

# IK-12 MAX3

Portable Welding and Gas/Plasma Cutting



## ***Serves as Both Cutting and Welding Carriage***

The IK-12Max3 is an new generation, innovative machine with a body structure systematized for different types of oxy-fuel/plasma cutting and automatic welding work. There are three major parts to the system – The advanced motorized carriage, a cutting torch unit and the plate track and accessories. All serving as independent units, the customer can choose the system needed for his specific requirements.

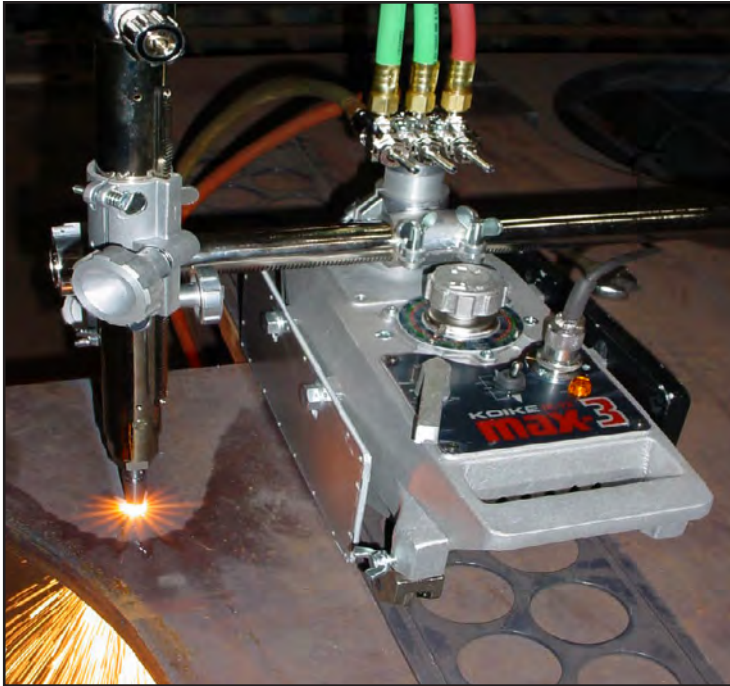
## ***Features & Benefits***

- **Multiple Application Carriage**  
Oxy fuel cut, plasma cut or MIG weld with various attachments
- **Multiple Use Machine**  
Performs straight line and circle cutting or welding
- **Double Cone Stepless Drive System**  
Maintains constant travel speed even with high temperatures; allows greater speed control
- **10 Torch Option Kits**  
Allows proper torch selection for each application; Koike's superior design Series 100 torch tips are included to ensure fast, smooth cuts
- **Plate Rider Torch Option**  
Automatically maintains torch distance during bevel or straight cutting
- **Extendable 1800mm (72in) Track Sections**  
Cut longer parts
- **Optional Snap Valve**  
One-touch on/off gas valve



# IK-12 MAX3

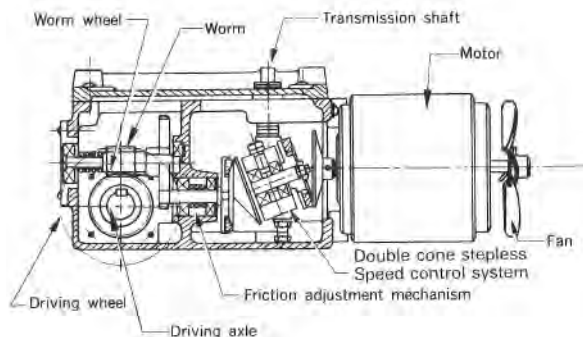
Portable Welding and Gas/Plasma Cutting



## Three Part System - Part 1: Advanced Motorized Carriage

The heavy duty driving mechanism of the IK-12 Max3 is not affected by intense heat and fluctuating voltage, therefore ensuring steady travel. The Speed Control utilizes an exclusive Koike Double Cone Stepless Speed System (see drawing below), which functions with a condensor motor rotating at regular speed to prevent heat and voltage problems. In addition, the condensor motor rotates at a constant low speed (1,800 r.p.m./60Hz), extending the service life of bearings. A “zero reduction drive system” is also employed within the mechanism to eliminate any knocking from backlash, noise and vibration. Protection from heat is maximized with the use of heat-resisting grease, high temperature soldering and Teflon wiring ensuring long, continuous operation.

