

# 70 Series Swingarc™

**Boom-Mounted 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 control 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** 160–280 lb. (73–127 kg)  
depending upon drive assembly and boom

**MPa Plus Swingarc models** provides synergic pulsed MIG with any MPa power source.

Available in **single- and dual-wire models with 12- or 16-foot booms** to accommodate a wide variety of semiautomatic wire feed applications, including large weldments and hard-to-reach areas.

**360-degree rotation and 60-degree lift angle** maximizes your work area (24- or 32-foot diameter work area).

**Unique counterbalanced boom** makes it easy to raise and lower boom and automatically holds its position.

**Includes 10-foot 14-pin interconnecting cord, 10-foot gas hose and 10-foot weld cable** for the operator to hook up.

**Control features on page 2.**

**In-boom cable routing** organizes hoses and cables, preventing damage and maintaining an orderly work cell.

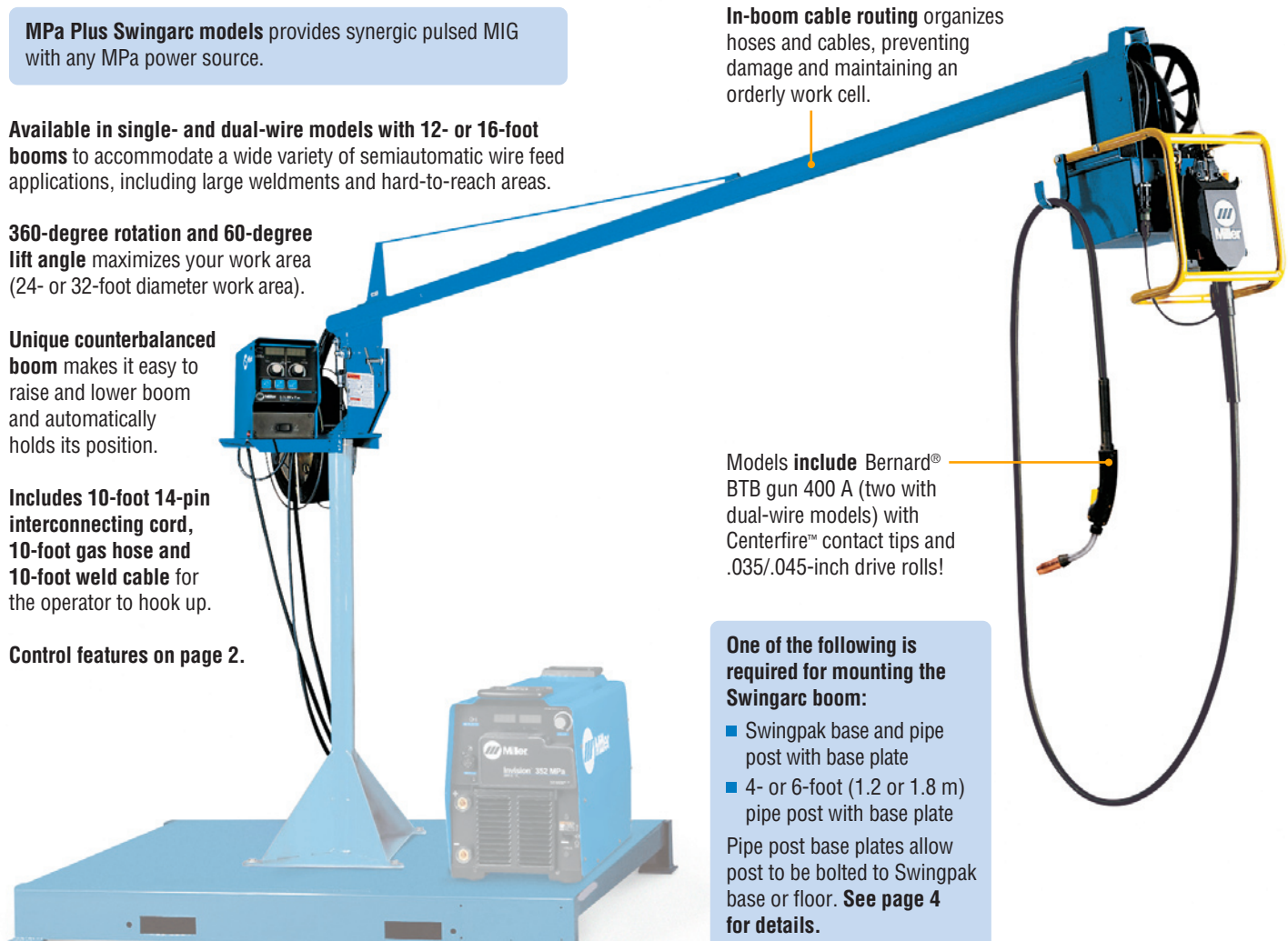
Models include Bernard® BTB gun 400 A (two with dual-wire models) with Centerfire™ contact tips and .035/.045-inch drive rolls!

**One of the following is required for mounting the Swingarc boom:**

- Swingpak base and pipe post with base plate
- 4- or 6-foot (1.2 or 1.8 m) pipe post with base plate

Pipe post base plates allow post to be bolted to Swingpak base or floor. **See page 4 for details.**

Single-wire Swingarc shown with included welding gun. Also shown are required pipe post and power source, and optional Swingpak™ base which are each sold separately.



Boom, control box and drive assembly are warranted for three years, parts and labor.



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## 70 Series Control Features



### Models

**74D:** Digital meters and remote voltage control

**74 MPa Plus:** Digital full feature with push-pull capability

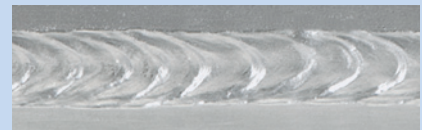
*Note: 70 Series feeders are shown, but front panels are the same for both feeders and controls.*

### 74D models features

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

### 74 MPa Plus models include 74D features 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 control.)
- **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, control 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.



## Specifications (Subject to change without notice.)

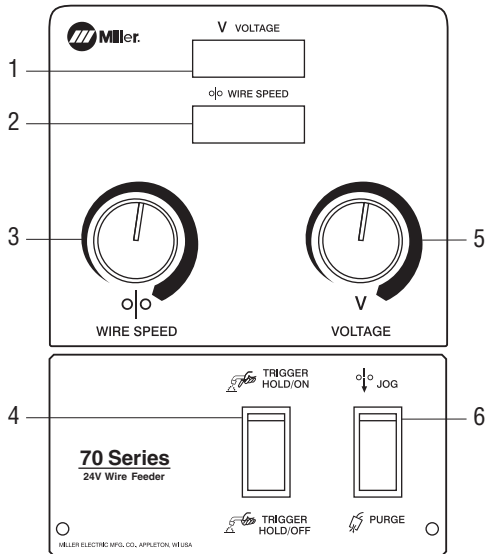


(Use with CV, DC power sources.)

Model	Input Power	Wire Feed Speed	Wire Diameter Capacity	12 ft. Boom Net Weight	16 ft. Boom Net Weight
SS-74D	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)	160 lb. (73 kg)	210 lb. (95 kg)
DS-74D				207 lb. (94 kg)	280 lb. (127 kg)
SS-74 MPa Plus	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)	160 lb. (73 kg)	210 lb. (95 kg)
DS-74 MPa Plus				207 lb. (94 kg)	280 lb. (127 kg)

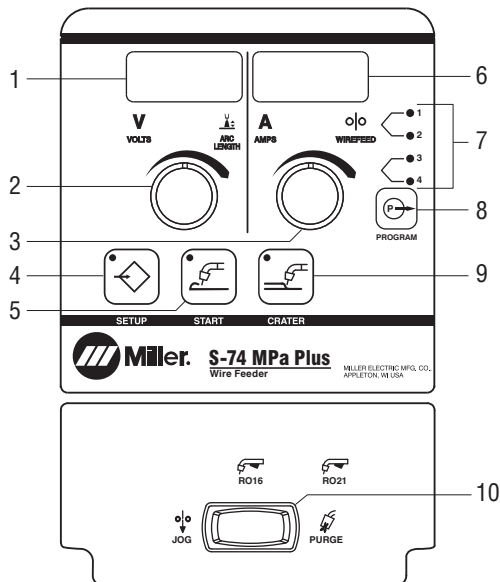
\*Wire kit **230708** is required to run 1/16 in. (1.6 mm) aluminum wire on XR-Aluma-Pro™ Plus guns and XR™-Pistol Plus guns.

# Control Panels



## SS-74D

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








## SS-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. Crater Button
10. Jog/Purge

## 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" clogged 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	—	—
.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	—	—

\*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 mm)	221030	149520

## Mounting Equipment for Swingarc™ Booms

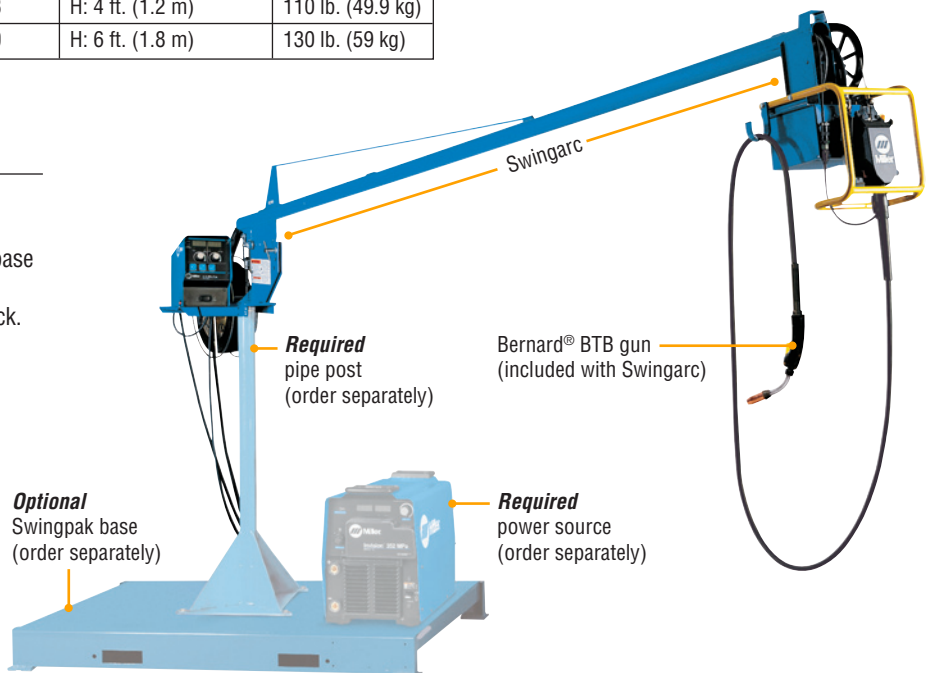
### Specifications and Usage (Subject to change without notice.)

Usage	Model	Stock No.	Dimensions	Net Weight
For 12 or 16 ft. Swingarc	Swingpak Base	183997	L: 65 in. (1.7 m) W: 50.875 in. (1.3 m)	285 lb. (129 kg)
	4 ft. Pipe Post with Base	149838	H: 4 ft. (1.2 m)	110 lb. (49.9 kg)
	6 ft. Pipe Post with Base	149839	H: 6 ft. (1.8 m)	130 lb. (59 kg)

### Swingpak™ Base

For use with 12- or 16-foot (3.7 or 4.9 m) Swingarc. Each base accommodates a Swingarc feeder system, power source, coolant system, and gas cylinder. The base plate is solid to help better organize components and cables. The entire unit can be moved with a forklift truck.

Note: Base must be mounted to floor with 16-foot Swingarc.





**Single/Dual Spool Carrier  
(Pipe Post not included)**  
**300353** For 4 ft. post  
**300352** For 6 ft. post



**Industrial MIG 4/0 Kit with Dinse Connectors  
300405**

For use with AlumaPower 350 MPa, Invision™ 352 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.



**Industrial MIG 4/0 Kit 300390**

For use with AlumaPower™ 450 MPa, Invision™ 450 MPa, XMT® 450, 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.

**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.

**Extension Cables for 14-Pin Plugs to 14-Pin Sockets**

- 242208025** 25 ft. (7.6 m)
- 242208050** 50 ft. (15.2 m)
- 242208080** 80 ft. (24.4 m)

Provides 14-pin, 24 VAC, contactor and voltage control. Add to the standard 10-foot (3 m) feeder cable to extend feeder farther from power source.



**PSA-2 Control 141604**

Required if using 70 Series controls with a power source that only supplies 115-volt power. When using the PSA control remote voltage is not functional. Control is

equipped with a 14-pin receptacle and a 10-foot (3 m) interconnecting cord with Hubbell connections for older-style power sources. Can also be used with competitive power sources requiring a contact closure for contactor control.

**For MPa Plus Controls only**

**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.



**XR-Aluma-Pro™ Plus Guns**

- 300000001** 15 ft. (4.6 m), air-cooled
- 300001001** 25 ft. (7.6 m), air-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)

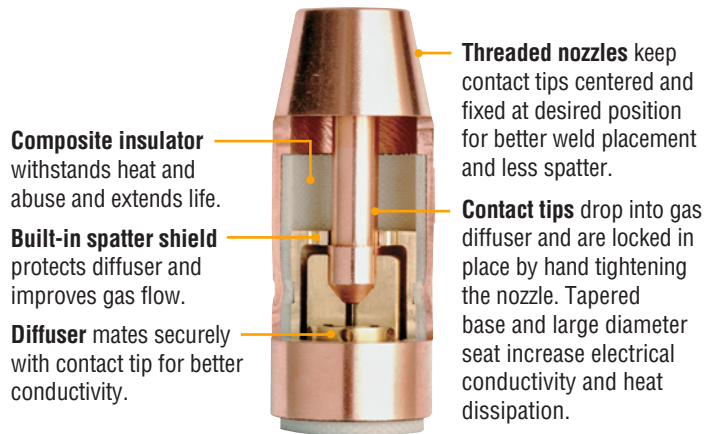
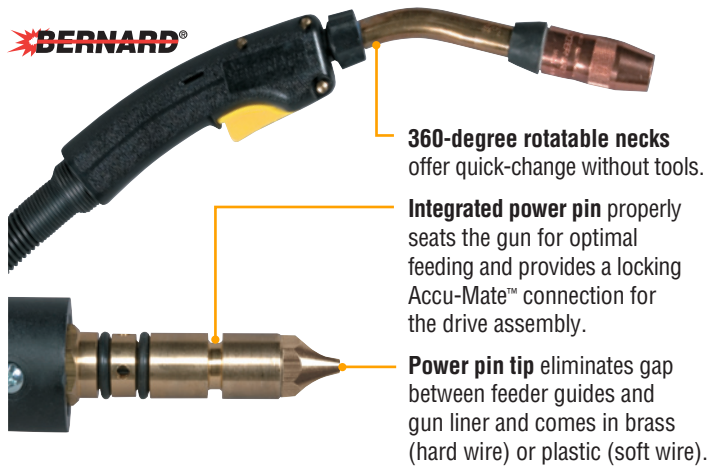
**Steel Liner (Optional)**

- 242191** Short head tube (air only)

# Bernard® BTB MIG Guns and Centerfire™ Consumables

**BTB MIG guns** increase productivity, reduce downtime, and lower maintenance and inventory costs.

**Centerfire consumables** improve weld quality, reduce downtime and boost gun performance.



## Power Pin Tips

- 2200105** Plastic, .030–.035 in. (0.8–0.9 mm), for aluminum (red)
- 2200106** Plastic, .040–3/64 in. (1.02–1.19 mm), for aluminum (white)
- 2200107** Plastic, .052–1/16 in. (1.4–1.6 mm), for aluminum (blue)
- 4477\*** Brass, .023–.045 in. (0.6–1.2 mm), for steel

## Liners

- 44115\*** 15 ft. (4.6 m), .035–.045 in. (0.9–1.2 mm), steel
- 44215** 15 ft. (4.6 m), .045–1/16 in. (1.2–1.6 mm), steel

## T Series Centerfire

- Contact Tips** 1.5 in. (38.1 mm)
- T-023** .023 in. (0.6 mm)
  - T-030** .030 in. (0.8 mm)
  - T-035** .035 in. (0.9 mm)
  - T-039** .039 in. (1.0 mm)
  - T-045\*** .045 in. (1.2 mm)
  - T-052** .052 in. (1.4 mm)
  - T-062** 1/16 in. (1.6 mm)
  - T-078** 5/64 in. (2.0 mm)
  - T-094** 3/32 in. (2.4 mm)
  - T-109** 7/64 in. (2.8 mm)
  - T-125** 1/8 in. (3.2 mm)

## TT Series Centerfire

- Contact Tips** 2 in. (50.8 mm)
- TT-023** .023 in. (0.6 mm)
  - TT-030** .030 in. (0.8 mm)
  - TT-035** .035 in. (0.9 mm)
  - TT-039** .039 in. (1.0 mm)
  - TT-045** .045 in. (1.2 mm)
  - TT-052** .052 in. (1.4 mm)
  - TT-062** 1/16 in. (1.6 mm)

## Centerfire Large Nozzles

- N-3400C** Copper, 3/4 in. I.D., flush tip
- N-3418C** Copper, 3/4 in. I.D., 1/8 in. tip recess
- N-3414C** Copper, 3/4 in. I.D., 1/4 in. tip recess
- N-3418B** Brass, 3/4 in. I.D., 1/8 in. tip recess
- N-3414B** Brass, 3/4 in. I.D., 1/4 in. tip recess
- N-5800C** Copper, 5/8 in. I.D., flush tip
- N-5818C** Copper, 5/8 in. I.D., 1/8 in. tip recess
- N-5814C\*** Copper, 5/8 in. I.D., 1/4 in. tip recess
- N-5818B** Brass, 5/8 in. I.D., 1/8 in. tip recess
- N-5814B** Brass, 5/8 in. I.D., 1/4 in. tip recess

