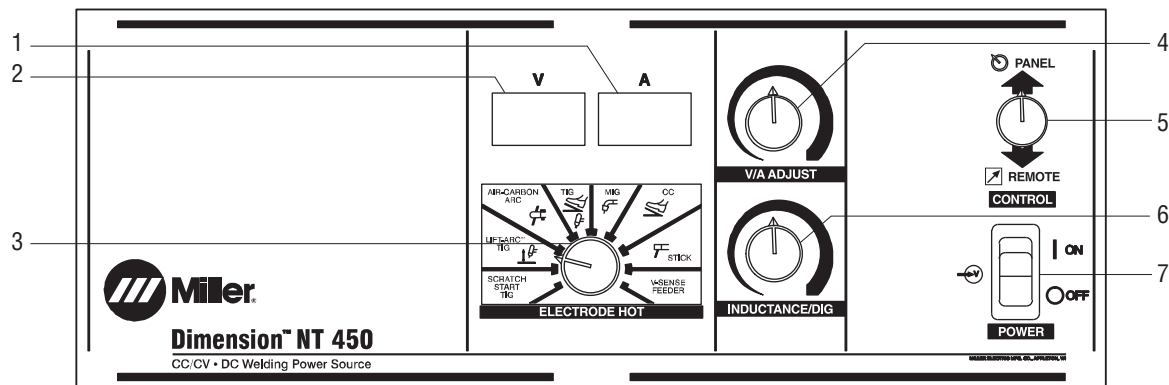


Amperage/Voltage Range	Rated Output	Amps Input at Rated Load Output, 50/60 Hz, 3-Phase 230 V 380 V 400 V 440 V 460 V 575 V KVA KW	Max. Open-Circuit Voltage	Dimensions	Net Weight
5–500 A in CC mode 10–38 V in CV mode	450 A at 38 VDC, 100% duty cycle	57 34 33 30 29 23 22.6 21.0 2.18* 1.11* 1.05* 0.95* 1.04* 0.84* 0.87* 0.29*	80 VDC	H: 32.5 in. (826 mm) (including lift eye) W: 23 in. (585 mm) D: 38 in. (966 mm) (including strain relief)	376 lb. (171 kg)

*While idling.

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

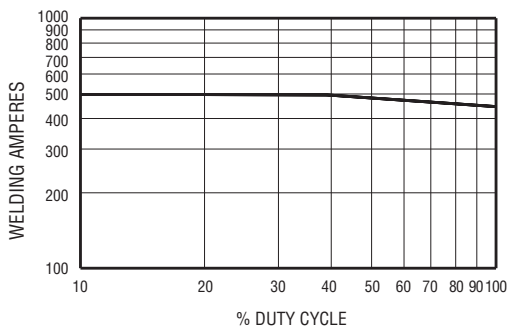
Control Panel



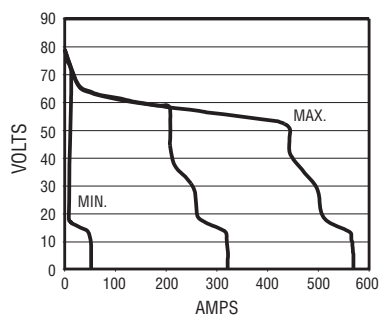
1. Ammeter
2. Voltmeter
3. Mode Switch
4. Amperage/Voltage Adjustment Control
5. Remote/Panel Switch
6. Inductance/DIG Control
7. Power Switch

Performance Data

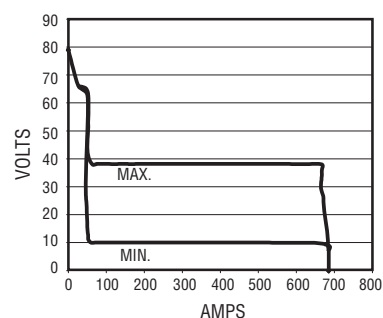
DUTY CYCLE CHART



CC VOLT/AMP CURVE



CV VOLT/AMP CURVE



Packages



Option #1: Dimension™ NT Power Source Only

Purchase components separately.

