

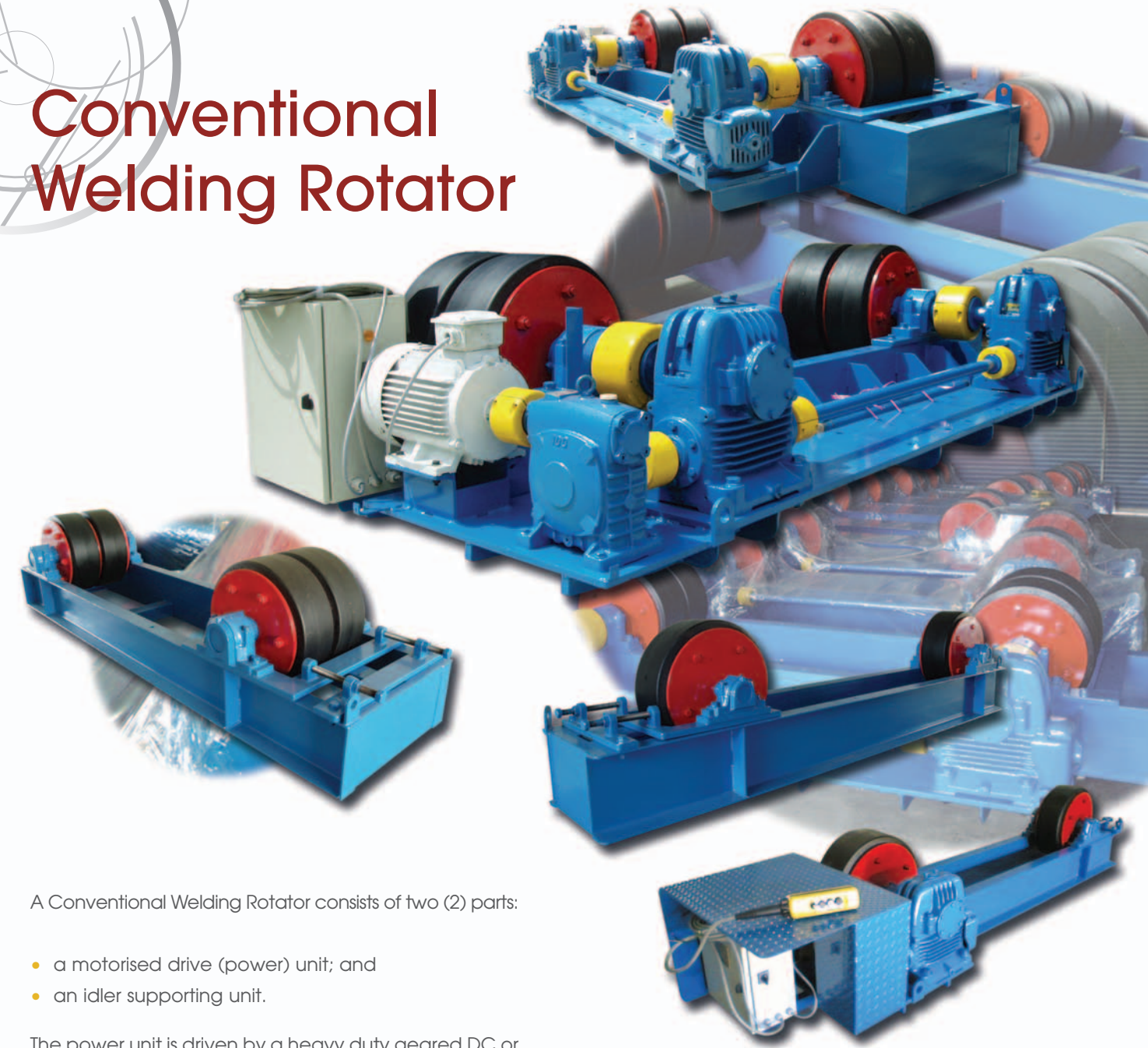
## Specifications

Model	Static Load 1 Power + 1 Idler (tonne)	Turning Capacity Torque (tonne)	Vessel Diameter Min-Max (mm)	Tyre Diameter / Width (mm)	Rotation Speed (mm/min)	Drive Mode
YR 10/5	5	10	120-2500	Ø 304 / 177	30-931	Single Wheel
YR 15/10	10	15	120-3200	Ø 355 / 177	30-931	Single Wheel
YR 30/20	20	30	250-4500	Ø 457 / 177	30-856	Single Wheel
YR 45/30	30	45	746-4500	Ø 588 / 203	30-843	Single Wheel
YR 60/30	30	60	746-4500	Ø 588 / 203	30-843	Dual Wheel
YR 110/75	75	110	746-4500	Ø 588 / 406	30-843	Dual Wheel
YR 120/90	90	120	746-4500	Ø 588 / 609	30-843	Dual Wheel
YR 180/120	120	180	746-4500	Ø 588 / 812	30-843	Dual Wheel
YR 200/150	150	200	746-4500	Ø 588 / 1015	30-843	Dual Wheel

Model	Vessel Diameter			Wheel Centre		
	Refer to sketch above					
	A (mm)	B (mm)	C (mm)	A (mm)	B (mm)	C (mm)
YR15/10	3200	1500	150	1850	950	650
YR30/20	4500	1750	250	1200	950	650
YR45/30	4500	2500	740	2070	1320	950
YR60/30	4500	2500	740	2070	1320	950
YR110/75	4500	2500	740	2070	1320	630
YR120/90	4500	2500	740	2070	1320	630
YR180/120	4500	2500	740	2070	1320	890
YR200/150	4500	2500	740	2070	1320	890

Model	Frame Dimensions							
	Power				Idler			
	Length (mm)	Width (mm)	Height (mm)	Weight (tonne)	Length (mm)	Width (mm)	Height (mm)	Weight (tonne)
YR15/10	3200	680	500	0.5	3000	430	500	0.3
YR30/20	3460	780	610	1.2	3000	470	610	0.6
YR45/30	3530	850	710	1.2	3000	520	710	0.6
YR60/30	3530	850	710	1.3	3000	520	710	0.6
YR110/75	3650	1290	710	1.5	3000	750	710	0.7
YR120/90	3700	1550	790	1.9	3000	1010	790	1.0
YR180/120	3700	1780	790	3.5	3000	1220	790	1.7
YR200/150	3700	2010	790	4.5	3000	1430	790	2.2

# Conventional Welding Rotator



A Conventional Welding Rotator consists of two (2) parts:

- a motorised drive (power) unit; and
- an idler supporting unit.

The power unit is driven by a heavy duty geared DC or AC motor which is designed according to internationally proven specifications to ensure constant speed with outer balance load of 15%.

The heavy duty tyres are designed to 65° durable hardness with high-stress rubber cushion mounts to absorb shock loads and prevent gear box damage.

The DC electronic function or inverter comes with a remote control panel with interlocking reversing systems operating at temperatures in excess of 60° C.

### Other features

- Oil sight level gauges
- Skid frame protection to prevent any damage on control box when lifting centre loads
- Anti-creep device feature offering ± 5° vessel creep control
- Overload disc to avoid any possible tyre damage

### Options

- Digital read LED present speed indicator
- Synchronising control accessory for multiple connections of power frames
- Synchronising, plug-in lead to customer length
- Bogie mounted frames
- Mechanised electric power bogie mounted frames
- Synchronising roll rotation and arc start control system

**NOTE:** Please refer to Yuryoku Engineer for any requirement that is not covered by this catalogue.



## Special Features

### Self-Aligned

Roll different sizes of work pieces without changing wheel centre

### Drive System

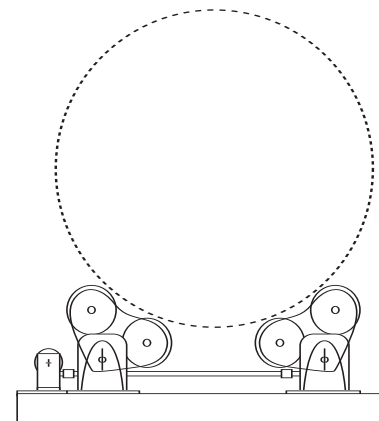
- Direct drive through heavy duty gear box (no external wearing parts such as spur or ring gears or chains)
- No backlash
- Oil sight level gauges

### Electronic Control

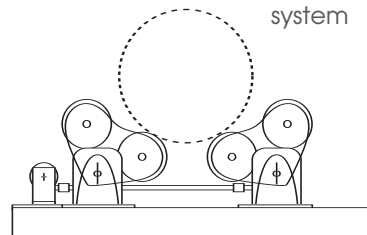
- Precision DC electronic control with interlocking reversing system
- Controller will operate at temperatures in excess of 60°C
- Remote Control :
  - a. Operation control panel as the standard length 10m
  - b. Special cable can be supplied

### DC or AC Motor

Ensures constant speed with outer balance loads of 15%



(A) Maximum



(B) Minimum

## Specifications

Model	Static Load 1 Power + 1 Idler (tonne)	Turning Capacity Torque (tonne)	Vessel Diameter Min-Max (mm)	Tyre Diameter / Width (mm)	Drive Mode
YR20ASA	20	30	580-4500	Ø 457 / 177	Single Wheel
YR30ASA	30	40	580-4500	Ø 457 / 177	Single Wheel
YR40ASA	40	60	580-4500	Ø 558 / 203	Dual Wheel
YR60ASA	60	90	580-4500	Ø 558 / 406	Dual Wheel
YR90ASA	90	135	580-4500	Ø 558 / 609	Dual Wheel
YR120ASA	120	180	580-4500	Ø 558 / 812	Dual Wheel

### Skid Mount Protection

Prevents control box damage when loading an off-centred skid frame

### Hi-Tech Torque Frame (Patent Pending)

Drive system with hi-stress rubber cushion mounts to absorb shock loads and prevent gear box damage

### Hi-Tech Anti-Creep Device

Adjustable anti-creep device provided as standard feature offering  $\pm 5^\circ$  vessel creep control

### Tyres

Specialised heavy duty tyres designed to 65° dural hardness

### Overload Discs

- Overload discs provided as standard to avoid any possible tyre damage
- Can be easily removed and re-machined if damaged

### Options

- Digital read LED present speed indicator
- Synchronising control accessory for multiple connections of power frames
- Synchronising, plug-in lead to customer length
- Bogie mounted frames
- Mechanised electric power bogie mounted frames
- Synchronising roll rotation and arc start control system



# Self-Aligned Welding Rotator



The main function of the Self-Aligned Welding Rotator is to roll work pieces of different sizes without changing the wheel centre.

The machine is driven by a DC or AC motor to ensure constant speed with outer balance loads of 15% and electronically controlled by a remote control panel which is attached to a standard 10 metre length cable.

The roller wheel consists of specialised heavy duty tyres of 65° dural hardness. The Self-Aligned Welding Rotator can also be used as:

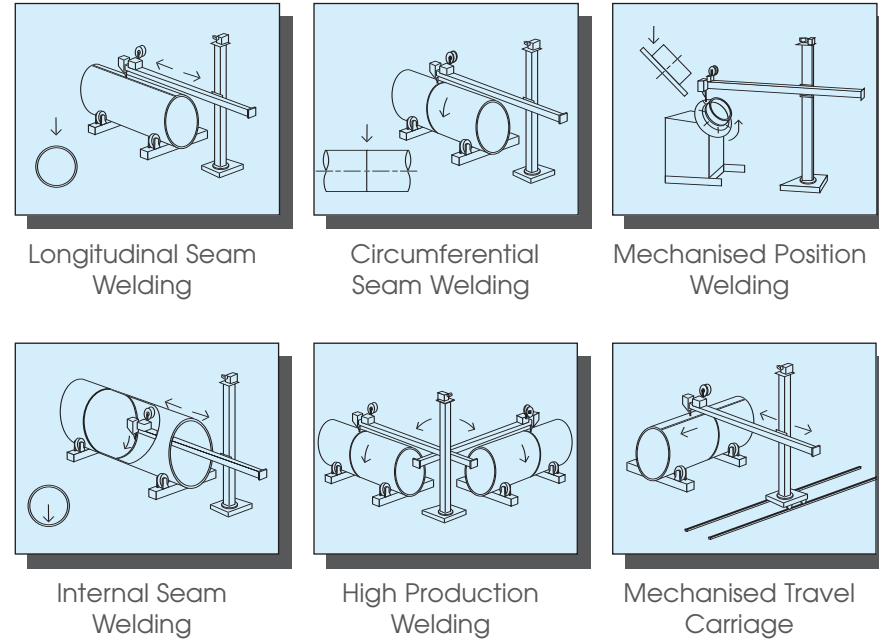
- A hi-tech anti-creep device providing  $\pm 5^\circ$  creep control
- Hi-stress rubber cushion mounts to absorb shock loads and avoid gear box damage
- An overload disc to avoid any possible tyre damage



**Options**

- Flux recovery unit
- Welding equipment
- Flux heating oven
- Vertical & horizontal cross slide (manual-electric)
- TV camera control
- Seat

**Automated  
Welding Systems  
and Positioning**



**Specifications**

Model	MINOR YM25	MINI YM33	MIDI YM44	MAX YM55	MAX YM66
Max Overall Height (mm)	3580	4600	5600	6950	7950
Effective Horizontal Boom Travel (mm)	2500	3000	4000	5000	6000
Effective Vertical Boom Travel (mm)	2500	3000	4000	5000	6000
Standard End of Boom to Arc (mm)	350	800	800	800	800
Standard Max Arc Height (mm)	2500	3000	4000	5000	6000
Standard MinArc Height (mm)	250	250	250	675	675
Width of Carriage (mm)	1550	1550	2150	2750	2750
Length of Carriage (mm)	2320	2320	2600	3000	3000
Standard Wheel Gauge (mm)	1400	1400	1800	2400	2400
Vertical Lift Speed (mm / min)	1000	1000	1000	1000	1000
Horizontal Travel Speed (mm / min)	1250	1250	1250	1250	1250
Travel Carriage Speed (mm / min)	1250	1250	1250	1250	1250



**Column & Boom**

Manipulators are designed to work either independently or in conjunction with rotators and/or positioners to perform jobs like positioning an automatic welding head correctly over a work piece to achieve accurate down hand weld.

