

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)*
- High-deposition MIG (GMAW)**
- RMD®**
- Air carbon arc (CAC-A)***
- Rated: 3/8-inch carbons

*With Intelx™ Pro and Intelx™ Elite feeders.

**With Intelx™ Elite feeders.

***Deltaweld 500 model only.

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

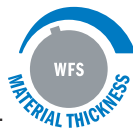
The standard in manufacturing for welders of all skill levels, with Intelx™ wire feeder options that deliver application specific benefits.

Dedicated wire feeder options

- Intelx Basic feeder with arc control means welders can produce better welds with minimal parameter adjustments.
- Intelx Pro feeder adds EZ-Set, Accu-Pulse®, memory buttons and steel and stainless weld programs.
- Intelx Elite feeder adds additional weld programs, intuitive display with on-demand graphics and more control.

Easy to use

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

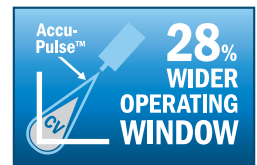
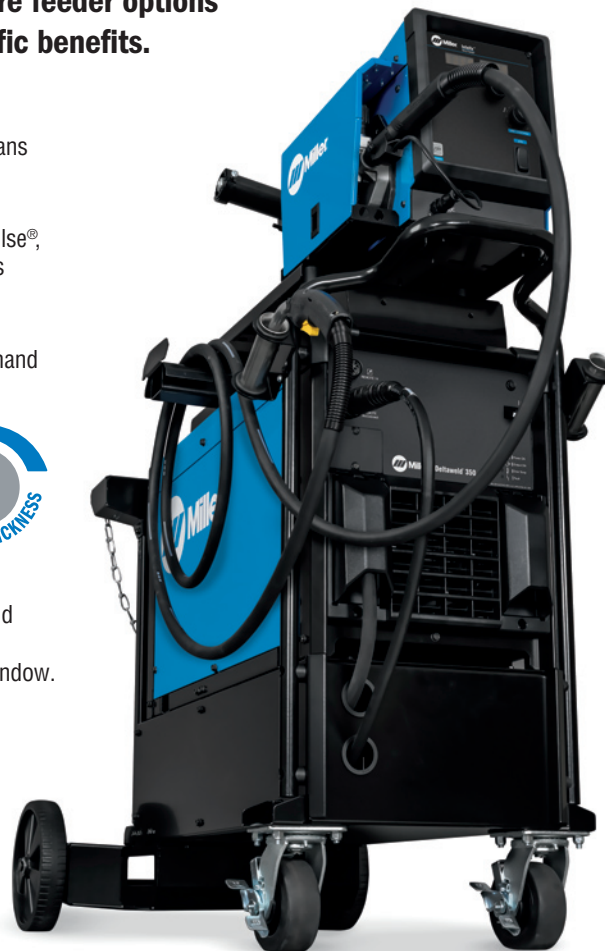


Pulse capable

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 Intelx™ Basic feeder, cart, guns and cables assembled.



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



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MillerWelds.com
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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.

Intelx™ 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.

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



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.



Intelx Basic single-wire feeder

- Display and controls for volts and wire feed speed
- Arc control to fine tune the welding arc
- Jog and purge button
- Trigger hold button



Intelx Pro 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



Intelx Elite single-wire feeder

- Soft keys to easily navigate menus
- Full-color LCD screen to simplify the setup and operation of a fully featured feeder
- Arc control to fine tune welding arc
- Memory buttons for quick program recall
- Trigger connections for standard MIG gun and XR-Aluma-Pro™ Plus and XR™-Pistol Plus push-pull guns

