

Koike PNC-12 Elite Portable CNC Cutting Machine

Below is an overview of the products we will deliver:

Introduction

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.



Specification

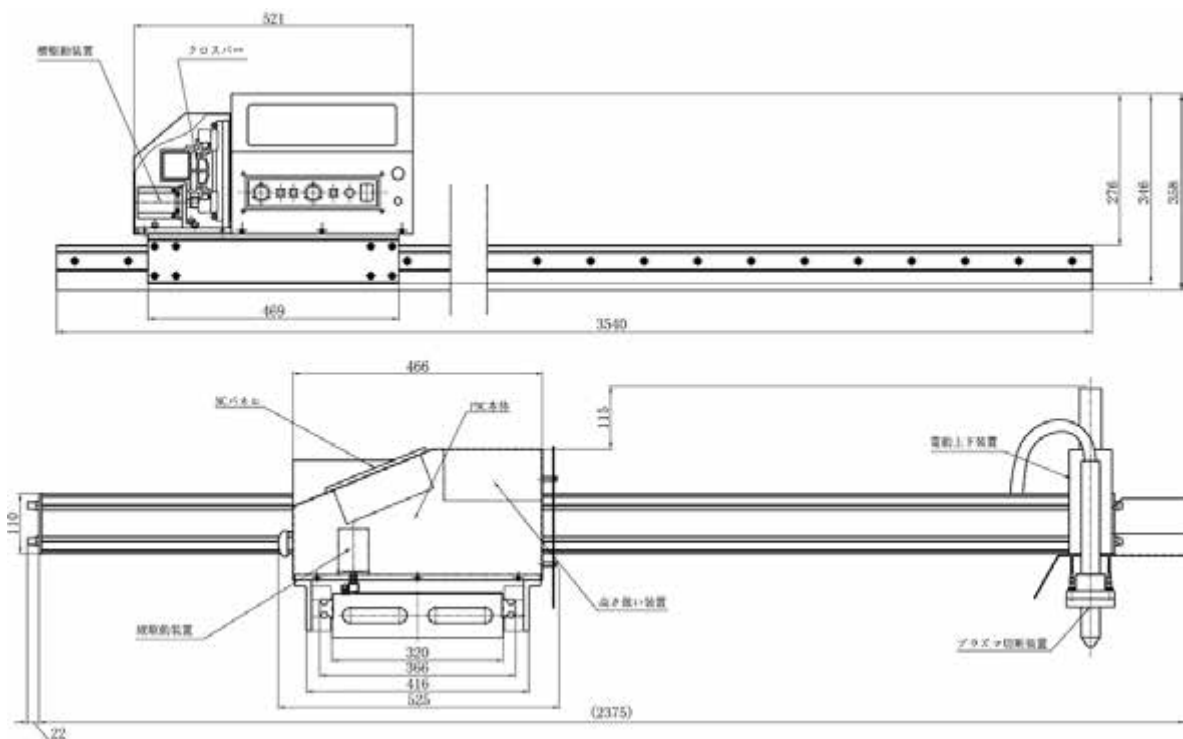
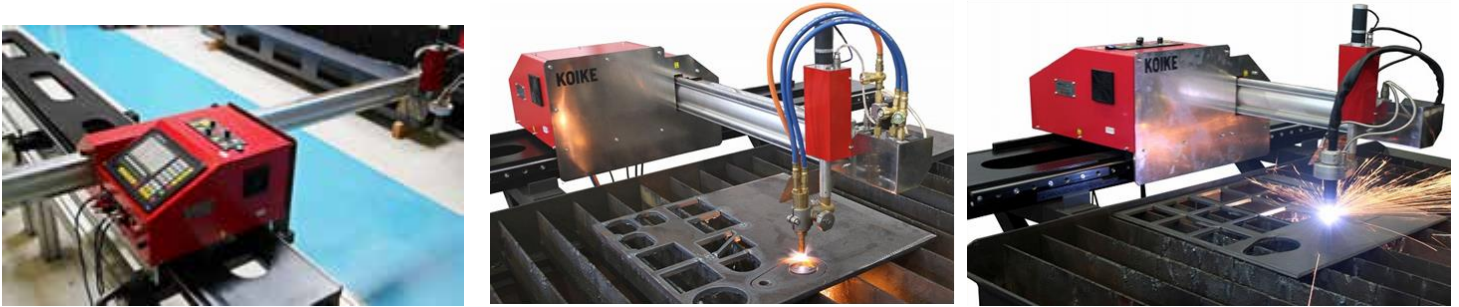
- 7" 256 color HD display 800*480 pixels
- Multi language display.
- 47 preset contours which can be edited
- 64 Mb SDRAM working memory` .
- USB connection for transfer data and cutting plans
- Cutting speed up-to 3000 mm/min
- Complete steel casing, internal protection from electromagnetic field and other radiations
- Integrated GDS system, AVC, torch collision and brake-away protection, linear guide for both X and Y-axis
- Rail length and width of rail steel for less vibration, guiding the side instead of on the top concern for stability
- Multi language software FidDef8 (CAD) en PNC-CAM
- 230V / CE approved with certificate
- Very solid and robust