The Manipulator is fully motorised for raise, lower and boom traverse with an optional motorised travelling base. It allows the use of fully automated production techniques which increase quality, reduce production time and reduce operator fatigue.

**Manipulator**

A safe vertical lift is achieved through an AC self-braking motor. A geared reducer provides constant speed and smooth movement. Moreover, the Manipulator is equipped with an automated safety latch. This latch locks the room instantly when the chain tension on the boom lift is released. The boom is driven by spur gears. It has a rack on the underside to prevent accumulation of foreign matter.



The Automatic Tank Welder machine is specifically designed for efficient horizontal welding of huge diameter storage tanks, ships' hulls, etc., ranging from 6m diameter and above. The recommended plate thickness is from a minimum of 6mm to a maximum of 50mm while recommended plate height is from a minimum of 1200mm to a maximum of 3000mm.

The tank top is transported by a DC gear motor. Both the YTW 11.3 (single sided welding model) and YTW 11.2 (double sided welding model) weld both internal and external walls simultaneously via the submerged arc process. The flux support unit consists of two knurled drive wheels, a belt system and a recycling capacity of up to 95%.

The unit also incorporates a travel speed indicator with an override fast jog button that allows the tank to be repositioned. Travel can be manually initiated on arc start. All international standard renowned welding machine brands will fit with our tank welder.

For added safety, both welding stations are fitted with emergency stop facilities, designed to de-activate all control and welding functions at the touch of a button. Seam tracking on the tank wall is accomplished through motorised vertical slides.

The variable traveling speed of the unit is controlled by an electrical control pendant which ranges from 0 to 1200 mm/min. Total weight of each complete frame unit is approximately 650 kg without taking account of the Power Source, Welding Head and Control.

### Our Tank Welder main features are:

- Master frame (A)
- Slave frame (B)
- Operator platform
- Flux recovery re-circulating systems
- Cross seam head adjuster
- Pre-heat torch & bracket
- Weather proof curtain
- Power supply cable – 50 metre
- 2 pieces of Flux Belt

### Other features of the Automatic Tank Welder include:

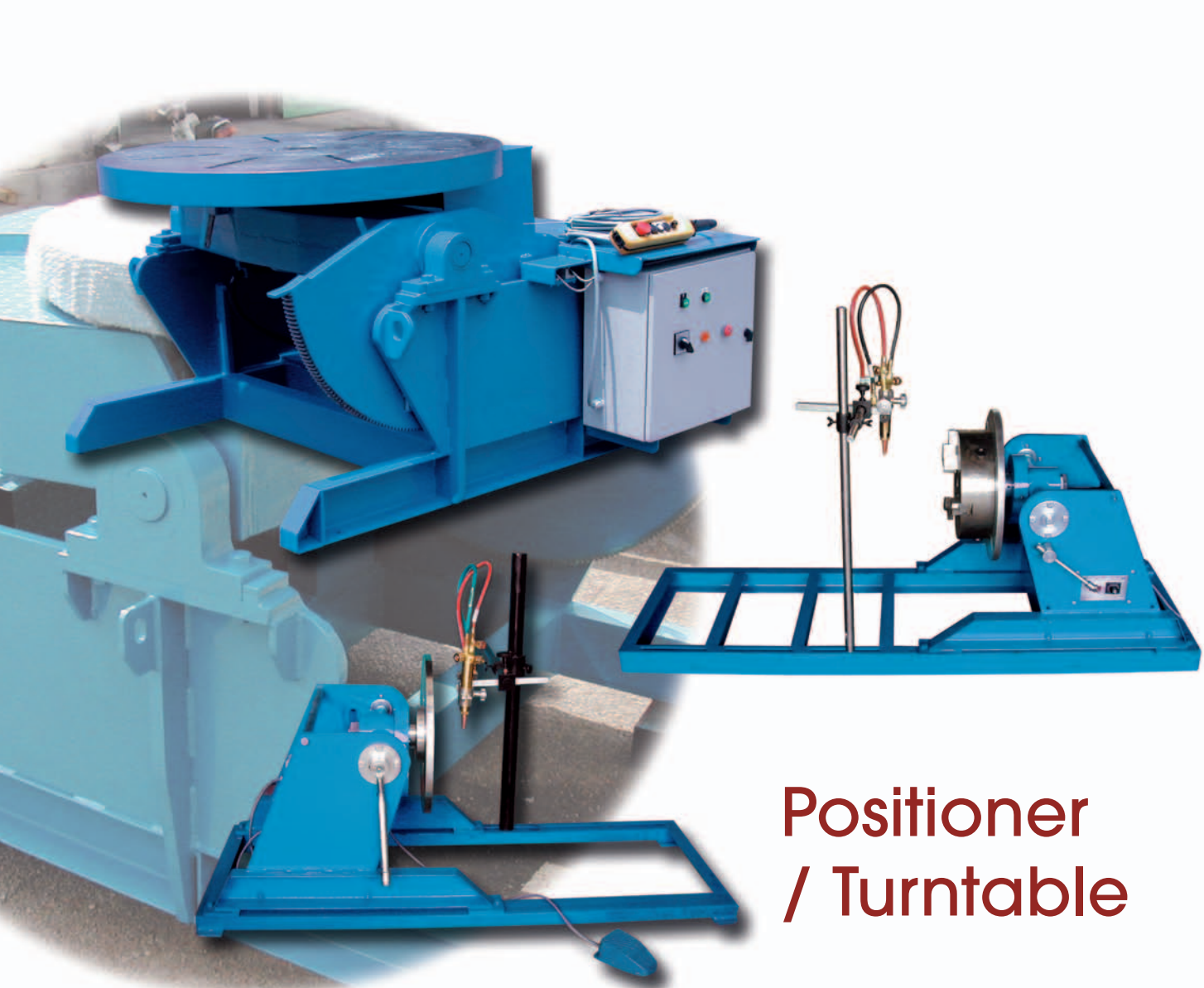
- Heavy motorised carriage supporting both welding stations
- Telescopic legs for welding adjustment from 300-1200mm
- Welding head for vertical welding adjustments of up to 300mm
- Frame head spreader designed for easy tank top loading and clamp facilities
- Safety cages, ladders and handrails with floors and roofs of non-slip plate



# Automatic Tank Welder Machine







## Positioner / Turntable

Our Positioner / Turntable is a compact machine ideally suited for jobs requiring rotary fixturing & positioning welding. We have various models which cater for work piece loading capacities, ranging from 400 kg to 15000 kg.

The table top can be tilted at different angles to achieve better welding positions and precision finishing. Table top tilting angles differ from model to model. All machines have a remote control panel with mounted switches to adjust variable speed control, "Forward-Off-Reverse" and tilting angle.

### Specifications

Model	Loading Capacity (kg)	Tilt Angle Degrees	Tilt Time (sec)	Rotation Speed (mm/min)	Table Diameter (mm)	Power Supply
YP 0.4	400	135	60	0.15 - 1.5	800	415 v 3 PH 50 Hz
YP 0.6	600	135	60	0.1 - 1	800	415 v 3 PH 50 Hz
YP 0.8	800	135	60	0.09 - 1	1000	415 v 3 PH 50 Hz
YP 1.5	1500	135	60	0.06 - 0.6	1200	415 v 3 PH 50 Hz
YP 2.5	2500	135	60	0.05 - 0.5	1400	415 v 3 PH 50 Hz
YP 4	4000	135	60	0.045 - 0.45	1600	415 v 3 PH 50 Hz
YP 6	6000	135	90	0.003 - 0.3	1800	415 v 3 PH 50 Hz
YP 8	8000	115	150	0.025 - 0.25	1800	415 v 3 PH 50 Hz
YP 10	10000	115	150	0.022 - 0.22	2000	415 v 3 PH 50 Hz
YP 15	15000	105	240	0.02 - 0.2	2250	415 v 3 PH 50 Hz

