Issued August 2019 • Index No. M/3.0

70 Series

Constant-Speed Wire Feeder

Quick Specs

Heavy Industrial Applications
Heavy manufacturing
Metal fabrication
Construction
Light manufacturing

Processes
MIG (GMAW)
Flux-cored (FCAW)
(gas- and self-shielded)
Pulsed MIG (GMAW) with MPa Plus feeder and optional MPa power source

Input Power 24 VAC, 10 A, 50/60 Hz
Wire Diameter Capacity .023–5/64 in. (0.6–2.0 mm)
Wire Feed Speed 50–780 ipm (1.3–19.8 m/min.)
Net Weight Single-wire feeder: 58 lb. (26 kg)
Dual-wire feeder: 87 lb. (39.5 kg)

Models: **74S: Standard, basic design**
74D: Digital meters
74 MPa Plus: Digital, full-feature with push-pull capability

S-74S S-74D S-74 MPa Plus

10-foot, 14-pin interconnecting cord for connecting to any Miller® 14-pin power source.

Trigger receptacle oriented in a downward position to reduce potential damage.

Trigger hold reduces operator fatigue by allowing the operator to make long welds without having to energize the trigger continuously.

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

For MPa Plus feeders only! **XR-Aluma-Pro™ Plus and XR™-Pistol Plus push-pull guns for aluminum.** Comes in 15- and 25-foot lengths for extended reach with trouble-free, reliable feeding. Gun is available in either air- or water-cooled versions.

Posifeed™ wire drive assembly features

- **24 VDC high-torque, permanent-magnet motor**.
- **Quick-change drive rolls**.
- **Quick-release, calibrated drive-roll pressure arm** allows drive roll change without losing spring preload setting.
- **Four sealed ball bearing all-gear-driven drive-roll carriers** for smooth, positive and accurate wire feed with long uninterrupted service life.
- **Easy loading and threading of welding wire** without having to release the drive-roll pressure arm.
- **Solid-state speed control and brake circuit** eliminates the need for electrical/mechanical relays and increases service life.
- **Uses Miller standard 1-5/8 inch (41 mm) diameter drive rolls**.
- **Quick-connect for all Miller guns**.
- **Covered drive rolls** — easy access, heavy-duty, molded composite cover over drive assembly.
- **Floating positive drive systems** provide trouble-free feeding on a variety of wires.

TRUE BLUE® 3YR. WARRANTY

Wire feeder is warranted for three years, parts and labor.

Miller Electric Mfg. LLC
An ITW Welding Company
1635 West Spencer Street
P.O. Box 1079
Appleton, WI 54912-1079 USA

Equipment Sales US and Canada
Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125

MillerWelds.com

Certified System ISO 9001 Quality

74S and 74D Wire Feeder Features

S-74S single-wire feeder

S-74D single-wire feeder

S models (basic 70 Series feeders)

- **Wire speed control**.
- **Factory-set run-in control** for improved arc starts.
- **24 VDC high-torque, permanent-magnet motor**.
- **Quick-change drive rolls**.
- **Quick-release, drive-roll pressure arm** allows drive roll change without losing spring preload setting.
- **Solid-state speed control and brake circuit** for increased service life.
- **Floating positive drive systems** provide trouble-free feeding on a variety of wires.

D models add the following features

- **Digital meters** for easy viewing of the wire feed speed and voltage.
- **Remote voltage control** allows operator to set voltage at the wire feeder without having to go back to the power source.
- **Tachometer feedback** to help keep wire feed speed accurate.

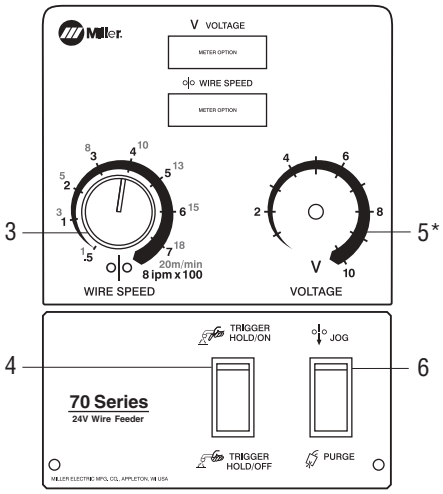
74S and 74D Specifications (Subject to change without notice.)

