IK-12 MAX3
Portable Welding and Gas/Plasma Cutting

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 Optional Torch 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 72 in (1800mm) Track Sections
  Achieves unlimited cut length

■ Optional Snap Valve
  One-touch on/off gas valve

Serves as Both Cutting and Welding Carriage

The IK-12 Max3 is an incredibly robust tractor, developed specifically to adapt to different solutions. With the 1 ½-inch diameter mounting post and 100-pound load capacity, the machine can be outfitted with different torch options in a matter of seconds thus saving you time and money by only having to supply one machine to do the job of many. The disk and cone drive system allows for extremely precise control over travel speed and when complimented by the 2-speed gearbox even plasma speeds are achievable. You can customize your machine specifically to your application by adding one of the pre-assembled plasma, welding or oxy-fuel torch sets or pick the specific parts you need on the attached pamphlet.
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, 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.

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: 14 in (350mm). Vertical adjustment up to 3 in (80mm).

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

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

- **SP-200 – For Square, V, Y, or X- Bevel Cutting**: Two torch model of SP-100 equipped with a plate rider having a floating function to maintain distance between tip and workpiece. Standard Pipe Arm Length: 20 in (500mm) - Counter 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 on a bevel block for precision X and K bevel cutting.

- **IK12MAX3P**: The IK-12MAX3P uses standard 1 ⅛ in 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 ¼ - 10 inch plus.

- **EPOCH 300 (EPOCH Thick Plate Cutting Unit)**: Having the ability to cut from 4-12 in material with a specifically designed torch tip. Very safe due to external gas mixture. Gas system includes pressure gauges at the machine.
Circle Track
Part # BCD19109
Cuts 1½ - 14 in (40 - 360mm) inside and 30 - 45 in (770 - 1,150mm) outside, counter weight recommended.

Vertical slide bars for roller bracket
Part # ZS30390: 6 in (145mm) (standard length)
Part # ZS30430: 10 in (250mm)
Part # ZS30433: 16 in (400mm)

Part 3: Track, Accessories and Options

Straight Track 72 in (1,800mm)
Part # ZM30400
Tracks can be interconnected as required

Extreme Duty Track 72 in (1,800mm)
Part # ZS30407
Recommended when cutting thick plate over 6 in (150mm); tracks can be interconnected as required

Circle Cutting (Adjustable Radius Bar)
Part # ZS31858
Allows cutting of circles from 1½ - 104 in (40 - 2,650mm) (1½ - 104 in) diameter.

IK-12 Max3 Plasma Interface Kit
Part # 61004469
Same speed capabilities as above machine but includes a true plasma machine interface, limit switch and 1¼ in torch holder with 32-pitch rack.

IK-12 Max3 S-Type High/Low Speed Machine Unit
Part # ZA4051703
Ultra versatile allows changing from low speed setting of 4-39 in/min (100-1000mm/min) to 12-118 in/min (300-3,000 mm/min). Great for oxy-fuel, plasma and welding use.

SPECIAL MODELS

Snap Valve
One-time On/Off Gas Valve
Part # SNAPVALVE: used on IK-12 Max3 with 1 torch
Part # SNAPVALVEII: used on IK-12 Max3 with 2 torches
Part # SNAPVALVEVE: used on IK-12 Max3 with 300L Torch kit

IK-12 Max3 Plasma Torch Holder
Part # ZM61278
2. Oxy-Fuel Torch Holder
Part # ZS61108
3. MIG Gun Torch Holder
Part # 61000676
4. Subarc clamp
Part # 1115992900
Note: MIG Gun Torch Holder (3) and Subarc clamp (4) must be ordered together.

Cross Bars Part #
13.7 in (350mm) as in S-100 set
Part # ZS30300
19.6 in (500mm)
Part # ZS30321
30.3 in (770mm)
Part # ZS61213
31.5 in (800mm)
Part # ZS30424
47.4 in (1200mm)
Part # ZS30426
98.4 in (2500mm)
Part # ZS30429

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

Circle Cutting (Adjustable Radius Bar)
Part # ZS31858
Allows cutting of circles from 1½ -104 in (40 - 2,650mm) (1½ - 104 in) diameter.

Rail Clamp - Magnet
Part # ZA3236020
Holds rail steady onto plate

Traveling Speed 3-31 in/min (80-800mm/min) 50Hz
4-39 in/min (100-1000mm/min) 60Hz

Motor Condenser type induction output 9/10W (50Hz/60Hz)

Speed Indicator Dial indication

Weight 25 lb (11.5kg) S-100 model

Max. Loading Weight 100 lb (50kg)

Overall Dimensions 17 (L) x 7(W) x 8-1/2(H) in (430 x 170 x 215mm)

Specifications for Standard Models

Specifications for Standard Models
## MODELS

### DESCRIPTIONS

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<td>MAX3S100102</td>
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<td>S-100 Set LPG Kit</td>
<td>MAX3S100106</td>
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<td>(1) IK-12Max3 Unit*</td>
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<td>(1) S-100 1 Torch Set</td>
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<td>S-200 Set Acetylene Kit</td>
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<td>OPTIONAL EQUIPMENT</td>
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<tr>
<td>IK-12Max3 Standard Unit</td>
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<td>IK-12Max3 S-Type Convertible High/Low Speed Machine Unit</td>
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<td>IK-12Max3 Plasma machine w/ Torch Holder and Interface Box</td>
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<td>IK-12Max3 Unit Only 220V</td>
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<tr>
<td>Circle Cutting Radius Bar Set</td>
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<td>Add Plasma to existing machine (required parts below)</td>
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<tr>
<td>(1) Torch Roller Bar Bracket</td>
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<td>(1) 1¾ in Plasma Torch Holder</td>
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** Below units may be used to substitute standard unit.

** Specify Cutting Tip -102 for Acetylene, 106 for LPG.

* Cutting Thickness ¼ - 4 in (3-100mm)