Dimension NT 450

#903 256 (230/460/575 V, 60 Hz)

Dimension NT 500

#907 391 (380/400/440 V, 50/60 Hz)



Build your own system at
MillerWelds.com/equiptoweld



Option #2: Dimension™ NT Stationary Package

Stationary display without running gear or cylinder rack.

Dimension NT 450 Stationary Package

#951 275 (230/460/575 V, 60 Hz)

Comes complete with:

- Dimension NT 450 power source
- S-74D wire feeder
- Bernard™ Q-Gun™
- Industrial MIG 4/0 kit consisting of flowmeter regulator with 10-ft. (3 m) gas hose, 10-ft. (3 m) 4/0 feeder weld cable with lugs, and 15-ft. (4.6 m) work cable with 600-amp C-clamp



Option #3: Dimension™ NT MIGRunner™ Package

MIGRunner system with factory-installed standard running gear and cylinder rack.

Dimension NT 450 MIGRunner Package

#951 279 (230/460/575 V, 60 Hz)

Comes complete with:

- Dimension NT 450 power source
- S-74D wire feeder
- Bernard™ Q-Gun™
- Industrial MIG 4/0 kit consisting of flowmeter regulator with 10-ft. (3 m) gas hose, 10-ft. (3 m) 4/0 feeder weld cable with lugs, and 15-ft. (4.6 m) work cable with 600-amp C-clamp
- Factory-installed standard running gear and cylinder rack

Genuine Miller® Accessories

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

#242 208 025 25 ft. (7.6 m)

#242 208 050 50 ft. (15.2 m)

#242 208 080 80 ft. (24.4 m)

Extension cables make a direct connection between the power source and remote control or 24 VAC wire feeder. No messy splicing or adapting required.

**For additional lengths visit MillerWelds.com/equiptoweld.*



Industrial MIG 4/0 Kit #300 390

Includes flowmeter regulator with 10-foot (3 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, and 15-foot (4.6 m) work cable with 600-amp C-clamp.

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.



Standard Running Gear #042 886

The large 10-inch (254 mm) rear wheels and 5-inch (127 mm) front casters on this running gear provide excellent mobility on the shop floor, making it easier to move the power source. 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 percent 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.

Remote Controls and Switches



RMLS-14 #129 337

Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and backward for momentary contact. Includes 26.5-foot (8 m) cord and 14-pin plug.



RCC-14 Remote Contactor and Current Control #151 086

East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Allows complete current and contactor control at operator's fingertips. Includes 26.5-foot (8 m) cord and 14-pin plug.



RCCS-14 Remote Contactor and Current Control #043 688

North/south rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Great for applications that require a finer amperage control. Includes 26.5-foot (8 m) cord and 14-pin plug.



RHC-14 Hand Control*

#242 211 020 20-ft. (6 m) cord

#242 211 100 100-ft. (30.5 m) cord

Miniature hand control for remote current and contactor control. Dimensions: 4 x 4 x 3.25 inches (102 x 102 x 83 mm). Includes cord and 14-pin plug.

*For additional lengths visit MillerWelds.com/equiptoweld.



RFCS-14 Foot Control #043 554

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

Coolant Systems

For more information, see the Miller Coolant Systems literature sheet, Index No. AY/7.2.



Coolmate™ 3

#043 007 115 VAC

#043 008 230 VAC

For use with water-cooled torches rated up to 500 amps. Unique paddle-wheel indicator, external filter and easy-fill spout.



Coolmate™ 4 #042 288 115 VAC

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

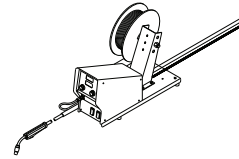
Coolant #043 810

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

Wire Feeder Options

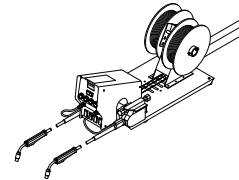
Bench-Style Feeders

	Lit. Index No.
22A	M/11.0
24A	M/11.0
S-74S	M/3.0
S-74D	M/3.0
S-74DX	M/3.0
S-74 MPa Plus	M/3.0