CV DC *(Use with CV, DC power sources.)*

Input Power	Wire Feed Speed	Wire Diameter Capacity	Dimensions S-74 (Single-Wire)	D-74 (Dual-Wire)	Net Weight S-74 (Single-Wire)	D-74 (Dual-Wire)
24 VAC, 10 A, 50/60 Hz	50–780 ipm (1.3–19.8 m/min.) Optional high-speed motor: 90–1,440 ipm (2.3–36.6 m/min.)	.023–5/64 in. (0.6–2.0 mm)	H: 14 in. (356 mm) W: 12.5 in. (318 mm) D: 28 in. (711 mm)	H: 14 in. (356 mm) W: 21 in. (533 mm) D: 35 in. (889 mm)	58 lb. (26 kg)	87 lb. (39.5 kg)

74S and 74D Control Panels

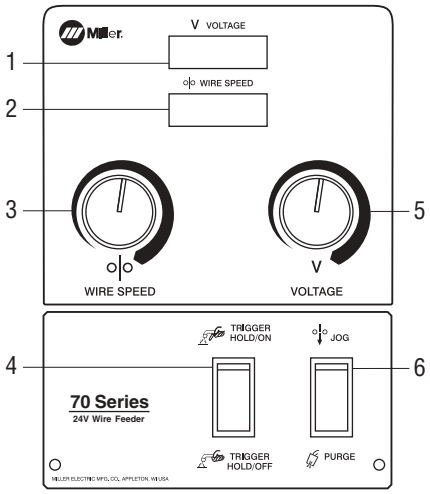
S-74S



1. Voltage Display Meter
2. Wire Speed Display Meter
3. Wire Feed Speed Adjust
4. Trigger Hold
5. Voltage Adjust*
6. Jog/Purge

Optional on S-74S. See Remote Voltage Control on page 6.

S-74D



Miller

74 MPa Plus Wire Feeder Features

S-74 MPa Plus single-wire feeder

D-74 MPa Plus dual-wire feeder

MPa Plus models have the features of the S and D models and add the following

- **Four weld programs** allow the operators to store four independent welding parameters reducing welding setup time. (Four programs available per side on dual-wire feeder.)
- **Adjustable run-in control** for improved arc starts.
- **Adjustable weld sequence control** gives operator complete control of the welding parameters: preflow, run-in, weld time, crater, burnback and postflow.
- **Welding process range control** locks parameters at a set percentage of welding parameters to ensure welding procedures and quality standards are maintained on the shop floor.
- **Dual schedule, trigger dual schedule and trigger program select** allows operator to switch welding parameters without readjusting machine, eliminating downtime and enhancing quality.
- **Push-pull capability** provides consistent, versatile and dependable aluminum wire feeding over greater distances.
- **Synergic pulsed MIG** operation with MPa power supplies. Provides communication between the power source, feeder and gun. As wire speed increases/decreases, the pulse parameters also increase/decrease to match the right amount of power needed.
- **Trigger schedule select** allows the operator to select the alternative schedule by quickly tapping the gun trigger when not welding. When optimized with MPa power sources the operator can also switch from MIG to pulsed MIG.
- **Profile Pulse**™ provides TIG appearance with MIG simplicity and productivity. Achieve "stacked dime" weld bead appearance without back-stepping. Profile Pulse frequency can be changed to increase or decrease the spacing between the ripple pattern to achieve the desired weld appearance.

- **Accu-Mate**™ properly seats the power pin for best feeding performance and prevents Accu-Mate grooved MIG guns from sliding in the casting.

74 MPa Plus Specifications (Subject to change without notice.)

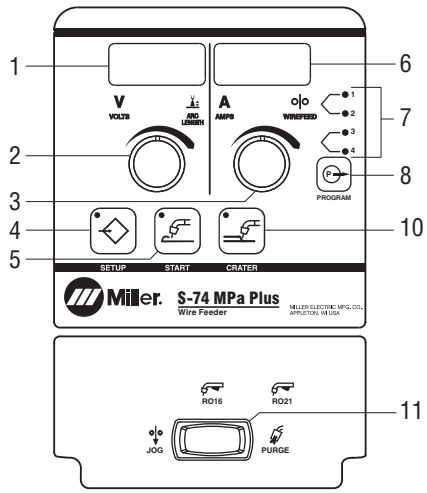
CV DC *(Use with CV, DC power sources.)*

