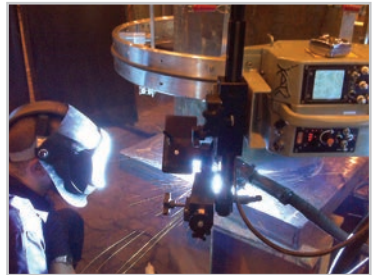


RIGID, SEMI RIGID & FLEXIBLE TRACKS



PIPE WELDING



SHIPBUILDING



CLADDING



TANK WELDING



**KAT WELD OSCILLATION CARRIAGE**

Ideal for heavy fabrication industries such as: Shipbuilding, Tank Welding, Pipeline and Bridge Construction

Motorized weld center line adjustment

Motorized stroke width adjustment

Precise oscillation speed control

Stores up to 10 different weld programs for quick recall of frequently used processes



LINEAR TORCH MOTION

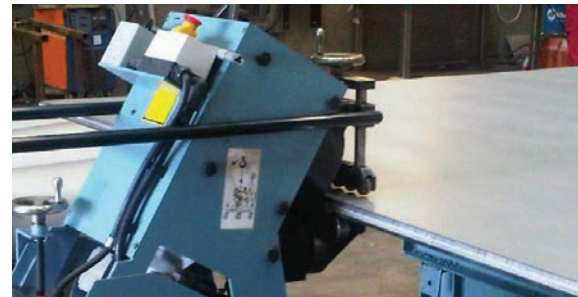
PENDULUM TORCH MOTION

TANGENTIAL / SCRIBING TORCH MOTION

**KAT® AUTOMATED WELDING CARRIAGE**

The Gullco KAT® is used throughout the world to automate a wide variety of welding and cutting operations. It is a durable, reliable precision travel carriage designed for use on rigid, semi rigid and flexible track which enables it to operate in any welding position. Gullco manufactures several systems and accessories designed for use with the KAT® making it one of the most versatile pieces of welding and cutting automation equipment available in the industry.

**KBM® PLATE BEVELLING MACHINES**



**HYDRAULIC ADJUSTABLE UNDERCARRIAGE**



KBM-18-080

For easy height adjustment KBM-18® units can be supplied with two types of undercarriage. Both are supplied with Gullco exclusive self-aligning caster wheel assemblies to maintaining a uniform bevel and consistent root face. Undercarriage sold separate

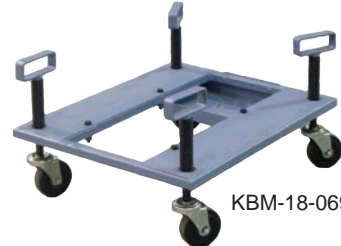


KBM-18-100  
KBM-18-069



KBM-28-100  
KBM-28-080

**CASTER SPRING LOADED ADJUSTABLE UNDERCARRIAGE**



KBM-18-069

Adjustable undercarriages come with Gullco's adjustable height self-aligning spring loaded caster wheel assemblies for self-propelled operation. Best suited for applications where constant machine height is required. The spring-loaded wheels help to eliminate imperfections in the ground to ensure a clean consistent bevel. Sold separately.

**KBM® Plate Edge Bevelers - Portable - Self Propelled**

These plate bevelers produce clean machined bevels with no thermal distortion on mild steel, stainless steel and aluminum plate from 1/4" (6.0 mm) to 1 1/2" (38.1 mm) thick. Thinner material can be bevelled. The KBM® automatically bevels the topside of the plate which results in a reduction of time and cost while reducing operator fatigue and improving the work environment by eliminating noise and hazardous grinding dust. Adjustable undercarriage for easy height adjustment come in both manual and hydraulic (sold separately).

**KBM®**

...for bevelling the top-side of plate

**KBM®**

...for bevelling the under-side of plate

**BEVEL UP TO 3m/min**

**KBM-28U® UNDERSIDE BEVELLER**

The KBM-28U® is perfect for bevelling the underside of the plate without need for flipping the work piece over. In combination with the KBM-28® efficiency is greatly increased when bevelling both the top and bottom of the plate.



**STANDARD MOGGY®**



**MAGNETIC MOGGY®**



The MOGGY® a lightweight, portable, four wheel friction drive travel carriage that can be used with or without track to automate welding operations. A speed potentiometer provides infinite speed selection within the speed range. The unit comes complete with adjustable guide rolls, travel limit switch assembly, vertical and horizontal slides providing 1 3/4" (44.4mm) adjustment and a semi-automatic gun holder. It is designed to run on a horizontal path against a vertical surface or a vertical path against a horizontal surface (Magnetic MOGGY®) to perform a fillet weld.

