

Red-D-Arc Welderrentals

When you're ready to weld.

Red-D-Arc Welderrentals, an Airgas company, is North America's leading provider of rental welding products and services, with over 40,000 units in a fleet that includes welders, welding positioners and other welding-related equipment, for almost any type of welding process and application.

Equipment Selector



WELDERS

POSITIONERS

GENERATORS

SPECIALTY EQUIPMENT



Airgas

1-866-733-3272

Rental Centers Across North America

Red-D-Arc Welderrentals

When you're ready to weld.

Red-D-Arc **Welderrentals** offers a full range of rental welding and positioning equipment for a variety of processes and applications.

Our rental products have been engineered and built to provide **Extreme-Duty™** performance and reliability in even the harshest environments, and are available through over 40 Red-D-Arc Rental Centers, strategically located throughout the United States, Canada, and Mexico.

From our rental fleet of over 40,000 welders and positioners, we can supply you with the equipment you need - where you need it, when you need it - anywhere in North America.

Available Services

- **Welding and Positioning Equipment Rentals**
A comprehensive product offering of cost effective, innovative solutions to your equipment needs
- **Welder-Logistics™ Extended Term Rental Programs**
12, 24 and 36 month rental programs with additional features and benefits
- **RDA-Tool-Crib™**
A cost effective alternative to equipment ownership for your complete fleet requirements
- **Service-Advantage-Plus™**
On-site equipment set-up, service and maintenance for specialized equipment and applications
- **Quality-Checked™ Welding Equipment**
Red-D-Arc carries an excellent selection of pre-owned welding and positioning equipment for sale
Each piece is tested, calibrated, and rated as Quality-Checked or Select and comes with a warranty

Welding and Cutting Processes

In addition to helping you with equipment selection, Red-D-Arc can assist you in choosing the best process for each welding and cutting application.

We can supply and service equipment for the following manual and automatic welding and cutting processes:

- Stick (SMAW) welding
- MIG (GMAW) welding
- Pulsed MIG (GMAW-P) welding
- Self-shielded flux-cored (FCAW-SS) welding
- Gas-shielded flux-cored (FCAW-GS) welding
- Submerged arc (SAW) welding
- TIG (GTAW) welding and pulsed TIG (GTAW-P) welding
- Air carbon arc cutting and gouging (CAC-A)
- Plasma (PAC) cutting and gouging

Welderrentals™
Positionerrentals™
WelderLogistics™
extended term rental programs



**Service
Advantage™
Plus**
Quality-Checked™
PRE-OWNED
Equipment

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Red-D-Arc Rental Centers

United States

Appleton	1901 Badger Road, Kaukauna, Wisconsin 54130-1185	(920) 759-4700
Atlanta	685 Lee Industrial Blvd., Austell, Georgia 30168-7434	(770) 819-0505
Baltimore	3403 Sinclair Lane, Baltimore, Maryland 21213-2030	(410) 342-9440
Baton Rouge	18180 Swamp Road, Prairieville, Louisiana 70769-3312	(225) 677-7676
Beaumont	4830 Lafin Drive, Beaumont, Texas 77705-4321	(409) 434-0800
Birmingham	101 Pardue Road, Pelham, Alabama 35124-2169	(205) 664-3969
Boston	1035 Millbury Street, Worcester, Massachusetts 01607-1494	(508) 795-0428
Charlotte	5324 North Graham Street, Charlotte, North Carolina 28269-4833	(704) 596-9430
Chicago	6900 West 63rd Street, Chicago, Illinois 60638-3916	(773) 586-2600
Corpus Christi	1819 N. Padre Island Drive, Corpus Christi, Texas 78408-2331	(361) 289-8866
Dallas	430 South Industrial Blvd., Dallas, Texas 75207-7502	(214) 742-9400
Denver	4675 Joliet Street, Denver, Colorado 80239-2921	(303) 373-1847
Detroit	38098 Van Born Road, Wayne, Michigan 48184-1577	(734) 641-2870
Houston	1817 Federal Road, Houston, Texas 77015-6709	(713) 451-8484
Las Vegas	2620 South Highland Drive, Las Vegas, Nevada 89109-1116	(702) 732-9141
Lexington	1668 Jaggie Fox Way, Lexington, Kentucky 40511-1082	(859) 259-2828
Los Angeles	1945 East 223rd Street, Carson, California 90810-1608	(310) 233-3327
Memphis	7340 Craft Goodman Road, Olive Branch, Mississippi 38654-1300	(662) 890-1188
Mobile	6065B Rangeline Road, Theodore, Alabama 36582-5204	(251) 443-8884
New Jersey	1513 South Washington Avenue, Piscataway, New Jersey 08854-3815	(732) 926-8868
Norfolk	1052 Portsmouth Blvd., Suffolk, Virginia 23434-2222	(757) 539-2104
Oakland	635 Gilman Street, Berkeley, California 94710-1330	(510) 527-9413
Philadelphia	7575 Holstein Avenue, Philadelphia, Pennsylvania 19153-3222	(215) 492-8276
Phoenix	544 West Iron Avenue, Suite 101, Mesa, Arizona 85210-6032	(480) 844-3625
Portland	11912 N.E. Hwy 99, Vancouver, Washington 98686-4002	(360) 546-0931
Sacramento	1725 69th Street, Sacramento, California 95819-4601	(916) 732-2197
San Bernardino	9950 4th Street, Rancho Cucamonga, California 91730-5722	(909) 581-3940
San Diego	9070 Clairemont Mesa Blvd., San Diego, California 92123-1208	(858) 268-4585
Seattle	11020 East Marginal Way South, Tukwila, Washington 98168-1935	(206) 763-2072
St. Louis	8309 Reilly Avenue, St. Louis, Missouri 63111-3848	(314) 631-8490
Tampa	2210 Peerless Road, Mulberry, Florida 33860-4448	(863) 425-8820
Tulsa	61 North Peoria Avenue, Tulsa, Oklahoma 74120-1622	(918) 587-8686

Canada

Arthur	10 Wells Street, Box 790, Arthur, Ontario NOG 1A0	(519) 848-9353
Edmonton	6 Challenger Crescent, Sherwood Park, Alberta T8H 2R1	(780) 417-0330
Ft. McMurray	350 MacAlpine Crescent, Bay 4, Ft. McMurray, Alberta T9H 4A8	(780) 791-2108
Grimsby	667 South Service Road, Box 40, Grimsby, Ontario L3M 4G1	(905) 643-4212
Moncton	175 Barker Street, Moncton, New Brunswick E1C 9T8	(506) 852-4081
Montreal	2181 Nobel, Ste-Julie, Quebec J3E 1Z9	(450) 649-6464
Nanaimo	950 Old Victoria Road, Unit 3, Nanaimo, British Columbia V9R 6Z8	(250) 754-8444
Toronto	1034 Pantera Drive, Mississauga, Ontario L4W 4A7	(905) 629-2423
Vancouver	7423 Wilson Avenue, Delta, British Columbia V4G 1E5	(604) 946-4667

United States and Canada toll free number

1-866-733-3272

Mexico

Veracruz	Calle Acacias, entre Avenida de las Torres y Calle J.B. Lizardi, Zona Industrial Bruno Pagliai, 91697 Veracruz, VER	(229) 981-2900
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Welding Equipment



- GASOLINE ENGINE-DRIVEN WELDERS
- PROPANE ENGINE-DRIVEN WELDERS
- DIESEL ENGINE-DRIVEN WELDERS
- STICK WELDERS
- MULTIOPERATOR STICK PAKS
- MULTIPROCESS POWER SOURCES
- MULTIOPERATOR POWER SOURCE PAKS
- MULTIOPERATOR DC CONVERTERS
- MIG PACKAGES
- WIREFEEDERS AND SPOOLGUNS
- WIREFEEDER/WELDERS
- TIG WELDERS



GASOLINE ENGINE-DRIVEN WELDERS

GX200 2+4 Welder Generator

DC CC 4kW



Fuel Efficient
Low Noise Level
4,000 Watt AC Generator
Available with Electric Start
11HP GX340 Honda Gasoline Engine

Exceptionally smooth output from the brushless, asynchronous alternator provides excellent welding arc characteristics and arc striking voltage. Lightweight and portable with auxiliary power available, even while welding.

Specifications

DC Amperage Range: 40 - 200 A
Rated Output: 200 A at 23 VDC, 35% duty cycle
170 A at 23 VDC, 60% duty cycle
Auxiliary Power: 4,000 watts, 60 Hz, 100% duty cycle on 240 VAC
2,000 watts, 60 Hz, 100% duty cycle on 120 VAC
Weight: 219 lb (99.3 kg) pull start, 230 lb (104.3 kg) with electric start
Dimensions: H: 20" (508 mm) W: 19.25" (489 mm) L: 30.5" (775 mm)

Options

Shop-type undercarriage

ZR8 Welder Generator

AC DC CC CV 10kW



225 amps AC CC Output at 100% Duty Cycle
210 amps DC CC Output at 100% Duty Cycle
200 amps CV Output at 100% Duty Cycle
20 HP Kohler CH20S Air-Cooled Gasoline Engine
DC Stick, AC Stick and CV Innershield Wire Welding
10,000 Watts Peak (9,000 Watts Continuous) 120/240 Volt AC Auxiliary Power

Smooth welding with a broad range for AC and DC stick electrodes. Polarity switch for selecting DC+, DC-, or AC welding output. Basic flux-cored, MIG and TIG welding capability.

Specifications

AC Amperage Range: 120 - 225 amps, 5 step control
DC Amperage Range: 120 - 210 amps, 5 step control
DC Voltage Range: 15 - 25 volts continuous control
Rated Output: 225 A at 25 VAC, 100% duty cycle
210 A at 25 VDC, 100% duty cycle
Max OCV at 3700 RPM 80V RMS
Auxiliary Power: 10,000 watts peak (9,000 watts continuous),
60 Hz, 100% duty cycle 120/240 VAC
(AC auxiliary power is reduced when welding simultaneously)

Options

Shop-type undercarriage, construction trailer

GASOLINE ENGINE-DRIVEN WELDERS

GX271 Multiprocess Welder

DC CC CV 9kW



275 amps DC Output at 100% Duty Cycle
Dependable 20 HP Honda GX620 Air-Cooled Gasoline Engine
DC Stick, CV Wire and DC Pipe Welding with E6010 Electrodes
9,000 Watts 115/230 Volt AC Auxiliary Power

Chopper technology for the best welding arc available on the market.
Full range output control in both CC and CV modes with arc force control in CC mode and inductance control in CV mode.
MS-style connections for remote amperage control and wirefeeders.

Specifications

DC Amperage Range: 20 - 300 amps continuous control
DC Voltage Range: 12 - 32 volts continuous control
Rated Output: 275 A at 28 VDC, 100% duty cycle
300 A at 25 VDC, 60% duty cycle
Auxiliary Power: 9,000 watts, 60 Hz, 100% duty cycle 120/240 VAC

Options

Shop-type undercarriage, construction trailer, remote control, LN25 wirefeeder, 42 and 115 volt constant-speed wirefeeders, spool gun type wirefeeder, Viper or Pro-Cut 25 plasma cutters (requires compressed air source)

PROPANE ENGINE-DRIVEN WELDERS

GX271LPG Multiprocess Welder Generator

DC CC CV 9kW



275 amps DC Output at 100% Duty Cycle
20 HP Kohler Air-Cooled LPG Engine
DC Stick, CV Wire and DC Pipe Welding with E6010 Electrodes
9,000 Watts 115/230 Volt AC Auxiliary Power

The GX271LPG has the same welding and auxiliary power features as the GX271 gasoline version, but comes with a Kohler Command CH-20 LPG engine and includes a shop-type, three-wheel undercarriage complete with LPG cylinder holder.

Specifications

DC Amperage Range: 20 - 300 amps continuous control
DC Voltage Range: 12 - 32 volts continuous control
Rated Output: 275 A at 28 VDC, 100% duty cycle
300 A at 25 VDC, 60% duty cycle
Auxiliary Power: 9,000 watts, 60 Hz, 100% duty cycle 120/240 VAC

Options

Remote control, LN25 wirefeeder, 42 and 115 volt constant-speed wirefeeders, spool gun type wirefeeder, Viper or Pro-Cut 25 plasma cutter (requires compressed air source)

DIESEL ENGINE-DRIVEN WELDERS

D500K 5+3 Welder

DC CC 3kW



Full Range Amperage Control and Job Selector (OCV) Control
Built to Red-D-Arc Extreme-Duty Specifications
Fuel Efficient Kubota F-2803 Diesel Engine
3,000 Watts AC Auxiliary Power

For demanding jobs that call for high amperage capabilities using electrodes up to 1/4" in diameter and air carbon arc (CAC-A) gouging with carbons up to 5/16" in diameter. Precise control of both current control and open circuit voltage for optimum arc characteristics.

Specifications

DC Amperage Range: 50 - 575 A Maximum OCV: 97

Rated Output: 400 A at 36 VDC, 60% duty cycle
350 A at 34 VDC, 100% duty cycle

Auxiliary Power: 3,000 watts, 60 Hz, 15 amps with circuit breaker

Weight: 1866 lb (846.4 kg) Fuel Capacity: 15 gallons (57 L)

Fuel Consumption: 1.79 GPH (6.78 LPH) at rated load

H: 44.25" (1124 mm) W: 27" (686 mm) L: 73.5" (1867 mm)

Options

Construction trailer, RC4 remote control, TIG welding with K930-2 TIG module, 240 VAC auxiliary power

D500K 5+3 with CV Wirefeed Module

DC CC CV 3kW



LN25
Wirefeeder

Stick, MIG and Flux-Cored Welding and Air Carbon Arc Gouging
Built to Red-D-Arc Extreme-Duty Specifications
Fuel Efficient Kubota F-2803 Diesel Engine
3,000 Watts AC Auxiliary Power

In addition to stick welding, the D500K 5+3 with Wirefeed Module provides CV output with improved arc stability for Innershield and MIG welding using LN25 wirefeeder or LN23P wirefeeder.

Specifications

DC Amperage Range: 50 - 575 A Maximum OCV: 97

Rated Output: 400 A at 36 VDC, 60% duty cycle
350 A at 34 VDC, 100% duty cycle

Auxiliary Power: 3,000 watts, 60 Hz, 15 amps with circuit breaker

Weight: 1905 lb (864.1 kg) Fuel Capacity: 15 gallons (57 L)

Fuel Consumption: 1.79 GPH (6.78 LPH) at rated load

H: 44.25" (1124 mm) W: 27" (686 mm) L: 73.5" (1867 mm)

Options

Construction trailer, RC4 remote control for stick welding, Red-D-Arc LN25 (shown) and LN23P wirefeeder, TIG welding with K930-2 TIG module, 240 VAC auxiliary power

DIESEL ENGINE-DRIVEN WELDERS

D502K 5+20 Welder

DC CC CV 20kW



Stick, MIG, DC TIG, Flux-Cored Welding and Air Carbon Arc Gouging
Built to Red-D-Arc Extreme-Duty Specifications
Kubota V3300-B 49 HP Liquid-Cooled Diesel Engine
Up to 20,000 Watts of Three-Phase 240 VAC Auxiliary Power

Same design as the D502K 5+4 with 20,000 watts of available auxiliary power.

