



Brazing

SK Brazing Manual Brazing Equipment.



SK Brazing has designed and implemented automation solutions for most industrial applications, from simple machines to complex systems that are fully automated. SK Brazing prides itself on the craftsmanship and quality levels found in their equipment.

We offer a complete range of brazing and soldering services including brazing consumables and technical assistance. SK Brazing has designed automation solutions for most industrial applications, from simple machines to complex systems that are fully automated.



Kinds	Gas Saver	Digital Gas Saver	Torch Boy	Torch Boy	Digital Torch Kit	Torch Man
View						
Major Function	Gas Saving function	Gas Saving function	Gas Saving function	Gas Saving function	Gas Saving function	Gas Saving function
	X	Digital pressure display	X	Digital pressure display	Digital pressure display	Digital pressure display
	X	X	Step brazing signals	Step brazing signals	Step brazing signals	Step brazing signals
	X	X	1 item memory function	Over 10 item memory function	Over 10 item memory function	Over 10 item memory function
	X	X	X	Brazing table	X	X
	X	X	X	X	Auto pressure control function	Auto pressure control function
	X	X	X	X	X	Auto brazing function
	X	X	X	X	X	Auto wire feeder (option)
						Auto temperature sensor(option)

HVAC Components Brazing

Gas flame heating Brazing Machines

Various brazing machines are used for brazing HVAC machine parts. In addition, welding, soldering machines and various assembly machines are being built to easily assemble these parts.

Aluminum or copper coil Brazing Machines.

SK Brazing has built several types of gas flame heating coil brazing machines for brazing the U-bends of copper heat exchangers and aluminum heat exchangers.

In particular, SK Brazing has designed a very special aluminum coil brazing machine that makes it possible to avoid "orange peel crack phenomenon" and "erosion issue" commonly found on the brazing of aluminum U-bend coils. Our technology sets a new global standard for aluminum brazing technology.

SK Brazing has built several types of gas flame brazing machines for the joining of U-bends for heat exchangers. These machines are for mass production with various types of conveyors, including a slat conveyor type, a free flow pallet conveyor type, a square moving conveyor type, etc.

Coil brazing machine types.

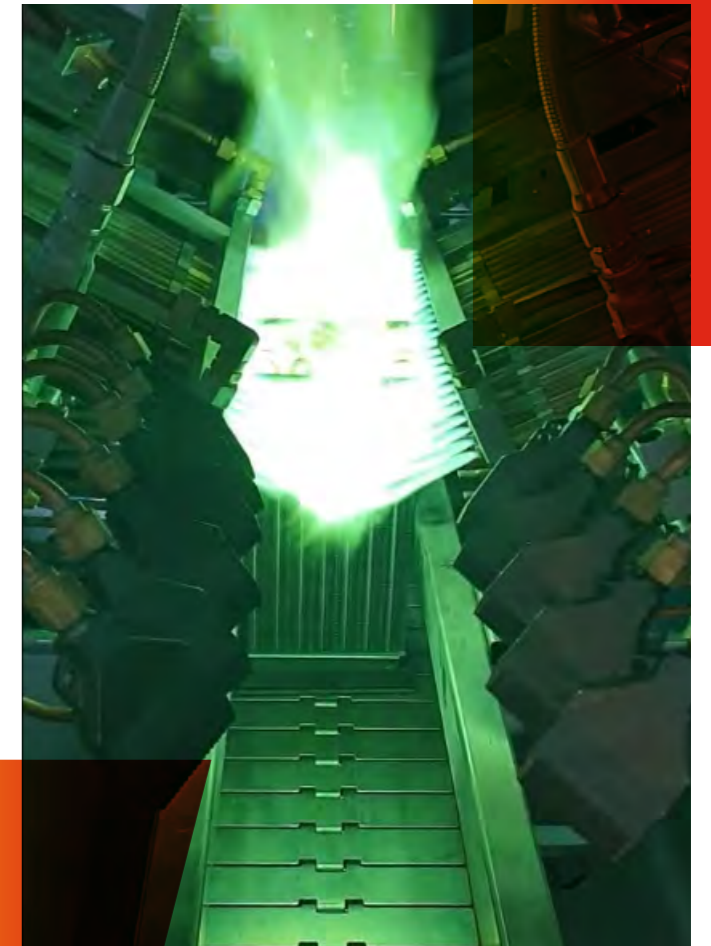
Torches that move up/down with a fixed slat conveyor.

The conveyor height is fixed and the torch height moves to braze the various coils.

SK Brazing coil brazing machine characteristics.