**MODEL GM-03-100** (Magnetic Model **GM-03-300**) MOGGY® Carriage with control for continuous or stitch welding. The control uses a Gullco microprocessor to provide accurate repeatability regardless of travel speeds for weld distance on and weld distance off. It has a forward/stop/reverse switch, wire feed start on/off switch, travel speed potentiometer, auto wire feed start with delay carriage start, wire feed connector with 15 ft. (4572mm) control cable.

**FILLET JOINT WELDING**



The MOGGY® performing a fillet weld using a template, guide or fence positioned parallel to the workpiece. The actual workpiece is often used as the guide.

**LAP JOINT WELDING**



The MOGGY® is performing a lap joint weld. It is guided by Industry Standard 6" (152.4mm) v-groove track running parallel to the joint.

**BUTT JOINT WELDING**



The MOGGY® is ideal for butt joint welding. Here the MOGGY® is using a fence to guide it accurately along the desired path. Standard v-groove track can also be used.

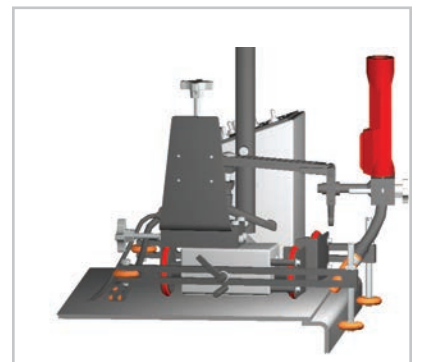
**DUAL GUN WELDING**



Dual gun holder assembly mounted on the MOGGY® enables positioning of two guns and simultaneous activation of two wire feed signals. MOGGY® is guided by the workpiece.



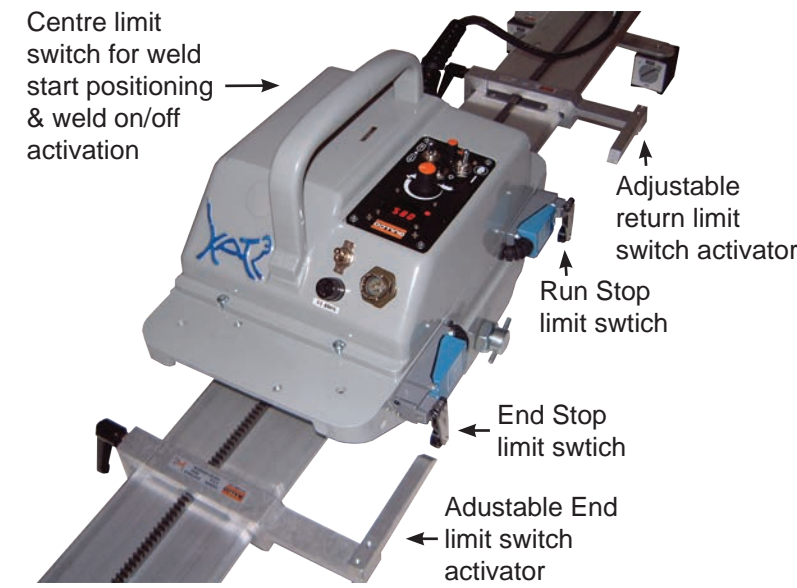
**MOGGY® AUTOMATION CARRIAGE FOR FILLET LAP AND BUTT WELDS**



The MOGGY® guide roller assemblies can be configured in a variety of ways enabling extreme versatility.



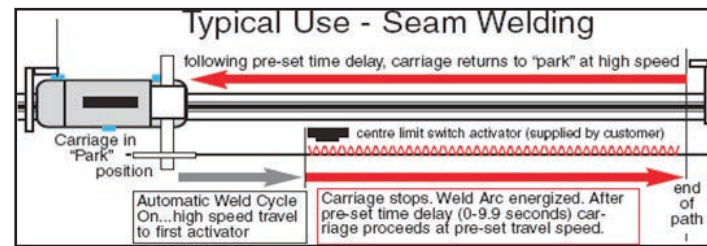
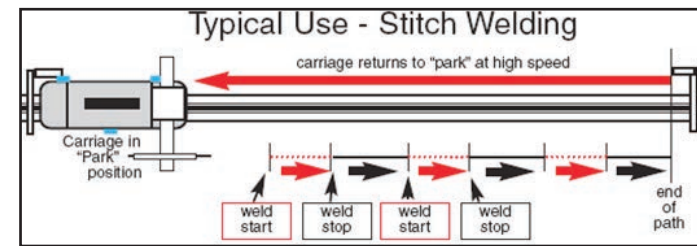
# KAT® AUTO-WELD CARRIAGE