Specifications

DC Amperage Range: 20 - 600 A Maximum OCV: 95
Rated CC Output: 500 A at 40 VDC, 100% duty cycle
600 A at 44 VDC, 40% duty cycle
DC Voltage Range: 14 - 40 V
Available Auxiliary Power While Welding:
5,500 watts Peak, 4,000 watts Continuous, 33.3/16.6 A, 120/240 VAC
Additional Available Auxiliary Power While Not Welding:
Single-Phase: 12,000 watts, 50 A, 120/240 VAC, 60 Hz; or
Three-Phase: 20,000 watts, 48 A, 240 VAC, 60 Hz
Weight: 1808 lb (820 kg)
Fuel Capacity: 25 gallons (95 L)
H: 50" (1270 mm) W: 30.75" (781 mm) L: 69.5" (1765 mm)

Options

Construction trailer,
RHC-14 remote control for stick welding

Trailblazer 44D Portable TIG Welder

AC DC CC 7.5kW



300 Amp AC and DC Welding Current
AC Gas Tungsten Arc (TIG) Welding
Built in High-Frequency Arc Starter with Intensity Control
Continental TMD-27 38 HP Water-Cooled Diesel Engine

For stick welding, TIG welding, air carbon arc cutting and gouging and stud welding. Includes a High-Frequency arc starter for TIG welding starts. Revolving field alternator design. Five separate output ranges with fine adjustment in each range. Circuit breaker protected auxiliary power receptacles. Automatic idle device for stick mode.

Specifications

DC Amperage Range: 35 - 400 A
AC Amperage Range: 30 - 300 A
Rated CC Output DC Mode: 300 A at 32 VDC, 100% duty cycle
Rated CC Output AC Mode: 300 A at 34 VDC, 100% duty cycle
Maximum OCV DC Mode: 72 V Maximum OCV AC Mode: 80 V
Auxiliary Power: 3,000 watts 120/240 VAC Auxiliary Power Welding
7,500 watts 120/240 VAC Auxiliary Power Not Welding
Weight: 1830 lb (830.1 kg) Fuel Capacity: 17.5 gallons (66.2 L)
H: 55.25" (1403 mm) W: 25" (635 mm) L: 73" (1854 mm)

STICK WELDERS AND PAKS

ES275i Inverter Welder

DC CC



Processes

Stick, DC TIG with Touch-Start

Configurations

Available as individual welders and 4Pak or 8Pak Multioperator welding systems.

4Paks include either insulated bases or carts with casters.

8Paks include bases with optional, add-on casters.

Description

275 amp at 35% duty cycle, constant current, DC, inverter welder with 1/3 phase, 50/60 Hz input

Input Voltages

Individual Welders:

208/230/460/575/1/3/60

220/380/400/415/440/1/3/50

4Pak and 8Pak Multioperator:

460/575/3/60

Features

- Outstanding E6010 and E7018 performance using up to 7/32" diameter electrodes that enables both whip or drag techniques for a variety of applications
- Touch-Start TIG allows DC TIG welding without high frequency starting
- Adjustable Arc Force and two-position Hot Start switch for enhanced arc control
- Potentiometer-type remote control
- Light-weight and compact design
- No output derating when operated on single-phase power
- Meets IP23S environmental rating
- Extreme-Duty environmental protection
- Manufactured under ISO 9001 certification
- 4Pak and 8Pak are small enough to fit through a 36" wide pedestrian door
- Tweco style output terminals
- 10' long, 8 AWG input cord for all 3 phase voltages
- Optional Primary Ground Protector available for 4Pak and 8Pak

Operation

- Stick and TIG Weld Modes
- Output Control controls the output current over the entire output range and can be adjusted under load. When using remote control this function becomes the limit setting
- Arc Force is only active in Stick weld mode
- Hot Start is only active in Stick weld mode and is fixed at 160% of the set current or 275 amps whichever is larger then quickly reverts to the set current in 0.4 seconds
- Voltage reconnect is via a side panel access door
- Remote Control is via a 3-pin MS-style receptacle

ES275i 4Pak Multioperator System



4Pak mounts on either an insulated base or a cart with casters for easy moving

STICK WELDERS AND PAKS

ES275i 8Pak Multioperator System



Shown with optional casters

Weights and Dimensions

ES275i

Weight: 54.5 lb (24.7 kg)
H: 13.6" (345 mm) W: 9.0" (229 mm) D: 20.25" (514 mm)

ES275i 4Pak

(on cart with casters)
Weight: 480 lb (217.7 kg)
H: 44.5" (1130 mm) W: 31" (787 mm) D: 35.75" (908 mm)

ES275i 8Pak

(on insulated base with casters)
Weight: 987 lb (447.7 kg)
H: 46.75" (1187 mm) W: 60" (1524 mm) D: 27.5" (699 mm)

Specifications (Individual Welders)

Input Power	Rated Output	Input Current at Rated Output	Output Range
208/230/460/575/3/60	275 amps, 31 volts, 35% 250 amps, 30 volts, 60% 200 amps, 28 volts, 100%	38/37/19/16 34/33/17/14 27/25/13/11	5 - 275 amps DC
208/230/460/575/1/60	275 amps, 29-31 volts, 35% 250 amps, 30 volts, 60% 200 amps, 28 volts, 100%	68/67/38/31 63/62/33/27 49/48/26/21	
220/380/400/415/440/3/50	250 amps, 30 volts, 35% 200 amps, 28 volts, 100%	32/20/19/18/17 25/15/15/14/13	5 - 250 amps DC
220/380/400/415/440/1/50	250 amps, 30 volts, 35% 200 amps, 28 volts, 100%	63/42/40/38/36 48/32/30/29/27	

Mark VIII-2

DC CC 2kW



Stick (SMAW) and DC TIG (GTAW) Welding Air Carbon Arc Cutting and Gouging (CAC-A) Flux-Cored (FCAW), MIG Welding with Voltage-Sensing Wirefeeders

This multioperator welding system drives eight modules from a single main transformer. Each welding module features remote control and a wide range of amperage settings.

Specifications

Rated Output at 40 Volts: Single Module: 200 A, 60% duty cycle

Main Transformer: 800 A, 100% duty cycle or 1600 A, 25% duty cycle

DC Welding Amp Range, Single Module: 35 - 300 A

Input Voltages: 230/460/575 V Maximum OCV: 80

Input at Rated Output:	230V	460V	575V	kVA	kW
	170 A	85 A	68 A	68 A	48.6 A

Weight: 4050 lb (1837 kg) H: 70.25" (1784 mm) W: 72" (1829 mm) D: 40" (1016 mm)

Options

RHC3 remote control, HF251D arc starter

STICK WELDERS AND PAKS

E300 Extreme-Duty Welder

DC CC 2kW



230/460/575 Volt, 60 Hz, 1 Phase Input

Rugged Tubular Pak-Lok-Frame
Excellent Performance and Versatility
Built to Red-D-Arc Extreme-Duty Specifications
Available as 4Pak and 6Pak Multioperator Systems

For stick welding with all types of electrodes up to 3/16" including low hydrogen, stainless steel, hardfacing, aluminum and bronze. Also scratch start DC TIG, and MIG or flux-cored welding with voltage sensing wirefeeders. Includes a built-in stabilizer for outstanding arc stability and pop-out-resistant welding with all DC electrodes.

Specifications

DC Amperage Range: 40 - 250 A Maximum OCV: 70
 Rated Output: 250 A at 30 VDC, 30% duty cycle
 Single-Phase Rated Input Current:
 86 at 230 VAC, 43 at 460 VAC, 34 at 575 VAC
 Weight (including frame): 402 lb (182.3 kg)
 H: 32" (813 mm) W: 24.75" (629 mm) L: 26" (660 mm)

Options

Three-wheeled shop-type undercarriage (shown), LN25 wirefeeder, 2kW 120 VAC duplex auxiliary power receptacle

E300 4Pak, 6Pak Multioperator Systems

DC CC 8kW



E300 4Pak

Modular Pak Construction
DP120 Power Distribution Panel Included
For Stick Welding with up to 3/16" Diameter Electrodes

Ideal for shipyards, construction sites, or any job where operating multiple arcs from a single primary power source is an advantage. Up to 250 DC amps per arc with continuous output control. Individual welding modules permit easy access for service or repairs. Both the 4Pak and 6Pak operate from a 120 amp service with either 460 VAC or 575 VAC three-phase input.

Individual Module Specifications

DC Amperage Range: 40 - 250 A Maximum OCV: 70
 Rated Output: 250 A at 30 VDC, 30% duty cycle

4Pak Specifications

Weight: 1,738 lb (788.3 kg)
 H: 74" (1880 mm)
 W: 50" (1270 mm)
 D: 35" (889 mm)

6Pak Specifications

Weight: 2,657 lb (1205.2 kg)
 H: 74" (1880 mm)
 W: 75" (1905 mm)
 D: 35" (889 mm)

Options

LN25 wirefeeders, 2kW 120 VAC duplex auxiliary receptacles

STICK WELDERS AND PAKS

E500 Extreme-Duty Welder

DC CC 2kW



230/460/575 Volt, 60 Hz, 3 Phase Input

Rugged Tubular Pak-Lok-Frame
Available as 4Pak and 6Pak Multioperator Systems
Built to Red-D-Arc Extreme-Duty Specifications
Arc Force, Remote Control, Continuous Current Control

The choice for industrial applications offering a smooth, consistent arc and enough amperage for air carbon arc gouging with up to 3/8" diameter carbons. Ideal arc characteristics for critical welding such as low hydrogen and stainless steel electrodes. Superior all-position stability makes code quality welds and clear x-rays easier to attain.

Specifications

DC Amperage Range: 75 - 625 A Maximum OCV: 67
 Rated Output: 500 A at 40 VDC, 60% duty cycle
 Three-Phase Rated Input Current:
 93 at 230 VAC, 46.5 at 460 VAC, 37.2 at 575 VAC
 Weight (including frame): 566 lb (256.7 kg)
 H: 32" (813 mm) W: 27.75" (705 mm) L: 34.25" (870 mm)

Options

Three-wheeled shop-type undercarriage (shown), LN25 wirefeeder, K930-1 TIG module for high quality DC TIG welding, 2kW 120 VAC duplex auxiliary power receptacle, RC1 remote control

E500 4Pak, 6Pak Multioperator Systems

DC CC 8kW



E500 4Pak

Modular Pak Construction
DP120 Power Distribution Panel Included
For High Amperage Stick Welding and Air Carbon Arc Gouging

All the benefits of the E300 Multioperator Pak System but with up to 625 amps DC from each module. Each module has its own arc force control, potentiometer-type continuous output control and remote control receptacle. Built to Red-D-Arc Extreme-Duty specifications for dependable operation in even the most severe conditions.

Operates with either 460 VAC or 575 VAC three-phase electrical input. Can be configured as either a 4Pak or 6Pak Multioperator System.

Individual Module Specifications

DC Amperage Range: 75 - 625 A Maximum OCV: 67
 Rated Output: 500 A at 40 VDC, 60% duty cycle

4Pak Specifications

Weight: 2498 lb (1133.1 kg)
 H: 76" (1930 mm)
 W: 57" (1448 mm)
 D: 43.5" (1105 mm)

6Pak Specifications

Weight: 3694 lb (1675.6 kg)
 H: 76" (1930 mm)
 W: 84" (2134 mm)
 D: 43.5" (1105 mm)

Options

LN25 wirefeeders, 2kW 120 VAC duplex auxiliary receptacles, RC1 remote control, common ground bar

MULTIPROCESS POWER SOURCES

EX350i Inverter Welder

DC CC CV



200 to 575 Volt, 50/60 Hz, 1 Phase and 3 Phase Input

350 Amps Output at 34 Volts, 60% Duty Cycle
Variable Hot Start, Arc Force, and Inductance (Pinch) Control
CC Soft, CC Crisp, CV Wire, CV Flux-Cored, TIG Welding Modes
Available as 4Pak Multioperator System

Outstanding arc characteristics with both constant current and constant voltage welding processes in a rugged, compact design. Advanced Plug-and-Play control recognition with Amphenol connections for 24V, 42V and 115V wirefeeders and 3-pin remote controls.

Specifications

DC Amperage Range: 5 - 425 A Maximum OCV: 77 VDC

Rated CC Output: 350 A at 34 VDC, 60% duty cycle
275 A at 31 VDC, 100% duty cycle

DC Voltage Range: 10 - 45 V on CV Wire, 10 - 40 V on CV Flux-Cored

Three-Phase Rated Input Current at 275 A, 31 VDC, 100% duty cycle:
17 amps at 460 volts, 14 amps at 575 volts

Weight: 77 lb (35 kg)

H: 14.8" (376 mm) W: 13.3" (338 mm) L: 27.9" (709 mm)

Options

LN25 voltage sensing wirefeeder, 42 VAC and 115 VAC constant speed wirefeeders and spool guns, RC1 remote control, K930 TIG Module for high-frequency TIG welding, Advanced Process Panel for Pulsed MIG and Pulsed TIG applications

WELDING CABLE



Our welding cable is available in a variety of amperage capacities and comes in 50' and 100' lengths, complete with quick release connectors. Electrode holders and whips are 10' long with connectors, and our ground clamps also connect via quick release connectors.

REMOTE CONTROLS



Remote output current/voltage controls are available for both potentiometer type and rheostat type welders.

All controls require extensions, available in both 50' and 100' lengths.

RC1 Potentiometer Type Remote Control

For welding machines with 3-pin or 14-pin MS-style connections.

Available with 350 ohm, 1K ohm, or 10K ohm potentiometers, and with rubber or high impact plastic housings.

RC4 Rheostat Type Remote Control

For remote Fine Current adjustment on Red-D-Arc D300K 3+3 diesel welders and Job Selector (open-circuit voltage) adjustment on Red-D-Arc D500K 5+3 and D503K 5+3HO diesel welders.

MULTIPROCESS POWER SOURCES AND PAKS

EXtreme360 Inverter Welder

DC CC CV



NEW!

EXtreme360 4Pak, 8Pak Multioperator Systems



Stick, MIG, TIG, Flux-Cored Welding Processes
Pulsed MIG Capabilities with optional Optima Control
Built to Red-D-Arc Extreme-Duty Specifications
Available as 4Pak and 8Pak Multioperator Systems

Description

350 amp at 60% duty cycle, constant current/constant voltage, DC inverter welder. Standard features include Auto-Line, Ammeter and Voltmeter, adjustable Arc Control, full Remote Control capability and Extreme-Duty construction.

Voltage Input

Individual Units: Auto-Line Power Management Technology allows for operation with any type of primary power from 208 to 575 VAC, single- or three-phase, 50 or 60 hertz with no manual linking required - ideal for dirty or unreliable power. 4Pak and 8Pak Multioperator units include DP120 panels and operate with 460/575/3/60 input power.

Features

Wind Tunnel Technology protects electrical components and PC boards from contamination. Fan-On-Demand cooling system operates only when needed, reducing noise, energy use and amount of contaminants pulled through the machine. Lift-Arc allows TIG starting without the use of high-frequency. Starts the arc without contaminating the weld with tungsten. Adaptive Hot Start increases the output amperage at the start of the weld if necessary, eliminating electrode sticking. Inverter arc control provides greater puddle control for superior electrode performance. Line voltage compensation keeps power constant even if power input varies by ± 10% on 575 volt power and +37%/-59% on 460 volt power. Process selector switch reduces the number of control setup combinations without reducing any features. Large, dual digital meters are easy to view and presettable to ease setting weld output. Pulsed MIG capabilities with optional Optima control reduces spatter and distortion, allows better out-of-position puddle control, and provides potential reduction of fume particle emission. Lightweight, aerospace-grade aluminum case offers protection with the benefit of reduced weight. Optional 114 VAC auxiliary power is available.

Input Power	Rated Output at 60% Duty Cycle	Voltage Range in CV Mode	Amperage Range in CC Mode	Max. Open-Circuit Voltage
Three-Phase	350 A at 34 VDC	10 - 38 V	5 - 425 A	75 VDC
Single-Phase	300 A at 32 VDC	10 - 38 V	5 - 425 A	75 VDC

EXtreme360 4Pak and 8Pak Multioperator Systems

These Paks are easily maneuvered around most jobsites when mounted on the optional wheel kit. Excellent stick welding performance with up to 425 DC amps per arc combined with the features of a high-end MIG machine make this a very versatile system.

EXtreme360 Specifications

Weight: 80 lb (36.3 kg)
 H: 17" (432 mm)
 W: 12.5" (318 mm)
 D: 24" (610 mm)
 Input Power: 208-575/1/3/50/60

4Pak Specifications

Weight: 700 lb (320 kg)
 H: 54.5" (1384 mm)
 W: 31.5" (800 mm)
 D: 32" (813 mm)
 Input Power: 460/575/3/50/60

8Pak Specifications

Weight: 1400 lb (640 kg)
 H: 109" (2768 mm)
 W: 63" (1600 mm)
 D: 64" (1626 mm)
 Input Power: 460/575/3/50/60

MULTIPROCESS POWER SOURCES AND PAKS

DC600 Extreme-Duty Welder

DC CC CV 2kW



230/460/575 Volt, 60 Hz, 3 Phase Input

Rugged Tubular Pak-Lok-Frame
Built to Red-D-Arc Extreme-Duty Specifications
Full Range Output Control, Standard Ammeter and Voltmeter
CC Stick, CV MIG/FCAW, and CV Submerged Arc Welding Modes

Designed for GMAW (MIG), FCAW and submerged arc welding, and stick and air carbon arc gouging with up to 3/8" diameter electrodes. Includes standard terminal strip for wirefeeders and remote controls.

Specifications

DC Amperage Range: 70 - 780 A (CV), 90 - 780 A (CC)

Maximum OCV: 72 VDC

Rated CC Output: 680 A at 44 VDC, 60% duty cycle

600 A at 44 VDC, 100% duty cycle

DC Voltage Range: 13 - 44 V (CV), 24 - 42 V (CC)

Rated Input Current at 600 A, 44 VDC, 100% duty cycle:

113 amps at 230 V, 56.5 amps at 460 V, 45.2 amps at 575 V

Weight (including frame): 640 lb (291 kg)

H: 31.6" (803 mm) W: 28" (711 mm) L: 41" (1041 mm)

Options

MS-style connections for remote control and wirefeeders, 42 VAC and 115 VAC constant speed wirefeeders and spool guns, LN25 wirefeeder, LT7 tractor, RC1 remote control, 2kW 115 VAC duplex receptacle

DC600 4Pak, 6Pak Multioperator Systems

DC CC CV



DC600 Multioperator 4Pak and 6Pak

All the power of a single DC600 multiprocess welder, in a multioperator package available in both a 4Pak and 6Pak welding system. Features both 42 VAC and 115 VAC auxiliary power for operating a wide range of wirefeeders and tractors. Built to Red-D-Arc Extreme-Duty specifications including a unique, proprietary Pak-Lok connection system which permits the removal or replacement of individual units without having to disassemble the complete system. Each Pak operates on either 460 or 575 volt three-phase input power from a single power supply. For added convenience, an available insulated steel base (shown) provides electrical isolation for the Pak when set on conductive surfaces.

Individual Module Specifications

Same as for individual DC600 power sources.

4Pak Specifications

Weight: 2832 lb (1284.6 kg)

H: 76" (1930 mm)

W: 56" (1422 mm)

D: 50" (1270 mm)

6Pak Specifications

Weight: 4204 lb (1906.9 kg)

H: 76" (1930 mm)

W: 84" (2134 mm)

D: 50" (1270 mm)

Options

Amphenol connections for remote control and wirefeeders, 42 VAC and 115 VAC constant speed wirefeeders and spool guns, LN25 wirefeeder, LT7 tractor, RC1 remote control, 2kW 115 VAC duplex receptacle

MULTIPROCESS POWER SOURCES

DC1000 Extreme-Duty Welder

DC CC CV



230/460/575 Volt, 60 Hz, 3 Phase Input

Rugged Tubular Pak-Lok-Frame
500 Amp Connections for Sub Arc and MIG Welding
Full Range Output Control, Standard Ammeter and Voltmeter
CC Sub Arc/Gouging, CV Innershield, CV Sub Arc/Gouging Modes

Specially designed for applications that call for large outputs. Precise control with outstanding arc characteristics on both constant voltage and constant current processes. Air carbon arc gouging with up to 5/8" diameter carbons. Includes a terminal strip with 8 amps of 115 VAC power for automatic and semiautomatic wirefeeders.

Specifications

DC Amperage Range: 150 - 1300 A Maximum OCV: 75 VDC

Rated CC Output:

1000 A at 44 VDC, 100% duty cycle (NEMA Class 1)

1000 A at 50 VDC, 100% duty cycle (based on 10 minute period)

DC Voltage Range: 16 - 46 V

Rated Input Current at 1000 A, 44 VDC, 100% duty cycle:

193 amps at 230 V, 96.5 amps at 460 V, 77.2 amps at 575 V

Weight (including frame): 962 lb (437.3 kg)

H: 31.6" (803 mm) W: 28" (711 mm) L: 41" (1041 mm)

Options

115 VAC and LN25 wirefeeders, LT7 and LT56 tractors, RC1 remote control, NA3 and NA5 automatic wirefeeders

MULTIOPERATOR DC CONVERTERS

MX350 Multi-Weld DC Converter

DC CC CV

System Description

Instead of operating with high voltage AC current like a conventional electric welder, the MX350 uses low DC arc voltage from a constant current electric or engine-driven welding machine, to produce up to 350 amps, DC positive, welding current at 100% duty cycle for stick welding or up to 40 volts of constant voltage power for MIG and flux-cored welding. The number of MX350 converters that can be run simultaneously from a single power source depends on the power source's output (kilowatts available), the welding processes used (kilowatts required), and the operating factor (how many MX350 converters are actually welding at any given time). Use of this system results in drastically reduced fuel consumption since one power source used in conjunction with MX350 converters replaces several individual conventional power sources.

Weights and Dimensions

Weight: 59 lb (26.8 kg)

H: 11.6" (295 mm) W: 10" (254 mm) D: 21.5" (546 mm)

Minimum Input Voltage Requirements

60 Volts DC, Constant Current

Processes

- DC Positive Stick, MIG and Flux-Cored welding
- Arc Gouging using up to 5/16" carbons
- When operating several MX350s from a single power source, any combination of DC positive welding processes can be used

Specifications

Rated CC DC Output/Volts/Duty Cycle	Output Range	Input DC Volts	Input Amps at Rated Output
350 amps, 34 volts at 100% duty cycle	30 - 350 amps 15 - 40 volts	60 - 80 volts DC 50 - 113 volts peak range	165 amps DC

MULTIOPERATOR DC CONVERTERS

Operational Advantages

- Units are small and portable, each weighing only 59 lb
- CC and CV process mode switch for DC positive welding processes
- Pre-set inductance in CV Mode results in optimized CV welding characteristics
- Chopper Technology for high performance, smooth quality welds and instant control of the arc
- CC Stick Soft and CC Stick Crisp mode switch for better control with E6010 and E7018 electrodes
- Multiple operator welding from a single power source results in reduced fuel consumption, emissions and noise
- No need to run remote control cables since all controls are located close to the operator for quick and easy access
- Adjustable controls for Hot Start and Arc Force as well as large, bright digital meters that indicate preset values before welding and actual values while welding assure better weld quality
- Less welding cable is required because a single welding cable is run from the power source to the MX350, either using a distribution box to connect the MX350s into or, running the MX350s in series, one plugged into the other
- A safer work area since a single low voltage cable, 60 volts DC, is brought from the power source to one or more distribution boxes which supply power to several MX350 converters

System Selection

To determine how many MX350 converters you can run from a particular power source, you first need to calculate the total kilowatt draw of the process or processes being used. This is easily done once you know what volt and amp settings you want to use.

For example, a 1/8" E7018 stick welding process at 130 amps and 27 volts has a kilowatt draw as follows:

$$\text{Kilowatts used} = \text{Amps} \times \text{Volts} \text{ divided by } .91 \text{ Operating Efficiency divided by } 1000$$

$$\text{or } 130 \times 27 / .91 / 1000 = 3.9 \text{ kilowatts}$$

Since you know that each MX350 requires 3.9 kilowatts for this process, you just need to know the kilowatt output of a particular power source in order to calculate how many MX350 converters you can run. From the chart (to the right) you can see that a D300K 3+3 has an available output of 13 kilowatts. By dividing 13 by 3.9 you can calculate that you could run up to 3 MX350 converters with the process and power source used in this example.

Power Source	Kilowatts Available @60V Output
D300K 3+3	13
D500K 5+3	20
D503K 5+3HO	21
D502K 5+4	30
D502K 5+20	30
DC1000	30

Additionally, the total kilowatts calculated can often be reduced for several units operated off the same power source since, for some welding processes, not all the MX350 converters are being used simultaneously. This reduction in total power requirement is referred to as the Operating Factor and is expressed as a percentage of the total power requirement. For example, if you know that only half the MX350 welders are being used at any given time, you can reduce the total kilowatt requirement by half and you can therefore double the number of MX350 converters that can be run from the power source.



MIG PACKAGES

LF72 and DC400 MIG Welding Package



Package Includes:

RDA DC400 Power Source (230/460/575 volt input)
LF72 2 Roll Wirefeeder (other feeders available upon request)
Drive Roll Kit
Magnum 400 15' MIG Gun with Connector Kit
RDA Model 355 Flometer Regulator 3100215
Gas Hose
Ground Cable and Ground Clamp
Universal Drive Reel Stand
Wirefeeder Control Cable
Three-Wheeled Undercarriage
Package does NOT include wire and shielding gas

Wire Feed Speed Range: 100 - 800 IPM (2.5 - 20.3 m/min)

Wire Size Range: .023 - 1/16" solid wire (0.6 - 1.6 mm)

.030 - 5/64" cored wire (0.8 - 2.0 mm)

The LF72 is designed for flux-cored gas and MIG processes and includes the patented MAXTRAC heavy-duty cast aluminum wire-drive system for reliable feeding and durability as well as totally tool-less drive rolls and wire guide installation. Calibrated wire feed speed dial for precise and accurate settings with positive arc starting and feeding with stainless steel, aluminum and flux-cored wires. The control cable connector with a Spin-Nut makes connecting the control cable a simple twist-of-the-wrist.

S75 Wirefeeder and Deltaweld 452 MIG Welding Package



Package Includes:

Deltaweld 452 Power Source (230/460/575 volt input)
S75 Wirefeeder 24 VAC, 10A, 50/60 Hz
Drive Roll Kit
RDA Model 355 Flometer Regulator 3100215
Gas Hose
Ground Cable and Ground Clamp
Wire Reel Stand
Wirefeeder Control Cable
Three-Wheeled Undercarriage
Package does NOT include wire and shielding gas

Wire Feed Speed Range: 50 - 1400 IPM (1.3 - 35.6 m/min)

Wire Size Range: .023 - 5/64" solid wire (0.6 - 2.0 mm)

The S75 wirefeeder features Accu-Mate connection and PD (Precision Drive) wire drive assembly to eliminate unreliable feeder/gun connections. An automatic run-in control significantly improves arc starting performance. PD wire drive assembly is designed to push difficult wires. Fast and easy drive roll changes are made possible by "quick ejector" drive roll carriers which release with the push of a button for an easy, one-handed operation. Drive roll pressure can be adjusted via a multiple-position adjustment lever providing enhanced operation.

LN25 Portable Wirefeeder



WIREFEEDERS

DC CV CC

Control Cable Not Required
Operates off Welder Arc Voltage
For MIG and Flux-Cored Welding
Maximum Versatility and Portability

This wirefeeder operates off arc voltage with a voltage sensing control circuit so a control cable is not required. To operate, simply connect the welding cable from the power source, attach the work clip and you're ready to weld. Includes a voltmeter, a gas solenoid, and an internal contactor. Can be operated with all electric and engine-driven welders with CV capability but can also be used with CC welders for non-critical welds. The LN25 provides constant wire feed speed for use with CV power sources and arc-sensing wire feed speed for CC power sources and will handle weld currents up to 300 amps at 60% duty cycle. For MIG and flux-cored arc welding processes using from 10 lb to 44 lb wire spools. Specify wire size and type for correct drive roll selection.

Specifications

Rated Current: 300 A at 60% duty cycle
 Wire Feed Speed: 50 - 700 IPM
 Input Voltage: 15 - 40 VDC (110 VDC maximum OCV)
 Wire Diameters: .023 - 1/16" solid steel wire
 .035 - 5/64" cored wire
 .035 - 1/16" aluminum wire
 Weight: 35 lb (15.9 kg)
 H: 14" (356 mm) W: 7.5" (191 mm) L: 21" (533 mm)

12VS Extreme-Duty Wirefeeder



DC CV CC

Control Cable Not Required
For MIG and Flux-Cored Welding
Operates on Arc Voltage and Open Circuit Voltage from CV or CC Welders
Voltage-Sensing Control Circuit with CC/CV Switch

New polypropylene case with built-in side rails and the ability to open the door to change wire with feeder in vertical position. Digital meters with SunVision technology are standard for voltage and wire speed, and can also display amperage if desired. Meters can be seen clearly even in direct sunlight. Potted and trayed main printed circuit board for the harshest environments adds exceptional reliability. Board has full-trigger isolation so a shorted gun trigger will not affect feeder operation. Improved contactor and overall duty cycle for high-amperage applications (425 A at 60%). Trigger hold, wire jog, and gas purge are all located on the front panel. Wider voltage range for small and large wires with no contactor chatter or arc outages. New double-filtered gas valve.

Specifications

Wire Feed Speed: 50 - 780 IPM (1.3 - 19.8 m/min)
 Welding Circuit Rating: 425 A at 60% Duty Cycle
 Input Power: Operates on OCV and arc voltage 14 to 48 VDC
 Max OCV: 110 VDC
 Wire Diameters: .023 - 5/64" solid, .030 - 5/64" flux-cored
 Maximum Spool Size: 45 lb (20.4 kg), 12" (305 mm)
 Weight: 35 lb (15.9 kg)
 H: 21" (533 mm) W: 9" (229 mm) D: 15.5" (394 mm)

SPOOL GUNS

XR-Control with XR-A or XR-W Edge Gun



MIG Aluminum and Soft Alloy Processes
XR-A Air-Cooled and XR-W Water-Cooled Gun Versions
For .030" thru 1/16" Aluminum Wire Sizes
15', 30' and 50' Guns

The XR push-pull wire feed systems offer the choice of air- or water-cooled MIG guns for truly customized systems for particular applications. Standard digital wire feed speed and volt meters provide easy indication and control of weld parameters. Unique solid-state control circuit permits XR systems to operate with most CC, CV or CC/CV DC welding power sources. True push-pull design provides continuous torque to wire. Gun motor controls actual wire feed speed at arc. Each motor works in concert to provide accurate and positive wire feed speed. Master/gun wire feed speed control improves resolution by limiting speed range at the gun. Adjustable wire run-in control improves arc starting. Gun rotates 360 degrees for various welding positions, reducing fatigue.

Specifications

Weld Current Capacity: Air: 250 A at 100% Duty Cycle
 Water: 400 A at 100% Duty Cycle

Wire Feed Speed: 70 - 875 IPM (1.8 - 22.2 m/min)

Wire Diameter Capacity: .030 - 1/16" aluminum wire

Maximum Spool Size Capacity: 12" (305 mm)

Input Power: 24 VAC, 50/60 or 100 Hz

XR-Control Dimensions:

H: 16" (406 mm), W: 9.25" (235 mm), L: 21.25" (540 mm)

XR-Control Weight: 38 lb (17.2 kg)

Spoolmatic 30A Spool Gun with WC-24 or WC-115A Control

DC CC CV



Spoolmatic 30A

Uses 1 Pound Wire Spools
For .023" thru 1/16" Wire Sizes
Light and Heavy Industrial Applications
MIG (GMAW) Aluminum and other Soft Alloy Wire Welding

This spool-type wirefeeder provides optimum welding performance with aluminum and other soft alloy wires. Comes with the WC-24 weld control for use with CV power sources supplying 24 VAC power such as the EX300 or the WC-115A weld control for use with CC power sources supplying 115 VAC power. (Specify with or without contactor.) Connects directly to the Millermatic 250X. Includes a 30 ft (9 m) cable assembly for accessing hard-to-reach areas. For use with 1 lb (0.5 kg), 4" (102 mm) diameter spools of wire.

Spoolmatic 30A Specifications

Rated Current: 200 A at 100% duty cycle

Wire Feed Speed: 70 - 875 IPM

Input Power: supplied from WC-24 or WC-115 weld control

Maximum Spool Size Capacity: 4" (102 mm)

Wire Diameters: .023 - 1/16" aluminum wire
 up to .045" hard wire

Weight: 14 lb (6.4 kg)

H: 10.25" (260 mm) W: 2.5" (64 mm) L: 15.125" (384 mm)



WC-24 Weld Control



WC-115A Weld Control

WIREFEEDER/WELDERS

PM255

DC CV



Shown with optional Prince XL Spool Gun

Superior Arc Starting
250 Amps, 26 Volts at 40% Duty Cycle
Soft, Controllable Arc with Reduced Spatter
Best Aluminum, Stainless and Mild Steel Welding in its Class

The patented arc technology of the PM255 provides a wide range of voltage adjustment for exceptional fine tuning control and flexibility. Dual drive rolls ensure precise wire feeding and reliability. Comes with large, easy to set knobs with pre-set/actual digital meters for precise, continuous and repeatable control of both wire feed speed and voltage procedures. Power source line voltage regulation holds voltage setting constant to maintain weld quality even when the input voltage fluctuates $\pm 10\%$. Includes a Magnum 250L welding gun with 12 ft cable assembly or direct connection to the Prince XL Spool Gun with adapter module for spool gun welding applications.

Specifications

Rated Output: 250 A, 26 V at 40% duty cycle
 DC Voltage Range: 10 - 45 V OCV Range: 10 - 40 V
 DC Amperage Range: 30 - 300 A Wire Feed Speed: 50 - 700 IPM
 Single Phase Rated Input Current:
 50 A at 230 VAC, 24 A at 460 VAC, 19 A at 575 VAC
 Weight: 220 lb (99.8 kg)
 H: 31.8" (808 mm) W: 18.9" (480 mm) L: 38.8" (985 mm)

MM251

CV DC



Welding Range 30 to 300 Amps
Solid Steel, Stainless Steel and Flux-Cored Welding
Uses .023 - .045" Solid MIG Wires and .035" Flux-Cored Wires

Active Arc Stabilizer provides excellent starts. Line voltage compensation provides constant output with fluctuations in input power. Adjustable run-in control for optimized starts. Spoolmatic 30A or 15A gun is directly connected with no extra module required. Tip Saver shuts off weld output if tip is shorted to work surface. Weld output shuts off if no arc is detected within 3 seconds after gun trigger is depressed. Fan-On-Demand, self-calibrating digital meters.

Specifications

Rated DC Output: 200 A, 28 VDC at 60% duty cycle
 250 A, 28 VDC at 40% duty cycle
 DC Amperage Range: 30 - 300 A OCV: 38 V
 Amps Input at Rated Output, 60 Hz:

200 V	230 V	400 V	460 V	575 V	kVA	kW
48	42	23	21	17	10	7.7

Wire Feed Speed: 25 - 700 IPM
 H: 32" (813 mm) W: 19" (483 mm) L: 39" (991 mm) Weight: 215 lb (98 kg)
 Wire Type and Diameter
 Solid Steel: .023 - .045" (0.6 - 1.2 mm)
 Stainless Steel: .023 - .035" (0.6 - 0.9 mm)
 Flux-Cored: .030 - .045" (0.8 - 1.2 mm)

TIG WELDERS

See also Trailblazer 44D portable TIG welder, page 13

SYNCROWAVE 250



Shown with Cool Runner 3X coolant system and remote foot control

AC DC CC 1 Phase Input

Output Range of 5 to 310 Amps
High Precision AC DC TIG Welding
Stick (SMAW), AC/DC TIG (GTAW) Welding

Excellent welding performance, control and versatility. Includes all the essential features needed for high-precision AC TIG welding, plus the flexibility to handle a wide variety of metals. An effective solution in any light industrial situation that requires constant current Squarewave technology. Delivers AC or DC current for TIG (GTAW), stick (SMAW), or Pulsed-TIG (GTAW-P) with the optional PC300 TIG pulsing control. Available with running gear, coolant system for water-cooled TIG applications and a variety of remote foot and hand controls.

Specifications

Welding Amperage Range: 5 - 310 A Maximum OCV: 80 V
Rated Output: 250 A, 30 V at 40% duty cycle
Input Current at Rated-Load:
110 A at 200 VAC, 96 A at 230 VAC, 48 A at 460 VAC, 38 A at 575 VAC
Rated Output: 200 A, 28 V at 40% duty cycle
Input Current at Rated-Load:
88 A at 200 VAC, 77 A at 230 VAC, 38 A at 460 VAC, 31 A at 575 VAC
Weight: 355 lb (161 kg)
H: 30.75" (781 mm) W: 19.25" (489 mm) L: 27" (686 mm)

SYNCROWAVE 350 LX



Shown with Cool Runner 3X coolant system and remote foot control

AC DC CC 1 Phase Input

Output Range of 4 to 400 Amps
Constant Current Squarewave Technology
Stick (SMAW), AC/DC TIG (GTAW), Pulsed TIG (GTAW-P) Welding

An exceptional single-phase TIG/Stick power source designed for the master welding craftsman. Delivers up to 400 amps of welding current. User friendly front panel with easy-to-use pushbuttons for process set-up. Includes pulser with preflow and postflow settings. Also available with an optional TIG sequencer. Lift-Arc circuit allows DC TIG starting without the use of high frequency. Balance/Dig controls, Pulser, Memory recall and digital volt and amp meters are included. Optional equipment includes start time/spot time control, crater time control, sequence selection switch, start and final current control. Available with running gear, coolant system for water-cooled TIG applications and a variety of foot and hand remote controls.

Specifications

Welding Amperage Range: 3 - 400 A Maximum OCV: 80 V
Rated Output: 350 A, 34 V at 40% duty cycle
Input Current at Rated-Load:
150 A at 200 VAC, 131 A at 230 VAC, 66 A at 460 VAC, 53 A at 575 VAC
Rated Output: 300 A, 32 V at 60% duty cycle
129 A at 200 VAC, 112 A at 230 VAC, 56 A at 460 VAC, 45 A at 575 VAC
Weight: 355 lb (161 kg)
H: 37.875" (962 mm) W: 22.875" (581 mm) L: 25.25" (641 mm)

PMT Equipment

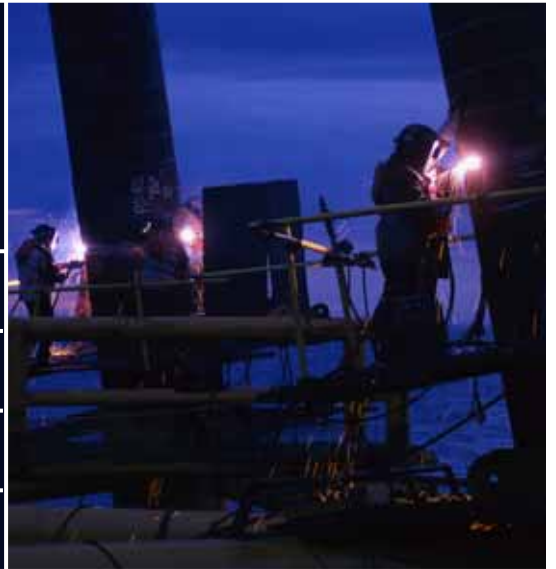


POSITIONERS

MANIPULATORS

TURNING ROLLS

SUBMERGED ARC EQUIPMENT



PMT EQUIPMENT

Red-D-Arc rents a variety of positioning equipment for both manual and automated welding and cutting processes including:

Positioners with rotating/tilting tables and optional scroll chucks and gripper chucks, available in capacities from ranging from 100 lb to 85,000 lb

Manipulators from 4 X 4 to 12 X 12 available with optional NA3 automatic welding heads/controls and travel carriages with track

Turning Rolls for tank and vessel rotation including both drive and idler rolls, from 1,500 lb to 400 ton capacity

Submerged Arc Welding Packages for use with positioning equipment to provide a turn-key, fully-automated welding system. LT7 tractors (track or trackless) and LN9 Squirtmobiles are also available.

Flux-Recovery Systems for use with submerged arc packages for recovery and recirculation of flux

High-Amperage DC and AC Power Sources to provide welding power for positioning-equipment welding packages

500 lb to 85,000 lb Capacity Positioners

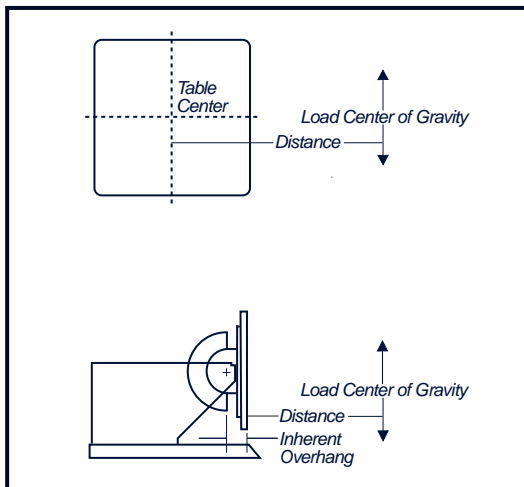


Positioner Load Capacity Table

MODELS AVAILABLE	LB-IN Max. Rotation	Torque Tilt	INH.* O.H.	C.G. @4"	C.G. @6"	C.G. @12"	C.G. @18"	C.G. @24"	C.G. @30"	C.G. @36"	C.G. @42"	C.G. @48"	C.G. @54"	C.G. @60"
PA-5MT	2,000	4,000	3.81	500	400	250	180	140	115	100	85	75	69	63
PA-15 HD4	6,000	18,100	4.25	1,500	1,500	1,110	810	640	525	450	390	340	310	280
PA-30 HD6	18,000	29,735	6.00	3,000	2,475	1,650	1,240	990	825	705	620	550	495	450
PA-45 HD12	54,000	91,900	7.00	4,500	4,500	4,500	3,675	2,965	2,485	2,135	1,875	1,670	1,500	1,370
PA-60 HD12	72,000	124,500	8.75	6,000	6,000	6,000	4,655	3,800	3,210	2,780	2,450	2,195	1,985	1,810
PA-100 HD12	120,000	163,300	9.00	10,000	10,000	7,775	6,045	4,945	4,185	3,630	3,200	2,865	2,590	2,365
PA-160 HD12	192,000	344,000	9.50	16,000	16,000	16,000	12,500	10,265	8,700	7,560	6,680	5,980	5,415	4,950
PA-240 HD12	288,000	510,000	9.25	24,000	24,000	24,000	18,715	15,340	12,995	11,270	9,950	8,900	8,065	7,365
PA-300	360,000	705,000	11.50	30,000	30,000	30,000	23,898	19,859	16,988	14,842	13,178	11,849	10,763	9,860
HD-400	480,000	840,000	9.00	-	-	40,000	31,000	25,000	21,500	18,500	16,400	14,600	13,200	12,000
HD-600	720,000	1,260,000	9.00	-	-	60,000	46,500	38,000	32,000	28,000	24,500	22,000	20,000	18,000
G-850	1,020,000	1,800,000	9.00	-	-	85,000	66,600	54,500	48,000	42,000	37,000	32,000	29,000	26,000

* Inherent Overhang

Selecting the Proper Positioner



Rotational Torque Calculation

1. Determine the total weight of the work piece, including fixtures.
2. Calculate the load center of gravity distance (LOAD C.G.), in inches from the center of the table.
3. Multiply information from step 1 times the information in step 2 to determine required rotational-torque.
4. Compare the required rotational-torque with the rated rotational-torque from the above table.
5. Select a positioner with a rotational-torque rating equal to, or greater than, the required rotational-torque.

$$\text{Load X Distance} = \text{Rotational-Torque Requirement}$$

$$(\text{LB}) \times (\text{inches}) = (\text{LB-Inches})$$

Tilt Torque Calculation

1. Determine the total weight of the work piece, including fixtures.
2. Calculate the load center of gravity distance (LOAD C.G.) in inches from the table face, including fixtures.
3. Add inherent overhang distance (INH. O.H) in inches to step 2.
4. Multiply information from step 1 times the sum of step 2 and step 3 to determine the required tilt-torque.
5. Compare the required tilt-torque with the rated tilt-torque from the above table.
6. Select a positioner with a tilt torque-rating equal to, or greater than, the required tilt-torque.

$$\text{Load X (Distance + Inherent Overhang)} = \text{Torque Rating}$$

$$(\text{LB}) \times ((\text{inches}) + (\text{INH. O.H.})) = (\text{LB-Inches})$$

PMT EQUIPMENT

Manipulators

Manipulators are singularly the most versatile pieces of equipment directly associated with automatic welding. They can be designed to duplicate the same procedure without variation as well as weld sequentially different procedures on the same weldment. A manipulator performs these functions on a distance and weight scale that man alone cannot achieve. It provides a consistency and accuracy by bringing the welding head to the weldment. Manipulators can be adapted to operate in pick and place applications as well as plate burning, painting and air carbon arc gouging.

Red-D-Arc rents and leases manipulators that can duplicate the functions of a highly-skilled welder... only better and with more consistency. Each manipulator can be customized for specific applications like simple straight-line or circumferential welding. The ram ends can be outfitted with small I.D. single- or multiple-arc automatic welding-heads for long seam and circumferential welding. Custom designs are available for long reach and heavy loads. All manipulators are available as pedestal mounted, motorized- or fixed-boom machines and can be mounted on a free-standing base or motorized travel-carriage for mobility.

MODELS AVAILABLE	VERTICAL TRAVEL	HORIZONTAL TRAVEL	MOTOR HP LIFT	RAM	BOLT CIRCLE BASE	X	Y	TRAVEL CAR
MA-44LD	4 ft.	4 ft.	1/4	1/4 or manual	---	97"	6' 6"	Standard
MA-66LD	6 ft.	6 ft.	1/4	1/4 or manual	---	121"	8' 6"	Standard
MA-99MD	9 ft.	9 ft.	1/2	1/2	13"	157"	12' 0"	Optional
MA-1212HD	12 ft.	12 ft.	3/4	3/4	22 1/8"	205"	16' 0"	Optional

Benefits of Manipulators

360 degree mast rotation

Speeds welding operations

Cost efficient, easy to operate

Eliminates the fatigue of hand operations

Ideal for fabrication or maintenance applications

Available as free-standing, self-supported fixture or mounted on a mobile carriage and track

Controls include up/down, in/out travel switch, speed potentiometer and variable-speed carriage travel

Welding controls include current, voltage, wire speed, start/stop weld, manual cross-seam adjustment, in/out adjustment of electrode and cylinder switch

Precise x-ray quality welds free from undercut and slag inclusion

Power source platform and all cables are optional - no special power source required

Complete with reliable Red-D-Arc submerged arc equipment

Optional travel cars with track, NA3 automatic welding-heads, flux-recovery systems and DC600, AC1200 and DC1500 power sources are available with all our manipulators



PMT EQUIPMENT

Turning Roll Sets

Designed and constructed to provide safe and dependable operation. On rubber-tired models the rollers absorb shock during loading and cushion the load during welding. A steel overload-disc (on larger models) protects the rubber tires from excessive overloads. The final-drive gearcase is totally enclosed and constructed entirely of steel, and aluminum-bronze worm gears provide maximum strength and durability to the final drive.



Turning Roll Alignment

The best turning roll setup uses only one driver and one idler to support the work. The two units are easier to align than three or more sets of drivers and idlers. When setting up the rolls, the wheel axle centerlines must be parallel to the centerline of the workpiece and rolls must be set on a flat, level floor. If any of these conditions are neglected, a condition commonly known as "end creep" will result where the workpiece threads and spirals as it rotates. End creep requires constant adjustments of the welding arc to track the seam as it rotates. Assuming the rolls are located on a level floor so that the roll bases are on the same plane, the quickest way to check alignment is to measure the diagonal distance between the four corners of the setup to square them with each other. Each diagonal measurement must be of equal length for the rolls to be square. If roll alignment is accurate and end creep is still experienced during rotation, then the work, itself, might not be straight.

Six Basic Rules to Follow When Using Turning Rolls

1. Drivers and idlers should all be of the same make, style and wheel diameter.
2. Install drivers and idlers on a smooth, level hard floor and preferably on a flat steel plate.
3. Obtain the best possible alignment during setup.
4. Do not anchor the driver and idler to the floor. Let them "float" into best alignment.
5. Use as few idlers as possible to support the load. Multiple idlers absorb power.
6. Always use the closest wheel-spacing possible that will safely handle the load and provide sufficient traction.

MODELS AVAILABLE	LOAD - CARRYING CAPACITY (SET)	LOAD -TURNING CAPACITY (DRIVE ROLL)	DIAMETER RANGE	ROLLER SPEED	MOTOR HP	TRACTIVE PULL	ROLLER TYPE
TRS-1500 *	3/4 ton (1,500 lb)	3/4 ton (1,500 lb)					
TDRA-3	3 ton (6,000 lb)	4.5 ton (9,000 lb)	6" to 5'	1.4 - 45 IPM	1/4	1,250	rubber
TDRA-5	5 ton (10,000 lb)	7.5 ton (15,000 lb)	6" to 12'	1.4 - 45 IPM	1/2	2,100	rubber
TDRA-10	10 ton (20,000 lb)	15 ton (30,000 lb)	6" to 12'	1.4 - 45 IPM	3/4	3,400	rubber
TDRA-20	20 ton (40,000 lb)	30 ton (60,000 lb)	6" to 14'	1.9 - 57 IPM	1.5	5,500	rubber
TDRA-60	60 ton (120,000 lb)	90 ton (180,000 lb)	8" to 15'	1.5 - 43 IPM	3	14,200	rubber
TDRA-120	120 ton (240,000 lb)	180 ton (360,000 lb)	8" to 16'	1.4 - 42 IPM	5	24,300	rubber
TDSA-200	200 ton (400,000 lb)	300 ton (600,000 lb)	8" to 15'	1.4 - 42 IPM	5	25,300	steel
250 Ton Model *	250 ton (500,000 lb)	375 ton (750,000 lb)					
300 Ton Model *	300 ton (600,000 lb)	450 ton (900,000 lb)					
400 Ton Model *	400 ton (800,000 lb)	600 ton (1,200,000 lb)					

* Call for Specifications

Calculating Turning Roll Capacity Requirements

Rated Load-CARRYING Capacity of Turning Rolls

Since the load CARRIED by the drive roll and idler roll (in a set) is split equally between both rolls, the actual load-CARRYING capacity of each roll is equal to one half the combined load-CARRYING capacity of the set. For example, in a 20-ton drive-roll/idler-roll set, each roll has a rated load-CARRYING capacity of 10 tons, but together they have a COMBINED load-CARRYING capacity of 20 tons.

Rated Load-TURNING Capacity of Turning Rolls

A drive roll has a load-TURNING capacity of one and one half times its rated load-CARRYING capacity while idler rolls have a load-TURNING capacity of zero. This means that the actual load-CARRYING capacity of a drive-roll/idler-roll set can be increased either by adding one or more idler rolls (of the same capacity) or by replacing the idler roll in the set with a larger load-CARRYING capacity idler roll.

For example, a 20-ton drive roll and two 20-ton idler rolls combined as a set have a total load-CARRYING capacity of 30 tons (1/2 of 20 tons multiplied by 3) and a load-TURNING capacity of 30 tons (20 tons multiplied by 1.5). This means that a load of 30 tons can be CARRIED (supported) and ROTATED by this combination of drive and idler rolls. This information is helpful for calculating load-turning/carrying capacities when the length of a tank to be supported is such that an additional idler roll is necessary to prevent deflection of the tank as a result of its own weight.

Welding-Related Specialty Equipment



AGW STORAGE TANK WELDERS

SUBMERGED ARC WELDING TRACTORS

PLASMA CUTTERS

ELECTRIC DISTRIBUTION PANELS

SMOKE EXTRACTORS

ELECTRODE AND FLUX HOLDING OVENS

OXY-FUEL CUTTING EQUIPMENT

AIR CARBON ARC GOUGING EQUIPMENT

GENERATORS

STUD WELDERS

INDUCTION HEATING EQUIPMENT

PIPE BEVELERS



AUTOMATIC GIRTH (AGW) WELDERS

Ransome AGW Girth Welder

**Cuts In-Field Storage Tank Welding Time Up to 40%
Self-Propelled Carriage
Operator Controlled Speeds from 4 to 105 IPM
Handles Plates 6' to 10' High as Thick as 2"
Weld Tanks from the Largest to as Small as 40' in Diameter**

Speeds construction 20 times faster than standard manual techniques for field erected storage tanks.

The AGW travels at operator controlled speeds of 4 IPM to 105 IPM and can handle plate as thick as 2" and tank diameters from the largest to as small as 40'. It is available as a single mobile welding station completely equipped with welding heads, all controls, flux support belts and flux recovery units.

The adjustable "A" frame straddles the tank shell plates riding on serrated steel drive wheels that can be adjusted for your tank diameter.

The tubular frame telescopes manually for efficient handling of heights of steel plate from 6' to 10' high.

Quick position guide wheels simplify loading and offloading. Helps speed up positioning for welding equipment.

The stable operator platform is a sturdy and solid work station with guard rails and all-weather curtains for operator safety and comfort and is fully equipped with its own direction and speed controls.

This package is neatly arranged ergonomically for convenience, accessibility and efficiency. Includes the Lincoln NA3 solid state control and welding head fitted with nozzles, wire feed rolls, straighteners and 50 lb wire reels for either single or twin-arc wire. The submerged arc flux belt mechanism ensures retention of the flux at the joint for efficient recycling.

Comes complete with a Red-D-Arc DC600 or DC1000 power source. Installation and set-up technicians for 3 O'Clock welders are available at additional cost.



SUBMERGED ARC TRACTORS

LT7 Submerged Arc Tractor

DC CV



Maximum Versatility and Portability
Self-Propelled Mechanized DC Wirefeeder
For MIG and Flux-Cored Automatic Welding
For Flat and Horizontal Submerged Arc Welds

The LT7 is a self-propelled mechanized DC wire feeder for submerged arc welding. Perfect in heavy fabrication industries where long welds in the flat and horizontal position are required. May be used with or without an optional track. Solid state controls precisely regulate procedures for reliable starting and economical welding to exacting requirements. Automatic compensation for input voltage and tractor loading variations, minimizes wire feed and tractor speed changes while welding. Close mechanical alignment between wire and joint maximizes weld quality. Exceptional tracking control and self-steering in most applications. Operates off 115 VAC power.

Specifications

Welding Amperage Capacity: up to 1000 amps

Wire Feed Speed: 100 - 400 IPM

Travel Speed: 6 - 70 IPM

Wire Size Range: 3/32" - 3/16"

Weight: 65 lb (29.5 kg)

H: 27.5" (699 mm) W: 33" (838 mm) L: 14" (356 mm)



PLASMA CUTTERS (PAC)

See also D300K 3+3 AirPak portable plasma cutter/welder, page 9

Procut 25 Plasma Cutter

CC DC



Cuts Material up to 1/4" at 22 IPM with 20 Amp Circuit
Cuts Material up to 3/8" at 9 IPM with 30 Amp Circuit
Operates off 115 VAC or 230 VAC Line Voltage

Easily cuts 3/8" material. Automatically connects between 115V and 230V input power. Share common torch parts with Viper and Python.

Specifications

K1756-1 (with 15' hand torch)

Voltage	Rated DC Output	Input Amps
115	25A at 35% duty cycle	37.7
115	20A at 60% duty cycle	26.7
230	25A at 60% duty cycle	19
230	20A at 100% duty cycle	15

Pilot Current: 12 A Current Range: 12 - 25 A

Air Pressure Required: 65 PSI Flow Rate: 240 CFH

Weight with torch: 29.5 lb (13.4 kg)

H: 10.2" (260 mm) W: 6.3" (160 mm) L: 16.1" (410 mm)

PCT20 Torch Consumable Parts

(these parts also work with the PCT80 torch)

Cutting Electrode	KP2063-1B1
Vortech Nozzle (.028)	KP2062-1B1
Shield Cup	KP2064-1

VIPER Plasma Cutter

CC DC



Production Cutting Capacity 1/2" at 28 IPM
Recommended Cutting Capacity 3/4" at 13 IPM
Maximum Cutting Capacity 1" at 8 IPM

Unmatched cutting speeds, low dross levels and unparalleled ease of use. Comes with the patented PCT80 hand plasma torch with 25' leads which uses only 3 consumable parts for easy maintenance, and a quick disconnect for fast and easy torch removal. Includes a valet-style undercarriage for torch storage and the ultimate in power source portability.

Specifications

Rated Output: 55 A at 50% duty cycle, 40 A at 100% duty cycle

Pilot Current: 18 A Current Range: 25 - 60 A

Air Pressure Required: 70 PSI Flow Rate: 360 CFH

Input Voltage: K1580-5 208V/230V/460V/1/3Ph/50/60Hz

K1580-6 460V/575V/3Ph/50/60Hz

Weight including undercarriage: 105 lb (47.6 kg)

H: 19.5" (495 mm) W: 13.25" (337 mm) L: 26" (661 mm)

PCT80 Torch Consumable Parts

(PCT80 hand torch is used with Viper and Python plasma cutters)

Cutting Electrode	KP2063-1B1
Vortech Nozzle (.043)	KP2062-2B1
Vortech Gouging Nozzle (.068)	KP2062-4B1
Shield Cup	KP2064-1
Drag Cup	KP2065-1

PLASMA CUTTERS (PAC)

PYTHON Plasma Cutter

CC DC



Production Cutting Capacity 3/4" at 18 IPM
Recommended Cutting Capacity 1" at 11 IPM
Maximum Cutting Capacity 1 1/4" at 7 IPM

Has the same features as the Viper plasma cutter with 80 amps of power for world class cutting performance up to 1" in only a 95 lb package. The patent-pending PCT80 hand plasma torch is included and a machine torch and robotic torch are also available. CNC/Robotic interface is standard. The standard PCT80 hand torch uses only 3 consumable parts and is also used with the Viper plasma cutter.

Specifications

Rated Output: 80 A at 60% duty cycle, 65 A at 100% duty cycle
 Pilot Current: 18 A Current Range: 35 - 85 A
 Air Pressure Required: 70 PSI Flow Rate: 400 CFH
 Input Voltage: K1581-6 208V/230V/460V/1/3Ph/50/60Hz
 K1581-5 460V/575V/3Ph/50/60Hz
 Weight including undercarriage: 145 lb (65.8 kg)
 H: 23.5" (597 mm) W: 17" (432 mm) L: 32" (813 mm)

Options

Machine Torch, w/25' leads	K1571-3
Robotic Torch, w/25' leads	K1571-5
Combination Circle Cutting Kit	K1625-1
Valet-Style Undercarriage	K1838-1

MAX200 Plasma Cutter

CC DC



High Capacity, Dual Gas Plasma Cutting System
For Cutting Gauge to 2" (50 mm) Metals
Maximum Mild Steel Cutting Capacity 2" at 6 IPM
Recommended Maximum Mechanized Production Capacity 1"

The dual gas system (plasma and shielding gas) allows you to run on Air/Air, O2/Air, N2/Air, N2/CO2, Ar-H2/N2 or other combinations for optimal results on all metals and conditions. The liquid cooled torch provides maximum cooling and long consumable life.

Specifications

Input Voltage: 240/480 V, 3 Phase, 60 Hz
 Input Current: 90/45A, 240/480 V at 30 kW output
 Output Voltage: 150 V DC Output Current: 40 to 200 A
 Duty Cycle: 100% Maximum OCV: 280 VDC
 Weight: 780 lb (350 kg)
 H: 41" (1040 mm) W: 28" (710 mm) L: 43" (1090 mm)

Gas Supply:

Plasma Gas	Air, N2, O2, Ar-H2
Plasma Flow (Air)	66 scfh (31 l/min)
Plasma Pressure	120 psig (8.3 bar)
Shield Gas	Air, N2, CO2
Shield Gas Flow (Air)	280 scfh (132 l/min)
Shield Gas Pressure	90 psig (6.2 bar)

ELECTRIC POWER DISTRIBUTION PANELS



DP225 Distribution Panel

240, 380, 480 or 600 volt electric power distribution
8 - 60 amp, 3 phase receptacles with 50 amp breakers
1 - 9 connection terminal board with 20 amp breaker
1 - 225 amp, 600 volt main breaker
CSA Approved



DP25 Step-Down Panel

460 or 600 volt, single phase, 120/240 volt secondary
6 - 120 VAC duplex receptacles with 15 amp GFI breakers
2 - 240 VAC twist-lock receptacles with 30 amp GFI breakers
1 - 20 amp, 600 volt main breaker
10 kVA 480/600 - 120/240 volt step-down transformer
CSA Approved



SB80 Splitter Box

Provides remote electric power distribution in space restricted locations such as the inside of vessels or other hard to access work areas and includes 4 -120 VAC duplex receptacles with 20 amp GFI breakers.

The SB80 Splitter Box plugs into one of two 240 VAC twist-lock receptacles on a DP25 Step-Down Panel.

Available with heavy duty extension cable (not shown) which provides power for portable operation of power tools up to 100' away from the DP25 Step-Down Panel.

CSA Approved

ELECTRIC POWER DISTRIBUTION PANELS

DP75 Distribution Panel



The DP75 Powermate is a fully-portable, electric panel designed for the distribution of 120 volt and 240 volt, single-phase electrical power on indoor and outdoor jobsites. Primary voltage can be either 600 or 480 volt, single-phase power which is stepped-down to 120/240 volt single-phase secondary power via a 30 kVA transformer. Ten 20 amp, 120 volt GFCI duplex receptacles are provided for the operation of hand tools, lighting fixtures and other electrical equipment. In addition, there are two 50 amp, 120/240 volt single-phase receptacles (protected by GFCI breakers), for the operation of larger power equipment, as well as for supplying power to up to two SB80 Splitter Boxes for difficult to access locations on the jobsite. The DP75 is CSA certified to NEMA 3 specifications, and is constructed from 14 gauge, 304 stainless steel for enhanced durability and weather protection.

- 10 - 120 volt, 20 amp Hubbell duplex T-slot GFCI outlets, with weather proof covers and 20 amp circuit breakers
- 2 - 120/240 volt, 50 amp Hubbell outlets, with weatherproof covers and 50 amp GFCI circuit breakers
- 1 - 30 kVA, 600/480 volt primary, 120/240 volt secondary transformer

PORTABLE SMOKE EXTRACTORS

SE1400W Smoke Extractor

Filters Dust and Fumes
Reusable, Washable Filter
Super-Flexible 10' Extraction Arm



Mechanical cleaning of welding fumes and light grinding dust. Captures dust at a distance of 12 - 20" from the source.

Weight: 174 lb (43 kg) Input: 120 VAC
Capacity: 1400 cfm through the hood, 700 cfm at the nozzle
H: 39.4" (1000 mm) W: 27.6" (700 mm) L: 18.9" (480 mm)

SE1602W Smoke Extractor

Two Operating Speeds
RSE200WF Reusable, Washable Filter
Stainless Steel Construction

Filter can be blown out with air or washed and precoated. Dual bypass motors. Includes 15' hose with magnetic locator.
Weight: 42 lb (19 kg) Input: 120 VAC Capacity: 160 cfm
H: 13.75" (349 mm) W: 10.75" (273 mm) L: 28.75" (730 mm)



Hexavalent chromium, or Cr(VI), is formed as a result of certain welding processes. Industry compliance with current OSHA standards regarding occupational exposure to hexavalent chromium is required by law. Determination and application of effective compliance measures - including the selection and use of fume extraction equipment, as well as the correct handling and disposal methods for filters used in fume extractors - is the responsibility of the employer or business entity. Refer to our website for more information about OSHA's Hexavalent Chromium Standards.

ELECTRODE OVENS



10 LB Capacity 10B Portable Oven

Easy to Load, Easy to Carry
Lightweight, Rugged, Completely Portable
Fast Access to Welding Electrodes at Point of Work
Low Cost Control of Welding Quality in the Shop or Field

Operates from 115 volt AC/DC source. Equipped with rod lifter, pilot light and has a 1" high false bottom to prevent moisture damage to electric connections. Thermostatically controlled oven temperature ranges from 100 - 400° F. Provides absolute electrode stability when used in conjunction with temperature-controlled ovens.

Specifications

Capacity: 10 to 20 lb
 Outside Dimensions: 7" dia. x 23" high
 Inside Dimensions: 3" dia. x 19" high
 Unit Weight: 14 lb
 Electrode Size: up to 18"
 Line Cord: 3 wire - 8 ft.
 Element: 125 W - 115 V
 Pilot Light: yes
 Temperature Range: 100 - 400° F
 Stacking: no

125 LB Model 125 Oven



350 LB Model 350 Oven



These ovens are compact and modular in design with recessed controls. The storage shelves can be easily removed to accommodate large size loads. They are fully insulated to prevent heat loss with pilot lights to indicate oven operation. A combination thermostat on/off switch maintains oven temperature in the 100 - 550 degree F range. Both models operate on 115 volt AC power.

Model 125

Capacity: 125 - 175 lb	Thermostat: yes
Unit Weight: 58 lb	Electrode Size: up to 18"
Line Cord: 3 wire - 8 ft	Element: 1000 W - 115 V
Pilot Light: yes	Temperature Range: 100 - 550° F
Outside Dimensions: 16" x 16" x 24.5"	
Inside Dimensions: 8.25" x 9.75" x 19.5"	

Model 350

Capacity: 350 - 450 lb	Thermostat: yes
Unit Weight: 105 lb	Electrode Size: up to 18"
Line Cord: 3 wire - 8 ft	Element: 1500 W - 115 V
Pilot Light: yes	Temperature Range: 100 - 550° F
Outside Dimensions: 22" x 22" x 24.5"	
Inside Dimensions: 14" x 16" x 19"	

FLUX HOLDING OVENS

200 LB Model GOV-200-FD Flux Holding Oven



Keeps Flux Dry, 200 lb Capacity
Temperature Range of 100 to 550 Degrees F
Operates on 115 or 230 VAC Power Supply

This insulated 200 lb capacity flux holding oven is generally located in the storage area and is used to keep the flux in its dry state or to dry out flux that has picked up moisture. It is complete with lifting lugs, a hinged loading lid, thermometer and a flux heating system incorporating 1,500 watts of low density elements. Temperature controlled by thermostat. Temperature range 100 to 550 degrees F.

For operation on 115 or 230 volt, single phase power.

Weight: 155 lb (70.3 kg)
Height: 54" (1372 mm) Width: 20" (508 mm) Depth: 24" (610 mm)

600 LB Model GOV-600-FD3 Flux Holding Oven



Keeps Flux Dry, 600 lb Capacity
Temperature Range of 100 to 550 Degrees F
Available for operation on various Industrial Power Supplies

This fully insulated 600 lb capacity flux oven incorporates three individual 200 lb flux hoppers, enabling up to three different types of flux to be stored and dried simultaneously. Complete with three hinged loading lids, lifting lugs, three individual thermometers and a flux heating system incorporating 1,500 watts of low density elements per compartment. Temperature is controlled by three individual thermostats so that each hopper is individually controlled. Temperature range of 100 to 550 degrees F. Operates on any industrial power supply (220, 460, 575 volts).

Weight: 250 lb (113.4 kg)
Height: 54" (1372 mm) Width: 42" (1067 mm) Depth: 24" (610 mm)

OXY-FUEL CUTTING EQUIPMENT

Cutting Outfits



Twin cutting hoses available in 50' lengths

RDA Steelworker Combination Cutting Outfit (Victor Style)

V315C	Torch Handle
V2460	Cutting Attachment
25-100C-540	Oxygen Regulator
25-15C-510	Acetylene Regulator
V1-101-1	Cutting Tip (other tip sizes available) Includes Flash-back Arrestors
RDA Part No. 4403091	

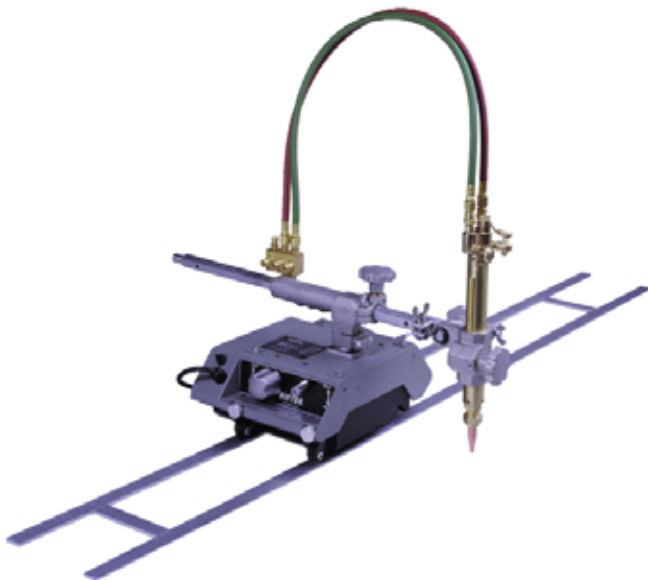
RDA Cutter Pak Straight Cutting Outfit (Victor Style)

V62-3EL	21" Straight Cutting Torch
25-100C-540	Oxygen Regulator
25-15C-510	Acetylene Regulator
V1-101-1	Cutting Tip (other tip sizes available) Includes Flash-back Arrestors
RDA Part No. 4403092	

RDA Model 355 Flometer Regulator (not shown)

RDA Part No. 3100215

Victor VCM 200 Cutting Machine



Rugged Construction MT210 Torch and Torch Rack 32 Pitch Pinion Torch Holder 3 Hose Manifold Block

The VCM 200 is a precision, tractor-type machine that can be used on its own track for straight line cutting and a variety of welding operations. Operated off the track with a radius rod assembly, the VCM 200 can be used for circle cutting. Features include large thumb screws for hand tight adjustments, dual drive controls and direct speed readout, cone disc drive, constant speed AC induction motor, up to 18" of torch racking distance from the machine, and constant speed over a wide range of temperatures. The torch holder is designed for machine torches with 1 3/8" (35 mm) barrel diameters. Available in high speed and high temperature model versions.

Specifications

Speed Range:	1" (25 mm) to 60" (1524 mm) per minute
6' Track Section:	0212-0005
12' Track Section:	0212-0018
Radius Rod for Circle Cutting:	0252-0040
Circle Diameters:	4" (100 mm) to 96" (2438 mm)
Weight:	47.0 lb (21 kg)
H:	11.5" (289 mm)
W:	11" (277 mm)
L:	14.25" (359 mm)

AIR CARBON ARC GOUGING (CAC-A)

K4000 Arc Gouging Torch



- Positive Grip Handle**
- Rugged Construction**
- Heavy Duty Metal Removal**
- Reduced Torch and Cable Weight**
- Natural 15 Degree Angle in the Torch**

The K4000 hand arc gouging torch is made for heavy-duty metal removal applications such as weld preparations in pressure vessel shops and shipyards. Comes with a 10' cable. Requires a welding power source, air compressor and carbon electrodes. See also page 53 for air carbon arc cutting and gouging data.

Specifications

Accepts:

Pointed Carbons: 5/32" (4 mm) to 1/2" (13 mm)

Flat Carbons: 3/8" (10 mm) and 5/8" (16 mm)

Maximum: 1000 amps

Compressed Air Requirements:

Pressure: 80 psi (5.6 kg/cm²)

Flow Rate: 28 cfm (0.79m³/min)

Torch and Cable Weight: 5.4 lb (2.4 kg)

N-6000 Automated Metal Removal System



- Five Times Faster Than With Hand Held Torch**
- Gouges More Accurately and Consistently**
- Grooves Require Less Grinding than with Hand Held Torch**
- Economical J-Groove and U-Groove Edge Preparations**

Designed to provide the best levels of control, uniformity and productivity in automated gouging of steels and other metals with the air carbon arc process. Usage of the N-6000 system has expanded to a wide variety of new and unique jobs. This system measures minute variations in the arc voltage or amperage, compares them with pre-set standards, and takes immediate action through its feedback control maintaining a precise arc gap for optimum gouging. Groove depth is maintained within a tolerance of $\pm 0.025"$ (0.635 mm). The N-6000 system is ideally suited for metal fabrication, particularly in weld joint preparation, where it is used to prepare uniform "U" or "J" grooves. The system is also used extensively for backgouging of seams and for removing defective welds and cracks.



Electric Power Generators



70SSJ SuperSilent GENERATOR
125USJ UltraSilent GENERATOR
180SSV SuperSilent GENERATOR
220SSV SuperSilent GENERATOR
300SSK SuperSilent GENERATOR
400SSV SuperSilent GENERATOR

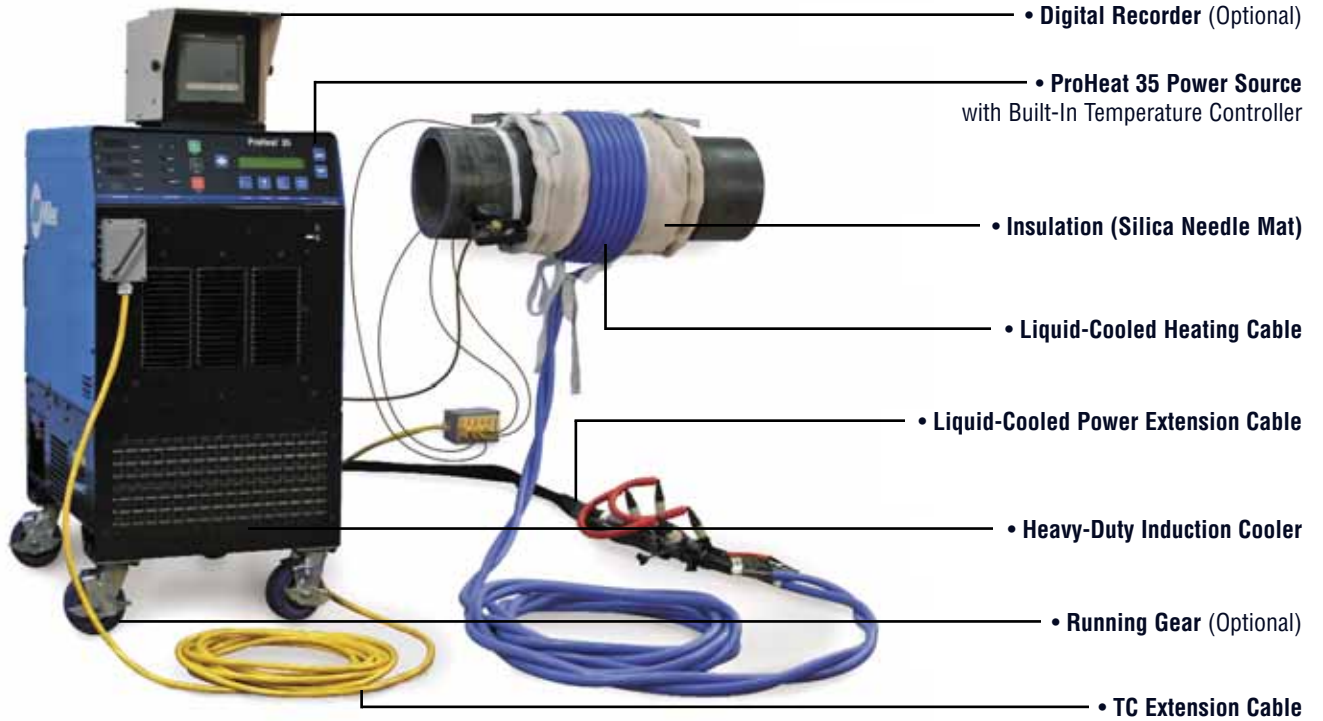


70 KVA to 400 KVA - Single/Three Phase Generators

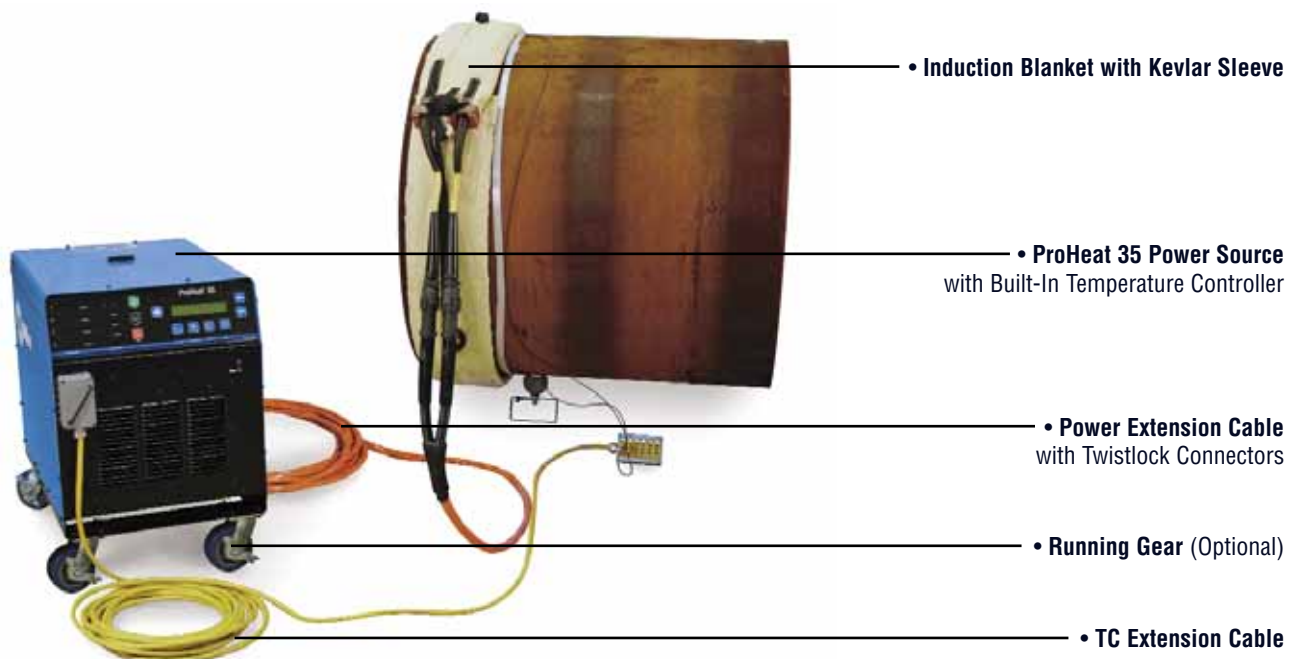
MODEL	70SSJ	125USJ	180SSV	220SSV	300SSK	400SSV						
GENERATOR	Revolving Field Self-Ventilated Dip-Proof Single Bearing 4 Poles Brushless with AVR 1800 208, 220, 240, 416, 440, 480 120, 127, 139, 240, 254, 277 Star with Neutral / Zigzag Star with Neutral 1.5% 1% 60 Hz (can be set for 50 Hz with reduced output) 0.8 Class F											
DESIGN												
No. OF POLES												
EXCITATION												
STANDBY OUTPUT							61 KW (77KVA)	110 KW (137KVA)	158 KW (198 KVA)	194 KW (242KVA)	264 KW (300KVA)	352 KW (440KVA)
PRIME OUTPUT							61 KW (77KVA)	100 KW (125KVA)	144 KW (180 KVA)	194 KW (242KVA)	264 KW (300KVA)	352 KW (440KVA)
GENERATOR RPM												
VOLTAGE - 3 PHASE												
VOLTAGE - SINGLE PHASE												
ARMATURE CONNECTION												
VOLTAGE REGULATION (No Load to Full Load)												
FREQUENCY												
POWER FACTOR												
INSULATION												
SOUND LEVEL dB (A) (Full Load at 23 Feet)	67	63	70	72	71	72						
DIESEL ENGINE	Electric Starter 4-Stroke Water Cooled Direct Injection Turbocharged No Intercooler Air to Air Intercooler											
MAKE/MODEL							John Deere D4045TF150	John Deere 6068HF275	Volvo TAD722GE	Volvo TAD741GE	Komatsu SAA6D125E-2	Volvo TAD1241GE
STARTING SYSTEM												
DESIGN												
DISPLACEMENT							4500 cc	6800 cc	7150 cc	7280 cc	11040 cc	12130 cc
NO. OF CYLINDERS							4	6	6	6	6	6
BORE X STROKE (MM)							106 x 127	106 x 127	108 x 130	107 x 135	125 x 150	131 x 150
GROSS ENGINE POWER OUTPUT							99	165	296	316	431	527
HP AT RATED SPEED							90	150	218	273	354	468
FUEL TANK CAPACITY GAL (L)							40 (150)	169 (640)	79 (300)	100 (380)	129 (490)	129 (490)
FUEL CONSUMPTION							at Full Load Gph (Lph) 3.9 (14.8) 7.7 (29.0) 11.2 (42.2) 12.6 (47.8) 16.7 (63.2) 20.6 (78.1) at 3/4 Load Gph (Lph) 3.1 (11.7) 5.8 (21.9) 8.5 (32.0) 9.7 (36.7) 12.5 (47.6) 15.4 (58.3) at 1/2 Load Gph (Lph) 2.3 (8.7) 3.8 (14.5) 5.9 (22.4) 7.0 (26.5) 8.5 (32.1) 10.8 (41.0) at 1/4 Load Gph (Lph) 1.8 (6.8) 2.5 (9.3) 3.7 (14.0) 4.3 (16.2) 5.0 (19.0) 6.3 (23.7)					
COOLANT CAPACITY GAL (L)							5.9 (22.3)	4.43 (16.8)	7.2 (27.3)	9.8 (37.0)	9.8 (37.0)	11.6 (44.0)
OIL CAPACITY GAL (L)							3.4 (13.0)	5.25 (19.9)	9.0 (34.0)	7.7 (29.0)	16.4 (62.0)	9.2 (35.0)
BATTERY	12V 72Ah x1	12V 128Ah	12V 150Ah x 2 24V System	12V 128Ah x 2 24V System	12V 150Ah x 2 24V System	12V 150Ah x2 24V System						
SIZE	L x W x H inches (cm) APPROX. NET WT. DRY LB (KG)											
L x W x H inches (cm)							49 x 35 x 55 (240 x 90 x 140)	120 x 49 x 73 (305 x 124 x 186)	140 x 47 x 71 (355 x 120 x 180)	144 x 52 x 69 (365 x 130 x 175)	153 x 55 x 71 (389 x 140 x 180)	166 x 56 x 83 (420 x 140 x 210)
APPROX. NET WT. DRY LB (KG)							3219 (1460)	6031 (2735)	6515 (2955)	7696 (3490)	9415 (4270)	11136 (5050)
AMP	SINGLE PHASE 120V SINGLE PHASE 240V THREE PHASE 240V THREE PHASE 480V											
SINGLE PHASE 120V							155.5A (4 wire) 168A x 2 (zigzag)	277.8A (4 wire) 301A x 2 (zigzag)	400.0A (4 wire)	488.9A (4 wire)	667.7A (4 wire)	888.9A (4 wire)
SINGLE PHASE 240V							77.8A (4 wire) 168A (zigzag)	138.9A (4 wire) 301A (zigzag)	200.0A (4 wire)	244.4A (4 wire)	333.3A (4 wire)	444.4A (4 wire)
THREE PHASE 240V							168A	301A	433A	529A	722A	962A
THREE PHASE 480V	84A	150A	216A	265A	361A	481A						

INDUCTION HEATING SYSTEMS

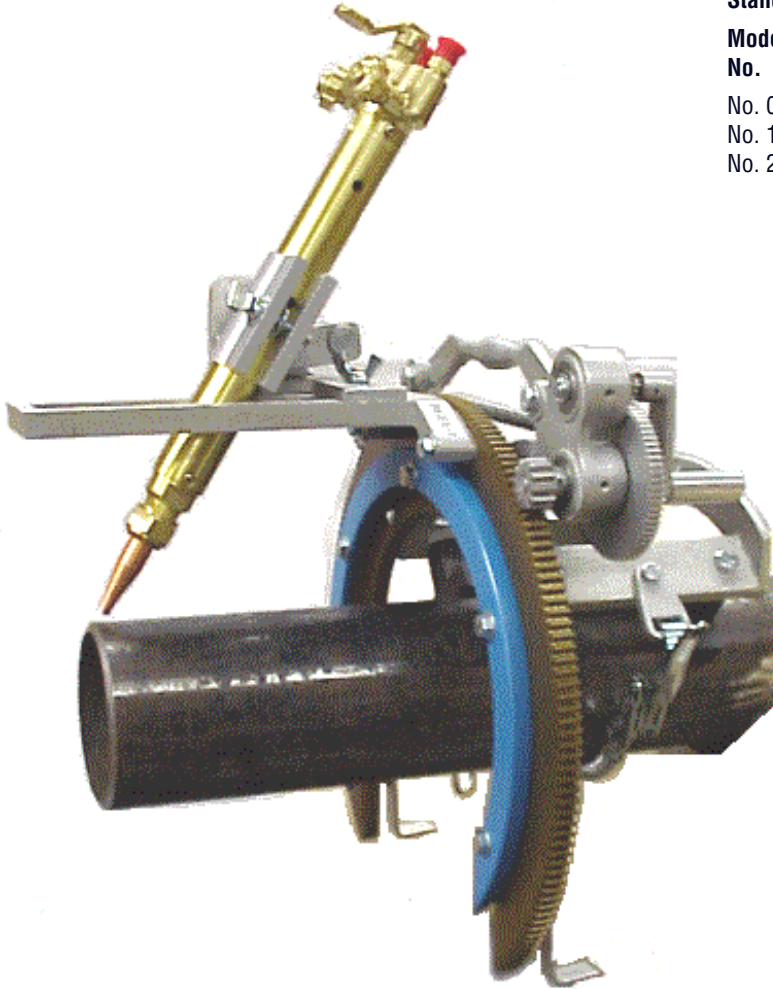
ProHeat 35 Liquid-Cooled Weld Preheating and Stress Relieving System



ProHeat 35 Air-Cooled Induction System



H & M SADDLE-TYPE PIPE BEVELERS



Standard Beveling Machines

Model No.	Standard Pipe Sizes	Net Weight
No. 0	2", 2.5", 3" and 4"	7.5 lb (3.37 kg)
No. 1	3", 4", 6" and 8"	16 lb (7.20 kg)
No. 2	7", 8", 10" and 12"	23 lb (10.35 kg)

Saddle-Type Cutting And Beveling Machines

Each machine is constructed of lightweight, hard-anodized aluminum, assuring durability and easy transportation to any job site for cutting and beveling 2" to 12" diameter pipe precisely, quickly and economically, even under the toughest conditions.

How accurately? Each ring gear and saddle is precisely machined, assembled and calibrated to $\pm .025"$ in concentricity and $\pm .015"$ in squareness. Each machine is equipped with a rear-mounted short saddle for cutting and beveling in tight locations. The rear-mounted saddle allows precise back-beveling operations without sacrificing the machine's integrity.

How swiftly? These machines' unique "split horseshoe" design permits easy placement over pipe sections. A quick-operating boomer assembly secures each machine to the pipe during the entire 360-degree rotation; no repositioning is necessary. The patented Cuboid Spacer System minimizes downtime by keeping the spacers on the machine. When using the No. 2 Standard Pipe Beveling Machine, for example, a 12" diameter pipe can be completely cut and beveled in less than four minutes.

How economically? Using H & M Pipe Beveling Machines saves weld prep time and money compared to hand cutting. Anyone can make accurate cuts and bevels with just a few minutes of instruction. Easy-to-follow manuals are provided with each machine.

Beveling machines include spacers for each nominal pipe size, Victor MT204 machine torch for #0 and #1 cutting tips or MT210 for #2 and larger cutting tips, flash arrestors, model C torch holder, boomer chain assembly and storage box for shipping (gas hose, gauges and cutting tips are not included.)

H & M BAND-TYPE BEVELERS



Cutting 48" pipe with Band-Type Pipe Beveler

Stainless Steel Bands

Model Number	Pipe Size (inches)	Shipping Weight
BAND14	10 to 14	6 lb (2.71 kg)
BAND20	14 to 20	8 lb (3.62 kg)
BAND26	20 to 26	9 lb (4.07 kg)
BAND30	26 to 30	10 lb (4.52 kg)
BAND36	30 to 36	12 lb (5.43 kg)
BAND42	36 to 42	14 lb (6.33 kg)
BAND48	42 to 48	15 lb (6.79 kg)
BAND56	48 to 56	16 lb (7.24 kg)
BAND60	56 to 60	17 lb (7.69 kg)
BAND64	60 to 64	18 lb (8.14 kg)
BAND68	64 to 68	19 lb (8.60 kg)
BAND72	68 to 72	20 lb (9.05 kg)

Band-Type Pipe Cutting And Beveling Machines

The H & M Band-Type Pipe Cutting and Beveling Machine is fast, accurate and versatile. A single operator can position the band and beveling machine head on 48" diameter pipe in about five minutes. The motorized beveling head is constructed of cast aluminum. Its lightweight, compact design allows for easy one-man setup and operation. Seventeen different stainless steel bands provide a cutting range of 10" to 96" diameter pipe, plus special bands are available for cutting pipe up to 20 feet in diameter.

Includes 115 VAC control box, DC reversible motor, Victor MT204 machine torch, torch holder, flash arrestors and storage box.

Each H & M Stainless Steel Band overlaps numerous pipe sizes making the bands very economical:

Automatically compensates for over-sized or under-sized pipe
Assures accuracy - overlapping squares up the band

Unaffected by dope or coating on the pipe
Conforms to out-of-round pipe

The H & M Motorized Beveling Machine Head incorporates a rugged, lightweight, cast aluminum chassis with the following features:

Portable (weighs only 18 lb)
Variable speed control box with forward and reverse capabilities
Plasma speeds (optional)

Designed to work on all H & M stainless steel bands
Equipped with a 90-volt DC motor
220 volt (optional)

H & M Manual Beveling Machine Head

Rugged, lightweight cast aluminum chassis
Fitted with an 8.5' flexible drive cable and crank handle
No electricity required

Easily portable at only 20 lb
Works with all H & M stainless steel bands

PIPE DIMENSIONS AND WEIGHTS

Upper Figures are pipe wall thickness in inches, Lower Figures are weight per foot in pounds

To calculate the weight per foot of pipe sizes not listed use the following formula:

Weight (lb/ft) = (Pipe O.D. in inches - Pipe Wall Thickness in inches) x 10.68 x Pipe Wall Thickness in inches

PIPE SIZE	PIPE O.D.	5	10	20	30	40	STD	60	80	XH	100	120	140	160	XXH
2"	2.375"	0.065	0.109	--	--	0.154	0.154	--	0.218	0.218	--	--	--	0.344	0.436
		1.604	2.638	--	--	3.653	3.653	--	5.022	5.022	--	--	--	7.462	9.029
2 1/2"	2.875"	0.083	0.120	--	--	0.203	0.203	--	0.276	0.276	--	--	--	0.375	0.552
		2.475	3.531	--	--	5.793	5.793	--	7.661	7.661	--	--	--	10.01	13.69
3"	3.5"	0.083	0.120	--	--	0.216	0.216	--	0.300	0.300	--	--	--	0.438	0.600
		3.029	4.332	--	--	7.576	7.576	--	10.25	10.25	--	--	--	14.32	18.58
4"	4.5"	0.083	0.120	--	--	0.237	0.237	0.281	0.337	0.337	--	0.438	--	0.531	0.674
		3.915	5.613	--	--	10.79	10.79	12.66	14.98	14.98	--	19.00	--	22.51	27.54
6"	6.625"	0.109	0.134	--	--	0.280	0.280	--	0.432	0.432	--	0.562	--	0.719	0.864
		7.585	9.289	--	--	18.97	18.97	--	28.57	28.57	--	36.39	--	45.35	53.16
7"	7.625"	--	--	--	--	--	0.301	--	--	0.500	--	--	--	--	0.875
		--	--	--	--	--	23.57	--	--	38.05	--	--	--	--	63.08
8"	8.625"	0.109	0.148	0.250	0.277	0.322	0.322	0.406	0.500	0.500	0.594	0.719	0.812	0.906	0.875
		9.914	13.40	22.36	24.70	28.55	28.55	35.64	43.39	43.39	50.95	60.71	67.76	74.69	72.42
10"	10.75"	0.134	0.165	0.250	0.307	0.365	0.365	0.500	0.594	0.500	0.719	0.844	1.000	1.125	--
		15.19	18.70	28.04	34.24	40.48	40.48	54.74	64.43	54.74	77.03	89.29	104.13	115.64	--
12"	12.75"	0.165	0.180	0.250	0.330	0.406	0.375	0.562	0.688	0.500	0.844	1.000	1.125	1.312	--
		22.18	24.20	33.38	43.77	53.53	49.56	73.15	88.63	65.42	107.32	125.49	139.67	160.27	--
14"	14.0"	--	0.250	0.312	0.375	0.438	0.375	0.593	0.750	0.500	0.937	1.093	1.250	1.406	--
		--	36.71	45.61	54.57	63.44	54.57	84.91	106.13	72.09	130.72	150.67	170.21	189.11	--
16"	16.0"	--	0.250	0.312	0.375	0.500	0.375	0.656	0.843	0.500	1.031	1.219	1.437	1.594	--
		--	42.05	52.27	62.58	82.77	62.58	107.50	136.46	82.77	164.82	192.43	223.50	245.25	--
18"	18.0"	--	0.250	0.312	0.438	0.562	0.375	0.750	0.937	0.500	1.156	1.375	1.562	1.781	--
		--	47.39	58.94	82.15	104.67	70.59	138.17	170.75	93.45	207.96	244.14	274.22	308.50	--
20"	20.0"	--	0.250	0.375	0.500	0.594	0.375	0.812	1.031	0.500	1.281	1.500	1.750	1.969	--
		--	52.73	78.60	104.13	123.11	78.60	166.40	208.87	104.13	256.10	296.37	341.09	379.17	--
22"	22.0"	--	0.250	0.375	0.500	--	0.375	0.875	1.125	0.500	1.375	1.625	1.875	2.125	--
		--	58.07	86.61	114.81	--	86.61	197.41	250.81	114.81	302.88	353.61	403.00	451.06	--
24"	24.0"	--	0.250	0.375	0.562	0.687	0.375	0.969	1.219	0.500	1.531	1.812	2.062	2.344	--
		--	63.41	94.62	140.68	171.05	94.62	238.35	296.58	125.49	367.39	429.39	483.12	542.13	--
26"	26.0"	--	0.312	0.500	--	--	0.375	--	--	0.500	--	--	--	--	--
		--	85.60	136.17	--	--	102.63	--	--	136.17	--	--	--	--	--
28"	28.0"	--	0.312	0.500	0.625	--	0.375	--	--	0.500	--	--	--	--	--
		--	92.26	146.85	182.73	--	110.64	--	--	146.85	--	--	--	--	--
30"	30.0"	--	0.312	0.500	0.625	--	0.375	--	--	0.500	--	--	--	--	--
		--	98.93	157.53	196.08	--	118.65	--	--	157.53	--	--	--	--	--
32"	32.0"	--	0.312	0.500	0.625	0.688	0.375	--	--	0.500	--	--	--	--	--
		--	105.59	168.21	209.43	230.08	126.66	--	--	168.21	--	--	--	--	--
34"	34.0"	--	0.312	0.500	0.625	0.688	0.375	--	--	0.500	--	--	--	--	--
		--	112.25	178.89	222.78	244.77	134.67	--	--	178.89	--	--	--	--	--
36"	36.0"	--	0.312	0.500	0.625	0.750	0.375	--	--	0.500	--	--	--	--	--
		--	118.92	189.57	236.13	282.35	142.68	--	--	189.57	--	--	--	--	--
42"	42.0"	--	--	--	0.625	0.750	0.375	--	--	0.500	--	--	--	--	--
		--	--	--	276.18	330.41	166.71	--	--	221.61	--	--	--	--	--
48"	48.0"	--	--	--	--	--	0.375	--	--	0.500	--	--	--	--	--
		--	--	--	--	--	190.74	--	--	253.65	--	--	--	--	--

