

PIPEWORX 400 - FIELD MENU & CONTROL REFERENCE

PURPOSE Quick field reference for front-panel setup, feeder controls, hidden adjustments, memory functions, process setup, shielding gas, filler metal and gun consumables.

1. POWER SOURCE - PROCESS SETUP

Process	Select / Setup Sequence	Primary Adjustment	Hidden / Long-Press
STICK	STICK -> Electrode EXX10 or EXX18	40-400 A	Hold STICK >2 sec: DIG 0-99 (default 40). Press STICK again: Hot Start 0.0-2.0 (default 1.3).
TIG	TIG -> Start: HF or Lift-Arc	10-350 A	With remote connected, hold TIG >2 sec to display effective amperage command.
MIG / FCAW / RMD / PULSE	SIDE SELECT -> MIG TYPE -> WIRE TYPE -> WIRE DIA -> GAS TYPE -> TRIGGER SELECT	Set final Volts/Arc Length + WFS at feeder	FCAW does not require wire type, diameter, or gas selection on power source.

MIG TYPE choices: FCAW | MIG | RMD | PULSE. **Wire Type:** CARBON | CARBON METAL CORE | STAINLESS. **Wire Dia:** .035 | .040 | .045. **Gas choices:** C8-C15 | C20 | C25 | 100% CO2 | C2 | 98/2 O_x | TRI-H | TRI-A (available choices depend on process/wire setup).

2. FEEDER - EVERYDAY CONTROLS & SHORTCUTS

Action	How to Access	Range / What It Does
Select side	Press LEFT or RIGHT (dual feeder)	Activates that feeder side. Gun trigger also activates its side.
MIG/FCAW voltage	Top knob	10.0-44.0 V.
RMD/Pulse Arc Length	Top knob	-3.0 to +3.0; 0 = nominal.
Wire Feed Speed	Bottom knob	50-780 ipm (1.3-19.8 mpm).
RMD/Pulse Arc Control	Hold LEFT/RIGHT >2 sec	ARC appears. Range -25 to +25; 0 nominal. Higher value widens arc cone.
MIG/FCAW Inductance	Hold LEFT/RIGHT >2 sec	IND appears. Range 0-99. Higher = longer arc-on time / more fluid puddle.
Jog	Hold JOG	Feeds wire without contactor/gas. Adjust jog speed with WFS knob.
Auto Jog	Press JOG + TRIGGER HOLD together	Preset 5.0-30.0 ft; default 15.3 ft. Top knob = length, bottom knob = jog WFS.
Purge	Hold PURGE	Opens selected gas valve; also TIG gas solenoid when TIG selected.
Timed Purge	Press PURGE + TRIGGER HOLD together	5-60 sec; default 30 sec. Adjust with top knob.
Trigger Hold	Press TRIGGER HOLD	ON/OFF. To latch/unlatch: hold gun trigger 0.5-6 sec, then release.
Memory recall at feeder	Press MEMORY	Scrolls locations 1-4; feeder can recall but cannot factory-reset a memory.

3. PREFLOW / POSTFLOW MENU

Access: Select TIG, LEFT or RIGHT -> press and hold PURGE -> rotate either feeder knob -> gas closes and menu opens -> release PURGE. **PrE** shows preflow; adjust with WFS knob. Rotate Voltage/Arc Length knob to **PSt** for postflow; adjust with WFS knob. Press any button to exit.

Setting	Selections / Standard Behavior
Preflow	Std or 0.0-10.0 sec (manual lists numeric values through 10.0; Trigger Select imposes 0.25 sec minimum). Std: TIG HF = 0.1 sec; wire = 0.25 sec.
Postflow	Std or 0-60 sec. Std TIG: 8 sec through 175 A, rising to 16 sec at 350 A. Std wire: 8 sec through 390 ipm, rising to 16 sec at 780 ipm.

4. MEMORY LOCATIONS & TRIGGER SELECT

Function	How It Works
Memory 1-4	Settings auto-save to the active memory about 1 second after a front-panel change.
Available memories	4 each for STICK, TIG, MIG LEFT, and MIG RIGHT = 16 with dual feeder; 12 with single feeder.
Reset one memory	On power source, hold that Memory Location button >2 sec. Current process in that location returns to factory defaults.
Trigger Select	Enable on power source. At least 2 memory locations must be enabled. While NOT welding, quick trigger tap <0.2 sec advances to next enabled memory.
Dual Schedule	With optional two-position switch, each switch position can store a separate MIG setup inside the selected memory location.
Memory card SAVE / LOAD	SAVE stores operator settings 1-4 to card; LOAD restores a saved configuration. CARD indicator = custom program data is active.

5. WHAT THE ADJUSTMENTS MEAN

Control	Process	Practical Meaning
Voltage	MIG / FCAW	Sets CV arc voltage. Feeder display range 10.0-44.0 V.
Arc Length (Trim)	RMD / Pro-Pulse	-3.0 to +3.0. Increase = longer arc; decrease = shorter arc.
Arc Control	RMD / Pro-Pulse	-25 to +25. Increase = wider arc cone; decrease = narrower arc cone.
Inductance	MIG / FCAW	0-99. Increase reduces short-circuit transfer frequency and increases arc-on time, making puddle more fluid.
DIG	Stick	0-99. Adds amperage in low-voltage / short-arc conditions to resist electrode sticking.
Hot Start	Stick	0.0-2.0. Adjusts starting amperage to help prevent electrode sticking at arc start.

6. QUICK PROCESS SETUP - PIPE

Application	Process	Starting Setup / Notes
Root - carbon steel	RMD	Select Carbon -> .035/.040/.045 -> gas. Arc Length range -3 to +3; 0 nominal. Typical nominal WFS depends on diameter/gas.
Root - stainless	RMD	Select Stainless -> diameter -> C2 / 98-2 Ox / Tri-H / Tri-A as available. Arc Length -3 to +3; 0 nominal.
Fill / cap - carbon	Pro-Pulse	Select Carbon -> diameter -> available gas. Arc Length -3 to +3; 0 nominal. Programs differ for rolled pipe vs in-position.
Fill / cap - stainless	Pro-Pulse	Select Stainless -> diameter -> available stainless gas. Programs differ for rolled pipe vs in-position.
Flux core	FCAW	Gas-shielded FCAW only recommended. Power-source wire type/diameter/gas selections are not required; follow wire manufacturer's gas/WFS recommendations.

7. QUICK OVERVIEW

- Only illuminated controls can be changed or adjusted.
- MIG setup is intended to be selected left-to-right: MIG TYPE -> WIRE TYPE -> WIRE DIA -> GAS TYPE -> TRIGGER SELECT.
- In RMD and Pro-Pulse, WFS is synergic with power; the machine automatically coordinates programmed waveform parameters.
- Actual voltage and amperage remain displayed for about 10 seconds after the weld ends.
- Remote 14 is factory-active for TIG; it can also be enabled for Stick. With a remote, the machine amperage knob sets the maximum and the remote commands 0-100% of that value.
- Factory/default weld settings are starting references only; final parameters must be evaluated for the actual application.

Source: Miller PipeWorx 400 Owner's Manual OM-236891AP (2023-06), Sections 8-1 through 8-15. This sheet is an operator quick reference, not a substitute for the owner's manual or qualified welding procedure requirements.

8 | GAS, WIRE & GUN CONSUMABLE GUIDE

Use this section as a quick setup reference. Final shielding gas, filler metal, gun rating and consumable selection must match the qualified procedure, pipe schedule, joint design and actual welding conditions.

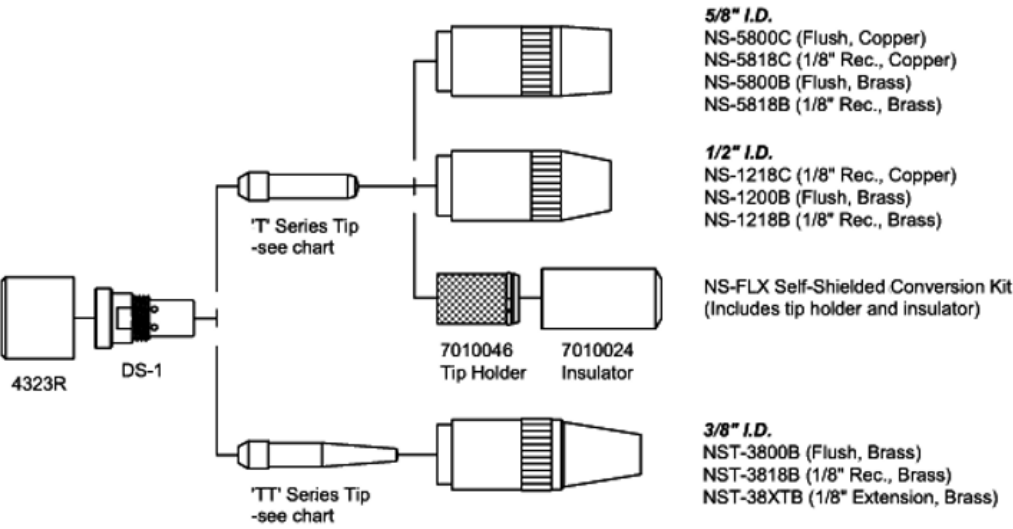
STAINLESS STEEL PIPE	SHIELDING GAS	WIRE
Preferred 2-gas approach	#1: TRI-H (90 He / 7.5 Ar / 2.5 CO2) - RMD root TRI-A (81 Ar / 18 He / 1 CO2) - Pulse fill/cap	High-silicon stainless wire
Single-gas alternative	#2: 98 Ar / 2 CO2 (C2) - RMD + Pulse Other tri-mix gases may also work.	.035 in. or .045 in. diameter depending on pipe schedule.

CARBON STEEL PIPE	SHIELDING GAS	WIRE
Primary recommendation	#1: 90 Ar / 10 CO2 - RMD + Pulse	ER70S-6 - RMD roots and Pulse fill/cap
Alternative for RMD / FCAW	#2: 75 Ar / 25 CO2 - RMD + Flux Core	FCAW: Hobart Triple 7 or applicable FCAW wire .035 in. or .045 in. depending on pipe schedule.

CENTERFIRE GUN CONSUMABLES

RMD ONLY	PULSE ONLY
150, 250 or 300 A gun with Centerfire	300 A Bernard gun with Centerfire
TT-035 or TT-045 - tapered contact tip NST-3818B - tapered nozzle DS-1 - diffuser	T-035 or T-045 - contact tip NS-5818C - nozzle DS-1 - diffuser

Small Centerfire™ Gas Diffusers and Nozzles



Centerfire reference: bernardtregaskiss.com/product/centerfire/

ENGINEERING NOTE This guide is an operator field reference, not a substitute for the PipeWorx owner's manual, filler-metal manufacturer recommendations, or qualified welding procedure requirements.

TECHNICAL BASIS Miller PipeWorx 400 Owner's Manual OM-236891AP (2023-06), Sections 8-1 through 8-15; user-supplied PipeWorx gas/consumable application guidance; Bernard Centerfire consumable reference diagram supplied in the source document.