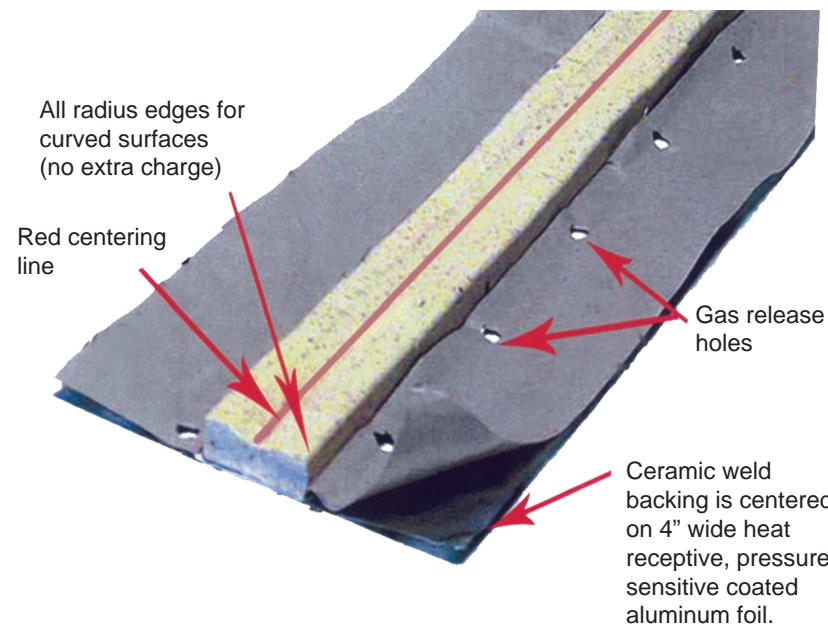
**MODEL GK-200-R\*-A**  
For use on KAT® Rigid Track

**MODEL GK-200-F\*-A**  
For use on KAT® Rigid Track

The KAT® Carriage Auto-Weld enables a wide variety of automated welding cycles that can be repeatedly performed along any plane. The advanced Auto-Weld control monitors, via distance travelled, and responds to limit switches mounted on the KAT® which in turn respond to adjustable activators mounted at appropriate positions on the KAT® Track. Travel direction/speed and length of travel path are synchronized with precise weld start and weld stop settings. By combining different control settings and limit switch activator positions, a wide variety of welding cycles can be repeatedly performed. The KAT® Auto-Weld Combination is ideal for stitch welding and seam welding applications where repeatability and accuracy are desired. The reliability and precision of this automated welding system reduces cost, adds efficiency and improves quality.



# KATBAK® CERAMIC WELD BACKING



Impart x-ray quality back beads on the root pass.

