

74 MPa Plus

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 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: 48 lb. (21.8 kg)
Dual-wire feeder: 87 lb. (39.5 kg)



S-74 MPa Plus single-wire feeder

D-74 MPa Plus dual-wire feeder

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

Toolless rotatable drive assembly allows operator to rotate drive housing, allowing a straight path for wire flow.

Accu-Mate™ properly seats the MIG gun power pin for best feeding performance.

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



XR-Aluma-Pro™ Plus and XR™-Pistol Plus push-pull guns for aluminum. Guns come in 15-, 25-, and 35-foot lengths for extended reach with trouble-free, reliable feeding, and are available in 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.
- Easy loading and threading of welding wire without having to release the drive-roll pressure arm.
- Four sealed ball bearing all-gear-driven drive-roll carriers for smooth, positive and accurate wire feed with long uninterrupted service life.
- 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.



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



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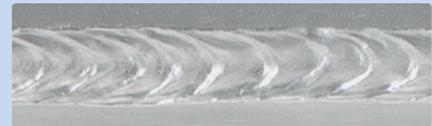
Additional 74 MPa Plus Wire Feeder Features



- **Wire speed control.**
- **Four gear-driven drive rolls** provide more consistent feeding on larger wire diameters.
- **10-foot, 14-pin interconnecting cord** for connecting to any Miller® 14-pin power source.
- **Tachometer feedback** to help keep wire feed speed accurate.
- **Digital meters** ensure accuracy when presetting and reading actual voltage, amperage and wire feed speed.
- **Remote voltage control** allows you to set both voltage and wire feed speed at the feeder, saving time and increasing weld quality.
- **Adjustable run-in control** for improved arc starts.
- **Dual schedule control** allows the operator to switch between two preconfigured welding parameters without readjusting the machine, saving time and enhancing quality.
- **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.
- **Trigger program select** provides the ability to access any of the four active programs.
- **Trigger hold** allows the operator to make long welds without having to hold the trigger continuously, reducing operator fatigue.
- **Sequence control** gives the operator the ability to adjust all 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.
- **Four weld program memories** allow operators to recall up to four previously used processes and their weld settings. (Four programs available per side on dual-wire feeder.)
- **Push-pull capability** provides consistent, versatile and dependable aluminum wire feeding over greater distances.

Additional features when used with AlumaPower MPa or XMT MPa power sources

- **Synergic pulsed MIG.** 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, reducing the need to make additional adjustments.
- **Profile Pulse™** provides TIG appearance with MIG simplicity and productivity. Achieve “stacked dime” weld bead appearance without gun manipulation. Profile Pulse frequency can be changed to increase or decrease the spacing between the ripple pattern to achieve the desired weld appearance.



Specifications (Subject to change without notice.)

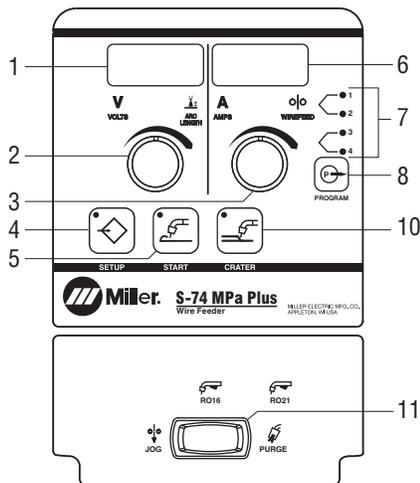
CV DC (Use with CV, DC power sources.)

Input Power	Wire Feed Speed	Wire Diameter Capacity*	Dimensions		Net Weight S-74 MPa Plus (Single-Wire)	D-74 MPa Plus (Dual-Wire)
			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)	48 lb. (21.8 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.

Control Panels

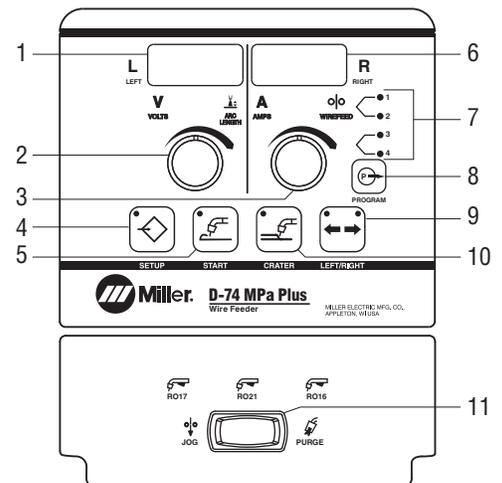
S-74 MPa Plus



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



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 MPa* and 450 MPa*	■	■	■	■	Best
XMT® 350 MPa and 450 MPa	■	■	■	■	Best
AlumaPower™ 350 MPa and 450 MPa	■ (Aluminum only)	■ (Aluminum only)	■	■	Best
XMT® 350 CC/CV and 450 CC/CV	■ (with Optima*)			■	Better
XMT® 304 CC/CV*	■ (with Optima*)			■	Better
Invision™ 354P* and 456P*	■ (with Optima*)			■	Better
Invision™ 354 MP* and 456MP*	■			■	Better
Deltaweld® Series* (after KF790532)					Good
XMT® 650 CC/CV and 650 ArcReach non-polarity reversing model (after NB410742C)					Good
Dimension™ 650*					Good
Dimension™ Series* (after KE614131)					Good

*Discontinued product.

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

74 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.*

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**.

Dual-Remote Configuration



MPa Plus Control Box
300739 D-74 MPa Plus

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

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.

*Gun NOT included.
Must be ordered separately.*



*Gun 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.

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-knurl 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



XR-Aluma-Pro™ Plus Guns

- 301575** 15 ft. (4.6 m), air-cooled
- 301574** 25 ft. (7.6 m), air-cooled
- 301739** 35 ft. (10.7 m), air-cooled
- 301576** 15 ft. (4.6 m), water-cooled
- 301577** 25 ft. (7.6 m), water-cooled
- 301740** 35 ft. (10.7 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)



Industrial MIG 4/0 Kit with Dinse Connectors

- 300405** For single-wire feeders
 - 300956** For dual-wire feeders
- For use with AlumaPower 350 MPa and XMT® 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. Dual kit comes with two flowmeter regulators and gas hoses.



Industrial MIG 4/0 Kit with lugs

- 300390** For single-wire feeders
 - 300957** For dual-wire feeders
- For use with AlumaPower 450 MPa, XMT® 450 CC/CV and MPa, and XMT® 650 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. Dual kit comes with two flowmeter regulators and gas hoses.



Feeder Cart 142382

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

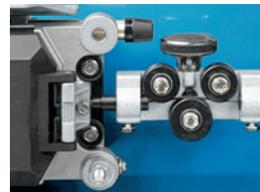
Turntable Assembly 146236

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 constant-voltage (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.

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
S-74 MPa Plus Single-Wire Feeder <i>(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)</i>	951291001	With standard motor, 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls — optimized for MPa power sources with push-pull capability		
D-74 MPa Plus <i>(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)</i>	951292001	With standard motor, two 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls — optimized for MPa power sources with push-pull capability		
Remote Configurations		See page 4		
Replacement Gun and Consumables				
Bernard® BTB Gun 400 A	Q4015AE9EMC	15 ft. (4.6 m), 400 A MIG gun with AccuLock™ consumables		
XR-Aluma-Pro™ Plus and XR™-Pistol Plus		See page 6		
AccuLock™ Consumables				
Power Sources				
AlumaPower™ 350 MPa and 450 MPa		See literature DC/34.0		
XMT® 350 CC/CV and MPa		See literature DC/18.93		
XMT® 450 CC/CV and MPa		See literature DC/18.94		
XMT® 650 CC/CV and ArcReach®		See literature DC/18.98		
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		

Date:

Total Quoted Price:

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