

# Deltaweld® 500 Systems

MIG Welding Systems 

## Quick Specs

### Heavy Industrial Manufacturing

General manufacturing  
General fabrication  
Structural steel fabrication  
Transportation  
Sheet metal fabrication  
Light-gauge tube and sheet

### Processes

MIG (GMAW-P)  
Flux-cored (FCAW)  
Accu-Pulse® MIG (GMAW-P)  
(with Intelx™ Pro feeder)  
Air carbon arc (CAC-A)  
Rated: 3/8-inch carbons

**Auxiliary Power** 115 V standard

### Input Power

208/230/460 V or 575 V, 3-phase, 60 Hz

### Rated Output

500 A at 100% duty cycle

### Output Range

30–650 A, 10–44 V

## Make Your Move

*The new standard in manufacturing provides the solution for welders of all skill levels, plus pulsed MIG capabilities with Intelx Pro integrated packages.*

### Ready to weld

Reduce the time and hassle of setting up welding systems. Make your move to a weld-ready Deltaweld MIGRunner™.

### Dedicated wire feeder options

- Intelx feeder — New arc control feature means welders can produce better welds with minimal parameter adjustments.
- Intelx Pro feeder — Adds Accu-Pulse®, EZ-Set, steel weld programs, and memory buttons.

### Legacy meets pulse

Accu-Pulse offers a more forgiving arc and compensates for variations in operator technique, providing a wider operating window.

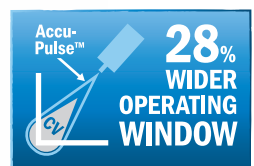
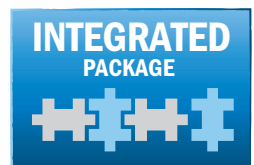
### Easy to use

EZ-Set simplifies parameter setup based on material thickness, removing complexity.



## Insight

Optional Welding Intelligence™ weld monitoring system. Get more done, produce higher-quality welds and control costs. See page 4 for more information.



Deltaweld 500 MIGRunner™ with Intelx™ Pro feeder shown.



Power source is warranted for three years, parts and labor.  
Original main power rectifier parts are warranted for five years.  
Gun warranted for 90 days, parts and labor.



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**MillerWelds.com**



# Deltaweld® 500 System Features



**Balanced-pressure drive-roll design and tensioners** feed wire in its truest and straightest form for consistent feedability, resulting in better welding performance.

**Accu-Mate™ connection** aligns the gun perfectly in the drive-roll carrier — preventing the gun from being pulled loose and providing consistent wire feeding.

**Drive rolls and guides are common** with other Miller® industrial feeders (use existing, not new parts).

**Inlet guide and intermediate guide installation is toolless.**

**Rotatable drive assembly** allows operator to rotate the drive, eliminating severe bends in the wire feed path. This extends gun-liner life and aids in feeding difficult wires.



**Quality-engineered cable management** protects your connections to keep you productive.



Intellex Pro single-wire feeder shown.

**Memory buttons** for quick program recall

**Display and controls** for volts/arc length, wire feed speed, and EZ-Set (if selected)

**Arc control** to fine tune the welding arc

**LCD setup screen** for easy selection of welding processes

**Jog and purge button**

**Trigger hold, trigger select, preflow and postflow buttons**



Deltaweld 500 with Insight Core™ shown.

**Dedicated constant-current gauge mode**, rated for up to 3/8-inch carbons.

**Wind Tunnel Technology™**

Internal air flow that protects electrical components and PC boards from dirt, dust, debris — greatly improving reliability.

**Fan-On-Demand™**

operates only when needed reducing noise, power consumption, and the amount of airborne contaminants pulled through the machine.

**ArcConnect™**

is a next generation communication that utilizes high speed signals to improve weld performance and allow point-of-use controls to be located at the feeder.

**Standard 115-volt auxiliary power**

provides 15 amps of circuit-breaker-protected power.

