

Fabricator® 252i

MULTI PROCESS WELDING SYSTEM



Fabricator® 252i Portable System Part No. W1004401

Comes Complete with:

- * Fabricator 252i Power Supply
- * 15 ft (4.6 m) Tweco® Spray Master® 250 Amp MIG Gun
- * Contact Tips (1 each):
 - .030 (0.8 mm)
 - .035 (0.9 mm) Installed
 - .045 (1.2 mm)
- * Victor® EDGE™ Argon Flow Gauge & 12.5 ft (3.8 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:
 - .035" / .045" V Groove Lower & Flat Upper (Fitted)
 - .023" / .030" / .035" V Groove
 - .045" Flux Cored Roll
- * Operator's Manual
- * 9 ft (2.7 m) Power Cord & NEMA 6-50P 230V AC Plug
- * .023" (0.6 mm) Outlet Guide

QUICK SPECIFICATIONS

PROCESSES

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

APPLICATIONS

Light Industrial Manufacturing
Mechanical Contractors
On-Site & Portable Welding Applications
Automotive Repairs & Customization
Farms & Ranches
Training Institutions
Maintenance & Repairs

RATED OUTPUT

250A / 26.5V @ 40% Duty Cycle
200A / 24V @ 60% Duty Cycle
150A / 21.5V @ 100% Duty cycle

MAX. OPEN CIRCUIT VOLTAGE

72V DC

AMPERAGE RANGE

5-300 A

WIRE FEED SPEED

67 - 700 ipm (1.7 - 17.8 m/min)

WEIGHT

65.3 lbs (29.6 kg)

ORDER INFORMATION

Part No: W1004401

Description: Fabricator 252i Portable System

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/15 ft cable and industry standard Tweco #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", 8", or 12" Spool Capacity** allows easy installation of wire spool sizes.
- * **Spool Gun** ready.

STICK:

- * **Adjustable Arc Force Control** for optimum STICK electrode performance.
- * Excellent 6010 welding electrode performance.

TIG:

- * **Lift TIG Start:** Provides TIG arc starting without use of high frequency.

Other Features:

- * **PFC Power Factor Correction:** Up to 40% power savings compared to conventional MIG welders.
- * **Digital Meters:** Voltage and Amperage; Preview and Hold capability.
- * **Excellent Portability:** Lightweight, less than 66 lbs.
- * **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.
- * **Advanced Features:** Includes Pre & Post Flow, Down Slope, Hot Start, Spot, Stitch, Burn Back, Wire Sharp, Arc Hour Runtime, Run-In Speed.



CONTROL PANEL

Power Indicator

The Green power indicator illuminates in the presence of power on the control circuitry

Digital Meters WFS / AMPS and Volts

Left Knob

Adjust weld Process value

- MIG - Wirefeed speed
- TIG - Amperage
- STICK - Amperage

Right Knob

Primary function to set MIG volts

- MIG - Push (1 sec) for Inductance
- STICK - Push (1 sec) for Arc Force or Dig feature



Fault Indicator

The Fault will illuminate yellow when any of the faults are detected

Process Mode Button

Depress to change process:

- MIG (GMAW/FCAW)
- TIG (GTAW)
- STICK (SMAW)

Trigger Latch Button

Depress to change Trigger Fn:

- 2T (On/Off)
- 4T (Trigger Hold)
 - Once the weld arc has started, release the trigger and continue welding
 - Activate the trigger again or brake the welding arc to finish welding

Advanced Feature Button

Depress & Release to enter or exit
Depress & Hold to purge shielding gas

ADVANCED FEATURES

The Fabricator® 252i welding characteristics are optimized to supply the best welding performance whether in the MIG, TIG or Stick modes. In those situations when you need more control for special applications or productivity enhancements go to the Advanced Features.

FUNCTION	MIG	TIG	STICK	DESCRIPTION
Operator Controls	Local / Remote	Local / Remote	Local / Remote	Determines whether the control is at the machine or from a remote device
Preflow Time	0 - 5.0 sec.	0 - 5.0 sec.		The time shielding gas is turned on before the arc is initiated
Hot Start	-	-	On/Off - Time - Amps	Higher burst of amps to help initiate the stick electrode arc
Run-In	30 - 150%	-	-	Slower or higher percentage of the set wire feed speed before the arc is initiated to optimize arc starting
Spot Weld	On/Off - Time	-	-	Enables Spot Welding
Stitch Weld	On/Off - Time (Stitch/Dwell)	-	-	Enables Stitch or Skip Welding
Down Slope	-	0 - 30.0 sec.	-	Eliminates the crater that can form at the end of the weld
Burnback	0 - 1.0 sec	-	-	Eliminates the wire from sticking in the weld puddle
Wire Sharp	OFF / ON	-	-	Sharpens the wire ensuring good arc start repeatability
Postflow Time	0 - 30.0 sec.	0 - 30.0 sec.	-	The time shielding gas remains on after arc is turned off
Wire Feed Speed Units	IPM / MPM	-	-	Can be set to "Inches per Minute" or "Meters per Minute"
Arc Hour Accumulated Run Time	0 - 10,000 hrs.	0 - 10,000 hrs.	0 - 10,000 hrs.	Records welding arc time
Restore Factory Defaults	No / Yes	No / Yes	No / Yes	Returns power source to the original factory settings

In addition, the Advanced Features Button can be used to initiate a 30 second gas line purge function to facilitate gas tank connection and setup. Simply press and hold the button for approximately (2) seconds, gas will purge for (30) seconds. It will stop if pressed again.

SYSTEM FEATURES

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 Left)

MIG Gun Connection, Tweco #4

8 pin Remote Receptacle for remote devices or MIG Gun

Gas Outlet for Spool Gun or TIG Torch

10 pin Receptacle for Spool Gun

Heavy Duty Welding output terminals with polarity reversal capability

MULTI PROCESS MIG SYSTEM PACKAGES

Fabricator® 252i Portable System*

Part No. W1004401



Comes Complete with:

- 1 Fabricator 252i Power Supply
- 2 Tweco® WeldSkill® 200 Amp Ground Clamp with 10 ft (3 m) Lead
- 3 Victor® EDGE™ Argon Flow Gauge
- 4 Tweco WeldSkill 200 Amp Electrode Holder with 13 ft (4 m) Lead
- 5 Drive Rolls:
.035" / .045" V Groove Lower & Flat Upper (Fitted)
.023" / .030" / .035" V Groove
.045" Flux Cored Roll
- 6 Contact Tips (1 each):
.030 (0.8 mm), .035 (0.9 mm), .045 (1.2 mm)
- 7 Outlet Guide, .023" (0.6mm)
- 8 15 ft (4.6 m) Tweco Spray Master® 250 Amp MIG Gun
- 9 Gas Hose, 12.5 ft (3.8 m), Male 5/8-18
- 9 ft (2.7 m) Power Cord and NEMA 6-50P 230V AC Plug (not shown)
- Operator's Manual (not shown)
- Thermal Arc Cap (not shown)

* MIG System package with "out of the box" additional Stick welding capabilities

Fabricator® 252i Portable System w/Single Cylinder Cart*

Part No. W1004402



Comes Complete with:

- 1 Fabricator 252i Power Supply
- 2 Single Cylinder Professional Cart
- 3 Tweco Parts Box
- 4 Tweco® WeldSkill® 200 Amp Ground Clamp with 10 ft (3 m) Lead
- 5 Victor® EDGE™ Argon Flow Gauge
- 6 Tweco WeldSkill 200 Amp Electrode Holder with 13 ft (4 m) Lead
- 7 Drive Rolls:
.035" / .045" (0.9 mm / 1.2 mm) V Groove Lower & Flat Upper (Fitted)
.023" / .030" / .035" V Groove
.045" Flux Cored Roll
- 8 Contact Tips (1 each):
.030 (0.8 mm), .035 (0.9 mm), .045 (1.2 mm)
- 9 Outlet Guide, .023" (0.6mm)
- 10 15 ft (4.6 m) Tweco Spray Master® 250 Amp MIG Gun
- 11 Gas Hose, 12.5 ft (3.8 m), Male 5/8-18
- 12 Accessory/Storage Drawer
- 9 ft (2.7 m) Power Cord and NEMA 6-50P 230V AC Plug (not shown)
- Operator's Manual (not shown)
- Thermal Arc Cap (not shown)

Fabricator® 252i Portable System w/Dual Cylinder Cart/Deluxe*

Part No. W1004403



Comes Complete with:

- 1 Fabricator 252i Power Supply
- 2 Dual Cylinder Professional Cart
- 3 Tweco Parts Boxes (Qty 2)
- 4 TIG Rod Storage Canister
- 5 Stick Electrode Storage Canister
- 6 Tweco® WeldSkill® 200 Amp Ground Clamp with 10 ft (3 m) Lead
- 7 Victor® EDGE™ Argon Flow Gauge (Qty 2, TIG and MIG)
- 8 Tweco WeldSkill 200 Amp Electrode Holder with 13 ft (4 m) Lead
- 9 Tweco 200 Amp Spool Gun with 25 ft (7.6 m) Lead
- 10 Drive Rolls:
.035" / .045" (0.9 mm / 1.2 mm) V Grooved Lower & Flat Upper (Fitted)
.023" / .030" / .035" V Groove
.045" Flux Cored Roll
- 11 Contact Tips (1 each):
.030 (0.8 mm), .035 (0.9 mm), .045 (1.2 mm)
- 12 Outlet Guide, .023" (0.6mm)
- 13 15 ft (4.6 m) Tweco Spray Master® 250 Amp MIG Gun
- 14 TIG Torch & Accessories
- 15 Gas Hoses, 12.5 ft (3.8 m), Male 5.8-18 (Qty 2)
- 16 Accessory/Storage Drawer
- 9 ft (2.7 m) Power Cord and NEMA 6-50P 230V AC Plug (not shown)
- Operator's Manual (not shown)
- Thermal Arc Cap (not shown)

* Notes: 1. The cart is shipped as a flat pack.
2. Three screws needed to assemble cart.
3. Three screws needed to fix power supply to cart.
4. Power Source box and cart box to be strapped together.
5. Gas cylinder(s) not included.

SPECIFICATIONS

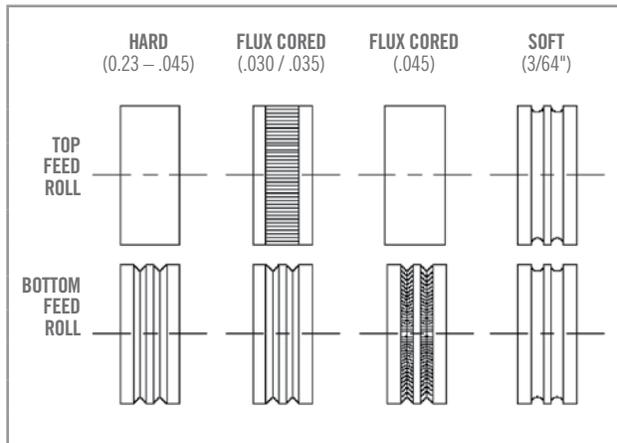
WELDING DC	
Maximum Output	300 Amp
MIG (GMAW/FCAW) Welding Output @104°F (40°C)	250A / 26.5V @ 40% Duty Cycle 200A / 24V @ 60% Duty cycle 150A / 21.5V @ 100% Duty Cycle
STICK (SMAW) Welding Output @104°F (40°C)	230A / 29.2V @ 40% Duty Cycle 200A / 28V @ 60% Duty cycle 150A / 26V @ 100% Duty Cycle
TIG (GMAW) Welding Output @104°F (40°C)	250A / 20V @ 40% Duty Cycle 200A / 18V @ 60% Duty cycle 150A / 16V @ 100% Duty Cycle
Current Range	5-300 A
MIG Welding Voltage Range	14-30 V
Wirefeed Speed Range	67-700 ipm (1.7 – 17.8 m/min)
Maximum Plate Thickness	1/2" (12.7 mm)
Wire Diameter Range	
Mild Steel:	.023" - .045" (0.6 - 1.2 mm)
Stainless Steel:	.023" - .035" (0.6 - 0.9 mm)
Aluminum: (with Spool Gun)	.030" - 3/64" (0.8 - 1.2 mm)
Flux cored:	.030" - .045" (0.8 - 1.2 mm)
Fitted Feedroll Suits MIG Wire	.035" - .045" (0.9 - 1.2 mm)
Warranty Period	3 Years*
Approvals	IEC 60974-1, ETL
Protection Class	IP23S
DIMENSIONS AND WEIGHT	
Dimensions H x W x D	H 17.32" x W 10.23" x D 23.62" (440 mm x 260 mm x 600 mm)
Weight	65.3 lbs (29.6 kg)

PRIMARY POWER	
Primary Voltage	Nominal 208/230 VAC
Supply Voltage Range	187-276 VAC
Number of Phases	Single Phase
Supply Frequency	50/60 Hz
Supply Plug	NEMA 6-50P
Rated kVA @ 250 Amps	8.2 kVA
Lead Cord Length	9 ft (2.7 m)
Maximum Input Current	39.5 Amps

REPLACEMENT ITEMS & CONSUMABLES	
Tweco® Spray Master® 250 Amp MIG Gun, 15 ft	20709S
Nozzle (23-50)	1230-1110
Diffuser (52FN)	1520-1102
Liner (42-4045-15)	1420-1123
Contact Tips	Tweco 14-Series
Tweco WeldSkill® 200 Amp Electrode Holder	WS252E-13
Tweco WeldSkill 200 Amp Ground Clamp	WS252G-10
ESS3-FG-580 Argon Flow Gauge	0781-5120
Gas Hose, 12.5 ft Male 5/8-18	W4013900
TIG Torch & Accessories	W4013600
Tweco Spool Gun, 200 Amp, 25 ft	1027-1391
Basic Utility Cart	W4014700
Single Cylinder Cart	W4015001
Dual Cylinder Cart	W4015002
Roll Cage	W4015101

* Limited Warranty, refer to warranty schedule.

DRIVE ROLLS & OUTLET GUIDES



DRIVE ROLLS			
Wire Size	Wire Type	Top Feed Roll	Bottom Feed Roll
.023" (0.6 mm)	HARD	407002-001	407002-002
.030" (0.8 mm)	HARD	407002-001	407002-002
.035" (0.9 mm)	HARD	407002-001	407002-002
.045" (1.2 mm)	HARD	407002-001	171115-003
.030" (0.8 mm)	FLUX CORED	375832	407002-002
.035" (0.9 mm)	FLUX CORED	375832	407002-002
.045" (1.2 mm)	FLUX CORED	407002-001	170924-010
3/64" (1.2 mm)	SOFT	408023-002	408023-002
OUTLET GUIDES			
Outlet Guide, .030" - .045" (0.8 mm - 1.2 mm)			872606
Outlet Guide, .023" (0.6 mm)			872605

ORDERING INFORMATION

Equipment Option	Part No.	Description
Fabricator® 252i Portable System	W1004401	Includes Fabricator 252i, Tweco® Spraymaster 250 Amp MIG Gun, Victor® EDGE™ Argon Flow Gauge & 12.5 ft (3.8 m) Hose, Tweco Electrode Holder & Ground Clamp, Drive Rolls & Contact Tips, Operator's Manual
Fabricator 252i Portable System w/Single Cylinder Cart	W1004402	Includes contents of W1004401 with Single Cylinder Cart (W4015001)
Fabricator 252i Portable System w/Dual Cylinder Cart/Deluxe	W1004403	Includes contents of W1004401 with TIG Torch & accy. (W4013600), Spool Gun (1027-1391) and Dual Cylinder Cart (W4015002)

ACCESSORIES

TIG Torch & Accessories <i>(required for TIG welding)</i> 	W4013600	TIG Torch, 26, 13 ft, SW/CUR Control, 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> 	1027-1391	Tweco Spool Gun 200A, 25 ft (7.6 M) Length, suits 4" (100 mm) spools
Basic Utility Cart 	W4014700	Utility Cart, accommodates maximum 7" diameter cylinder
Single Cylinder Cart 	W4015001	Single cylinder cart accommodates up to 9" diameter cylinder with accessory drawer and consumable compartment
Dual Cylinder Cart 	W4015002	Dual cylinder cart accommodates up to two 9" diameter cylinders with accessory drawer, consumable compartments and TIG & Stick Rod Holders
Roll Cage 	W4015101	Protective Roll Cage for skidding or carrying (power supply not included)
Foot Control 	600285	Contacter On/Off and current control with 15 ft cable and 8-pin male plug
Hand Pendant 	10-4014	Contacter On/Off and current control with 25 ft cable and 8-pin male plug
Helmet 	4100-1004	TWECO WeldSkill Helmet (USA only)