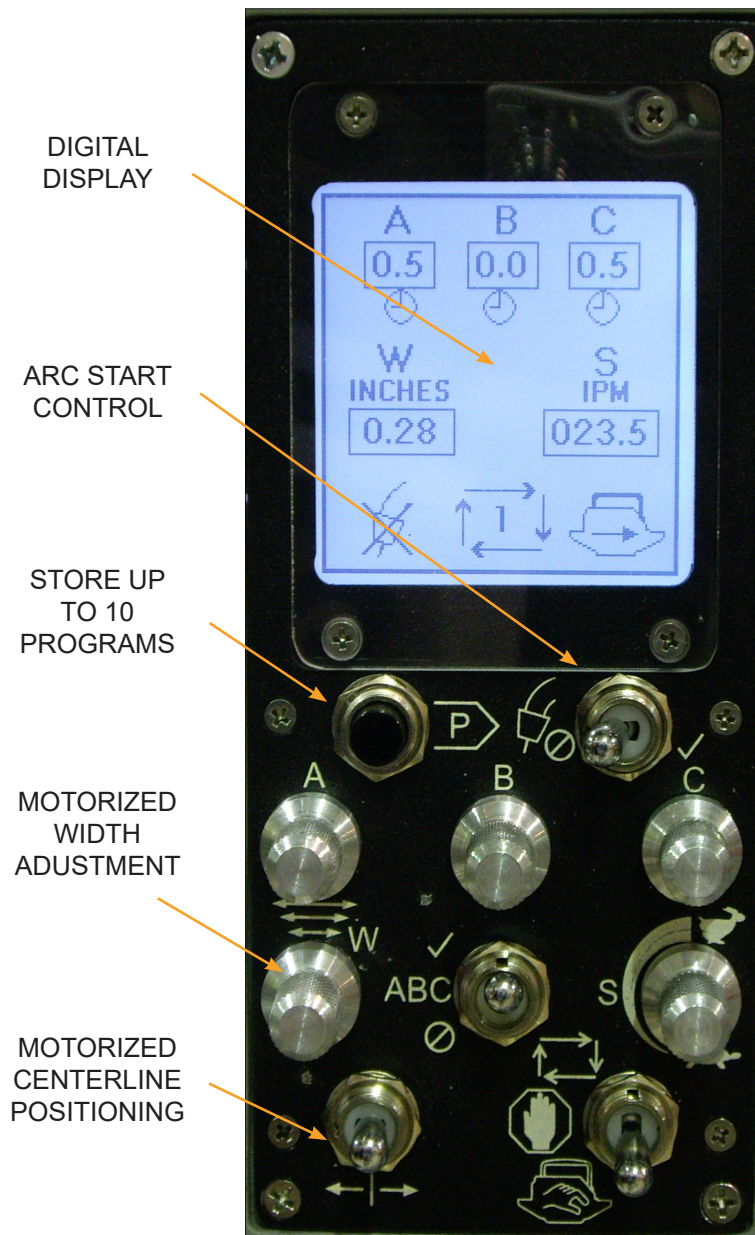


## OSCILLATOR CONTROL



## RADIAL OSCILLATOR



This advanced oscillation package is designed to increase production and improve the quality of the weld produced in automatic mechanized welding operations by minimizing weld defects such as poor penetration, incomplete fusion, overlap and undercut.

The GK-200 Series Compact Oscillator Carriage combination comes with the option for linear or radial oscillation head and can be equipped for use on either rigid or flexible track.

The oscillator is available with a linear, pendulum, tangential or step (square pattern) motion to the welding gun with adjustable motorized stroke width, infinitely variable stroke speed adjustment, three independent position dwell times, motorized centre line positioning and automatic wire feed start and travel start/stop interface.

By combining welding gun oscillation movement with the precision controlled travel speed of the Kat carriage, up to 10 weld programs can be produced and stored.

## LINEAR OSCILLATOR



## WELDING AND CUTTING AUTOMATION



## AUTOMATED OSCILLATION WELDING CARRIAGE - KAT®



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 or Radial Oscillation Capability*

ALL POSITION WELDING AND CUTTING AUTOMATION CARRIAGE

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**Models For All-Positions, Flat or Curved Surface Weld Oscillation**

The Gullco KAT® Oscillator Package is comprised of the compact oscillator head, controls, mounting brackets, connecting cable, 1-1/8" heavy duty micro fine rack boxes with rack arms for horizontal and vertical adjustments and standard MIG gun holder, together with a KAT® carriage for rigid track or flex track as shown above.

**Model Series GK-200-F** (left) is supplied with a Gullco KAT® specifically designed for operation on spring steel KAT® Flexible Track.