# Intellex™ Feeder Features



Feature	Intellex™ Feeder	Intellex™ Pro Feeder
Digital meters	■	■
Remote voltage	■	■
Wire feed speed	■	■
Arc control	■	■
Trigger hold	■	■
Wire jog and purge	■	■
Wire feed speed feedback	■	■
Four drive rolls	■	■
Rotatable drive	■	■
Up to 60 lb. spool	■	■
MIG process	■	■
Dual-wire models	■	■
EZ-Set MIG		■
EZ-Set Accu-Pulse®		■
Trigger select		■
Preflow		■
Postflow		■
Memory slots (2)		■
Out-of-box programs		■

## Processes available include:

- MIG
- EZ-Set MIG (Intellex Pro only)
- EZ-Set Accu-Pulse (Intellex Pro only)



## Feeder programs (Intellex Pro only) available include:

- Steel
- Stainless steel
- Flux-cored
- Metal-cored
- Different wire sizes
- Different gas types



**Single-wire feeder swivels** for convenience and function, eliminating wear on gun and liner assembly. It moves with the MIG gun, allowing operator to see the front of the feeder and which parameters are selected.



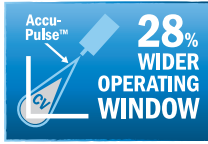
**Dual-wire models** allow two different wire types to be available on one feeder, avoiding downtime from changing spools and drive rolls.

# Deltaweld® 500 System Processes

Take the performance of each process to the highest level

## Accu-Pulse®

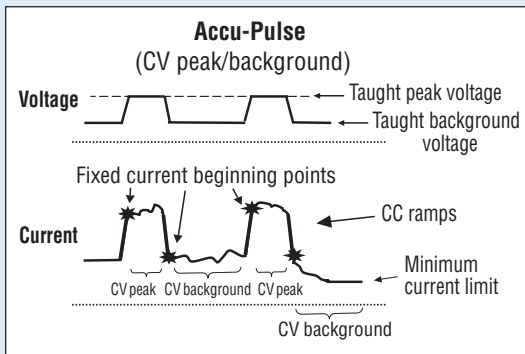
- More forgiving arc compensates for variations in operator technique
- Most adaptive arc on 16 gauge (1.6 mm) and thicker
- Designed for all weld positions



Best For	Standard Spray	Accu-Pulse	Short Circuit
Deposition	A	A	D
Gap filling	D	B	A
Low heat input	D	B	A
Out-of-position welds		A	B
Low spatter	A	A	C
Thick metals	A	A	D
Thin metals		B	A
Increased travel speed	A	A	B

**HOT** **COLD**

Ratings A, B, C, and D are relative values. An "A" rating indicates a best fit between your performance needs and process. A "blank" rating indicates that the process is not recommended for that application.



The Accu-Pulse process allows for precise control of the pulse arc. Accu-Pulse provides optimum molten puddle control and has power to increase wire feed speeds and deposition 20 to 25 percent in many applications. In most cases, slightly different ratios of gas mixtures will perform well using a similar program and adjusting arc length or the appropriate arc control for the selected process. Contact Miller for more information on less common materials and gas combinations.

## Insight Welding Intelligence™: The Total Welding Data Solution

With an Insight weld monitoring system you can get more done, produce higher-quality welds and control costs. Learn more at [MillerWelds.com/insight](http://MillerWelds.com/insight)

**Insight Core™** Insight Core is an easy-to-use welding information solution that gives visibility into your operation so you can improve productivity.

- **Measure welding productivity.** See each welder's arc-on time to set baselines, plan improvements and measure goals.
- **View easy-to-understand reports.** Dashboards show trends and develop reports. Compare welders, cells and plants.
- **Identify welding costs.** Make improvements to reduce expenses.
- **Easily install and use.** Just connect it to the internet. View secure data on any web-connected device anywhere.



Deltaweld 500 with Insight Core shown. See page 8 for a complete list of models with Insight Core.

# Deltaweld® 500 Specifications (Subject to change without notice.)



Mode	Amp/Volt Ranges	Rated Output	Amps Input at Rated Output, 60 Hz, 3-Phase						Dimensions (Includes lift eye)	Net Weight
			208 V	230 V	460 V	575 V	KVA	KW		
MIG (GMAW)	10–44 V	500 A at 39 VDC, 100% duty cycle	64.2	58.1	30.4	24.8	24.2 (24.7*)	21.7 (21.7*)	H: 22.36 in. (568 mm) W: 15.35 in. (390 mm) D: 31.65 in. (804 mm)	145 lb. (65.8 kg)
		575 A at 42.75 VDC, 60% duty cycle	80.2	73.5	38.0	30.4	30.3 (30.2*)	27.2 (27.2*)		
		650 A at 44 VDC, 25% duty cycle	94.2	84.9	43.9	34.9	35.0 (34.8*)	31.6 (31.7*)		
Gouge (CAC-A)	30–650 A	500 A at 40 VDC, 100% duty cycle	65.4	59.6	31.1	25.3	24.8 (25.2*)	22.2 (22.3*)		
		575 A at 43 VDC, 60% duty cycle	81.0	73.5	38.0	30.3	30.2 (30.1*)	27.3 (27.4*)		
		650 A at 44 VDC, 25% duty cycle	94.2	84.9	43.9	34.9	35.0 (34.8*)	31.6 (31.7*)		

\*KVA and KW for 575-volt model.

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

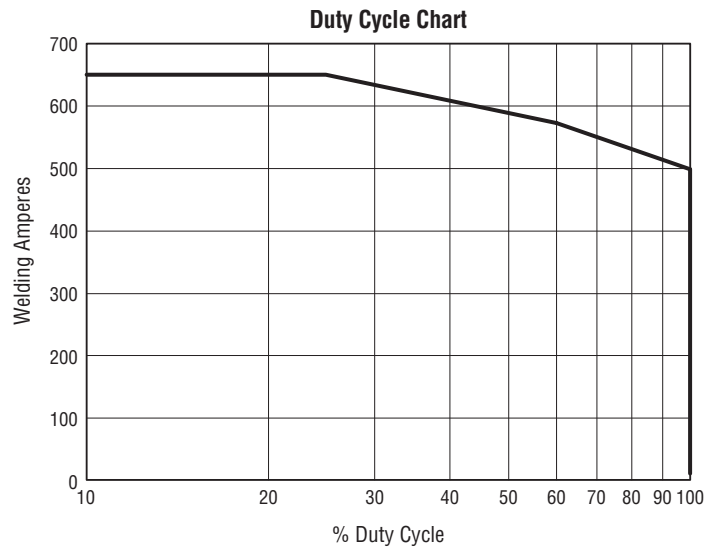
# Intelx™ Feeder Specifications (Subject to change without notice.)



Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Size Capacity	Dimensions	Net Weight
50 VDC	Deltaweld 350 or 500	600 A at 113 VDC, 60% duty cycle	50–780 ipm (1.3–19.8 m/min.)	.023–5/64 in. (0.6–2.0 mm)	18 in. (457 mm) 60 lb. (27 kg)	Single-wire: H: 16.25 in. (413 mm) W: 12.38 in. (314 mm) D: 27.88 in. (708 mm) Dual-wire: H: 14 in. (356 mm) W: 18 in. (457 mm) D: 34.5 in. (876 mm)	Single-wire: 44.8 lb. (20.3 kg) Dual-wire: 77 lb. (34.9 kg)

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

# Deltaweld® 500 Performance Data



## Genuine Miller® Accessories



**Deltaweld  
350/500  
Running Gear  
301523**

Features small footprint, dual-cylinder rack, chains for gas cylinders, ergonomic handle design and lockable front casters with two torch holders, and storage area below.

Features small footprint, dual-cylinder rack, chains for gas cylinders, ergonomic handle design and lockable front casters with two torch holders, and storage area below.



**Cart Accessory Kit 301528**

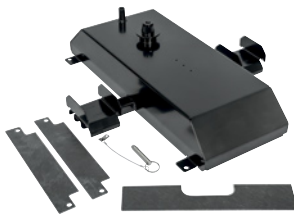
Single-wire feeder kit for use with running gear 301523. See note below for dual-wire feeder kit. Consists of flowmeter regulator with 5-foot (1.5 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, 15-foot (4.6 m) work cable with 600-amp C-clamp, and 9-foot (2.7 m) ArcConnect control/motor cable. Dual kit comes with an additional flowmeter regulator and gas hose.

Note: For dual-wire feeder kit both **301528** and **301579** are required.



**Stationary Handle Kit 301529**

Allows easy movement and portability of the power source.



**Feeder Swivel Kit 301533**

For single- and dual-wire feeders. Allows feeder to mount to the top of Deltaweld.

Note: **ONLY** the single-wire feeder can swivel.



**Hanging Bail 058435**

Used for suspending feeder over work area.



**ArcConnect Control/Motor Cables**

**280471009** 9 ft. (2.7 m)

**280471015** 15 ft. (4.6 m)

**280471025** 25 ft. (7.6 m)

**280471050** 50 ft. (15.2 m)

**280471075** 75 ft. (22.9 m)

**280471100** 100 ft. (30.5 m)

**280471150** 150 ft. (45.7 m)

Connects power source directly to feeder or remote operator interface.

Note: Cables cannot be joined together to create longer lengths and extension cables are not available.



**Work Sense Leads  
(volt sense)**

**300461** 25 ft. (7.6 m)

**300462** 50 ft. (15.2 m)

When connected from the back of the wire feeder to the workpiece, the work

sense lead provides accurate voltage feedback on the wire feeder display, and compensates for any voltage drop from the weld cables.

## Drive Roll Kits and Guides

Select drive roll kits from chart below according to type and wire size being used. Drive roll kits include four drive rolls, necessary guides and feature an anti-wear sleeve for inlet guide.

Wire Size	"V" groove for hard wire	"U" groove for soft wire or soft-shelled cored wires	"V" knurled for hard-shelled cored wires	"U" cogged for extremely soft wire or soft-shelled cored wires (i.e., hard facing types)
.023/.025 in. (0.6 mm)	<b>087132</b>	—	—	—
.030 in. (0.8 mm)	<b>046780</b>	—	—	—
.035 in. (0.9 mm)	<b>046781</b>	<b>044750</b>	<b>046792</b>	—
.035 and .045 in. (0.9 and 1.2 mm)	<b>227061*</b>	<b>244293**</b>	—	—
.040 in. (1.0 mm)	<b>191917</b>	—	—	—
.045 in. (1.1/1.2 mm)	<b>046782</b>	<b>046785</b>	<b>046793</b>	<b>083319</b>
.052 in. (1.3/1.4 mm)	<b>046783</b>	<b>046786</b>	<b>046794</b>	—
1/16 in. (1.6 mm)	<b>046784</b>	<b>046787</b>	<b>046795</b>	<b>046800</b>
.068/.072 in. (1.8 mm)	—	—	—	—
5/64 in. (2.0 mm)	—	<b>046788</b>	<b>046796</b>	<b>046801</b>

\*Included with Intelix feeders. Drive roll is dual-size reversible with one .035-inch and one .045-inch groove.

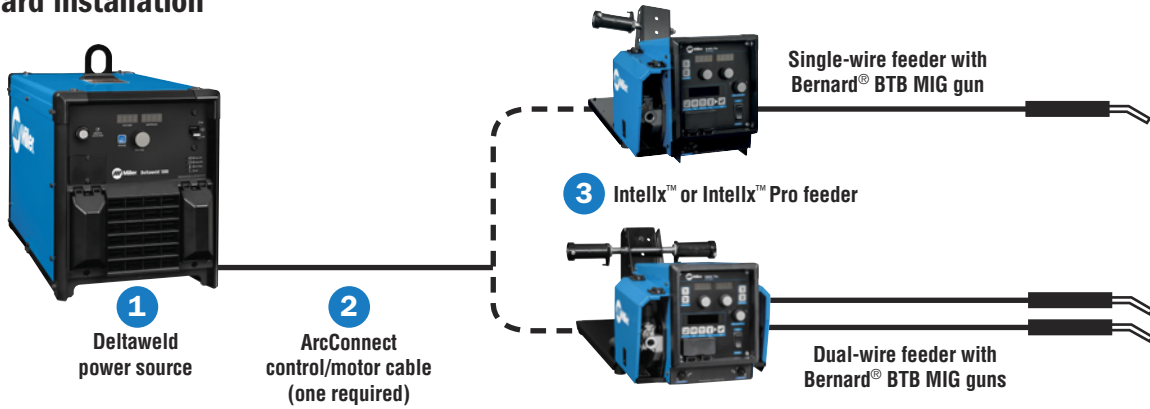
\*\*Drive roll is dual-size reversible with one .035-inch and one .045-inch groove which also accommodates .047-inch (3/64-inch) wire.

