Issued May 2023 • Index No. DC/16.4

Deltaweld® 350 and 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 Intellx™ Pro feeder)

Input Power 380/400 V, 3-phase, 50 Hz

Rated Output
350: 350 A at 60% duty cycle
500: 500 A at 100% duty cycle

Output Range
350: 20–400 A, 10–38 V
500: 30–650 A, 10–44 V

The standard in manufacturing for welders of all skill levels, with Intellx™ wire feeder options that deliver application specific benefits.

Dedicated wire feeder options
- Intellx Basic feeder with arc control means welders can produce better welds with minimal parameter adjustments.
- Intellx Pro feeder adds EZ-Set, Accu-Pulse®, memory buttons and steel and stainless weld programs.

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



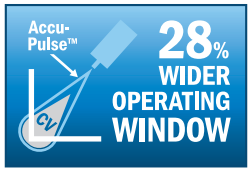
Pulse capable
Accu-Pulse offers a more forgiving arc and compensates for variations in operator technique, providing a wider operating window.

Insight
Optional Welding Intelligence™ weld monitoring system. Get more done, produce higher-quality welds and control costs. See page 6 for more information.

Deltaweld 350 with 14-pin receptacle shown with Intellx™ Basic feeder, cart, guns and cables assembled.







TRUE BLUE® 3YR. WARRANTY

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

Miller®

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MillerWelds.com

Certified System
ISO 9001
Quality

Deltaweld® Features



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



Deltaweld 350 with 14-pin receptacle and Insight

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.

Backwards compatibility. Models come with both ArcConnect and the standard Miller® 14-pin for use with older Miller® wire feeders.



Deltaweld 500 with 14-pin receptacle and Insight

Dedicated constant-current gouge mode (500 model only), rated for up to 3/8-inch carbons.

Intellx™ Feeder 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.

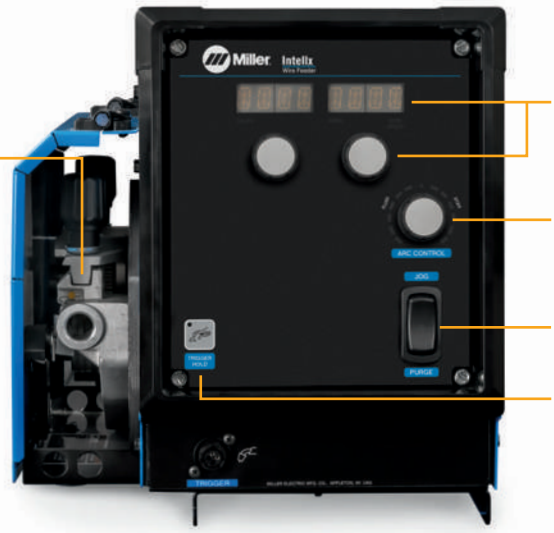
Drive rolls and guides are common with other Miller® industrial feeders (use existing, not new parts).

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.



Optional feeder swivel kit (page 8) allows single-wire feeder to swivel 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.



Display and controls for volts and wire feed speed

Arc control to fine tune the welding arc

Jog and purge button

Trigger hold button

Intellx Basic single-wire feeder



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

Intellx Pro single-wire feeder



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

Intellx™ Feeders Comparison





Feature	Intellx™ Basic Feeder	Intellx™ 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	■	■
Dual-wire models	■	■
MIG process	■	■
EZ-Set MIG		■
EZ-Set Accu-Pulse®		■
Trigger select		■
Preflow		■
Postflow		■
Memory slots		2
Out-of-box steel programs		■
Out-of-box stainless programs		■

Processes include:

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



Intellx Pro feeder programs include:

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

Deltaweld® System Processes

Take the performance of each process to the highest level

Accu-Pulse®

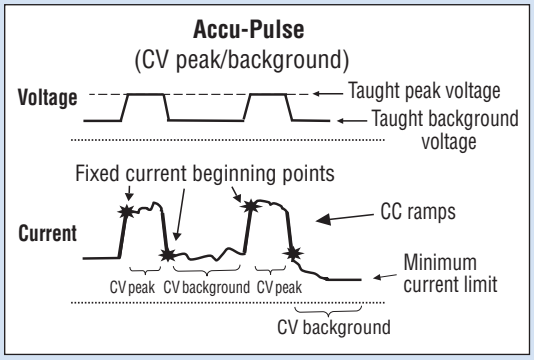
- More forgiving arc compensates for variations in operator technique
- Most adaptive arc on 16 gauge (1.6 mm) and thicker
- Designed for all weld positions





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

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 11 for a complete list of models with Insight Core.

Deltaweld® Specifications (Subject to change without notice.)

Model	Mode	Amp/Volt Ranges	Rated Output	Amps Input at Rated Output, 50 Hz, 3-Phase 380 V	400 V	KVA	KW	Dimensions *(Includes lift eye)*	Net Weight
Deltaweld 350	MIG (GMAW)	10–38 V	300 A at 29 VDC, 100% duty cycle	16.3	15.2	9.7	10.6	H: 22.36 in. (568 mm) W: 15.35 in. (390 mm) D: 29.15 in. (740 mm)	115 lb. (52.2 kg)
			350 A at 31.5 VDC, 60% duty cycle	20.4	19.2	12.3	13.4		
			425 A at 35.25 VDC, 30% duty cycle	27.0	25.6	16.7	17.8		
Deltaweld 500	MIG (GMAW)	10–44 V	500 A at 39 VDC, 100% duty cycle	34.8	33.4	21.7	23.7	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	43.6	41.5	26.9	28.7		
			650 A at 44 VDC, 25% duty cycle	51.2	48.4	31.4	33.5		
	Gouge (CAC-A)	30–650 A	500 A at 40 VDC, 100% duty cycle	35.7	33.9	22.0	23.4		
			575 A at 43 VDC, 60% duty cycle	43.8	42.0	27.3	29.1		
			650 A at 44 VDC, 25% duty cycle	51.2	48.4	31.4	33.5		

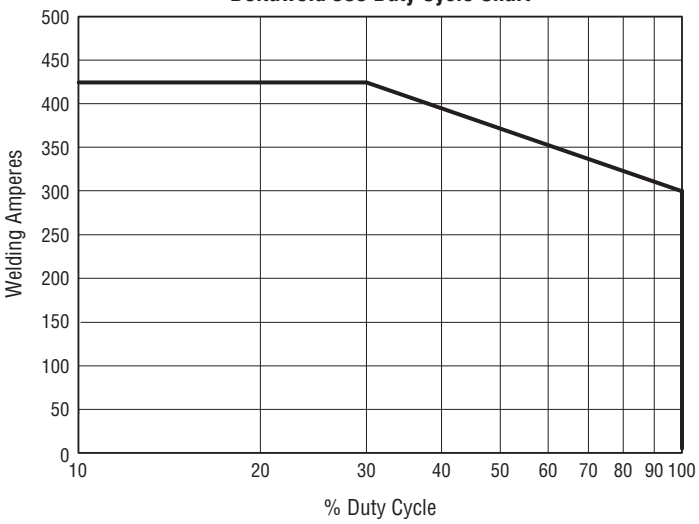
CE *All CE models conform to the applicable parts of the IEC 60974 series of standards.*

Intellx™ Feeder Specifications (Subject to change without notice.)

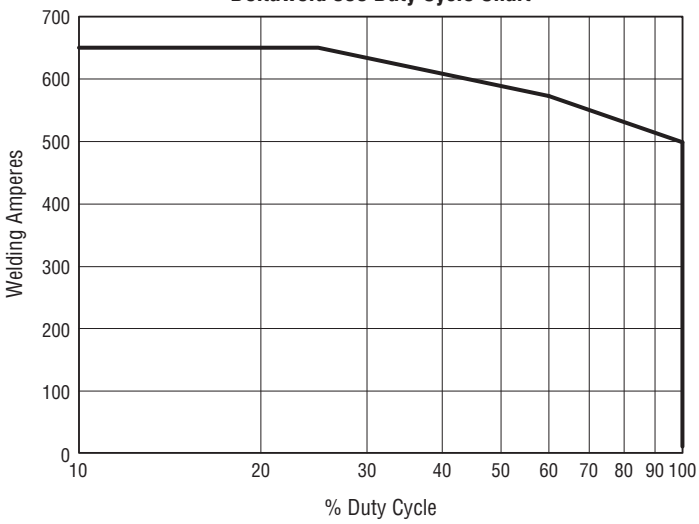
Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Size Capacity	Dimensions	Net Weight
50 VDC	Deltaweld 350 or 500	600 A at 113 VDC, 60% duty cycle	50–780 ipm (1.3–19.8 m/min.)	.023–5/64 in. (0.6–2.0 mm)	18 in. (457 mm) 60 lb. (27 kg)	Single-wire: 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)

Deltaweld® Performance Data

Deltaweld 350 Duty Cycle Chart



Deltaweld 500 Duty Cycle Chart



Genuine Miller® Accessories

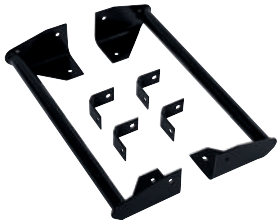


Deltaweld 350/500 Running Gear 301523
Features small footprint, dual-cylinder rack, chains for gas cylinders, ergonomic handle design and lockable front casters with two torch holders, and storage area below.

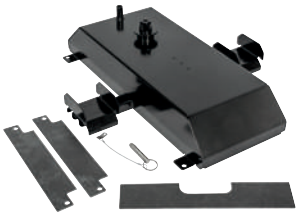


Cart Accessory Kit 301528
Single-wire feeder kit for use with running gear 301523. See note below for dual-wire feeder kit. Consists of flowmeter regulator with 5-foot (1.5 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, 15-foot (4.6 m) work cable with 600-amp C-clamp, and 9-foot (2.7 m) 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.



Spool Covers
057607 For single-wire feeders and left side of dual-wire feeders
090389 For right side of dual-wire feeders
For 12-inch (305 mm) spool.
Note: Spool covers cannot be installed if the wire drive assembly is in a rotated position.

Spool Adapter 047141
For use with 14-pound (6.4 kg) spool of Lincoln self-shielding wire.



Wire Reel Assembly 108008
For 60-pound (27 kg) coil of wire.



Reel Covers
195412 For single-wire feeders and left side of dual-wire feeders
091668 For right side of dual-wire feeders
For 60-pound (27 kg) coil. Helps to protect the welding wire from dust and other contaminants.
Note: Reel covers cannot be installed if the wire drive assembly is in a rotated position.

Euro Adapter Kit 164902
Allows European-style welding guns to be used with Intellx™ feeders.



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)	**087132**	—	—	—
.030 in. (0.8 mm)	**046780**	—	—	—
.035 in. (0.9 mm)	**046781**	**044750**	**046792**	—
.035 and .045 in. (0.9 and 1.2 mm)	**227061***	**244293****	—	—
.040 in. (1.0 mm)	**191917**	—	—	—
.045 in. (1.1/1.2 mm)	**046782**	**046785**	**046793**	**083319**
.052 in. (1.3/1.4 mm)	**046783**	**046786**	**046794**	—
1/16 in. (1.6 mm)	**046784**	**046787**	**046795**	**046800**
.068/.072 in. (1.8 mm)	—	—	—	—
5/64 in. (2.0 mm)	—	**046788**	**046796**	**046801**

Wire Guides

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

Note: When ordering hard wire kits, retain factory-supplied inlet guide.

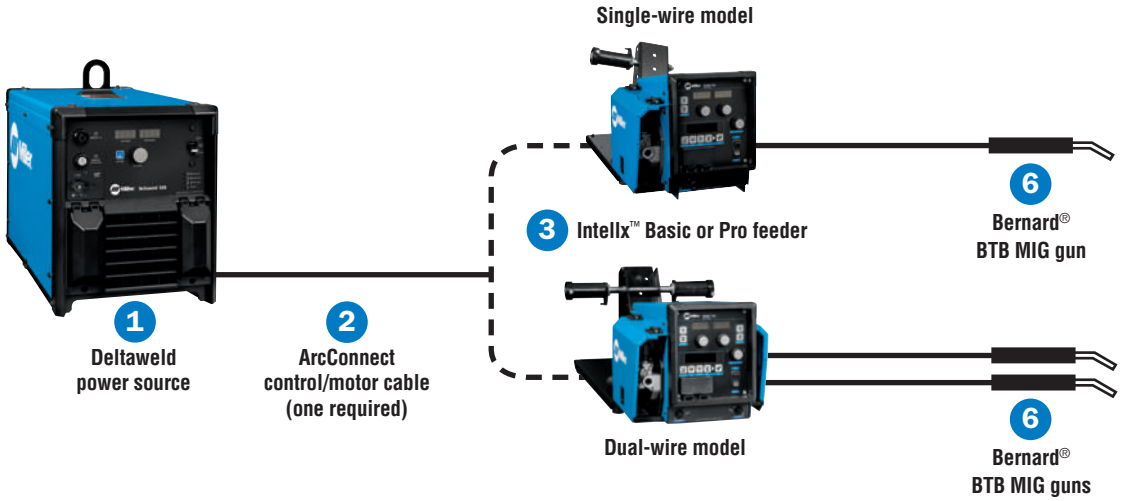
Nylon Guides for Feeding Aluminum

Wire Size	Inlet Guide and Intermediate Guide Kits
.035 in. (0.9 mm)	**293928**
.047 in. (1.2 mm)	**293929**
1/16 in. (1.6 mm)	**293930**

Note: U-groove drive rolls are recommended when feeding aluminum wire.

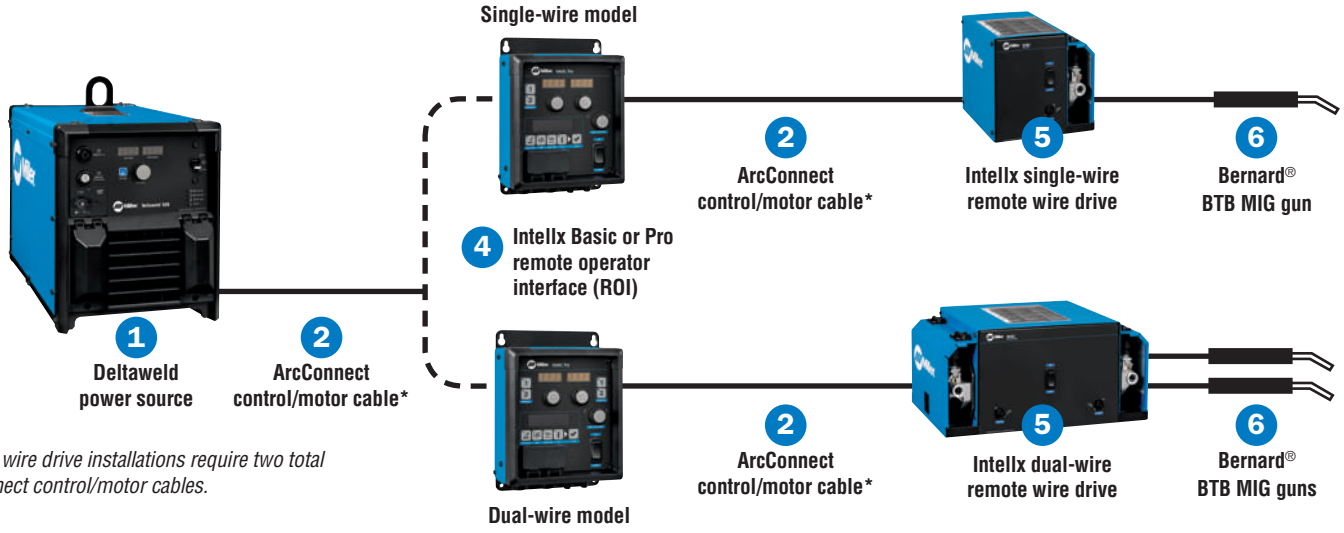
Typical Deltaweld® System Installations

Standard installation



Remote wire drive installation (NOT for use with push-pull guns.)

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



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

Ordering Information

Configure a Custom Deltaweld System (See corresponding item numbers in Typical Deltaweld Systems Installations on page 10.)				
Power Source	**Stock No.**	**Description**	**Qty.**	**Price**
1 **Deltaweld® 350** 380/400 V	**907853001** **907853003**	**CE.** With ArcConnect and 14-pin receptacle **CE.** With ArcConnect, 14-pin receptacle and Insight		
Deltaweld® 500 380/400 V	**907854001** **907854003**	**CE.** With ArcConnect and 14-pin receptacle **CE.** With ArcConnect, 14-pin receptacle and Insight		
Cables and Leads				
2 ArcConnect Control/Motor Cables		See page 8 for available lengths		
Work Sense Leads (volt sense)		See page 8 for available lengths		
Bench Feeders and ROI				
3 **Intellx™ Basic Bench-Style Wire Feeders**	**301493** **301541**	Single-wire feeder Dual-wire feeder		
Intellx Pro Bench-Style Wire Feeders	**301492** **301540**	Single-wire feeder Dual-wire feeder		
4 Intellx Remote Operator Interface (ROI)	**301548** **301551**	Control box for single-wire drive assembly Control box for dual-wire drive assembly		
Intellx Pro Remote Operator Interface (ROI)	**301552** **301553**	Control box for single-wire drive assembly Control box for dual-wire drive assembly		
5 Intellx Remote Wire Drive	**301554** **301555**	Single-wire drive assembly Dual-wire drive assembly		
6 Bernard BTB Gun		See Bernard literature SP-BTB		
Accessories				
Deltaweld Running Gear	**301523**	For Deltaweld 350/500		
Cart Accessory Kit		For single- or dual-wire bench feeders. See page 8		
Stationary Handle Kit	**301529**	Allows easy movement and portability of the power source		
Feeder Swivel Kit	**301533**	Allows single- or dual-wire bench feeders to mount to the top of Deltaweld. Only single-wire feeder can swivel		
Hanging Bail	**058435**	For suspending feeder over work area		
Spool Covers (for 12 in. spool)	**057607** **090389**	For single-wire feeders and left side of dual-wire feeders For right side of dual-wire feeders		
Spool Adapter	**047141**	For use with 14-pound (6.4 kg) spool of Lincoln self-shielding wire		
Wire Reel Assembly	**108008**	For 60-pound (27 kg) coil of wire		
Reel Covers (for 60 lb. coil)	**195412** **091668**	For single-wire feeders and left side of dual-wire feeders For right side of dual-wire feeders		
Euro Adapter Kit	**164902**	Allows European-style welding guns to be used with Intellx feeders		

Date: **Total Quoted Price:**

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