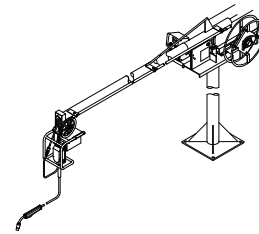
Bench-Style Dual Feeders

D-74S	M/3.0
D-74D	M/3.0
D-74DX	M/3.0
D-74 MPa Plus	M/3.0



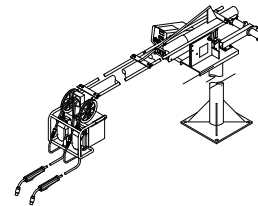
Boom-Style Feeders

SS-74S12	M/13.11
SS-74S16	M/13.11
SS-74D12	M/13.11
SS-74D16	M/13.11
SS-74DX12	M/13.11
SS-74DX16	M/13.11
SS-74 MPa Plus	M/13.11



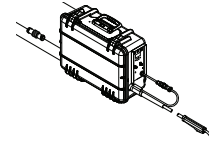
Boom-Style Dual Feeders

DS-74S12	M/13.11
DS-74S16	M/13.11
DS-74D12	M/13.11
DS-74D16	M/13.11
DS-74DX12	M/13.11
DS-74DX16	M/13.11
DS-74 MPa Plus	M/13.11



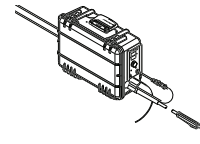
Portable Feeders

SuitCase® 12RC	M/6.5
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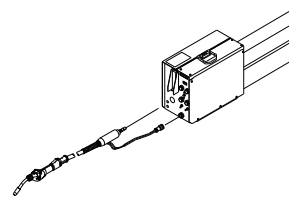
Portable Voltage-Sensing Feeders

SuitCase® X-TREME™ 8VS	M/6.42
SuitCase® X-TREME™ 12VS	M/6.42



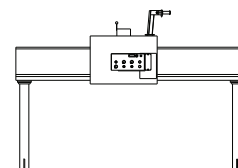
Aluminum Push-Pull Feeders

XR™-S and XR™-D Controls	M/1.7
Guns available:	
XR-Aluma-Pro™	M/1.71
XR-Pistol	M/1.73
XR-Pistol-Pro	M/1.74



Hard Automation

70 Series Remote Configurations	M/3.0
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Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Dimension™ NT 450 Power Source Only	#907 256	230/460/575 V, 60 Hz		
Dimension™ NT 450 Stationary Package	#951 275	230/460/575 V, 60 Hz		
Dimension™ NT 450 MIGRunner™ Package	#951 279	230/460/575 V, 60 Hz		
Dimension™ NT 500 Power Source Only	#907 391	380/400/440 V, 50/60 Hz, International Only		
Wire Feeders				
22A	#951 190	See Lit. Index No. M/11.0		
24A	#951 193	See Lit. Index No. M/11.0		
70 Series		See Lit. Index No. M/3.0		
SuitCase® 12RC	#951 580	See Lit. Index No. M/6.5		
SuitCase® X-TREME™ 8VS	#951 583	See Lit. Index No. M/6.42		
SuitCase® X-TREME™ 12VS	#951 543	See Lit. Index No. M/6.42		
XR™-Controls	#300 601 #300 687	XR-S model. See Lit. Index No. M/1.7 XR-D model. See Lit. Index No. M/1.7		
Swingarc™ Boom Feeders		See Lit. Index No. M/13.11		
Remote Controls				
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	#242 211 020 #242 211 100	Hand control with 20-ft. (6 m) cord and 14-pin plug Hand control with 100-ft. (30.5 m) cord and 14-pin plug		
RFCS-14	#043 554	Foot control		
Options and Accessories				
Extension Cables		See page 4		
Industrial MIG 4/0 Kit	#300 390	Includes flowmeter regulator with 10-ft. (3 m) gas hose, 10-ft. (3 m) 4/0 feeder weld cable with lugs, and 15-ft. (4.6 m) work cable with 600-amp C-clamp		
Polarity Control	#042 871			
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 5		
Coolant	#043 810			
Primary Power Cable				
Secondary Welding Cables				
Work Cable and Clamp				

Date:

Total Quoted Price:

Distributed by:

