

# Do's and Don'ts

when you switch on single-phase equipment



## Use the correct

input current, cable and plug in accordance with AS 60974-1

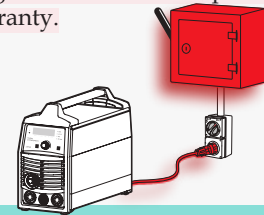
**Before operating** your welding machine, follow the instructions in the operating manual provided.

**Inspect** cables and plugs regularly.

Contact a qualified electrician for advice and/or upgrade and, if needed, to replace any damaged plugs or cables.



- Don't risk damage to your machine or cause tripping and/or fire by using the wrong input current, cable or plug.
- Don't tamper with plugs or file down earth pins. Doing so will void warranty.



## Welding Machines are designed and manufactured to conform EC 60974 or AS 6097

This Standard not only covers the machine but also the input cable and plug requirements including the size of the plug that should be used (formula in clause 3.33).

### EXAMPLE

If the  $I_{1\text{eff}}$  rating on your machine is **27A** then you must use a **32A** plug as a **15A** is undersized for the welding current being used and may cause the cable to **overheat**.

The  $I_{1\text{eff}}$  determines the correct plug, input cable and input current required for each machine.

$I_{1\text{eff}}$	Plug Icon	min-max cable size
$I_{1\text{eff}} \leq 10A$		1.5-2.5 mm <sup>2</sup>
$I_{1\text{eff}} \leq 15A$		1.5-4 mm <sup>2</sup>
$I_{1\text{eff}} \leq 25A$		2.5-6 mm <sup>2</sup>
$I_{1\text{eff}} \leq 32A$		4-10 mm <sup>2</sup> size must be indicated on the cable

## It's important

to understand input and output currents and to make sure that the input circuit is correctly rated to supply the required input draw.

This allows the machine to operate at or near maximum output and protects the circuit board from tripping, overheating and/or catching fire.

## Your Machine

must be compliant to E4824: Regulatory Compliance Mark (RCM) and number.

Check for this symbol before buying.



## Look for the $I_{1\text{eff}}$

on the welding machine's rating plate and ensure that you have the correct input circuit to support this power draw.

Effective rated primary current ( $I_{1\text{eff}}$ ) combines the conductor heating due to these two levels of current.  $I_{1\text{eff}}$  is the maximum rated effective supply current that determines the minimum plug and input cable rating as well as the minimum capacity of the input circuit that the machine gets plugged into to safely operate the machine.

**If you don't have** a suitable power outlet,

you should contact a qualified electrician to advise whether the wiring in your building will cater required outlet.

You may also need to upgrade your circuit breakers and possibly switchboard to suit. Failure to do this may cause an electrical fire in the building which may void insurances.

		AS/NZS60974-1 IEC/EN60974-10			
	50A/16.5V-230A/25.5V	X	25%	60%	100%
		$I_2$	230A	190A	150A
		$U_2$	25.5V	23.5V	21.5V
	15A/10.6V-250A/20V	X	25%	60%	100%
		$I_2$	250A	200A	160A
		$U_2$	20V	18V	16.4V
	15A/20.6V-220A/28.8V	X	25%	60%	100%
		$I_2$	220A	170A	140A
		$U_2$	28.8V	26.8V	25.6V
	$U_1=240V$ 1-(50/60Hz)	MIG	$I_{\text{max}}=45A$	$I_{\text{eff}}=26A$	
		TIG	$I_{\text{max}}=39A$	$I_{\text{eff}}=23A$	
		MMA	$I_{\text{max}}=46A$	$I_{\text{eff}}=27A$	
<b>S</b>		IP21		Air cool	