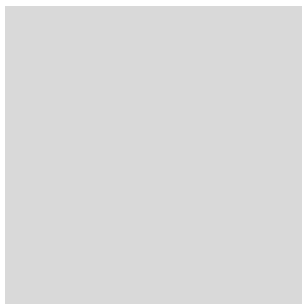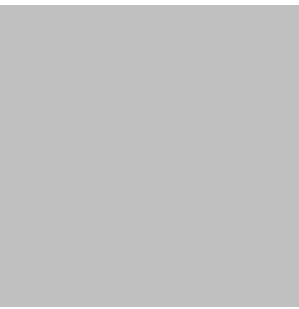# Portable Machines and Gas Equipment
Product Catalogue

KOIKE – the spirit of cutting.

Established in 1918 in Japan,
customers active in shipbuilding, steel construction, vehicle manufacturing, fabrication
and other heavy metal industries trust on nearly 100 years of KOIKE's cutting expertise.

Advanced technology combined with face to face relationship and an in-depth
understanding of customers cutting needs - that's what KOIKE as a Japanese manufacturer
of oxy-fuel, plasma and laser cutting technology stands for.

Table of Contents

PNC-12 EXTREME

Portable CNC Cutting Machine

KOIKE Auto Nesting CAD/CAM included

Features and Benefits

- **Oxyfuel and plasma cutting**
  Machine is ideal for either oxyfuel or plasma cutting configuration

- **Easy operation**
  Simple CNC controller with highly customizable parameters enables high quality cuts to be achieved easily

- **Rigid linear guiding system**
  Rigid linear guiding system for both X and Y axis

- **Robust steel-made longitudinal rail**
  Steel-made rail provides extra stability and durability in heavy duty working environment

- **Auto Nesting CAD/CAM software**
  Every PNC-12 Extreme package comes standard with Koike original CAD/CAM software

- **Flexible shape cutting**
  CNC control allows cutting of various shapes

PNC-12 Extreme is a flexible, productive, and affordable CNC cutting solution designed to provide high quality cuts using oxyfuel and plasma cutting technology.

PNC-12 Extreme is a perfect machine to enter the world of CNC cutting.

Designed with Koike quality standard

Flexible cutting

Oxy-Fuel configuration

- High quality cutting from 5mm to 50mm thickness mild steel.
- Affordable CNC cutting solution

Plasma configuration

- Faster cutting on almost all types of metal plates.
- Works with most air plasma systems upto 100A (plasma power source is sold separately)

Reliability and performance

Cross bar design

- Extra-wide cross bar with linear guiding system realizes high quality cuts.
- Cross bar compartments are separated from CNC for better dust protection for electrical parts.
- Plasma lead and cables are placed in metal square pipe for spatter protection.

Longitudinal rail

- Robust steel welded construction.
- Designed to maximize durability in heavy-duty working environment.
- Weight contributes to provide stability to the machine movements.
- Linear block is securely fixed onto a thick, long aluminium base that fully covers entire length of the machine body.
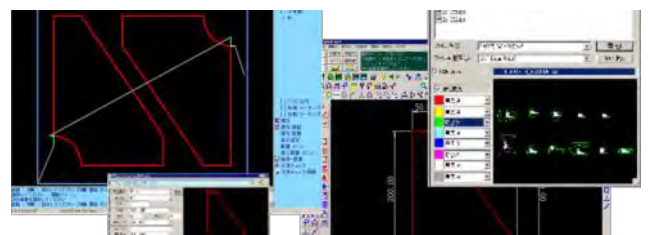
Koike D420 Controller

- Simple and easy to use.
- 47 pre-installed shape patterns
- Numerous functions including nesting, plate alignment, mirroring, pierce point selection, and more.

KOIKE Auto Nesting CAD-CAM software included

- Auto nesting and sequence up to 12 shapes per cutting plan.
- Easy to learn and operate.

Cutting Capability and standard features

Oxy-fuel cutting

Three solenoid valves

■ Quick and easy ignition and flame adjustment.

Piercing sequence

■ Customizable piercing sequence allows optimum piecing control and productivity.

Cross bar with integrated gas lines

Clean and sharp cuts

■ Koike High-speed Divergent Nozzles are included in every oxy-fuel configured PNC-12 Extreme, providing outstanding cutting speed and quality.

Expansion possibilities

■ Variety of optional accessories available. Machine can be reconfigured to Plasma, Twin gas torch etc., at any time when needed.

Plasma cutting

Arc voltage control

■ Automatically detects live arc voltage and make necessary torch height adjustment during cutting.

Torch collision protection

■ Magnetic torch break away system disjoint the torch from the lifter in case of torch collision.

Initial torch height control

■ Initial height sensor is implemented in torch break away system, allowing fast and accurate torch initial height adjustment.

Internal torch cable carrier

■ Cable carrier mounted on the cross bar allows easy handling of plasma torch cable during cutting. Fits most 100A plasma torch cable.

Plasma power source

■ Most air plasma systems upto 105A with 35mm diameter torch.

Flexibility

■ Variety of optional accessories available. Machine can be reconfigured to Oxy-fuel at any time when needed.
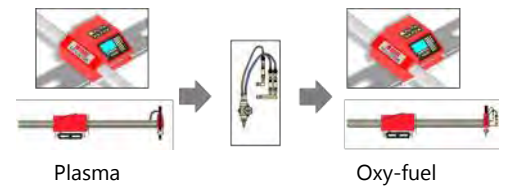
Optional Accessories

Conversion Kit

Gas to Plasma Conversion Kit

■ A Kit to change an Oxy-Fuel configured machine to Plasma configuration. Included: Arc Voltage Control (AVC) unit, Plasma torch holder with integrated torch break away system and initial height sensor, all required cables.

■ Plasma power source not included.

Oxy-fuel   Plasma

Plasma to Gas Conversion Kit

■ A Kit to change an Plasma configured machine to oxy-fuel configuration. Included: Koike oxy-fuel torch unit with solenoid valves and gas connections, a set of 3pcs HC nozzles.

Plasma   Oxy-fuel

Cutting Table and Filter System

MCT Modular Cutting Table

Modular cutting table system.1 module covers cutting area 1500 mm x 1500 mm. Delivered in almost-ready package. Final assembly is required on site.

■ MCT 1515 contains 1 Module for PNC-12 Extreme Type-1015.

■ MCT 1530 contains 2 Modules for PNC-12 Extreme Type-1530.

Important: 85% of each module surface must be covered for effective fume extraction. Easy Transport and Installation.

Including rail support to mount PNC-12 Extreme.

HELIOS Cutting Table for PNC

A 1500 mm x 3000 mm cutting table, suitable for plasma cutting. The table has 6 divided internal sections (500mm x 1500mm each).

As machine travels, fume extraction opening of each section open/close automatically by mechanically triggered pneumatic valves, allowing effective fume extraction.

Delivered complete, Including rail support, pneumatic valves and tubing.

Fume extraction valves

VDS2-H5C Filter system

A compact fume extraction filter unit. Requires Filter Kit to work with MCT cutting table. Full specification available upon request.

■ Maximum flow capacity of 4000m3/hr

■ Maximum pressure of 2000 Pa

■ Includes PTFE made 2 cartridges. Each cartridge has filter surface of 20m2.

■ 80L dustbin capacity.

Filter Kit H5C

A Kit including duct pipes to connect VDS2-H5C with MCT Modular Cutting Table, air regulator, hose, vibration reducing mat and cartridge protection powder.

Plasma Power Source

Following is some products Koike Europe confirmed compatibility with PNC-12 Extreme.
- Hypertherm® Powermax series with interface connection
- Kjellberg® CutFire series with interface connection

Preassembled plasma interface cable is supplied, when one of above plasma systems are purchased (together with PNC-12 Extreme) from Koike Europe.
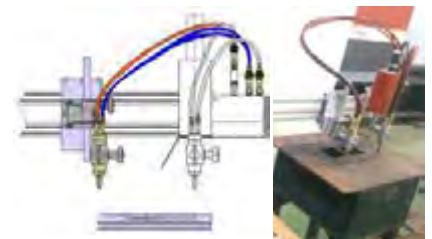
Oxy-fuel cutting accessories

Twin Torch Option

Adds 2nd oxy-fuel torch.
- Automatic gas control
- Manual torch up/down adjustment
- Maximum cutting thickness when using 2 torches: 30 mm
- Torch distance 75 - 600 mm

Twin Torch Attachment

A simple way to cut with two oxy-fuel cutting nozzle.
- Maximum cutting thickness when using 2 torches: 30 mm
- Torch distance 30 - 300 mm

Heavy Duty Torch set

Long oxy-fuel torch with 230 mm neck. Also includes metal bladed hose set. Recommended to customers who plan to cut thick materials on frequent basis. Metal blade protects the hose from spatters, which reduce frequency of hose replacement. Long torch allows machine to be positioned higher from the cutting table. Due to less heat input to the cross bar, longer service life can be expected.

Accessory	Type	Stock #	Description
Conversion Kit	Gas to Plasma	64072	
	Plasma to Gas	64073	
Cutting Table	MCT Type-1515	239.100.813	
	MCT Type-1530	239.100.814	
	HELIOS Type-1530	239.100.815	
Filter System	VDS2-H5C Filter System	239.100.119	
	Filter Kit for VDS2-H5C	239.100.231	
Plasma Power Source	Hypertherm® Powermax 65	64074	Stock # is valid only for purchases with PNC-12 Extreme. A convenient package including interface cable assembly by Koike. Contact Koike for detailed configuration and specification of each plasma power source.
	Hypertherm® Powermax 85	64075	
	Hypertherm® Powermax 105	64076	
	Kjellberg® Cutfire 100i	64077	
Oxy-fuel Accessory	Twin Torch Option	64079	
	Twin Torch Attachment	ON001	
	Heavy Duty Torch set	64080	

Type and Specification

Specification

		PNC-12 Extreme	
Type		1015	1530
Effective cutting area		1000 x 1500 mm	1500 x 3000 mm
Rapid travel speed		4000 mm/min	
Maximum cutting speed		3000 mm/min	
Longitudinal rail		Welded steel construction	
Cross bar		Aluminium extrude with integrated gas piping	
Motor: X-axis and Y-axis		Stepping Motor	
Motor: Torch lifter		DC motor	
Driving method		Rack and Pinion	
Rail system X-axis and Y-axis		Linear guiding	
Input voltage		Single phase 200-240VAC, 50/60 Hz	
CNC: Main features	Model	KOIKE D420	
	Display	7 inch color	
	Language	EN / DE / FR / IT / NL / RU / ES and other	
	Program input	Manual MDI or by USB	
	Preinstalled cutting patterns	47 shapes	
	Program format	EIA format	
	Functions	Rotation, mirror, nesting, cutting recovery, piercing point selection and more.	
Bundled Software: Main features	Version	KOIKE PNC-CAM Expert V2E	
	CAD drawing	2D CAD with many functions, optimizing cutting parts creation	
	CAD data import	DXF, DWG	
	CAD data saving	DXF, PT (Koike part registration format)	
	Auto nesting function	Yes	
	Auto sequence function	Yes	
	# of shape types on 1 plan	12	
	Nesting data export	Direct saving to USB, with PNC-12 Readable format	
Oxy-fuel model features	Maximum cutting thickness	50 mm (*)	
	Number of solenoid valves	Total 3 pcs, 1 for each gas line	
	Piercing sequence	Customizable torch movement and timing	
	Cutting nozzle	5x KOIKE High-speed nozzles included	
Plasma model features	Plasma system	Not included	
	Maximum cutting thickness	Depends on Plasma power	
	Torch holder diameter	For Ø35 mm plasma torch	
	Initial torch height control	Yes	
	Torch collision protection	Yes	
	Arc Voltage torch height control	Yes	
	Compatible arc voltage division ratio	1:1 (raw arc voltage) or 50:1	

(*) with standard setup. Contact Koike for requirements for thicker material cutting using PNC-12 Extreme

PNC-12 Extreme: Selections

Stock #	Model	Gas type	Cutting tool	Cutting area
64030	PNC-12 Extreme Type-1015 ACE	Acetylene	Oxy-fuel	1000 x 1500 mm
64031	PNC-12 Extreme Type-1015 LPG	Propane		
64056	PNC-12 Extreme Type-1015 Plasma	-	Plasma	
64032	PNC-12 Extreme Type-1530 ACE	Acetylene	Oxy-fuel	1500 x 3000 mm
64033	PNC-12 Extreme Type-1530 LPG	Propane		
64057	PNC-12 Extreme Type-1530 Plasma	-	Plasma	

KOIKE

Your cutting needs − achieved.

Artin Bonyan Co.

No.2, Jolfa Str, Tehran, Iran (IR)
Phone: + 98 21 22891307
Fax: + 98 21 22891297
Web: www.artinbonyan.com
E-mail: info@artinbonyan.com

Koike Europe B.V.

Grote Tocht 19
1507 CG Zaandam
The Netherlands

Tel   +31-(0)75 - 612 - 7227
Fax   +31-(0)75 - 670 - 2271
info@koike-europe.com
www.koike-europe.com