# Portable Beam Gas Cutting Machine



### For Easy, Accurate Clean Cuts

The Mini-Mantis II is a semi-automatic gas cutting unit for rapid and precise cutting of H-beam web and flange. For ease and optimum efficiency, the unit features:

- Rail and main unit have been combined resulting in reduced setup time.
- Single-lever rail clamping
- PWM control for smooth, even cutting speed.
- Unit is constructed for easy maintenance and serviceability

Add to these features KOIKE's quality construction, ensuring durability and trouble-free operation, and you have an economical, efficient, compact gas cutting machine for small H-beam steel.

# Oxy Fuel Beam Cutter Bevel or straight cut steel beams

- Automatic Pilot Flame Set preheat only once; pilot flame between cuts saves time and gas
- Three Rail Sizes For efficient setup in cutting web

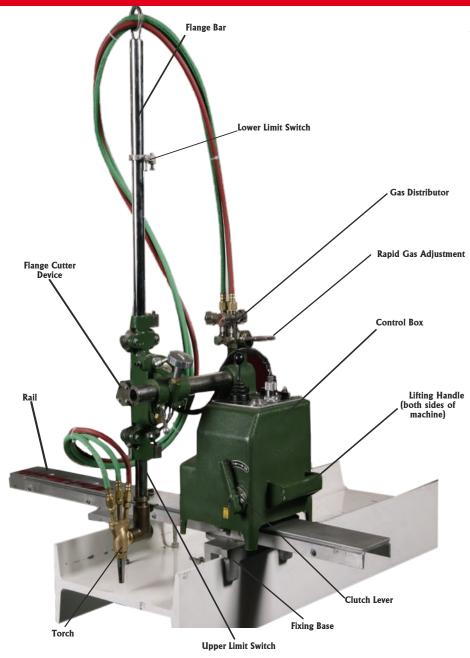
Features & Benefits

- Long Flange Bar Option For cutting of longer flanges up to 47 ¼ in (1200mm)
- 4-Way Jog Direction Control
   Automates vertical and horizontal travel
- Adjustable Rail and Rack Bar Angle Allows diagonal cuts on web and flange
- Lightweight and Portable Total weight including rail is only 44 lb (20kg), making it easy to carry and use in tight spaces
- High Quality Tips

Koike's superior design Series 100 torch tips are included to ensure fast, smooth cuts

Optional Snap Valve
 One-touch on/off gas valve





## Why Mini-Mantis II?

Rapid Gas Adjustment

Koike's unique "One Touch Flame Adjuster" is used in the gas distribution system. The flame only has to be adjusted once, after which a flip of a lever stabilizes the flame at that setting. The pilot flame can be left on until the next cutting operation which results in a considerable savings of time and gas.

#### Highly Automated

The combination 4-way drive and cutting switch turns on the cutting oxygen and drive motion in one step. With the exception of the flange adjustment, nearly everything is automatic. For example, setting the stop to the flange size shuts off the cutting oxygen when flange cut is completed.

#### **Easy, Functional Controls**

Power switch, speed control, 4-way torch direction switch, rapid traverse, and indicator lamp are all grouped for easy use on the control panel.



Protractor on Rail



Diagonal Web Cutting



Diagonal Flange Cutting



Flange Bevel Cutting

## Easy To Use

#### No need to prepare or move workpiece.

The Mini-Mantis II has two motors, one for web-cutting and one for flange work. For web cuts, the carriage is driven along the rail; for flange cuts, the torch assembly is moved vertically through a rack-and-pinion drive. There is no need to turn and mark the workpiece.

# Designed to make diagonal cuts on the flange as well as the web, while bevel cutting.

The angle is set by adjusting the rail using built-in protractor or the vertical rack-bar resulting in high-precision diagonal cuts that are clean and sharp. Achieve the highest quality flange and web bevel cuts ever!

#### Two for the price of one- H-beam and plate cuts are possible.

The Mini-Mantis II is designed for cutting H-beams, but can also be used on plate as well. The flexibility of this machine makes it an ideal choice for your beam and plate cutting needs.

#### Quality cut-surface finish.

The smooth, steady, automatic cutting travel eliminates the need for secondary operations. You can begin welding as soon as you've finished cutting.



Plate cuts also possible



Light and portable

# Capacity

#### **Right Angle Cutting**

A= 6-24 in (150-600mm) \*Optional A: 6-36 in (150-900mm) or 6-60 in (150-1500mm)

B= 6-16 in (160-400mm) \*Option of up to 31 in (800mm)

**Diagonal Web Cutting** 

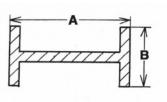
35° at 16 in (400mm) diagonal web length

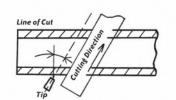
#### **Bevel Cutting**

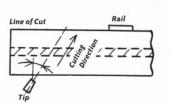
35° for both web and flange

#### Flange Diagonal Cutting

30° at 16 in (400 mm) maximum diagonal flange dimension







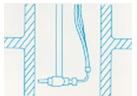
# **Koike Offers Versatility**

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## **Torch Set**

The Mini-Mantis II comes standard with the ST Short Torch.

The ST model is the short torch version which allows cutting of several H-beams together, where little spacing is available.



SPECIFICATIONS	WEB CUTTING	<b>FLANGE CUTTING</b>							
Cutting Thickness	<sup>1</sup> ⁄ <sub>4</sub> - 1- <sup>1</sup> ⁄ <sub>4</sub> (5-32mm)								
Cutting Speed	4-28 in/min (10	0-700 mm/min)							
Speed Control	PWM Control								
Drive Motor	DC shunt-wound motor, 5W (with reduction gear)								
Drive System	Friction Roller	Rack and Pinion							
Weight	44 lb (20kg) 44 in (1,100mm) Clamping bolts								
Rail Length (600L Standard)									
Rail Fixing									

Koike 100 Series cutting tips are recommended for best performance. Lifetime warranty on torch against a sustained flashback when using genuine Koike cutting tips (damaged tip and torch must be returned).

MODELS DESCRIPTION	PART#
<ol> <li>Mini-Mantis II Horizontal Drive Unit</li> <li>Mini-Mantis II Vertical Drive Unit</li> <li>Oxy-fuel Torch</li> </ol>	ZA425100501
<ul> <li>(3) Cutting tips Model 102 or 106</li> <li>(1) Safety-Z Coupling Set</li> <li>*Requires Rail, please choose from Rail Options</li> </ul>	Size 0, 1, and 2 ZA3232260
*Rail Options	
600L Standard Rail - 24 in (600mm)	ZA4251201
900L Rail - 36 in (900mm)	ZA4251202
1500L Rail - 60 in (1500mm)	ZA4251203

OPTIONAL EQUIPMENT	
Special Wide Flange Slide Bar 47-¼ in (1200mm) increases flange cutting from 16-31 in (400-800mm)	ZS32027



Against a sustained flashback when using a genuine Koike cutting tip

(Damaged torch and genuine Koike cutting tip must be returned)





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