AIR CARBON ARC GOUGING DATA

The air carbon arc process is flexible, efficient, and cost effective on practically any metal; carbon steel, stainless steel and other ferrous alloys; gray, malleable and ductile cast iron; aluminum; nickel; copper alloys and other nonferrous metals. Single-phase machines with low open-circuit voltage may not work for air carbon arc gouging (CAC-A). However, any three-phase welding power source of sufficient capacity may be used for air carbon arc gouging. The arc voltage used in air carbon arc gouging and cutting ranges from a low of 35 to a high of 56 volts; thus the open-circuit voltage should be at least 60 volts. The actual arc voltage is governed by arc length and the type of gouging. For most applications CAC-A is used with DCEP (reverse polarity). The electrode should extend at most 7 inches from the gouging torch with the air jet between the electrode and workpiece. A minimum extension of 2" should be used to prevent damage to the torch parts. Normal compressed air pressures for CAC-A range between 80 psi and 100 psi at the torch; higher pressures may be used, but they don't remove metal more efficiently. Use 60 psi (413.7 kPa) with the light-duty manual torch. The air hose supplying air to the torch body should have an inside diameter of at least 3/8" (6.4 mm).

SUGGESTED CURRENT RANGES FOR COMMONLY USED ELECTRODE TYPES AND SIZES

Electrode Diameter		DC Electrode With DCEP		AC Electrode With AC		AC Electrode With DCEN	
in.	mm	Minimum Amps	Maximum Amps	Minimum Amps	Maximum Amps	Minimum Amps	Maximum Amps
1/8	3.2	60	90	-	-	-	-
5/32	4.0	90	150	-	-	-	-
3/16	4.8	200	250	200	250	150	180
1/4	6.4	300	400	300	400	200	250
5/16	7.9	350	450	-	-	-	-
3/8	9.5	450	600	350	450	300	400
1/2	12.7	800	1000	-	-	-	-
5/8	15.9	1000	1250	-	-	-	-
3/4	19.1	1250	1600	-	-	-	-
1	25.4	1600	2200	-	-	-	-

RECOMMENDED MINIMUM AIR REQUIREMENTS

Type of Torch	Recommended Compressor Rating								ASME Receiver Size	
	(1) Air Pressure		Air Consumption		Intermittent Use		Continuous Use		gal	litres
	psi	kPa	cfm	L/min	hp	kW	hp	kW		
Light Duty (2)	40	280	8	227	.5	0.4	1.5	1.1	60	227
General Duty (2)	80	550	25	708	5.0	3.7	7.5	5.6	80	303
Multipurpose (3)	80	550	33	934	7.5	5.6	10	7.5	80	303
Automatic (4)	60	414	46	1303			15	11.2	80	303

1. Pressure while torch is in operation.
2. Accommodates flat electrodes.
3. Generally considered a foundry torch.
4. Requires some kind of mechanical manipulation.

PERMISSIBLE NOISE EXPOSURE

Ear protection is recommended when noise from the air carbon arc process exceeds permissible levels as listed in OSHA 1910.95

Duration Per Day	Sound Level DBA (in hours) Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/4 or less	115

WELDING ELECTRODES

MILD STEEL COATED ELECTRODES

E7018-X	E	Indicates that this is an electrode
	70	Indicates how strong this electrode is when welded. Measured in thousands of pounds per square inch.
	1	Indicates in what welding positions it can be used.
	8	Indicates the coating, penetration, and current type used. (See Classification Table below)
	X	Indicates that there are more requirements. (See Additional Requirements below)

WELDING POSITIONS

- 1** Flat, Horizontal, Vertical (up), Overhead
- 2** Flat, Horizontal
- 4** Flat, Horizontal, Overhead, Vertical (down)

Flat Position - usually groove welds, fillet welds only if welded like a "V"

Horizontal - Fillet welds, welds on walls (travel is from side to side).

Vertical - welds on walls (travel is either up or down).

Overhead - weld that needs to be done upside down.

CLASSIFICATION TABLE

Class	Electrode Coating	Penetration	Current Type
Exxx0	Cellulose, Sodium	Deep	DCEP
Exxx1	Cellulose, Potassium	Deep	AC, DCEP
Exxx2	Rutile, Sodium	Medium	AC, DCEN
Exxx3	Rutile, Potassium	Light	AC, DCEP, DCEN
Exxx4	Rutile, Iron Powder	Medium	AC, DCEP, DCEN
Exxx5	Low Hydrogen, Sodium	Medium	DCEP
Exxx6	Low Hydrogen, Potassium	Medium	AC, DCEP
Exxx7	Iron Powder, Iron Oxide	Medium	AC, DCEN
Exxx8	Low Hydrogen, Iron Powder	Medium	AC, DCEP
Exxx9	Iron Oxide, Rutile, Potassium	Medium	AC, DCEP, DCEN

ADDITIONAL REQUIREMENTS

Suffix	Additional Requirement
-1	Increased toughness (impact strength) for E7018 electrodes. Also increased ductility in E7024 electrodes.
-M	Meets most military requirements - greater toughness, lower moisture content as received after exposure, diffusible hydrogen limits for weld metal.
-H4	Indicates the maximum diffusible hydrogen limit measured in milliliters per 100 grams (mL/100g). The 4, 8, and 16 indicates what the limit is. Example: -H4 = 4mL per 100 grams
-H8	
-H16	

LOW ALLOY STEEL COATED ELECTRODES

E7018-X	E	Indicates that this is an electrode
	70	Indicates how strong this electrode is when welded. Measured in thousands of pounds per square inch.
	1	Indicates in what welding positions it can be used.
	8	Indicates the coating, penetration, and current type used. (See Classification Table above)
	X	Indicates what alloys are in this electrode. (See Suffix Table page 45)

WELDING POSITIONS

Same as for Mild Steel Coated Electrodes (above)

CLASSIFICATION

Same as for Mild Steel Coated Electrodes (above)

WELDING ELECTRODES

LOW ALLOY STEEL COATED ELECTRODES, CONT'D.

SUFFIX TABLE

Suffix	Steel Alloy Type	Suffix Number Description	
-A1	Carbon-Molybdenum	0.40 - 0.65 Mo	
-B1	Chromium-Molybdenum	0.40 - 0.65 Cr	0.40 - 0.65 Mo
-B2	Chromium-Molybdenum	1.00 - 1.50 Cr	0.40 - 0.65 Mo
-B2L	Chromium-Molybdenum	Lower Carbon B2	
-B3	Chromium-Molybdenum	2.00 - 2.50 Cr	0.90 - 1.20 Mo
-B3L	Chromium-Molybdenum	Lower Carbon B3	
-B4L	Chromium-Molybdenum	1.75 - 2.25 Cr	0.40 - 0.65 Mo
-B5	Chromium-Molybdenum	0.40 - 0.60 Cr	1.00 - 1.25 Mo
-B6	was E502	4.6 - 6.0 Cr	0.45 - 0.65 Mo
-B8	was E505	8.0 - 10.5 Cr	0.8 - 1.2 Mo
-C1	Nickel Steel	2.00 - 2.75 Ni	
-C1L	Nickel Steel	Lower Carbon C1	
-C2	Nickel Steel	3.00 - 3.75 Ni	
-C2L	Nickel Steel	Lower Carbon C2	
-C3	Nickel Steel	0.80 - 1.10 Ni	
-NM	Nickel-Molybdenum	0.80 - 1.10 Ni	0.40 - 0.65 Mo
-D1	Manganese-Molybdenum	1.00 - 1.75 Mn	0.25 - 0.45 Mo
-D2	Manganese-Molybdenum	1.65 - 2.00 Mn	0.25 - 0.45 Mo
-D3	Manganese-Molybdenum	1.00 - 1.80 Mn	0.40 - 0.65 Mo
-W	Weathering Steel	Ni, Cr, Mo, Cu	
-G		No required chemistry	
-M	Military grade	May have more requirements	

Class	Min. Tensile Strength	Min. Yield Strength
E60xx	62,000 psi	50,000 psi
E70xx	70,000 psi	57,000 psi
E80xx	80,000 psi	67,000 psi
E90xx	90,000 psi	77,000 psi
E100xx	100,000 psi	87,000 psi
E110xx	110,000 psi	95,000 psi
E120xx	120,000 psi	107,000 psi

CHEMICAL SYMBOLS FOR THE ELEMENTS

C	Carbon	Most effective hardening element in steel
Mn	Manganese	Hardening element second to carbon
Si	Silicon	Deoxidizer, moderate strengthener
P	Phosphorus	Causes cracking if too high
S	Sulfur	Aids in machining - Cracking problems like P
Cr	Chromium	Hardness (low) - corrosion resistance (high)
Ni	Nickel	Hardening element - better cold toughness
Mo	Molybdenum	Hardenability - high temp tensile - creep strength
B	Boron	Very small amounts increase hardness
Cu	Copper	Corrosion resistance (low) - cracking (high)
Al	Aluminum	Deoxidizer - improves mechanical properties
Ti	Titanium	Removes: Oxygen, S, N, and C
N	Nitrogen	Improves strength - lowers toughness
Cb	Columbium	Hardness - Improves mechanical properties
V	Vanadium	Hardness - Improves mechanical properties



AWS WELDING SYMBOL CHART

American Welding Society A2 Committee on Terms and Definitions, 1998,
American Welding Society Welding Symbol Chart, AWS A2.1: 1998, 2nd Printing,
Miami: American Welding Society.

Basic Welding Symbols and Their Location Significance								
Location Significance	Fillet	Plug or Slot	Spot or Projection	Stud	Seam	Back or Backing	Surfacing	Edge
Arrow Side								
Other Side				Not Used			Not Used	
Both Sides		Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	
No Arrow Side or Other Side Significance	Not Used	Not Used		Not Used		Not Used	Not Used	Not Used
Location Significance	Groove							Scarf for Brazed Joint
	Square	V	Bevel	U	J	Flare-V	Flare-Bevel	
Arrow Side								
Other Side								
Both Sides								
No Arrow Side or Other Side Significance		Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used

Supplementary Symbols				Location of Elements of a Welding Symbol			
Weld-All-Around	Field Weld	Melt-Thru	Consumable Insert				
Backing/Spacer (Rectangular)		Contour					
<p>Basic Joints Identification of Arrow Side and Other Side Joint</p>							
<p>Butt Joint</p>		<p>Corner Joint</p>					
<p>T-Joint</p>		<p>Lap Joint</p>		<p>Edge Joint</p>			
				<p>Letter Designations</p> <p>Where letter designations are to be included in the tail of the welding symbol, reference is made to Table 1, Letter Designations of Welding and Allied Processes and Their Variations, of AWS A2.4-98.</p> <p>American Welding Society 550 N.W. LeJeune Road Miami, Florida 33126</p>			

Typical Welding Symbols		
<p>Double-Fillet Welding Symbol</p> <p>Fillet Weld Size</p> <p>Length</p> <p>Omission of Length Indicates that Weld Extends Between Abrupt Changes in Direction or as Dimensioned</p>	<p>Chain Intermittent Fillet Welding Symbol</p> <p>Pitch (Distance Between Centers) of Segments</p> <p>Fillet Weld Size (Length of Leg)</p> <p>Length of Segments</p>	<p>Staggered Intermittent Fillet Welding Symbol</p> <p>Pitch (Distance Between Centers) of Segments</p> <p>Fillet Weld Size (Length of Leg)</p> <p>Length of Segments</p>
<p>Plug Welding Symbol</p> <p>Included Angle of Countersink</p> <p>Plug Weld Size (Diameter of Hole at Root)</p> <p>Depth of Filling (Omission Indicates Filling is Complete)</p> <p>Pitch (Distance Between Centers) of Welds</p>	<p>Back Welding Symbol</p> <p>Back Weld</p> <p>OR</p> <p>2nd Operation</p> <p>1st Operation</p>	<p>Backing Welding Symbol</p> <p>Backing Weld</p> <p>OR</p> <p>1st Operation</p> <p>2nd Operation</p>
<p>Spot Welding Symbol</p> <p>Spot Weld Size</p> <p>Number of Welds</p> <p>Pitch</p> <p>RSW</p> <p>Process</p>	<p>Stud Welding Symbol</p> <p>Stud Size</p> <p>Pitch</p> <p>Number of Studs</p>	<p>Seam Welding Symbol</p> <p>Increment Length</p> <p>Seam Weld Size</p> <p>Pitch</p> <p>RSEW</p> <p>Process</p>
<p>Square-Groove Welding Symbol</p> <p>Groove Weld Size</p> <p>Root Opening</p>	<p>V-Groove Welding Symbol</p> <p>Depth of Bevel</p> <p>Groove Weld Size</p> <p>Groove Angle</p> <p>Root Opening</p>	<p>Double-Bevel-Groove Welding Symbol</p> <p>Groove Weld Size</p> <p>Groove Weld Size</p> <p>Arrow Points Toward Member to be Beveled</p>
<p>Symbol with Backgouging</p> <p>Depth of Bevel</p> <p>Backing Weld Backgouge</p>	<p>Flare-V-Groove Welding Symbol</p> <p>Groove Weld Size</p>	<p>Flare-Bevel-Groove Welding Symbol</p> <p>Groove Weld Size</p>
<p>Multiple Reference Lines</p> <p>1st Operation On Line Nearest Arrow</p> <p>2nd Operation</p> <p>3rd Operation</p>	<p>Complete Joint Penetration</p> <p>Indicates Complete Joint Penetration Regardless of Type of Weld or Joint Geometry</p> <p>CJP</p>	<p>Edge Welding Symbol</p> <p>Edge Weld Size</p>
<p>Flash or Upset Welding Symbol</p> <p>Process Reference</p> <p>FW</p>	<p>Melt-Thru Symbol</p> <p>Root Reinforcement</p>	<p>Joint with Backing</p> <p>'R' Indicates Backing Removed After Welding</p>
<p>Joint with Spacer</p> <p>With Modified Groove Weld Symbol</p> <p>Double-Bevel Groove</p>	<p>Flush Contour Symbol</p> <p>Back Weld</p>	<p>Convex Contour Symbol</p> <p>G</p>

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