



Welding Equipment Register

More Powerful Machines

Technology has come a long way over the past few decades; welding machines come packed with more power than ever and top brands continually push the limits with each new generation of equipment. The performance of modern day machines are constantly reaching new heights and as more brands enter the market, this trend will only continue in coming years.

However, the increased performance is a double-edged sword in some machines; especially those used domestically. Some brands will supply leads and plugs for a machine that just can't hold the power needed to run at peak power.

Incorrect Fittings Can Be Dangerous

While supplying incorrect fittings may prevent the welding machine from achieving an optimal performance, the inability to maintain high currents can become a potential safety risk to the welder. Attempting to use these machines at high currents may cause the leads or plugs to fail, short-circuit, or potentially burn out and start a fire!

Weld Australia's Involvement in Equipment Safety

To ensure that Australian welders can make informed decisions on welding equipment, Weld Australia, together with participating equipment suppliers, has developed a register of safe-to-use equipment. This register will maintain a list of equipment that is deemed safe for use through compliance with IEC 60974.1 (Arc welding equipment – Part 1: Welding power sources) and IEC 60974.6 (Arc welding equipment – Part 6: Limited duty equipment). This list will be made available on our site [[← hyperlink will go here](#)] and will be updated quarterly.

How to Use the Register

The major electrical properties of each machine has been listed next to its name. Some models will be able to utilise multiple welding processes. For these machines, the electrical properties of each technique is listed in separate rows. To confirm that these models are fitted with the correct plug/lead, compare the **Plug Rating** of each machine with the highest **I_{1eff}** of the model. If the **Plug Rating** is higher or equal to the **I_{1eff}**, then the machine has been correctly fitted.

To gauge how effective a machine is at maintaining a high current output, check the **Duty Cycle at 40°C**. The listed duty cycle identifies the percentage of time; for a machine with a duty cycle of 60% at 100 A, the machine can operate for three minutes at 100 A for every five minutes it is being used.

Registered Equipment

Model	Brand	Manufacturer	Plug Rating	Phase	Process	Duty Cycle at 40°C	I _{1eff}
Advancell250C	Smootharc	BOC	32 A	Single Phase	GMAW	35% at 250 A	28 A
					MMAW	30% at 220 A	25 A
Advancell250R	Smootharc	BOC	32 A	Single Phase	GMAW	35% at 250 A	27.2 A
					MMAW	30% at 220 A	24.1 A
Advancell400R	Smootharc	BOC	32 A	Three Phase	GMAW	45% at 400 A	16.8 A
					MMAW	40% at 400 A	17 A
					MMAW	20% at 175 A	14.9 A
					GTAW	35% at 175 A	14.9 A
BOC180MULTI	Smootharc	BOC	15 A	Single Phase	GMAW	20% at 180 A	14 A
					MMAW	20% at 160 A	13.9 A
					GTAW	25% at 180 A	12 A
BOC181MIG	Smootharc	BOC	15 A	Single Phase	GMAW	20% at 180 A	14 A
BOC185ACDC/FC	Smootharc	BOC	15 A	Single Phase	GTAW	30% at 180 A	10.7 A
					MMAW	35% at 135 A	13.2 A
BOCDC185	Smootharc	BOC	15 A	Single Phase	GTAW	30% at 185 A	12.9 A
					MMAW	30% at 140 A	14.5 A
CUT100B	Smoothcut	BOC	20 A	Three Phase	Plasma Cutter	60% at 100 A	14 A
CUT40C	Smoothcut	BOC	15 A	Single Phase	Plasma Cutter	30% at 40 A	15 A
MAGMIG145	Magmate	BOC	10 A	Single Phase	GMAW	15% at 145 A	9.8 A
MAGMMA140DIY	Magmate	BOC	10 A	Single Phase	MMAW	20% at 140 A	9.8 A
MAGMMA160DIY	Magmate	BOC	15 A	Single Phase	MMAW	20% at 160 A	11.6 A
MMA131VRD	Smootharc	BOC	10 A	Single Phase	MMAW	20% at 130 A	9.8 A
					GTAW	20% at 170 A	9.1 A
MMA171VRD	Smootharc	BOC	15 A	Single Phase	MMAW	20% at 170 A	14.3 A
					GTAW	20% at 200 A	11.6 A