# XR-S and XR-D Controls

## Push-Pull Control Feeders

### Quick Specs

<table>
<thead>
<tr>
<th>Heavy Industrial Applications</th>
<th>Processes</th>
<th>Dimensions</th>
<th>Wire Speed</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Vehicles</td>
<td>MIG (GMAW) Welding</td>
<td>H: 16 in (406 mm)</td>
<td>70 – 780 IPM (1.8 – 19.8 m/min)</td>
<td>42.5 lb (19.2 kg)</td>
</tr>
<tr>
<td>Recreational Vehicles</td>
<td>Pulsed MIG (GMAW-P) with</td>
<td>W: 9-1/2 in (241 mm)</td>
<td>(Dependent on gun used)</td>
<td></td>
</tr>
<tr>
<td>Trucks and Trailers</td>
<td>pulsing power source</td>
<td>D: 21-1/4 in (540 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat Exchangers</td>
<td>Input Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sign Manufacturers</td>
<td>24 VAC, 50/60 Hz</td>
<td></td>
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</tr>
</tbody>
</table>

### The Power of Blue.

True push-pull wire feeder. Slave/torque motor provides continuous push force to the wire while the gun motor controls wire feed speed at the arc, together providing accurate and positive wire feed speed over long distances (up to 35 ft).

**Run-in control** can be adjusted to tune arc starting, reducing wire stubbing or arc flaring which can result in burnbacks to the contact tip.

**Wire jog control** allows wire to be threaded through gun cable without energizing weld output.

### XR-S Model

A simple alternative to costly complicated systems. Unit has only wire feed speed display, jog/purge, run-in control, and trigger hold. It’s an excellent choice for those who want a basic push-pull feeder, or have basic CV power sources.

Unit is factory set with preflow on (0.2 seconds) and postflow off. Preflow can be turned off and postflow turned on (3.5 seconds) via internal dip switch setting.

### XR-D Model

Provides advanced digital and programming capabilities. Unit has the same features as the XR-S model, but adds a digital weld voltage display and remote voltage control.

Unit has improved programmable interface for preflow/postflow, and start and crater settings for more critical welding applications.

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**True Blue SYR Warranty**

Wire feeder is warranted for 3 years, parts and labor. Guns are warranted for 1 year.
### Specifications

(Subject to change without notice.)

<table>
<thead>
<tr>
<th>Input Power</th>
<th>Input Welding Circuit Rating</th>
<th>Wire Speed</th>
<th>Wire Diameter Range</th>
<th>Maximum Spool Size Capacity</th>
<th>Dimensions</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VAC, 5 A, 50/60 Hz</td>
<td>400 A at 100% Duty Cycle</td>
<td>70–780 IPM</td>
<td>Aluminum: .035 – .062 in (0.9 – 1.6 mm) Solid Wire: .035 – .045 in (0.9 – 1.2 mm) Drive roll kit #195 591 required to run 1/16 in (1.6 mm) wire</td>
<td>12 in (305 mm)</td>
<td>H: 16 in (406 mm) W: 9-1/2 in (241 mm) D: 21-1/4 in (540 mm)</td>
<td>42.5 lb (19.2 kg)</td>
</tr>
</tbody>
</table>

Certified to both the Canadian and U.S. Standards for welding equipment.

### Control Panels

1. Setup Menu Indicator
2. Left Display
3. Start Menu Indicator
4. Crater Menu Indicator
5. Volts Indicator
6. Arc Length Indicator
7. Left Adjust Knob
8. Start On Indicator
9. Setup Indicator
10. Setup Button
11. Start Button
12. Right Display
13. Wire Speed Indicator
14. Amps Indicator
15. Right Adjust Knob
16. Crater On Indicator
17. Crater Button
18. Jog/Purge Switch
19. Wire Speed Display
20. Run-In Speed Control
21. Trigger Hold Switch
22. Motor Torque Switch
23. Gas Flowmeter (Optional)
24. Gun Securing Knob
25. Gun Bushing
26. Drive Casting

XR-D Front Panel
XR-S Front Panel
Side Panel Detail (Common to Both Models)
Genuine Miller Options and Accessories

Gas Flowmeter Kit
#246 127 Field
Monitors and adjusts
gas flow at the feeder.
Note: Gas pressure must
be controlled at the primary
gas supply with the use of
a regulator.

Optima™ MIG (GMAW)
Pulse Control
#043 389
For Invisions and
XMTs (except MPa
and VS models).
A multipurpose,
microprocessor-based
pulse control for
synergic MIG (wire
welding or GMAW), manual MIG pulsing
or standard MIG welding. Use this control
with all above power sources and any
Miller wire feeder. Includes 25 ft (7.6 m)
cord with 14-pin plug.