Input Power	Wire Feed Speed	Wire Diameter Capacity*	Dimensions S-74 MPa Plus (Single-Wire)	D-74 MPa Plus (Dual-Wire)	Net Weight S-74 MPa Plus (Single-Wire)	D-74 MPa Plus (Dual-Wire)
24 VAC, 10 A, 50/60 Hz	50–780 ipm (1.3–19.8 m/min.)	.023–5/64 in. (0.6–2.0 mm) .035–1/16 in. (0.9–1.6 mm) aluminum	H: 14 in. (356 mm) W: 12.5 in. (318 mm) D: 28 in. (711 mm)	H: 14 in. (356 mm) W: 21 in. (533 mm) D: 35 in. (889 mm)	58 lb. (26 kg)	87 lb. (39.5 kg)

Wire kit **230708 is required to run 1/16 in. (1.6 mm) aluminum wire on XR-Aluma-Pro™ Plus guns and XR™-Pistol Plus guns.*

74 MPa Plus Control Panels

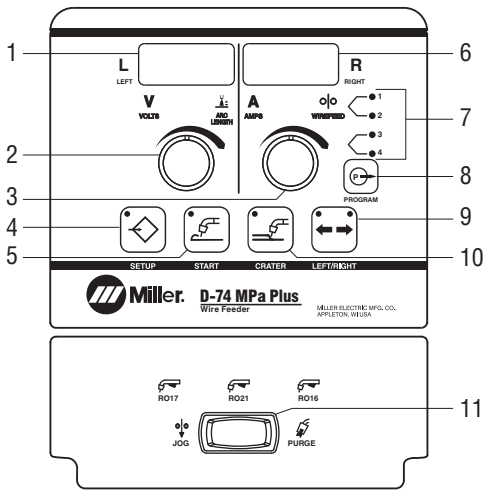
S-74 MPa Plus



1. Voltage/Arc Length Display Meter
2. Voltage/Arc Length Adjust
3. Amperage/Wire Speed Adjust
4. Setup Button
5. Start Button
6. Amperage/Wire Speed Display Meter
7. Program Indicators
8. Program Button
9. Left/Right Select Button*
10. Crater Button
11. Jog/Purge

D-74 MPa Plus only

D-74 MPa Plus



70 Series Control Box, Cables and Wire Drive Motor Assemblies

Single-Remote Configuration

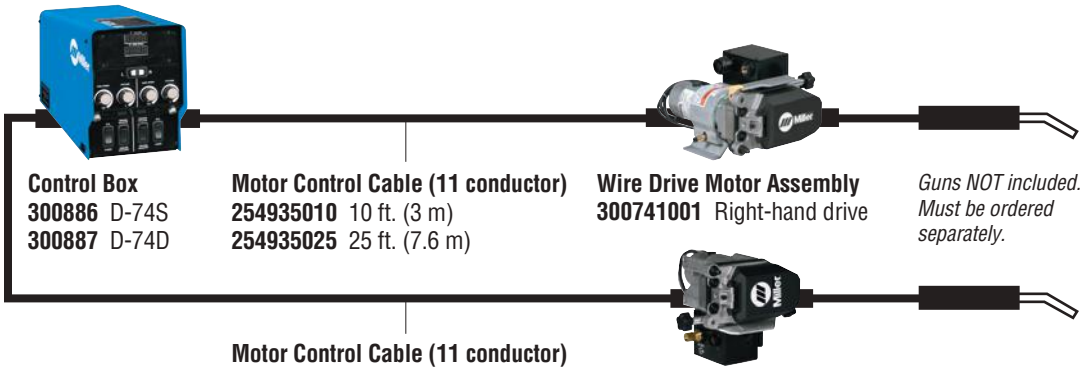
Control Box
300881 S-74S
300882 S-74D

Motor Control Cable (11 conductor)
254935010 10 ft. (3 m)
254935025 25 ft. (7.6 m)

Wire Drive Motor Assembly
300904 Left-hand drive

Gun NOT included. Must be ordered separately.

Dual-Remote Configuration



Control Box
300886 D-74S
300887 D-74D

Motor Control Cable (11 conductor)
254935010 10 ft. (3 m)
254935025 25 ft. (7.6 m)

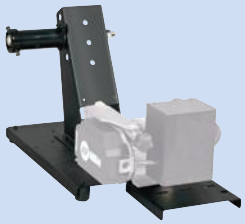
Wire Drive Motor Assembly
300741001 Right-hand drive

Guns NOT included. Must be ordered separately.

Motor Control Cable (11 conductor)
254935010 10 ft. (3 m)
254935025 25 ft. (7.6 m)

Wire Drive Motor Assembly
300904 Left-hand drive

Flexible mounting options for wire drive assembly
Fixed automation, boom applications, or other applications that benefit from having the drive assembly located away from the control box.



If using spooled wire you will need to order **Feeder Base 195369.**

70 Series MPa Plus Control Box, Cables and Wire Drive Motor Assemblies

Single-Remote Configuration

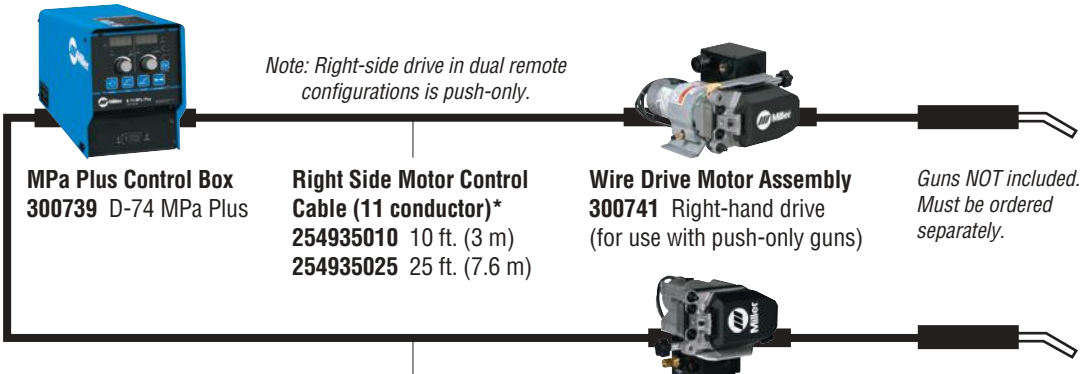
MPa Plus Control Box
300738 S-74 MPa Plus

MPa Plus Motor Control Cable (14 conductor)*
254864010 10 ft. (3 m)
254864025 25 ft. (7.6 m)
254864050 50 ft. (15.2 m)

MPa Plus Wire Drive Motor Assembly
300740 Left-hand drive
(for use with push-only guns, or XR-Aluma-Pro™ Plus and XR™-Pistol Plus push-pull guns)

Gun NOT included. Must be ordered separately.

Dual-Remote Configuration



Note: Right-side drive in dual remote configurations is push-only.

MPa Plus Control Box
300739 D-74 MPa Plus

Right Side Motor Control Cable (11 conductor)*
254935010 10 ft. (3 m)
254935025 25 ft. (7.6 m)

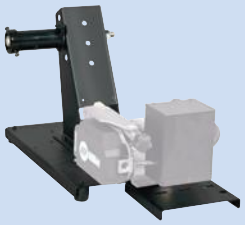
Wire Drive Motor Assembly
300741 Right-hand drive
(for use with push-only guns)

Guns NOT included. Must be ordered separately.

MPa Plus Motor Control Cable (14 conductor)*
254864010 10 ft. (3 m)
254864025 25 ft. (7.6 m)
254864050 50 ft. (15.2 m)

MPa Plus Wire Drive Motor Assembly
300740 Left-hand drive
(for use with push-only guns, or XR-Aluma-Pro™ Plus and XR™-Pistol Plus push-pull guns)

Flexible mounting options for wire drive assembly
Fixed automation, boom applications, or other applications that benefit from having the drive assembly located away from the control box.



If using spooled wire you will need to order **Feeder Base 195369.**

Power Source Compatibility for MPa Plus Wire Feeders

Power Source	Pulse Capable	Synergic Pulsed MIG	System Communication Enhanced Arc Control	Electronic Inductance/ SharpArc®	Compatibility
Invision™ 352 and 450 MPa	Yes	Yes	Yes	Yes	Best
XMT® 350 and 450 MPa	Yes	Yes	Yes	Yes	Best
AlumaPower™ 350 and 450 MPa	Yes *(Aluminum only)*	Yes *(Aluminum only)*	Yes	Yes	Best
XMT® 350 and 450 CC/CV	Yes *(with Optima)*	No	No	Yes	Better
XMT® 304 CC/CV	Yes *(with Optima)*	No	No	Yes	Better
Invision™ 456P	Yes *(with Optima)*	No	No	Yes	Better
Invision™ 456MP	Yes	No	No	Yes	Better
Invision™ 354P	Yes *(with Optima)*	No	No	Yes	Better
Invision™ 354MP	Yes	No	No	Yes	Better
Deltaweld® Series *(after KF790532)*	No	No	No	No	Good
Dimension™ 650	No	No	No	No	Good
Dimension™ Series *(after KE614131)*	No	No	No	No	Good

Note: Power sources not included in this list are not recommended. For specific information, please contact your local Miller® distributor.