### Wire Guides

Wire Size	Inlet Guide	Intermediate Guide
.023-.040 in. (0.6-1.0 mm)	<b>221030</b>	<b>056206</b>
.045-.052 in. (1.2-1.3 mm)	<b>221030</b>	<b>056207</b>
1/16-5/64 in. (1.6-2.0 mm)	<b>221030</b>	<b>056209</b>
5/64-1/8 in. (2.0-3.2 mm)	<b>229919</b>	<b>056211</b>

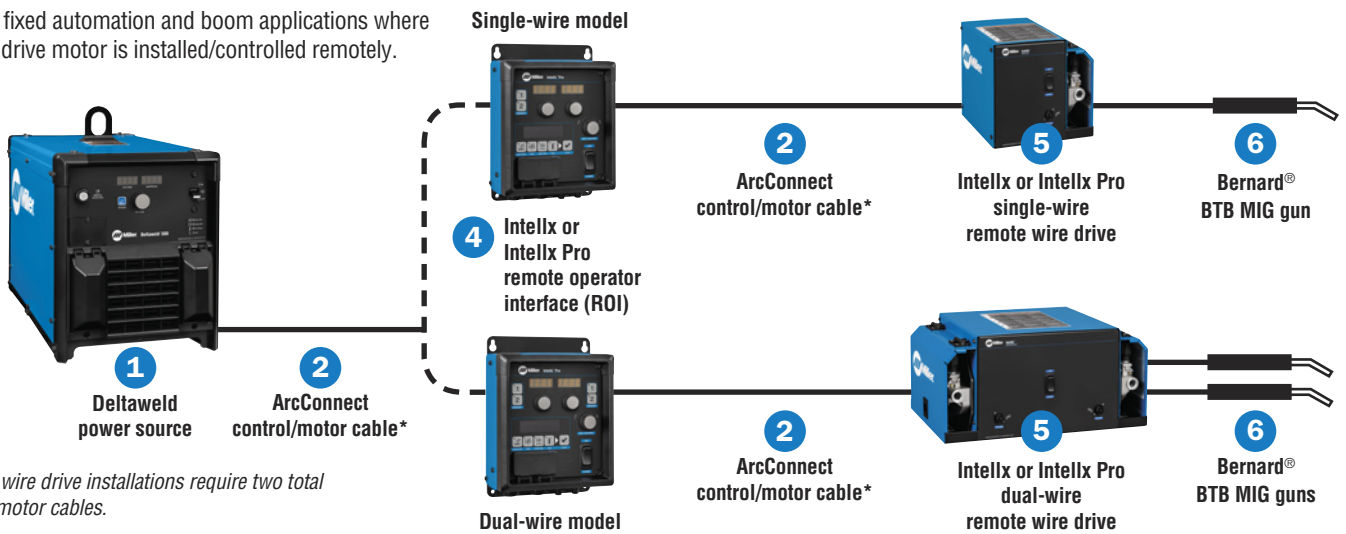
# Typical Deltaweld® 500 System Installations

## Standard installation



## Remote wire drive installation

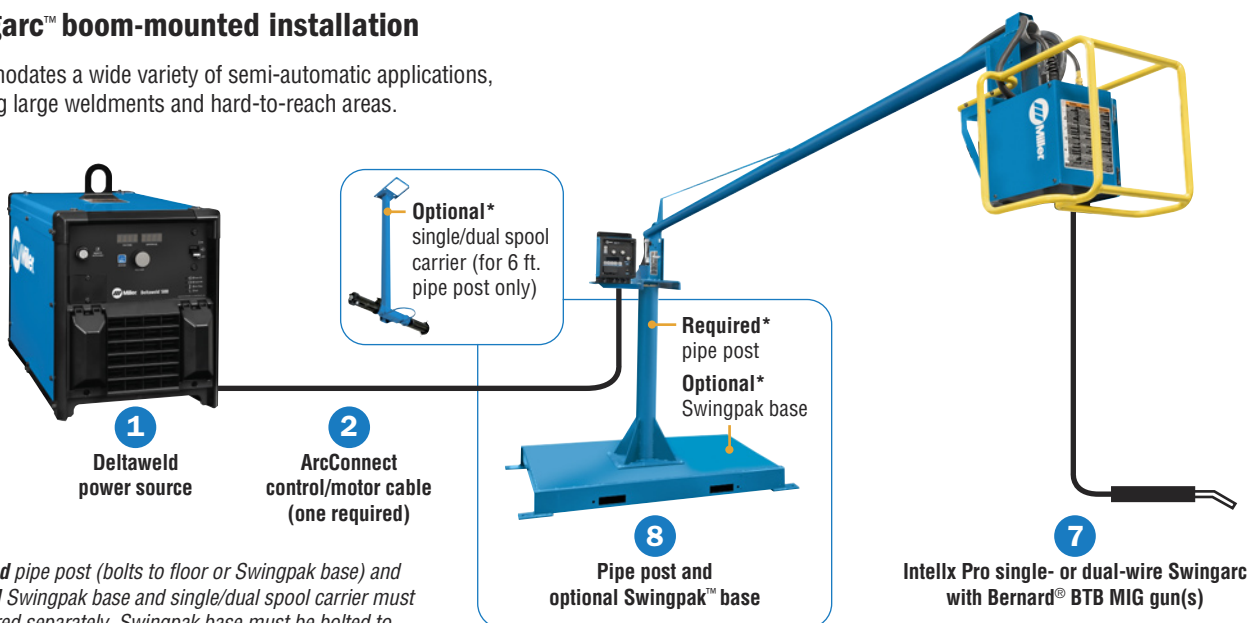
Ideal for fixed automation and boom applications where the wire drive motor is installed/controlled remotely.



\*Remote wire drive installations require two total control/motor cables.

## Swingarc™ boom-mounted installation

Accommodates a wide variety of semi-automatic applications, including large weldments and hard-to-reach areas.



\*Required pipe post (bolts to floor or Swingpak base) and optional Swingpak base and single/dual spool carrier must be ordered separately. Swingpak base must be bolted to the floor for 16-foot Swingarc. See page 8.

# Ordering Information Most popular models ◀

Deltaweld® 500 Packages	Stock No.	Description	Qty.	Price
Deltaweld 500 MIGRunner™ w/Single-Wire Intellx	951814	Includes Deltaweld 500 power source (907785 or 907785002 on Insight Core package), single- or dual-wire bench feeder with Bernard® BTB Gun 400 A (two with dual-wire feeders) and .035/.045 in. V-grooved drive rolls, factory-installed running gear with cable holder, gun holders, and chains for gas cylinders, cart accessory kit for single- or dual-wire feeder (see page 6), and quick-setup guide and video		
Deltaweld 500 MIGRunner™ w/Single-Wire Intellx Pro	951808 ◀			
Deltaweld 500 MIGRunner™ w/Single-Wire Intellx and Insight Core	951826			
Deltaweld 500 MIGRunner™ w/Dual-Wire Intellx	951819			
Deltaweld 500 MIGRunner™ w/Dual-Wire Intellx Pro	951820			
Deltaweld 500 w/Running Gear, Cart Accessory Kit and Insight Core™	907800	Same as above, but without wire feeder and MIG gun (see options below). If ordering a dual-wire feeder, also order accessory kit (301579)		
Deltaweld 500 (575 V) MIGRunner™ w/Single-Wire Intellx Pro	951824 ◀	Includes Deltaweld 500 (575 V) power source (907786 or 907786002 on Insight Core package), single- or dual-wire bench feeder with Bernard® BTB Gun 400 A (two with dual-wire feeders) and .035/.045 in. V-grooved drive rolls, factory-installed running gear with cable holder, gun holders, and chains for gas cylinders, cart accessory kit for single- or dual-wire feeder (see page 6), and quick-setup guide and video		
Deltaweld 500 (575 V) MIGRunner™ w/Single-Wire Intellx Pro and Insight Core	951827			
Deltaweld 500 (575 V) w/Running Gear, Cart Accessory Kit and Insight Core™	907801	Same as above, but without wire feeder and MIG gun (see options below). If ordering a dual-wire feeder, also order accessory kit (301579)		