The Koike Double Cone Stepless Speed System



## Part 2: Cutting Torch Unit

■ **S-100 – For Square or V-Bevel:**  
Single torch unit equipped with a simple holder having no floating function. Standard Pipe Arm Length: 350 mm (14in). Vertical adjustment up to 80mm (3in).

■ **S-200 – For square, V, Y or X-Bevel cutting:** Two torch model of S-100. Standard Pipe Arm Length: 500mm (20in). Balance weight attached. Bevel and parallel cutting possible.

■ **SP-100 – For Square or V-Bevel Cutting:** Single torch unit equipped with a plate rider having floating function to maintain distance between tip and workpiece. Standard Pipe Arm Length: 350mm (14in). Vertical axis steel pipe and Vertical adjustment up to 120mm (5in).

■ **SP-200 – For Square, V, Y, or X-Bevel Cutting**  
Two torch model of SPR-100 equipped with a plate rider having floating function to maintain distance between tip and workpiece. Standard Pipe Arm Length: 500mm (20in) - Balance weight attached. Bevel and parallel cutting possible.

■ **SP-300 (V-Cutting Unit) – For Square, V, Y, or X-Bevel Cutting:**  
A combination unit of plate rider having floating function and 2 torches of V bevel block. Clean and sharp bevel V, Y and X cutting is ensured.

■ **SP-400 (X-Cutting Unit) – For Square, V, Y, X or K-Bevel Cutting:**  
Combination unit of plate rider having floating function and 3 torches of X bevel block for precision X and K bevel cutting.

■ **IK12MAX3P:** The IK-12MAX3P uses standard 1-3/8inch 32 pitch torch holder for use with most plasma systems using remote pendant supplied by the plasma manufacturer. Speed of 4-118 IPM.

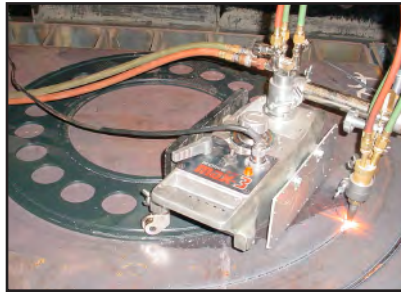
■ **IK12MAX3W:** The IK-12MAX3W uses standard MIG gun with remote pendant supplied by the MIG machine manufacturer.

■ **300LKIT:** The 300LKIT is an add-on torch kit for the the IK-12MAX3 that allows plate cutting from 1/4- 6 inch plus.

■ **EPOCH 300/600 (EPOCH Thick Plate Cutting Unit):** Single torch unit having EPOCH cutting tip of special structure designed exclusively for thick plate cutting. The distribution unit is equipped with a pressure gauge. Cutting Thickness: 100-300mm (4-12in using tip model EPOCH 300); 300-600mm (12-24in using tip model EPOCH 600)



IK-12MAX3 S-Type High/Low speed Machine Unit



Circle Track Part # BCD19109 Cuts 1 1/2 - 14" (40 - 360mm) inside and 30 - 45" (770 - 1,150mm) outside, counter weight recommended.



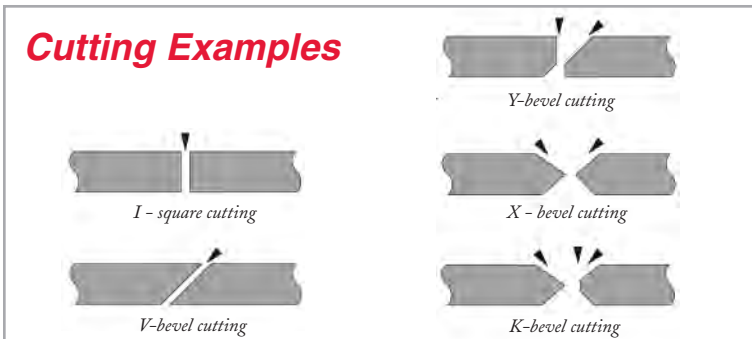
Roller bracket and torch holder 1 3/8" 32 pitch rack; Roller bracket Part # ZM61278, Torch holder K866-8428-00



Longer slide bars for Roller bracket above Standard length 6" (145mm) 10" (250mm) Part # ZS30430 16" (400mm) Part # ZS30433

SPECIFICATIONS FOR STANDARD MODEL	
Traveling Speed	80-800 mm/min (3-31in/min) 50Hz 100-1000 mm/min (4-39in/min) 60Hz
Speed Control	Double cone stepless system
Motor	Condenser type induction output 9/10W (50Hz/60Hz)
Speed Meter	Dial indication (w/conversion scale)
Weight	11.5kg (25lbs) S-100 model
Max. Loading Weight	50kg (100lbs)
Overall Measurement	430 (L) x 170(W) x 215(H) mm (17 x 7 x 8 1/2in)

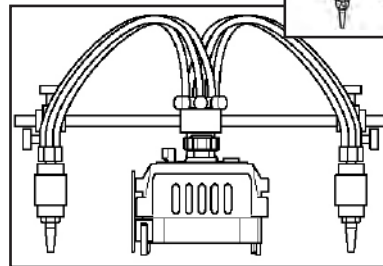
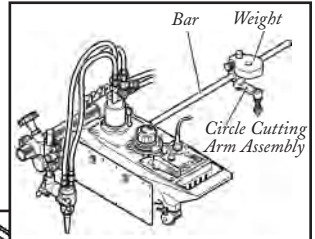
SPECIAL MODELS	
<b>IK-12MAX3 S-Type High/Low Speed Machine Unit</b>	Ultra versatile allows changing from low speed setting of 100 -1,000mm (4 -39in) per minute to 300 -3,000mm (12 - 118in) per minute. Great for oxy-fuel, plasma and welding use. Part # ZA405-1703
<b>IK-12MAX with Plasma Interface Kit</b>	Same speed capabilities as above machine, but includes a true plasma machine interface, limit switch and 1 3/8in. torch holder with 32 pitch rack. Part # ZM405-1753



## Part 3: Track, Accessories and Options

- **Straight Track 1,800mm (72in) Part #ZM30400**  
Tracks can be interconnected as required
- **Extreme Duty Track 1,800mm (72in) Part #ZS30400**  
Recommended when cutting thick plate over 150mm (6in); tracks can be interconnected as required
- **Heavy Duty Radiograph Track 1,800mm (72in) Part #0838-3959-00** Recommended for replacing or extending existing Radiograph track

- **Circle Cutting (Adjustable Radius Bar) Part #ZS31858**  
Allows cutting of circles from 40 - 2,650mm (1 1/2-104in)



Longer Cross Bar Application

- **Cross Bars**
- |                               |                |
|-------------------------------|----------------|
| 13.7" (350mm) as in S-100 set | Part # ZS30300 |
| 19.6" (500mm)                 | Part # ZS30321 |
| 30.3" (770mm)                 | Part # ZS61213 |
| 35.4" (900mm)                 | Part # ZS30424 |
| 47.4" (1200mm)                | Part # ZS30426 |
| 98.4" (2500mm)                | Part # ZS30429 |



Counter Weight - may be required for above Cross Bars; Part #ZS30346



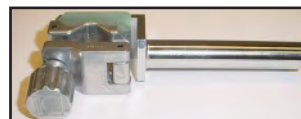
Plasma Interface Kit



Standard Bar Post #ZS30204 80mm (3in)  
Extended Bar Post #60032374 300mm (12in)

Bar Holder ZS30301

Bar Post and Bar holder for kit building



Optional MIG Gun torch holder (straight or goose neck) For use with Roller Bracket. Part #61000676

# Specifications

IK-12Max3-2000-0205



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

MODELS Description	Part #	
<b>S-100 Set Acetylene Kit</b>	<b>MAX3S100102</b>	
<b>S-100 Set LPG Kit</b>	<b>MAX3S100106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) S-100 1 Torch Set	ZA405-2017	
(3) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>S-200 Set Acetylene Kit</b>	<b>MAX3S200102</b>	
<b>S-200 Set LPG Kit</b>	<b>MAX3S200106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) S-200 2 Torch Set	ZA405-2018	
(6) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>SP-100 Set Acetylene Kit</b>	<b>MAX3SP100102</b>	
<b>SP-100 Set LPG Kit</b>	<b>MAX3SP100106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) SP100 Torch Set	ZA405-2019	
(3) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>SP-200 Set Acetylene Kit</b>	<b>MAX3SP200102</b>	
<b>SP-200 Set LPG Kit</b>	<b>MAX3SP200106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) SP200 Torch Set	ZA405-2020	
(6) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>SP-300 Set Acetylene Kit</b>	<b>MAX3SP300102</b>	
<b>SP-300 Set LPG Kit</b>	<b>MAX3SP300106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) SP300 Torch Set	ZA405-2021	
(6) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	

MODELS Description	Part #	
<b>SP-400 Set Acetylene Kit</b>	<b>MAX3SP400102</b>	
<b>SP-400 Set LPG Kit</b>	<b>MAX3SP400106</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) SP400 Torch Set	ZA405-2022	
(9) Cutting Tips - 102 for Acetylene, 106 for LPG	Koike 100 series	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>Epoch 300 Set</b> cuts from 100-300mm (4-12in) thick	<b>MAX3EPOCH</b>	
(1) IK-12 Max3 Unit*	ZA405-1404	
(1) Epoch 300 Torch Set	ZA405-2024	
(2) Cutting Tips	Epoch 300 series	
(1) Heavy Duty Straight Rail	ZS30407	
<b>300L Torch Kit</b> 3-300mm (1/6 - 12in) w/ 100 series tips Requires ZA405-1703 or ZA405-1404 machine unit and tips; use with IK-12Max3 to replace Radiograph machines	<b>300LKIT</b>	
<b>Plasma Kit</b>	<b>IK12MAX3P</b>	
(1) IK-12 Max3 S-type HS Unit	ZA405-1703	
(1) Bar Holder	ZS30301	
(1) Cross Bar 900mm (30in)	ZS30424	
(1) Torch Roller Bar Bracket	ZM61278	
(1) 32 Pitch Pinion Plasma Torch Holder, 1 3/8 in ø	K866-8428-00	
(1) Rail 1800 mm (72 in)	ZM30400	
<b>Welding Kit (optional)</b>	<b>IK12MAX3W</b>	
(1) IK-12 Max3 S-type HS Unit	ZA405-1703	
(1) Torch Set for Gooseneck Gun	ZA440-4110	
(1) Rail 1800 mm (72 in)	ZM30400	

OPTIONAL EQUIPMENT	
IK-12 Max3 Standard Unit <i>* Below units may be used to substitute standard unit</i>	ZA405-1404
IK-12 Max3 S-Type Convertible High/Low Speed Machine Unit	ZA405-1703
IK-12 Max3 Plasma machine w/ Torch Holder and Interface Box	ZM405-1753
IK-12 Max3 CSA Approved Unit	ZA405-1408
IK-12 Max3 Unit Only 220V	ZA405-1406
Circle Cutting Radius Bar Set	ZS31858
<b>Add Plasma to existing machine (required parts below)</b>	
(1) Torch Roller Bar Bracket	ZM61278
(1) 1 3/8 Plasma Torch Holder	K866-8428-00

OPTIONAL EQUIPMENT	
<b>Torch Sets Only for IK-12 Max3**</b>	
S-100 1 Torch Set w/ 3 tips <sup>†</sup>	ZA405-2017
S-200 2 Torch Set w/ 6 tips <sup>†</sup>	ZA405-2018
SP-100 1 Torch Set w/ 3 tips <sup>†</sup>	ZA405-2019
SP-200 2 Torch Set w/ 6 tips <sup>†</sup>	ZA405-2020
SP-300 2 Torch Set w/ 6 tips <sup>†</sup>	ZA405-2021
SP-400 3 Torch Set w/ 9 tips <sup>†</sup>	ZA405-2022
Epoch 300 1 Torch Set w/ 2 tips	ZA405-2024
<b>Rails</b>	
For IK-12 Beetle or IK-12 Max3	ZM30400
Circle Track IK12 Max3 only	BCD19109
Extreme Duty Rail for IK-12 Max3	ZS30407
Heavy Duty Radiograph Style Rail	0838-3959-00

\*\* Specify Cutting Tip - 102 for Acetylene, 106 for LPG. <sup>†</sup> Cutting Thickness 3-100mm (1/6 - 4in)



Main Office:  
635 W. Main St., P.O. Box 307  
Arcade, NY 14009  
Phone (585) 492-2400 Fax (585) 457-3517

Visit us at [www.koike.com](http://www.koike.com)



ISO 9001  
JQA-2093  
Koike Techno Center Products