PSA-2 Control
#141 604
Required when using the
XR Control with power
sources having only
115 VAC available.
Mounts at power source
and includes a 10 ft (3 m)
115 VAC cord and
contactor cord with Hubbell connectors.
A simple modification in the PSA-2 control
also allows it to be used with competitive
constant voltage power sources requiring
a contact closure for contactor control.
The PSA-2 includes a 14-pin receptacle
for direct connection of the standard
interconnecting cord and optional extension
cords. Bracket included for side mounting
to the power source.
Note: When using the PSA-2 control, the optional
Remote Voltage Control is not functional.

Extension Cords
#122 973 25 ft (7.6 m)
#122 974 50 ft (15.2 m)
#122 975 75 ft (22.9 m)
Provides 14-pin, 24 VAC, contactor and
voltage control. Can be added to the
standard 10 ft (3 m) feeder cord to extend
feeder farther from power source.

Water Coolant Systems

Coolmate™ V3
#043 007 115 VAC
#043 008 230 VAC
#043 009 115 VAC
For use with water-cooled guns. Refer to
Lit. Index No. AY/7.2 for additional coolant
system information.

Coolant
#043 809
Sold in cases of four 1-gallon recyclable
plastic bottles.

Typical Installations

Miller CV or CV/CC power
source equipped with a 14-pin
receptacle and 24 VAC power.

PSA-2
115/24 VAC
Miller CV or competitive
CV power source with
115 VAC power

10 ft (3 m) 24 VAC
and contactor cord supplied with feeder
10 ft (3 m) gas hose included

XR-S or XR-D
Control

Contactor
115 VAC

10 ft (3 m) 24 VAC
and contactor cord supplied with feeder
10 ft (3 m) gas hose included

XR-S or XR-D
Control

or

Coolmate 3
Coolmate 4
Coolmate V3
Coolmate 3
Coolmate 3
Coolmate 3
Coolmate 3
Coolmate 3
Coolmate 3
### Ordering Information
(Use the 3-step process below to assemble a complete system.)

1. **Pick a Control**
   - XR-S or XR-D

2. **Pick a Gun Style**
   - Gooseneck or Pistol (15, 25, 30, or 35 ft Cable, Air- or Water-Cooled)

3. **Pick a Power Source***
   - Deltaweld® Series [Lit. Index No. DC/16.2](#)
   - XMT® 350 [Lit. Index No. DC/18.83](#)
   - Invision™ 352 MPa [Lit. Index No. DC/23.6](#)
   - Trailblazer® Series [Lit. Index No. ED/4.77](#)
   - PipePro® 304 [Lit. Index No. ED/10.6](#)
   - *Other power sources may be used.

#### How to Assemble a System

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR-S Control</td>
<td>#300 601</td>
<td>Standard model with wire feed speed digital display, jog/purge, run-in control, and trigger hold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-D Control</td>
<td>#300 687</td>
<td>Enhanced model has same features as XR-S model plus advanced digital and programming capabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-Aluma-Pro A Gun</td>
<td>#300 000</td>
<td>15 ft (4.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Air-Cooled)</td>
<td>#300 001</td>
<td>25 ft (7.6 m) cable</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>#300 264</td>
<td>35 ft (10.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-Aluma-Pro W Gun</td>
<td>#300 003</td>
<td>15 ft (4.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Water-Cooled)</td>
<td>#300 004</td>
<td>25 ft (7.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#300 265</td>
<td>35 ft (10.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-A Pistol Grip Gun</td>
<td>#198 127</td>
<td>15 ft (4.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Air-Cooled)</td>
<td>#198 128</td>
<td>30 ft (9 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-W Pistol Grip Gun</td>
<td>#196 129</td>
<td>15 ft (4.6 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Water-Cooled)</td>
<td>#196 130</td>
<td>30 ft (9 m) cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR-Control Drive Rolls</td>
<td>#194 118</td>
<td>.030 in (0.8 mm) (Order from Miller Service Parts.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Control box includes .035</td>
<td>#194 118</td>
<td>.035 in (0.9 mm) (Order from Miller Service Parts.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and 3/64 in drive rolls. Order</td>
<td>#196 301</td>
<td>.040 in (1.0 mm) (Order from Miller Service Parts.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/16 in drive rolls separately)</td>
<td>#194 119</td>
<td>.047 in (1.2 mm) (Order from Miller Service Parts.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#195 591</td>
<td>.062 in (1.6 mm) (Order from Miller Service Parts.)</td>
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</tbody>
</table>

#### Options
- Gas Flowmeter Kit [#246 127](#) Field
- Optima MIG Pulse Control [#043 389](#)
- PSA-2 Control [#141 604](#) For older power sources w/115 V feeder power
- Extension Cords See XR-Control Accessories on page 3
- Water Coolant Systems See Lit. Index No. AY/7.2

#### Date: 

<table>
<thead>
<tr>
<th>Date:</th>
<th>Total Quoted Price:</th>
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</tbody>
</table>

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*Important note: The products and descriptions mentioned in this literature are for use with XR-Control systems with serial #KK309906 or higher. To confirm compatibility of any products listed here with older equipment, please contact the factory at 1-920-735-4505.*