**Diffuser** D-1\*

**Insulator** 10012\*

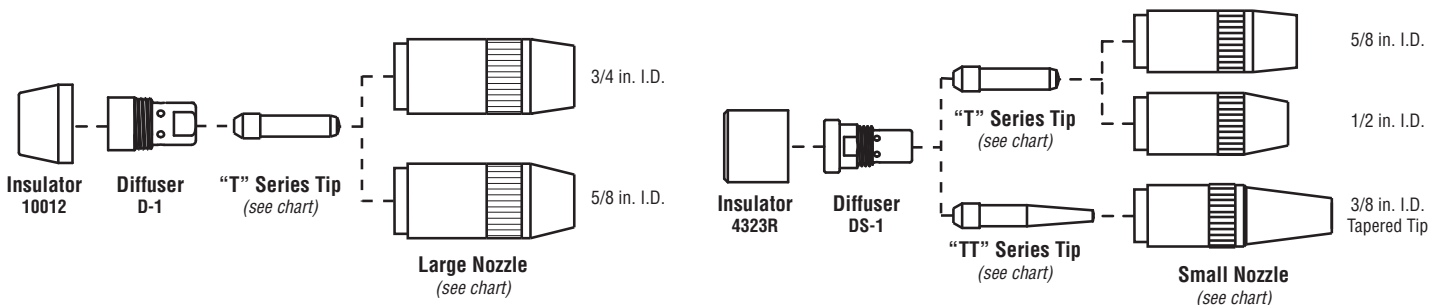
## Centerfire Small Nozzles

- NS-5818C** Copper, 5/8 in. I.D., 1/8 in. tip recess
- NS-5800B** Brass, 5/8 in. I.D., flush tip
- NS-5818B** Brass, 5/8 in. I.D., 1/8 in. tip recess
- NS-1218C** Copper, 1/2 in. I.D., 1/8 in. tip recess
- NS-1200B** Brass, 1/2 in. I.D., flush tip
- NS-1218B** Brass, 1/2 in. I.D., 1/8 in. tip recess
- NST-3800B** Brass, tapered, 3/8 in. I.D., flush tip
- NST-3818B** Brass, tapered, 3/8 in. I.D., 1/8 in. tip recess
- NST-38XTB** Brass, tapered, 3/8 in. I.D., 1/8 in. tip extension

**Diffuser** DS-1

**Insulator** 4323R

\*Comes standard with 15 ft. BTB Gun 400 A for steel.

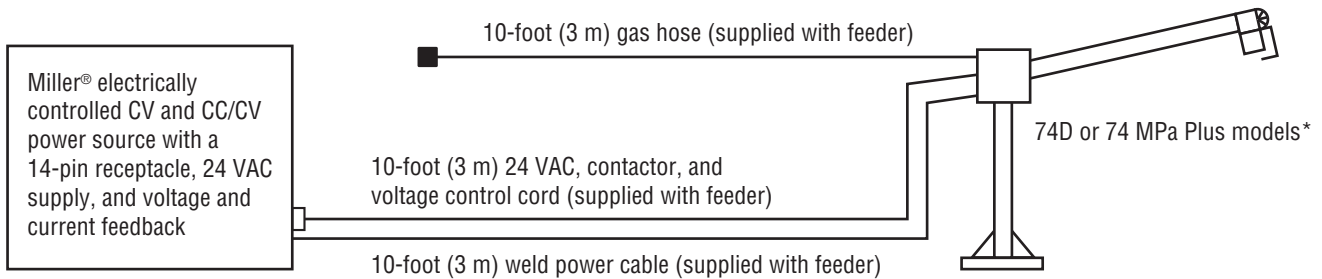
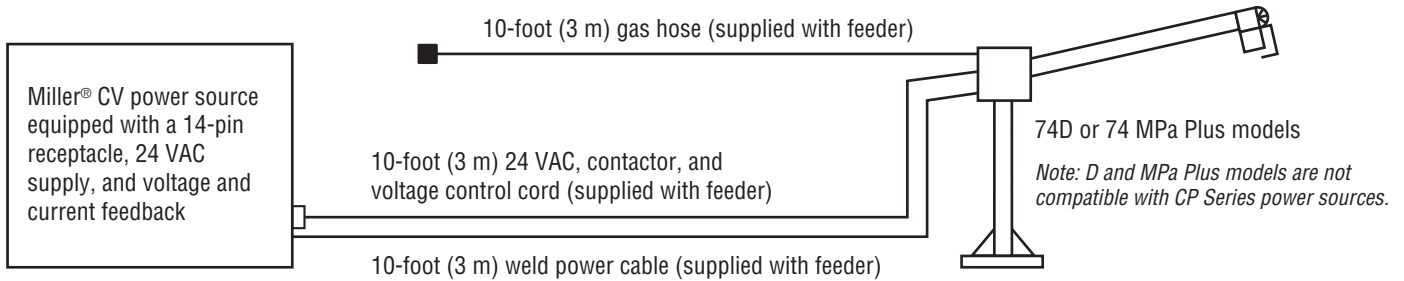


