

## ROTARY MANIPULATORS ROTANGLE MODELS 12, 18, & 18 CNC SPECIFICATION



Model: Rotangle 12 for 12" (305 mm) chamber



Model: Rotangle 18 for 18" (457 mm) chamber

### General Description:

This Rotary Manipulator is called a "Rotangle" because it rotates a work-piece at various angles between 0° and 90°. It is designed for loading while in the beam welder chamber, or when removed from the chamber. It is fitted with a "curly" cable for this purpose.

Work-pieces or work-holders are held in the collet chuck, which has a run out of less than 0.001" (0.03 mm). The size range is 1/16" to 1" diameter (1.6 x 25 mm). There is a through hole of 1" (25 mm). With the use of stepper motors the unit has a very wide speed range so that small and large diameter parts can be welded with the required welding speed. The Rotangle CNC is supplied with a faceplate as well as collets. (Tailstock is extra).

The Rotangle is mounted on a stand so that its height can be adjusted to suit the specified working distance. An optional Tailstock can be fitted that runs on two rails attached to the headstock. These rails are removable when not in use.

The Rotangle CNC has motorized tilt (0-90°).

### Special Features:

- Low profile and very compact.
- Very wide speed range using stepper motors and timing belt drive.
- The variable speed drive box is sold separately. When purchased as part of a "Beamer" electron beam welding system it is not required since all the drivers are built into the machine.
- Superior accuracy of rotation with ball bearings and collets.

- Low stray magnetic field to prevent beam interference.
- Adjustable height and angle on a stand.
- Optional, removable tailstock.
- Lightweight for easy handling.
- Collets lock for spanner tightening when required.

Specifications	Rotangle Model 12	Rotangle Model 18 CNC
<b>Overall size:</b> <b>Without stand or tailstock</b>	4" x 5.25" x 6" (102 x 133 x 152 mm)	Details on request
<b>With stand and tailstock:</b>	9.6" h x 8.4" x 4.5" (244 x 214 x 114 mm)	
<b>Weight:</b>	Standard:19.5 lbs ( 8.8 Kg) With tailstock: 26 lbs (11.8 Kg)	
<b>Speed Range:</b>	Will depend on the drive system, but typically 3 - 150 RPM	
<b>Load Capacity</b>	20 lbs (9.1 Kg) horizontal. 50 lbs (22.7 Kg) vertical	80 lbs 'CNC' Version
<b>Size Capacity:</b>	The collets size range is 1/16" to 1" (1.6 mm x 25 mm) (Collets set supplied to order)	8" Diameter faceplate
<b>Maximum Diameter:</b>	Limited only when the tailstock is fitted to 5.0" (127 mm)	
<b>Height Adjustment:</b>	A standard 1" (25mm) centerless ground shaft is used for adjustment of the Rotangle height so it can be replaced if the standard adjustment of 6" (152 mm) is not sufficient.	Height is normally achieved by placing this, and other tooling on the Z axis Table
<b>Locking &amp; Tightening:</b>	The collets spindle can be locked with a locking plunger that is built in. The collets spanner can then be used to tightly clamp the part or work-holder in the chuck if required (normally this is not necessary).	
<b>Tailstock: (optional extra)</b>	The tailstock slides on two 3/4" diameter (190 mm) shafts to adjust the center distance. It contains a small diameter ball bearing for mounting a tailstock center. The small diameter is to enable the beam to pass close to the axis of rotation when mounted vertically.	