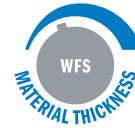
Intellex™ Feeders Comparison



Feature	Intellex™ Basic Feeder	Intellex™ Pro Feeder	Intellex™ Elite Feeder
Digital meters	■	■	Full color LCD
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	■	■	■
Insight Core™ compatible*	■	■	■
Insight Centerpoint™ Basic compatible*	■	■	■
EZ-Set MIG	■	■	■
EZ-Set Accu-Pulse®	■	■	■
Trigger select	■	■	■
Preflow and postflow	■	■	■
Memory slots	■	2	8
Out-of-box steel programs	■	■	■
Out-of-box stainless programs	■	■	■
Out-of-box aluminum programs	■	■	■
Out-of-box nickel programs	■	■	■
Out-of-box copper nickel programs	■	■	■
Out-of-box silicon bronze programs	■	■	■
Out-of-box titanium programs	■	■	■
EZ-Set high-deposition MIG	■	■	■
EZ-Set RMD®	■	■	■
XR™ Plus push-pull gun compatible	■	■	■
Profile Pulse™	■	■	■
Weld sequence control	■	■	■
Trigger dual schedule	■	■	■
Dual schedule switch support	■	■	■
Parameter limits	■	■	■
Memory lockouts	■	■	■
System lock	■	■	■
Wire retract	■	■	■
Auto thread and auto purge	■	■	■
Insight Centerpoint™ Premium compatible*	■	■	■

Processes include:

- MIG
- EZ-Set MIG (Intellex Pro and Intellex Elite)
- EZ-Set Accu-Pulse (Intellex Pro and Intellex Elite)
- EZ-Set High-deposition MIG (Intellex Elite)
- EZ-Set RMD® (Intellex Elite)



Intellex Pro and Intellex Elite feeder programs include:

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

Additional Intellex Elite feeder programs include:

- Aluminum
- Nickel
- Copper nickel
- Silicon bronze
- Titanium

*Insight module required.

Deltaweld® System Processes

MIG

- Lower spatter than traditional MIG welders
- Better arc performance with silicon bronze and coated materials

Accu-Pulse® *

- The most popular process for majority of industrial welding applications
- Most adaptive arc on 16 gauge (1.6 mm) and thicker
- Designed for all weld positions


High-deposition MIG (HD MIG)**

- Higher deposition rates than standard spray transfer on thicker materials
- Designed for welding applications in which spray transfer is preferred

RMD® **

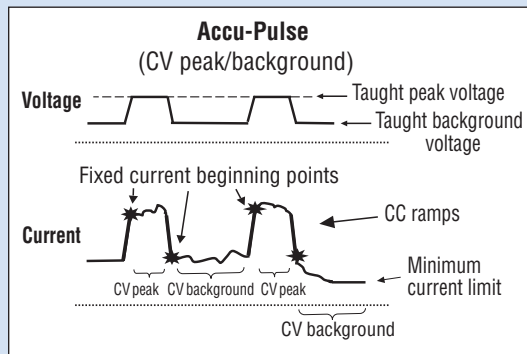
- Lowest heat process, best for gap handling
- Limited travel speed

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

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.

**With Intellix™ Pro and Intellix™ Elite feeders. **With Intellix™ Elite feeders.*



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™

With an Insight weld monitoring system you can get more done, produce higher-quality welds and control costs.

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.



Insight Centerpoint™ (Purchased license(s) of Centerpoint required.)

On-premises application providing productivity/utilization metrics, capture of welding parameters, operator weld sequence governance, and integration with enterprise IIoT solutions. Scalable to end user needs.

- **Measure welding productivity.** See each welder's arc-on time to set baselines and plan improvements. Capture activities to understand downtime reasons.
- **Govern operator tasks.** Through an easy-to-use operator interface direct welding and non-welding tasks to follow standard work practices, reduce out of sequence welds, and prevent missing welds.
- **Reduce training costs.** Utilize Centerpoint as the "Digital Mentor" to train new welders on proper production steps freeing up senior personnel for more productive activities.
- **Configure weld process remotely.** Full fleet management allows configuration of Deltaweld settings from Centerpoint.

