

MIG 100EN TURBO NO GAS (See diagram on P. 11)

WIRE SIZE SPECIFICATION CHART

NO GAS WELDING MILD STEEL (FLUX CORED WIRE ONLY)

Welding Wire

Workpiece Thickness (millimetre)	Welding Wire 0.9 mm.	Welding Wire Spd. Adjust.
	Pos. A B	Adjust. C
0.6 - 0.8	1 - Min.	Low
0.8 - 1.0	2 - Min.	Med.
1.0 - 2.0	2 - Max.	Med.
2.0 - 3.0 *	2 - Max.	High

GAS WELDING STEEL

Workpiece Thickness (millimetre)	Welding Wire 0.6 mm.		Welding Wire 0.8 mm.	
	Welding Pos. A B	Wire Spd. Adjust. C	Welding Pos. A B	Wire Spd. Adjust. C
0.6 - 0.8	1 - Min.	Low	1 - Min.	Low
0.8 - 1.0	1 - Max.	Med.	2 - Min.	Med.
1.0 - 2.0	2 - Min.	Med.	2 - Max.	Med.
2.0 - 3.0	2 - Max.	High	2 - Max.	High
3.0 - 5.0 *	2 - Max.	High	2 - Max.	High

* NOTE: With correct preparation it is possible to weld upto 5 mm thick mild steel with the MIG 100 EN TURBO NO GAS. Seek advice if unsure.

GAS WELDING ALUMINIUM

Workpiece Thickness (millimetre)	Welding Wire 0.8 mm.	
	Welding Pos. A B	Wire Spd. Adjust. C
0.8	1 - Min.	Med.
1.0 - 2.0	2 - Min.	Med.
2.0 - 3.0	2 - Max.	High

MIG 150EN TURBO NO GAS

WIRE SIZE SPECIFICATION CHART

NO GAS WELDING MILD STEEL (FLUX CORED WIRE ONLY)

Workpiece Thickness (millimetre)	Welding Wire 0.9 mm.		Welding Wire Spd. Adjust. D	
	Welding Pos. Switch A B C	Adjust. D	Low	Med.
0.6-0.8	A 2	Min.	Low	Med.
0.8-1.0	A 3	Min.	Med.	Med.
1.0-1.2	1	2/3	Max.	Med.
1.2-2.0	A 2	Max.	Med.	High
2.0-3.0 *	A 3	Max.	High	

N.B.: Please note that for position 1, B switch can be on 2 or 3 position.

Conversion to gas welding

For welding Stainless Steel or Aluminium it is necessary to convert your No-Gas Machine to Gas operation (The MIG 85 EN is a No-Gas welder only. It **cannot** be converted to gas operation). This is extremely simple once you have purchased the following parts from your local **Clarke** dealer or Welding Supplies store:

- 1) WIRE - All Clarke No Gas Mig welders accept mini and 5 Kg. wire spools in 0.6 mm. and 0.8 mm. diameter.
 - 2) TIPS - The appropriate tip must be purchased to suit the thickness of wire being used (Note: if using 0.8 mm. Aluminium wire a 1.0 tip must be used).
 - 3) GAS - Disposable gas bottles are available from your local **Clarke** dealer or from a welding supplies dealer. Rechargeable gas bottles are available from your welding supplies dealer.
 - 4) GAS REGULATOR - A gas regulator to fit your gas cylinder is available from your local **Clarke** dealer or a welding supplies dealer.
- Note: Decide in advance whether you are going to use disposable or rechargeable gas bottles as this will effect the type of regulator purchased.

- 5) SUNDRIES - If you decide to use rechargeable bottles then you will have to purchase a large gas bottle adaptor and a length of 1/4" (6 mm.) I.D. flexible gas pipe. (Available from **Clarke** International or your local welding supplies dealer).

Attaching gas bottle and regulator

- 1) If using disposable gas bottles remove the protective plastic cap from the threaded top of the bottle and screw the regulator down in a clockwise fashion until tight (be careful not to put too much force on the regulator when tightening).
- 2) Insert the plastic gas tube (diagram 2,Q) into the regulator (push all the way in). Note: when changing disposable bottles, push in the outer flange of the regulator orifice to allow easy release of the plastic tube.
- 3) The operation of the pressure regulator, for use with disposable bottles, is based on the action of a needle operated by a knob placed over a graduated dial plate (from "0" to "6"), acting on the valve of the bottle. With the knob turned to position "0" there is no gas flow; before starting to weld bring the knob to position "3" or "4", achieving a gas flow of 2/3 litres/minute. In order to obtain the maximum service from each gas bottle, always maintain a minimum gas flow (2/3 litres per minute) which is sufficient to obtain a good weld without porosity. The pressure regulator is equipped with a safety valve which will automatically operate should the pressure surge.
- 4) For safety and economy, ensure that the regulator is fully closed (turning fully anti-clockwise) when not welding and/or before fitting or removing the gas bottle.
- 5) When using a rechargeable bottle insert the plastic gas tube (Q) into a large gas bottle adaptor. Connect the tail end of the adaptor to a length of 1/4" (6 mm.) I.D. flexible gas pipe and connect this pipe to a gauged pressure regulator which is screwed onto the rechargeable bottle. The gauged pressure regulator is then used to control the flow of gas which should be 2/3 litres per minute.

WARNING: The torch (Diagram 2, Item T) must be kept straight. When feeding a new wire through the liner, make sure the wire is cut cleanly (no burrs or angles) and at least two inches of the end is straight (no curves). Failure to follow these instructions could lead to the wire damaging the liner.

Preparation for welding

NO-GAS WELDING

- 1) Plug the machine into a correct outlet*.
- 2) IMPORTANT: Ensure that the polarity is correctly set-up. For No-Gas Welding the earth/ground clamp lead should be plugged into the positive (+) socket on the front panel of the machine, whilst the torch lead should be plugged into the negative (-) socket on the front panel of the machine.