

# Rebel™ EMP 205ic AC/DC

Portable, True all-process welding system



Rebel EMP 205ic AC/DC  
shown with CoolMini 2

The Rebel™ EMP 205ic AC/DC provides 120/230 VAC, complete with MIG/MAG, Flux-Cored, Stick, DC TIG, and AC TIG capabilities, which means – yes – it TIG welds aluminum in AC mode. It is a TRUE all-in-one, all-process welding system that delivers best-in-class performance in each process in the most portable, durable, go anywhere, weld anything industrial package on the market. Now compatible with the Cool Mini 2 water cooler for better results when TIG welding for extended time.

- True All-Process – excellent performance on MIG/MAG, Flux-Cored, STICK (including cellulosic electrodes), DC LIFT TIG and AC TIG industrial applications
- Advanced AC TIG Features like High Frequency Starts, Frequency Adjustment up to 400 Hz, Expanded Balance & Offset Control and Dual Current. With DC LIFT TIG also offers a Pulse Mode up to 500 Hz.
- Technology – exclusive sMIG (“smart MIG”) a short arc process feature that continuously learns and adapts to the operator’s welding technique to provide a stable arc and superior, repeatable welds; increases productivity for the experienced welder, and reduces training time for novice welders
- Unmatched Portability and Durability – weighing in at only 22.7 Kg (50.0 lb) Rebel EMP 205ic AC/DC with 5-handle roll cage can tackle any job around the shop or out at the job site
- TFT Multilingual Display – packed full of features, Rebel EMP 205ic AC/DC has 4 programmable memory locations for each process, multi-language selection, trim adjustment, inductance control, pre/post flow control and spot weld setting - giving you the ability to fine tune your welds for optimal performance
- Backed by ESAB Iron Clad Pledge and 3-year warranty

Visit [esab.com](http://esab.com) for more information.

## Industry

- Light Fabrication
- Repair and Maintenance
- Automotive Bodies
- Food and Beverage
- Aluminum Trailers
- Boiler tubes
- Pipe Construction
- Mechanical Contractors
- Agricultural Equipment
- Training Schools

# Rebel™ EMP 205ic AC/DC

Specifications		
Primary Voltage	120 VAC 1Φ +/- 10%, 50/60 Hz	230 VAC 1Φ +/- 10%, 50/60 Hz
Primary Current I <sub>max</sub>	27.1 A	29.6 A
Primary Current I <sub>eff</sub>	15.8 A	14.8 A
Idle Power	32 W	
Mains Cable	14/3C AWG, 3 m (10 ft.)	
Supply Plug	230 V, NEMA 6-50P	
Rated kVA	4.5 kVA/3.3 kW	7 kVA/6.8 kW
Generator Requirements	8.0 kW/8.2 kVA	
Maximum Output MIG/MAG SMAW/Stick TIG AC/DC	205A / 24.3V 180A / 27.2V 205A / 18.2V	
MIG/MAG Welding Output Duty Cycle	115A / 19.75V @ 20%	205A / 24.25V @ 25%
SMAW/Stick Welding Output Duty Cycle	75A / 23.0V @ 40%	170A / 26.8V @ 25%
TIG AC/DC Welding Output Duty Cycle	105A / 14.2V @ 40%	205A / 18.2V @ 25%
Open Circuit Voltage	68 V	
Power Factor at Max Current	0.98	
Efficiency at Max Current	78%	
AC TIG Functionality Balance Range Frequency Range	60 – 90% 25 – 400 Hz	
DC TIG Functionality Pulsed TIG (DC only)	0.1 – 500 Hz	
Current Range	5 – 130 A	5 – 205 A
Voltage Range (MIG/MAG)	14.5 – 20.5 V	
Wire Feed Speed Range	2.0 – 12.1 m/min (80– 475 ipm)	
Maximum Plate Thickness	9.5 mm (3/8 in.)	
Wire Diameter Range: Mild Steel Stainless Steel Aluminum Flux Cored	0.6 – 0.9 mm (0.023-0.035 in.) 0.8 – 0.9 mm (0.030-0.035 in.) 0.8 – 1.2 mm (0.030-0.045 in.) 0.8 – 1.2 mm (0.030-0.045 in.)	
Max Spool Diameter	4 in. (100 mm), 8 in. (200 mm)	
Approvals	CSA	
Enclosure Class	IP23S	
Operating Temperature	-10 to +40 °C (+14 to 104 °F)	
Power Source Dimensions, L x W x H	584 x 229 x 406 mm (23 x 9 x 16 in.)	
Power Source Weight	22.7 kg (50 lbs.)	

# Rebel™ EMP 205ic AC/DC

## Ordering Information

Description	Part Number
Rebel EMP 205ic AC/DC – MIG/Stick/TIG Welding System*	0558102553
Rebel EMP 205ic AC/DC Water Cooled Package	0700303000

\* **Delivery includes:** Rebel EMP 205ic AC/DC, Tweco Fusion 180 MIG/MAG Gun 10 ft (3 m), Victor Gas Regulator/Flow gauge, Gas Hose 10 ft (3 m), Tweco return cable kit, 16 mm<sup>2</sup>, 10 ft (3 m), OKC 50, Tweco electrode holder, 16 mm<sup>2</sup>, 10 ft (3 m), OKC 50, ESAB Heliarc SR-17, 12.5 ft (3.8 m), OKC 50 and accessories, Tweco foot control, 15 ft (5 m), ESAB OK AristoRod 12.50 0.030 in. (0.8 mm), 2.2 lbs. (1 kg), Feed rolls 0.023/0.030 in. (0.6/0.8 mm) V (fitted), 0.030/0.035 in. (0.8/0.9 mm) V and 0.030/0.035 in. (0.8/0.9 mm) VK, Velocity Contact Tips 0.023, 0.030, 0.035 in. (0.6, 0.8, 0.9 mm), Power cable adapter, 230V/120V NEMA 6-50R to NEMA 5-15P, Instruction Manual

## Accessories

Description	Part Number
Tweco Fusion 180A MIG Gun, 3m (10 ft)*	1017-1338
Return cable kit, 16 mm <sup>2</sup> , OKC 50, 3 m (10 ft)*	WS200G10
Electrode Holder 200A and Lead Assembly, 13 ft (4 m), OKC 50*	WS200E13
Victor HRF 1425-580, Regulator/Flowmeter, for Ar/CO <sub>2</sub> *	0781-2743
Victor GRF400-320 Flow Gauge/Regulator, for CO <sub>2</sub>	0781-2703
Gas hose with 5/8 in. 18 RH fittings, 3 m (10 ft)*	W4013900
COOLMINI 2, water recirculator with connectors	0447888880
SR-B 20 Torch, Water, 3.8 m (12.5 ft), OKC 50	0700025534
SR-B 20 Torch, Water, 7.6 m (25 ft), OKC 50	0700025535
Heliarc SR-17 TIG Torch, Air-cooled, 2.4 mm (3/32 in.), 3.8 m (12.5 ft), OKC 50*	0700026610
Heliarc SR-17 TIG Torch, Air-cooled, 2.4 mm (3/32 in.), 7.6 m (25 ft), OKC 50	0700026611
Heliarc SR-26 TIG Torch, Air-cooled, 4.0 mm (5/32 in.), 3.8 m (12.5 ft) OKC 50	0700026620
Heliarc SR-26 TIG Torch, Air-cooled, 4.0 mm (5/32 in.), 7.6 m (25 ft), OKC 50	0700026621
Tweco TIG Foot Control 15 ft (5 m), 8-pin connector*	W4014450
TIG Accessory Kit for 17/26, 0.040 in. & 1/16 in. (1.0mm & 1.6 mm)	1442-0065
TIG Accessory Kit for 17/26, 3/32 in. & 1/8 in. (2.4 mm & 3.2 mm)	1442-0066
Tweco Spool Gun 200A 3.5 m (12 ft)	1027-1398
MMA 4 Hand Remote Current Control, 33 ft, (10 m) cable, 8-pin	0700500084
Power Adapter, 230 V to 120 V, 15 A NEMA 6-50R to NEMA 5-15P*	W4014000
Rebel Single Cylinder Cart	0558102491
Rebel Dual Cylinder Cart	0558102492
OKC 50, Cable Connector, Male (2 ea)	9425-1431
OKC 50, Cable Connector, Female (2 ea)	9425-1432
Coolant, 3.8 L (1 gal)	0560950312
Quick Connect Fitting, Male, 5/8-18 in. LH	0558102394

\* Items include in the package.

# Rebel™ EMP 205ic AC/DC

Wear Parts	
Description	Part Number
Feed Roll, 0.6/0.8 mm (0.023/0.030 in.) V*	7977036
Feed Roll, 0.8/0.9 mm (0.030/0.035 in.) V*	0558103014
Feed Roll, 0.9/1.2 mm (0.035/0.045 in.) V	7977660
Feed Roll, 0.8/0.9 mm (0.030/0.035 in.) VK*	7977732
Feed Roll, 0.9/1.2 mm (0.035/0.045 in.) VK	0349312497
Feed Roll, 0.8/0.9 mm (0.030/0.035 in.) U	7977731
Feed Roll, 1.0/1.2 mm (0.040/0.045 in.) U	7977264
Guide, Inlet, Wire, 0.030-0.045 in. (0.8-1.2 mm)	0558102328
Guide, Outlet, Wire, 0.030-0.045 in. (0.8-1.2 mm)	0558102326
Guide, Inlet, Wire, 0.024 in. (0.6 mm)	0558102327
Key, Shaft, Motor, Drive	0558102334

\* Items include in the package.

Wear Parts – Tweco Fusion 180 MIG Gun	
Description	Part Number
Velocity2 Contact Tip, 0.6 mm (0.023 in.) Tweco Fusion 180A	1110-1308
Velocity2 Contact Tip, 0.8 mm (0.030 in.) Tweco Fusion 180A	1110-1309
Velocity2 Contact Tip, 0.9 mm (0.035 in.) Tweco Fusion 180A	1110-1310
Velocity2 Contact Tip, 1.2 mm (0.045 in.) Tweco Fusion 180A	1110-1312
Velocity2 Nozzle, 3/8 in. ID, Tweco Fusion 180A	1220-1206
Velocity2 Nozzle, 1/2 in. ID, Tweco Fusion 180A	1220-1201
Velocity2 Nozzle, 5/8 in. ID, Tweco Fusion 180A	1220-1203
Velocity2 FCAW Tip Holder	1220-1207
Velocity2 FCAW Tip Holder Insulator	1220-1208
Conduit / Liner, Fusion 180A, 0.8/0.9 mm (0.030/0.035 in.), Hard	1420-1140
Conduit / Liner, Fusion 180A, 1.0/1.2 mm (0.040/0.045 in.), Hard	1420-1123
Conduit / Liner, Fusion 180A, 0.8/1.2 mm (0.030/0.045 in.), Soft	1420-1003

Wear Parts – Tweco Spool Gun	
Description	Part Number
Standard Contact Tip, 0.6 mm (0.023 in.)	1110-1100
Standard Contact Tip, 0.8 mm (0.030 in.)	1110-1101
Standard Contact Tip, 0.9 mm (0.035 in.)	1110-1102
Standard Nozzle, 3/8 in. ID	1210-1100
Standard Nozzle, 1/2 in. ID	1210-1110
Standard Nozzle, 5/8 in. ID	1210-1120
Conduit / Liner, Tweco Spool Gun	2031-2107
Gas Diffuser, Tweco Spool Gun	1510-1101



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