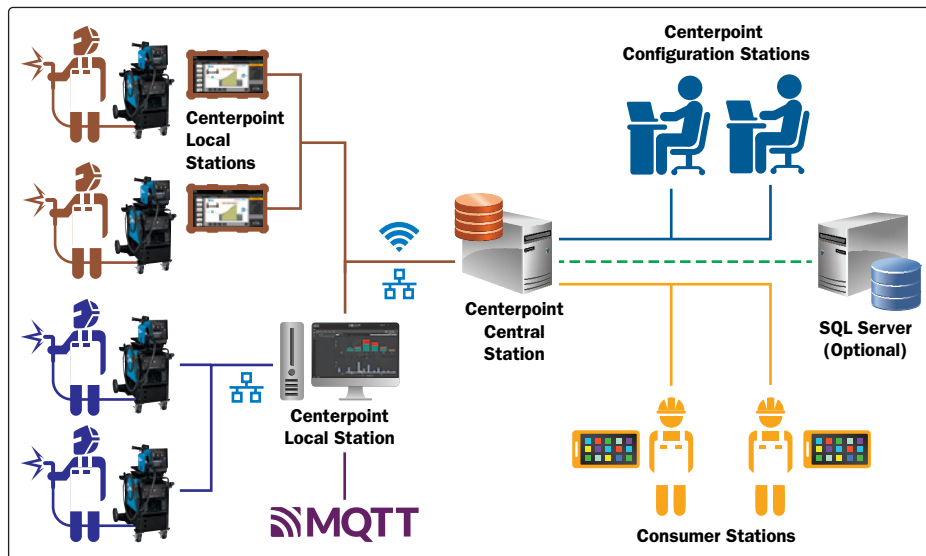
Modes of operation

- **Basic mode** included at no cost.
- **Premium mode** requires a purchased capability key for each Deltaweld.

301485 Centerpoint v10 Single License

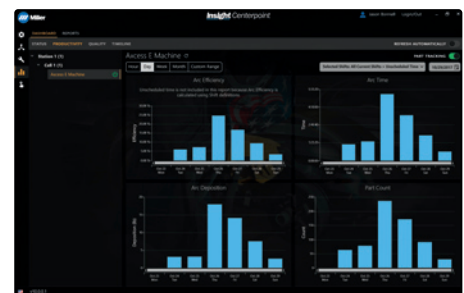
301703 Centerpoint Basic Capability Activation

301490 Centerpoint Premium Capability Activation



▲ Premium mode

▼ Basic mode



Learn more at MillerWelds.com/insight

Deltaweld® Specifications (Subject to change without notice.)



Model	Mode	Amp/Volt Ranges	Rated Output	Amps Input at Rated Output, 50 Hz, 3-Phase				Dimensions (Includes lift eye)	Net Weight
				380 V	400 V	KVA	KW		
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		

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

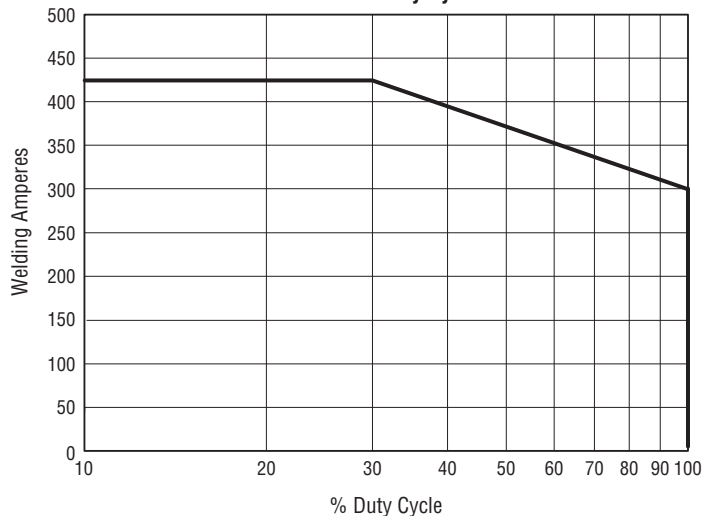
Intelx™ Feeder Specifications (Subject to change without notice.)



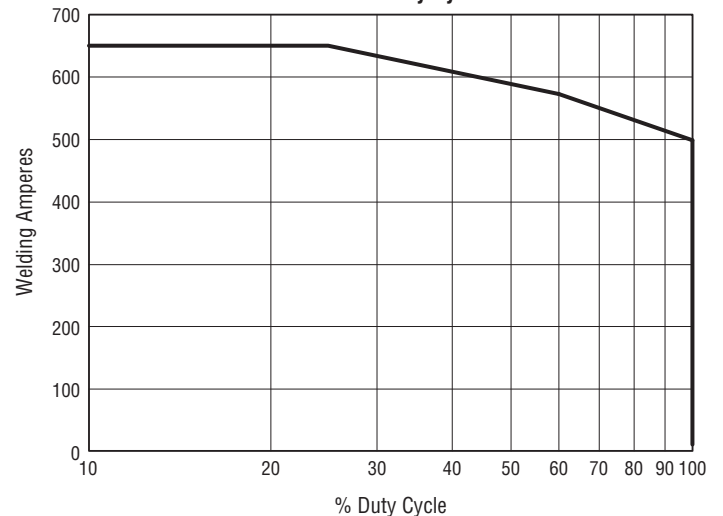
Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Size Capacity	Dimensions	Net Weight
50 VDC	Deltaweld 350 or 500	600 A at 113 VDC, 60% duty cycle	50–780 ipm (1.3–19.8 m/min.)	.023–5/64 in. (0.6–2.0 mm)	18 in. (457 mm) 60 lb. (27 kg)	Single-wire: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

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

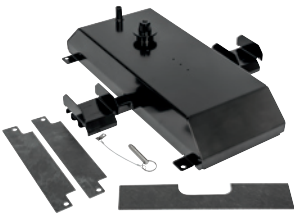
Single-wire feeder kit for use with running gear 301523. See note below for dual-wire feeder kit. Consists of flowmeter regulator with 5-foot (1.5 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, 15-foot (4.6 m) work cable with 600-amp C-clamp, and 9-foot (2.7 m) ArcConnect control/motor cable.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

295231 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 Intelix™ 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.







AccuLock™ Nozzle N-A3412C

Required for high-deposition MIG (HD MIG) process when using Bernard® BTB gun with AccuLock consumables.

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.

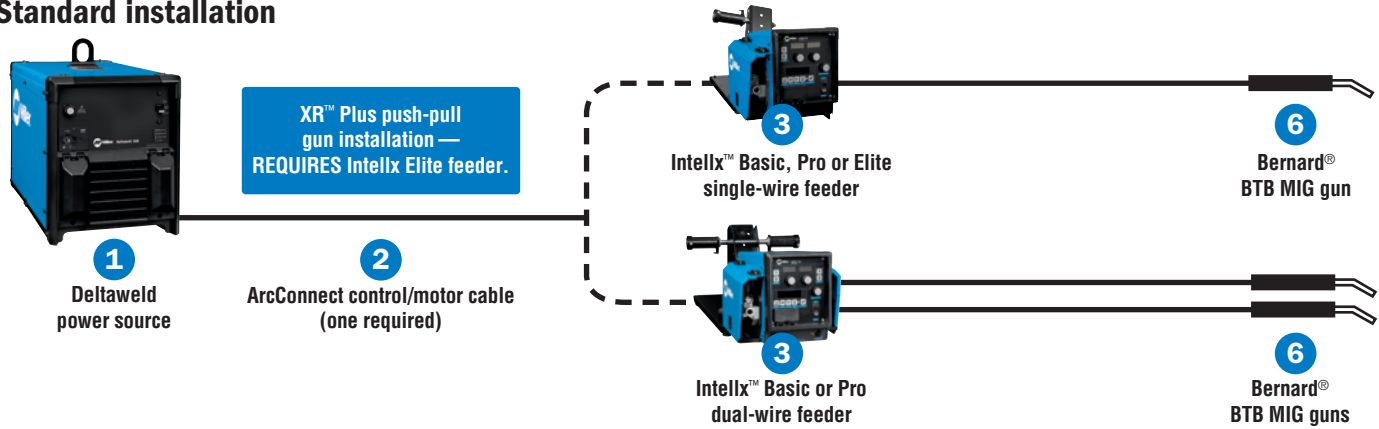
Nylon Guides for Feeding Aluminum

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

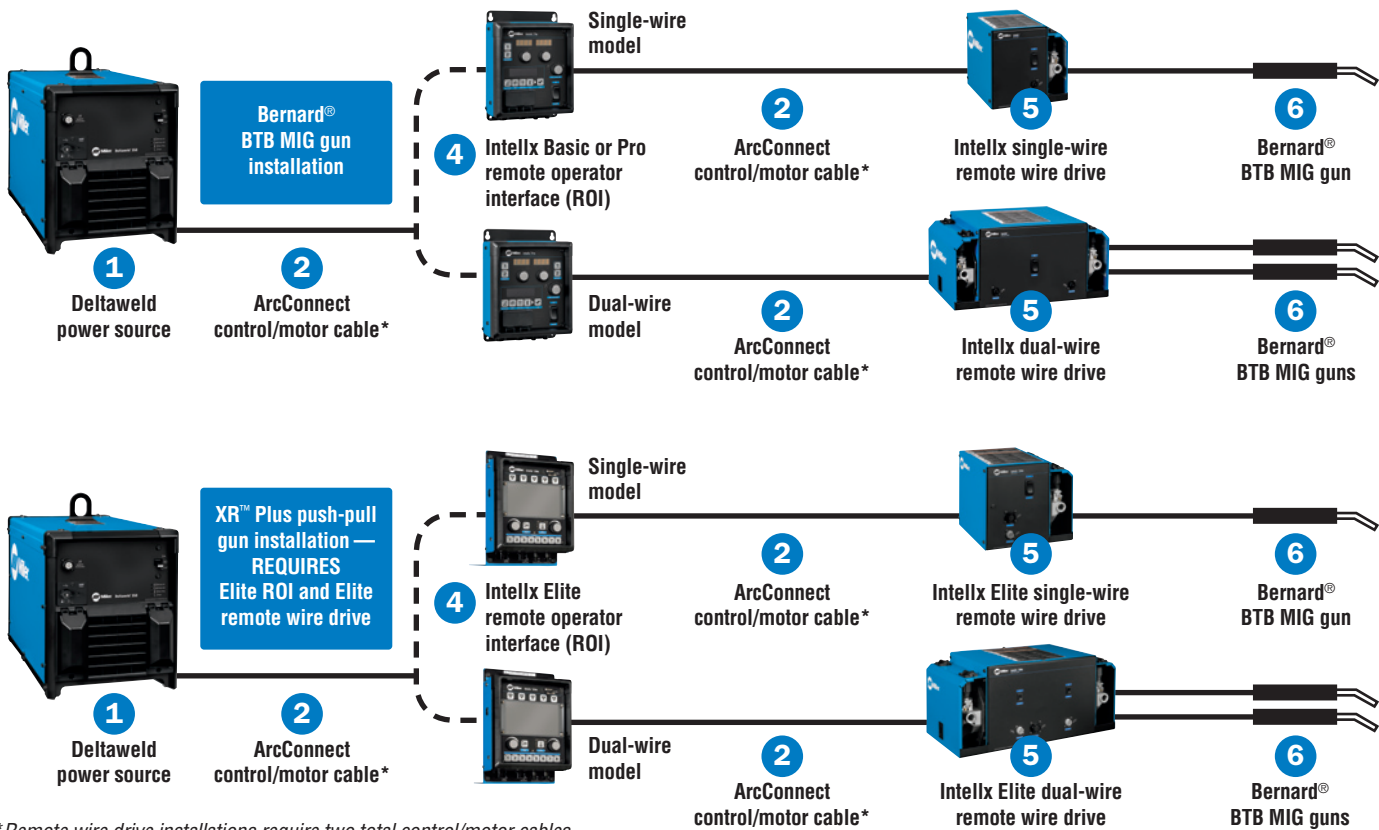
Note: U-groove drive rolls are recommended when feeding aluminum wire.

Typical Deltaweld® System Installations

Standard installation



Remote wire drive installations 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.

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	CE. With ArcConnect and 14-pin receptacle		
	907853003	CE. With ArcConnect, 14-pin receptacle and Insight		
Deltaweld® 500 380/400 V	907854001	CE. With ArcConnect and 14-pin receptacle		
	907854003	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	Single-wire feeder		
	301541	Dual-wire feeder		
Intellx Pro Bench-Style Wire Feeders	301492	Single-wire feeder		
	301540	Dual-wire feeder		
Intellx Elite Bench-Style Wire Feeder	301705	CE. Single-wire feeder		
4 Intellx Basic 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		
Intellx Elite Remote Operator Interface (ROI)	301606	CE. Control box for single-wire drive assembly. ONLY for use with Intellx Elite remote wire drive		
	301607	CE. Control box for dual-wire drive assembly. ONLY for use with Intellx Elite remote wire drive		
5 Intellx Remote Wire Drives	301554	Single-wire drive assembly		
	301555	Dual-wire drive assembly		
Intellx Elite Remote Wire Drives	301722	CE. Single-wire drive assembly. ONLY for use with Intellx Elite ROI		
	301723	CE. Dual-wire drive assembly. ONLY for use with Intellx Elite ROI		
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)	295231	For single-wire feeders and left side of dual-wire feeders		
	090389	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	For single-wire feeders and left side of dual-wire feeders		
	091668	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:

Distributed by:

