

WARNING – SAFETY CONSIDERATIONS

1. Do not use the K.C. alignment clamp as a lifting device.
2. K.C. alignment clamps are not to be used as a load bearing device.
3. A lift mechanism should not be attached to the clamp to lift the pipe.
4. Wedges should not be driven under the frame of the clamp in an attempt to reform the pipe as it may damage the clamp and void the warranty.
5. The clamp is not designed for the alignment of the tees, elbows, valves and other fittings.
6. The clamp should not be used with any type of device that is used to preheat the pipe prior to welding as this may result in failure of the clamp.

CLAMP DESCRIPTION

The Ratchet Drive Clamp manufactured by K.C Welding & Machine Corp is used as an alignment tool when tack welding sections of pipe and is available for pipe sizes 4” to 72”. The ratchet drive mechanism and corresponding ratchet wrench, also manufactured by K.C., is available in three sizes, as follows:

Clamp Size	Wrench Gear Size
4” to 8”	3/4”
10” to 42”	7/8”
44” to 72”	1”

Each clamp size is designed to align only one diameter of pipe.

Environmental Considerations: The working temperature ranges from -13° Fahrenheit (-25° Celsius) to +122° Fahrenheit (+50° Celsius).

OPERATING INSTRUCTIONS

1. Release all pressure on the Ratchet Mechanism using the ratchet wrench to rotate the square nut in a counterclockwise direction.
2. Lift the Ratchet Mechanism from hook on the clamp end.
3. Open the clamp.
4. Place the clamp on pipe.
5. Center the cross bar on the pipe end.
6. Grasp the clamp handles and close the clamp on the pipe,
7. Engage Ratchet Mechanism on the hook on the clamp end.
8. Rotate the square nut with the ratchet wrench in a clockwise direction until the both pipes are aligned in the clamp.
9. Tack weld the pipe ends together at points between the cross bars.



10. Release the clamp from the pipe using the ratchet wrench to rotate the square nut in a counterclockwise direction.
11. Lift the Ratchet Mechanism from hook on the clamp end.
12. Open the clamp.
13. Remove the clamp from the pipe.

MAINTENANCE INSTRUCTIONS

1. After each use, the clamp should be cleaned and sprayed with a light film of oil to avoid rusting.
2. After each use, apply grease to hinge pin ends using grease fittings.
3. Every two weeks, remove threaded end of screw assembly; clean and remove any contamination; apply grease to threaded area.
4. Prior to use, the clamp should be inspected for cracks and deformation of the clamp. If any cracks or deformation of the clamp are present, the clamp should be replaced. No other maintenance is required.

STORAGE INSTRUCTIONS

The clamp should be kept in a dry environment when not in use.