# Typical Installations

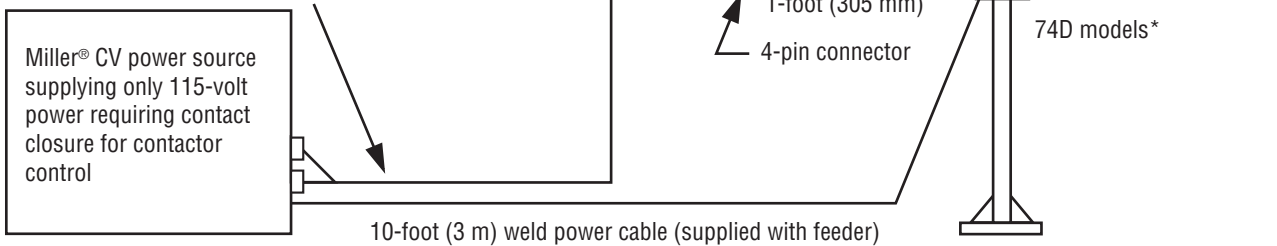
## Models

**74D: Digital meters and remote voltage control**

**74 MPa Plus: Digital full feature with push-pull technology**



10-foot (3 m) interconnecting cord included with PSA-2 control. Includes a 4-pin connector for connecting to PSA-2 control and Hubbell connectors on older-style Miller® CV power sources.



\*When using a 70 Series control with Miller® power sources that do NOT have remote voltage control capabilities, i.e., CP type, the voltage control in the 70 Series control IS NOT functional. See Operator's Manual for operating instructions.

\*\*If using a 70 Series control with a power source that only supplies 115-volt power, the PSA-2 (power source adapter) is required. When using the PSA control remote voltage is not functional. See Operator's Manual for operating instructions.

## Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Single-Wire Models (includes one 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls)</b>				
<b>SS-74D12</b>	<b>951526</b>	12 ft. (3.7 m) boom with S-74D control		
<b>SS-74D16</b>	<b>951527</b>	16 ft. (4.9 m) boom with S-74D control		
<b>SS-74 MPa Plus-12</b>	<b>951438</b>	12 ft. (3.7 m) boom with S-74 MPa Plus control		
<b>SS-74 MPa Plus-16</b> <i>(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)</i>	<b>951439</b>	16 ft. (4.9 m) boom with S-74 MPa Plus control		
<b>Dual-Wire Models (includes two 15 ft. (4.6 m) Bernard BTB Gun 400 A and drive rolls)</b>				
<b>DS-74D12</b>	<b>951535</b>	12 ft. (3.7 m) boom with D-74D control		
<b>DS-74D16</b>	<b>951536</b>	16 ft. (4.9 m) boom with D-74D control		
<b>DS-74 MPa Plus-12</b>	<b>951441</b>	12 ft. (3.7 m) boom with D-74 MPa Plus control		
<b>DS-74 MPa Plus-16</b> <i>(Order XR-Aluma-Pro Plus or XR-Pistol Plus and U-groove drive rolls separately)</i>	<b>951442</b>	16 ft. (4.9 m) boom with D-74 MPa Plus control		
<b>Replacement Guns and Consumables</b>				
Bernard® BTB Gun 400 A	<b>Q4015AE8EMC</b>	400 A, 15 ft. (4.6 m)		
XR-Aluma-Pro™ Plus and XR™-Pistol Plus		For MPa Plus controls only. See page 5		
Centerfire™ Consumables		See page 6		
<b>Power Sources</b>				
Invision™ 352 MPa and 450 MPa		See literature DC/23.6		
XMT® 350 and 450		See literature DC/18.93 and DC/18.94		
Dimension™ 650 and 650 ArcReach®		See literature DC/19.3		
<b>Mounting Equipment</b>				
Swingpak™ Base	<b>183997</b>	For 12 or 16 ft. booms		
Pipe Posts	<b>149838</b> <b>149839</b>	4 ft. with base for 12 or 16 ft. boom 6 ft. with base for 12 or 16 ft. boom		
<b>Accessories</b>				
Single/Dual Spool Carrier		See page 5		
Industrial MIG 4/0 Kits		See page 5		
Spool Adapter	<b>047141</b>			
Wire Reel Assembly	<b>108008</b>			
Extension Cables		See page 5		
PSA-2 Control	<b>141604</b>			

Date:

Total Quoted Price:

Distributed by:

