



**General Catalog**

**Ver.7.2**

**Portable Machines**

**Gas Apparatus**

**Cutting Series**

**Welding Series**



## President's Message

Since our establishment in 1918, Koike has played a major role in the development of key industries, as an acknowledged leader in the manufacture of machine tools that use gas as a power source. Over the years, we have pioneered the development of plasma and laser cutting machines and commercialized state of the art automated systems using CNC controls that kept pace with the latest market needs.

At the same time we established a network to supply total systems, from gas, welding, cutting solutions and related equipment, to fill our customers' needs.

As one of the companies with 100 years of experience in continuously changing world, experiencing the social change of company roles and employee lifestyles, we carry a precept of the master Confucius "If a man keeps cherishing his old knowledge, so as continually to be acquiring new, he may be a teacher of others". By reviewing the old experience and the technology accumulated in the past, we move forward our development with our total approach from the various perspectives such as environment, safety, and application of intelligence technology, etc. in order to endeavor to improve Customer Satisfaction (CS) and Employee Satisfaction (ES).

We will actively promote and engage in our business together with our group companies in today's relentlessly changing market under Globalization and Industry 4.0, at the cutting edge of the world.

Our corporate philosophy is:

### 1) Management Philosophy:

"To satisfy the needs and establish the trust of our worldwide customers as a total source manufacturer and supplier of gas, welding and cutting solutions."

### 2) Basic policies:

"To increase customer satisfaction, acquire new customers, and maintain lasting relationships with existing customers."

"To contribute to society as a meaningful and financially sound company."

"To improve our knowledge and skills and focus our efforts toward improving ours and our employees lives."

Looking towards the future, we will continue to commit to our Customer Satisfaction.



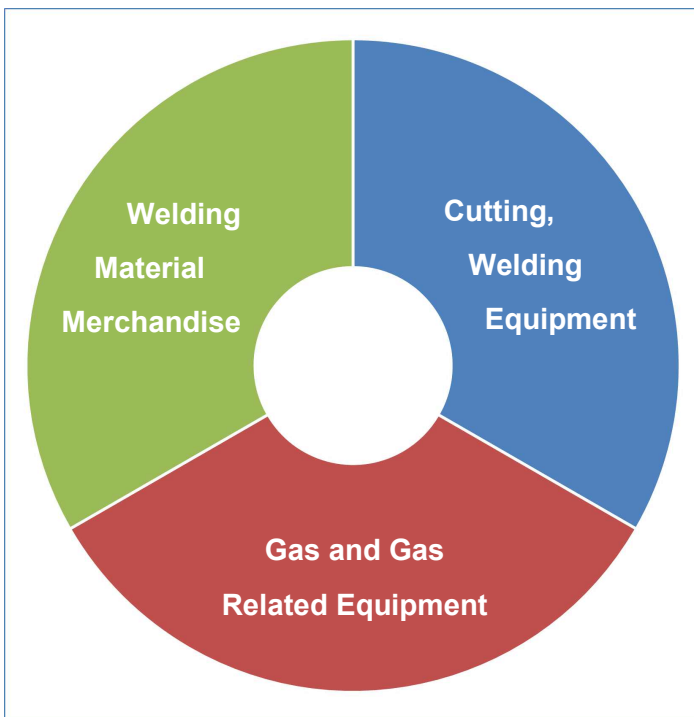
President  
Hideo Koike





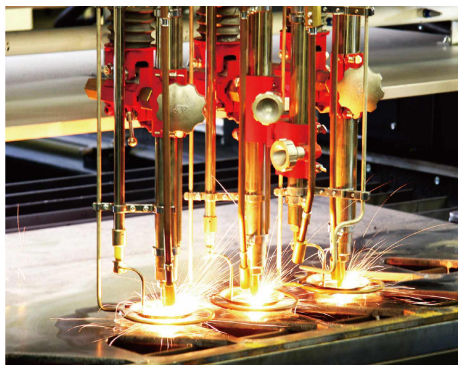
## Total System Supplier of Gas, Cutting, and Welding

Since its establishment in 1918, KOIKE has played a significant role in the development of key industries, as an Acknowledged Leader in the manufacture of machine tools that use ‘Gas Energy’. Over the years, we have been at the forefront of the development of ‘Plasma’ and ‘Laser’ Cutting Machines, and have commercialized state of the art automated systems using CNC controls those keep pace with the latest market needs. At the same time, we have also established a network to supply total systems, including gas, cutting, welding solutions and related equipment, to meet the needs of our customers. We were proud to celebrate our 100th Anniversary in 2018. In the next 100 years, our aim is to steadily progress for the expansion in the global market.



In the “Cutting and Welding Equipment” sector, as a leading manufacturer of Cutting Machines for many years, we have leveraged our superior technology to develop a wide range of the Thermal Cutting and Portable Cutting Machines varying from Hand-Held Blowpipe Type to the CNC cutting machines.

In addition, we meet all the needs of the welding abundantly, ranging from Cutting Tips and Gas Regulators which are essential for the operation of Cutting Machines, to Welding and Welding-related equipment surrounding the Welding process, as well as the associated software, etc.



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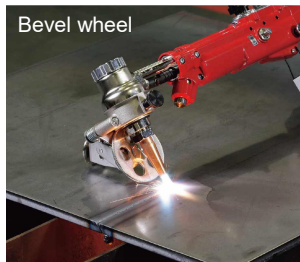
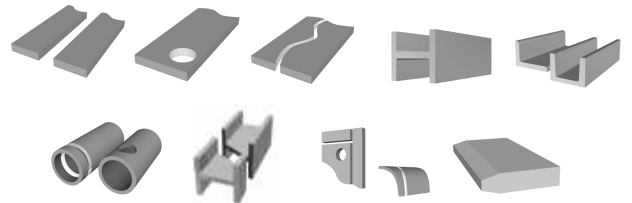
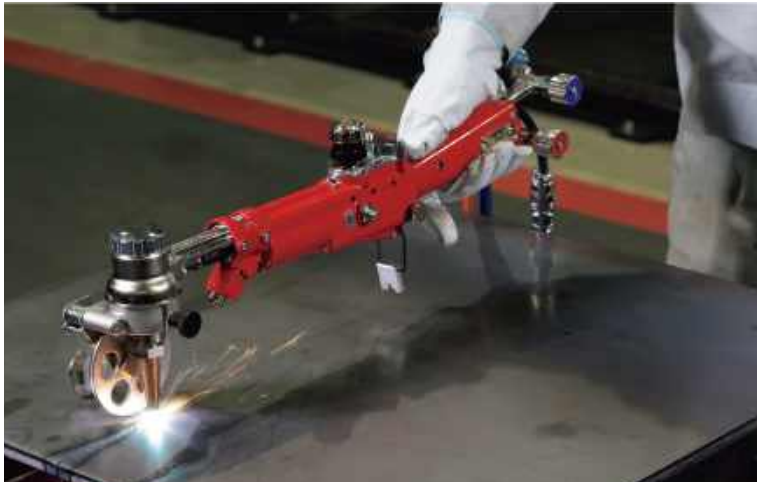
# **Portable Machines**

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Semi-Motorized Oxy-Fuel Hand Torch

# HANDY AUTO PLUS

Most multi purposed hand torch with auto ignition.  
A **HANDY AUTO PLUS** in every factory.



Bevel wheel



Small circle cutting attachment



Guide handle



Support wheel

## Overview

**HANDY AUTO PLUS** is a hand held mechanized gas cutting torch that combines convenience of auto ignition and the preheat ON/OFF lever type to the function provided by the **HANDY AUTO II**. Allows cutting in any position from any direction, such as curves, circles, shapes, bevels, and straight line cutting, in plane plate, vertical plate, H-beam, etc. The **HANDY AUTO PLUS** Kit is composed by the main body and accessories in a special case convenient for carrying and storing.

## Auto Ignition Device

Torch can be lit by the auto igniter lever, and the preheat gas adjusted beforehand. Flame can be extinguished by pressing the release button. After adjust the preheat flame once, it can be ignite and extinguished by operating the ignition lever.

## Flame Adjustment Device

The flame adjustment valve has a lock function, and even if the knob is touched the valve adjustment will not change.

## Feature

- Easy operation with excellent cutting quality.
- Attachments that allow various cutting.
- Quick change attachment structure.
- Multi adapter system for AC100 - 240V.

## Main Specification

Model Name	HANDY AUTO PLUS
Cutting Thickness (mm)	5 - 30
Cutting Speed (mm/min)	150 - 530 (using standard wheel)
Rotation Speed (rpm)	1.2 - 4.2
Drive Method	Friction drive
Speed Control Method	Transistor control
Power Supply	AC100 - 240V
Body Length (mm)	525
Body Weight (kg)	2.8
Cutting Tip	102 (ACE) or 106 (LPG)

## Main components and Accessories

### [Standard Kit]

- Cutting Machine Main Body [**HANDY AUTO PLUS**]
- Power Cable with AC Adapter (5M)
- Instruction Manual
- Standard Wheel
- Fuse
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0,1,2

### Additional items for [Professional Kit]

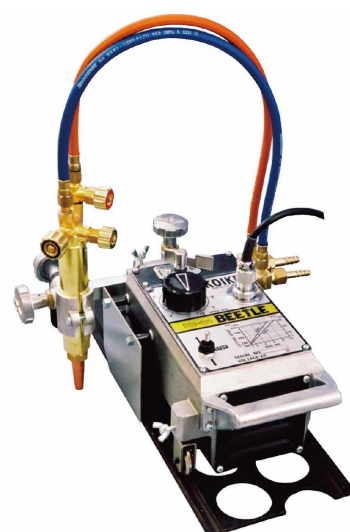
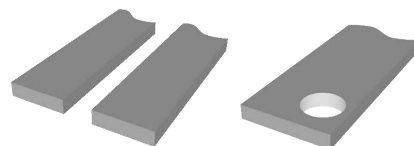
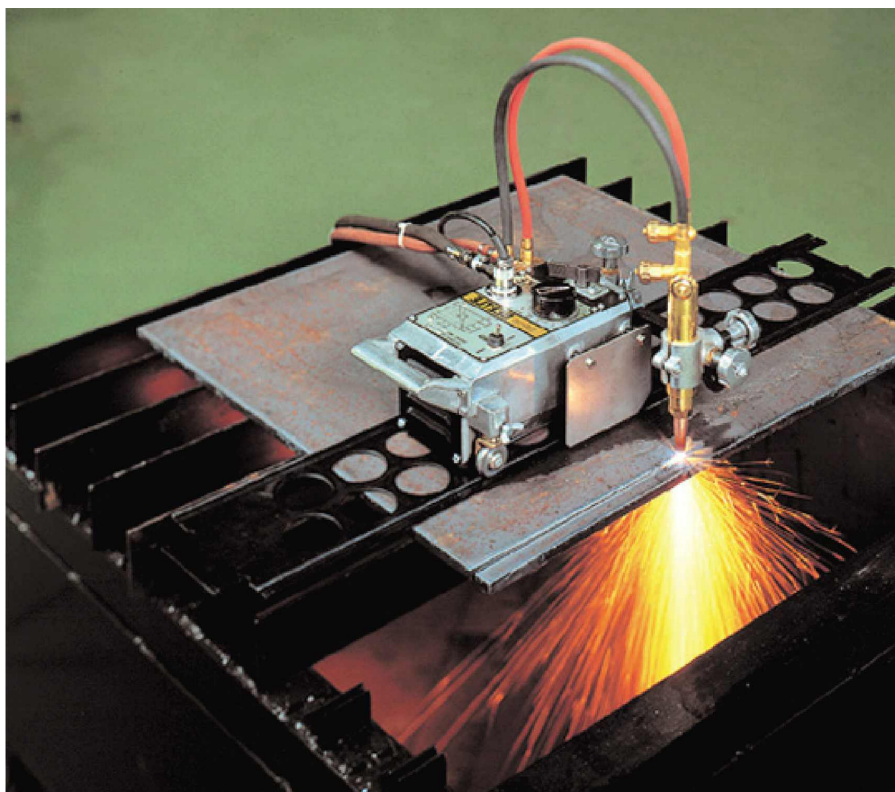
- Support Wheel
- Bevel Wheel (degree 22 - 45)
- Guide Handle
- Small Circle Cutting Attachment (φ30 - 200mm)
- Steel Carrying Case



Oxy-Fuel Cutting Machine for Straight-Line

# IK-12 BEETLE

IK-12 BEETLE is a portable flame cutting machine designed to cut straight lines, circles, and bevels with light weight body emphasizing utility.



## Overview

IK-12 BEETLE is a compact and lightweight type of automatic cutting machine for straight line cutting that emphasizes the practicality.

IK-12 BEETLE has a stable driving performance by its powerful motor, which allows to easily perform various Straight (I-CUT) and Bevel cutting, or Circle cutting.

Machine has achieved a stable operation by the use of the single cone stepless transmission system.

The travel direction (forward, backward, stop) can be changed by single operation, and the machine's positioning reliably performed by clutch operation.

The cutting position can be adjusted by the horizontal bar and up and down torch rack.

## Main Specification

Model Name	IK-12 BEETLE
Cutting Thickness (mm)	5 - 50
Bevel Cut. Angle	0 - 45°
Traveling Speed (mm/min)	150 - 800
Speed Control	Dial Adjustment
Transmission System	Single Cone Stepless System
Motor	Condenser type Induction Motor 9/10W (50/60Hz)
Length (mm)	360
Wheel Width (mm)	160
Weight (kg)	9.5 ( with one torch )
Heat Shield	Double Insulation Plate
Cutting Tip	102 (ACE) or 106 (LPG)

## Feature

- Travel direction (forward, backward, stop) can be changed by single operation
- Stable operation achieved by the single cone stepless transmission system
- Light weight (9.5kg) with easy movement and maneuverability
- Machine with 2 torches for parallel and bevel cutting is also available

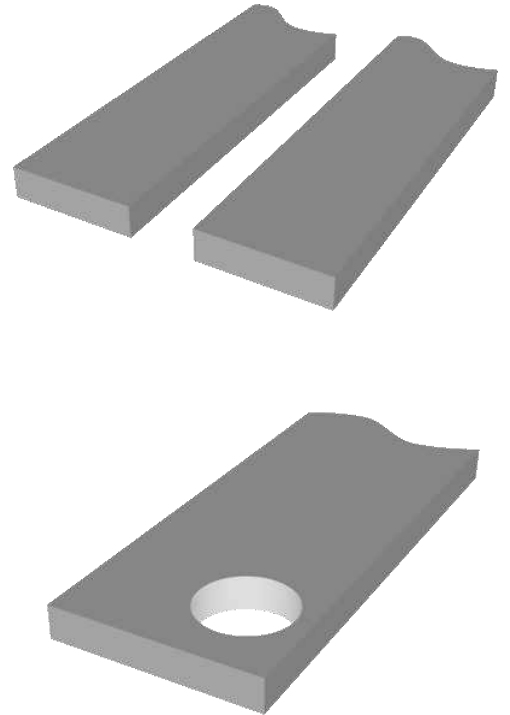
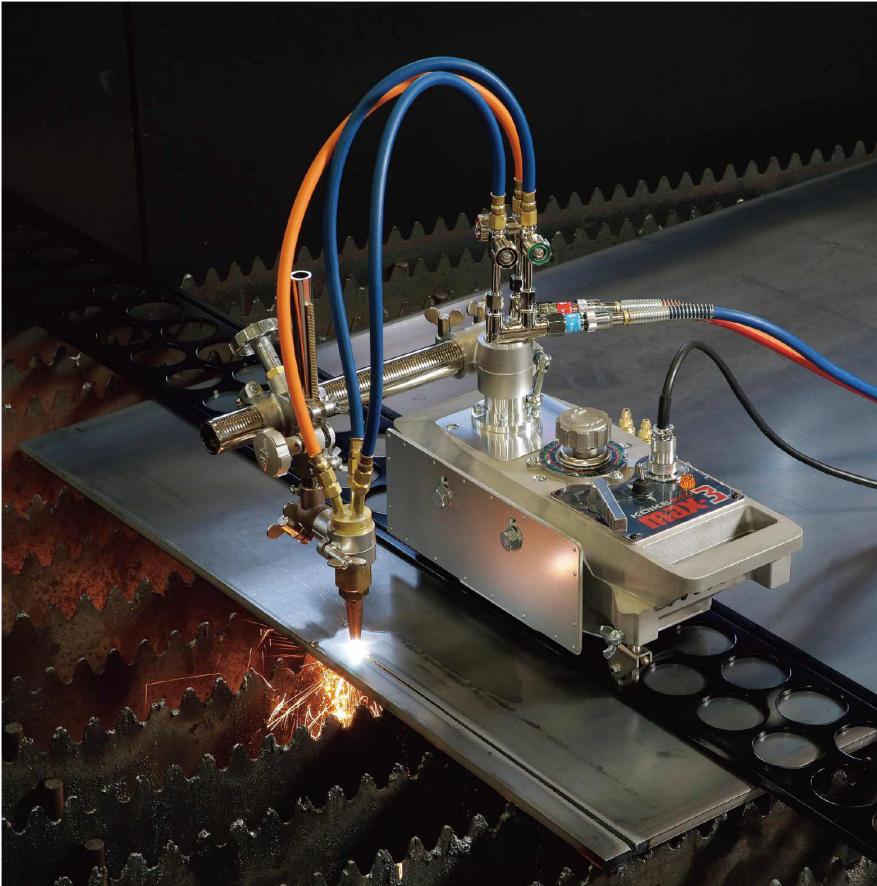
## Main components and Accessories

- Cutting Machine Body [IK-12 BEETLE]
- Power Cable (5M)
- Instruction Manual
- Tip Support
- Torch set (One torch)
- Cutting Tip 102 (ACE) or 106 (LPG) #0,1,2

Oxy-Fuel Cutting Machine for Straight-Line

# ***IK-12 max3***

IK-12 max3 is a high quality motor driven portable flame cutting machine designed to cut straight lines, circles, and bevels with clean, sharp, smooth edges providing various cutting attachments.



## **Overview**

**IK-12 max3** is a semi-automatic gas cutting machine. A large selection of accessories are available to be used combined to the main components (main body, torch set and rail) according to the application.

Our double cone stepless transmission system provides a stable rotational speed range, avoiding problems due to heating and unstable voltage. Machine also has a high thermal insulation performance due to the use of heat-resistant grease and Teflon wiring.

## **Main Specification**

Model Name	IK-12 max3	
Cutting Thickness	According to the torch set*	
Traveling Speed (mm/min)	Standard Type	80 - 800 (50Hz), 100 - 1000(60Hz)
Transmission System	Double Cone Stepless System	
Motor	Condenser type Induction Motor 9/10W (50/60Hz)	
Length (mm)	430	
Wheel Width (mm)	160	
Weight (kg)	11 (only main body)	
Max. Loading Weight (kg)	50	

\*Please, select the suitable torch set from page 11 and 12.

## **Feature**

- Excellent operability and high versatile in every field, it's the KOIKE's portable bestselling machine
- Excellent traction and gravity center balance provides stable operation
- Lower body and heat insulating plate installed at machine cutting side provides high heat resistance
- Longer lifetime due the Double Cone Stepless System

## **Main components and Accessories**

- Cutting Machine Body [IK-12 max3]
- Power Cable (5M)
- Instruction Manual
- Tip Support



Multi Purpose Portable Machine for Oxy-Fuel/Plasma Cutting and Welding

# IK-12 NEXT

NEXT generation of portable carriage with NEW Design & Functions for WIDE Range of Applications.



## Overview

**IK-12 NEXT** is the latest model of IK-12 series, one of the most popular and long-seller gas cutting carriage.

New control panel and Torch set: Wide range of application is possible to enable not only gas / plasma cutting, but also welding with the same carriage.

New drive control system allows you to set precise and wide range of travel speed from thin to thick plate thickness cutting application.

Newly equipped function: "Creep Mode" (Patent No.6424267). By simply pressing the button, normal speed can instantly switched to low speed mode for easy adjustment at start/end point of thick plate cutting.

Adding Weaving Unit option: Butt-welding for thick plat can be easily made by Weaving Unit.

No need to add a separate control box for weaving function for

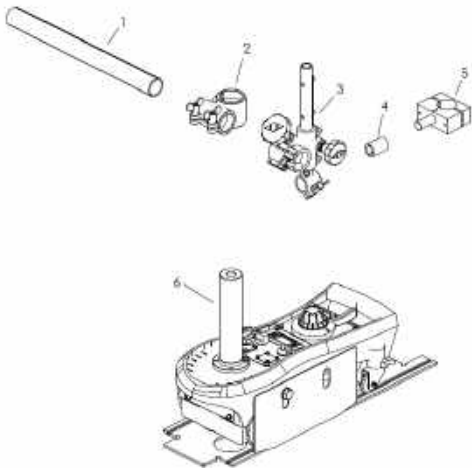
## Feature

- Wide range of speed setting 40 - 2400mm/min
- New control system allows Wide range of application; gas/ plasma cutting and welding
- Stable and accurate speed control is achieved with encoder motor and digital speed indicator
- Easy speed control with "Creep Mode" at Lead-in/out of thick plate cutting. **IK-12 NEXT** directly inherits various options of IK-12 max3, which can be used as such

## Main Specification

<b>Model Name</b>		IK-12 NEXT
<b>Specification of Carriage</b>	Travel Speed (mm/min)	40 - 2400
	Motor	DC24V Encoder electronic control
	Speed Dial	Infinite rotation multifunctional dial
	Digital Display	Travel Speed and parameters
	Body Weight (kg)	8.5
	Machine Dimension (L x W x H) (mm)	432 x 220 x 160
	Input Power Source	Single phase AC100-240V 50Hz-60Hz
<b>Gas Cutting</b>	Straight cutting	Yes ( with the same rail for IK-12 series )
	Circle cutting	Yes ( with circle cutting rail or circle cutting attachment )
	Creep mode	Yes
<b>Plasma cutting</b>	Plasma arc interlocking	Yes
	Arc wait time (sec)	-10.0 - 10.0
<b>Welding</b>	Position	Butt weld with straight downward position
	Weld interlocking start	Yes
	Arc wait time (sec)	-10.0 - 10.0
<b>Weaving control</b>	Swing speed (mm/min)	400 - 1500
	Swing range (mm)	0 - 100.0
	Left/Middle/Right stop time (sec)	0.0 - 10.0

## Special torch holder sets for IK-12 NEXT

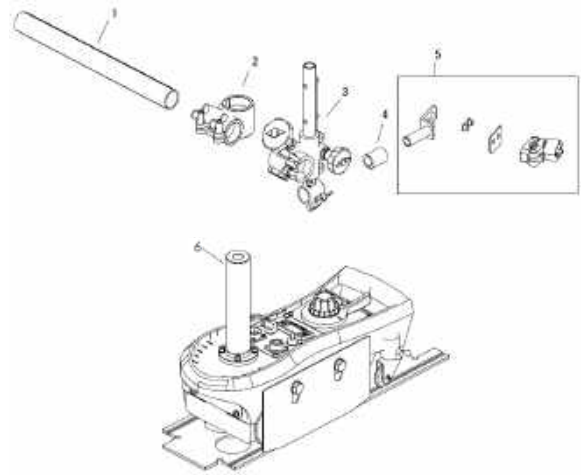


### Plasma Holder Set

Standard type of holder is compatible with  $\phi 35\text{mm}$  plasma torch. For  $\phi 30\text{mm}$  or  $\phi 25\text{mm}$  torches, torch bush has to be added as an option. Body of IK-12 NEXT can interlock with a plasma power supply.



[ Applicable Model ] IK-12 NEXT



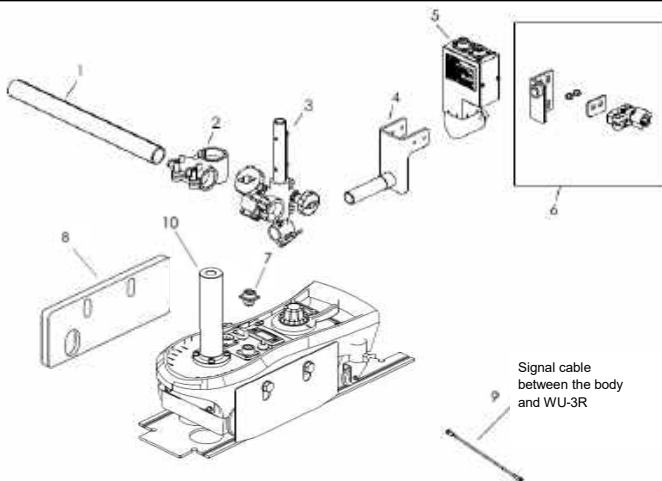
### Welding Holder Set

It is an holder set for performing butt welding with IK-12 NEXT. IK-12 NEXT is equipped with arc control system. It can be easily applied to arc welding.

- $\phi 16 - 23\text{mm}$  torch can be clamped
- Fit for straight and curved torch.
- The aim angle can be adjusted according to the mounting angle of the torch holder.



[ Applicable ] IK-12 NEXT



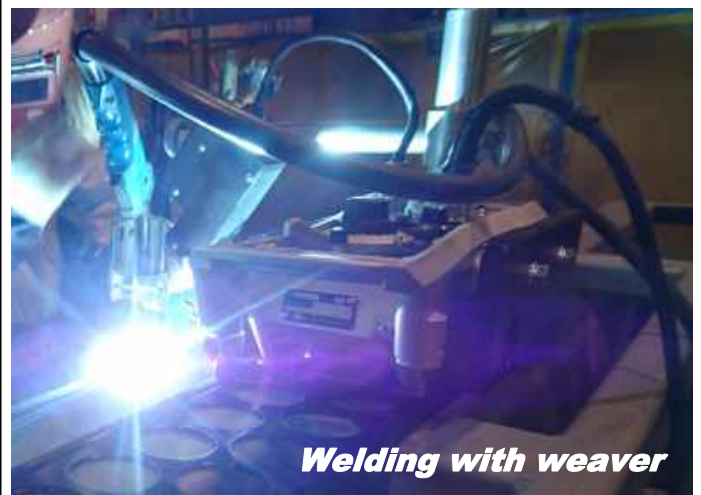
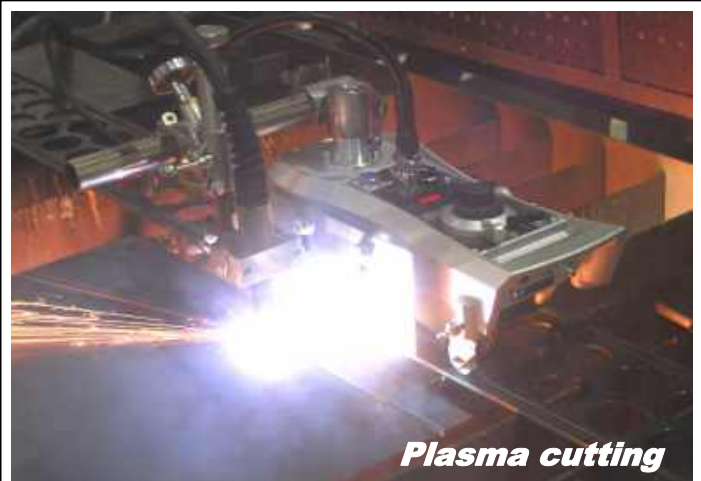
### Weaving Holder Set

Weaving unit increase the welding deposition with few pass. Numerical control for swing width and speed are available. IK-12 NEXT is equipped with arc control system, so it can be easily applied to arc welding.

- $\phi 16 - 23\text{mm}$  torch can be clamped
- Fit for straight and curved torch.



[ Applicable Model ] IK-12 NEXT

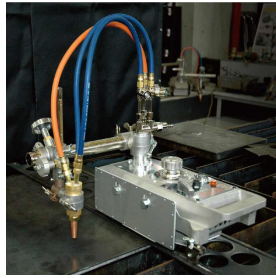


## Torch set



### S-100 Single torch set

Standard torch set for single torch of IK-12 NEXT / max3. Torch up and down mechanism works smoothly due the pipe rack system and its operation has an improved durability. Cutting quality is further improved when using SP-type\* torch holder with floating mechanism that automatically follows the bend of the steel plate in the guide rollers.



[ Applicable Model ] IK-12 NEXT and IK-12 max3  
\*SP-100 single torch set is available.

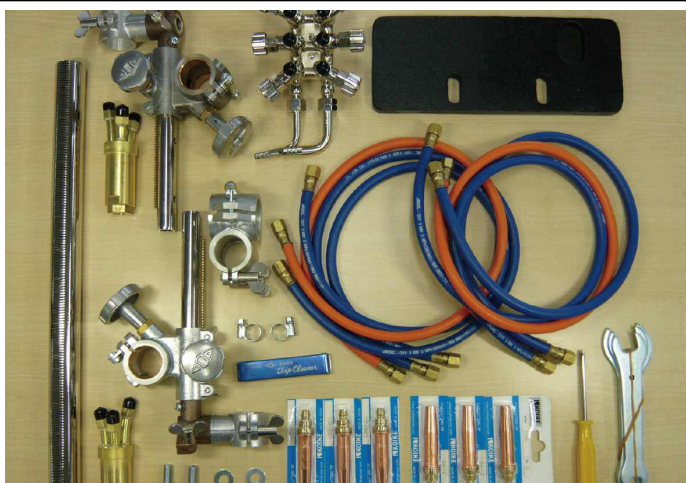


### SP-300 Bevel torch set

Dedicated torch set for the X and Y bevel cutting with the IK-12 NEXT / max3.

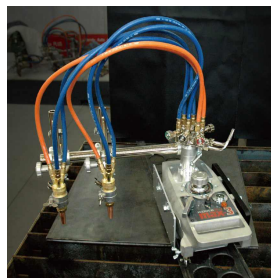


[ Applicable Model ] IK-12 NEXT and IK-12 max3



### S-200 Twin torch set

Torch set for two torches of IK-12 NEXT / max3. The just fit in design for IK-12 NEXT / max3 allows easy alignment of the torch. Cutting quality will be further improved when using SP-type\* torch holder with floating mechanism that automatically follows the bend of the steel plate in the guide rollers.

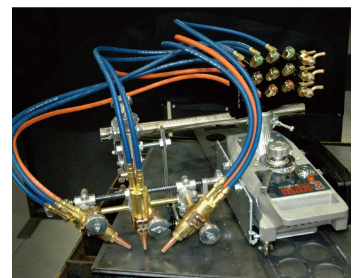


[ Applicable Model ] IK-12 NEXT and IK-12 max3  
\*SP-200 twin torch set is available.



### SP-400 Bevel torch set

Dedicated torch set for the X, Y and K bevel cutting with the IK-12 NEXT / max3.



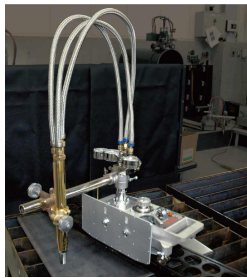
[ Applicable Model ] IK-12 NEXT and IK-12 max3

## Torch set

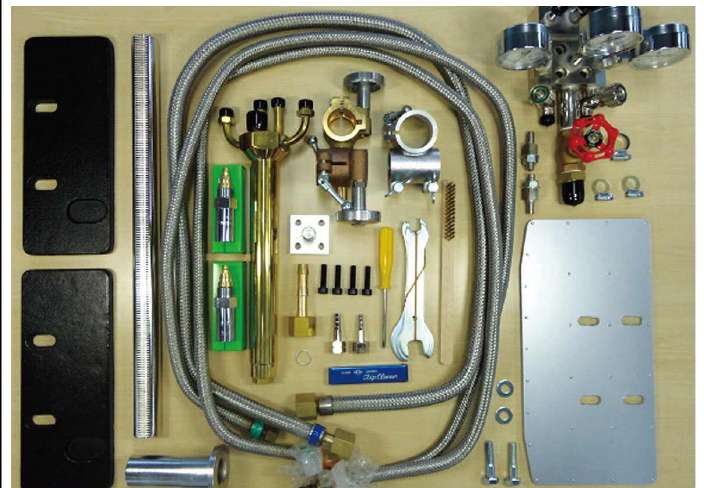


### EPOCH300 Torch Set for thick material

Cutting torch set of out-mixing method for cutting of thick material. Using the dedicated tip EPOCH 300 which uses out-mixing method and avoiding backfires, thick materials can be safely cut. EPOCH 300 is used for cutting of cold steel plate of 100 - 300mm. The gas used is LPG. Please use it combined to a dedicated EPOCH rail.

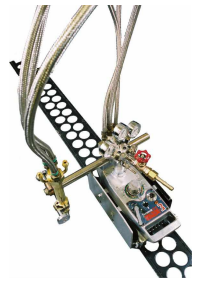


[ Applicable Model ] IK-12 NEXT and IK-12 max3

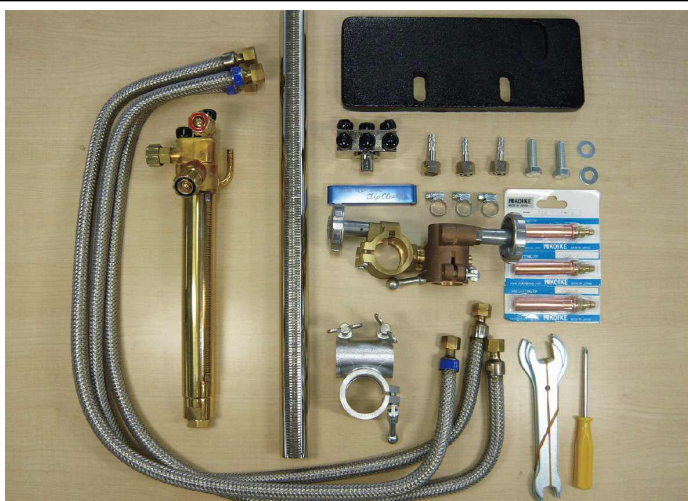


### EPOCH600 Torch Set for thick material

Cutting set of out-mixing method for cutting of extra-thick materials. Using the dedicated tip EPOCH 600 which uses out-mixing method and avoiding backfires, extra thick materials can be safely cut. EPOCH 600 is used for cutting of cold steel plate of 300 - 600mm. The gas used is LPG. Please use it combined to a dedicated EPOCH rail.



[ Applicable Model ] IK-12 NEXT and IK-12 max3



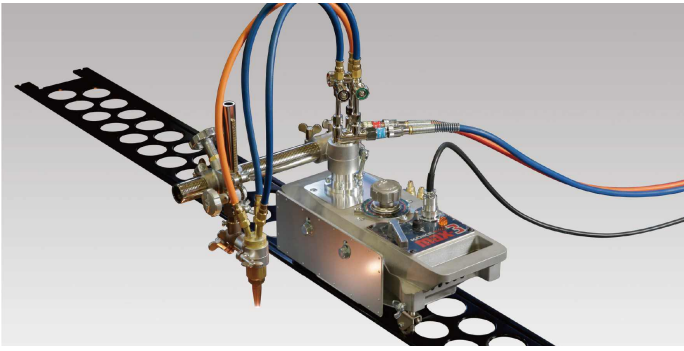
### L-100 Torch Set for thick material

Thick material cutting torch set of tip mixing method, using a high number's 100 type of tip. In case frequent cutting of thick materials, the torch should be cooled with water moderately.



[ Applicable Model ] IK-12 NEXT and IK-12 max3



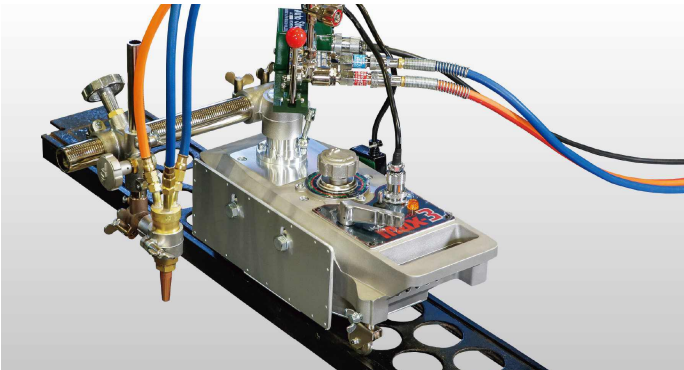


### 1.8M Straight Rail

S/N: BCD19102

Straight rail for using in IK-12 series. Rail length is 1.8m, but by extensive use, it is also possible to perform a longer straight cut. Using material with hardly bends and excellent durability.

[ Applicable Model ] IK-12 NEXT, IK-12 max3 and IK-12 BEETLE



### EPOCH Rail

S/N: BCD19108

Straight rail for using in IK-12 series with EPOCH torch set. Rail length is 1.8m, but by extensive use, it is also possible to perform a longer straight cut. Using material with hardly bends and excellent durability.

[ Applicable Model ] IK-12 NEXT and IK-12 max3

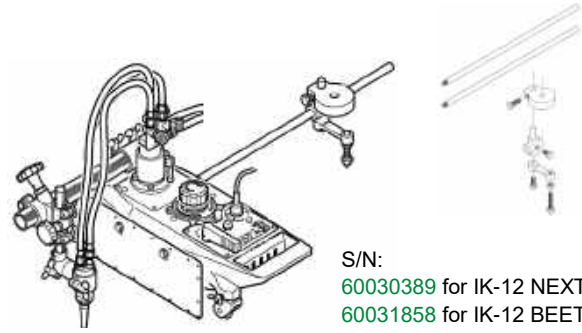


### Circle Rail

Rail for cutting of circular shape with IK-12 series. It is possible to cut circle with Inside of  $\phi 40-360\text{mm}$ , and Outside of  $\phi 770-1150\text{mm}$  ( $\phi 360-770\text{mm}$  can not be cut)

S/N: BCD19109 for IK-12 NEXT / max3  
BCA19501 for IK-12 BEETLE

[ Applicable Model ] IK-12 NEXT, IK-12 max3 and IK-12 BEETLE

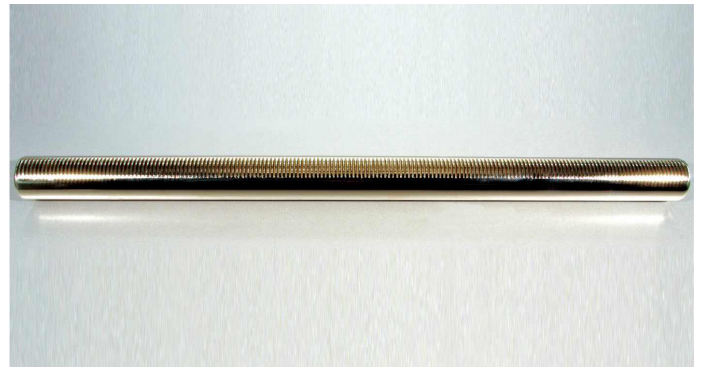


S/N:  
60030389 for IK-12 NEXT / max3  
60031858 for IK-12 BEETLE

### Circle Cutting Attachment

Attachment for performing circular cutting of  $\phi 600 - 2,200\text{ mm}$ .  
- Since it is a compass type, positioning can be determined easily by aligning the center pin to the center of the circle you want to cut.  
- The weight attached to the top of the center pin prevents misalignment.

[ Applicable Model ] IK-12 NEXT, IK-12 max3 and IK-12 BEETLE



### Pipe Arm 500/1000/2500mm

Pipe arm for supporting of the torch holder for IK-12 NEXT and IK-12 max3. The pipe arm for single torch set contains 350mm, and for two torch set contains 500mm. 1000mm and 2500mm will be only available in stand-alone. Please choose it depending on the application.

[ Applicable Model ] IK-12 NEXT and IK-12 max3



### Torch Stand

Torch Stand for the supporting of pipe arm for IK-12 NEXT and IK-12 max3. Please select the proper length of stand depending on the torch set, cutting set and work condition.

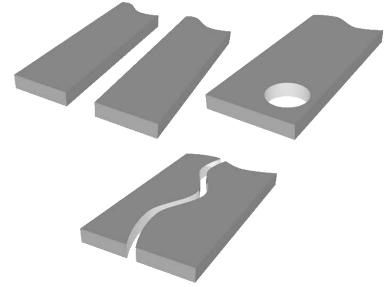
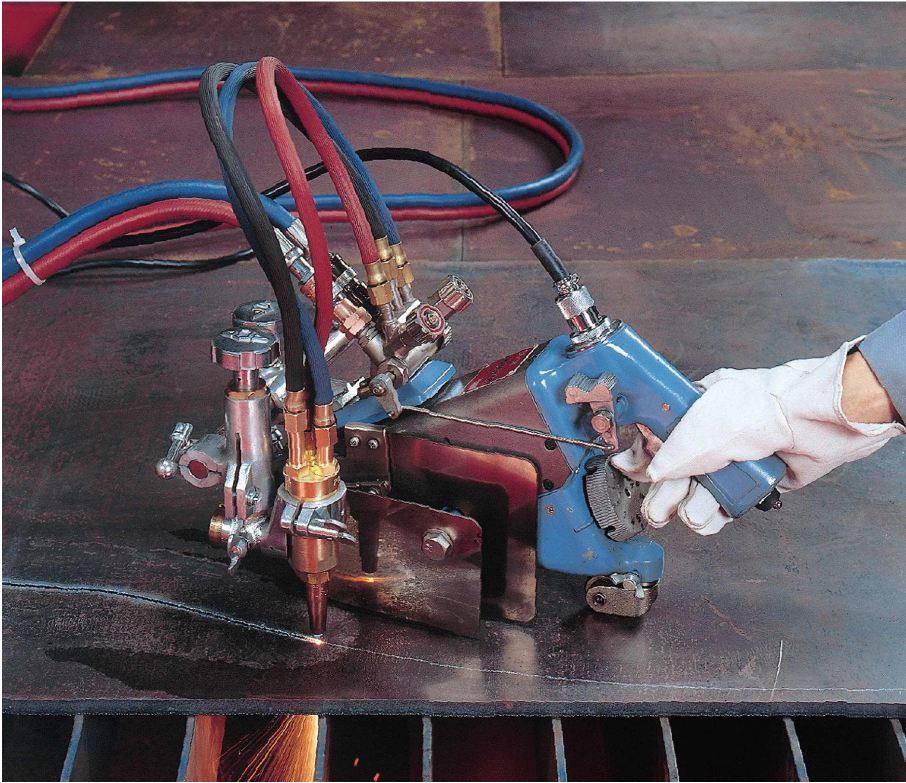
S/N:  
60030204: 84L (Standard)  
60030378: 114L (EPOCH)  
60030440: 180L (Bevel attachment, Twin torch attachment, Plasma / Welding holder set )  
60032374: 300L  
60032375: 400L  
60032376: 500L

[ Applicable Model ] IK-12 NEXT and IK-12 max3

Semi-Automatic Cutting Machine

# IK-93 HAWK

Outstanding mobility and ease of operation resulting in high-quality "Hand-guided cutting".



## Overview

**IK-93 HAWK** is a semi-automatic cutting machine that has been developed primarily for the purpose of high quality straight line cutting by hand guided with smooth operation and running.

Designed after thoroughly checking of the operability. Easy to operate even in the curved cutting, Inside or Outside radius, by the improved position of the grip and the speed adjustment dial.

## Feature

- Gas and Speed adjustment, and Clutch operation can be performed by only one hand
- Easy operation by the tracer guidance
- Forward and Backward movement available
- Holders are available in 4 types, Rack type, Screw type, and 2 types for Bevel Cutting
- Several options available, as Straight Cutting Rail, Circle Cutting Attachment

## Main Specification

Model Name	IK-93 HAWK
Cutting Thickness (mm)	5 - 30
Bevel Cut. Angle	0 - 45°
Traveling Speed (mm/min)	100 - 1000
Speed Control	Dial Adjustment
Length (mm)	380
Wheel Width (mm)	100
Weight (kg)	7.5
Heat Shield	Double Insulation Plate
Cutting Tip	102 (ACE) or 106 (LPG)

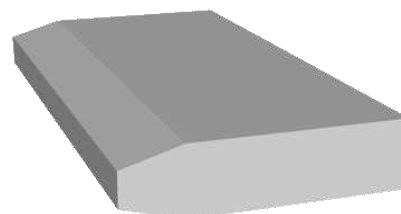
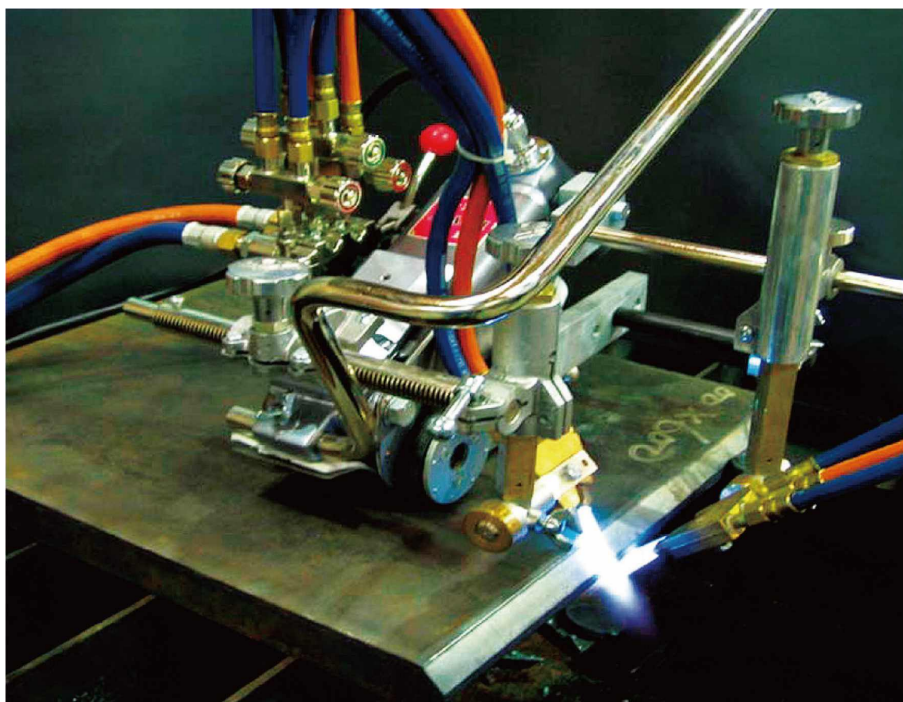
## Main components and Accessories

- Cutting Machine Body [IK-93 HAWK]
- Power Cable (5M)
- Instruction Manual
- Single Torch Set
- Cutting Tip 102 (ACE) or 106 (LPG) #0,1,2

Semi-Automatic Oxy-Fuel Cutting Machine

# IK-93 EDGE-CUT

The IK-93 EDGE-CUT creates a high quality single pass X-Bevel (upper and lower bevel)



## Overview

**IK-93 EDGE-CUT** is a cutting machine that can singly perform the X-Bevel Cut, which used to be cut by 2 portable machines.

A stable bevel cut with high quality is achieved by eliminating the speed variation by thorough insulation measures and following the steel plate edge with a roller.

Machine designed from thorough research at the customer's workplace, with several KOIKE's features.

## Main Specification

Model Name	IK-93 EDGE-CUT
Cutting Thickness	Up to 50mm at Bevel Cutting
Bevel Cut. Angle	0-45°
Traveling Speed (mm/min)	100 - 1000
Tracking Type	Plate Edge Track
Speed Control	Dial Adjustment
Length (mm)	402
Weight (kg)	12.5
Heat Shield	Thermal bottom Insulation Plate + Insulation Plate
Gas Operation	Twin Valve Preset Function
Cutting Tip	102 (ACE) or 106 (LPG)

## Feature

- KOIKE unique preset valve allows saving flame setting
- Speed variation is avoided even on long distances
- Immediate response for the root face cutting variation, by the smooth operation of torch holder structure
- Equipped with standard bottom roller to make easier the Lead-In and Lead-Out

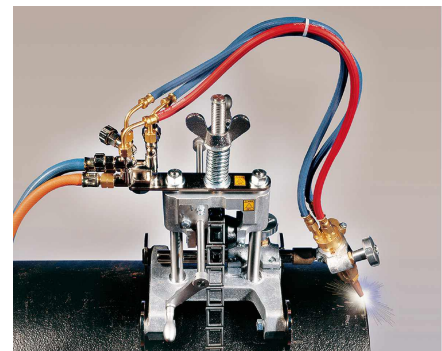
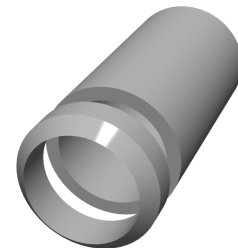
## Main components and Accessories

- Cutting Machine Body [IK-93 EDGE CUT]
- Power Cable (5M)
- Instruction Manual
- Screwdriver
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0,1,2

## Portable Oxy-Fuel Pipe Cutting Machine

# PICLE 1-II

The **PICLE 1-II** is a manual operated portable pipe cutting machine with a chain and gear drive system.



### Overview

Compact pipe cutting machine developed over thoroughly researches from the actual construction sites and pipelines. Cover the majority of pipe processing, such as dimensional cutting and bevel cutting, from small to large dimension of pipes.

Since machine is manually operated, it is ideal for work in places without power supply. The combination of a sprocket wheel incorporated to the center of machine's main body and a chain tightened around the pipe periphery drives the machine smoothly by the machine's lower rollers. The length of the chain can be adjusted link by link, making it easy to match the chain to the circumference of the pipe.

### Feature

- Small size and lightweight (8.3kg). Can be carried by one hand
- No power needed to cut, high performance at any work site
- From  $\phi 114$  to 600mm is possible to cut only adding or removing the links
- High precision of bevel cutting with no marking
- Excellent cutting quality, no need of grinding; Butt welding of flange is possible just after cutting
- Fix or move the machine is possible just loosening the wing nut on the top of machine

### Main Specification

Model Name	PICLE 1-II
Cutting Thickness (mm)	5 - 30
Bevel Angle	0 - 45°
Effective Pipe Cutting Diameter (mm)	$\phi 114$ - 600
Torch Vertical Stroke (mm)	50
Torch Feed Stroke (mm)	100
Drive Method	Manual ( <b>No need electric power</b> )
Wheel Width (mm)	210
Height (mm)	410
Weight (kg)	8.5
Cutting Tip	102(ACE) or 106(LPG)
Supplied Chain	80 links (equivalent to 2.4m)

### Main components and Accessories

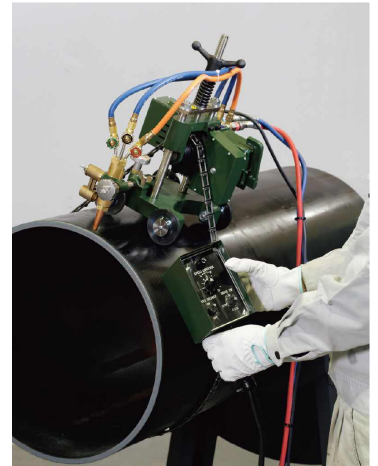
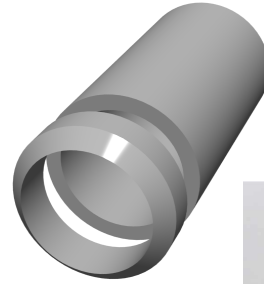
- Cutting Machine Body [**PICLE 1 - II**]
- Chain (80 links)
- Instruction Manual
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0, 1, 2



Remote Control Oxy-Fuel Pipe Cutting Machine

# AUTO-PICLE-II/S

**AUTO-PICLE** is a remote control gas motorized pipe cutting machine. The special rail for torch/tip guidance system provides high cutting accuracy and makes the



## Overview

**AUTO-PICLE** is a motorized oxy-fuel pipe cutting machine with remote control. The special fixed rail for the torch guidance system provides high cutting accuracy even for large pipes.

Due to the constant traveling speed, high quality cutting surface can be achieved. Various bevel angles are available by adjusting the angle on the torch holder scale. Changes in the pipe diameter are easily matched by adding or removing chain links as needed.

## Feature

- High accurate cutting achieved by the guide rail
- Vertical pipe cutting is possible by using the guide rail
- Add or remove chain's links as needed according to the pipe diameter
- Operate machine away from cutting area is possible by the remote control

## Main Specification

Model Name		AUTO-PICLE-II	AUTO-PICLE-S
Cutting Thickness (mm)	5 - 30		
Bevel Angle	0 - 45°		
Cutting Speed (mm/min)	100 - 700		
Effective Pipe Cutting Diameter (mm)	φ150 - 600 * Guide rails are not available to be used with AUTO PICLE II	φ150 - 400 w/o guide rail	
		φ400 - 600 (with D-600)	
		φ600 - 900 (with D-900)	
		φ900 - 1200 (with D-1200)	
		φ1200 - 1500 (with D-1500)	
Drive Method	PWM Control		
Wheel Width (mm)	230		
Height (mm)	400		
Weight (kg)	14	15	
Operation Box	Pendant type		
Cutting Tip	102(ACE) or 106(LPG)		
Supplied Chain	80 links (equivalent to 2.4m)		

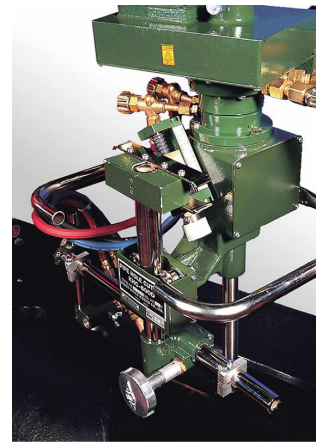
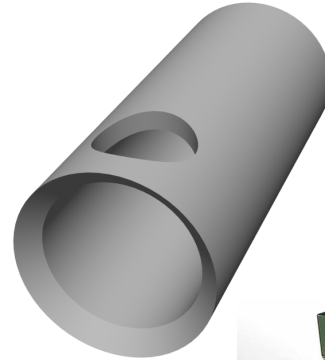
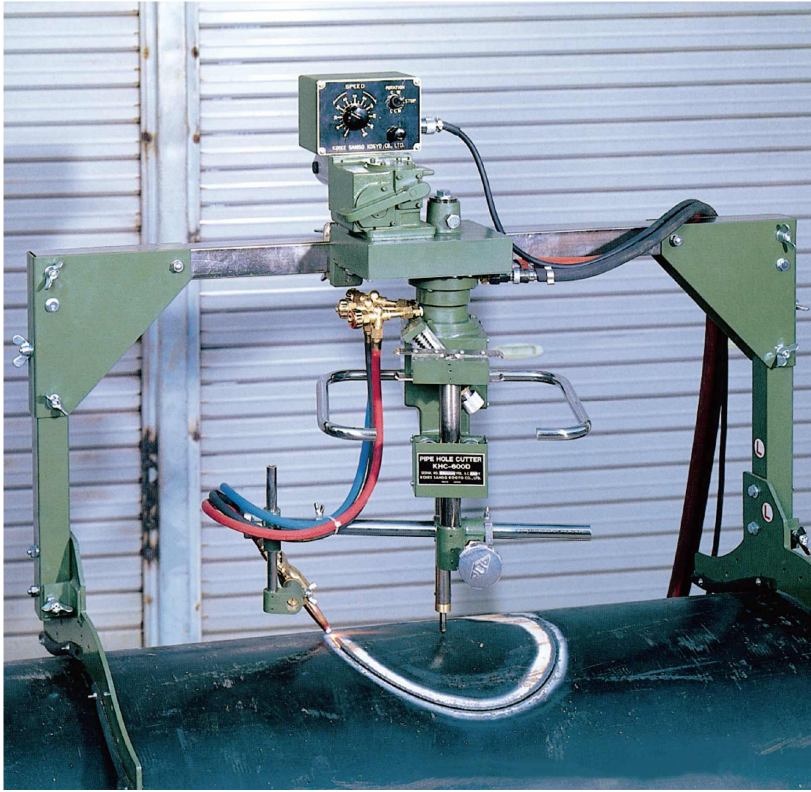
## Main components and Accessories

- Cutting Machine Main Body [AUTO-PICLE-II / -S]
- Chain (80 links)
- Power Cable (5M)
- Instruction Manual
- Fuse
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0, 1, 2

## Portable Automatic Pipe Hole Cutting Machine

# KHC-600D

Great pipe fitter tool, allows tubes to be cut for welding fit-up work. Such as creating man hole opening, fish- mouth and creating T-joints.



### Overview

**KHC-600D** is a portable automatic cutting machine for cutting holes in pipes. The machine can provide both Straight and Bevel cutting, and it is used in the manufacturing of high-pressure storage tanks and heat exchangers. Vertical motion of torch can be accurately adjusted by the eccentric mechanism, and the rotation distribution method prevents hoses twisting and leakage.

Pipe with  $\phi 250$  to 800mm diameter can be cut by supporting the normal stand with small-diameter pipe fixture. In additional, using stand for overhang workpiece, the cutting of the edge face of the pipe is also possible to be cut (please use the small diameter pipe fixture together).

### Feature

- Easy positioning by using the centering pin
- Bevel cutting up to 45° is available
- Rotation distribution method prevents hoses twisting and leakage
- KOIKE special Torch Up/Down mechanism provides smooth movement
- Circle cutting in a flat plate is also available

### Main Specification

Model Name	KHC-600D
Cutting Thickness (mm)	5 - 50
Bevel Angle	0 - 45°
Cutting Speed (mm/min)	100 - 700
Effective Circle Cutting Dia (mm)	$\phi 80 - 600$
Applicable Main Pipe Dia (mm)	$\phi 800$ or more*
Applicable Ratio Between Branch and Main Pipe Dia	1 : 2 or more ( $\phi 600$ mm hole can be cut in a $\phi 1200$ mm pipe)
Torch Up/Down Stroke (mm)	0 - 100
Speed Control Method	PWM Control
Motor	DC24V 15W DC Motor
Machine Dimension (L x W x H) (mm)	1050 x 500 x 760
Weight (kg)	26
Cutting Tip	102 (ACE) or 106 (LPG)

\*Optional item: Small Diameter Pipe Fixture is available for less than  $\phi 800$ mm

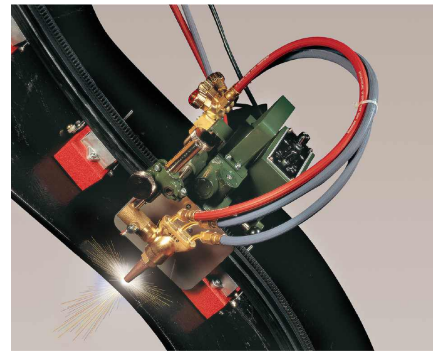
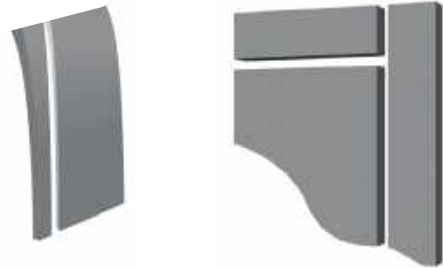
### Main components and Accessories

- Cutting Machine Body [**KHC-600D**]
- Power Cable (5M)
- Centering Tool
- Instruction Manual
- Fuse
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0, 1, 2

## Automatic All-Position Cutting Machine

# IK-72T

From flat to multi plane surfaces, **IK-72T** can cut various types of steel shape, such as channel, curved plate, angled steel members and the like.



### Overview

**IK-72T** is an all position cutting machine that provides cutting in any position. Various cutting can be performed, such as straight cutting of flat plate, circular arc cutting, side of structure, slope, steel plate and radius surface.

Cutting can be performed by combining 3 types of rail, straight (1D), 2 dimensional (2D) and 3 dimensional (3D). 2D rail is made by hard rubber and can be bent at minimum R2500mm, up and down. 3D rail is made by hard rubber and can be bent at minimum R2000mm, up, down, left and right.



1D rail

2D rail

3D rail

### Feature

- Compact and light weight. Easy to carry, setting and operate, even in narrow spaces
- Easy to setting and remove by using the magnet with switch
- Rail centering can be easily adjusted by the magnet mounting structure
- Easy positioning by the use of clutch device
- Simple design with easy maintenance and inspection

### Main components and Accessories

- Cutting Machine Body [**IK-72T**]
- Power Cable (5M)
- Instruction Manual
- Fuse
- Screwdriver
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0, 1, 2

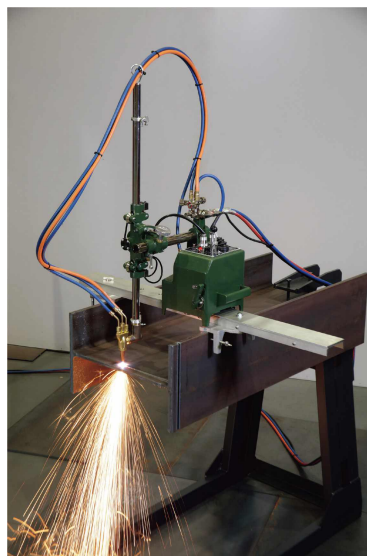
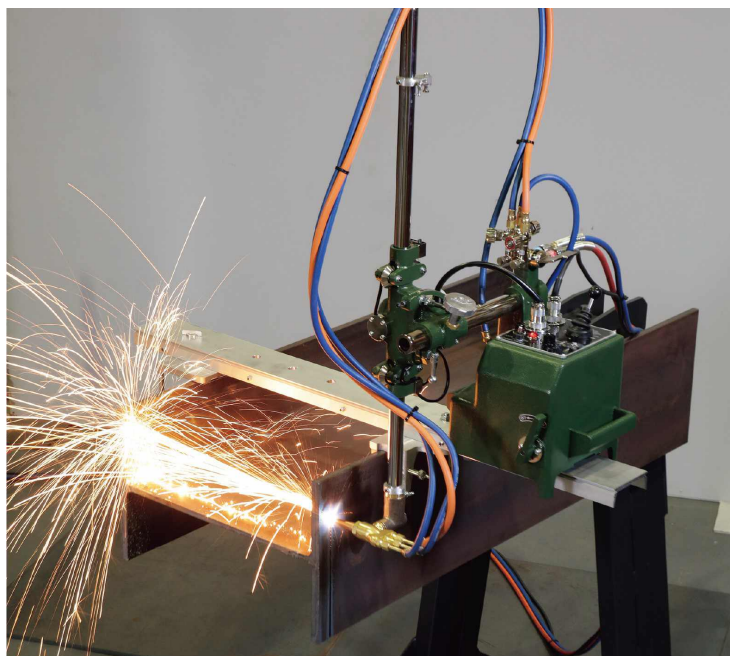
### Main Specification

Model Name	IK-72T
Cutting Thickness (mm)	5 - 30
Bevel Angle	0 - 45°
Cutting Speed (mm/min)	150 - 700
Driving Method	Rack and Pinion
Speed Control Method	Dial Adjustment
Machine Dimension (L x W x H) (mm)	190 x 195 x 140
Body Weight (kg)	4.5
Cutting Tip	102 (ACE) or 106 (LPG)

## Semi-Automatic H-Beam Cutting Machine

# MINIMANTIS-II

Rapid and precise cutting machine of H-shape web and flange.



### Overview

**MINIMANTIS-II** is the most powerful cutting machine for cutting H-beam. Designed to make diagonal cut on the web and flange, and also bevel cutting, simply by changing the angle of the rail or the Up/Down rack bar, as well as the straight cutting.

Equipped with 2 drive motors for web and flange cutting. The carriage moves along the rail to cut the web and torch moves up and down to cut the flange. Therefore there is no need to align or rotate the H-beam when cutting. In addition, it is possible to use it in combination with 3 types of rails with different length, according to the web dimension.

### Feature

- Setting time reduced by the integrated main body and guide rail
- Easy carry and motion due to its lightweight, also reduces the effort in movement
- Diagonal cutting on web by 35° and bevel cutting on the flange up to 45°
- PWM control provides stable feeding speed
- Steel plate can also be cut

### Main Specification

Model Name	MINIMANTIS-II	
Cutting Thickness (mm)	5 - 30	
Bevel Angle	Web	0 - 35°
	Flange	0 - 35°
Cutting Speed (mm/min)	100 - 700 ( Web and Flange )	
Effec. Cutting Range (I-Cut)	Web (mm)	Web : 150 - 600 (with 600mm rail)
	Flange (mm)	Flange : 150 - 400 (with ST-400 Vertical drive unit)
Drive Method	Web : Friction, Flange : Rack and Pinion	
Speed Control Method	PWM Control	
Motor	24V DC 15W DC Motor	
Weight (kg)	20kg (Main Body + 600 rail)	
Optional Vertical Drive Unit	ST-400 and ST-700	
Optional Rail (mm)	ST-600/900/1500 rail	
Cutting Tip	102 (ACE) or 106 (LPG) #0,1,2	

### Main components and Accessories

- Cutting Machine Body [MINIMANTIS-II]
- Power Cable (5M)
- Instruction Manual
- Fuse
- Screwdriver
- Wrench
- Cutting Tip Cleaner
- Cutting Tip 102 (ACE) or 106 (LPG) #0,1,2

## Accessories



### Extendable Rail 1.8M for IK-93 HAWK

Straight rail used for IK-93 HAWK. Although the rail length is 1.8m, cutting of longer straight line is also possible by using it in a successively.

[ Applicable Model ] IK-93 HAWK and others

S/N: **BBA19302**



S/N:

**60031131** for 1,000mm

**60031101** for 2,400mm

### Extension Chain

Chain for PICLE 1 II / AUTO-PICLE II / S traveling around the pipe. Add it when the standard chain is not enough.

[ Applicable Model ] PICLE 1 II / AUTO-PICLE II / S



S/N:

**BGB99101**: D-600

**BGB99102**: D-900

**BGB99103**: D-1200

**BGB99104**: D-1500

### Guide Rail

#### D-600 / D-900 / D-1200 / D-1500

Guide rail for AUTO-PICLE S. Select the rail model according to the pipe diameter. It must be used within the range specified.

[ Applicable Model ] AUTO-PICLE S

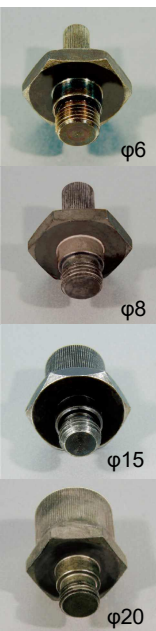


### Overhang Stand

S/N: **BFC99102**

This stand allows KHC-600D to cut pipes' edge surface. Normally, the machine works with the standard stand, but for cases such as for cutting of edge of the pipe, the overhang stand is provided.

[ Applicable Model ] KHC-600D  
(Please use the small diameter pipe fixture together)



### Magnet Roller φ6 / φ8 / φ15 / φ20

Optional magnet roller for IK-54D. Easy to match different shape mold dimensions by changing the diameter from the standard roller of φ10 to the other roller's diameter.

φ6 : Change to about 60 to 600mm/min.  
Can follow shape corner of R4mm or more.

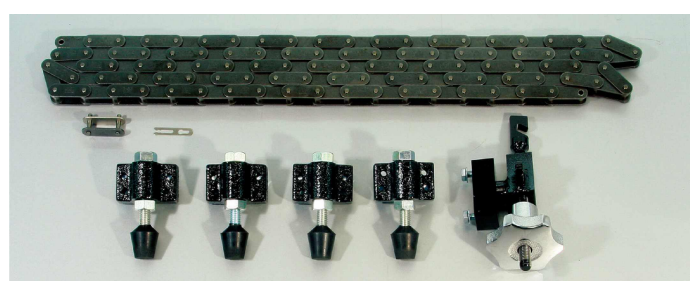
φ8 : Change to about 80 to 800mm/min.  
Can follow shape corner of R5mm or more.

φ15 : Change to about 150 to 1500mm/min.  
Can follow shape corner of R9mm or more.

φ20 : Change to about 200 to 2000mm/min.  
Can follow shape corner of R11mm or more.

S/N: **60030722** for φ6      **60030723** for φ8  
**60030724** for φ15      **60030725** for φ20

[ Applicable Model ] IK-54D



### Small Diameter Pipe Fixture

This fixture tool allows KHC-600D to cut holes on pipes of 250 to 800mm by fixing the cutting machine to this small diameter pipes.

[ Applicable Model ] KHC-600D

S/N: **BFC99101**

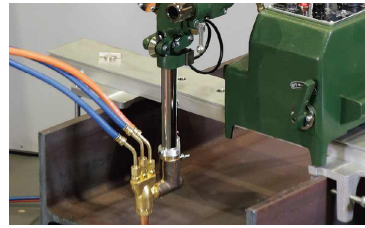


### Vertical unit for MINIMANTIS-II

Vertical pipe unit for MINIMANTIS-II to extend the cut length of flange. Standard specification allows cutting of 400mm, and this accessory provides the cutting length up to 700mm.

- Vertical unit ST-400
- Vertical unit ST-700

[ Applicable Model ] MINIMANTIS II



### Rail for MINIMANTIS-II

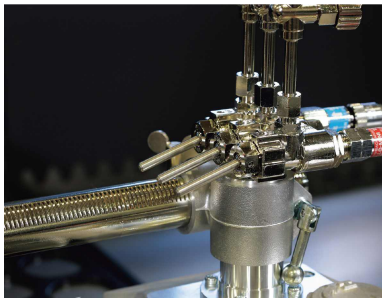
3 types of rail for MINIMANTIS-II can be selected as effective length 600 / 900 / 1,500mm depending on size of H-beam.

[ Applicable Model ] MINIMANTIS-II

- S/N: **BHA99201**: 600mm (1,100L) for ST  
**BHA99202**: 900mm (1,500L) for ST  
**BHA19203**: 1,500mm (2,100L) for ST

### Snap Valve

Open and close of preheat gas, preheat oxygen and cutting oxygen can be done by individual levers.



[ Applicable Model ]

- BQA00001** Snap Valve (A) for AUTO-PICLE
- BQA00002** Snap Valve (B) for IK-12 NEXT / IK-12 max3 with 1 torch
- BQA00003** Snap Valve (C) for IK-12 NEXT / IK-12 max3 with 2 torch
- BQA00004** Snap Valve (D) for IK-12 BEETLE with 1 torch
- BQA00005** Snap Valve (E) for IK-12 BEETLE with 2 torch



### Preset Valve

S/N: 60039410

Preheat gas and preheat oxygen, and also cutting oxygen can be opened and closed by one lever each. Preheat gas, preheat oxygen and cutting oxygen can all be turned OFF at the same time by operating one lever.

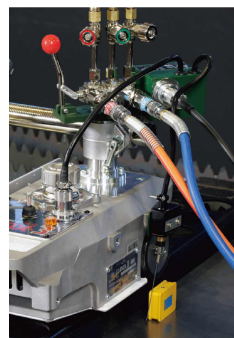
[ Applicable Model ] IK-12 NEXT and IK-12 max3



### Bevel Cutting Attachment S/N: BQB00003

By attaching to the torch, enables the bevel cutting. Easy setting of positive or negative bevel cutting with angular scales. Cutting thickness is up to 75mm. It uses 100 type cutting tip.

[ Applicable Model ] Any model which uses 100 type cutting tip



### Auto Stop Valve

One single lever operation, provides switching between 3 positions: 1) Preheat gas and preheat oxygen ON. 2) Preheat gas, preheat oxygen, and cutting oxygen ON. 3) All OFF. An device placed at the end of cutting position automatically stops the machine running and gas supply by interlocking the detection device attached to the machine with the electromagnet.

[ Applicable Model ] IK-12 NEXT, IK-12 max3 and IK-12 BEETLE for 1 distributor or 2 distributor.



### Twin Torch Attachment S/N: BQC00002

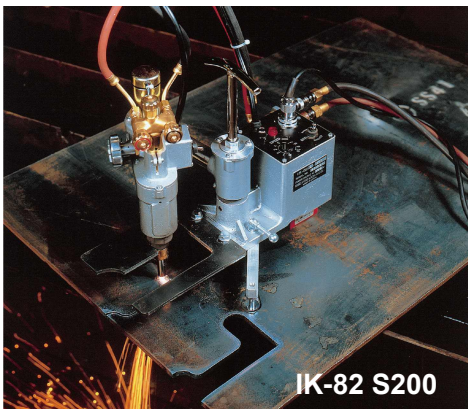
Enables the IK-12 NEXT, IK-12max3, and others, to perform parallel cutting with 1 torch and 2 cutting tips. The tip distance can be set from 32 to 310mm, allows strip cutting and a closer distance between small parts. It uses 100 type cutting tip.

[ Applicable Model ] Any model which uses 100 type cutting tip

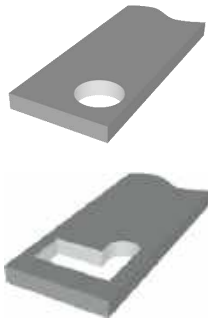


### Twin Torch attachment with PNC-12

## Other portable cutting machines



**IK-82 S200**



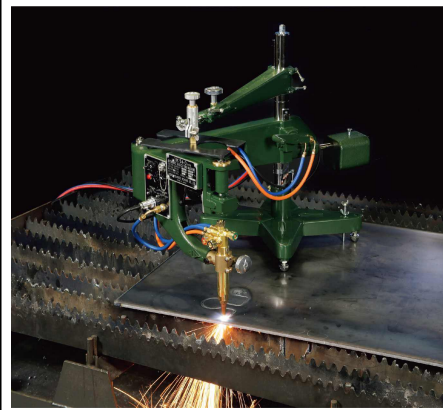
Automatic Shape Cutting Machine

### **IK-82 S200/M300**

Most advanced magnetic tracing type gas cutting machine. Effective designing and modular structure greatly reduce equipment weight, and provide a system configuration to ensure operation ease according to the particular operation requirements.

#### Main Specification

Model Name	IK-82 S200	IK-82 M300
Cutting Thickness (mm)	5 - 50	
Magnet Roller (mm)	φ25	φ16
Cutting Speed (mm/min)	100 - 900	100 - 600
Eff. Cutting Range (mm)	Circle	φ200
	Ellipse	420 x 160
Speed Control Method	Transistor Control	
Weight (kg)	7.5	9.5
Cutting Tip	406NT(LPG) or 402ST(ACE) #0,1,2	



Automatic Shape Cutting Machine

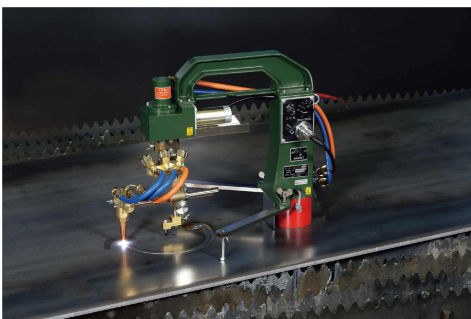
### **IK-54D**

IK-54 D is a mold tracing cutting machine with a robust structure that can cut mild steel up to thickness 100mm with high quality. Machine traces the mold reliably with a powerful magnet roller. In addition, by selecting the magnet roller by different diameter (φ6/ 8/10/15/20mm),

#### Main Specification

Model Name	IK-54D	
Cutting Thickness (mm)	5 - 100 (in case of #5 cutting tip)	
Eff. Circle Cut. Diam. (mm)	φ30 - 700 ( φ600 - 1700, in case of Main Shaft)	
Eff. Square Cut. Range (mm)	φ30 - 600 ( φ500 - 1200, in case of Main Shaft)	
Cutting Speed (mm/min)	100 - 1000	
Speed Control	PWM Control	
Magnet Roller (mm)	φ10* (Standard)	
Weight (kg)	44 (Weight included)	
Machine Dimension (L x W x H) (mm)	1260 x 695 x 550	
Cutting Tip	102 (ACE) or 106 (LPG)	

\*Magnet roller: φ6, 8, 15 and 20mm are available



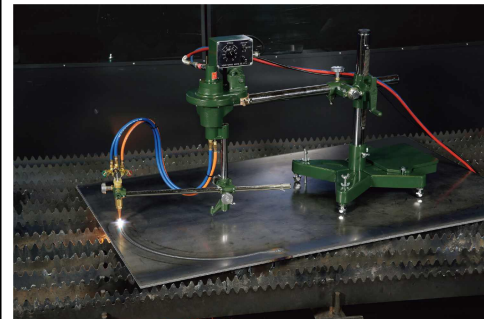
Automatic Circle Cutting Machine

### **CIR CUT-I/II**

CIR CUT I / II is an automatic cutting machine for circle cutting, which can perform I-CUT and bevel cutting up to 45°. The main body is fixed on the steel plate by magnets, the model I uses permanent magnet, and the model II uses electromagnet. The model II powerful electromagnet allow the machine to perform cutting in any position, including slope and vertical position.

#### Main Specification

Model name	CIR CUT-I	CIR CUT-II
Cutting Thickness (mm)	5 - 30	
Bevel Angle	0 - 45°	
Eff. Circle Cut. Dia. (mm)	φ40 - 200	
Torch Rotation Speed (rpm)	0.6 - 6.0	
Drive Method	PWM Control	
Motor	15W DC Motor	
Weight (kg)	11	11.3
Fixing Method	ON/OFF type magnet	Electro Magnet
Cutting Tip	102(ACE) or 106(LPG)	



Automatic Circle Cutting Machine

### **IK-70 600 / 1000**

IK-70 is a portable automatic circle cutting machine developed to cutting of large circle diameter of circle including bevel cutting in horizontal posture.

The cutting of circle with φ30 to 600mm in case of the model 600, and φ150 to 1000mm in case of the model 1000 is possible.

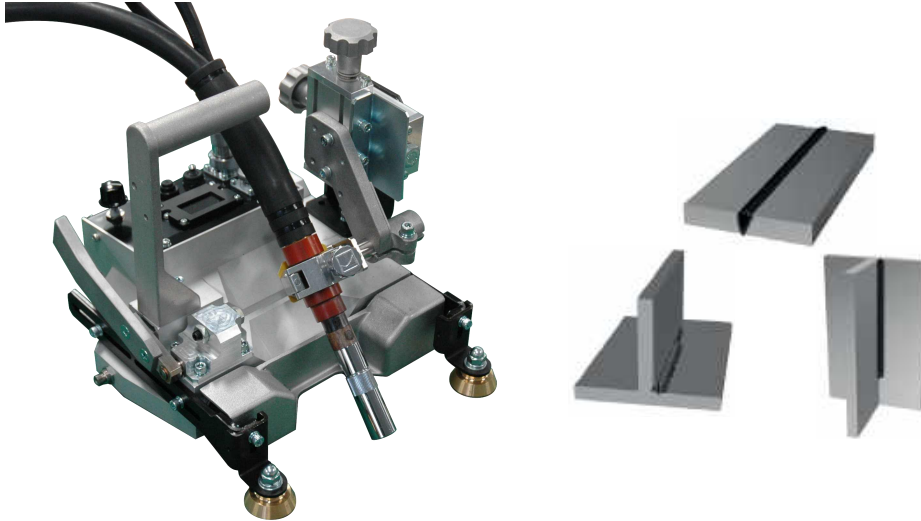
#### Main Specification

Model name	IK-70 600	IK-70 1000
Cutting Thickness (mm)	5 - 50 (in case of #4 cutting tip)	
Bevel Angle	0 - 45°	
Eff. Circle Cut. Dia. (mm)	φ30 - 600	φ150 - 1000
Plate Angle for Bevel cut.	0 - 45°	
Torch Rotation Speed (rpm)	0.2 - 6.0	0.04 - 1.5
Drive Method	PWM Control	
Motor	15W DC Motor	
Weight (kg)	24	55
Cutting Tip	102(ACE) or 106(LPG)	

## Welding Carriage

# WEL-HANDY MULTI NEXT

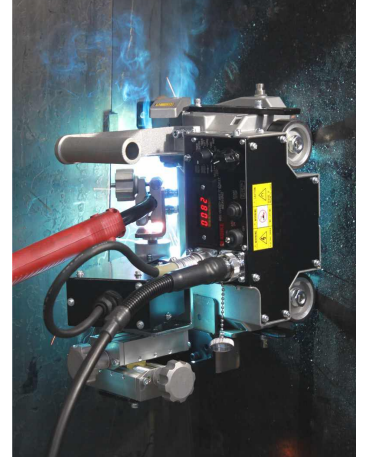
NEXT stage for welding carriage ! Challenge for 100% Welding Automation !



Stitch welding by  
WHM NEXT TACK



Up-ward welding by  
WHM NEXT WEAVING



### Overview

**WEL-HANDY MULTI NEXT** is a high performance welding carriage available with multi-purpose of application. The combination of permanent magnet and 4-wheel drive system ensured Stable driving.

Industry's top class strong magnet (power 50kg), allows you to weld in any kind of posture.

Machines designed for specific use such as Tack or Weaving welding and a wide range of options are at your disposal.

NEXT series are equipped with high function controllers with numerical control by digital display. Parameters can be changed during welding.

**WEL-HANDY MULTI NEXT** series continue to evolve with you

### Feature

- **New action lever:** detach magnet with little effort
- **New gearbox:** Secured the durability of the driving system
- **New universal torch holder:** designed for both straight and curved torch
- **New guide roller:** designed for multiple application
- **New slide unit:** torch adjustment is now smoother and more accurate

### Main Specification

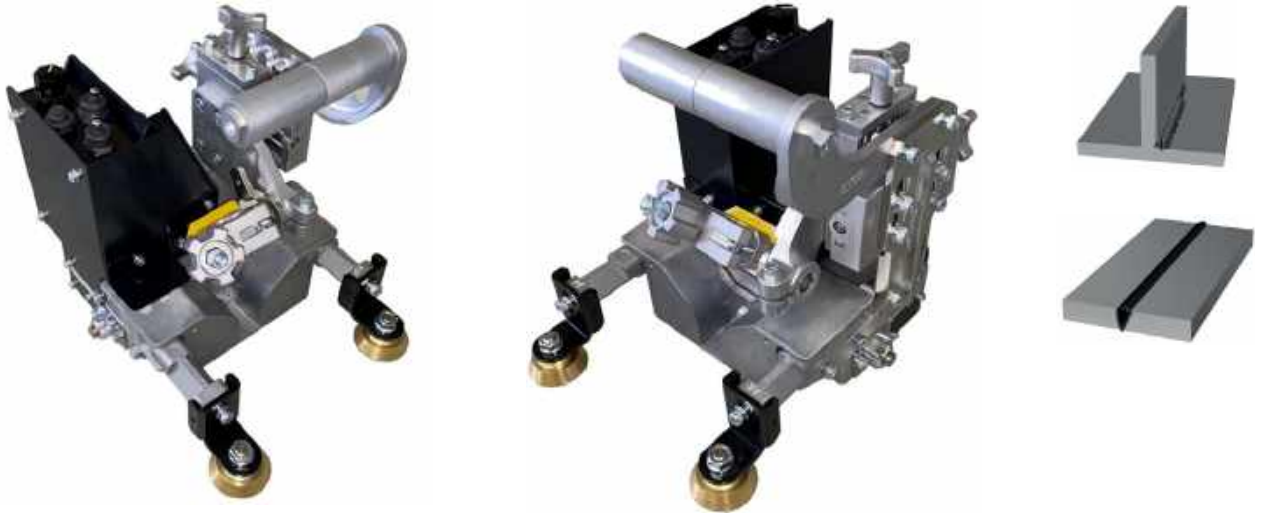
		WEL-HANDY MULTI NEXT	WEL-HANDY MULTI NEXT TACK	WEL-HANDY MULTI NEXT WEAVING
Model name		WEL-HANDY MULTI NEXT	WEL-HANDY MULTI NEXT TACK	WEL-HANDY MULTI NEXT WEAVING
Driving System		4 Wheel Driving		
Traction		Horizontal Fillet 16kg (Strong Magnet) / Vertical Fillet 16kg (Included Body Weight)		
Gap (Floor to Bottom) (mm)		5.5		
Magnet Up / Down system		Light Action Lever at Body Side ( Pull The Lever to released the magnet)		
Magnet Type		Permanent Magnet 50kg		
Travel Speed (mm/min)		50 - 1500		
Tracing Method		Guide Roller		
Applicable Posture		Horizontal Fillet Vertical Fillet (Only Strong magnet)	Horizontal Fillet & Vertical Fillet	
Start Interlocking Welding		Yes		
Automatic Stop by Limit Switch		Yes		
Arc Test		Yes		
Arc Stabilization Time (sec)		No	0 - 10.0	
Crater Current Correspondence		No	Yes	
Tack		No	Yes	
WEAVING	Weaving Speed (mm/min)	No	400 - 1500	
	Weaving Width (mm)	No	0.0 - 100.0	
	Stop Time on Left, Middle, Right (sec)	No	0.0 - 10.0	
Body weight (kg)		8.7	8.8	10.8
Body Dimensions W x D x H (mm)		280 x 280 x 250		310 x 280 x 250
Input Power Supply		Single Phase AC100 to 240V 50Hz-60Hz		



Welding Carriage

# WEL-HANDY COMPACT

Smallest & Lightest welding carriage in KOIKE history. Take the unprecedented mobility in your hand.

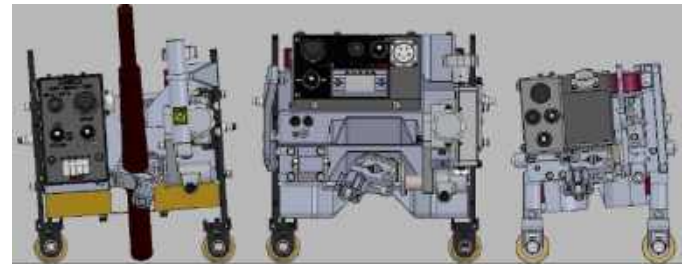


Size & Weight comparison

## Overview & Feature

**WEL-HANDY COMPACT** is a high performance welding carriage for fillet welding.

- Smallest of our Welding Carriages Series
- Extremely light & High Durability of the Body (5.2kg)
- Push and Switch Arms
- Customizable Handles
- Wide Adjustable range of Slide Holder and Torch (New Development)
- Straight Torch / Curved Torch Common Used Clamp
- Limit Switch on Both Side for Auto Stop Function



WH-MINI STRONG

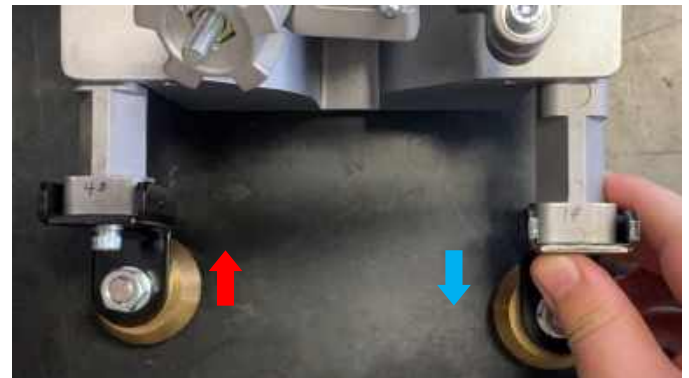
WHM-NEXT

WH-COMPACT

Model	Body Dimension (mm) / Weight
<b>WEL-HANDY COMPACT</b>	<b>200×255×230 / 5.2 kg</b>
WEL-HANDY MINI STRONG	260×265×300 / 8.2 kg
WEL-HANDY MULTI NEXT	280×280×250 / 8.5 kg

## Main Specification

Model name	WEL-HANDY COMPACT	
Weight (kg)	5.2	
Body Dimension (mm)	200 x 250 x 230	
Traction (kg)	11	
Gap (Floor - Bottom) (mm)	5	
Driving System	4 Wheel Driving	
Magnet Type	Permanent Magnet	
Magnet Power (kg)	25	
Travel Speed (mm/min)	100 - 550	
Tracking Method	Vertical Tracking by Guide Roller	
Applicable Posture	Horizontal Fillet Welding	
Torch Adjustable Range	Torch Angle	35° - 55°
	UP and Down (mm)	Max. 45
	Forward/Backward (Length) (mm)	Max. 45
	Forward/Backward (Angle)	Forward:5°, Backward:4°
Automatic Stop Functions	Limit switch on each end of carriage	
Non-Weld Parts (mm)	210 (Total)	
Power Cable	Optional	
Torch Holder Size (Diameter) (mm)	φ 16 - 23	
Motor	DC Motor	
Input Power	AC100 - 240V 50/60Hz	

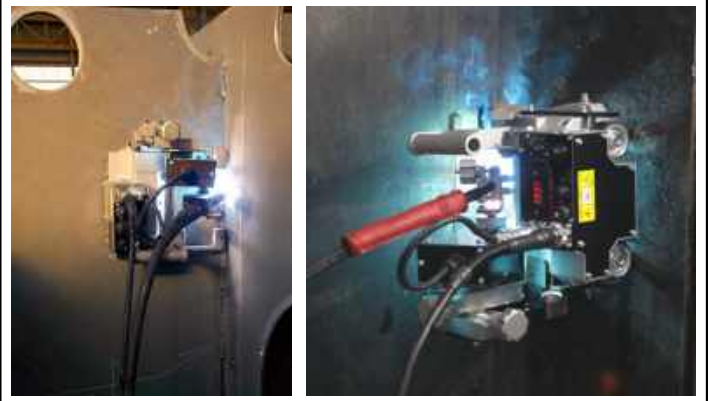


Push one of the arms into the body, and it will change the direction. (No tools required)

**Application case studies for Welding carriage**



Flipping guide rollers to trace at back side



Up-ward welding on metal assembly with weaver



Special arm made by customer



Fillet welding gantry system



Pipe seam welding with traveling on rail



Up-ward pipe welding



Combination of welding carriage and turning roller



Tubular welding

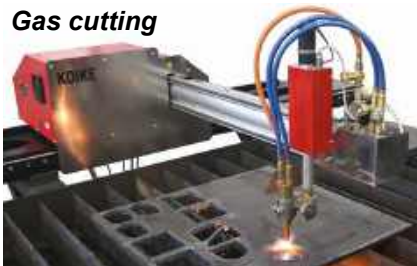
CNC machine that is possible to use in single phase power supply!

# ~~PNC-12 EXTREME~~

It is a CNC Cutting Machine that can be simply used by CNC device mounted in a compact body.



**Gas cutting**



**Plasma cutting**



## Overview

CNC device equipped with a simple operation keypad, and a display with a 7 inch LCD easy to understand graphically. Cutting of various types of shapes is possible using the 47 pre-programmed patterns, and function that keep the high quality and accuracy even in the cutting of small sizes, such as Mirror Image/ Rotation/ Dry Run/ Reverse/ start point return.

## Feature

- Oxy-Fuel gas cutting type and Air Plasma cutting type are available
- 47 pre-programmed patterns are available
- CAD/CAM software "PNC-CAM" for complex shapes is supplied exclusively for PNC
- The Initial Height Control (IHC) and height control during the cutting is available for plasma cutting type

## Main Specification

Model name		PNC-12 EXTREME
Machine body	Effective cutting width (mm)	1000, 1250, 1500
	Effective cutting length (mm)	1500, 2000, 3000, 6000
	Max. Rapid speed (mm/min)	3000
	Max. Cutting speed (mm/min)	2000
Oxy-fuel cutting	Drive method	Rack and Pinion
	Oxy-fuel cutting torch	1 set with motorized torch riser
	Cutting tips	102 (ACE) or 106 (LPG)
	Cutting thickness (mm)	5 - 50
Plasma cutting	Torch holder (mm)	1 set with motorized torch riser / Diameter 35
	Available Plasma System	POWERMAX series or non high frequency arc start type Plasma system (Customer's scope of supply. Please select the suitable plasma system as per thickness of cutting material.)
	Torch protection	Torch Magnetic de-coupler
	Torch height control	Initial height sensing / Arc voltage torch height control
CNC	Name of CNC	KOIKE D420
	Display	7 inch color LCD graphic display and key pad
	Program input	Manual MDI or by USB stick
	Control axis	X/Y 2 axis control
	Shape library	47 patterns
CAD/CAM	Operation function	Dry run, Pattern nesting, Reverse, Plate alignment, Mirror, etc.
	Model	PNC-CAM 2A (KAP Portable CNC editions)

## Pipe Cutting Machine

# PNC-PIPE

Simple-operation to cut both steel plate and pipe!  
Improve your productivity by automated plasma cutting



### Overview

**PNC-PIPE** is a pipe cutting machine realized with our conception of simple-operation system. Maintaining the conventional flat plate cutting function of famous PNC-12, pipe cutting function is newly added on **PNC-PIPE**. By a simple switching, pipe is integrated into **PNC-PIPE**, which can be regarded as a superior and derivative type of original PNC with higher multiplicity.

Simple-operation system, user-friendly, and compact body will enable in-house cutting production and increase your productivity by automating manual cutting process.

### Feature

- Available with flat plate and pipe cutting
- Superior accuracy with excellent cutting quality compared with manual cutting
- Simple and user-friendly operation by CNC
- Contribution to in-house cutting production

### Main Specification

Model Name		PNC-PIPE
Cutting Material		Flat Plate and Pipe by switching
Max. Cutting Speed (mm/min)		2000
Max. Rapid Speed (mm/min)		6000
Pipe cutting	Max. Length (mm)	3000
	Pipe Diameter Range (mm)	φ40 - 260
	Thickness (mm)	4 - 16
	Max Load (kg)	400
	Pipe Accuracy	Tolerance < 2% (for both Roundness/ Straightness)
Flat plate cutting	Effective Cutting Width (mm)	1500
	Effective Cutting Length (mm)	3000
Chuck Type		Triple-Jaws hollow chuck for connection to fume collecting duct
Pipe Support		2 sets
Number of Control Axis		2 axis
Number of Plasma Torch		1 (Plasma cutting system is not included.)
Plasma Height Sensor/ Initial Height Sensor Unit		Built-in as standard
CAD/CAM Software for Flat Plate		1 License as standard (PNC CAM)
CAM Software for Pipe		1 License as standard (FAST-CAM FAST-PIPE BASIC 10 module)
Machine Dimension (W x D x H) (mm)		3870 x 2820 x 1110
Input Voltage		Single phase AC100 – 240V 50Hz/60Hz

# **Gas Apparatus**

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Middle pressure type Hand Cutting Torch

# MK type Cutting Torch

Standard medium-pressure gas cutting torch. Mainly used as a cutting torch for disconnect components. For Tip mixing method, it is safe and difficult to occur backfire.



MK-100, 150, 250 and 300  
(Lever with lock type)

MK-K251, K251B  
(Lever without lock type)

Torch model	Cutting thickness (mm)	Torch body length (mm)	Torch body weight (g)	Torch head angle (deg.)	Lever/Trigger	Cutting tip	Fuel gas
MK-100	100mm Max.	466	900	75, 90, 180	Lever with lock	102, 102HC, 106, 106HC, 103, 107	Acetylene, Propane, Ethylene and Natural gas
MK-150	150mm Max.	495	880	90			
MK-250	250mm Max.	525	1,500	75, 90, 180			
MK-300	300mm Max.	661	1,550	75, 90, 180	Lever without lock		
MK-K251	250mm Max.	495	1,000	90			
MK-K251B*							

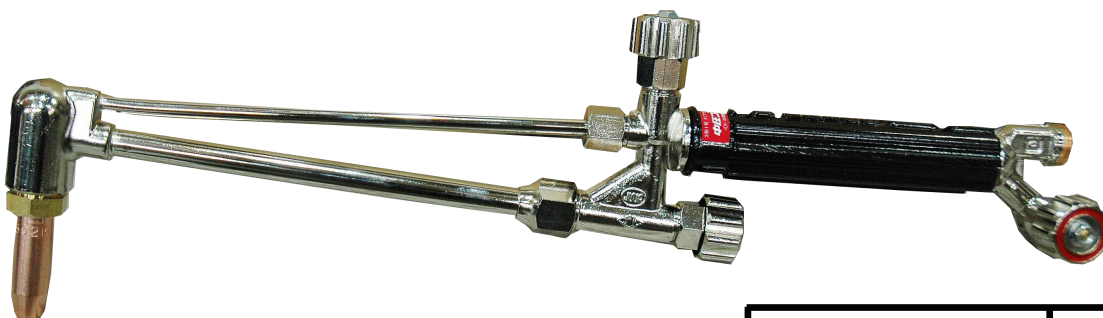
\*Bottom Lever Type

\*Ask KOIKE for hose connection type

Middle pressure type Hand Cutting Torch

# Gold-MM Torch

New improved cutting torch reduce risks of flashback at cutting tip and significant improvement of heating energy with new type 502 / 506 MM nozzles.



Cutting Tip 502MM for Acetylene	Cutting Tip 506MM for LPG
■ Stock No. DB151186F 	■ Stock No. DB15410F 

- JIS Model 3 No.1 equivalent\*
- JWA certification number 8605-310

\* JIS = Japanese Industrial Standards

Torch model	Cutting thickness (mm)	Torch body length (mm)	Torch body weight (g)	Torch head angle (deg.)	Torch type	Cutting tip	Fuel gas
S type	50 Max.	392	690	90	Valve	502MM, 506MM	Acetylene, Propane
L type		480	740				

**Cutting****Heating**

Middle pressure type Hand Cutting Torch

# ***Skill Cut Torch***

Mainly used as a cutting torch, and it is available for Gouging and Heating.



For heating, Skill cut-250 with Cutting tip 122B and Acetylene needs to be selected.  
For heating with LPG, Line Heating Torches are recommended.

- JIS Model 3 No.1 & 2 equivalent
- JWA certification number 8605-310 & 320

Torch model	Cutting thickness (mm)	Torch body length (mm)	Torch body weight (g)	Torch head angle (deg.)	Torch type	Cutting tip	Fuel gas
Skill cut-100	100 Max.	515	700	75, 90, 180	Valve	502A, 506A	Acetylene, Propane
Skill cut-250	250 Max.	578	980			102, 106	

**Cutting**

Low pressure type Hand Cutting Torch

# ***Gold Light-II Torch***

Light weight and compact. If flashback arrestor "Apollo mini-tackle" are used together, safety is further improved.



- JIS Model 1 No.1 & 2 equivalent
- JWA certification number 8605-110 & 120

Torch model	Tip No.	Cutting thickness (mm)	Torch body length (mm)	Torch body weight (g)	Torch head angle (deg.)	Torch type	Gas pressure ( MPa )	
							Oxygen	Fuel gas
No. 1 (M-cut)	C-I #1	3 - 10	395	610	90	Valve	0.3	0.02
	C-I #2	10 - 20						
	C-I #3	20 - 30						
No.2 (A-cut)	C-II #1	3 - 15	477	760	90	Valve	0.3	0.02
	C-II #2	15 - 40						
	C-II #3	40 - 80						

Tip model	Stock No.	Shape	Used gas
C-1	SK-1011 to 3		Acetylene
	SK-1021 to 3		LPG
C-2	SK-2011 to 3		Acetylene
	SK-2021 to 3		LPG

**Cutting**

Low pressure type Hand Cutting Torch

# ***Safety Light-II Torch***

Light weight and compact with less backfire by spring function. If flashback arrestor "Apollo mini-tackle" are used together, safety is further improved.



- JIS Model 1 No.1 & 2 equivalent
- JWA certification number 8605-110 & 120

Torch model	Tip No.	Cutting thickness (mm)	Torch body length (mm)	Torch body weight (g)	Torch head angle (deg.)	Torch type	Gas pressure ( MPa )	
							Oxygen	Fuel gas
No. 1 (M-cut)	C-I #1	3 - 10	430	610	90	Valve	0.3	0.02
	C-I #2	10 - 20						
	C-I #3	20 - 30						
No.2 (A-cut)	C-II #1	3 - 15	486	725	90	Valve	0.3	0.02
	C-II #2	15 - 40						
	C-II #3	40 - 80						

Tip model	Stock No.	Shape	Used gas
C-1	SK-1011 to 3		Acetylene
	SK-1021 to 3		LPG
C-2	SK-2011 to 3		Acetylene
	SK-2021 to 3		LPG

**Scarfig**

Scarfig Torch

# MK-Scarfig Torch

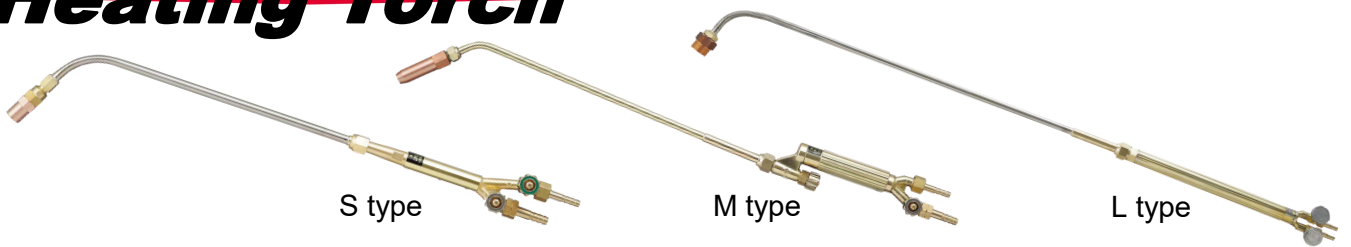


Torch model	Tip type	Tip No.	Gas pressure ( MPa )		Welding width (mm)	Welding depth (mm)	Torch body length (mm)	Torch body weight (g)	Injector	Torch type	Tip model	Stock No.	Shape	Used gas
			Oxygen	Fuel gas										
MK-Scarfig No. 1, 2 and 3	MKS (AC)	1	0.7 - 0.9	0.04	20-30	2 - 4	No. 1: 890 No. 2: 1190 No. 3: 1620	No. 1: 2000 No. 2: 2150 No. 3: 2450	Fixed	Bottom Lever w/o lock	MKS	Ask KOIKE		Acetylene
		2			30-40									
		3			40-50									
	MKPS (LPG)	1		0.015	20-30	2 - 4								
		2			30-40									
		3			40-50									LPG

Line Heating Torch

# Heating Torch

**Heating**



Torch model	Tip No.	Gas pressure ( MPa )		LPG flow rate (L/h)	Flame Condition	Injector	Torch body length (mm)	Torch body weight (g)	Torch type
		Oxygen	Fuel gas						
S type	L-1000S/SK	0.2	0.02	1000	L-S,M,L type: Diffusion	Fixed	620	610	Valve
	L-1500S	0.3	0.03	1500					
	L-2000S	0.4		2000					
	L-2500S	0.5	0.04	2500					
	L-3000S/SK	0.6	0.05	3000					
M type	L-3000M/MK	0.3	0.05	3000	L-SK, MK type: Centralization	Changeable	700	880	
	L-4000M	0.5		4000					
	L-5000M/MK	0.55		5000					
L type	L-7000L	0.3	0.05	7000	Fixed	1600	2800		
	L-10000L	0.45		10000					
	L-12000L	0.55		12000					



**Welding**

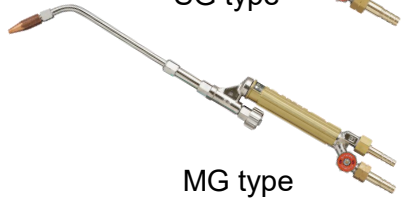
Low pressure type Welding Torch

# Gold Welding Torch

Having fuel gas valve locking mechanism can reduce the risk of unintentional valve open.



SG type



MG type

\*Ask KOIKE for LG type

- JIS Model B No.0 & 1 equivalent

Torch model	Tip type	Tip No.	Welding thickness (mm)	Gas pressure (MPa)		Torch body length (mm)	Torch body weight (g)	Injector	Torch type
				Oxygen	Acetylene				
SG		50	- 0.5	0.2	0.02	260	530	Fixed	Valve
		70	0.5 - 0.7						
		100	0.7 - 1.0						
		140	1.0 - 1.4						
		200	1.4 - 2.0						
MG		200	- 2.0	0.3	0.02	432	544	Fixed	Valve
		225	2.0 - 2.3						
		250	2.3 - 2.5						
		315	2.5 - 3.2						
		400	3.2 - 4.0						
		450	4.0 - 4.5						
		500	4.5 - 5.0						

Tip model	Stock No.	Shape	Used gas
SG	DB57181A - E (Tip No. 50,70,100,140,200)		Acetylene
MG	DB57182A - G (Tip No. 200,225,250,315,400,450,500)		

**Scarfig**

Heavy Duty Scarfig Torch

# Power-1350D Scarfig Torch



Torch model	Tip type	Used gas	Gas pressure (MPa)		Scarfig width (mm)	Scarfig depth (mm)	Torch body length (mm)	Torch body weight (g)	Injector	Torch type
			Oxygen	Fuel gas						
1350D	P-15	Propane	0.9 - 1.3	0.06-0.1	60-90	2 - 5	1320	2300	Fixed	Bottom Lever w/o lock
		Coal gas		0.08-0.14						

Tip model	Stock No.	Shape	Used gas
P-15	DB89881A		Propane Coal Gas

## Cutting Tip

# 102

• Standard Tip

**Acetylene**

S/N: DB11181B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Acetylene		Jet Oxygen	Preheat Oxygen	Acetylene	
00	3 - 5	0.8	0.15	0.02	700 - 660	690	410	370	
0	5 - 10	1.0	0.2		660 - 550	1,200			
1	10 - 15	1.2	0.25	0.3	550 - 490	2,100	480	430	
2	15 - 30	1.4	0.3		490 - 400	3,400			
3	30 - 40	1.6	0.35	0.025	400 - 350	4,300	6,500	550	500
4	40 - 50	1.9			0.025	350 - 320			
5	50 - 100	2.3	0.4	0.03	320 - 200	11,000	690	630	
6	100 - 150	2.7			0.035	200 - 150			15,000
7	150 - 250	3.0	0.45	0.04	150 - 80	22,000	1,060	960	
8	250 - 300	3.4			0.45	80 - 45			28,000

# 102HC

• For Hand Cutting and Portable Cutting

**Acetylene**

S/N: DB11285B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Acetylene		Jet Oxygen	Preheat Oxygen	Acetylene	
00	3 - 5	0.8	0.15	0.02	700 - 660	690	410	370	
0	5 - 10	1.0	0.2		660 - 550	1,200			
1	10 - 15	1.2	0.25	0.3	550 - 490	2,100	480	430	
2	15 - 30	1.4	0.3		490 - 400	3,400			
3	30 - 40	1.6	0.35	0.025	400 - 350	4,300	6,500	550	500
4	40 - 50	1.9			0.025	350 - 320			
5	50 - 100	2.3	0.4	0.03	320 - 200	11,000	690	630	
6	100 - 150	2.7			0.035	200 - 150			15,000
7	150 - 250	3.0	0.45	0.04	150 - 80	22,000	1,060	960	
8	250 - 300	3.4			0.45	80 - 45			28,000

# 102D5

• Divergent High Speed Tip

**Acetylene**

S/N: DB11183B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Acetylene		Jet Oxygen	Preheat Oxygen	Acetylene
00	3 - 5	0.6	0.5	0.02	- 700	850	520	470
0	5 - 10	0.8			700 - 625	1,600		
1	10 - 15	1.0	0.025	0.03	625 - 550	2,400	600	550
2	15 - 30	1.2			550 - 475	3,600		
3	30 - 40	1.4	0.025	0.03	475 - 425	4,800	750	680
4	40 - 50	1.6			425 - 350	5,600		
5	50 - 100	1.9	0.03	0.04	350 - 250	8,800	860	780
6	100 - 150	2.3			250 - 175	13,500		
7	150 - 250	3.0	0.04	0.04	175 - 90	24,000	1,330	1,210
8	250 - 300	3.4			90 - 60	31,000		

# 102D7

• Divergent High Speed Tip

**Acetylene**

S/N: DB11184B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Acetylene		Jet Oxygen	Preheat Oxygen	Acetylene
00	3 - 5	0.4	0.7	0.02	- 750	750	520	470
0	5 - 10	0.6			750 - 680	1,100		
1	10 - 15	0.9	0.025	0.03	680 - 600	2,500	600	550
2	15 - 30	1.1			600 - 500	3,800		
3	30 - 40	1.3	0.025	0.03	500 - 450	5,400	750	680
4	40 - 50	1.5			450 - 400	7,300		
5	50 - 100	1.8	0.03	0.04	400 - 260	10,000	860	780
6	100 - 150	2.1			260 - 180	14,000		
7	150 - 250	2.6	0.04	0.04	180 - 100	22,000	1,330	1,210
8	250 - 300	3.2			100 - 70	35,000		

# 402ST

• Standard Tip  
( Only for IK-82 )

**Acetylene**

S/N: DB14183C-H



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Acetylene		Jet Oxygen	Preheat Oxygen	Acetylene
0	5 - 10	1.0	0.2	0.02	500 - 450	1,200	380	340
1	10 - 15	1.2	0.25		450 - 400	2,100	485	440
2	15 - 30	1.4	0.3	400 - 350	3,200	550		
3	30 - 40	1.6	0.3	350 - 300	4,200			
4	40 - 50	1.8	0.35	0.025	300 - 250	6,800	640	580
5	50 - 100	2.1	0.5	0.03	250 - 200	11,000	730	660

# 406NT

• Standard Tip  
( Only for IK-82 )

**LPG**

S/N: DB14483C-H



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG
0	5 - 10	1.0	0.2	0.02	500 - 450	1,200	1,640	410
1	10 - 15	1.2	0.25		450 - 400	2,100		
2	15 - 30	1.4	0.3	0.025	400 - 350	3,200	2,160	540
3	30 - 40	1.6	0.3		350 - 300	4,200		
4	40 - 50	1.8	0.35	0.03	300 - 250	6,800	2,160	540
5	50 - 100	2.1	0.5	0.03	250 - 200	11,000		

## Cutting Tip

### 106,106O

- Standard Tip
- 106O is for quick type torch

**LPG**

S/N: 106: DB11481B-L  
106O: DB11484B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.8	0.3	0.02	700 - 660	690	1,180	310		
0	5 - 10	1.0			660 - 550	1,200				
1	10 - 15	1.2	0.35	0.025	550 - 490	2,100	1,370	360		
2	15 - 30	1.4			490 - 400	3,400				
3	30 - 40	1.6			400 - 350	4,300				
4	40 - 50	1.9			350 - 320	6,500				
5	50 - 100	2.3	0.4	0.03	320 - 200	11,000	1,860	490		
6	100 - 150	2.7			200 - 150	15,000			3,040	800
7	150 - 250	3.0			150 - 80	22,000			3,720	980
8	250 - 300	3.4	0.04	80 - 45	28,000					

### 106HC

- For Hand Cutting and Portable Cutting

**LPG**

S/N: DB11589B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.8	0.3	0.02	700 - 660	690	1,180	310		
0	5 - 10	1.0			660 - 550	1,200				
1	10 - 15	1.2	0.35	0.025	550 - 490	2,100	1,370	360		
2	15 - 30	1.4			490 - 400	3,400				
3	30 - 40	1.6			400 - 350	4,300				
4	40 - 50	1.9			350 - 320	6,500				
5	50 - 100	2.3	0.4	0.03	320 - 200	11,000	1,860	490		
6	100 - 150	2.7			200 - 150	15,000			3,040	800
7	150 - 250	3.0			150 - 80	22,000			3,720	980
8	250 - 300	3.4	0.04	80 - 45	28,000					

### 106D5,05

- Divergent High Speed Tip
- 106O5 is for quick type torch

**LPG**

S/N: 106D5: DB11482B-L  
106O5: DB11485B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.6	0.5	0.02	- 700	850	1,180	310		
0	5 - 10	0.8			700 - 625	1,600				
1	10 - 15	1.0	0.025	0.03	625 - 550	2,400	1,370	360		
2	15 - 30	1.2			550 - 475	3,600				
3	30 - 40	1.4			475 - 425	4,800				
4	40 - 50	1.6			425 - 350	5,600				
5	50 - 100	1.9	0.04	0.03	350 - 250	8,800	1,860	490		
6	100 - 150	2.3			250 - 175	13,500			3,040	800
7	150 - 250	3.0			175 - 90	24,000			3,720	980
8	250 - 300	3.4	0.04	90 - 60	31,000					

### 106D7,07

- Divergent High Speed Tip
- 106O7 is for quick type torch

**LPG**

S/N: 106D7: DB11483B-L  
106O7: DB11486B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.4	0.7	0.02	- 750	750	1,180	310		
0	5 - 10	0.6			750 - 680	1,100				
1	10 - 15	0.9	0.025	0.03	680 - 600	2,500	1,370	360		
2	15 - 30	1.1			600 - 500	3,800				
3	30 - 40	1.3			500 - 450	5,400				
4	40 - 50	1.5			450 - 400	7,300				
5	50 - 100	1.8	0.04	0.03	400 - 260	10,000	1,860	490		
6	100 - 150	2.1			260 - 180	14,000			3,040	800
7	150 - 250	2.6			180 - 100	22,000			3,720	980
8	250 - 300	3.2	0.04	100 - 70	35,000					

### 106M

- Standard Tip
- Heavy Preheat Oxygen Tip

**LPG**

S/N: DB11487B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.8	0.3	0.02	700 - 660	690	1,710	450		
0	5 - 10	1.0			660 - 550	1,200				
1	10 - 15	1.2	0.35	0.025	550 - 490	2,100	2,470	650		
2	15 - 30	1.4			490 - 400	3,400				
3	30 - 40	1.6			400 - 350	4,300				
4	40 - 50	1.9			350 - 320	6,500				
5	50 - 100	2.3	0.45	0.03	320 - 200	11,000	2,890	760		
6	100 - 150	2.7			200 - 150	15,000			3,570	940
7	150 - 250	3.0			150 - 80	22,000			3,990	1,050
8	250 - 300	3.4	0.03	80 - 45	28,000					

### 106M5

- Divergent High Speed Tip
- Heavy Preheat Oxygen Tip

**LPG**

S/N: DB11595B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG		
00	3 - 5	0.6	0.5	0.02	- 700	850	1,180	310		
0	5 - 10	0.8			700 - 625	1,600				
1	10 - 15	1.0	0.025	0.03	625 - 550	2,400	1,370	360		
2	15 - 30	1.2			550 - 475	3,600				
3	30 - 40	1.4			475 - 425	4,800				
4	40 - 50	1.6			425 - 350	5,600				
5	50 - 100	1.9	0.04	0.03	350 - 250	8,800	2,890	760		
6	100 - 150	2.3			250 - 175	13,500			3,570	940
7	150 - 250	3.0			175 - 90	24,000			3,990	1,050
8	250 - 300	3.4	0.03	90 - 60	31,000					

## Cutting Tip

### 106M7

- Divergent High Speed Tip
- Heavy Preheat Oxygen Tip

**LPG**

S/N: DB11489B-L



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG	
00	3 - 5	0.4	0.7	0.02	- 750	750	1,710	450	
0	5 - 10	0.6			750 - 680	1,100			
1	10 - 15	0.9			680 - 600	2,500			
2	15 - 30	1.1			600 - 500	3,800			
3	30 - 40	1.3			500 - 450	5,400	2,470	650	
4	40 - 50	1.5			450 - 400	7,300			
5	50 - 100	1.8			0.025	400 - 260	10,000	2,890	760
6	100 - 150	2.1				260 - 180	14,000	3,570	940
7	150 - 250	2.6	0.03	180 - 100	22,000	3,990	1,050		
8	250 - 300	3.2		100 - 70	35,000				

### EPOCH

- For Thick Plate Cutting
- Post-mixing type tip (EPOCH torch only)

**LPG**

S/N:

EPOCH300: DB19481A  
EPOCH600: DB19481B



Tip No.	Plate Thickness (mm)	Kerf Width. (mm)	Gas pressure (MPa)			Cutting Speed (mm/min)	Gas flow amount (Nm <sup>3</sup> / h)		
			Jet Oxygen	Preheat Oxygen	LPG		Jet Oxygen	Preheat Oxygen	LPG
300	100	5.5 - 7.0	0.4	0.05 - 0.06	0.03 - 0.04	250 - 290	27	3.3 - 4.0	2.3 - 2.7
	200	6.0 - 8.0	0.45			170 - 190	30		
	300	7.0 - 9.0	0.5	0.06 - 0.07	0.04 - 0.05	130 - 150	32	4.0 - 4.8	2.7 - 3.1
600	300	8.0 - 12	0.6	0.07 - 0.1	0.05 - 0.06	80 - 90	70	4.8 - 7.0	3.1 - 3.4
	400	10 - 13				60 - 70	80		
	500	11 - 14	1.0	0.05 - 0.06	0.05 - 0.06	60 - 70	80	4.8 - 7.0	3.1 - 3.4
	600	12 - 15				50 - 60	110		

### 103

- Standard Tip

**Ethylene**

S/N: DB11781C-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Ethylene		Jet Oxygen	Preheat Oxygen	Ethylene	
0	5 - 10	1.0	0.3	0.02	660 - 550	1,200	800	460	
1	10 - 15	1.2			550 - 490	2,100			
2	15 - 30	1.4			0.025	490 - 400	3,400	900	500
3	30 - 40	1.6				400 - 350	4,300		
4	40 - 50	1.9			0.035	350 - 320	6,500	1,200	660
5	50 - 100	2.3				320 - 200	11,000		
6	100 - 150	2.7	0.4	200 - 150	15,000	2,200	1,280		

### 103D5

- Divergent High Speed Tip

**Ethylene**

S/N: DB11782C-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Ethylene		Jet Oxygen	Preheat Oxygen	Ethylene	
0	5 - 10	0.8	0.5	0.02	700 - 625	1,600	800	460	
1	10 - 15	1.0			625 - 550	2,400			
2	15 - 30	1.2			0.025	550 - 475	3,600	900	500
3	30 - 40	1.4				475 - 425	4,800		
4	40 - 50	1.6			0.035	425 - 350	5,600	1,200	660
5	50 - 100	1.9				350 - 250	8,800		
6	100 - 150	2.3	250 - 175	13,500	2,200	1,280			

### 103D7

- Divergent High Speed Tip

**Ethylene**

S/N: DB11783C-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Ethylene		Jet Oxygen	Preheat Oxygen	Ethylene	
0	5 - 10	0.6	0.7	0.02	750 - 680	1,100	800	460	
1	10 - 15	0.9			680 - 600	2,500			
2	15 - 30	1.1			0.025	600 - 500	3,800	900	500
3	30 - 40	1.3				500 - 450	5,400		
4	40 - 50	1.5			0.035	450 - 400	7,300	1,200	660
5	50 - 100	1.8				400 - 260	10,000		
6	100 - 150	2.1	260 - 180	14,000	2,200	1,280			

## Cutting Tip

### 105A

• Standard Tip

Hydrogen

S/N: Ask KOIKE



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Hydrogen		Jet Oxygen	Preheat Oxygen	Hydrogen
00	3 - 5	0.8	0.15	0.02	700 - 660	690	260	850
0	5 - 10	1.0	0.2		660 - 550	1,200		
1	10 - 15	1.2	0.25		550 - 490	2,100		
2	15 - 30	1.4	0.3		490 - 400	3,400	300	1,000
3	30 - 40	1.6			400 - 350	4,300		
4	40 - 50	1.9	0.35		350 - 320	6,500	400	1,350
5	50 - 100	2.3	0.4	320 - 200	11,000			

### 105A5

• Divergent High Speed Tip

Hydrogen

S/N: Ask KOIKE



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Hydrogen		Jet Oxygen	Preheat Oxygen	Hydrogen	
00	3 - 5	0.6	0.02	0.025	- 700	850	260	850	
0	5 - 10	0.8			700 - 625	1,600			
1	10 - 15	1.0			625 - 550	2,400			
2	15 - 30	1.2			0.025	550 - 475	3,600	300	1,000
3	30 - 40	1.4				475 - 425	4,800		
4	40 - 50	1.6			0.03	425 - 350	5,600	400	1,350
5	50 - 100	1.9	350 - 250	8,800					

### 105A7

• Divergent High Speed Tip

Hydrogen

S/N: Ask KOIKE



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Hydrogen		Jet Oxygen	Preheat Oxygen	Hydrogen	
00	3 - 5	0.4	0.7	0.025	- 750	750	260	850	
0	5 - 10	0.6			750 - 680	1,100			
1	10 - 15	0.9			680 - 600	2,500			
2	15 - 30	1.1			0.025	600 - 500	3,800	300	1,000
3	30 - 40	1.3				500 - 450	5,400		
4	40 - 50	1.5			0.03	450 - 400	7,300	400	1,350
5	50 - 100	1.8	400 - 360	10,000					

### 107

• Standard Tip

Natural Gas

S/N: DB11881B-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)				
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas		
00	3 - 5	0.8	0.3	0.015	700 - 660	690	1,000	600		
0	5 - 10	1.0			660 - 550	1,200				
1	10 - 15	1.2			550 - 490	2,100				
2	15 - 30	1.4			0.35	0.015	490 - 400	3,400	1,200	700
3	30 - 40	1.6					400 - 350	4,300		
4	40 - 50	1.9			0.4	0.015	350 - 320	6,500	1,350	800
5	50 - 100	2.3	320 - 200	11,000						
6	100 - 150	2.7	200 - 150	15,000	1,700	1,000				

### 107D5

• Divergent High Speed Tip

Natural Gas

S/N: Ask KOIKE



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas	
0	5 - 10	0.8	0.5	0.015	750 - 625	1,600	1,220	740	
1	10 - 15	1.0			625 - 550	2,400			
2	15 - 30	1.2			550 - 475	3,600			
3	30 - 40	1.4			0.015	475 - 425	4,800	1,390	840
4	40 - 50	1.6				425 - 350	5,600		
5	50 - 100	1.9			0.02	350 - 250	8,800	1,900	1,150
6	100 - 150	2.3	250 - 175	13,500		2,310	1,400		

### 107D7

• Divergent High Speed Tip

Natural Gas

S/N: DB11882C-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)			
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas	
0	5 - 10	0.6	0.7	0.015	750 - 680	1,100	1,350	800	
1	10 - 15	0.9			680 - 600	2,500	1,500	900	
2	15 - 30	1.1			600 - 500	3,800			
3	30 - 40	1.3			0.015	500 - 450	5,400	1,700	1,000
4	40 - 50	1.5				450 - 400	7,300		
5	50 - 100	1.8			0.02	400 - 260	10,000	1,850	1,100
6	100 - 150	2.1	260 - 180	14,000		2,200	1,300		

## Cutting Tip

### 107M

- Standard Tip
- Heavy Preheat Oxygen Tip

**Natural Gas** S/N: Ask KOIKE



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas
0	5 - 10	1.0	0.3		660 - 550	1,200	1,500	900
1	10 - 15	1.2		0.015	550 - 490	2,100		
2	15 - 30	1.4			490 - 400	3,400		
3	30 - 40	1.6		0.02	400 - 350	4,300	2,000	1,150
4	40 - 50	1.9			350 - 320	6,500	2,400	1,400
5	50 - 100	2.3		0.4	320 - 200	11,000		
6	100 - 150	2.7			200 - 150	15,000	3,200	1,900

### 107M5

- Divergent High Speed Tip
- Heavy Preheat Oxygen Tip

**Natural Gas** S/N: DB11883C-J



Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas
0	5 - 10	0.8			700 - 625	1,600	1,500	900
1	10 - 15	1.0		0.015	625 - 550	2,400		
2	15 - 30	1.2			550 - 475	3,600		
3	30 - 40	1.4		0.02	475 - 425	4,800	2,000	1,150
4	40 - 50	1.6			425 - 350	5,600	2,400	1,400
5	50 - 100	1.9		0.025	350 - 250	8,800		
6	100 - 150	2.3			250 - 175	13,500	3,200	1,900

### 107M7

- Divergent High Speed Tip
- Heavy Preheat Oxygen Tip

**Natural Gas** S/N: DB11885C-J













Tip No.	Plate Thickness (mm)	Oxy hole dia. (mm)	Gas pressure (MPa)		Cutting Speed (mm/min)	Gas flow amount (L / h)		
			Oxygen	Natural Gas		Jet Oxygen	Preheat Oxygen	Natural Gas
0	5 - 10	0.6			750 - 680	1,100	1,500	900
1	10 - 15	0.9		0.015	680 - 600	2,500		
2	15 - 30	1.1			600 - 500	3,800	2,000	1,150
3	30 - 40	1.3		0.02	500 - 450	5,400		
4	40 - 50	1.5			450 - 400	7,300	2,400	1,400
5	50 - 100	1.8		0.025	400 - 260	10,000		
6	100 - 150	2.1			260 - 180	14,000	3,200	1,900

## Gouging Tip

Tip model	Tip #	Stock No.	Photos	Used Gas	Torch	Tip shape
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### 100 type gouging tip



**Gouging width: 7 - 17.5mm    Gouging depth: 2 - 8.5mm**

111	6 - 14	DB81181J - N, P - S			Acetylene	Skill Cut-250	Straight
113		DB81183J - N, P - S					Bent
161	6 - 12	DB81481J - N, P, Q			LPG	Skill Cut-250	Straight
181		Ask KOIKE			Ethylene		Straight
163		DB81482J - N, P, Q			LPG		Bent
183		DB81782J - N, P, Q			Ethylene		Bent

### 400 type gouging tip





**Gouging width: 7 - 12.5mm    Gouging depth: 2 - 7mm**

\*205 type adapter is required to use with No. 2 torch.  
S/N: DA152819

411	1 - 3	Ask KOIKE			Acetylene	Gold light-II No. 2, Safety light No. 2 (A-cut)	Straight	
413		DB84183D - F					Bent	
461		Ask KOIKE					LPG	Straight
481		Ask KOIKE					Ethylene	Straight
463		DB84482D - F					LPG	Bent
483		Ask KOIKE					Ethylene	Bent

### 500 type gouging tip

**Gouging width: 7 - 12.5mm    Gouging depth: 2 - 7mm**

513	1 - 3	Ask KOIKE			Acetylene	Skill Cut-100, GOLD-MM	Bent
563		Ask KOIKE			LPG		

Heavy Duty Gas Cutting Nozzle

# 106PS Series

The **106PS** gas cutting tip allows you performing stable piercing for thick material even more than 100mm. And preheat time can be sufficiently reduced combined with machine and system.



## Feature

- Significant reduction of preheat time (Combined with our machine and system)
- Improved Piercing Capacity and Stability (Combined with our machine and system)
- Improvement of productivity by reducing preheat time
- Expanded outer cap lifetime
- Improved sputter slag separation
- Sharp, high quality cuts
- Limited upper edge melt
- Limited upper edge slag
- Keep Steady and Safe cutting operation
- Keep Cutting with small gas consumption

## Main Specification

Model Name	106PS
Piercing Thickness (mm)	MAX. 150
Piercing Limit by Machine Torch (mm)	FP-A: Up to 100 FP-C: Up to 150
Seat (Fitting) angle	KOIKE standard (30°)
Fuel Gas	Propane

## Preheat Time Comparison

Thickness	Pre-heating Time (sec.)	
	Conventional	106PS
50mm	80	25
75mm	120	25
100mm	160	30
150mm	160	30

Note: Compared to KOIKE previous models in process and nozzle.



## Outer Cap (PS Tip Cover)

DB11607A	#0 - #3
DB11607B	#4 - #6

## 106PS Series & Stock Number

106PS (3.5Mpa) Standard Nozzle			106PS-D5 (5 Mpa) High Speed Nozzle			106PS-D7 (7 Mpa) High Speed Nozzle		
Stock #	Thickness (mm)	Tip #	Stock #	Thickness (mm)	Tip #	Stock #	Thickness (mm)	Tip #
DB11608C	5-10	0	DB11610C	5-10	0	DB11612C	5-10	0
DB11608D	10-15	1	DB11610D	10-15	1	DB11612D	10-15	1
DB11608E	15-30	2	DB11610E	15-30	2	DB11612E	15-30	2
DB11608F	30-40	3	DB11610F	30-40	3	DB11612F	30-40	3
DB11608G	40-50	4	DB11610G	40-50	4	DB11612G	40-50	4
DB11608H	50-100	5	DB11610H	50-100	5	DB11612H	50-100	5
DB11608J	100-150	6	DB11610J	100-150	6	DB11612J	100-150	6



Gas cylinder Pressure Regulator

# ***Safety Gold-V (Deluxe type)***

Best selling regulator for gas cylinder in Japan.



Safety Gold-V (Oxygen)



Safety Gold-V (Acetylene)

Model	Gas	Pressure gauge (MPa)			Flow capacity (Nm <sup>3</sup> /h) [Pressure] (MPa)	Body weight (kg)
		Inlet	Outlet	Max. Delivery pressure		
Safety gold-V (Oxygen)	Oxygen	25	2.5	0.99	35 [0.8]	1.4
Safety gold-V (Acetylene)	Acetylene	2.5	0.2	0.098	7 [0.05]	1.8

Gas cylinder Pressure Regulator

# ***Safety Custom-II***

Best selling regulator for gas cylinder in Asian market.



Safety Custom-II (Oxygen)



Safety Custom-II (Acetylene)



Safety Custom (Argon)

Model	Gas	Pressure gauge (Mpa)			Flow capacity (Nm <sup>3</sup> /h) [Pressure] (MPa)	Body weight (kg)
		Inlet	Outlet	Max. Delivery pressure		
Safety custom-II (Oxygen)	Oxygen	25	2.5	0.99	35 [0.8]	1.3
Safety custom-II (Acetylene)	Acetylene	2.5	0.2	0.098	7 [0.05]	1.8
Safety custom (Others)	Argon, Nitrogen and Others	35	2.5	0.99	35 [0.8]	1.3

Gas cylinder Pressure Regulator

# ***CUSTOM-K***

Standard regulator with reasonable price.



CUSTOM-K101 (Oxygen)



CUSTOM-K202 (Acetylene)



CUSTOM-K206 (Propane)

Model	Gas	Pressure gauge (Mpa)			Flow capacity (Nm <sup>3</sup> /h) [Pressure] (MPa)	Body weight (kg)
		Inlet	Outlet	Max. Delivery pressure		
Custom-K101	Oxygen	25	2.5	0.99	25 [0.8]	1 - 1.5
Custom-K202	Acetylene	2.5	0.3	0.13	5	1 - 1.5
Custom-K206	Propane				[0.05]	

Note: The maximum cylinder pressure for the Oxygen is 15Mpa

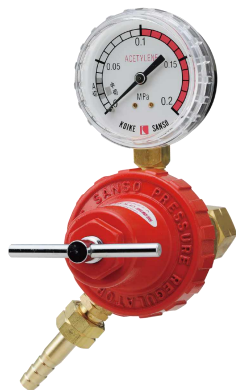
Pipe line Gas Pressure Regulator

# Safety Gold-Line

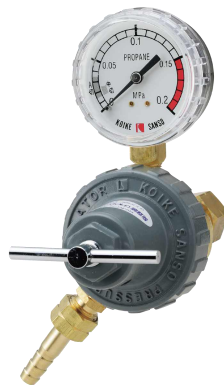
Best selling gas regulator for factory pipe.



SG-L1 (Oxygen)



SG-L2 (Acetylene)



SG-L3 (Propane)

JWA certification number:

- 8605-S30 for SG-L1
- 8605-AC3 for SG-L2
- 8605-LP3 for SG-L3

Model	Gas	Gas pressure (MPa)			Standard flow amount (Nm <sup>3</sup> / h)	Body weight (kg)
		Inlet gauge	Outlet gauge	Max. Delivery pressure		
SG-L1	Oxygen	-	1.5	0.7	26 (for 0.4MPa)	1
SG-L2	Acetylene		0.2	0.07	6.6 (for 0.05MPa)	
SG-L3	Propane		4.8 (for 0.05MPa)			

Dial type Gas Flow Regulator

# AccuFlow

High precision and maintenance free. Flow rate can be set just by adjusting the dial.



AR-16 / 30  
for cylinder



AR-16 / 30  
for gas piping



AccuFlow  
for balloon



CWH-25D  
with heater for cylinder

Model	Gas	Pressure gauge (Inlet) (MPa)	Delivery Pressure (Outlet) (MPa)	Range of flow rate reg. (NL/min)		Body weight (kg)
AR-16 for cylinder	Argon	25	0.2 Preset	4 - 16	10 step setting	0.6
AR-30 for cylinder				9 - 30		
AR-16 for gas piping		1.5		4 - 16		
AR-30 for gas piping				9 - 30		
CO <sub>2</sub> -25		7 - 25				
AccuFlow for balloon	Helium	25	0.35 Preset	120 - 260	2 step setting	0.7
CWH-25D	CO <sub>2</sub>		0.2 Preset	7 - 25	10 step setting	2

Safety coupling device

# Apollo Safety Products

One-touch coupling with built-in micro backflow/backfire prevention mechanism! It obstructs backflow/ backfire generated in oxy-fuel cutting.



## Overview

KOIKE has always been developing its gas welding/cutting equipment for higher safety and easier handling. Apollo Coupling is one of the outstanding result of KOIKE's effort.

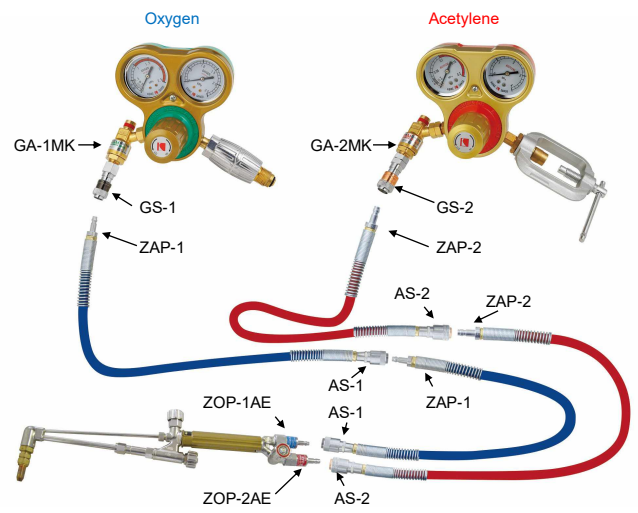
The Apollo Coupling is fitted to the outlet pipe, connecting hose, and the welding/cutting machine and outfit, removing possible risks accompanying the gas welding/cutting operation and making preparation and maintenance of the welding/cutting machines easy.

Further, each type is specially designed for oxygen or fuel gas in order to prevent mistakes.

Hoses, safety device for piping lines and other safety products are also available with Koike's high standard safety.



Apollo Global coupling series



Coupling connection diagram



Apollo Universal Hose

Available to use with various fuel gas such as Hydrogen, Acetylene, Propane, MPS, Natural gas and etc.



BIG TACKLE for pipe line



GAS-HAI

Dry type flashback arrestor for hose & torch / portable machine

# Apollo Mini-Tackle

Reverse flow / Flashback prevention mechanism built-in. Cut off any possibility of flashback accident.

## Feature

- Reverse flow prevention
- Check valve
- Fire extinguisher



ZOP-1AE

ZOP-2AE

Model	Gas	Operation Pres. range (MPa)	Max. Flow rate (NI/h)	Length (mm)	Weight (g)
ZOP-1AE	Oxygen	0.2 - 0.9	10.000	54	48
ZOP-1AEL			20.000	62	71
ZOP-2AE	Acetylene, Propane	0.02 - 0.08	1.500	55	49
ZOP-2AEL			2.500	68	72

Dry type flashback arrestor for gas cylinder regulator

# Gold Arrestor-MK

Most safe flashback arrestor with temperature activated cut-off valve for gas cylinder regulator.

## Feature

- Reverse flow prevention
- Check valve
- Fire extinguisher
- Gas flow cut-off valve
- Temperature activated cut-off valve



GA-1MK



GA-2MK



Model	Gas	Operation MAX. pressure (Mpa)	Max. Flow rate (Nm3/h)	Length (mm)	Weight (g)	Reset function	Cut-off temperature
GA-1MK	Oxygen	0.1 - 0.9	25	72	210	Red signal, pin-lock type	95° C
GA-2MK	Fuel gas	0.01 - 0.13	3				

Dry type flashback arrestor for large flow volume of gas manifold and factory piping

# BIG TACKLE

## Feature

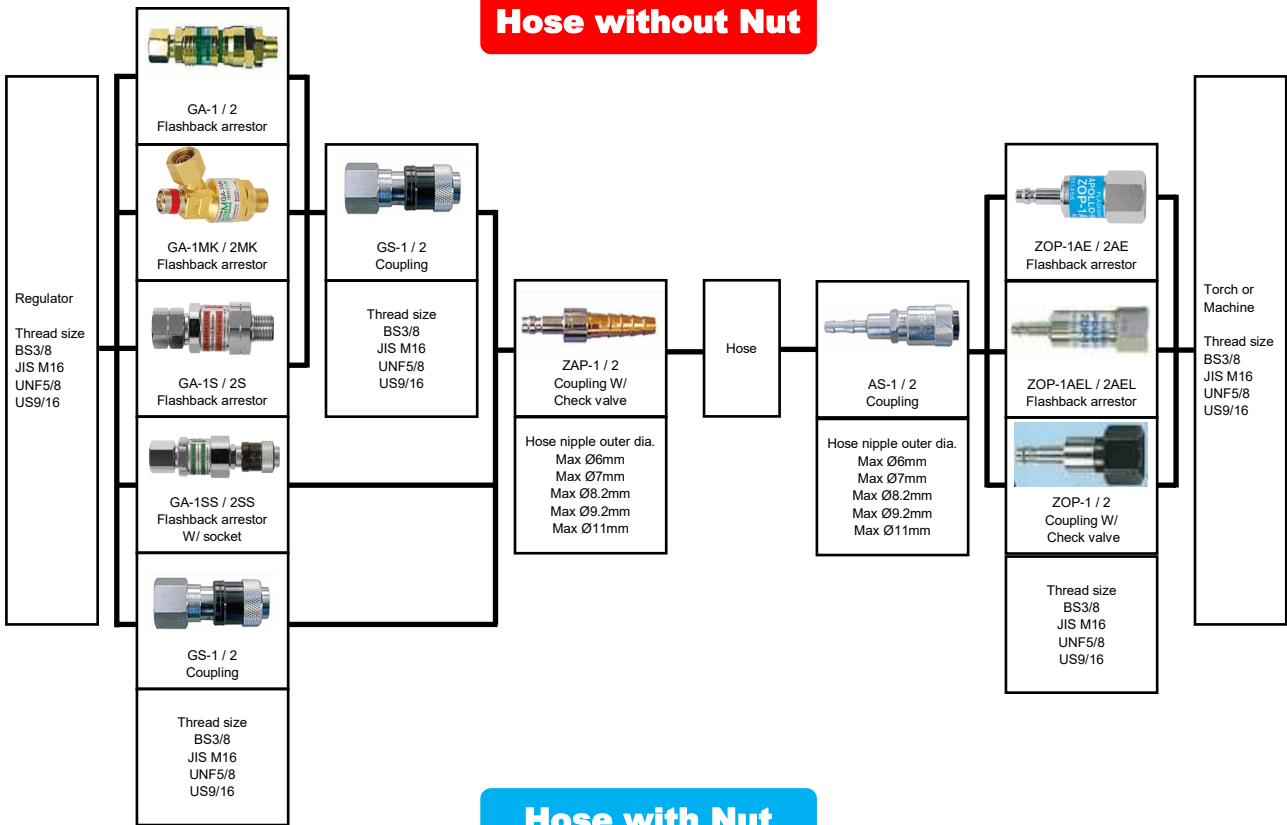
- Flashback / reverse flow prevention with cut-off valve
- One-touch reset type
- For manifold and factory piping
- Parallel use is available for large flow volume



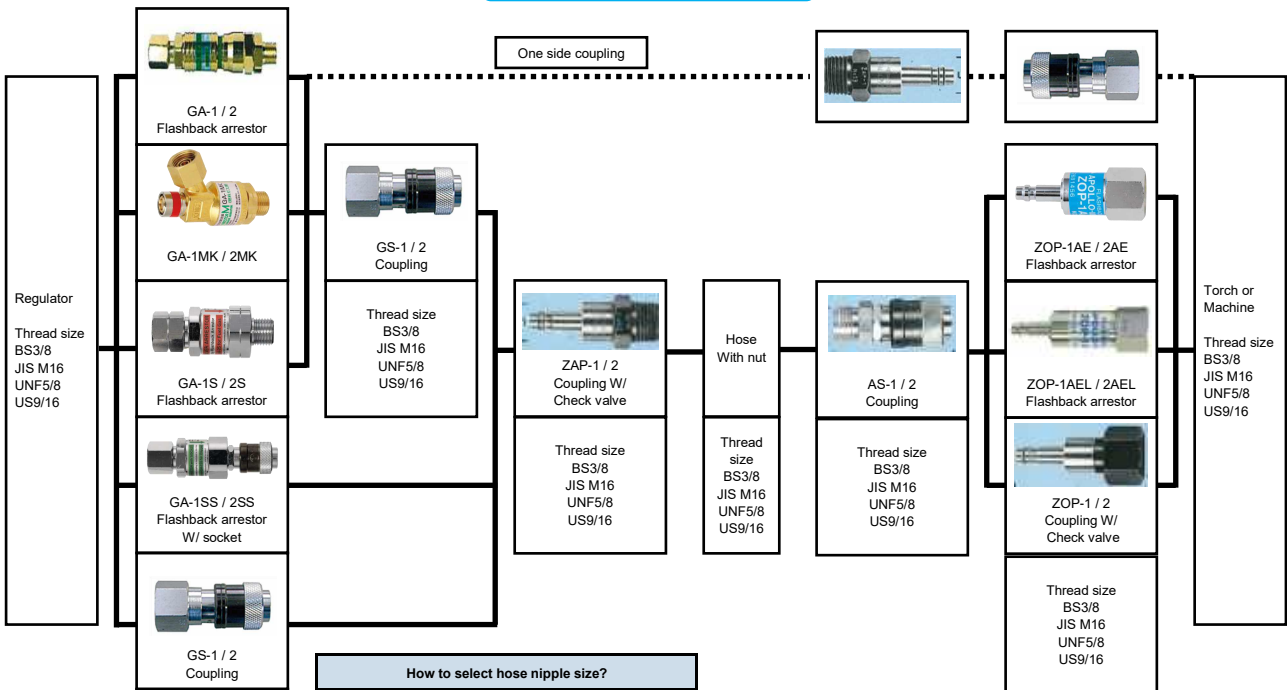
Model	Gas	Operation MAX. pressure (Mpa)	Max. Flow rate (Nm3/h)	Inlet & Outlet size	Length (mm)	Weight (kg)
BIG TACKLE-5	Acetylene	0.13	5	JIS10k x 20A	262	4.5
	Propane	0.15				
	LNG	0.3				
BIG TACKLE-10	Acetylene	0.13	10	JIS10k x 25A	335	6.4
	Propane	0.15				
	LNG	0.3				
BIG TACKLE-30	Acetylene	0.13	30	JIS10k x 50A	448	16.6
	Propane	0.15				
	LNG	0.3				
BIG TACKLE-60	Propane	0.15	60	JIS10k x 50A	582	38
	LNG	0.3				
BIG TACKLE-100	LNG	0.3	100	JIS10k x 50A	726	43
BIG TACKLE-100L	Propane	0.15			806	48

# Flashback Arrestor / Coupling selection

## Hose without Nut



## Hose with Nut



### How to select hose nipple size?

Hose nipple outer dia.	Hose inner dia.
Max Ø6mm	4mm
Max Ø7mm	6mm
Max Ø8.2mm	8mm
Max Ø9.2mm	9mm
Max Ø11mm	10mm

### Following combinations are available

Coupling		Flashback Arrestor	
Model Name	Contents	Model Name	Contents
ZGSP-1 / 2	GS-1 / 2 + ZAP-1 / 2	ZOSP- 1AE / 2 AE	AS-1 / 2 + ZOP-1AE / 2AE
ZASP-1 / 2	AS-1 / 2 + ZAP-1 / 2	ZOSP- 1AEL / 2 AEL	AS-1 / 2 + ZOP-1AEL / 2AEL
ZOSP-1 / 2	AS-1 / 2 + ZOP-1 / 2	WZO-AE	ZOSP-1AE + ZOSP-2AE
WZG	ZGSP-1 + ZGSP-2	WZO-AEL	ZOSP-1AEL + ZOSP-2AEL
WZA	ZASP-1 + ZASP-2		
WZO	ZOSP-1 + ZOSP-2		

For other combination, please ask KOIKE.

## **Flashback Arrestor / Coupling Safety Basic**

Safety elements for device		
1	SMF	Sintering metal filter stops the flame.
2	PCV	Pressure controlled valve to cut off gas supply at the event of flashback.
3	RSTV	Re-settable function of pressure controlled valve.
4	IDCTN	The indication of cutting off gas supply by pressure controlled valve.
5	CHKV	Check valve stops the reverse gas flow.
6	TCFV	Prevent burnbacks by the thermal cut-off valve.
7	QKCL	Quick – action coupling.

Name	Code	1	2	3	4	5	6	7
		SMF	PCV	RSTV	IDCTN	CHKV	TCFV	QKCL
Sentinel Plus	GA-1	○	○	○	○	○	—	—
UL No.: MH 16462	GA-2	○	○	○	○	○	—	—
Gold Arrestor-MK	GA-1MK	○	○	○	○	○	○	—
	GA-2MK	○	○	○	○	○	○	—
Silver Arrestor	GA-1S	○	—	—	—	○	○	—
	GA-2S	○	—	—	—	○	○	—
Silver Arrestor with Socket	GA-1SS	○	—	—	—	○	○	○
	GA-2SS	○	—	—	—	○	○	○

Apollo Coupling	ZAP-1	—	—	—	—	○	—	○
	ZAP-2	—	—	—	—	○	—	○

Mini-Tackle	ZOP-1	—	—	—	—	○	—	○
	ZOP-2	—	—	—	—	○	—	○
Super Sentinel UL No.: MH 16462	ZOP-1A	○	—	—	—	○	—	○
	ZOP-2A	○	—	—	—	○	—	○
Mini-Tackle E-Type	ZOP-1AE	○	—	—	—	○	—	○
	ZOP-2AE	○	—	—	—	○	—	○
Mini-Tackle L-Type	ZOP-1AEL	○	—	—	—	○	—	○
	ZOP-2AEL	○	—	—	—	○	—	○

Sentinel Plus for Machine Torch	GAM-1L	○	○	○	○	○	—	—
	GAM-1	○	○	○	○	○	—	—
	GAM-2L	○	○	○	○	○	—	—

BIG Tackle—5	○	○	○	○	○	○	—	—
BIG Tackle—10	○	○	○	○	○	○	—	—
BIG Tackle—30	○	○	○	○	○	○	—	—
BIG Tackle—60	○	○	○	○	○	○	—	—
BIG Tackle—100	○	○	○	○	○	○	—	—

# **Cutting Series**

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The ShopPro offers fabricators unprecedented value for small shops

# ShopPro

Offering fabricators unprecedented value for small shops.



## Overview

KOIKE ARONSON **ShopPro** and **ShopPro XHD** are the company's newest value priced, made in America high performance cutting system, offering fabricators premium features in a package compact enough to fit in small shops.

Ruggedly built, the **ShopPro** and **ShopPro XHD** has the same reliability and accuracy found with all Koike Aronson cutting systems.

**ShopPro** and **ShopPro XHD** were developed with the help of feedback of fabricators and metal workers, who demanded a robust machine set at a reasonable price.

The fabricated steel gantry design allows for wider cutting widths with shorter cutting lengths, and plates can be easily loaded directly from the front of the table by hand or by forklift.

## Feature

- All-in-One type of CNC Plasma cutting machine
- Low-cost investment for high productivity
- Gantry bridge with dual-side rack and pinion drive
- Simple Operation by touch panel PC
- Easy control software of integrated CAD, CAM and Auto-Programming
- Best match to Hypertherm Powermax series air plasma system (up to 125amp for **ShopPro**)
- Best match to Hypertherm MaxPro200 air plasma system (up to 200amp for **ShopPro XHD**)
- Easy machine installation at customer site

## Main Specification

Model Name	ShopPro 4x4	ShopPro 4x8	ShopPro 5x10	ShopPro XHD 5x10
Effective Cutting Area ( W x L ) ( mm )	1,200 x 1,200	2,400 x 1,200	3,000 x 1,500	3,000 x 1,500
Machine Size w/o CNC ( W x L ) ( mm )	2,000 x 1,800	3,200 x 1,800	3,800 x 2,100	4,000 x 2,100
Machine Weight ( kg )	600	1,000	1,600	2,000
Rack & Pinion Drive System	954 oz-in NEMA-34 Stepper Motors			550 oz-in NEMA-34 Servo Motors
Gear Reduction	3 pcs of Precision Helical 15:1 gearboxes			
Rapid Traverse Speed ( mm/min )	25,400			
CNC Controller	FlashCut CNC 21" Touch screen Panel PC			



CNC Oxy-Fuel Gas & Plasma Cutting Machine at Economical Price

# MAXIGRAPH-S



## Main Specification

Model Name	MAXIGRAPH-S
Rail Span (mm)	3,000 / 3,500 / 4,000
Max. Rail Length (Rail Unit: 3m) (mm)	15,000
Torch Carriage Connecting Method	Steel Belt
Machine Structure	Gantry Bridge / Dual Drive (Rack and Pinion)
Effective Cutting Width (mm)	Rail Span -900 (without Belt-type Ducting)
Effective Cutting Length (mm)	Rail Length -1,750
Rail Weight (Type)	22kg/m
Max. Rapid Drive Speed (mm/min)	12,000
Input Power Supply	For Machine: 1-Phase, AC200/220V±10%, 50/60Hz For Air Plasma : depends on selected model
CNC	D430
Max. Number of Torches	4 Torches (3 Torches when equipped with Plasma torch)
Available Plasma System	Air Plasma

## Feature

- Simple CNC on a Rigid Gantry Structure
- High Precision Dual Side Rack & Pinion Drive
- Max. Rail Span : 4,000mm
- Max. 4 sets of Oxy-fuel Gas Cutting Torches
- Air Plasma Cutting System Available



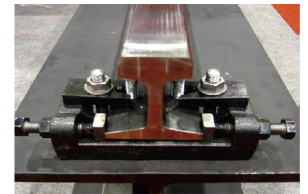
Bevel Cutting Attachment



Double Square Column



Steel Belt



22 kg/m Rail

CNC Oxy-Fuel Gas & Plasma Cutting Machine at Economical Price

# FLEXIGRAPH-Smart



## Main Specification

Model Name	FLEXIGRAPH-Smart
Rail Span (mm)	3,500 / 4,000
Max. Rail Length (Rail Unit: 5 m) (mm)	15,000
Torch Carriage Connecting Method	Steel Bar
Machine Structure	Gantry Bridge / Dual Drive (Rack and Pinion)
Effective Cutting Width (mm)	Rail Span -1,000 (without Belt-type Ducting)
Effective Cutting Length (mm)	Rail Length -1,800
Rail Weight (Type)	T-type (@5m unit)
Max. Rapid Drive Speed (mm/min)	10,000
Input Power Supply	For Machine: 1-phase, 220V, 50/60Hz For Plasma : depends on selected model
CNC	D430
Max. Number of Torches	2 Torches (1 Torches when equipped with Plasma)
Available Plasma System	Air Plasma

## Feature

- Simple CNC on Simple Gantry Structure
- High Precision Dual Side Rack & Pinion Drive
- Max. Rail Span: 4,000mm
- Max. 2 sets of Oxy-fuel Gas Cutting Torches.
- Air Plasma Cutting System Available (Max. 1 Plasma + 1 Gas Torch)
- T-type Longitudinal Rail



Twin Torch Attachment



Compact Trapezoid Frame



Steel Bar



T-type Rail

All round cutting machine from thin plate to thick plate

# MAXIGRAPH

CNC machine that provides high versatility in cutting from thin plate to thick plate, with reasonable investment. Specialized machine for Oxy-Fuel or Plasma cutting or Combined machine are available.



## Overview

Multiples Oxy-Fuel Gas Cutting Torches, as well as Oxygen Plasma System **SUPER-400PROII**, the highest class plasma power source in the industry, available, which allows even cutting of thick plates, while being a simple machine structure.

**XPR-300** system is also available, and when it is your choice, the high level of cutting quality can be implemented in both Mild Steel and Stainless Steel cutting.

Taking advantage of its light footwork this versatile cutting machine can cut with high precision.

## Feature

- CNC control and two wheels drive can be adopted, while keeping a low price
- Maximum number of Oxy-Fuel cutting torches: up to 6
- Maximum rail span: up to 6,000mm
- Torch mounting method without overhang (steel belt)
- 38kg/m high rigidity rail can also be applied
- Easy CNC operation

## Main Specification

	MAXIGRAPH-DE	MAXIGRAPH-DX
Model Name	MAXIGRAPH-DE	MAXIGRAPH-DX
CNC	D600pro	FS-0i
Max. Rapid Speed (mm/min)	12,000	15,000
Available Plasma System	Air Plasma	SUPER400ProII / SUPER300ProII α / XPR-300
Machine Structure	Gantry Bridge / Double Side Drive	
Drive System	Rack and Pinion	
Rail Span (mm)	3,500 - 6,000 (Increments of 500)	
Total Rail Length (Max. 30m) (mm)	KSK 4800×N, KET 3000×N	
Effective Cutting Width (mm)	Rail Span - 900	
Effective Cutting Length (mm)	Rail Length - 1750	
Rail Weight	KSK : 37kg/m, KET : 22kg/m or 37kg/m	
Input Power Supply	For Machine 3-Phase, 200/220V±10%, 50/60Hz For Plasma System 3-Phase, 380V±10%, 50Hz	
Torch carriage connecting method	Steel Belt	
Max. Num. Oxy-Fuel Gas cutting Torches	6 Torches (5 torches when equipped with Plasma)	
Cut. Thickness (Oxy-Fuel) (mm)	6 - 100 / up to 50 (Simultaneous 4 Torches)	

[Note]  
KSK: KOIKE SANJO KOGYO CO., LTD. (in Japan)  
KET: KOIKE ENGINEERING TANGSHAN CO., LTD. (in China)

KOIKE Standard Highest Performance Achieved on all different businesses.

# VERSAGRAPH

Widely used as specialized machine for Oxy-Fuel or Plasma Cutting, as well as with a combination of both systems. The most versatile cutting machine, covering main demanded applications from the current market.



VERSAGRAPH-5500ZX Plasma Cutting 3D-Link, with customized green color.

## Overview

High speed and high precision cutting is implemented by the combination of high rigid gantry and large output servo motor.

Oxy-Fuel Gas cutting of plate thickness up to 100mm, and Plasma cutting up to 40mm, achieved as standard, with other possibilities as per customer requirements.

A great range of options available, such as the 3D-Link (Plasma Bevel Device), Inkjet Printing/Marking, Drill Unit, among others, which covers the most demanding requirements of customers businesses.

**VERSAGRAPH** utilizes the latest technologies to provide the best accuracy, versatility, reliability and durability.

## Feature

- All-purpose Oxy-Fuel and/or Plasma Cutting Machine that can be even improved by adding the several options available, as Bevel Cutting 3D-Link System, Drill Unit, Printing Device, etc...
- Easy to operate machine, with operation step and carriage operation panel as standard
- Plasma underwater system cutting available as option

## Main Specification

Model Name	VERSAGRAPH	
Machine Structure	Gantry Bridge / Double Side Drive	
Drive System	Rack and Pinion	
Rail Span	3,500 to 6,500mm (Increment of 500mm)	
Total Rail Length (mm)	4,800×N	
Effective Cutting Width (mm)	Rail Span -900	
Effective Cutting Length (mm)	Rail Length -2,500	
Rail Weight (Type)	37kg/m	
Max. Cutting Speed (mm/min)	10,000	
Max. Marking Speed (mm/min)	24,000	
Max. Rapid Speed (mm/min)	Longitudinal	24,000
	Transverse	34,000
Torch Up/Down Speed (mm/min)	20,000	
Input Power Supply	For Machine & Plasma, 3-phase 200/220V 50/60Hz	
CNC	FANUC FS-30i for 3D-Link (Bevel Spec.)	
	FANUC Series 0i	
Torch Carriage Connecting Method	Steel Belt / Square Steel Bar	
Max. Number of Oxy-Fuel Gas Cutting Torch	Steel Belt : 8	
	Square Bar : 20	
Cut. Thickness (Oxy-Fuel) (mm)	6 - 100	
	Up to 50 (Simultaneous 8 Torches)	
Available Plasma System	SUPER-400Pro II / SUPER300ProII α / XPR-300 / HiFocus Series	

## CNC Oxy-Fuel Gas Cutting Machine

# NANOGRAPH

Cutting Machine exclusively for Oxy-Fuel Gas cutting, in which the cutting is performed by NC program instead of optical tracer.



### Overview

The **NANOGRAPH** was developed as an improved alternative to the conventional optical tracer cutting machines, its gantry structure provides a higher cutting speed and more reliability when compared to the conventional optical tracer.

The latest CNC FANUC 0i provides high precision cutting and control. Simple CNC cutting machine with single side wheel drive and excellent cost performance.

### Feature

- Excellent maintainability
- Maximum Number of Oxy-Fuel Gas cutting Torch: up to 6
- Air plasma / Powder Marking torch mounting available as option
- Torch mounting method without overhang (steel belt)
- 37kg/m rail with high rigidity

### Main Specification

Model Name	NANOGRAPH
Machine Structure	Gantry Bridge / Single Side Drive
Drive System	Rack and Pinion
Rail Span (mm)	Rail Span 2,500 to 4,000 (Increments of 500)
Total Rail Length (mm)	4,800×N
Effective Cutting Width (mm)	Rail Span -900
Effective Cutting Length (mm)	Rail Length -2500
Rail Weight (Type) (kg/m)	37
Max. Cutting Speed (mm/min)	6,000
Max. Marking Speed (mm/min)	10,000
Max. Rapid (mm/min)	10,000
Input Power Supply	3-Phase 200/220V 50/60Hz
CNC	FANUC 0i
Torch Mounting System	Steel Belt / Square Bar
Max. Number of	6 Torches (5 Torches when equipped with Plasma)
Cut. Thickness (Oxy-Fuel) (mm)	6 - 100 / up to 50 (Simultaneous 6 Torches)
Installed Plasma System	Air Plasma

Flagship Model of Oxy-Fuel Cutting / Plasma Cutting Machine.

# MYNUC

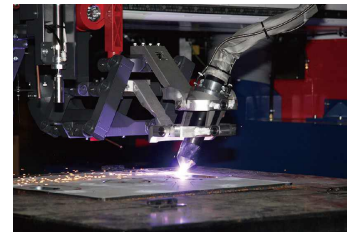
KOIKE highest performance cutting machine. MYNUC is the most robust option in the thermal cutting field, widely applied to various jobs as a specialized machine for Oxy-fuel or Plasma cutting, with possibility of combination of both, oxy and plasma cutting systems, with several options available.



MYNUC-6000D Plasma Cutting 3D-Link, with customized blue color.



Oxy-Fuel Bevel Cutting



Plasma Bevel Cutting (3D-Link System)

## Overview

MYNUC is the most functional cutting machine meeting in detail several needs from the users.

Machine is equipped with the high precision and multi-functional FANUC CNC, and has several options available, such as the 3D-Link (Plasma Bevel Device), Oxy-Fuel Bevel Device, Drill Unit, Inkjet Printing/Marker Device, Dot Marking Device, Shot Blast, etc.

MYNUC is a very robust cutting machine, available with wide rail spans up to 12m, with onboard type of fume collector system, and simultaneous cutting for processing of oversized steel plates, extensively required in the shipbuilding field.

## Feature

- Several tools available as option. This machine can be completely customized
- Most robust machine structure, available with wide rail span up to 12m
- High dust collection capability performed by fume collector onboard type
- For heavy-duty user with high occupancy rate
- Installation of 4 sets of Oxy-fuel Gas Bevel torch block or 2 sets of 3D-Link Plasma Bevel Device available

## Main Specification

Model Name	MYNUC	
Machine Structure	Gantry Bridge / Double Side Drive	
Drive System	Rack and Pinion	
Rail Span (mm)	4,500 to 12,000 (Increment of 500)	
Total Rail Length (mm)	4,800×N	
Effective Cutting Width (mm)	Rail Span -900	
Effective Cutting Length (mm)	Rail Length -3,500	
Rail Weight (Type)	37kg/m (50kg/m rail for wider span over 9m)	
Max. Cutting Speed (mm/min)	10,000	
Max. Marking Speed (mm/min)	36,000	
Max. Rapid Speed (mm/min)	Longitudinal	54,000
	Transverse	36,000
Torch Up/Down Speed (mm/min)	20,000	
Input Power Supply	3-Phase 200/220V 50/60Hz	
CNC	FANUC Series 31i / FANUC Series 30i / FANUC Series 0i	
Torch carriage connecting method	Steel Belt / Square Bar	
Max. Number of Oxy-Fuel Gas Cutting Torch	Steel Belt : 12 Square Steel Bar : 20	
Cut. Thickness (Oxy-Fuel) (mm)	6 to 100mm Up to 50mm (Simultaneous 20 Torches)	
Available Plasma System	SUPER-400Pro II SUPER-300Pro II α	

CO<sub>2</sub> Laser Cutting Machine with Onboard Type of Oscillator

# LASERTEX-Z Series

KOIKE original CO<sub>2</sub> Laser Cutting Machine with the Laser Oscillator mounted on the carriage and KOIKE Σ-Box, which provides stable laser beam transmission and cutting quality.



## Overview

Original KOIKE's structure of Σ-Box and oscillator mounted on carriage provides stable optical axis and optimum path length improving the cutting performance. The Σ-Box (KOIKE patented technology) fixes the optical components of laser optical path in the onboard installed box, avoiding any influence of structure deflection.

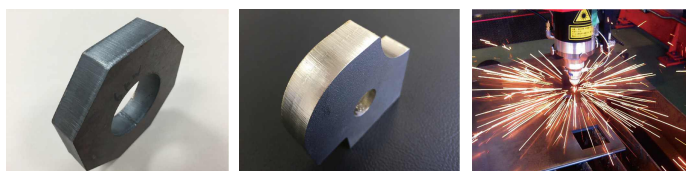
Pressurized clean air structure protects the optical component from dirt, keeping the internal environment clean for a long period, which not only stabilize the optical axis but also suppresses the power loss.

After each part cutting is completed, dry running starts while torch raises, then torch will start lowering while moving just before reach the next piercing point (Frog Control feature), reducing the time required for moving without cutting.

Torch UP/Down movement is improved, corresponding to the optimal position distance, reducing the risk of nozzle/torch touch the steel plate. Moreover, due to the improvement of sequence, the piercing operation speed up, which contributes with productivity improvement on the process of small parts and parts with large quantity of holes piercing.

## Feature

- Shortened time of external beam axis adjustment in the Σ-Box
- Corresponds to wide span
- Onboard type of Oscillator eliminated the optical axis deviation
- Torch Up/Down speed improved to 20m/min
- Productivity improvement by optimization of Frog Control feature
- 3 types of piercing methods available, suiting up each application



## Main Specification

Model Name	LASERTEX- XX04Z II	LASERTEX- XX06Z II
Oscillator	FANUC C4000i	FANUC C6000i
Rating Output (W)	4,000	6,000
Type of Laser	Carbon Dioxide Laser	
Structure	Oscillator on Carriage type / Σbox	
CNC	FANUC Series 31i	
Rail Span (mm)	4,500 to 6,500 (Increments of 500) ※Extensible up to 8,500 as special option	
Rail Length (mm)	4,800×N (MAX. 50,000)	
Effective Cutting Width (mm)	Rail Span -1,000	
Effective Cutting Length (mm)	Rail Length - 3,000	Rail Length - 4,000
Max. Cutting Speed (mm/min)	10,000	
Max. Rapid Speed (mm/min)	24,000	
Max. Torch Up/Down Speed (mm/min)	Manual Feed : 3,000 Automatic Operation : 20,000	
Cutting Thickness (mm)	Mild Steel	3.2 to 22
	Stainless Steel	1.5 to 12
		3.2 to 25
		1.5 to 25

DBC Fiber Laser Cutting Machine

# FIBERTEX-Zero & Series

The world's first Fiber Laser Cutting Machine that adopts the DBC (Dual Beam Control) Oscillator. KOIKE's Best Fiber Laser Cutting Machine, which meet all users demands.



**K Torch**, the New Torch Head for DBC Fiber Laser.



12kW Fiber Laser Cutting Material: SN490C 25mm

## FIBERTEX-Zero

The new **18kW DBC Oscillator** brought to the fiber laser cutting segment more versatility with the significant improvements on the cutting capability, and in order to achieve the **Highest Level of Contour Accuracy** for CW Cutting by **DBC**, KOIKE also reviewed the machine's structure and completely renewed the drive system, introducing the new fiber laser cutting machine the **FIBERTEX-Zero &**.

FIBERTEX-Zero kept all the best features from its predecessor and more, also allowing the customer to choose whether the **Operation Panel, Oscillator** and **Chiller** will be **On-board type** or **Standalone type**, while the **Fume Collector** remaining only as **Standalone type**.

## What is DBC?

While the **Single Beam** Mode has only the **Central Beam**, **DBC** is a combination of a **Central Beam** and a **Ring Beam**, which brings more efficiency to the cutting process.

**DBC** allows the controlling of the shape of the **Central Beam** and the **Ring Beam** individually to the best condition according to the **Materials Type, Surface Condition, and Surface Temperature**, achieving a better **Cutting Quality** in a wider range of material from thin to thick plates, difficult-to-cut material, and even on rust material which now can be cut without pre-burning cutting.

## Feature

- First ever **IPG 18kW DBC Oscillator** implemented
- Cutting Performance enhanced to the utmost by adopting the new torch head "**K torch**", with DBC dedicated nozzle
- Cutting accuracy significantly improved by machine body rigidity increase
- Cutting of SN490C, known as one of the most difficult material to be cut by laser, has be greatly improved by the 12kW DBC achieving a very stable cutting with great cutting quality even on 25mm plate
- Rust material cutting without pre-burning

## Main Specification

Model Name	FIBERTEX-XX12 Zero &	New FIBERTEX-XX18 Zero &
Oscillator	IPG YLS DBC	IPG YLS DBC
Rating Output (W)	12,000	18,000
Structure	Gantry Bridge (Onboard or Stand-Alone Oscillator)	
CNC	FANUC Series 31i	
Rail Span (mm)	4,000~6,500 (Increments of 500)	
Rail Length (mm)	4,800×N (Max. 100,000)	
Effective Cutting Width (mm)	Rail Span -1250	
Effective Cutting Length (mm)	Rail Length -4000	
Max. Cutting Speed (mm/min)	6,000	
Max. Rapid Traverse Speed (mm/min)	24,000 (High Speed Type : 34,000)	
Max. Torch Up/Down Speed (mm/min)	Manual Feed : 3,000, Automatic Operation : 20,000	
Cutting Thickness (mm)	Mild Steel	3.2 - 32
	Stainless Steel	1.5 - 40
		3.2 - 40
		1.5 - 45

# CNC Controllers

They are full featured, shaped cutting controls incorporating the latest advancement in Graphical User Interface and Motion Control Technology. Our pre-programmed shape library allows you to create over 300 custom shapes at your fingertips. Reduce programming errors and assure increased repeatability and accuracy at faster processing speeds.

## D430



- 10.4" TFT color LCD display
- 47 Standard Patterns
- 2 Axis control board
- EIA program format
- Main HDD 256MB
- USB Memory Port
- MDI (Manual Data Input)
- 64MB CPU
- Max. 150,000 lines Program Code
- Max. 4MB Single Code File
- FLMC-F2300T/A Operating system

## D600 Pro



- 15" high light LCD
- More than 90 standard graphics libraries
- Build-in touch-screen
- Automatic identification of EIA Code and ESSI code
- Support FLCAM, Fast cam, Sigma Nest and other nesting software.
- Support suffix TXT, CNC, NC, MPG, B3 and other G Internal storage: 4G
- Hard disk: 128G solid state
- Linux real-time, Windows 10 OS

## FANUC FS-0i



- 15" TFT color LCD display
- Touch Screen function
- 60 Standard Patterns
- MAX. 4 Axis control board
- EIA program format
- SSD 8GB: System 2GB, Data 6GB
- USB Memory Port
- MDI (Manual Data Input)
- Local Area Network Port
- Windows 10 Operating System

## FANUC FS-30i



- 15" Color LCD display
- Touch Screen function
- 60 Standard Patterns
- MAX. 5 Axis control board
- EIA/ESSI program format
- SSD 8GB: System 2GB, Data 6GB
- USB Memory Port
- MDI (Manual Data Input)
- Self Diagnostic Alarm Devices
- RS-232C Port for Ext. Devices
- Local Area Network Port
- Windows 10 Operating System

## FANUC FS-31i



- 15" TFT color LCD display
- Touch Screen function
- 60 Standard Patterns
- MAX. 3&4 Axis control board
- EIA/ESSI program format
- SSD 8GB: System 2GB, Data 6GB
- USB Memory Port
- MDI (Manual Data Input)
- Self Diagnostic Alarm Devices
- RS-232C Port for Ext. Devices
- Local Area Network Port
- Windows 10 Operating System



The Highest Performance Level Oxygen Plasma System in the World

# ~~**SUPER-400Pro II / SUPER-300Pro II α**~~

The latest developed KOIKE original plasma system, which was the first oxygen plasma developed in the world. By combining many years of plasma cutting know-how and the state-of-the-art technology, the SUPER Series continues evolving to keep achieving the best performance in the market.

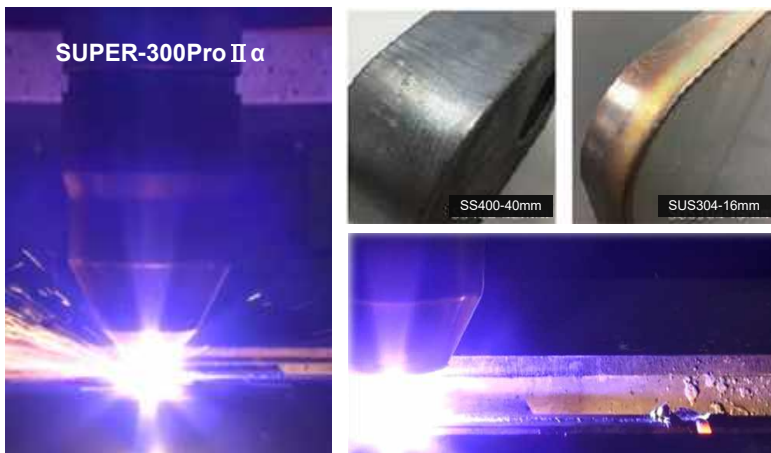
## Overview

The **Super** Series Plasma System achieves excellent usability in a variety of cutting application, all due to its automatic cutting parameters setting system connected to the CNC cutting machine.

Consumables' Life Time significantly increased compared to the previous model due to improvements on the consumables structures, at same time the **Anti-magnetic Arc Blow** function was positively impacted been also improved, which allows the cutting even under magnetic force of 300mT (in-company environment test). All this leading to a improvement to the cutting quality and productivity from thin to thick plates cutting.

The new function **Jet Pierce** performs a safe piercing process, while the high pressure gas injected from the orifice of the torch tip blows the slags during the piercing. (Patent No. 3751728)

The gas pressure range requirement is from 0.5 to 0.7Mpa, which can be supplied by any general piping, not requiring any special modification in the customer gas supply piping.



## Main Specification

Model Name		SUPER-400Pro II	SUPER-300Pro II α
Power Supply Model		KP-4055	KP-3055
Input Power Supply		3-Phase 200/220V 50/60Hz 3-Phase 380/400/440V 50/60Hz	
Rated Input (kVA)		119	89
Rated Current (A)		400	300
Plasma Gas		O <sub>2</sub> (Mild Steel) / N <sub>2</sub> (Stainless Steel)	
Shield Gas		O <sub>2</sub> / Air (Mild Steel) / H35 (Stainless Steel)	
Cutting Thickness (mm)	Mild Steel	Max. 50	Max. 40
	Stainless Steel		
Severing Cut (mm)		80	

## Feature

- Automatic cutting parameter setting
- Improvement of anti-magnetic arc blow function
- Improved life time of consumables
- High quality cutting from thin plate to thick plate
- Improvement of piercing performance
- Improvement of small hole cutting performance
- Bevel cutting of Stainless Steel and Mild Steel available
- Tool-less consumable exchange structure

# XPR-300 (Hypertherm Inc.)

The most significant advance in mechanized plasma cutting technology, which redefines what plasma can do by expanding its capabilities and opportunities.

## Overview

The XPR300 advances HyDefinition® cut quality by blending new technology with refined processes for next generation, X-Definition™ cutting on mild steel, stainless steel and aluminum.

Consumable life time increases of over 40% compared with previous systems, and the advanced power supply technology delivers highly responsive, rapid system feedback, and automatically intervenes to eliminate events that negatively impact system efficiency and consumable life.



## Feature

- Industry-leading X-Definition™ cutting quality
- Optimized Productivity while Reducing Operating Cost
- Engineering System Optimization and easy-of-use features
- Advanced Process Control and Delivery
- Chiller Unit is integrated

## Main Specification

Model Name	XPR-300	
Power Supply Model	Core / OptiMix	
Input Power Supply	3-Phase, 200/220V, 50/60Hz or 380/440V, 50/60Hz	
Rated Input (kVa)	75	
Rated Current (A)	300	
Plasma Gas	O <sub>2</sub> , N <sub>2</sub> (Mild Steel)	F5, H <sub>2</sub> /N <sub>2</sub> /Ar (Stainless Steel)※
Shielding Gas	O <sub>2</sub> / Air (Mild Steel)	N <sub>2</sub> (Stainless Steel)※
Piercing Thickness (mm)	Max. 50 (Mild Steel) (Core Specification: 45)	Max. 38 (Stainless Steel)※
Cutting Thickness (mm)	80 (Mild Steel)	75 (Stainless Steel)※
Cutting Shape	I-Cut	

※Stainless Steel Mix Gas specification is available only with OptiMix Specification.

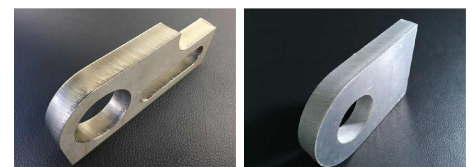
New Standard for the Stainless Steel Cutting

# HiFocus Series

The excellent quality achieved in stainless steel cutting by HiFocus Series was not seen in plasma cutting until now. HiFocus series sets new standards for plasma cutting of stainless steel.

## Main Specification

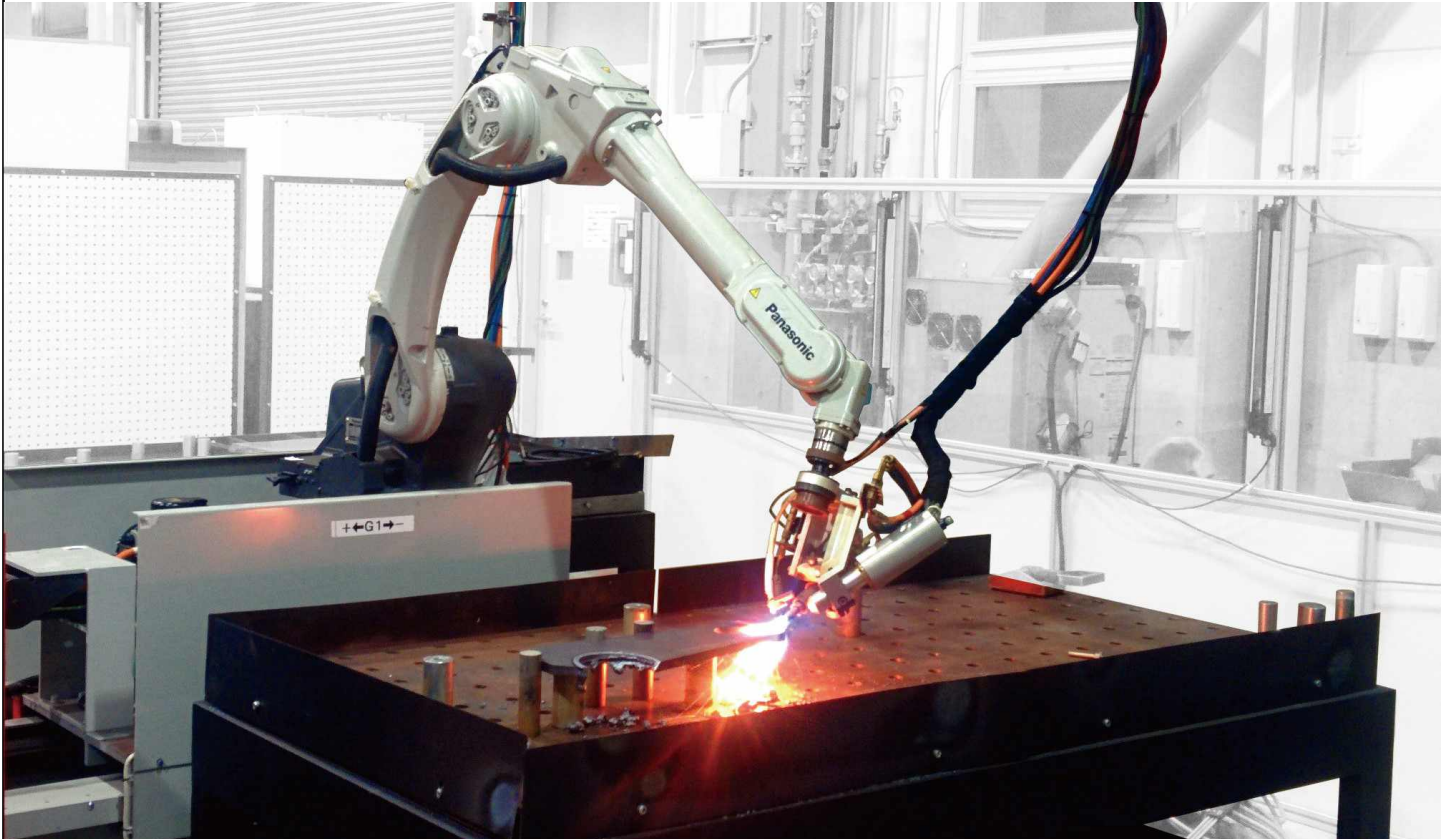
		HiFocus 280i neo	HiFocus 440i neo	HiFocus 600i neo
Power Supply	Model Name	HiFocus 280i neo	HiFocus 440i neo	HiFocus 600i neo
	Input Power Supply	3-Phase 400/440V 50/60Hz 3-Phase 200/220V 50/60Hz (only 280i and 440i)		
	Rated Input (kVA)	67	127	180
	Rated Current (A)	280	440	600
	Current Adjustable Range (A)	10 - 280	10 - 440	10 - 600
	Usage Rate	100%		
	Plasma Gas	Ar/H <sub>2</sub> /F5 (N <sub>2</sub> 95%+H <sub>2</sub> 5%)		
	Shield Gas	N <sub>2</sub>		
	Working Pressure (Mpa)	0.9 - 0.99		
	Outline Dimension ( W×L×H ) (mm)	680×1030×1450		680×1030×1450 ×2 units
Cutting Thickness (Stainless Steel) (mm)	Dry	2.3 to 50	6 to 100	6 to 150
	Under Water	10 to 30	10 to 70	10 to 100
Torch	Torch Model	PerCut 450M		PerCut 611
	Max. Working Current (A)	280	440	600
	Usage Rate	100%		
	Cooling System	Water Cooling (Circular)		
	Torch Lead Length (m)	1.5		
	Outline Dimension (mm)	φ57×450		



Oxy-Fuel Gas Bevel Cutting Robot

# BEVEL MASTER

Specialized in bevel cutting of steel shapes commonly used in the construction machinery and shipbuilding industry, empowers the automation of bevel cutting on flat plates by its Flexible Range and High Accuracy motion.