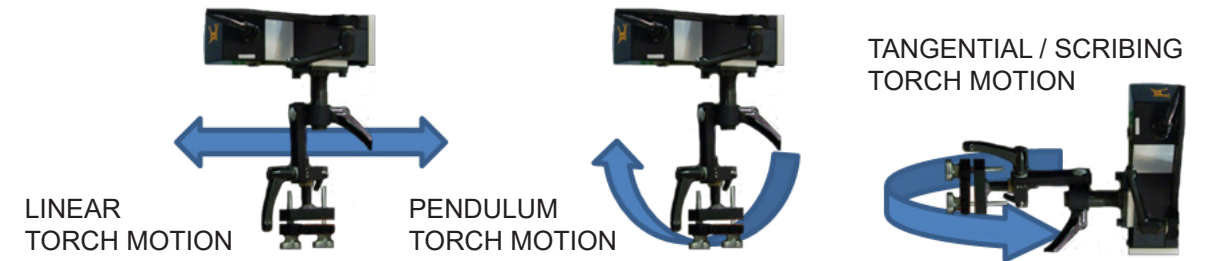
**Model Series GK-200-R Combo** (right) is supplied with a KAT® specifically designed for operation on rigid aluminum KAT® track.

All are equipped with the Gullco microprocessor-based programmable control with a closed loop feedback system for complete speed accuracy regardless of load [0-100 lbs. (45kgs)] when operating in any weld position.

Detailed information is provided on the back page of this brochure.

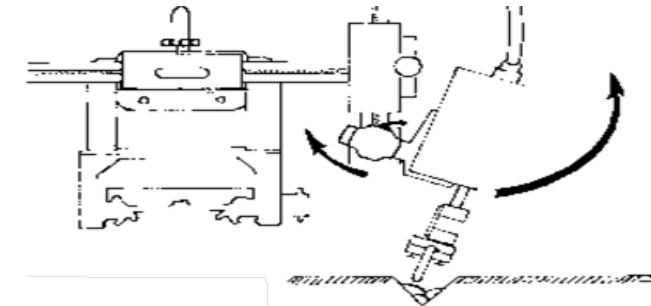
**Also Available Are The Linear or Radial Separate Remote Controlled Compact Oscillator Assembly - Model GK-201-100-RC**

This assembly is comprised of either radial or linear Oscillator Head with MIG gun holder, Remote Control Box, Control Cable (up to 20ft), Micro Fine Rack Boxes, Rack Arms, and Brackets. It can be mounted on existing KAT® All-Position Travel Carriages, Welding Head Manipulators, Side Beam Carriages, etc.



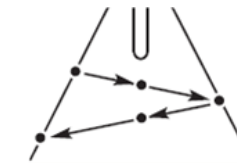
**TANGENTIAL AND PENDULUM OR LINEAR MOTION**

The oscillator heads are capable of producing three distinct motions when mounted in either the horizontal or vertical position. Shown in the above (right) is a tangential or scribing motion. The other, (middle) is a pendulum motion. Combined with the third linear straight line head they meet all welding oscillation requirements.

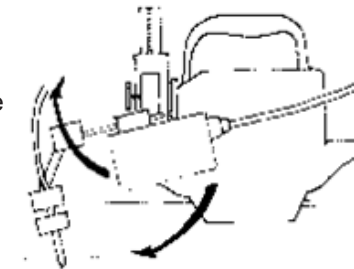


**MOTORIZED CENTRELINE ADJUSTMENT**

With independent, electronically controlled dwells (0-5 sec.) at each end of the stroke and at the centre of the stroke path.



The proper torch angle/position is established quickly and easily with the Gullco KAT® Oscillator Head. It's simply a matter of tilting the oscillator, which can be adjusted side to side or forward and backward this results in the elimination of the time consuming and generally ineffective procedure of tilting the carriage or track.



**MOTORIZED STROKE WIDTH** - Easy, precise adjustment to provide the required weld pattern.

**OSCILLATION SPEED CONTROL**- Oscillation speed is electronically controlled by a speed potentiometer (140 inches per minutes (linear) 45° per second (radial).

**Combining High Precision With Exceptional Versatility**

High precision, state-of-the-art controls on the KAT® carriage automatically direct the desired forward/reverse movement or dwell of the welding gun and its oscillation motion to produce the numerous weld patterns shown below. The carriage control enables the carriage speed and direction to be pre-set and shown on its

LED display in IPM or cm/min. The oscillator controls enable pre-setting of the carriage delay/start after wire feed start, dwell times, stroke speed, stroke width, program storage and cycle start.

Control information is available on the following page

**Some of the Weld Patterns Attainable With the KAT® Oscillator System**

**ANGULAR OSCILLATION PATTERN**

KAT CARRIAGE TRAVELS CONTINUOUSLY

WITH OSCILLATOR HEAD VERTICAL TO WORK

COMBINING OSCILLATION AND OSCILLATOR DWELL

SPECIAL OSCILLATION

Tilted - for welding on horizontal plane

Straight Line - Back and forth oscillation

**STEP OSCILLATION PATTERN**

KAT CARRIAGE TRAVELS ONLY DURING END DWELLS

Oscillation Head Vertical

Oscillation Head Horizontal