# PipeWorx FieldPro System

# Multiprocess Pipe Welding Systems



## Quick Specs

# Pipe Welding Field Operations

Process piping Refinery Petrochemical Power HVAC and water pipe

#### **Processes**

Stick (SMAW) DC Lift-Arc™ TIG (GTAW) MIG (GMAW) RMD®

Pulsed MIG (GMAW-P) Flux-cored (FCAW) Air carbon arc (CAC-A) cutting and gouging (6.0 mm carbons) Rated Output 350 A at 34 VDC, 60% duty cycle

Output Range Stick: 40-350 A

DC Lift-Arc TIG: 10-350 A MIG/Flux-cored: 10-44 V

Net Weight PipeWorx 350 FieldPro: 45.4 kg (100 lb.)

FieldPro Remote: 4.5 kg (10 lb.)

SuitCase® 8VS X-TREME™ ArcReach™: 13 kg (28 lb.)
SuitCase® 12VS X-TREME™ ArcReach™: 15.6 kg (34.5 lb.)

FieldPro Smart Feeder: 23 kg (50 lb.)





#### Simplified cable management

- Save time by eliminating the need to trace cables back to change welding parameters and processes.
- No control cables to lay out and manage on the jobsite.

#### Complete control at the weld joint

- FieldPro remote reduces weld defects by automatically setting correct polarity for each welding process—without the need to manually swap cables.
- Eliminates the need to adapt to less than optimal settings without control cables, and allows for easy setup of a new weld process with the touch of a button.
- Total remote control of welding processes and parameters improves safety by limiting jobsite movement and reducing slip, trip and fall hazards.

### Arc performance optimized for critical pipe welding

- Industry-leading arc performance in a field-ready package.
- True multiprocess system provides conventional stick, DC Lift-ArcTIG, FCAW and MIG welding, as well as RMD and pulsed MIG.
- Smart Feeder delivers excellent RMD and pulse welding up to 61 m (200 ft.) away from the power source with no control cables. RMD and pulse processes also help reduce weld failures and eliminate backing gas on some stainless and chrome-moly applications.

#### New durability standard for field construction

• Designed and built to withstand the harshest field environments.



Power source is warranted for three years, parts and labour.



#### ITW Welding - BV

Edisonstraat 10 P.O. Box 1551 NL-3261 LD Oud-Beijerland, Netherlands

TEL: +31 (0) 186 641 444 FAX: +31 (0) 186 640 880

## ITW Welding – Italy S.r.l.

Via Privata Iseo 6/e 20098 San Guiliano M.se Milano – Italia

TEL.: +39 02 982901 FAX: +39 02 98281552 ITW-Welding.com

# International Headquarters Miller Electric Mfg. Co.

An Illinois Tool Works Company 1635 W. Spencer Street Appleton, WI 54914 USA TEL.: +1 920 735 4554 FAX: +1 920 735 4125

MillerWelds.com

## **Stick and TIG Welding Processes**

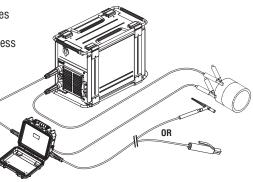


PipeWorx 350 FieldPro



Complete remote control. The FieldPro Remote provides all the same functionality of the PipeWorx 350 FieldPro hundreds of feet from the power source, including process changeover, and amperage adjustment with no special cables. Connect the FieldPro Remote in line with the electrode holder or TIG torch with standard welding cables and have complete remote control.

Superior arc performance. The optimized stick and TIG performance specifically meets the needs of open root pipe welding and helps reduce training time and increases quality. Starts maintain root opening and prepared edge and stops limit arc marks outside of the heat-affected zone.



Stick/TIG installation diagram

Easy to use. The PipeWorx 350 FieldPro™ is streamlined and simplified to reduce setup time and potential weld defects. Pushbutton process changeover eliminates the need for swapping cables. The robust design will withstand harsh environments common in the field.

## PipeWorx 350 FieldPro™ Specifications (Subject to change without notice.)







| Amperage/Voltage<br>Ranges                | Rated Welding<br>Output            | IP<br>Rating | Output<br>Voltag | mps Inp<br>, 60 Hz,<br>es and (<br>380 V | at NEW | IA Load<br>Rating |      | KVA  | KW   | Max. Open-<br>Circuit Voltage | Dimensions<br>(H x W x D)                | Net<br>Weight        |
|---|------------------------------------|--------------|------------------|--|--------|-------------------|------|------|------|-------------------------------|--|----------------------|
| 10-350 A in CC mode<br>10-44 V in CV mode | 350 A at 34 VDC,<br>60% duty cycle | IP23         | 36.1             | 27.1                                     | 25.9   | 17.8              | 14.1 | 15.0 | 14.4 | 75 VDC                        | 432 x 305 x 559 mm<br>(17 x 12 x 22 in.) | 45.4 kg<br>(100 lb.) |



🚱 Certified by Canadian Standards Association to both the Canadian and U.S. Standards. [ All CE models conform to the applicable parts of the IEC 60974 series of standards.

# **Solid Wire and Flux-Cored Welding Processes**



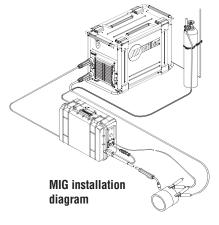
SuitCase X-TREME™ 12VS ArcReach™ and SuitCase X-TREME" 8VS ArcReach™ feeders

Set volts and wire feed speed remotely. The simple interface on the feeder allows operators to adjust parameters at the point of use with no control cables.

Easy process changeover. Simply connect the SuitCase feeder to your weld lead and you are ready to go. The power source automatically switches settings to run conventional wire processes.

Easy solution for traditional wire process. Add the flux-cored capability of the PipeWorx 350 FieldPro™ for fill and cap passes for increased productivity.

Durable design reduces downtime. Impact-resistant case and the elimination of feeder control cables provides a solid solution to last in harsh environments.



# SuitCase® Feeder Specifications (Subject to change without notice.)





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

| Model                                | Input Power                              | Input Welding<br>Circuit Rating | IP<br>Rating | Wire Speed                                      | Wire Diameter Capacity  | Max. Spool<br>Size Capacity          | Dimensions<br>(H x W x D)                     | Net<br>Weight       |
|--------------------------------------|--|---------------------------------|--------------|---|---|--------------------------------------|---|---------------------|
| SuitCase<br>X-TREME 8VS<br>ArcReach  | Operates on arc voltage and open-circuit | 330 A at<br>60% duty cycle      | IP23         | 1.3-19.8 m/min.<br>(50-780 ipm)<br>dependent on | <b>Solid wire</b> 0.6–2.0 mm (.023–5/64 in.) <b>Flux-cored</b> 0.8–2.0 mm | 203 mm (8 in.),<br>6.4 kg (14 lb.)   | 324 x 184 x 457 mm<br>(12.75 x 7.25 x 18 in.) | 13 kg<br>(28 lb.)   |
| SuitCase<br>X-TREME 12VS<br>ArcReach | voltage:<br>14–48 VDC/<br>110 max. OCV   | 425 A at<br>60% duty cycle      |              | arc voltage                                     | (.030-5/64 in.)   | 305 mm (12 in.),<br>20.4 kg (45 lb.) | 394 x 229 x 533 mm<br>(15.5 x 9 x 21 in.)     | 15.9 kg<br>(35 lb.) |





🚱 Certified by Canadian Standards Association to both the Canadian and U.S. Standards. 💽 All CE models conform to the applicable parts of the IEC 60974 series of standards.



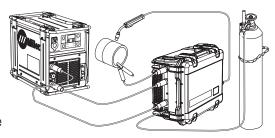
## **RMD**° and Pulsed MIG Welding Processes



FieldPro Smart Feeder

Smart Feeder delivers excellent RMD and pulsed MIG welding up to 61 m (200 ft.) away from the power source with no control cables — twice the distance previously possible. RMD and pulsed MIG processes also help reduce weld failures and eliminate backing gas on some stainless and chrome-moly applications.

Durable design reduces downtime. Impact-resistant case and the elimination of feeder control cables provide a solid solution to last in harsh environments.



RMD/pulsed MIG installation diagram

Synergic processes. RMD and pulsed MIG welding permits procedures with one wire and one gas to eliminate process switch-over time.

Easy process changeover. Simply connect the FieldPro Smart Feeder to your leads and you are ready to go. All controls automatically shift to the FieldPro Smart Feeder.

## FieldPro Smart Feeder Specifications (Subject to change without notice.)



| Input Power   | Input Welding<br>Circuit Rating | IP<br>Rating | Wire Speed  | Wire Diameter<br>Capacity   | Max. Spool<br>Size Capacity        | Dimensions<br>(H x W x D)                  | Net<br>Weight     |
|---|---------------------------------|--------------|---|-----------------------------|------------------------------------|--|-------------------|
| Operates on arc voltage<br>and open-circuit voltage:<br>14-110 VDC* | 275 A at<br>60% duty cycle      | IP23         | 1.3-12.7 m/min.<br>(50-500 ipm)<br>dependent on arc voltage | 0.9-1.1 mm<br>(.035045 in.) | 305 mm (12 in.),<br>15 kg (33 lb.) | 457 x 330 x 546 mm<br>(18 x 13 x 21.5 in.) | 23 kg<br>(50 lb.) |

<sup>\*</sup>Welding with the FieldPro Smart Feeder requires the PipeWorx 350 FieldPro to be hooked up to three-phase power.



🚱 Certified by Canadian Standards Association to both the Canadian and U.S. Standards. 🎑 All CE models conform to the applicable parts of the IEC 60974 series of standards.

## **Bernard**<sup>™</sup> **PipeWorx Guns**



PipeWorx guns are capable of root pass welding, and the PipeWorx 300 also does fill and cap pass welding. Both guns are built with the goal of improving your welding productivity and feature the following:

Versatility. Can be used for MIG, pulsed MIG and flux-cored.

**Ergonomics.** Compact, lightweight gun with high-amperage capability reduces operator fatigue.

Visibility. The combination of tapered tips and nozzles and 60-degree neck provide excellent visibility on root passes in pipe joints.

Centerfire™ tip. Provides "drop-in" tip with no threads providing quick changeover. No tools are required.

### **Specifications** (Subject to change without notice.)

| Bernard Model    | 100% Duty Cycle NEMA | 100% Duty Cycle CE | 60% Duty Cycle CE | 35% Duty Cycle CE | Gas Type                      | Cable<br>Length | Net<br>Weight |
|------------------|----------------------|--------------------|-------------------|-------------------|-------------------------------|-----------------|---------------|
| PipeWorx 250-15  | 300 A                | 250 A              | 300 A             | 365 A             | 100% CO <sub>2</sub>          | 4.6 m           | 4.1 kg        |
| (root pass only) | _                    | 210 A              | 250 A             | 300 A             | 80% argon/20% CO <sub>2</sub> | (15 ft.)        | (9 lb.)       |
| PipeWorx 300-15  | 350 A                | 320 A              | 370 A             | 470 A             | CO <sub>2</sub> gas           | 4.6 m           | 4.6 kg        |
|                  | _                    | 270 A              | 310 A             | 390 A             | 80% argon/20% CO <sub>2</sub> | (15 ft.)        | (10 lb.)      |

#### **Key Gun Consumables**

| Description                    | Part<br>Number     | Package<br>Quantity |
|--------------------------------|--------------------|---------------------|
| 0.9 mm (.035 in.) tapered tip  | TT-0351            | 10                  |
| 1.0 mm (.040 in.) tapered tip  | TT-039             | 10                  |
| 1.2 mm (.045 in.) tapered tip  | TT-045             | 10                  |
| 0.9 mm (.035 in.) tip          | T-035              | 10                  |
| 1.0 mm (.040 in.) tip          | T-039              | 10                  |
| 1.2 mm (.045 in.) tip          | T-045 <sup>2</sup> | 10                  |
| 1.4 mm (.052 in.) tip          | T-052              | 10                  |
| 1.6 mm (1/16 in.) tip          | T-062              | 10                  |
| 0.9-1.2 mm (.035045 in.) liner | 431151,2           | 1                   |
| 1.2-1.6 mm (.045062 in.) liner | 44215              | 1                   |

Standard part on PipeWorx 250-15.

| Description                                     | Part<br>Number        | Package<br>Quantity |
|---|-----------------------|---------------------|
| 13 mm (1/2 in.) ID nozzle                       | NS-1218C              | 10                  |
| 16 mm (5/8 in.) ID nozzle                       | NS-5818C <sup>2</sup> | 10                  |
| 16 mm (5/8 in.) ID nozzle                       | N-5818C               | 10                  |
| 19 mm (3/4 in.) ID nozzle                       | N-3418C               | 10                  |
| 9.5 mm (3/8 in.) ID tapered tip nozzle          | NT-3800C              | 10                  |
| 9.5 mm (3/8 in.) ID tapered tip nozzle          | NST-3800B             | 10                  |
| 9.5 mm (3/8 in.) ID extended tapered tip nozzle | NST-38XTB1            | 10                  |
| Diffuser  | D-1                   | 10                  |
| Diffuser  | DS-1 <sup>1,2</sup>   | 10                  |
| 60° Q tube assembly                             | QT2-60 <sup>1,2</sup> | 1                   |
| 80° Q tube assembly                             | QT2-80                | 1                   |
| O-ring  | 4929                  | 10                  |



<sup>&</sup>lt;sup>2</sup>Standard part on PipeWorx 300-15.

## **Drive Rolls for FieldPro™ Feeders** (Feeders require two drive rolls.)

Select drive rolls from chart below according to type and wire size being used.



Wire size

"V" groove



"U" groove for soft wire or soft-shelled cored wires



"V" knurled for hard-shelled



"U" cogged for extremely soft wire or soft-shelled cored wires (i.e., hard facing types)



Wire Inlet Guide

| WIIG 312G              | Tot flatu wife | Coled Wiles | Colea wiles | (i.e., natu facing types) | wile illet dulue |
|------------------------|----------------|-------------|-------------|---------------------------|------------------|
| 0.6 mm (.023/.025 in.) | 087130         | _           | _           | _                         |                  |
| 0.8 mm (.030 in.)      | 053695         | _           | _           | _                         |                  |
| 0.9 mm (.035 in.)      | 053700         | 072000      | 132958      | _                         |                  |
| 1.1/1.2 mm (.045 in.)  | 053697         | 053701      | 132957      | 083489                    | 221030           |
| 1.3/1.4 mm (.052 in.)  | 053698         | 053702      | 132956      | 083490                    |                  |
| 1.6 mm (1/16 in.)      | 053699         | 053706      | 132955      | 053708                    |                  |
| 2.0 mm (5/64 in.)      | _              | 053704      | 132960      | 053710                    |                  |

Note: Part numbers above are for single drive rolls.

## **Ordering Information**

| System Components                                 | Stock No.                  | Description  | Qty. | Price |
|---|----------------------------|--|------|-------|
| PipeWorx 350 FieldPro™ Power Source               | 907633                     | 230-575 V, 50/60 Hz. Dinse-style connectors  |      | T     |
| FieldPro™ Remote with Stick/TIG Interface         | 301176                     | Dinse-style connectors   |      |       |
| SuitCase® X-TREME™ 8VS ArcReach™                  | 301033                     | MIG/FCAW feeder  |      |       |
| SuitCase® X-TREME™ 12VS ArcReach™                 | 301032                     | MIG/FCAW feeder  |      |       |
| FieldPro™ Smart Feeder                            | 301177                     | MIG/FCAW/RMD/pulse feeder. Dinse-style connectors  |      |       |
| Accessories                                       |                            |  |      |       |
| PipeWorx 250-15 MIG Gun                           | Q2015TF2DEL<br>Q2015TF2DML | Euro connection. See page 3<br>Miller connection. See page 3   |      |       |
| PipeWorx 300-15 MIG Gun                           | Q3015TF2DEL<br>Q3015TF2DML | Euro connection. See page 3<br>Miller connection. See page 3   |      |       |
| MIG Gun Consumables                               |                            | See page 3   |      |       |
| Feeder Drive Rolls                                |                            | See above  |      |       |
| PipeWorx Memory Cards                             | 300538                     | Blank card. Used to store weld programs  |      |       |
|   | 301230                     | System software. For free download, visit MillerWelds.com  |      |       |
|   | 300557                     | Calibration. Used to calibrate the PipeWorx system. For free download, visit MillerWelds.com (Smart Feeder only)   |      |       |
|   | 300744                     | Inconel. Pulsed MIG, 1.2 mm (.045 in.) diameter wire, 100% argon   |      |       |
|   | 300460                     | Range locks. Provides ability to set nominal parameter values and ranges for wire feed processes   |      |       |
|   | 300667                     | Accu-Power.™ Displays instantaneous power during welding to meet the new ASME requirement for calculating heat input on complex waveform processes (RMD® and pulsed MIG) |      |       |
|   | 301035                     | Trigger select/hold option. Enables trigger select while welding to change processes and parameters without stopping   |      |       |
|   | 301116                     | VRD. Voltage reduction device (VRD) lowers open-circuit voltage (OCV) to 15 VDC  |      |       |
| Wireless Remote Hand Control with 14-Pin Receiver | 300430                     | Hand control with wireless 91.4 m (300 ft.) operating range  |      |       |
| Connector, Dinse                                  | 134460                     | 70 mmq, male   |      |       |
|   | 136600                     | 70 mmq, female   |      |       |
| Kit, Gas Flow Meter                               | 301306                     |  |      |       |

Date: Total Quoted Price:

Distributed by:

