



# CATALOG

Circumferential welding machine





## 1. Introduction

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In tube sheet head welding, welding is performed while the work piece is being rotated by the rotating positioner and fixture with the gripper. According to the diameter of the workpiece, it is possible to raise and lower the welding head by the up-down gearbox motor assembly in order to place the welding nozzle in the right position. At the same time, it is considered for more accurate positioning of the sliding assembly in the location of the welding nozzle.



LPG cylinder Circumferential welding machine



## Main Specifications

Main Technical Specification Flange Welding		
1	Welding Type	Mig (co2)
2	Welding Device	TCK 514
3	Number Of Welding Head	1
4	Work piece	Tube Diameter : 200-400 mm
5	Vertical Travel Stroke	200 mm
6	Horizontal Travel Stroke	150 mm
8	Boom Horizontal Speed	700 mm/min
9	Boom Vertical Mechanism	Linear guideway - Rack & Pinion - Electromotor & Worm Gear Gearbox
10	Boom Horizontal Mechanism	Linear guideway - Rack & Pinion - Electromotor & Worm Gear Gearbox
13	Roller Bed Turing Mechanism	Gear & Pinion - Electromotor & Worm Gear Gearbox
14	Positioner Turing Speed	To 2 rpm
16	Control System	PLC
17	IP Classification	IP22
18	Power Supply	220V-50Hz 3PH
19	Chassis Overall Dimensions	1900 mm x 1800 mm x 925 mm
20	Total Weight	700 Kg



## Additional Description

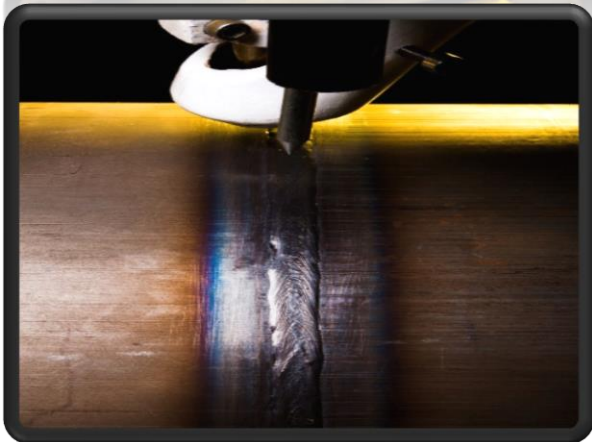
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- It has a Mig welding system with accurate ampere and voltage control during welding according to the required standard.
- It has a Shell rotation speed control system by Stepper Motor.
- It has a Cap rotation speed control system by Stepper Motor.
- Has a fixture to hold the Shell on both sides of the Flanges.
- Ability to weld parts in addition to Shell- types of rollers.
- Ability to load up to 3 tons on the machine's turntable.
- Work and easy operation.
- Speed and quality in Shell And Tube Sheet welding operations.
- The ability to adjust the height in X. axes to a course of 1000 mm.
- The ability to adjust the height in two Y.Z. axes to a course of 150 mm.
- Ability to weld all kinds of Shell and Tube Sheet used in industries with different sizes.
- It has a welding connection system without contact and damage to the shaft and the surfaces under the bearing.



## Similar Project

In the figure below, one of the similar Machine made in KARA Company is shown.



**LPG cylinder Circumferential welding machine**



## KARA TCK 514

### Application

- ✓ Possibility of Welding Various Metals, Steel Alloys, Stainless Steel, Aluminum and Copper
- ✓ Possibility of Being Used in Industries such as Steel Structure, Ship Building, Oil, and Gas, etc.
- ✓ Possibility of Being Used in Gas Metal Arc Welding (CO<sub>2</sub>) and Flux Cored Arc Welding

### Features:

- ✓ Possibility of Welding Thin-Thick Beams (Sheets) at Different Positions
- ✓ Having a Three-Phase Input Power Supply with a High Output Capacity for Continuous Welding in Three Shifts
- ✓ Equipped with Burn Back Control System to Avoid Welding Rod Sticking with Nozzle or Work-Piece
- ✓ Equipped with Soft Start System for Maintaining a Slow and Sustainable Arc at the Start of Welding
- ✓ Two Negative Junction Sockets for Providing the Most Sustainable arc and Welding Penetration Control
- ✓ Possibility of a Precise and Continuous Adjustment of Wire Speed (Amp)
- ✓ Easy Transportation Using a Crane Hood, Four Rotatory and Fixed Wheels and a Carry Handle
- ✓ Having a Wide Range of Welding Voltage Choice Using a 4-10 State Voltage Selector and Two Selector Switches
- ✓ Possibility of Welding Automation with Capability for Adjusting Electric Arc Time
- ✓ Possibility of Separating, Moving and Transferring Wire Feeder Unit to Welding Area Using Special Cables
- ✓ Having Appropriate Space at the Back of Machine for Holding Gas Cylinder along with a Chain
- ✓ Having a 220v Output Socket for Gas Heater
- ✓ Possibility of Gas and Wire Movement Testing Prior to Welding Operation
- ✓ Rectifier Thermal Overload Protection

### Advantages

- ✓ High Speed Production and Welding
- ✓ Low Electrode Waste & Consumption Costs Using Continuous Welding Rod
- ✓ Easy Application Operations and No Need to Be Cleaned Due to Lack of Any Slag
- ✓ Water Circulator Unit inside the Machine for Cooling Welding Torch





# KARA Quality Certificates



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