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# CATALOGUE

## KARA CNC PLATE & TUBE CUTTING MACHINE





# KCPTCM



## KARA CNC Plate & Tube Cutting Machine

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1. Suitable for making exact cuttings in various shapes and sizes using Oxy-Fuel and Plasma cutting techniques.
2. Possibility of Oxy-Fuel and Plasma nozzles installation on the main head and attaching an extra Oxy-Fuel nozzle (Master & Slave)
3. Possibility of cutting various geometric shapes on the tube
4. Having a robust and durable machining structure.
5. Having a precise and high-speed linear motion using Servo Motor and planetary gearbox with a very low backlash.
6. Equipped with two Servo Motors and planetary gearboxes at the two sides of machine for a constant and vibration less motion. (Gantry configuration)
7. Possibility of transferring longitudinal motion force of cutting gate using a diagonal bevel rack & pinion for a fast and precise travel speed (Linear guide).
8. Possibility of linear movement of cutting nozzle on the linear ball bearings using a diagonal bevel rack & pinion for fast and precise movements (Rack & Pinion and Linear Guide).
9. Using the TEX Computer CNC Control System made in Italy with a performance version 2016.
10. Equipped with an automatic height control system for nozzles to prevent crashing of nozzle with H-beam.
11. Equipped with automatic solenoid valves for each nozzle to avoid Oxygen and Gas waste, to adjust cutting flame and easy operation.
12. Equipped with a flame or flashback arrestor.
13. Having a dust remover for slide rails.
14. Equipped with a spring-applied control system for gearbox to protect damages resulting from operator fault while working.
15. Equipped with robust, integrated and adjustable slide rails for unsmooth workshop surfaces.
16. Having a set of robust steel belt tables which can be replaced easily.
17. Equipped with a fume suction table.
18. Equipped with an operator seat.





## Main Technical Specifications

1	Effective cutting width (mm)	2500
2	Effective cutting length (mm)	6000
3	Number of cutting stations	Single: Plasma OR Oxy-fuel Compact: Plasma & Oxy-fuel Master-Slave: Main Oxy-fuel Drive Station & Slave stations
4	Plasma cutting's power supply	KARA Plasma 200A
5	Plasma cutting thickness (mm)	0.5 – 25 for Carbon steel 0.5 – 20 for Stainless Steel 0.5 – 15 for Aluminum
6	Oxy-fuel cutting thickness (mm)	Single Torch: 300
7	Maximum Contour's speed (mm/min)	7000
8	Machine's control system (optional)	TexComputer (Itay)
9	Cutting Flame's Reflect Protection system	Flashback Arrestor
10	Cutting Torch's Protection system	Automatic height control
11	Panel's degree of protection	IP 20
12	Machine's Electric Power Consumption	220V-50 Hz-1PH-16A
13	Cable protection and guidance system	Energy chain guide
14	System for turning on/off cutting torch	Automatic spark plug transformer
15	Machine's linear movement system	T90/B (T16) + Helical rack & pinion
16	Machine's Driving components	Servo motors + planetary gearbox
17	Possibility to increase the length and width of machine (optional)	Width: Up to 4m Length: Up to 12 m
18	Overall Machine's Dimension (mm)	7900 x 5500
19	Overall Machine's Weight (kg)	≈ 3200
20	Machine's Worktable Options	Automatic plasma's fume suction Mechanism

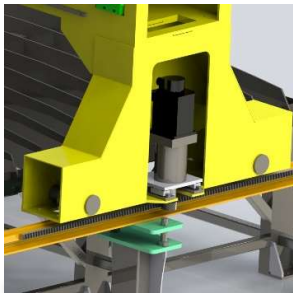
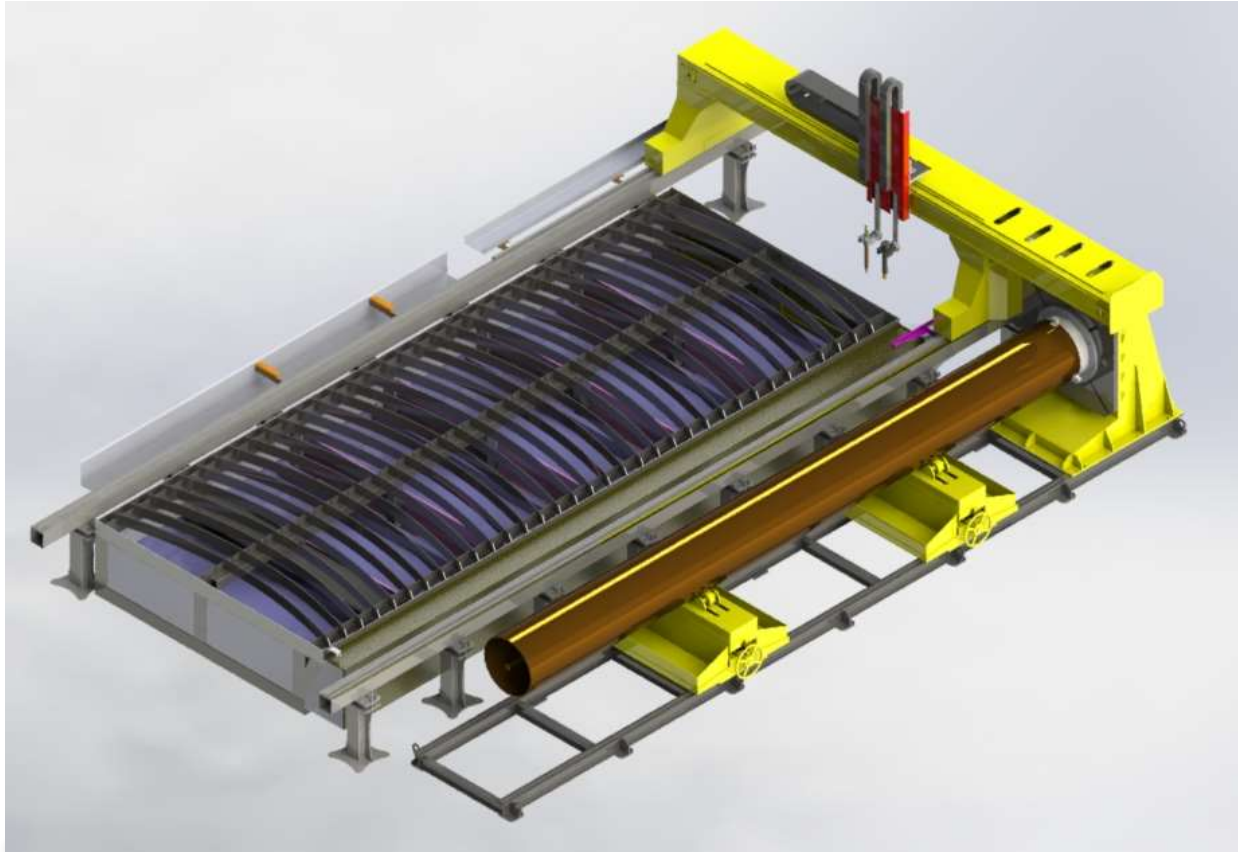
## Tube Cutting Specification

21	Working diameter (Min. & Max.)	Ø50 mm – Ø500 mm
22	Pipe length (Min. & Max.)	Min: 100 mm / Max: 6000 mm
23	Pipe Maximum loading capacity (kg)	4000
24	Pipe clamping system	3 Jaw Chuck -Ø500 mm
25	Pipe retaining system along cutting path	Adjustable subsets according to Pipe diameter and length changes





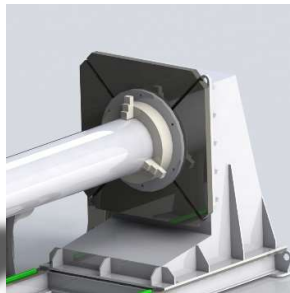
# KCPTCM



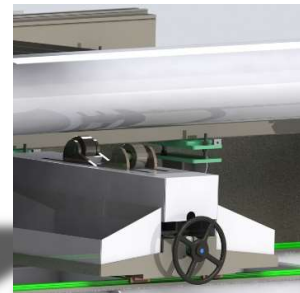
**FIGURE NO.13**



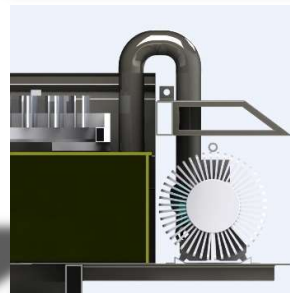
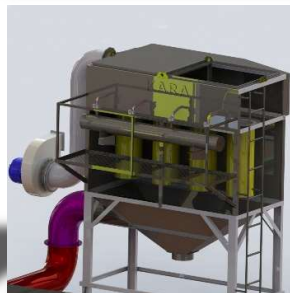
**FIGURE NO.15**



**FIGURE NO.24**



**FIGURE NO.25**



**FIGURE NO.20**

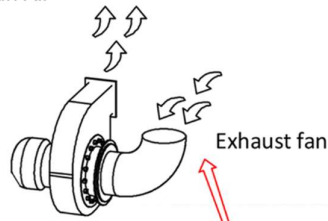




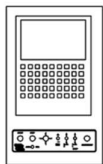
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clean Air

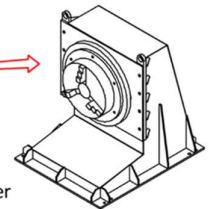
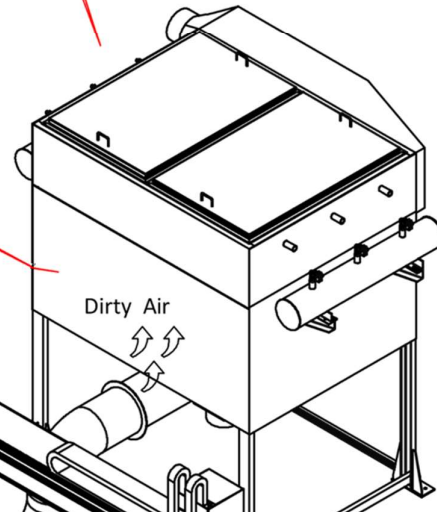


- oxy-fuel & Plasma Cutting Dust Collection
- The modular design
- Material support
- Pneumatic jack for door control
- Proximity micro switch
- Dust Filter Cartridge
- Solenoid valve



- Electrical control box
- Operator panel
- stand alone Cnc controller

Dirty Air



- positioner
- Rotation 0- 360°
- 3-Jaw Self centering Chu

- Plasma cutting torch
- oxy-fuel cutting torch
- Cutting Torch angle



- Transverse adjustment screw
- Height adjustment screw
- Anchor bolt
- Base Plate





# KCPTCM



## Machine Control System

### TexComputer (Italy)

#### Technical Specifications:

1. Equipped with 6 axillary machine zero points for placing workspace at 6 various locations of machine
2. Transferring Files method: WIFI, Ethernet PORT, USB memory.
3. 10-Inch-wide touch screen color monitor. (65000 colors, 1024x768 pixel)
4. Controlling of Oxy-Fuel or plasma torch at various modes.
5. Adjustable cutting torch Kerf.
6. Predefined figure library.
7. Touch screen and graphic monitor (Persian and English)
8. Backward cutting facility.
9. Connectable mouse and keyboard (for editing codes).
11. A Laser Pointer for Determination of Zero point. (optional)
12. Adjusting plate angle by software.
13. Possibility of Attaching Axis Beveling (optional).
14. G-Code Generator: Pro Nest Software Program (in office).
15. CNC Automatic Torch Height Controller (for plasma torch).
16. Fully-Closed-Loop Servomotor Control System.
17. Cutting Type Software Selection (Oxy-Fuel/Plasma).
18. Controller Technology (ITALY, 2016).





## KARA PLASMA 200A Technical Specification

1	Type of voltage control	Thyristor Control
2	Current control steps	Stepless
3	Current Voltage Range	25A/110v ~ 200A/200V
4	Permissible Load @100% D.C.	200A
5	Open Circuit Voltage	380V
6	Input Fuse Slow	100A
7	Input Current@ 100% D.C.	100A
8	Max Power	66KW
9	No Load power	500 kw
10	Mains input power	3x380 V/50Hz
11	Over Load Protection	Thermostat
12	Cooling Type	A.F.
13	Protection Class	IP20
14	Insulation Class	H
15	Dimension L/W/H	760/590/1435 mm
16	Weight	460 Kg
17	Air Input Pressure	7 Bars
19	Air Consumption	230 L/min
20	Torch Cable Length	6 m (additional are available by request)





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## KARA Plasma Cutting Machine

<b>Application</b>	Suitable for cutting in all metal industries with easy operation, high velocity and quality
	Capability of cutting carbon steel with a 0.5mm-25mm thickness as well as stainless steel with a 0.5mm-20mm thickness and aluminum 0.5mm-15mm.

## Process Description

KARA Plasma Cutting uses a concentrated electrical arc which melts the material through a high temperature plasma beam. All the conductive metals such as carbon steel, alloy steel, aluminum, copper, etc. can be cut. In this process, the work-pieces can be cut by using ionization of gas and jet ions which are expanded with a high velocity from a very narrow orifice. The contact of these ions with work-piece produces a high amount of heat causing the area to be melted. The plasma gases can be compressed air, Nitrogen, Oxygen or a mixture of Argon/Hydrogen. Since there is 5-7 times increase in cutting speed compared to Oxy-Fuel cutting, there will be fewer dead times (without pre-heating). Indeed, the high speed and no need to Oxy-Fuel, there a considerable reduction in the plasma cutting price compared to Oxy-Acetylene welding.

## Features

- ✓ Continuous current Control from 20 A to max (thyristor control).
- ✓ Tough work shifts for a long time cutting.
- ✓ Thermostat for protection against overload & overcurrent.
- ✓ Twin filter drier.
- ✓ Output current display.
- ✓ Air pressure gauge.
- ✓ Maximum Current limiter.
- ✓ Tow eyelet for easy transportation.

<b>Accessories</b>	Water cooler unit for plasma cutting torch cooling.
	Plasma cutting torch (air/water Cooled).
	Longitudinal cutting carriage with capability of straight torch installation (optional).







# KCPTCM



## KARA Quality Certificates



## Contact US



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[karagroup.official](https://www.instagram.com/karagroup.official)



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