Weld one side only

Deposit more weld metal

Eliminate defects and rework

Eliminate costly unnecessary gouging and grinding

Size 1/4" (6.3 mm) to 2" (51 mm) special sizes and configurations available

Conveniently packaged and sealed in plastic for moisture proof protection

Wider heat receptive pressure sensitive foil for improved adhesion to work piece



TANK BUILDING



PIPE WELDING



SHIP BUILDING



BRIDGE BUILDING

KATBAK® Ceramic Weld Backing Improves Weld Quality, Saves Time and Reduces Cost

MODEL	SPECIFICATION/TYPICAL APPLICATION	SPECS. inches / (mm)
1033-R-1/4 (12.25" - 426.75mm)	Similar to the 1033-R tile but in 1/4" lengths making it much more flexible to wrap around smaller diameters of pipe and vessel.	1/4" x 1 1/2" x 1 1/2" (6.35 x 38.1 x 38.1)
1033-R (12.25" - 426.75mm)	This tile is most suitable for those applications where slag is involved, mainly M.A.G. welding with cored wire. It gives space for the slag to go while leaving a good root bead. Each tile is radially to form a strip around the cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1042-R (12.25" - 426.75mm)	This tile is useful for M.I.G. welding with solid wires and metal cored wires. It is also useful for T.J.G. welding. Cored wires can also be used with this tile but smaller root reinforcement will be produced. Each tile is radially to form the strip around a cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1043-R (12.25" - 426.75mm)	This tile is for similar applications as the 1042-R but where a narrower root bead is required. Each tile is radially to form a strip around a cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1062-R (12.25" - 426.75mm)	This tile is similar to the 1042-R but it is thicker and more robust for heavier weld deposits and higher amperages. Each tile is radially to form the strip around the cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1066-RD (12.25" - 426.75mm)	This is a 6mm round tile suitable for X preps, K preps and single bevel, single V butt joints (similar to fillet welds) on thin plates up to 10mm thick. Suitable for welding with M.I.G./M.A.G. solid, flux cored or metal cored wires. 1066-RD is for use on thicker plates.	6mm Round (19.05mm)
1069-RD (12.25" - 426.75mm)	This is a 6mm round tile suitable for X preps, K preps and single bevel, single V butt joints (similar to fillet welds) on thin plates up to 10mm thick. Suitable for welding with M.I.G./M.A.G. solid, flux cored or metal cored wires. 1069-RD is for use on thicker plates.	6mm Round (19.05mm)
1013-RD (12.25" - 426.75mm)	These tiles are for similar uses as the 1066-RD but for thicker plates up to 15mm thick. Suitable for welding with M.I.G./M.A.G. solid, flux cored or metal cored wires.	6mm Round (19.05mm)
1015-RD (12.25" - 426.75mm)	These tiles are for similar uses as the 1066-RD but for thicker plates up to 15mm thick. Suitable for welding with M.I.G./M.A.G. solid, flux cored or metal cored wires.	6mm Round (19.05mm)
1020-RD (12.25" - 426.75mm)	These tiles are for similar uses as the 1066-RD but for thicker plates up to 15mm thick. Suitable for welding with M.I.G./M.A.G. solid, flux cored or metal cored wires.	6mm Round (19.05mm)
1033-45 (12.25" - 426.75mm)	All 1033 tiles are suitable for K or X preps where the bevel angles are 45, 60 or 90 degrees. Also suitable for welding with M.I.G./M.A.G. solid wire, metal cored or flux cored wires. They are a substitute for round tiles where the benefit of the 1033 range of tiles is a "full-face" contact with the joint preparation, reducing the risk of burn-through as may occur with the round tiles where you have a single point contact of the tile with the work piece. 1033-90 also used when reverse side of a single bevel, single V butt joint where the reverse angle will always be 90°.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1033-60 (12.25" - 426.75mm)	All 1033 tiles are suitable for K or X preps where the bevel angles are 45, 60 or 90 degrees. Also suitable for welding with M.I.G./M.A.G. solid wire, metal cored or flux cored wires. They are a substitute for round tiles where the benefit of the 1033 range of tiles is a "full-face" contact with the joint preparation, reducing the risk of burn-through as may occur with the round tiles where you have a single point contact of the tile with the work piece. 1033-90 also used when reverse side of a single bevel, single V butt joint where the reverse angle will always be 90°.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1033-90 (12.25" - 426.75mm)	All 1033 tiles are suitable for K or X preps where the bevel angles are 45, 60 or 90 degrees. Also suitable for welding with M.I.G./M.A.G. solid wire, metal cored or flux cored wires. They are a substitute for round tiles where the benefit of the 1033 range of tiles is a "full-face" contact with the joint preparation, reducing the risk of burn-through as may occur with the round tiles where you have a single point contact of the tile with the work piece. 1033-90 also used when reverse side of a single bevel, single V butt joint where the reverse angle will always be 90°.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1062 (12.25" - 426.75mm)	This tile is used when two plates to be welded are of a different thickness and is suitable for MIG welding with solid wire, metal core wire and can also be used with flux core wire.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)

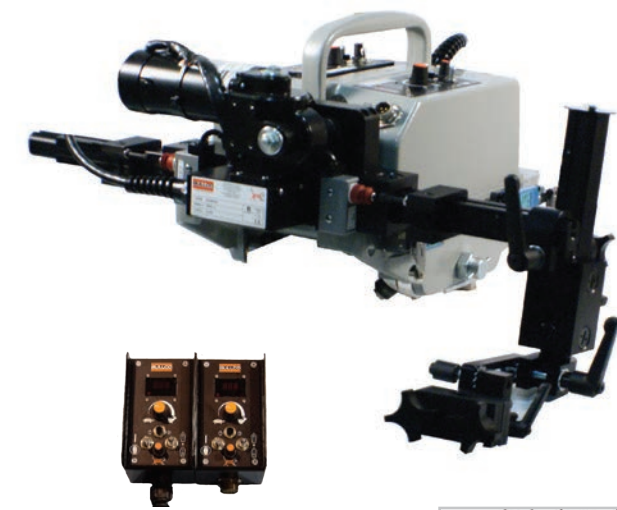
Available in 1/4" to 2" (6.3 mm to 50.8 mm) tiles

KATBAK® Ceramic Weld Backing Can Lay Root Weld & Fill In One Pass With X-Ray Quality Back Beads

MODEL	SPECIFICATION/TYPICAL APPLICATION	SPECS. inches / (mm)
1042-ER (12.25" - 426.75mm)	This tile is suitable for use with M.I.G./M.A.G. applications with solid, flux or metal cored wires where minimal penetration is required but higher amperage is necessary because the small up-stands that are present in this tile will not burn away with amperages less than about 120 amps. Each tile is radially to form the strip around a cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1041-R (12.25" - 426.75mm)	This is similar to the 1042-R but has a slightly smaller groove where more penetration is required than with the 1042-R. Each tile is radially to form a strip around a cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1044-R (12.25" - 426.75mm)	This tile is a larger tile and has a larger groove than the 1042-R tile or the 1041-R tile where the user needs more penetration and more substance in the tile. Possibly for submerged arc welding applications and thicker plates. Each tile is radially to form a strip around the cylinder.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1061 (12.25" - 426.75mm)	This is for inserting behind plates where there is a taper on the backside of the plate. This tile allows the groove portion to fit snugly against the root. Note that these tiles are square edged and so, will not go round a radius. They are meant for flat plates. Again, these tiles are used for M.I.G./M.A.G. welding with all the wires.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1060 (12.25" - 426.75mm)	This tile has upturned sides for use when the plates are introduced at an angle or with differing thicknesses to allow the root of the weldment to sit snugly against the tile and present next to the radially portion where the root will form.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1042-FR (12.25" - 426.75mm)	This tile is similar to the standard flat tile but it is more flexible to go round a tighter radius. Please note that all other tile shapes can be made 1/4" long to aid flexibility of the tile. Each tile is radially to form a strip around a cylinder. 1042-FR This is similar to the 1042-FR but it is thicker, larger tile to withstand higher currents where minimal penetration is required.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1083-FR (12.25" - 426.75mm)	This tile is similar to the standard flat tile but it is more flexible to go round a tighter radius. Please note that all other tile shapes can be made 1/4" long to aid flexibility of the tile. Each tile is radially to form a strip around a cylinder. 1083-FR This is similar to the 1042-FR but it is thicker, larger tile to withstand higher currents where minimal penetration is required.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1042-FR-1/4 (12.25" - 426.75mm)	This tile is specially designed to prevent back bead drop in horizontal welding and can be used with MIG welding with solid wire, metal core wire and can also be used with flux core wire.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1080-R (12.25" - 426.75mm)	This tile is specially designed to prevent back bead drop in horizontal welding and can be used with MIG welding with solid wire, metal core wire and can also be used with flux core wire.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1066-B (12.25" - 426.75mm)	This is for fitting behind a single bevel, single V butt where a fillet weld must be produced on the backside of the joint during welding on the front side of the joint... possibly where access for welding or repairs is not possible. This tile will produce a mitered fillet.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)
1065-B (12.25" - 426.75mm)	Similar applications to the 1066-B but the fillet weld produced will be a convex reduced fillet instead of a mitered fillet.	1 1/2" x 1 1/2" x 1 1/2" (38.1 x 38.1 x 38.1)

Available in 1/4" to 2" (6.3 mm to 50.8 mm) tiles

# KAT® INDEXER CARRIAGE



A Remote Control Pendant Is Available When Required

The Gullco KAT® Indexing System is typically used to automate single or multi-head overlay and cladding welding operations, hard surfacing, etc. The automatic routine drives a motorized device (either the KAT® carriage or the motorized rack arm), cycling back and forth between limit switches. When the device that is cycling reaches a limit switch, it pauses, and the other motorized device starts to index the gun/torch a preset distance in a preset direction allowing for consistent uniform weld patterns.

An Arc Signal Relay is supplied with the system to provide integrated arc activation signals to the overlay/surfacing equipment. Two Gullco Standard Platform (GSP) controls, each with dedicated microprocessor chips, are used to control the automatic, two axis indexing system. Gullco Indexing Systems, enable repetitive overlay- surfacing cycles to be preformed, with precise motion of the gun/torch from start to finish, regardless of the number of passes of the work pieces involved.