## Overview

High quality bevel cutting is achieved even for shapes with complex arcs formats by using the 6-axis fully articulated robot.

KOIKE's 2D CAD/CAM software **KAP** is used in this system, allowing the creation of program for the robot directly from the parts' data. By connecting with KAP the interoperability achieved is similar to a NC Cutting Machine, improving significantly the productivity as there is no need for teaching tasks as in the conventional robot operation.

## Feature

- By adopting the 6-axis articulated robot, high quality and automated curved bevel cutting is possible
- Off-line automatic programming is possible, it is perfect choice for multi-product production
- Dedicated Cutting Table with pins is used to support the work piece, there is no need for any work piece jig
- The position deviation at the time of workpiece setting is corrected by mounting of the touch sensor
- Cutting of large work piece is also possible by using the Traveling Slider and Overhanging System
- Air Plasma cutting is also available



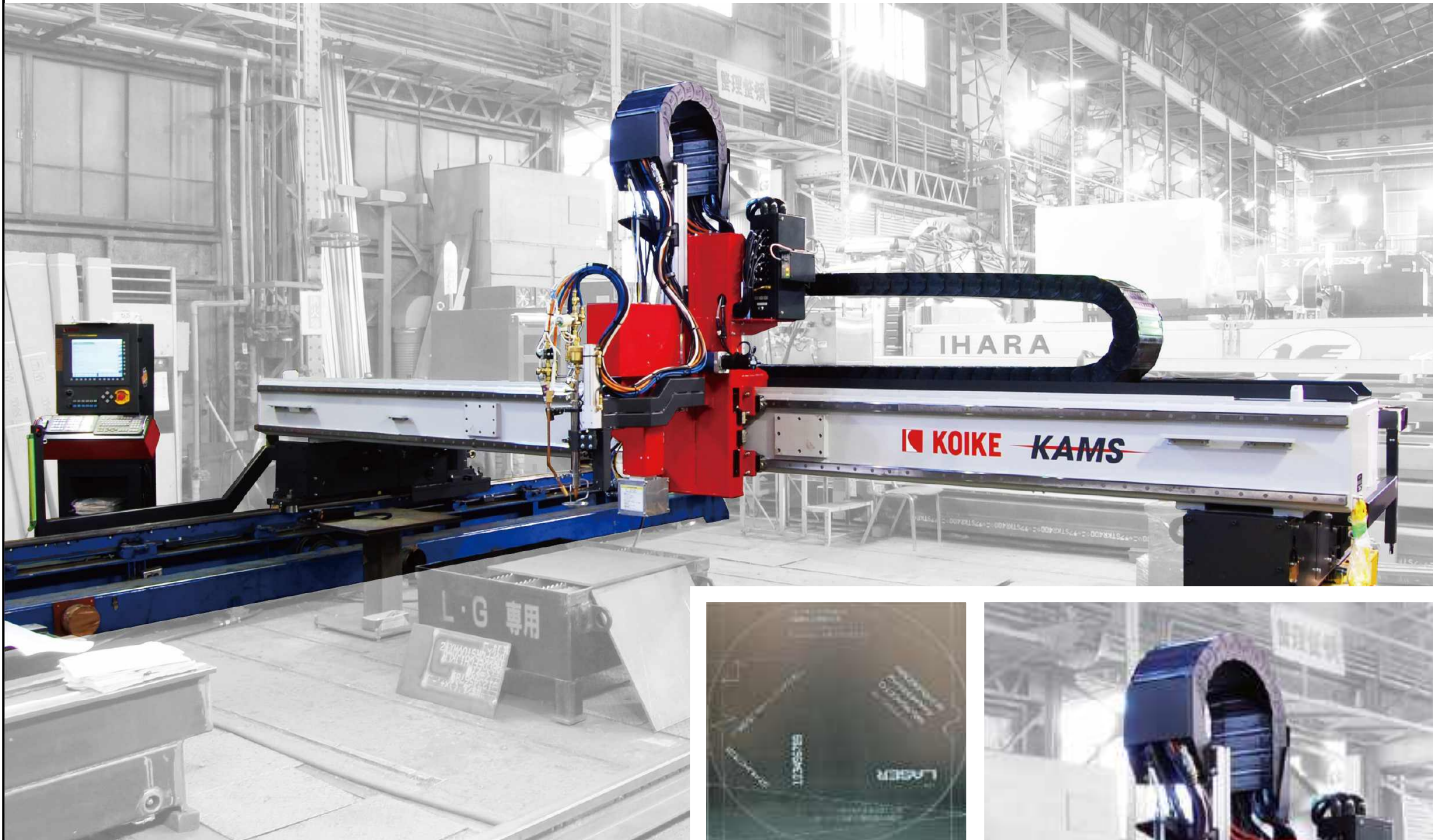
## Main Specification

Model Name	BEVEL MASTER		
Structure	Fixed Type	Slider Type	Overhanging Type
Robot Type	Panasonic TL-1800GIII		
Touch Sensor	Sensing Probe Type		
Number of Motion Axis	6-axis	7-axis	
Effective Cutting Range (mm)	1000×1000	1000×4000	2000×6000
Max. Cutting Thickness (mm)	50 (Please consult in case of thick plate more than 50)		
Max. Bevel Angle	45° Positive/Negative		
Fuel Gas for Cutting	LPG or Hydrogen mixed gas		
Hi/Low Switch	Yes		

KOIKE Specialized Printing & Marking Machine.

# KAMS

KOIKE Auto Marking System (KAMS) is a specialized Printing and Marking machine that improves the way that marking jobs are performed.



## Overview

Marking and Printing are performed by a **Thermal Spray Marking** or **Ink-Jet Dot Marking**, both devices are capable of marking lines and printing characters (Alphanumeric / Katakana / Symbols). These devices are the same devices also mounted on machines combined, Cutting & Marking machines.

Either on combined or dedicated machines the whole processing time is significantly reduced while eliminating handwriting marking errors, leading to an overall improvement in the processing productivity.

In addition to the single marking/printing device system, multiple marking/printing heads can be mounted on the gantry marking/printing system, leading to a high-speed marking/printing on the entire plate surface.

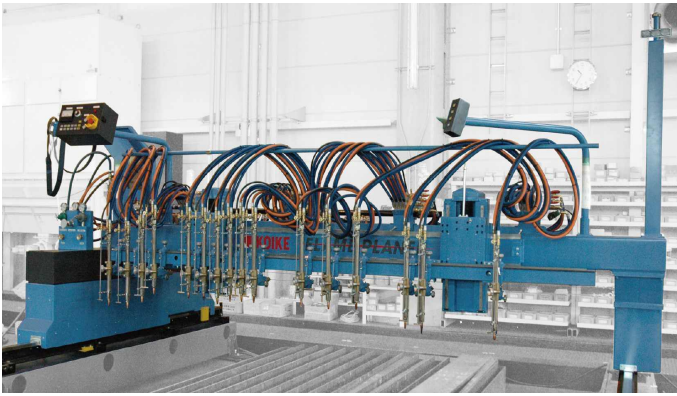
## Feature

- High-speed marking up to 48m/min is possible due to the light weight marking device
- Manual marking errors error eliminated by the automated system
- Maximum printing size of 48x36mm
- Remarkably increased amount of information printed on entire plate surface
- Entire processing efficiency significantly improved by automating the complete marking process

## Main Specification

Model Name	KAMS
Machine Structure	Gantry Type / Double Side Drive
Drive System	Rack & Pinion
Rail Span (mm)	4,000 to 6,500 (increment of 500)
Rail Length (mm)	4,800 x N
Rail Type/Weight	37kg/m
Max. Marking Speed (mm/min)	48,000
Input Power Supply	3-Phase 200/220V 50/60Hz
Character Type (PJ-1B)	Alphanumeric / Katakana / Symbols (27 symbols)
Max. Character Size (mm)	48 x 72 (PJ-1B-0)
Printable Surface	Black Scale / Zinc Primer / Wash Primer

## Special Application Machines



Multi Oxy-Fuel Gas Torch Straight Line Cutting Machine.

### FLAME PLANER

Main Specification		
Model Name	FLAME PLANER	
Machine Structure	Gantry Bridge / Single Side Drive	
Drive System	Rack and Pinion	
Rail Span (mm)	4,000 - 12,000 (Increments of 500)	
Rail Length (mm)	4,800×N	
Effective Cutting Width (mm)	Rail Span -1,000	
Effective Cutting Length (mm)	Rail Span 4,000 - 5,500	Rail Length -3,400
	Rail Span 6,000 - 9,000	Rail Length -4,200
	Rail Span 9,500 - 12,000	Rail Length -5,200
Rail Weight (Type)	37kg/m or 50kg/m	
Max. Cutting Speed (mm/min)	1,200	
Input Power Supply	1-Phase 100/110V, 3-Phase 200/220V 50/60Hz	
Max. Number of Torch	40 Torches	



CNC Piercing Hole Drill Specialized Machine.

### ADS

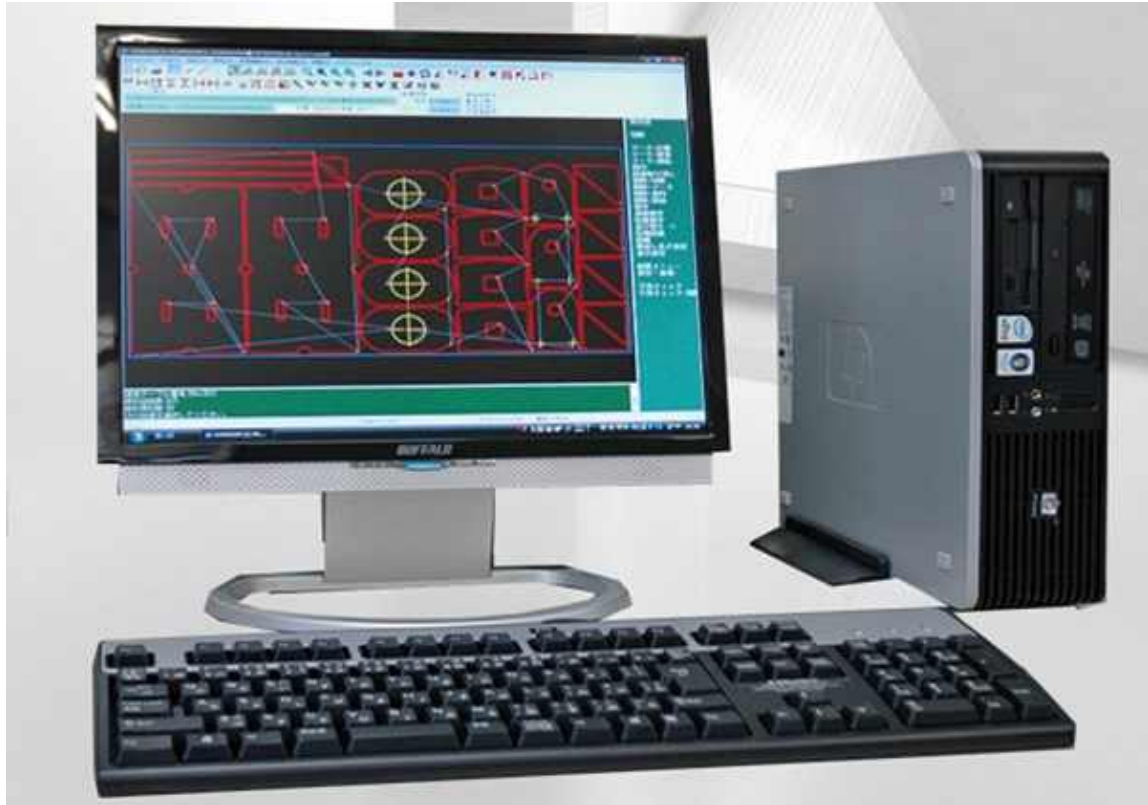
Main Specification		
Model Name	ADS	
Machine Structure	Gantry Bridge / Double Side Drive	
Drive System	Rack and Pinion	
Rail Span (mm)	4,000 - 6,500 (Increments of 500)	
Rail Length (mm)	4,800×N	
Rail Weight (Type)	37kg/m	
Max. Drive Speed (mm/min)	12,000	
Input Power Supply	3-Phase 200/220V 50/60Hz	
Max. Processing Thickness (mm)	200 (Mild Steel)	
Hole diameter (mm)	10	
Machining Time (sec.)	Thick. 100mm	Approx. 90 sec
	Thick. 150mm	Approx. 102 sec



NC Automatic Programming System

# KAP 8030N Ver.5

KOIKE CAD/CAM Software developed based on the rich experience of KOIKE in Oxy-Fuel Gas, Plasma and Laser cutting.



## Overview

Special processes such as Corner Process, Bevel Cutting, Water Drainage Cutting can be configured by adding the customer's know-how and achieving product accuracy. It can also be connected with Production Control, Operation Management, Steel Stock Management System, etc.

### Production Control

Delivery Date, Customers, and Products Models can be controlled. Models, Weight and Cutting Length records can be outputted in a .csv file.

### Operation Management

Operation conditions such as Cutting, Marking, Fast-Forward Time, are collected from the Cutting Machine and outputted in a .csv file.

### Steel Stock Management

Material's Stock, Remnant Plate Processing, Materials Shape can be easily managed, and cutting achieves excellent yield. Material, Remnant Plate Processing, and Scrap can be managed uniformly.

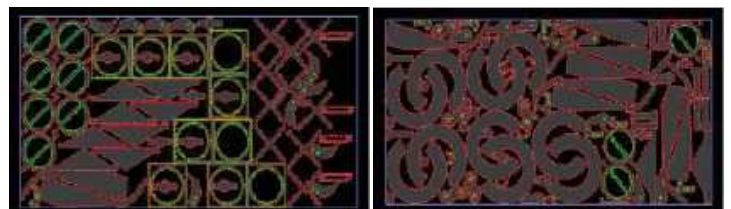
## Feature

- System maximize the Cutting Machine processing performance
- Fine cutting is achieved meeting the customer needs
- Special cutting processes, including Bevel Cutting available
- Cutting Machine can be connected to cutting schedule management
- Various traceability enhancement available

## Display Layout



## Auto Nesting



## Main Specification

Model Name	KAP8030N Ver.5
Free Parts Shape Creation	Automatic Sequence
DXF/DWG Conversion	Common Line Cutting
Basic Shapes Pattern (55 shapes)	Cut-In / Out Pattern Creation
Automatic Dimension Display	Multiple Torch Cutting Route Creation
Automatic Nesting	Cutting Route Interference Check
Yield Display	Remnant Plate Processing Management
Min. Required Mother Material Indexing	NC Date Transfer
Date Output	CSV Data

KOIKE Original Navigation System for Remnant Material

# Navigation System

Effective use of remnants reduces material scrap ratio and improves profit. Scrap ratio is significantly reduced from conventional single part cutting. By cutting remnants/multiple plates at the same time, working efficiency is improved.

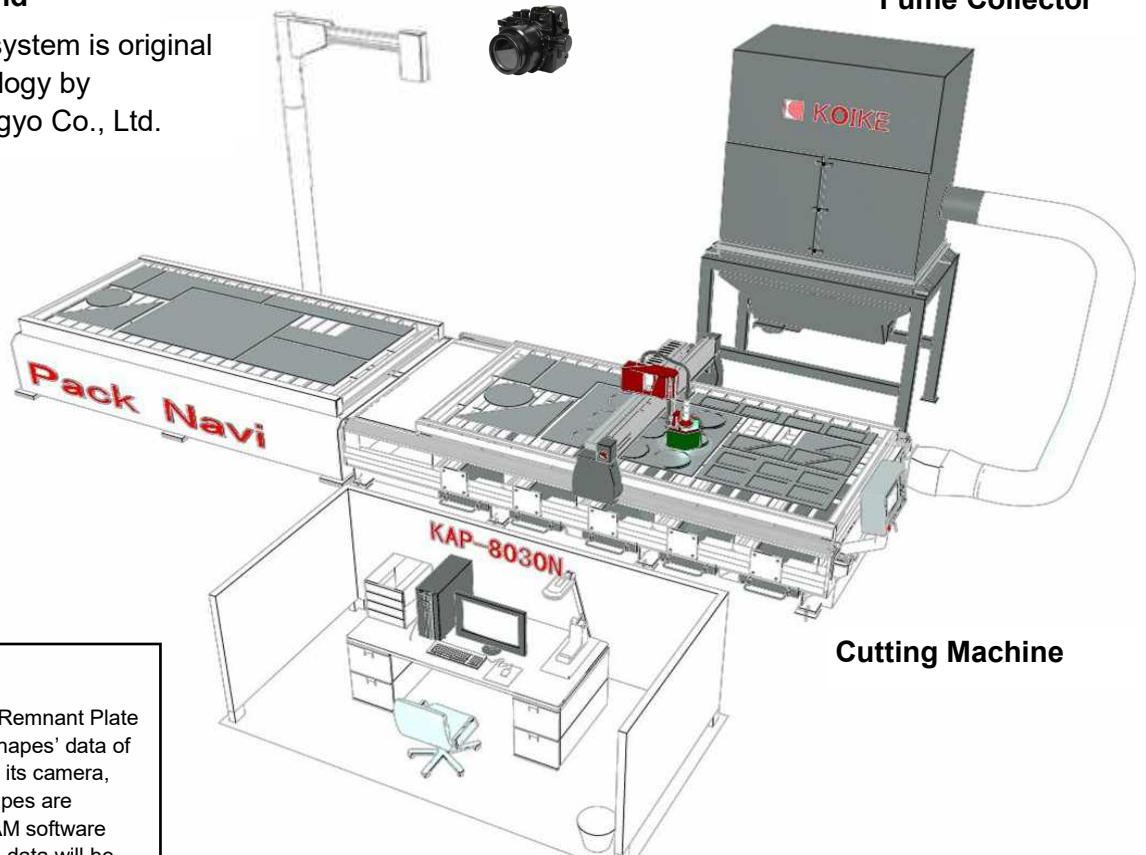
## Navigation Stand

The navigation system is original patented technology by Koike Sanso Kogyo Co., Ltd.

## New Navigation Camera



## Fume Collector



## Overview

**Navigation System** for Remnant Plate Processing captures the shapes' data of multiple remnant plates by its camera, then these recognized shapes are imported in to the CAD/CAM software **KAP8030N**, where the NC data will be created.

## Feature

- From the image the value is coordinated and multiple remnant plates can be processed by CNC cutting machine at once
- Remnant plates shape and position are accurately recognized, and the nesting of cutting products can be optimized
- Profit increases significantly due to yield improvement and shortened processing time
- Production efficiency can be improved combining the Stocker and Conveyor Line
- Products tracking and management can be achieved by connection with Product Control System, also for remnant plate

## Remnants' Settings & Shooting



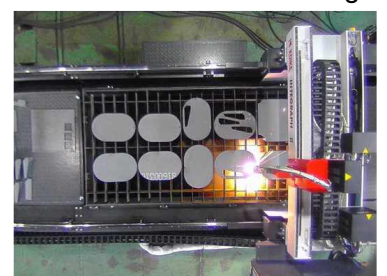
## Remnant's Shapes Extraction



## Nesting & Data Creation



## NC Data Transfer & Cutting



GENERAL	OXY-FUEL CUTTING	OXY-FUEL GAS CUTTING TORCH
<p><b>SCRAP HAND CUTTING TORCH</b> Hand Cutting Torch such as skill cut 250 is equipped and gas outlet is installed in the on-board piping of cutting machine.</p> <p><b>JET AIR CLEANER</b> Air gun and hanger for cleaning is installed on cutting machine.</p> <p><b>MULTI-POINT REMOTE CONTROLLER</b> Remote controller, which allows remote operation such as JOG Feed, Torch up and down, Start, Stop, and Reverse movements by using radio waves.</p> <p><b>ILLUMINATING LAMP</b> 2-Eye lamps of 200W are installed at the lower parts of the machine frames.</p> <p><b>COLD AREA SPECIFICATION</b> Heater will be installed in the operation panel and control panel, in case of machine is installed in cold areas.</p> <p><b>COLLISION PREVENTION FUNCTION</b> (Backward/Forward) When other machine is driven over the common rail, the sensor for prevention of mutual collision is installed. When this sensor is activated, the machines stop immediately.</p> <p><b>RAIL AIR BLOW</b> Device installed before and after the roller to blow away dust and iron powder that may be on the rail.</p> <p><b>SOLENOID VALVE FOR RAIL AIR BLOW</b> Air jet of Rail Air Blow is triggered by the solenoid valve control connected with the longitudinal drive unit.</p> <p><b>RAIL WIPER BRUSH</b> Dust on the rail surface is removed by the motorized brush rotation, which rotates only when machine is moving in the longitudinal direction.</p> <p><b>BLINKING WARNING LIGHT</b> LED Light with 3 Stages to indicate operation conditions, as RED: Alarm, YELLOW: Power-ON and GREEN: Automatic Operation.</p> <p><b>PHOTO SENSOR SAFETY DEVICE</b> Photo Sensor Safety Devices are installed at machine's front and rear side (1 at each side). When one of these sensors are triggered an alarm will be displayed pausing the machine.</p> <p><b>INTRUSION PREVENTION WIRE</b> Intrusion Prevention Wires are installed at machine's front and rear side (1 at each side). When the wires are pulled an alarm will be displayed with a buzzer alarm, pausing the machine.</p> <p><b>TAPE SWITCH</b> Tape Touch Switches are installed in the most protruding corners at machine's front and rear side. When these switches are pressed machine will be in emergency stopped and there will be a buzzer alarm.</p> <p><b>FLUID SHUT OFF VALVE</b> Fluid Solenoid Valve is installed on the machine. When there is an NC alarm or a pressure drop, the solenoid valve is closed and the fluids are stopped.</p> <p><b>OPERATION TIME METER</b> Instrument that displays the total using time of cutting oxygen installed on the operation panel.</p>	<p><b>THICK PLATE CUTTING TREATMENT</b> Following units changed as insulation measures for thick plate cutting.</p> <ul style="list-style-type: none"> <li>- Machine Saddle adopted will be High Saddle type.</li> <li>- Insulation plate is installed at the bottom surface of frames, saddle side surface and the operation panel side.</li> <li>- Axial fan installed between frame bottom surface and insulation plate.</li> <li>- Gas operation panel is changed to high flow rate type and the on-board piping is changed to loop type.</li> <li>- Distribution hoses adopted are Heat-resistant hoses.</li> </ul> <p><b>PIERCING FOR THICK PLATE</b> At the time of starting the cutting, the jet of the cutting oxygen pressure and the torch height are automatically adjusted and optimized. Normally for a piercing capacity of 25mm, safe and certain piercing can be done up to maximum of 100mm.</p> <p><b>QUICK TORCH</b> Cutting Torch in which cutting tip can be exchange by one touch. FP-A Torch and FP-C Torch are suitable to this.</p> <p><b>HI-LOW REGULATOR</b> High-Low switching function that shortens the preheating time piercing has been added in the standard type of gas regulator unit.</p> <p><b>MOTORIZED LIFTER DEVICE (HDH)</b> The torch up and down operation is possible either by program commands or the Operation Panel Switch. The standard up and down stroke is 100mm, and its speed is 870mm/min (in case of 60Hz) or 720mm/min (in case of 50Hz).</p> <p><b>FORWARD/BACKWARD TORCH ADJUSTER</b> At the time of aligning the cutting tip with the steel plate edge, the torch can be adjusted in the forward and backward by the handle. The forward and backward adjustment stroke is 50mm. In case of square steel type, the torch minimum interval becomes 125mm.</p> <p><b>WATER SPRAY DEVICE (RING TYPE)</b> The solenoid valve for water spray connected with the cutting oxygen opens and closes, during the cutting, spraying water to reduce heating of steel plate surrounding the cutting tip.</p> <p><b>AUTO-IGNITION DEVICE</b> This device auto ignite the cutting torch and marking torch by program command or the switch of the operation panel. Since the model of auto ignition device changes according to the gas type, the confirmation of gas type is necessary.</p> <p><b>CAPACITANCE HEIGHT SENSOR</b> It is a electrostatic capacity type of sensor installed at the motorized torch up and down device, which will keep the distance between the cutting tip and the steel plate constantly the same by the detection of the steel plate surface.</p> <p><b>SQUARE STEEL BAR</b> It is a torch carriage connecting method which becomes the guide for shifting to the left and right. The corner connected to the carriage can hold multiple torch units.</p> <p><b>STEEL BELT</b> Multiple torch units are clamped to the steel belt to be rotated in the transversal stroke direction. It is a torch mounting system in which isomorphic cutting and symmetric cutting are possible in the direction of the clamp.</p> <p><b>TORCH SELECT I</b> By the selection of switch on the operation panel, the cutting oxygen and the operation of motorized torch up and down device are controlled. Only the selected torch performs the operation.</p> <p><b>TORCH SELECT II</b> By the selection of switch on the operation panel, preheating oxygen, preheating gas, auto ignition and water spray are controlled. Only the selected torch performs the operation.</p>	<p><b>STANDARD TORCH (300L/400L/500L)</b> Tip Mixing Oxy-Fuel Gas Cutting Torch for plate thickness up to 150mm. Different lengths of 300mm/400mm/500mm are lined up depending on the cutting thickness and machine structure.</p> <p><b>FP-C TORCH</b> Tip Mixing Gas Cutting Torch for plate thickness up to 250mm.</p> <p><b>6023 TORCH</b> Tip Mixing Gas Cutting Torch for plate thickness up to 300mm.</p> <p><b>EPOCH 300</b> Out Mixing Gas Cutting Torch for plate thickness up to 300mm. Excellent heat resistant and prevention of backfire.</p> <p><b>EPOCH 600</b> Out Mixing Gas Cutting Torch for plate thickness up to 600mm. Excellent heat resistant and prevent backfire</p>
<b>PLASMA CUTTING SYSTEM</b>		
<p><b>TORCH RELEASE MECHANISM (MAGNET TYPE)</b> In the case of the plasma torch collision with the plate, this function detects that the plasma torch is detached from the torch holder.</p> <p><b>FORECAST DEVICE FOR PLASMA ELECTRODE LIFE TIME</b> The plasma cutting time and the number of piercings performed are integrated and measured. % (percentage) of the remaining life of the electrode time is shown.</p> <p><b>DETECTION DEVICE FOR PLASMA ELECTRODE LIFE TIME (Dr.ElecV)</b> Function responsible to monitoring and detect the usage Conditions and/or breaking of the plasma electrode.</p> <p><b>INITIAL HEIGHT SETTING DEVICE (IHS)</b> The initial height can be set by the contact of torch or dedicated probe with the steel plate. (Torch Contact Type, Air Cylinder Type)</p> <p><b>SPRAY DEVICE FOR SPATTER DEPOSITION INHIBITOR</b> When small circle or small parts are cut, in order to prevent the adhesion of spatters in the plate, which can be a problem at the time of piercing, this device will spray the spatter deposition inhibitor in the piercing position periphery on the steel plate before piercing is performed.</p> <p><b>SHIELD CURTAIN FOR PLASMA ARC</b> Shielding curtain is installed in the plasma torch head, covering torch's periphery, which will prevent plasma arc to leak at the time of plasma cutting.</p> <p><b>PLASMA MARKING</b> Draw a marking line on a steel plate is possible by the plasma arc.</p>		



LASER	CNC	CUTTING TABLE / FUME COLLECTOR / ANCILLARY EQUIP.
<p><b>FROG CONTROL</b></p> <p>After each part cutting is completed, dry running starts while torch raises, then torch will start lowering while moving just before reach the next piercing point.</p> <p><b>AI CONTOUR CONTROL</b></p> <p>In case of Laser Making and Pre-burn Process, AI contour control that performs high precision processing is carried out by commanding an arbitrary range on the program.</p> <p><b>SKIP FUNCTION</b></p> <p>This function moves automatically by dry operation to the next piercing point in case of touch alarm during cutting. Valid/Invalid can be selected by the selection switch on the Operation Panel.</p> <p><b>RETRY FUNCTION</b></p> <p>This function automatically return the head to the place of occurrence in case of cutting alarm is generated during automatic operation. It is also possible to skip to the next cutting start point by the skip function, when the cutting alarm is generated continuously.</p> <p><b>LASER MARKING</b></p> <p>Clear marking line can be drawn by the laser beam on the steel plate by oxygen assist gas or nitrogen assist gas.</p> <p><b>NITROGEN CUTTING FOR STAINLESS STEEL</b></p> <p>Stainless steel can be cut with high quality by the nitrogen assist gas.</p> <p><b>SPIKE PIERCING</b></p> <p>Spike piercing irradiates high output pulse laser while controlling the oxidation reaction. Small hole can be opened in a short time. It is an excellent piercing function for Mild Steel of KOIKE original.</p> <p><b>HSQ PIERCING</b></p> <p>This piercing function can open smaller hole by optimizing the laser focus, nozzle height, and inner assist gas pressure. Plate thickness for mild steel is 22mm.</p> <p><b>BURNING DETECTION</b></p> <p>Sensor that monitors the cutting, which cannot be used in high speed cutting (in case of CW cutting). Burning alarm is effective when the switch on the Operation Panel <b>Burning Sensor Enable</b> is selected. (Plate Thickness Detection: SS400/SUS304 MAX.16mm, is only possible by CO<sub>2</sub> Laser)</p> <p><b>SELECTION OF SCHEDULED OPERATION</b></p> <p>Processing Order can be selected for Laser Cutting, Laser Marking, Pre-heating, Pre-Burn and Line Marking, and each one will be executed at a time or after setting by scheduled operation.</p> <p><b>PRE-BURN FUNCTION</b></p> <p>This function burns the cutting path at the steel plate surface, In order to improve the cutting performance on steel plates with painted coating, rusty steel plates, and steel plates with bad surface condition.</p> <p><b>CCD / ITV CAMERA / MONITOR WITH SWITCH</b></p> <p>This monitor shows the 180° range image on the backside of the machine to increase the safety.</p> <p><b>PUSH AIR / EXHAUST FAN (FIBER LASER ONLY)</b></p> <p>Air discharge devices that push the fumes, exhausting the fumes to outside of the machine.</p> <p><b>DVR FUNCTION</b></p> <p>Recording device that allows recording videos taken by CCD/ITV Camera. Recorded video can be seen any time.</p> <p><b>CUTTING TABLE (FIBER LASER ONLY)</b></p> <p>KOIKE's original Cutting Table design provides increased measures against the reflection and leakage of the fiber laser beam.</p>	<p><b>COORDINATE ROTATION FUNCTION</b></p> <p>In accordance with the Oxy-Fuel Gas Torch cutting tip and the Laser Spot the NC device can calculate the deviation of the steel plate from the rail by the input of 2 points at the edge of the steel plate. Based on the calculation results, the commanded shapes in the cutting program will be adjusted in the steel plate.</p> <p><b>AXIS NAME MODIFICATION</b></p> <p>Change of the axis name (± X/Y).</p> <p><b>OPTIONAL BLOCK SKIP</b></p> <p>By turning ON the optional skip switch of the operation panel, the blocks that includes the Slash Code, "I" or "I1", in the program can be ignored.</p> <p><b>SCHEDULE OPERATION FUNCTION</b></p> <p>By memorizing the position of each steel plate and its angle inclination relative to the longitudinal rail, the parts' processing, such as Cutting, etc., can be automatically and sequentially performed continuously. The maximum of 20 steel plates can be placed on the cutting table.</p> <p><b>MIRROR IMAGE FUNCTION</b></p> <p>When the mirror image function is enabled, the movement of the horizontal axis will be opposite to the program command.</p> <p><b>MANUAL ABSOLUTE</b></p> <p>In case of absolute command, the CNC can select whether the amount of movement by manual operation will be added on the coordinate values.</p> <p><b>KFCNC OPERATION COUNTING FUNCTION</b></p> <p>This function detects the signals, such as Cutting Oxygen, Pre-heating, Marking Powder, Plasma Arc, Marking Pre-heating, and measures the operation time and sends the combined data to the host computer through the network. Moreover, the current status of the above mentioned signals are displayed on the CNC Screen by the screen operation.</p> <p><b>PATTERN INPUT FUNCTION</b></p> <p>Cutting simple parts can be performed by using any of the built-in Pattern Shapes available in the NC device.</p>	<p><b>PALETT CHANGER</b></p> <p>Palett Changer stores steel plates to be processed. After the completion of the cutting process, the next waiting palette is sent to the processing stage, and move to the cutting machine. Combining with the Navigation System, in connection with Stocker System, the automation progresses is facilitated, and the cutting machine operation rate can be maximized.</p> <p><b>STOCKER</b></p> <p>This hierarchical rack can collect the palettes in which all the steel plates and remnant plates processing are arranged. By combining with the Palette Changer, the palettes are fed in to the cutting stage, and the cutting processes of multiple steel plates can be automated and scheduled.</p> <p><b>HOUSING</b></p> <p>A housing for covering of the machine's cutting area aiming to improve the work environment, providing further measures, such as Shielding, Sound Proof, Dust Control, and more. The most suitable structure can be suggested according to the customer's demand and targeted machine.</p> <p><b>ECO BOX</b></p> <p>When <b>ECO BOX</b> is installed in the Fume Collector, each time that plasma main arc turns ON the Fume Collector is started and once main arc turns OFF Fume Collector also turns off. This operation reduces the power consumption, saving energy.</p> <p><b>BELT DUCT TYPE FUME COLLECTOR SYSTEM</b></p> <p>The suction hood connected to the cutting machine collects the fumes while constantly follows the cutting area. The suction hood and suction duct are connected and sealed by the belt. In this fume collection system the optimal suction space is achieved by maintaining a constant water level in the cutting table, and the maximum of the fume collection capability is exerted even in a wide cutting area.</p> <p><b>DAMPER TYPE FUME COLLECTOR SYSTEM</b></p> <p>Multiple fume suction ports provided in the side walls of the dry cutting table which opens and closes in accordance with the cutting area. This is a dust collection system which exerts constantly high fume collection capability.</p>
	<p style="text-align: center;"><b>MARKING</b></p> <p><b>POWDER MARKING DEVICE (WHITE)</b></p> <p>This device perform white line marking by thermal spraying of zinc powder. At the time of steady running, the marking line width will be within 1.2mm.</p> <p><b>POWDER MARKING DEVICE (BLUE/RED/YELLOW)</b></p> <p>This device perform line marking by fusing glass particles with some pigments. The color can be selected from the 3 colors available, Blue, Red and Yellow.</p> <p><b>PEN MARKING DEVICE</b></p> <p>It is a line marking device in which the marking is done by a felt-tip pen.</p> <p><b>INKJET PRINTING &amp; MARKING</b></p> <p>This device can print various characters at a marking speed of 20,000mm/min with different sizes, and marking of lines of approximate width of 0.5mm by using the ink jet printing device. Marking colors can be selected from the 6 colors available, White, Black, Blue, Green, Yellow and Red.</p> <p><b>DOT PRINTING MARKER</b></p> <p>Dot Printing Device can form characters by controlling the ON/OFF of the multiple holes in the printer, which discharges the painting.</p> <p><b>DOT LINE MARKER</b></p> <p>Dot Line Marking Device can draw lines with width of 1mm, approximately. On the WB type the color can be switched between 2 colors, White and Blue.</p>	<p><b>PUSH FAN</b></p> <p>This Push Fan is installed on the opposite side of the suction hood, in order to push the fumes through the cutting table all the way to the suction hood and into the fume collection duct.</p> <p><b>PUSH AIR</b></p> <p>This Push Air consists to air discharger nozzles, installed on the opposite side of the suction hood, in order to push the fumes through the cutting table all the way to the suction hood and into the fume collection duct.</p>

# Comparison Chart for Koike Engineering Tangshan (KET) Gas / Plasma Cutting Machines

	FLEXIGRAPH-Smart	MAXIGRAPH-S	MAXIGRAPH-DE	MAXIGRAPH-DX	VERSAGRAPH-DD	VERSAGRAPH-DX	MYNUC-D (With Plasma 3D)
Rail Span	3,500 to 4,000mm	3,000 to 4,000mm	3,500 to 6,000mm	3,500 to 6,000mm	3,500 to 6,500mm	4,000 to 6,500mm	4,500 to 12,000mm
Rail Length	5,000xNmm MAX. 15,000mm	3,000xNmm or MAX. 15,000mm	3,000xNmm or MAX. 30M	3,000xNmm or MAX. 30M	3,000xNmm	3,000xNmm	3,000xNmm
Rail	T-type (@5m unit)	22kg/m (@3m unit)	22kg/m (@3m unit) 38kg/m (@3m unit)	22kg/m (@3m unit) 38kg/m (@3m unit)	38kg/m (@3m unit)	38kg/m (@3m unit)	38kg/m (@3m unit)
Maximum Rapid Traverse Speed	10,000mm/min	12,000mm/min	12,000mm/min	15,000mm/min	Long.:24,000mm/min Trans.:34,000mm/min	Long.:24,000mm/min Trans.:34,000mm/min	Long.: 36,000mm/min Trans.: 36,000mm/min
CNC	FANUC Series 0i			✓	✓		✓
	FANUC Series 30i (Plasma Bevel)				✓		✓
	D600 Pro		✓				
	D430	✓					
Cutting Tools	Oxy-Fuel Torch	2 (1 with plasma)	6 (5 with plasma)	6 (5 with 1 plasma / 2with 2 plasma)	Steel Belt : 6 Square Bar : 24 (5 with 1 plasma / 2with 2 plasma)	1 (1 with 1 plasma)	Steel Belt : 12 Square Bar : 24 (5 with 1 plasma / 2with 2 plasma)
	SUPER-400 PROII			✓	✓	✓	✓
	SUPER-400 PLUS			✓	✓	✓	✓
	XPR300			✓	✓	✓	✓
	HiFocus Series			✓	✓	✓	✓
Plasma Option	Air Plasma	✓	✓	✓	✓	✓	✓
	3D-Link (Plasma Bevel Cutting)					✓	✓
	Y Bevel Cutting with 2 Torches						
	Fume Collector System		✓	✓	✓	✓	✓
Fume Collector System Onboard							✓
Powder Marking Torch (with Auto Ignitor)		✓	✓	✓	✓	✓	✓
Ink-Jet Marking							✓
2 Plasma (MaxPro200 x2) by FS-0i							✓
Remark			Equivalent model to KSK "ECONOGRAPH"	Equivalent model to KSK "ECONOGRAPH"	Equivalent model to KSK "TECHNOGRAPH"	Equivalent model to KSK "TECHNOGRAPH"	Equivalent model to KSK "UNITEX"

# **Welding Series**

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Small-sized Positioner

# LD-R Series

A compact positioner standard model designed and manufactured to provide stable positioning control on a wide range of rotation speed.

## Overview

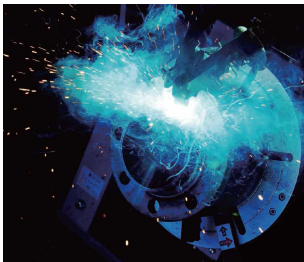
KOIKE LD-R Series is a versatile compact positioner. The LD-60R, LD-150R, LD-300R has a wide range of rotation speed by the dedicated controller LDR-B and DC motor.

High welding noise tolerance design ensures the possibility to use any welding method. (compatible with High-frequency TIG).

LD-600R performs table rotation and electric tilt axis through AC motor and inverter control. In addition, table can be rotated right or left without switching operation, by using the 2-pedal foot switch.

## Feature

- Extremely wide range of rotation speed from low to high
- High welding noise tolerance, also compatible with high-frequency TIG
- Excellent grounding power collection even when brushless
- LD-600R uses electric model for table tilt



Main Specification				
Model Name	LD-60R	LD-150R	LD-300R	LD-600R
Stock No.	ALD10100	ALD10200	ALD10300	ALD10400
Maximum Horizontal Load (kg)	60	150	300	600
Maximum Vertical Load (kg)	30	120	200	500
Table Diameter (mm)	φ300	φ380	φ450	φ620
Table Tilt Method	Manual			Electric
Max. Table Tilt Torque (kgf/mm)	Manual			141500
Max. Height of Center of Gravity with Max. Load (mm)	150	110	150	
Table Tilt Axis Distance (mm)	96	100		133
Table Tilt Angle	-135 - 135°		0 - 90°	
Table Rotation Speed (rpm)	0.15 - 20	0.1 - 6.2	0.1 - 4.6	0.2 - 1.16
Max. Rotation Torque (kgf/mm)	1500	3000	8000	50000
Max. Eccentricity of Center of Gravity with Max. Load (mm)	50	25	40	100
Max. Welding Electric Current (A)	500			750
External Dimensions (W x D x H) (mm)	421×530×379	542×747×432	575×750×550	744×993×728
Body Weight (kg)	28	60	110	270
Input Power Source	1-Phase 100 - 240V 50/60Hz			3-Phase 200/380V 50/60Hz

High Functioning Small Positioner

# LD-RW Series

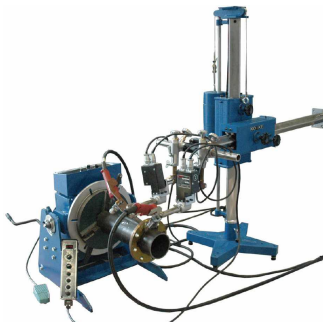
A high-functioning compact positioner series that enables the automation of circumferential welding with a single unit. It can also be extended by using the weaving unit (sold separately) or the external operation box.

## Overview

Advanced model that adds a welding interlocking function to the compact positioner LD-R. Combined with Scroll Chuck and Torch Stand, it provides automatic circumferential welding system with little effort.

Adding the optional weaving unit function expands the welding range even further. The twin torch weaving consists of:

- LD-150RW Positioner
- Weaving Unit WU-3R×2
- Remote Pendant
- Scroll Chuck WP-300
- Torch Stand L



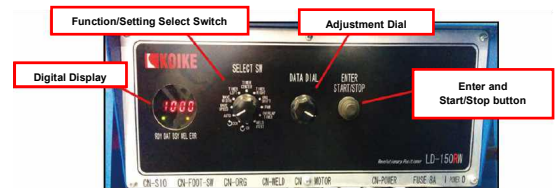
Combination with torch stand

## Feature

- Automates circumferential welding just by including a connector
- Reduces wiring with an internal controller
- Compatible with crater current switching of welder
- Welding schedule can be managed easily with the digital display



LD-150RW



## Main Specification

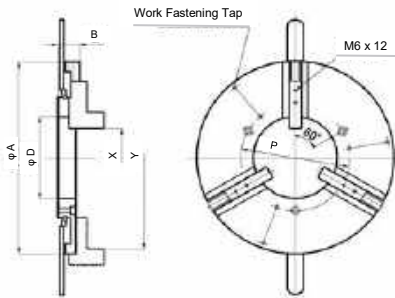
Model Name	LD-60RW	LD-150RW	LD-300RW	LD-600RW
Stock No.	ALD10105	ALD10205	ALD10305	ALD10405
Maximum Horizontal Load (kg)	60	150	300	600
Maximum Vertical Load (kg)	30	120	200	500
Table Diameter (mm)	φ300	φ380	φ450	φ620
Table Tilt Method		Manual		Electric
Max. Table Tilt Torque (kgf/mm)		Manual		141500
Max. Tilt Torque of Center of Gravity with Max. Load (mm)		Manual		141500
Table Tilt Axis Distance (mm)	96		100	133
Table Tilt Angle	-135 - 135°		0 - 90°	
Table Rotation Speed (rpm)	0.42 - 16	0.15 - 6.2	0.23 - 4.6	0.2 - 1.10
Max. Rotation Torque (kgf/mm)	1500	3000	8000	50000
Max. Eccentricity of Center of Gravity with Max. Load (mm)	50	25	40	100
Setting Items	Standard Function	Rotation Speed Adjustment, Normal Rotation/Reverse Switch, Automatic Circumferential Welding Mode/ Manual Operation Mode Switch, Initial Arc Time Settings (0~99.99 sec.), Overwrap Time Settings (0~99.99 sec.)		
	WU-3R	Weaving unit swing speed settings (400 - 1500mm/min), Weaving unit swing width setting (0 - 100.0mm), Weaving unit left/middle/right stop time (0 - 10 sec.)		
Max. Welding Electric Current (A)		500		750
Operation Panel		Installed in main body		Remote Pendant
External Dimensions (W x D x H) (mm)	421×579×379	542×747×432	575×750×550	744×993×728
Main Body Weight (kg)	35	66	115	271
Input Power Source Single Phase		1-Phase 100 - 240V 50/60Hz		3-Phase 200/380V 50/60Hz

## Turning Roll Chuck

# WP Series

### Feature

- Perfect combination with LD series positioner
- Compatible with work of different diameter by opening/closing the three jaws
- Tap hole is also available to prevent workpiece from slipping on the table surface



WP - 400

### Main Specification

Model Name	WP-200	WP-300	WP-400	
Stock No.	W0300100	W0300200	W0300300	
Dimensions (mm)	A	200	300	400
	B	39		45
	D	80	100	170
	P	100	120	220
Included Mounting Bolts	Hexagon bolts with hole M8×30 3units		Hexagon bolts with hole M8×40 3units	Hexagon bolts with hole M10×40 3units
	Grip Range (mm)	X	20 - 130	80 - 190
Y		110 - 210	170 - 280	250 - 380
Grip Force (KN(kgf))	2 (200)	2.5 (250)	3.5 (350)	
Body Weight (kg)	6	12	24	

### Positioner Compatible Table

Model	WP-200	WP-300	WP-400
LD-60R/RW	Handle with included bolts	Hexagon bolts with hole M8-45 3units*1	Hexagon bolts with hole M10-50 3units*1
LD-150R/RW	Handle with included bolts		Hexagon bolts with hole M10-60 3units*1
LD-300R/RW	Hexagon bolts with hole M8-40 3units*2	Hexagon bolts with hole M8-35 3units	Hexagon bolts with hole M10-50 3units*1
LD-600R/RW	Hexagon bolts with hole M8-40 3units*2	Handle with included bolts	Hexagon bolts with hole M10-55 3units*1

\*1. Put the screw through slit on table and tighten with bolt from the back side. Please prepare separately the screws required for the installation.

\*2. Tap added in the table requires additional processing. Separate processing fees are required when tap processing is ordered.

# WPS Series

### Feature

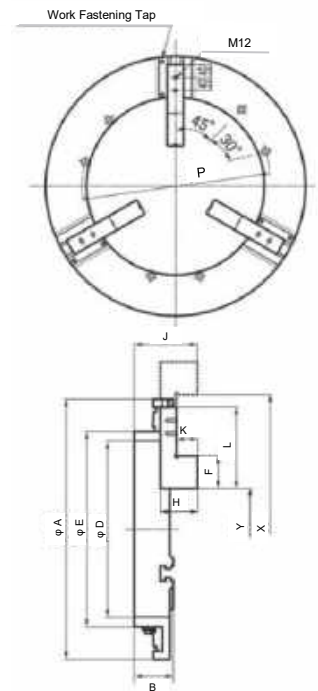
- Welding chuck for large workpieces
- Compatible with work of different diameter by opening/closing the three jaws
- Hole structure that reduces the height of the center of gravity



WPS - 600

### Main Specification

Model Name	WPS-500	WPS-600	WPS-800	WPS-1000	WPS-1200	
Stock No.	2WP00500	2WP00600	2WP00700	2WP00800	2WP00900	
Dimensions (mm)	A	500	600	800	1000	1200
	B	105		120	135	145
	D	270	365	540	700	830
	E	330	425	600	760	900
	F	70		100		
	H	100		115		
	J	170	195		210	220
	K	60		65		
	L	200		250		
Included Mounting Bolts	M12×100 6units		M16×130 6units		M16×140 6units	
	Grip Range (mm)	X	330 - 540	400 - 620	550 - 830	750 - 1050
Y		50 - 330	150 - 400	250 - 550	450 - 750	600 - 900
Grip Force (KN(kgf))	20 (2000)			29 (3000)		
Height of Center of Gravity x Capability	100/mm×600kg	150/mm×600kg	200/mm×600kg	250/mm×600kg	300/mm×600kg	
Max. Load Capability (kg)	800	1000	1500		2000	
Body Weight (kg)	57	87	110	180	290	



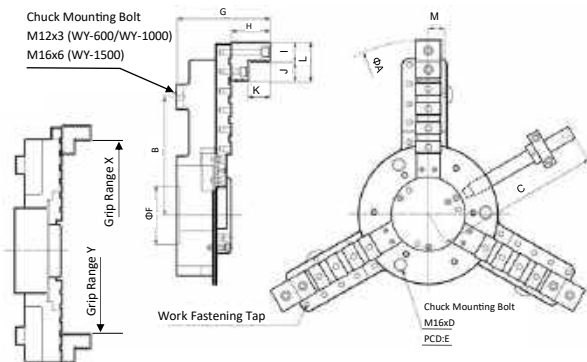
Chuck

# WY Series



WY-1000

Chuck Mounting Bolt  
M12x3 (WY-600/WY-1000)  
M16x6 (WY-1500)



## Feature

- Welding chuck for large workpieces
- Compatible with work of different diameter by opening/closing the three Jaws
- Tap hole is also available to prevent workpiece from slipping on the table surface

## Main Specification

Model Name	WY-600	WY-1000	WY-1500	
Stock No.	2WP00201	2WP00301	2WP00501	
Dimensions (mm)	A	726	1126	1640
	B	250	430	530
	C	340	545	692
	D	3		6
	E	241.3		340.4
	F	120		260
	G	190.7		244.5
	H	80		95
	I	40		50
	J	40		50
	K	45		48
L	80		100	
M	34	50		85
Grip Range (mm)	X	240 - 640	240 - 1040	335 - 1535
	Y	160 - 560	160 - 960	235 - 1435
Grip Force (KN(kgf))	20 (2000)		29 (3000)	
Height of Center of Gravity x Capability (mm) x (kg)	100×400		100×700	
Max. Load Capability (kg)	600		1200	
Body Weight (kg)	58	90	230	

Turning Roll

# TR-R Turning Roll

## Overview

The KOIKE Turning Roll **TR Series** is a line-up of models that support loads from 1 ton to 50 tons.

For roller interval adjustment, **TR-1BR** is set to any position on the frame and fixed in place, **TR-3BR** is fixed in place with a knock-pin and for TR-5R and above models, a screw structure is used.

Besides the standard nitrile rubber, roller materials are available in urethane, which helps prevent damage to installed work piece and steel, which is resistant to friction.



## Main Specification

Model Name	TR-1BR	TR-3BR	TR-5R	TR-10R	TR-20R	TR-30R	TR-50R
Stock No.	ATR22100	ATR22200	ATR22400	ATR22500	ATR22600	ATR22700	ATR22800
Maximum Load (kg)	1000	3000	5000	10000	20000	30000	50000
Maximum Diameter (mm)	50 - 1500	200 - 2000	300 - 3500		400 - 5000		500 - 6000
Roller Peripheral Speed (mm/min)	70 - 700	139 - 1390	134 - 1340	139 - 1390	148 - 1480		147 - 1470
Roller Interval (mm)	160 - 700	210 - 900	420 - 1600		420 - 2200	470 - 2200	500 - 2800
Roller Dimension Dia. x W (mm)	150×100	200×120	300×120	300×140	300×160	300×180	420×240
Drive	1 wheel			2 wheels			
Body Weight (kg)	200	260	900	930	1400	1500	3250
Input Power Source	3-Phase 200/380V 50/60Hz						

Medium-sized Positioner

# ***P11-Type Series Positioner***

Medium-sized positioner designed to provide safety and simple structure with excellent operability.

## **Overview**

KOIKE **P11-Type Series** Positioner provides easy operation and excellent safety while a medium-sized positioners. The simple table elevating function enables the positioner for working on different position and tasks.

## **Feature**

- Can be adjusted at 5 levels (a crane is required to adjust height)
- Rotation table tilt range is assured at 0-135°
- Self-locking structure gear box avoid table to flip over under the workpiece's weight
- Table can be rotated by standard accessory: 2-pedal foot switch.



60P11



120P11

## **Main Specification**

Model Name	30P11	60P11	120P11
Stock No.	20100	20300	20500
Maximum Load (kg)	1350	2700	5400
Table Dimensions	φ1067	φ1524	
Tilt Speed (rpm)	50Hz:0.44 60Hz:0.52	50Hz:0.52 60Hz:0.62	
Tilt Torque N/m (kgf/m)	6400 (658)	14200 (1455)	30100 (3070)
Max. Height of Center of Gravity with Max. Load (mm)	300		
Table Tilt Angle	0 - 135°		
Table Rotation Speed (rpm)	0.12 - 1.2	0.10 - 1.0	0.08 - 0.8
Rotation Torque N/m (kgf/m)	4000 (415)	8100 (831)	16200 (1662)
Max. Eccentricity of Center of Gravity with Max. Load (mm)	300		
Table Height (mm)	1095 - 1695 (150 pitch)	1256 - 1864 (152 pitch)	1263 - 1863 (150 pitch)
Max. Welding Electric Current (A)	750		
Outside Dimensions (W x D) (mm)	1558×1975	1754×2156	1830×2248
Body Weight (kg)	1710	3000	3200
Input Power Source	3-Phase 200/380V 50/60Hz		



# Automatic Girth Welder



Automatic Girth Welder



### Feature

- Self propelled unit for controlled quality
- Travel speeds from 100mm/min to 2,700mm/min based on procedures
- Plate sizes up to 3m tall and up to 45mm thick, tanks 9m in diameter or larger
- Can use any combination of wire and flux based on procedure
- Can weld from one side or both sides of tank
- Can weld with single wire or tiny twin wire; sub arc or open arc process

# VUP / Vertical Up Tank Welder



### Feature

- High deposition rates of 18 to 30 kg per hour
- Fast vertical speeds, 230mm/min on 9mm plate, 150mm/min on 25mm plate, 100mm/min on 100mm plate
- X-Ray quality with impacts better than 13.5m/kg at -17°C
- Weld joints of either square edge or single bevel
- Square butt reduces plate preparation time
- Operates with either two movable shoes or one moving shoe with a fixed backing bar

# VI-2. Plasma Welding



Inverter-control / Pulse plasma

**PW-350FR**

(Medium steel plates 3 to 9mm)

Inverter-control / Pulse plasma

**PW-100FR (Thin plates 0.5 to 5mm)**



Butt welding (Stainless 0.1mm I)

Coupling (SU5304)



Hollow ball



Pipe joint (SU5304)



Welding beilows

### Feature

- Bevel cutting is not necessary
- Easy penetration beading
- Very few angular distortion
- Sputter less
- Little electrode consumption

### Main Specification

Model Name	PW-350FR	PW-100FR
Rated input voltage (V)	200±10%	
Rated Frequency & Phase	3phase, 50/60Hz	
Rated Input Voltage (kVA)	19.6	6.9
Rated Output Current (A)	350	100
Duty Cycle	300A 100%	
Rated Load Voltage (V)	40	35
Pulse Frequency Range	0.5 - 300 (2stage)	
Pulse Duty Range	15 - 85%	
Gas	Plasma	Ar
	Shield	Ar + H <sub>2</sub>
Cooling System	Closed-loop forced water circulating	
Dimensions (WxDxH) (mm)	610×1088×1137	470×994×1020
Weight (kg)	220	140

Balance Positioner

# Universal Balance Positioner

## Overview

**Universal Balance Positioner** allow safe and quick manipulation of large objects with small manual force by setting work based on the center of gravity. **Universal Balance Positioner** doesn't use any force of motors. Work piece can be rotate 360 degrees around both axis, allowing effortless access to any desired location upon a mounted fixture.

## Feature

- Allows downhand position with rotation/turning operations
- Without using any kind of electric or air force

## Main Specification

Model Name	C-50	C-250	C-450	C-900
Stock No.	ABP00100	ABP00200	ABP00300	ABP00500
Maximum Load (kg)	50	250	450	900
Table Diameter (mm)	φ125	φ203		
Max. Height of Center of Gravity (mm)	150	300		
Rotation Method	360° Manual			
Tilt Method	360° Manual			
Table Height (when horizontal) (mm)	175	750-1050	775-1050	840-995
Max. Welding Electric Current (A)	600	800	1200	
Body Weight (kg)	7	95	100	200



C-900

# Torch Stand

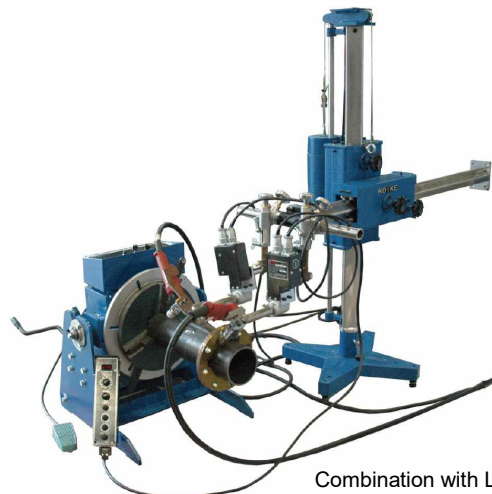
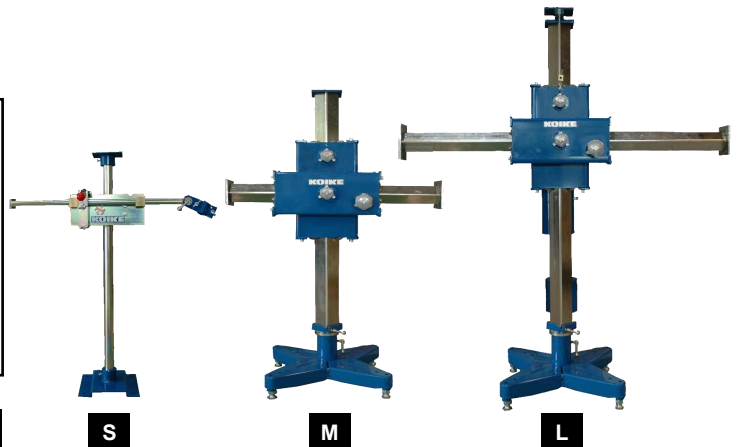
## Overview

The **Torch Stand** supports welding torch and assures accurate welding. Automatic welding system can be easily constructed by the combination of a variety of attachments.

The squared flange of the boom edge in **Torch Stand M** and **L type**, allows the installation not only CO<sub>2</sub> welding torch but also weaving unit WU-3R.

## Main Specification

Model Name	Torch Stand S	Torch Stand M	Torch Stand L
Stock No.	W0200100	W0200200	W0200300
Height (mm)	800	1106	1330
Arm Length (mm)	660	662	1088
Vertical Stroke (mm)	500		
Horizontal Stroke (mm)	150	300	700
Edge Max. Load (kg)	5	10	
Main Body Weight (kg)	13	40	50
Weaving Unit Accessory	×	○	



Combination with LD-RW positioner





Total System Supplier of Gas, Cutting, and Welding

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