PNC-12 EXTREME			
Type	Type-1015	Type-1530	CNC
Effective cutting width	1.000 mm	1.500 mm	CNC Model KOIKE D420
Effective cutting length	1.500 mm	3.000 mm	Display 7" color LCD
Cross bar length	1.900 mm	2.400 mm	Languages English, Dutch, French, Spanish, and more
Longitudinal rail length	2.050 mm	3.540 mm	Program input Manual MDI or by USB stick (upto 16GB)
Rapid travel speed	4.000 mm/min.		Drive X /Y with linear guiding, rack & pinion
Maximum cutting speed	3.000 mm/min.		Program format EIA format
Input voltage	Single phase 200 - 240 VAC, 50/60 Hz		Pre-installed cutting shape 45 patterns
Oxy-fuel cutting specification (for Oxy-fuel Cutting Package only)			
Oxy-fuel Cutting Package	1 set motorized torch lifter with automatic solenoid valves, Koike high quality cutting torch		CNC functions Rotation, back to pierce, scale, and much more
Included cutting nozzles	6x KOIKE D7-type high speed nozzles		CAD/CAM software Bundle of FidDef8 (CAD) and PNC-CAM
Cutting thickness	5 - 100 mm		
Plasma cutting specification (for Plasma Cutting Package only)			
Torch control	Initial height sensing, Arc voltage torch height control, torch break-away		
Plasma system	Air-plasma system, torch diameter 35mm		

Machine Structure

1) Machine body

Machine body is colored red with CNC control panel integrated in the front`. It's very strong machine against wear for everyday heavy-duty use and also equipped with a heat shield which is mounted on the cutting side of the body for heat protection.



2) Cross bar

- Metal made, extra wide and robust guiding system.
- Extra thick aluminum extrude cross bar to minimize vibration and eliminate torch "sink".
- Gas lines are integrated in the cross bar.
- Drive system is placed in a separated compartment from Machine body, avoiding dusts to invade into the Control box. Contributes to long life time of the cutting system.



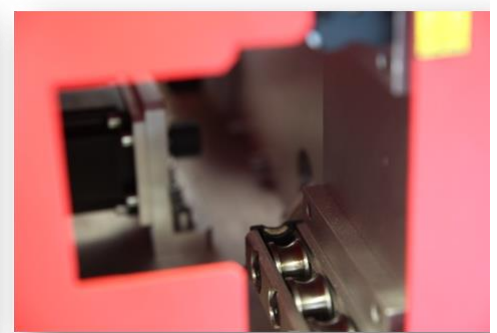
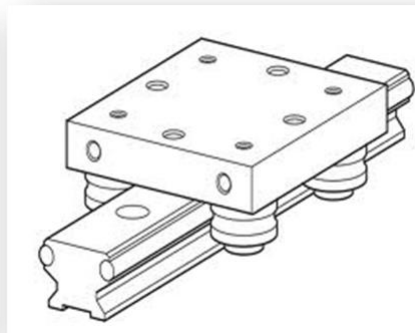
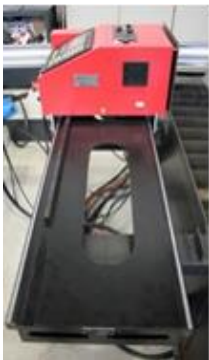
3) Longitudinal rail

After series of test and inspections, Koike have selected stable steel construction to minimize vibration.

These longitudinal rail is constructed with black-painted steel. Two (2) linear guides and one (1) rack are placed on the top.

Features:

- Length rail made of steel all our competitors use Aluminium.
- The chose for using steel is simple because it is more stable and has less vibration the less vibration the better the cut!
- The rail is heavy and robust approx. 120KG
- The rail comes standard with Rigid Linear Guiding System both X and Y-axis



4) Plasma Cutting torch

PNC-12 EXTREME is fully compatible with plasma cutting and this configuration comes standard with

- Arc Voltage Hight Controle System (AVC)
- Torch Height Control Sensor
- Torch Brake Away System (TBAS)
- All needed cables
- Oxy Fuel torch holder comes standard with:
- Automatic torch holder
- Automatic pre-heat and cutting gas supply
- Automatic gas stop when cutting is done
- Gas hoses
- All needed cables



Picture shows fully equipped plasma type PNC-12 Extreme Plasma system (torch, lead, power source) is optional, and not included.



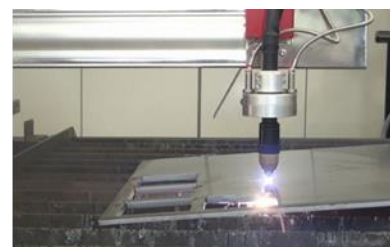
Torch break-away system that protects the torch and machine in case of collision.



IHC unit integrated on top cover



IHC unit in operation



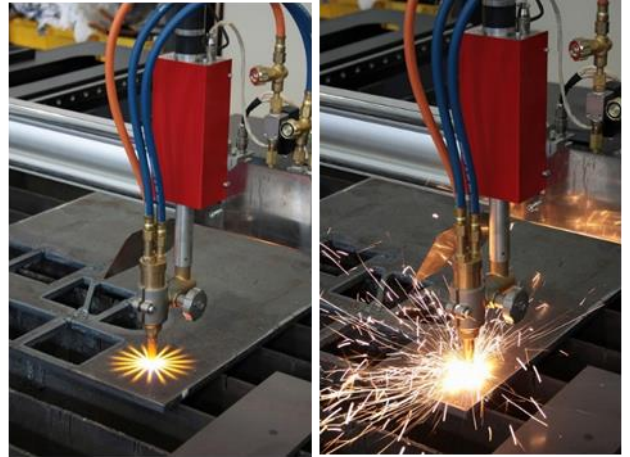
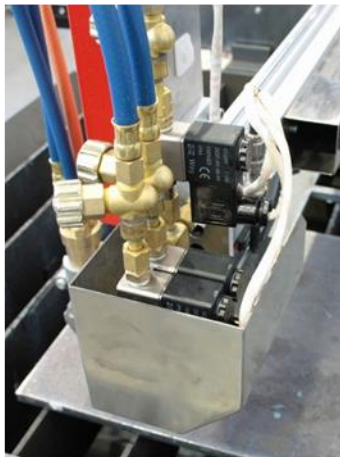
AVC function test in an extreme condition. Smooth height control is achieved on 4-degree angled plate.

5) Oxy/fuel cutting torch unit

- 3 set of standard solenoid valves and a motorized torch lifter are included in oxy-fuel setup as standard option.
- Smooth automatic piercing sequence, together with Preheat timer on D420, synchronized solenoid valves and motorized torch lifter



**Motorized
torch lifter**



**Automatic piercing sequence possibilities,
just like a higher-class CNC machines.**

PNC-12 plasma configuration comes standard with

- Automatic torch lifter, cutting torch
- Automatic gas flow / automatic gas cut off
- Integrated gas distribution in the cross-bar
- Set cutting nozzles 5-50 mm
- Multi language software PNC/CAM KAP
- Machine is able to cut up to 50* mm mild steel for thicker material please
- contact Koike
- Oxy Fuel cutting torch suitable for all Koike 100 nozzles.
- CE certification
- Type 1015 effective cutting range 1.000 mm x 1.500 mm
- Type 1530 effective cutting range 1.500 mm x 3.000 mm

6) D420 Controller

- Equipped with a 7-inch color LCD, which displays easy-to-understand graphical user interface.
- Simple control with integrated panel keyboard.
- 47 pre-set patterns make it possible to cut most of basic patterns without use of special CAD/CAM software.
- Despite the low price, D420 is equipped with top-of-the-line functionalities. Few of examples are mirror, plate rotation, material rotation, dry run, return, program search, piercing point selection



D420 Controller



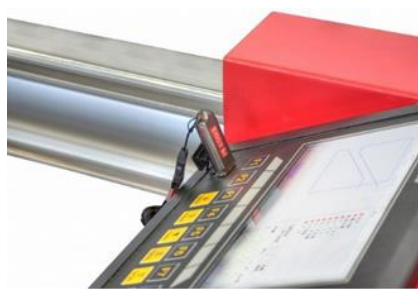
47 sets of pre-set patterns

USB Support:

- D420 Controller comes standard with a USB port.
- USB is used to import/export NC data, or to run CNC update program and new language file installation.
- Cutting and nesting data can be made with CAD/CAM software, "PNC-CAM", which comes standard with PNC-12 Extreme packages from Koike Europe.
- With "PNC-CAM", virtually every shape can be created and import to PNC-12 Extreme for cutting.
- Other Koike's nesting software can be used with PNC-12 Extreme. Contact Koike for details.



USB port is located on the left side.

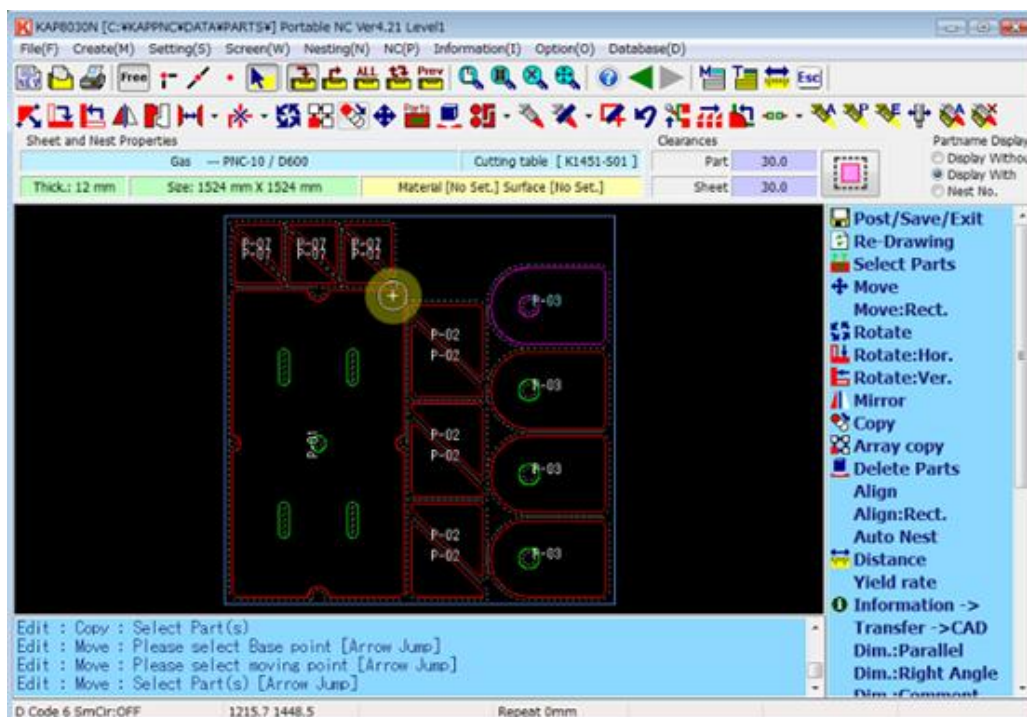
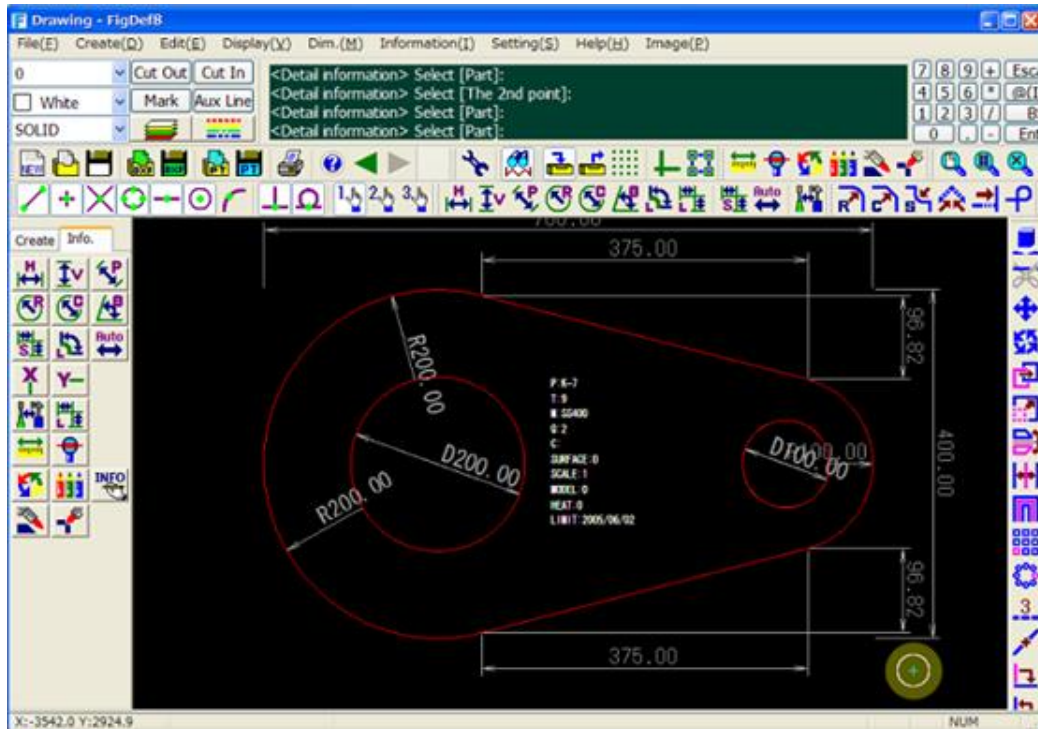


By importing NC data from USB, virtually every shape can be cut with PNC-12 Extreme.

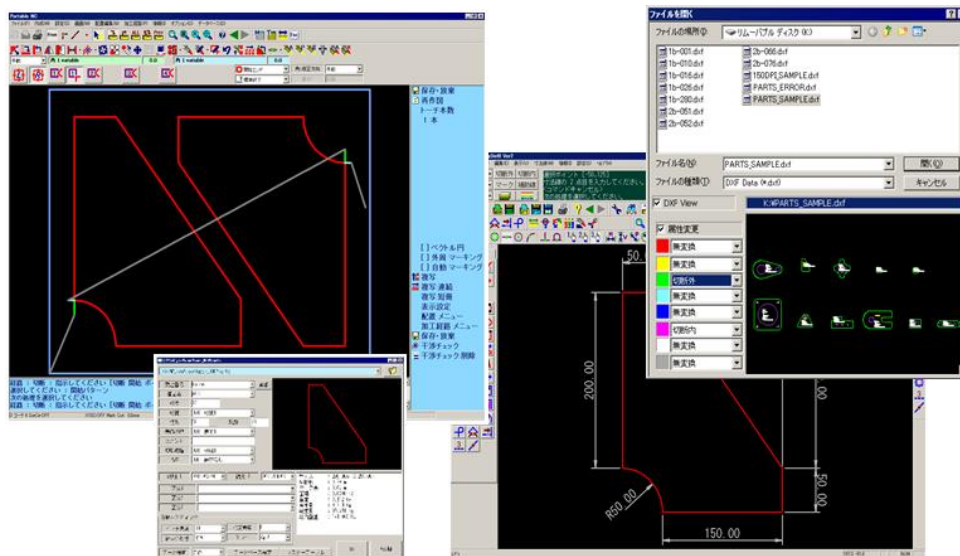


7) KOIKE PNC-CAM

KOIKE PNC-CAM is included in PNC-12 so you can design and cut almost any shapes.



- PNC-CAM” is a CAD/CAM software specially designed for Koike PNC series.
- Simple and easy operation.
- Increased productivity and efficiency by lead in/out adjustment and nesting.
- Virtually every shapes can be programmed for cutting.
- Additional pattern shapes for easy shape creation



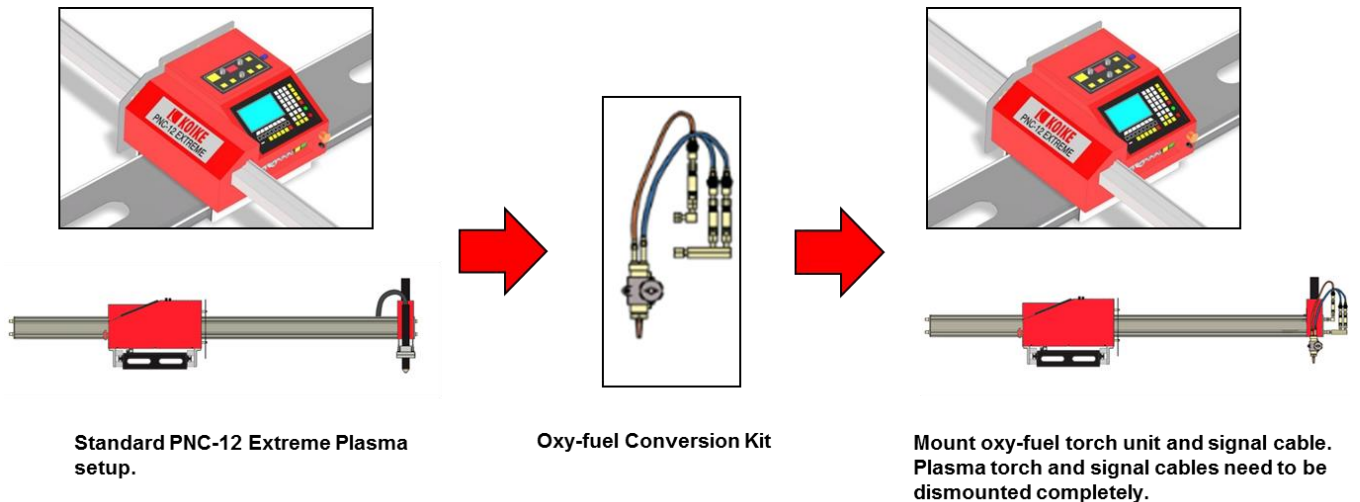
Simple & Easy



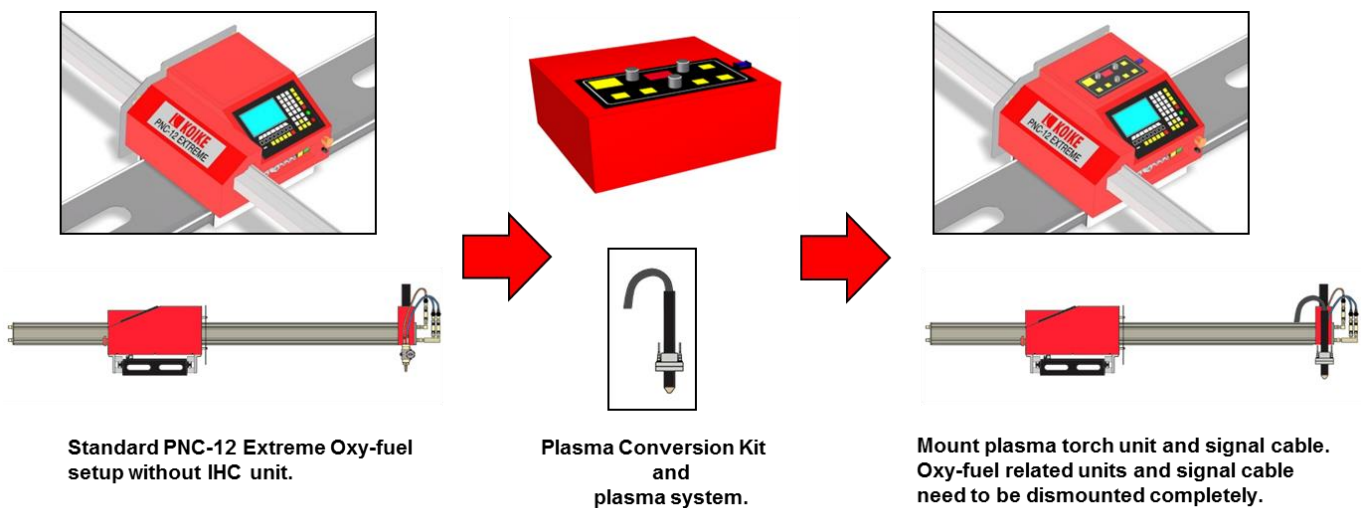
Additional pattern shapes

Extra Accessories (Optional)

- Conversion kit from plasma > gas



- Conversion kit from gas > plasma always in combination with AVC unit



➤ Filter unit

The dust collector is used for the collection of airborne dust and particles which are generated during the cutting, grinding, welding or other processes

The filter elements are sequentially cleaned by compressed air. When one is cleaned in process the other filter elements remain in operation.



➤ Special made cutting table with rail support beam



➤ Secondary oxy-fuel torch option

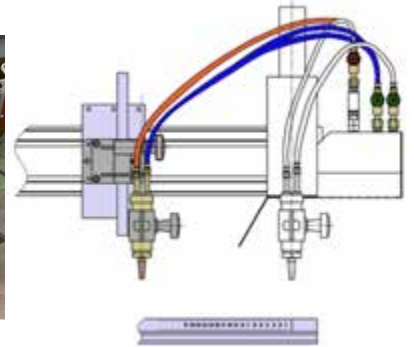
- Adds one extra torch for PNC-12 EXTREME Oxy-fuel setup.
- Mounted on cross bar.
- Torch height is controlled manually, similar to other Koike portable machines.
- Gas is distributed to two torches after solenoid valves, synchronizing operation of gases for both torches simultaneously by D420 CNC controller.



Secondary oxy-fuel torch option
(proto-type shown)



Secondary oxy-fuel torch mounted on the cross bar.



➤ Power source supplied by Koike:



- Kjellberg Cut-fire 100 (up to 20 mm , Pierce up to 15mm)