Configure a Custom Deltaweld System (See corresponding item numbers in Typical Deltaweld Systems Installations on page 7.)

Power Sources	Stock No.	Description	Qty.	Price
<b>1</b> Deltaweld® 500 208/230/460 V  Deltaweld® 500 575 V	907785 ◀	With ArcConnect and meters		
	907785001	With ArcConnect, meters and 14-pin receptacle		
	907785002	With ArcConnect, meters and Insight Core		
	907785003	With ArcConnect, meters, 14-pin receptacle and Insight Core		
	907786 ◀	With ArcConnect and meters		
	907786001	With ArcConnect, meters and 14-pin receptacle		
	907786002	With ArcConnect, meters and Insight Core		
	907786003	With ArcConnect, meters, 14-pin receptacle and Insight Core		
<b>Cables and Leads</b>				
<b>2</b> ArcConnect Control/Motor Cables		See page 6 for available lengths		
Work Sense Leads (volt sense)		See page 6 for available lengths		
<b>Feeder, ROI and Swingarc</b>				
<b>3</b> Intellx Bench-Style Wire Feeders	951783	Single-wire feeder with Bernard BTB Gun 300 A and .035/.045 in. V-groove drive rolls		
	951815	Dual-wire feeder with two Bernard BTB Gun 300 A and .035/.045 in. V-groove drive rolls		
Intellx Pro Bench-Style Wire Feeders	951784 ◀	Single-wire feeder with Bernard BTB Gun 300 A and .035/.045 in. V-groove drive rolls		
	951816	Dual-wire feeder with two Bernard BTB Gun 300 A and .035/.045 in. V-groove drive rolls		
<b>4</b> Intellx Remote Operator Interface (ROI)	301548	Control box for single-wire drive assembly		
	301551	Control box for dual-wire drive assembly		
Intellx Pro Remote Operator Interface (ROI)	301552	Control box for single-wire drive assembly		
	301553	Control box for dual-wire drive assembly		
<b>5</b> Intellx Remote Wire Drive	301554	Single-wire drive assembly		
	301555	Dual-wire drive assembly		
<b>6</b> Bernard BTB Gun	Q3015AE8XMC	300 A, 15 ft. (4.6 m) with Centerfire™ consumables		
	Q4015AE8EMC	400 A, 15 ft. (4.6 m) with Centerfire™ consumables		
<b>7</b> Intellx Pro Swingarc™ Boom-Mounted Wire Feeders	951804	12 ft. single-wire model w/Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
	951806	16 ft. single-wire model w/Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
	951805	12 ft. dual-wire model w/two Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
<b>8</b> Pipe Post	149838	4 ft. pipe post. Required for mounting Swingarc booms		
	149839	6 ft. pipe post. Required for mounting Swingarc booms		
Swingpak™ Base	183997	Optional mounting platform for pipe post		
Single/Dual Spool Carrier	300352	Optional spool carrier for 6 ft. pipe post		
Boom Retrofit Kits	301470	Single boom. Retrofits Deltaweld onto 70 Series Swingarc™		
	301471	Dual boom. Retrofits Deltaweld onto 70 Series Swingarc™		
<b>Accessories</b>		<b>See page 6</b>		

Date: Total Quoted Price:

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