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)	Polished stainless steel "U" groove for aluminum wires contains nylon guides
.035 in. (0.9 mm)	**151026**	—	**151052**	—	**265255**
.040 in. (1.0 mm)	**161190**	—	—	—	—
.045 in. (1.1/1.2 mm)	**151027**	**151037***	**151053**	**151070**	**265256***
.052 in. (1.3/1.4 mm)	**151028**	—	**151054**	—	—
1/16 in. (1.6 mm)	**151029**	**151039**	**151055**	**151072**	**265257**
.068/.072 in. (1.8 mm)	—	—	**151056**	—	—
5/64 in. (2.0 mm)	—	—	**151057**	—	—
3/32 in. (2.4 mm)	—	**151041**	**151058**	—	—

**Accommodates .045- and .047-inch (3/64-inch) wire.*

Nylon Wire Guides for Feeding Aluminum Wire

Wire Size	Inlet Guide	Intermediate Guide
.035 in. (0.9 mm)	**221912**	**242417**
.047 in. (1.2 mm)	**221912**	**205936**
1/16 in. (1.6 mm)	**221912**	**205937**

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

Wire Guides

Wire Size	Inlet Guide	Intermediate Guide
.023–.040 in. (0.6–1.0 mm)	**221030**	**149518**
.045–.052 in. (1.1–1.4 mm)	**221030**	**149519**
1/16–5/64 in. (1.6–2.0 mm)	**221030**	**149520**
3/32–7/64 in. (2.4–2.8 mm)	**229919**	**149521**

Genuine Miller® Options and Accessories

Remote Voltage Control
194988 Field. Non-digital for S-74S model
194991 Field. Non-digital for D-74S model

Industrial MIG 4/0 Kit with Dinse Connectors 300405
For use with AlumaPower 350 MPa, Invision™ 350 MPa and 352 MPa, and XMT® 304 and 350 power sources. This useful pulse-ready MIG kit can be purchased separately. Includes flowmeter regulator with 10-foot (3 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with Dinse-style connector on one end and a lug on the other, and 15-foot (4.6 m) work cable with Dinse-style connector on one end and 600-amp C-clamp on the other.

Industrial MIG 4/0 Kit 300390
For use with AlumaPower 450 MPa, Invision™ 450 MPa, XMT® 450 CC/CV and MPa, CP-302, Deltaweld®, and Dimension™ power sources. Includes flowmeter regulator with 10-foot (3 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, and 15-foot (4.6 m) work cable with 600-amp C-clamp.

Feeder Cart 142382
A low-profile, creeper cart which allows the operator to easily move the feeder around the work area. Shipped disassembled.

Turntable Assembly 146236
Allows rotation of the feeder as operator changes work positions. This reduces strain and bending on gun cable.

Hanging Bail (Electrically Isolated) 058435
Used for suspending feeder over work area.

Wire Straightener

141580 For .035–.045 inch (0.9–1.1 mm) diameter wire.

141581 For 1/16–1/8 inch (1.6–3.2 mm) diameter wire.

Helps reduce the cast in wire to improve wire feeding performance and increase the service life of the gun liner and contact tip.

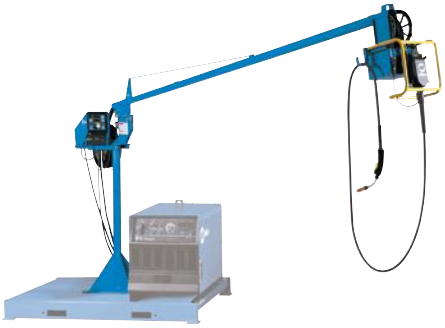
Spool Covers
057607 For S-74 and left side of D-74 models
090389 For right side of D-74 models
For 12-inch (305 mm) spool.
Note: Spool covers cannot be installed if the wire drive assembly is in a rotated position.