# Travel Gantry Welding System

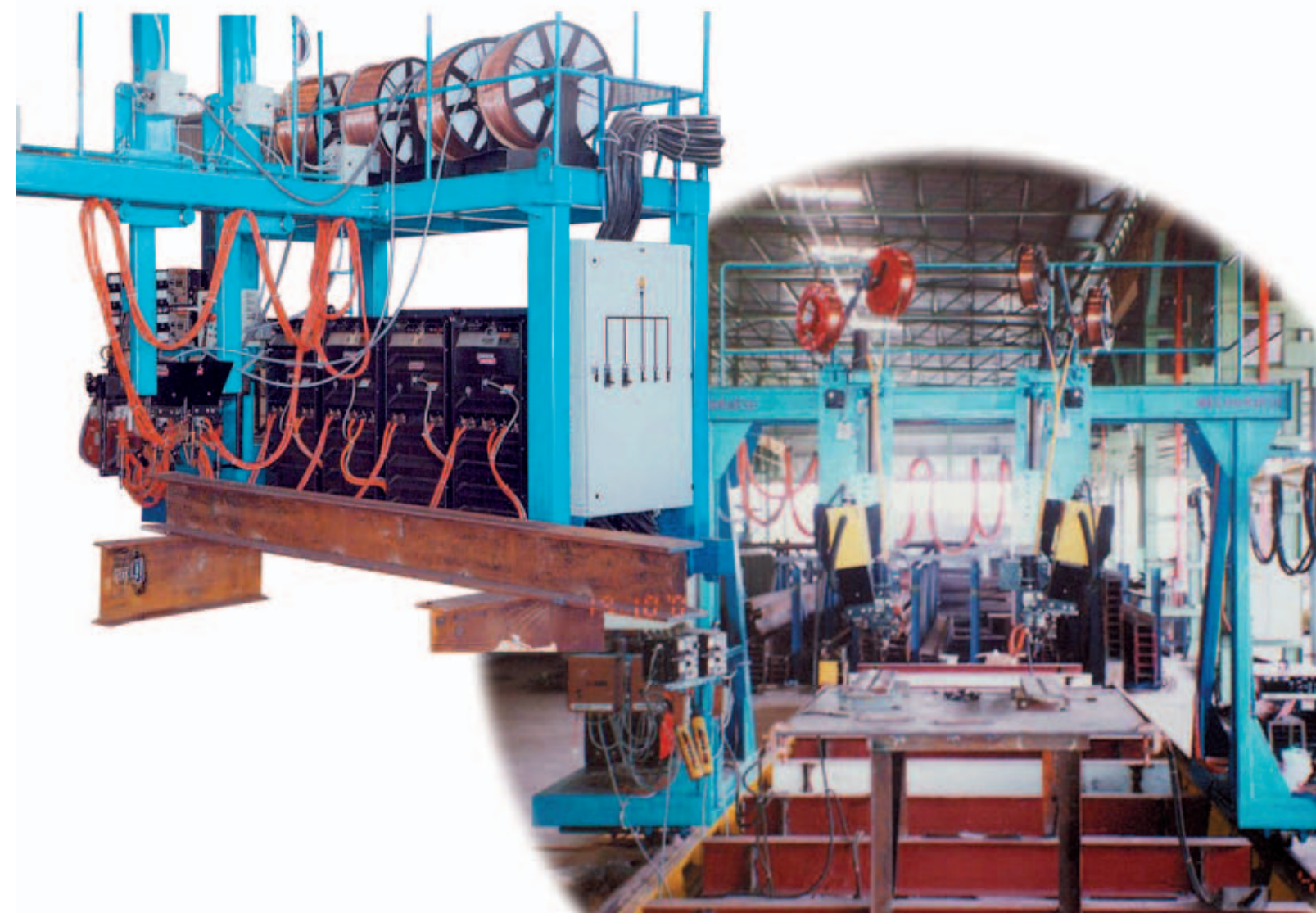
The Travel Gantry Welding System is designed and manufactured according to customer specifications and its main function is to do welding work on the web or flanges for H or I beam.

This system consists of a controlled variable speed motorised travel gantry which moves along the track and attaches to either a twin or multi welding head, which is adjustable for the weld position. The unit is best suited to submerged Arc or MIG welding systems, subject to customer requirements. The number of units of power source required to generate the welding function depends on the number of welding heads/controls.

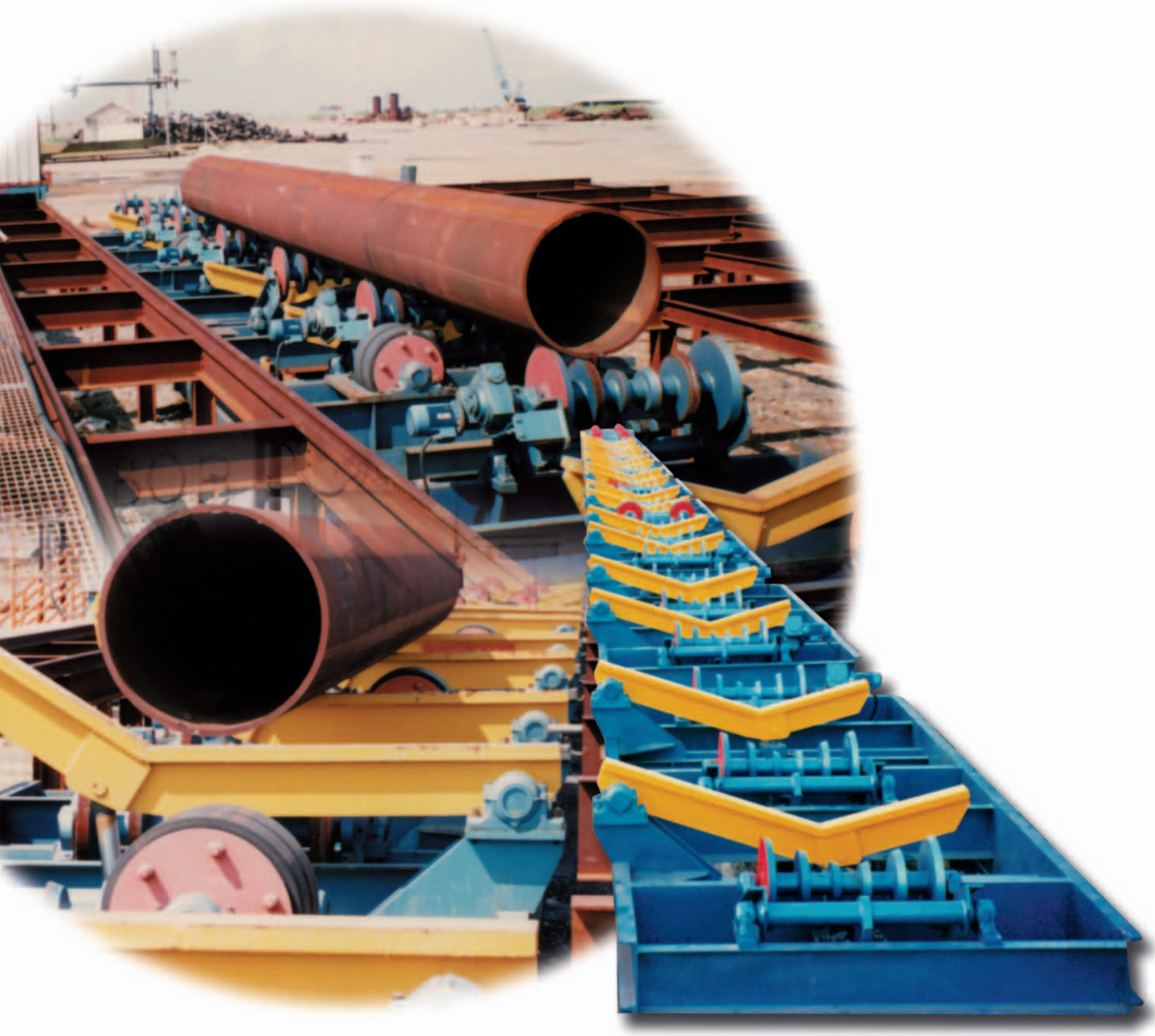
### The advantages of using the Travel Gantry System are:

- It provides better production efficiency and productivity, and helps customers in cutting down cost and improving product quality
- Increased output
- Cleaner production floor and great reduction in wastage compared to the conventional method
- Operation for longer number of hours

Please contact us with any further questions.







## Pipe Rack System

Our Pipe Rack System is a special custom design and build automatic modular welding and transfer line process that incorporates a welding station with a fit-up, making it suitable for circumferential sub-welding tubular sections. It also consists of a hydraulic kicker to allow lifting and unloading.

The Pipe Rack System assists customers in increasing production efficiency and reduces production cost in the long term.

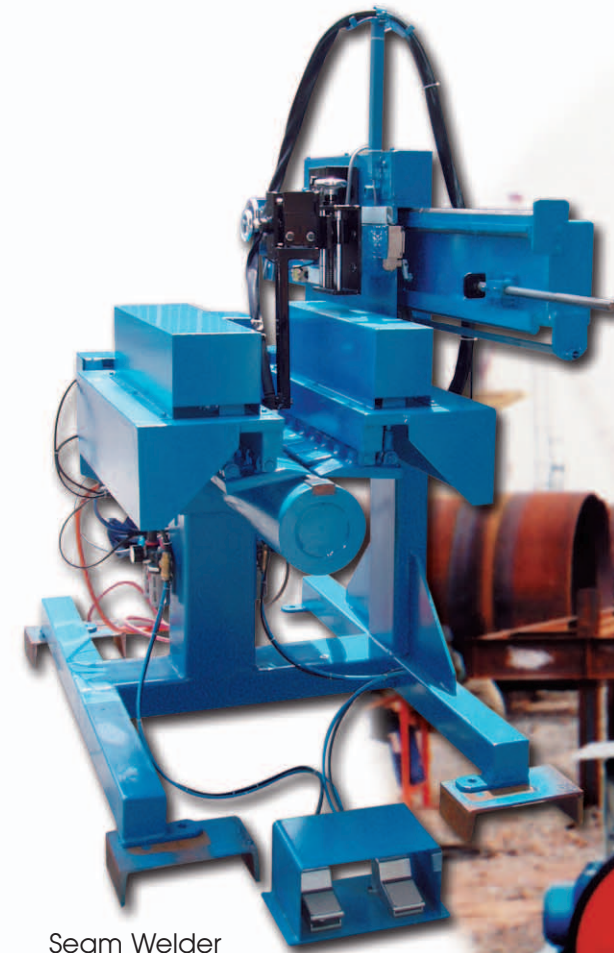
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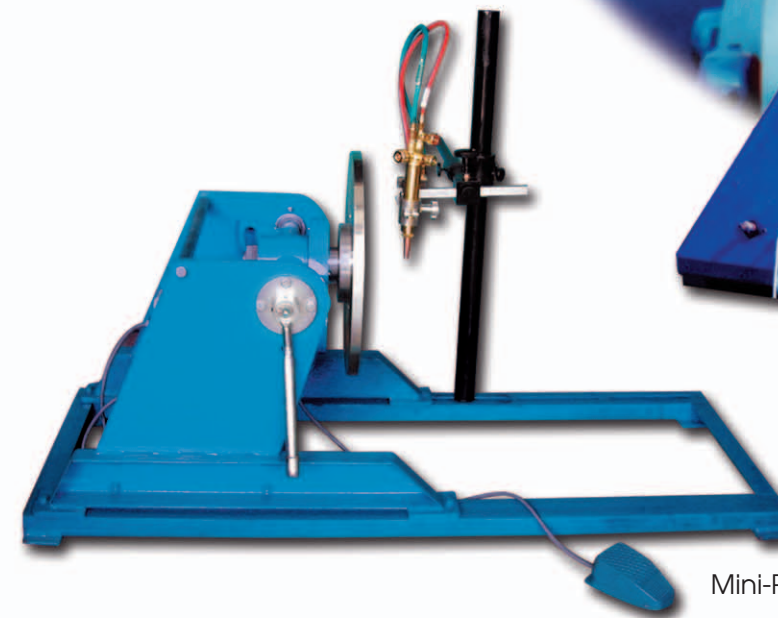
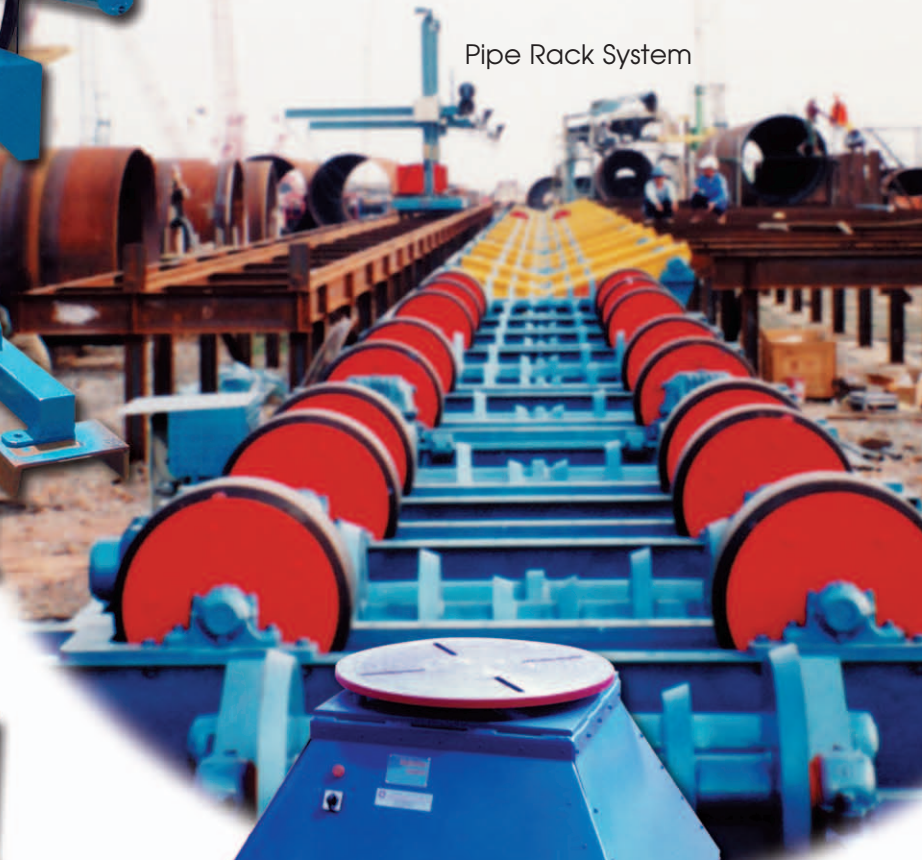
Elbow-arm Welding Machine



Pipe Rack System



Seam Welder



Mini-Positioner



Mini-Turntable