

Fabricator® 181i

MULTI PROCESS WELDING SYSTEM



Fabricator® 181i Part No. W1003181

Comes Complete with:

- * Fabricator 181i Power Supply
- * 12 ft Tweco® WeldSkill® 180 Amp MIG Gun
- * Bonus Contact Tips (1 each):
 - .023 (0.6 mm)
 - .030 (0.8 mm) Installed
 - .035 (0.9 mm)
- * Victor® Argon Regulator/Gauge & 10 ft (3 m) Hose
- * Tweco WeldSkill 200 Amp electrode holder with 13 ft (4 m) lead
- * Tweco WeldSkill 200 Amp ground clamp with 10 ft (3 m) lead
- * Drive Rolls:
 - .023" / .030" (0.6 mm / 0.8 mm) V Groove Installed
 - .023" / .035" (0.6 mm / 0.9 mm) V Groove
 - .030" / .035" (0.8 mm / 0.9 mm) for Flux Cored Wire
- * 4 general purpose stick electrodes (E6013)
- * Operator's Manual & Set-up DVD
- * 9 ft (2.75 m) Power Cord and NEMA 6-50P 230V AC Plug
- * Shoulder Strap

QUICK SPECIFICATIONS

PROCESSES

MIG (GMAW)
Flux Cored (FCAW)
Lift TIG (GTAW)
STICK (SMAW)

APPLICATIONS

Automotive Repair & Customization
Farms & Ranches
Training Institutions
Maintenance & Repair
Sheet Metal & Light Fabrication
On-site & Portable Welding Applications
Home Hobbyists (DIY)

RATED OUTPUT

180A / 23V @ 20% Duty Cycle
145A / 22.5V @ 30% Duty Cycle

MAX. OPEN CIRCUIT VOLTAGE

62V DC

AMPERAGE RANGE

10 - 180 Amps

WIRE FEED SPEED

100 - 650 IPM (2.5 - 17.8 m/min)

WEIGHT

32.2 lbs (14.6 kg)

ORDER INFORMATION

Part No: W1003181

Description: Fabricator 181i Package

Part No: W1003182

Description: Fabricator 181i Package w/Car

Three Process Capability:

MIG (GMAW/FCAW), STICK (SMAW), TIG (GTAW).

MIG:

- * **Infinite Voltage Control** with optimized starting performance.
- * **Inductance Control** for arc stability and spatter control.
- * **Tweco MIG Gun** w/12 ft. cable and industry standard #4 connection.
- * **Durable Metal Feed Plate** features 2 roll drive system, quick change reversible drive rolls and easy-to-set single scaled wire tension knob.
- * **4" or 8" Spool Capacity** allows easy installation of wire spool sizes.
- * **Spool Gun** ready.
- * **Adjustable Burnback Control.**

STICK:

- * **Adjustable Arc Force Control** for optimum STICK electrode performance.
- * Built in **Hot Start** for easy arc starting.

TIG:

- * **Lift TIG Start:** Provides TIG arc starting without use of high frequency.
- * **Downslope:** Eliminates the crater that can form at the completion of a weld.

Other Features:

- * **Digital Meters:** Voltage and Amperage; Preview and Hold capability.
- * **Excellent Portability:** Lightweight, less than 33 lbs includes shoulder strap.
- * **Comprehensive Setup Chart:** Weld set up guide for optimum welding performance over a wide range of materials and shielding gases.
- * **Trigger Control:** 4T (Latch) eliminates operator fatigue.
- * **Remote Receptacle:** Enables connection of remote control devices and Spool Gun.
- * **Quick Change Polarity:** Simple quick change polarity (no tools required) from the front of the power source.
- * **Overload Protection:** Shuts down the power source to protect the internal electrical components from overheating.
- * **IP23S:** Suitable for outdoor use.
- * **Intelligent Fan Control:** Operates when welding commences to cool components & reduce airborne contaminants pulled through the power source.



CONTROL PANEL

Digital Meters WFS / Amps and Volt Meters

WFS / Amps Control Knob

Voltage / Arc Force Control / Down Slope Control Knob



Process Button Select MIG, STICK or Lift TIG

Trigger 2T (ON/OFF) or 4T (Trigger Hold) selection

Inductance Control Knob

SYSTEM FEATURES

Local/Remote Switch

Burnback Control

Easy installation Wire Spool Adaptor & Braking System

Metal 2 Roll wire drive system with quick change drive rolls and single tension arm

Comprehensive Welding Setup Chart for welding process parameters



Control Panel (Refer Above)

MIG Gun/Spool Gun Switch

Tweco® Style MIG Gun Connection

8 pin Remote Receptacle for remote devices & Spool Gun

Heavy Duty Welding output terminals with polarity reversal capability

SPECIFICATIONS

WELDING DC	
Maximum Output	180 Amps
MIG (GMAW/FCAW) Welding Output @104°F (40°C)	180A / 23V @ 20% Duty Cycle 145A / 22.5V @ 30% Duty Cycle
STICK (SMAW) Welding Output @104°F (40°C)	175A / 27V @ 20% Duty Cycle 140A / 25.6V @ 30% Duty Cycle
TIG (GMAW) Welding Output @104°F (40°C)	175A / 17V @ 25% Duty Cycle 160A / 16.4V @ 30% Duty Cycle
Current Range	10 - 180 Amps
MIG Welding Voltage Range	10 - 25 Volts
Wirefeed Speed Range	100 - 650 IPM (2.5 - 17.8 m/min)
Maximum Plate Thickness	1/4" (6.4 mm)
Wire Diameter Range	
Mild Steel:	.023" - .035" (0.6 - 0.9 mm)
Stainless Steel:	.023" - .035" (0.6 - 0.9 mm)
Aluminum:	.030" - .035" (0.8 - 0.9 mm)
Flux cored:	.030" - .045" (0.8 - 1.2 mm)
Installed Feedroll Suits MIG Wire	.023" - .030" (0.6 - 0.8 mm)
Warranty Period	3 Years*
Approvals	IEC 60974-1 (CE), ETL 3163339
Protection Class	IP23S
DIMENSIONS AND WEIGHT	
Dimensions H x W x D	H 16.14" x W 8.27" x D 17.72" (410 mm x 210 mm x 450 mm)
Weight	32.2 lbs (14.6 kg)

PRIMARY POWER	
Primary Voltage	208/230 VAC
Supply Voltage Range	208 - 265 VAC
Number of Phases	Single Phase
Supply Frequency	50/60Hz
Supply Plug	NEMA 6-50P
Rated kVA @ 180 Amps	9 kVA
Lead Cord Length	9 ft (2.75 m)
Maximum Input Current	37 Amps
REPLACEMENT ITEMS & CONSUMABLES	
Tweco® WeldSkill® 180 Amp MIG Gun, 12 ft.	1017-1316
Nozzle 1/2" Bore	1210-1112
Diffuser	1510-1101
Liner	1420-1113
Contact Tips	Tweco 11-Series
Tweco WeldSkill 200 Amp Electrode Holder w/Lead, 13 ft., 50mm Dinse	WS200E13
Tweco WeldSkill 200 Amp Ground Clamp w/Lead, 10 ft., 50mm Dinse	WS200G10
Victor® CutSkill® Argon Regulator/Gauge	0781-4169
Gas Hose, 12.5 ft., Male 5/8-18UNF	W4013900

* Limited Warranty, refer to warranty schedule.









Comes Complete with:

- 1 Fabricator® 181i Power Supply
- 2 Victor Argon Regulator/Gauge & 10 ft (3 m) Hose
- 3 Tweco WeldSkill 200 Amp Electrode Holder with 13 ft (4 m) Lead
- 4 12 ft Tweco WeldSkill 180 Amp MIG Gun
- 5 Bonus Contact Tips (1 each):
.023 (0.6 mm)
.030 (0.8 mm) Installed
.035 (0.9 mm)
- 6 Tweco WeldSkill 200 Amp Ground Clamp with 10 ft (3 m) Lead
- 7 Operator's Manual & Set-up DVD
- 8 Drive Rolls:
.023" / .030" (0.6 mm / 0.8 mm)
V Groove Installed
.023" / .035" (0.6 mm / 0.9 mm) V Groove
.030" / .035" (0.8 mm / 0.9 mm) for Flux Cored Wire
- 9 4 General Purpose Stick Electrodes (E6013)
- 10 Shoulder Strap
- 11 9 ft (2.75 m) Power Cord and NEMA 6-50P 230V AC Plug (not shown)

ORDERING INFORMATION

Equipment Option	Part No.	Description
Fabricator® 181i Package	W1003181	Includes Fabricator 181i, Tweco® WeldSkill® 180 Amp MIG Gun, Victor® Argon Regulator/Gauge & 10 ft (3 m) Hose, Tweco Electrode Holder & Ground Clamp, Drive Rolls & Contact Tips, Sample Electrodes and Shoulder Strap, Operator's Manual & Set-Up DVD
Fabricator 181i Package w/Cart	W1003182	Includes contents of W1003181 with Utility Cart W4014700

ACCESSORIES

TIG Torch & Accessories <i>(required for TIG welding)</i> 	W4013802	TIG Torch, 17V, 13 ft, 8 pin and accessory kit with 1/16", 3/32", 1/8" thoriated tungstens; 1/16", 3/32", 1/8" collets; 1/16", 3/32", 1/8" collet bodies; No. 5, 6, 7 Alumina nozzle; short back cap; long back cap
Spool Gun <i>(required for aluminum MIG welding)</i> 	1027-1390	Tweco Spool Gun 160A, 12 ft (3.6 m) Length, suits 4" (100 mm) spools
Basic Utility Cart 	W4014700	Utility Cart, accommodates maximum 7" diameter cylinder
Foot Control 	600285	Contacter On/Off and current control with 15 ft cable and 8-pin male plug
Helmet 	4100-1004	Tweco WeldSkill Helmet (USA only)
Carry Bag 	W4015300	Protective Carry Bag & Parts Storage

DRIVE ROLLS

Drive Roll .023" / .035" (0.6/0.9 mm)	W4014800	V groove for steel & stainless steel
Drive Roll .023" / .030" (0.6/0.8 mm)	7977036	V groove for steel & stainless steel wires (Installed)
Drive Roll .035" / .045" (0.9/1.2 mm)	7977660	V groove for steel & stainless steel wires
Drive Roll .030" / .035" (0.8/0.9 mm)	7977731	U grooved for aluminum wires
Drive Roll .040" / 3/64" (1.0/1.2 mm)	7977264	U grooved for aluminum wires
Drive Roll .030" / .035" (0.8/0.9 mm)	7977732	V knurled groove for flux cored wires
Drive Roll .045" (1.2 mm)	704277	V knurled groove for flux cored wire