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 S-74 and left side of D-74 models
091668 For right side of D-74 models
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.

Extension Cables
247831025 25 ft. (7.6 m)
247831050 50 ft. (15.2 m)
247831080 80 ft. (24.4 m)
Eleven conductors to support contactor control and remote voltage control on all Miller electronic CV 14-pin power sources. Additional functions supported when using the MPa power sources include synergic pulsed MIG, and remote process select and side select capabilities.



Swingarc™ Boom-Mounted Wire Feeders
Swingarc boom-mounted semiautomatic wire feeders bring an extra dimension of flexibility and efficiency to high-production wire welding stations. You get an effective solution that maximizes output, especially when dealing with large weldments and hard-to-reach places. See literature M/13.11.

For MPa Plus Wire Feeders only

XR-Aluma-Pro™ Plus Guns
300000001 15 ft. (4.6 m), air-cooled
300001001 25 ft. (7.6 m), air-cooled
300003001 15 ft. (4.6 m), water-cooled
300004001 25 ft. (7.6 m), water-cooled
This easy-to-use and easy-to-maintain gooseneck-style MIG gun is designed for push-pull wire feed systems. Available in air- or water-cooled versions. Gun design allows for better access into tight spots.

XR™-Pistol Plus Guns
300753 15 ft. (4.6 m), air-cooled
300754 25 ft. (7.6 m), air-cooled
300757 25 ft. (7.6 m), water-cooled
This easy-to-use and easy-to-maintain pistol-grip MIG gun is designed for push-pull wire feed systems. Available in air- or water-cooled versions.

1/16-inch (1.6 mm) Wire Kit 230708
Specially designed for 1/16-inch wire. Includes idler roll, head tube liner and inlet guide. Required when running 1/16-inch wires. Not included with standard XR-Aluma-Pro Plus or XR-Pistol Plus guns.

Hardwire Liner Kit for Steel and Stainless 198377
For 15-, 25-, or 35-foot (4.6, 7.6 or 10.6 m) guns. Kit consists of gun head tube liner and feed cable liner. Recommend using .030–.045 inch mild steel or stainless steel electrode wire (.052- and 1/16-inch wire not recommended).

Phosphorous Bronze Liner (Optional)
233999 Long head tube (air or water)
233998 Short head tube (air only)

Steel Liner (Optional)
242191 Short head tube (air only)

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Single-Wire Feeders (includes one 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls)				
S-74S	**951196**	With standard motor		
S-74D	**951198**	With standard motor		
S-74 MPa Plus *(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)*	**951291**	With standard motor, optimized for MPa power sources with push-pull capability		
Dual-Wire Feeders (includes two 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls)				
D-74S	**951203**	With standard motor		
D-74D	**951204**	With standard motor		
D-74 MPa Plus *(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)*	**951292**	With standard motor, optimized for MPa power sources with push-pull capability		
Remote Voltage Control	**194988** **194991**	Field. Non-digital control *(S-74S model only)* Field. Non-digital control *(D-74S model only)*		
Remote Configurations		See page 4		
Replacement Gun and Consumables				
Bernard® BTB Gun 400 A	**Q4015AE8EMC**	400 A, 15 ft. (4.6 m)		
XR-Aluma-Pro™ Plus and XR™-Pistol Plus		For MPa Plus wire feeders only. See page 7		
Centerfire™ consumables				
Power Sources				
Invision™ 352 MPa and 450 MPa		See literature DC/23.6		
XMT® 350 and XMT® 450		See literature DC/18.93 and DC/18.94		
CP-302 and Deltaweld® Series		See literature DC/13.0 and DC/16.2		
Dimension™ 452 and Dimension™ 650		See literature DC/19.2 and DC/19.3		
Accessories				
Industrial MIG 4/0 Kits		See page 6		
Feeder Cart	**142382**			
Turntable Assembly	**146236**			
Hanging Bail	**058435**	Electrically isolated		
Wire Straightener		See page 6		
Spool Covers		See page 6		
Spool Adapter	**047141**			
Wire Reel Assembly	**108008**			
Reel Covers		See page 6		
Extension Cables		See page 6		
Swingarc™ Boom-Mounted Wire Feeders		See literature M/13.11		

Date: **Total Quoted Price:**

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