

RADOX PLASMA & OXY FUEL CUTTING CNC MACHINE



2000 * 6000 mm

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RADOX has introduced the latest plasma cutting CNC machine called **RADO SMART** to industrial companies, which has been described in below.

RADO SMART CNC's are manufactured cooperating(technical cooperating) with best European companies in Iran and due to the capabilities and high precision of this type of CNC, can be adapted with all types of international plasma units.

Regarding **Plasma unit** of **RADO SMART**, with just a few settings the new plasma cutting units of the **Smart Focus 300** series achieve excellent results in the cutting range from 0.5 to 80 mm. Even under challenging conditions highest cutting quality and speed are realized.

Therefore we use our proven cutting technologies as for example Contour Cut for

Height control units have an enormous influence on the cutting quality, the lifetime of the consumables and the process stability. It is crucial for the quality of the cutting results to adjust the right distance

Controller of **RADO SMART** are the latest RADOX engineering and R&D department achievement.

Easy training and simple operating and user friendly are advantages of these type of **RADOX** controllers.

cutting mild steel. The optimized gas control units and torches protect the consumables; reduce the gas consumption and the costs per cutting meter.

SMART FOCUS 300 is LIKE LASER type and has the ability to cut materials underwater too. Under water ability reduce temperature effects on cutting surface and increase quality of cutting surface.

between plasma torch and work piece and to keep it constant. The used height control systems are dynamic and voltage-dependent in order to always ensure the optimum cutting height.

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RADO SMART GENERAL TECHNICAL SPECIFICATION

CNC MODEL: LYNX	Height control:M4000
Controller: RADOX C2	Plasma unit: SMART300
Plasma marker	Under water plasma
Cutting thickness : 0.5mm-80mm	Cutting cost: 1/3 flame cut
Cutting speed: 9 times flame cut	Cutting surface quality: Excellent
Energy Guide for plasma cable, duct	Oxy fuel torch : For cutting up to a thickness of 300 mm
Ac Servo motor Double drive	Sheet Align ◊Nesting◊Piercing
Mono block structure	Sparker, LM guide, motor Z
5 axis CNC cutting head(optional)	Water tank(steam absorber)

Technical specification (RADO SMART)

CNC technical data	
Effective Cutting Width	2010 mm
Effective Cutting Length	6010 mm
Overall width	3800 mm
Overall length	7400 mm
Weight ~	4500 kg
Height	1950 mm
Flame cutting torch	(Max thickness=0.5~300 mm)
Max positioning speed	15000 mm/min
Positioning Accuracy	± 0.3 mm
Torch Vertical Movement	300 mm
X Motion	Linear motion Guide(LM guide)
Y Motion	Rack and Pinion-AC servo motor
Z axis	Screw-Lm Guide- servo motor
Rail machining of all axis	
Strong Industrial profiles structure , mono block structure	
Double drive (two AC servo motors in both (X) axis)	
Sparker	
CNC pipe cutter (optional)	
5 axis CNC beveller (optional)	
Gear box zero back lash planetary gear box for AC servo	
Water tank	
Solenoid valves	

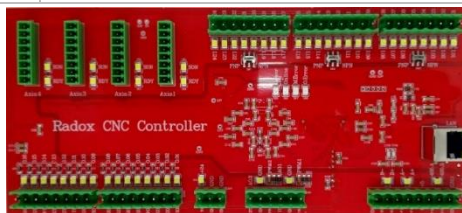
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Motor Z
Gauges specification: Working Range: 1-10 Bar
Regulator specification Working Range: 1-10 Bar
Encoder specification: P/R 2500
Rails Specification: Linear Motion Guide
AC Servo
Relay specification : 24 VDC
Flame bevel torch

RADOX C2 HIGH PERFORMANCE POSITION CONTROL

Axes	4 axes
Digital input	24 isolated NPN and PNP inputs
Digital output	16 open drain outputs with short circuit protector
Analog output	2 analog outputs
PWM output	2 PWM outputs with adjustable frequency
Pulse rate	500000 pulses per second
Command pulse type	Pulse-Direction
Acceleration range	50mm/s ² to 30000mm/s ²
Velocity profile type	S-Curve
Hardware buffer size	2000 blocks FIFO with time expander for safety
Handshaking time	20ms
Isolation type	Opt coupler
Data connection type	100Mb/s LAN – TCP Protocol
Data connection cable length	Up to 20m with UTP / Up to 50m with SFUTP
Hardware lock	24 time locks with internal clock
Power	16v...32v - 300mA
Dimension	24.4cm x 12.5cm
Control type	Open loop position control
Accessory	Wireless remote



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Plasma unit technical data

Mains voltage 3x 400 V, 50 Hz

Cutting current 35 – 300 A

Marking current 10 – 50 A

Duty cycle 100 %

Cutting range

- Maximum 80 mm

- Recommended 1 – 60 mm

- Piercing 40 mm

Marking gases Ar, N2

Dimensions (L x W x H) 1,030 x 680 x 1,450 mm

Mass 488 kg

Plasma machine torch PerCut 4000

Quick change head PerCut 4000

Description data

Smart Focus 300 400V/50H

Primary cable 4*50 qmm.5m, w/o plug

Work piece cable 70mm² 5m

Control cables power source – PGE

Gas supply – gas control

Control cable 25 pol. 1,5m

Gas hose Air G1/4" 6m

Gas hose O2 G1/4" 6m, free of oil

Gas hose Ar G1/4" 6m

Gas hose H2 G3/8" left hand 6m

Gas hose N2/H2 G3/8" left hand 6m

Gas supply – manual

PGE-300 plasma gas controller all gases

PBA-300 plasma torch connection unit

PZL-300 Hose and cables set 15m

Consisting of:

Water inlet hose 15m

Water returns hose 15m

Supply cable 15m

Control cable 7-pol. 15m

Control cable 8-pol. 15m

Cathode cable 50qmm 15m M10

Gas hose PG1 air/N2 G1/4"-1/8" 15m

Gas hose PG2 O2/N2 G1/4" L-G1/8" 15m

Gas hose PG3 H2 G3/8" L-G1/8" 15m

Gas hose SGM12*1-G1/8" 15m

Gas hose KG Air/N2 G1/8" 15m

Plasma machine torches:

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Shaft –Per cut 4000-440A/C/1,5m
 Quick-change head Per Cut 4000
 Lubricant for O2 LC 40 Fluid 25 ml
 Toolkit for Per Cut 2xx/4xx
 Consisting of:
 Torch tool –Per Cut 440-450
 Gas guide puller Per Cut 440-450
 Socket wrench f .cooling tube
 Coolant Kjellfrost -15 C
 Plasma cutting machine – CNC
 Plug X102
 Interface 25-pot. Plug
 Plug X104 for interface
 Interface 4-pol.plug(X104)
 Height control M4000 BAS
 Linear Drive Cable for B1000/M4000/10m
 Control cable 10m M4000-Smart/Hi Fo X102
 Control cable 10m M4000-Smart/Hi Fo x107
 Isolation bush 50,8/58x70
 Box 126x96x169 cm with Certificate
 Wooden box 121x86x71cm w. certificate
 1 x manual instruction + Dec. Of confirm.engl

Height control M4000

M4000 BAS

Height control unit for Hi Focus, Smart Focus, Fine Focus, Cut Fire and PA-S power sources with a working load of up to 12 kg, lifting up to 220 mm

Height control M4000 BAS

Serial no: 11824609/160031

Linear Drive cable for B1000/M4000/10m

Control cable 10m M4000-smart/Hifo X104

Isolation bush 50,8/58x70

Box 126x96x169 cm with certificate



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