

# ***PNC-12 EXTREME***

*Portable • CNC • Cutting Machine*



 **KOIKE**  
Your cutting needs – achieved.

# PNC-12 EXTREME

## Innovation with KOIKE's high standard

The PNC-12 EXTREME is a whole new innovative cutting solution developed with KOIKE's highest standard. It is a perfect machine to enter the world of CNC cutting. Based on the demands from the market for a simple, affordable, and versatile CNC cutting machine, KOIKE designed a machine that is portable, operated by CNC, and suitable for both oxy-fuel and plasma cutting.

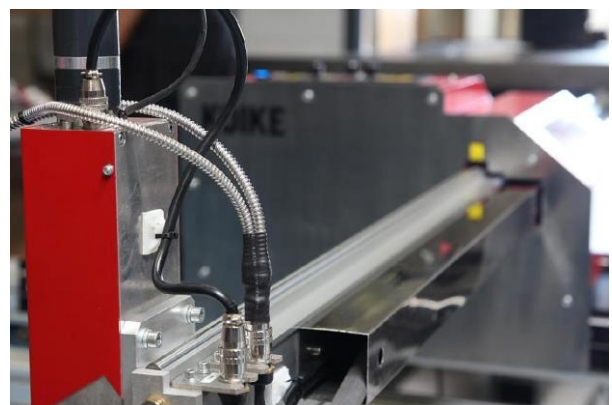
Due to its compact size and portability, installation of the machine is easier than ever. Assembly and setup of all components, such as machine body, rail, and cross bar do not require any special measuring tools. PNC-12 EXTREME is pre-adjusted at our factory before shipping, and besides filtering system and cutting tables, what customer needs to do at the installation site is to simply slide in all components together, and connect cables.

- Ideal for all customers looking for a simple CNC cutting solution
- Plug and cut - minimal installation time
- Easy and simple CNC operation with pre-installed shape templates
- Suitable for both oxy-fuel and plasma cutting
- Compatible with most of air plasmas available in today's market
- Comes standard with CAD/CAM software

## Flexibility to your cutting needs

The PNC-12 EXTREME is pre-configured with different sizes. Koike selected the rail to be made of robust structured steel, which ensures long lasting durability under heavy duty working environment. Cross bar is held with widened linear guide blocks, stabilizing the torch even when the cross bar is extended to its maximum length.

The PNC-12 EXTREME can be selected from either oxy-fuel or plasma cutting packages. Oxy-fuel package comes with an oxy-fuel torch set with integrated automated piercing sequence program and gas on/off solenoid valves on all gas lines. Plasma cutting package comes with Initial Torch Height Sensor (IHS), arc voltage height control (AVC), torch break away system, and 35 mm diameter plasma torch holder.



## *D420 CNC Controller*

The all new KOIKE D420 CNC controller gives easy and flexible CNC experience. 48 Types of most common shapes are pre-installed in the controller, and for those who would like to customize, parameters can be edited to create special cutting settings.



KOIKE D420 Controller is equipped with the latest portable CNC control technology, such as automatic piercing sequence, mirror cutting, angle adjustments, nesting, rotation, and more. Clear and crisp 7-inch color screen displays the live status of the machine during cutting. Important cutting parameters, such as cutting speed as piercing timer delay, can be modified easily without exiting from current cutting menu. Together with KOIKE FigDef8 and PNC-CAM, which enables parts to be created from the scratch for PNC-12 EXTREME, CNC cutting can be achieved in a simple way.

## *Standard features*

### **Rigid linear guiding system**

Sets of extra-wide rigid linear guiding system are used for both X and Y-axis, mounted firmly onto the thick fixing plates of the machine body. Together with KOIKE's precise adjustments during assembly process, high level of cutting performance is maintained.



### **Steel-made longitudinal rail**

The one of KOIKE's designing goals is to provide products with long-lasting durability. The PNC-12 EXTREME is not an exception. It comes with a tough and rigid steel rail, which successfully minimizes vibrations during cutting, and lasts long in heavy-duty environment of the welding and cutting.

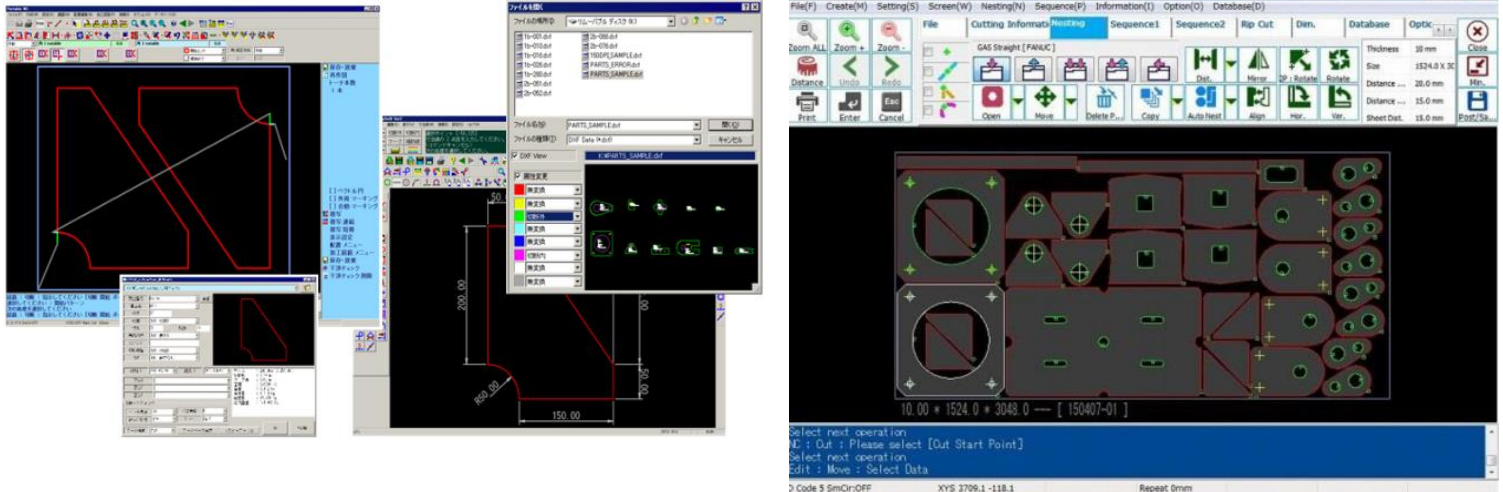




## *FigDef8/PNC-CAM 2A,* a bundle of CAD/CAM Software specialized in cutting

All PNC-12 EXTREME comes with FigDef8/PNC-CAM2A NC programming software as standard. This bundle has the essence of KOIKE's experience in developing cutting-oriented NC programming software since 1980. Designing of cutting shapes, nesting of parts, and setting cutting orders can be done at ease.

☆PNC-CAM2A have Auto nesting & Auto Sequence functions. Compared to other products in its class PNC-CAM 2A does more to automatically embed cut process expertise into the NC code.



Function of PNC-CAM2A		
Software module	Figure Definition	KOIKE 2-Dimension CAD
		Standard Shape Library, about 55 patterns
		Auto measuring of lines
		Corner loop for Plasma cutting
		DXF and DWG parts convert
	Nesting	Auto Nesting for Max. 12 kind shapes.
		Automatic combination of same part
		Copy of Nesting data for repeat cutting
		Gap setting for between each part
	Sequence	Automatic sequence setting
Center piercing for Small circle cutting		
Single part cutting	Lead-in / out length change	
Tools	Sequence setting without Nesting operation	
Others	Gas cutting and Plasma cutting	
Supply USB memory	Work report output	
	Software and License	PNC-CAM2A software, License and Install program in USB memory
Customer's Scope	Instruction manual	PDF file and Tutor function in USB memory
	Operation System	Windows 7, 8 or higher version
	Display	1,024 X 768 dots (XGA) or bigger
	Hard disk	2 GB or bigger to be used

# Cutting tool selection

KOIKE standard model:

## Plasma Cutting Package

In addition to the standard oxy-fuel cutting method, KOIKE provides a complete plasma cutting package. Package includes Arc Voltage Torch Height Control (AVC) and Initial Height Sensor (IHS).

With IHS, the plasma torch can be positioned to a proper distance from the plate when piercing, extending consumable life by decreasing the chance of spatters to adherent onto the tip.

AVC measures arc voltage during cutting and by operating torch lifter to maintain the same voltage, correct torch height is maintained throughout the cut. Especially useful when cutting larger size parts or when cutting table is not flat from long-time use. Switching from oxy-fuel to plasma set up is not very complicated.

KOIKE supplies most of external signal cables with pre-assembled metal connectors, which saves a lot of time to perform the modification.



**Option:** Cutting tool conversion

## kit: Plasma to Oxy-fuel cutting

If cutting tool needs to be changed, Conversion kit is available to modify Plasma cutting configured machine into Oxy-fuel cutting configuration.

### \* Conversion kit: Plasma to Oxy-fuel cutting



PNC-12 EXTREME oxy-fuel cutting torch package is equipped with high-quality KOIKE cutting torch and automatic on/off solenoid valves on all gas lines, which enables presetting of the flame and automatic piercing sequence. Also, KOIKE 100 series cutting nozzles are included in the package.

## Standard Specification of PNC-12 EXTREME

Model	PNC-12 EXTREME	
Machine body	Transverse bar length *1	2,400mm
	Effective cutting width	1,500mm
	Longitudinal rail length *2	3,500mm
	Effective cutting length	3,000mm
	Rapid speed	4,000mm/min
	Cutting speed	100mm/min - 3,000mm/min
	Supply voltage	Single phase, 110V or 220/230V selectable by internal switch
	Heat shield plate	Provided at side of the machine and the torch motor
Plasma cutting	Torch holder	1 set with motorized torch riser and torch break away mechanism / Diameter 35mm
	Suitable plasma system	Non high frequency arc start type plasma system (Customer's Scope *3)
	Plasma cable holder	Transverse bar hold type
	Torch height control *4	Initial height sensing / Arc voltage torch height control
CNC	Model of CNC	KOIKE D420
	Operation panel	7 inch color LCD graphic display and key pad
	Language	English, Japanese, Chinese, French, Spanish, Portuguese, Russian, Korean, Dutch
	Program input	Manual MDI or by USB stick (up to 16GB)
	Control axis	X / Y 2 axes control
	Coordinate range	Max. +/- 99,999.999mm
	Program format	EIA format
	Shape library	48 patterns
	Operation function	Dry run, Reverse, Plate alignment, Mirror, and much more
CAD/CAM	Model	PNC-CAM 2A
•Optional specification (Cutting tool conversion kit : Plasma to Oxy-fuel cutting)		
Oxy-fuel cutting	Oxy-fuel cutting torch	1 set with motorized torch riser
	Cutting tip	3 seats KOIKE 100 series tip
	Cutting thickness	Max. cutting thickness is subject to cutting tip size.

\*\* Fume collecting system is not included.

\*1 Transverse bar is selectable from 1,900mm, 2,150mm, 2,400mm(Effective cutting width: 1,000mm, 1,250mm, 1,500mm)

\*2 Longitudinal rail is selectable from 2,000mm, 3,000mm, 3,500mm(Effective cutting length: 1,500mm, 2,500mm, 3,000mm).

The Rail of PNC-12 EXTREME is not compatible with the rail of PNC-10 Elite.

\*3 Plasma cutting system is not included. Customer's scope of supply.

\*4 You also can choose Oxy-fuel cutting type without Initial torch Height Sensor(IHS) and Arc Voltage height Control (AVC)



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