- 2 or 3 stage flame control types
- Orange peel free design by precise flame control
- Less erosion by precise flame control
- Good memory unit for torch height and width, flame condition, conveyor speed, etc.
- Precise flame control provides ideal conditions for brazing.
- Easy model changeover.
- Leak free joints by providing a good brazing diffusion condition with heat balance between the U-bends and coil body.
- High brazing speed.

Compressor body to tube brazing machines.



SK Brazing is one of best brazing engineering companies in the world specializing in brazing automation and education.

In order to braze the compressor body and tube(s), we manufacture various machines such as the shuttle type, conveyor type, index type and fully automatic type. In particular, these parts need to join steel and copper, and expensive silver alloys are used as brazing materials. In particular, brazing machines and technologies that can reduce silver alloys volume are very important to customers.

Various AHR parts brazing machines for aluminum, copper, brass, and steel parts.

Refrigeration and air conditioning parts have mainly used copper, steel, and brass for more than 100 years, and recently, due to cost problems, aluminum and stainless steel have been widely used. Therefore, various solutions are required for the brazing of such complex materials. SK Brazing has been creating many world-class brazing technologies based on brazing theory and experience for more than 30 years. The machines listed below are representative machines listed below.



Automotive Component Brazing Machines.

Various brazing, welding, soldering and assembly machines are used for brazing automotive mechanical parts. In particular, it is used for brazing various aluminum, stainless steel and steel parts.

SK Brazing is one of the world's best brazing engineering companies in the field with more than 30 years of experience and a good brazing theory development. It is a global brazing automation company that exports brazing machines to more than 70 countries and deals with global automotive parts companies.

Especially in the case of automobile parts brazing, it is important to maintain continuous quality reliability in the present and future. SK Brazing covers the global market with many experienced engineers who demonstrate their remarkable experience and is second to none in the industry.

These machines have various advantages:

- Special torch design for uniform heating.
- Automatic torch position change.
- Automatic flame change function.
- Rotation/up-down flame oscillation.
- Three-stage flame control function.
- Elimination of orange peel crack and erosion.



IHX assembly brazing machine with bending tubes.

In order to braze various IHX joints in bending condition, SK Brazing has been producing many styles of brazing machines, as follows.

One pair IHX bending tube brazing machines.

These machines are widely used for the brazing of IHX tube joints in bending condition. They are designed as one pair to improve the production rate. An operator can load at teach station of the brazing machine in the shuttle. This machine can braze from one to several joints (over 10 joints) at each station in the shuttle. SK Brazing is the first in the world to develop this capability.



Manual induction brazing machines.

SK Brazing manufactures manual induction machines (high or medium frequency) that can be used for manual brazing of various tube sizes. This machine is designed for manual brazing using a very compact and light weight gun design with a lightweight wire cable. The weak gun and cable will give the customer a huge advantage for manual brazing. Our design is certainly one of the world's most compact induction gun designs.

SK manual induction brazing machine advantages.

- Easy to hand carry due to the light-weight gun and cable.
- Compact and easy to hold hand unit.
- Frequency eddy & Hysteresis loss through the positive and negative poles offset are minimized due to the specially designed cable between the induction gun and the induction power generator.
- Power loss and metal effect on an operator is reduced through the use of specially designed circuit for the high frequency cable & hand gun transformer.

Induction heating Brazing Machines



Induction heating Brazing machines

Manual Induction Brazing Equipment

SK Brazing manufactures manual induction equipment (both high and medium frequency) that can be used for the manual brazing of various tubes. This equipment is designed for manual brazing utilizing lightweight gun and cable unit that minimizes operator fatigue. The design is certainly one of the most compact induction gun designs in the world.

Manual Resistance Brazing Equipment

SK Brazing developed the world's first manual resistance brazing that enables tube-to-tube brazing with resistance heating. A unique tube end design was developed to take advantage of this unique process. Resistance brazing takes place in a short period of time, resulting in less heat transfer, less damage of the base metal, and a clean brazing joint.



Manual induction brazing machines.

SK Brazing manufactures manual induction machines (high or medium frequency) that can be used for the manual brazing of various tube sizes. This machine is designed for manual brazing using a very compact and light weight gun design with a lightweight wire cable. The light gun and cable will provide the customer a distinct advantage for a manual brazing job. Our design is certainly one of the most compact induction gun designs in the world.

SK manual induction brazing machine advantages.

- Easy to carry by hand due to the lightweight gun and cable.
- Compact and easy-to-grip hand unit.
- Frequency eddy & Hysteresis loss through the positive and negative poles offset are minimized due to the specially designed cable between the induction gun and the induction power generator.
- Power loss and metal effect around the power cable are minimized due to advanced cable technology.
- High frequency effect on an operator is reduced through the use of specially designed circuit for the high frequency cable & hand gun transformer.



Induction gun unit and water chiller



Induction gun view



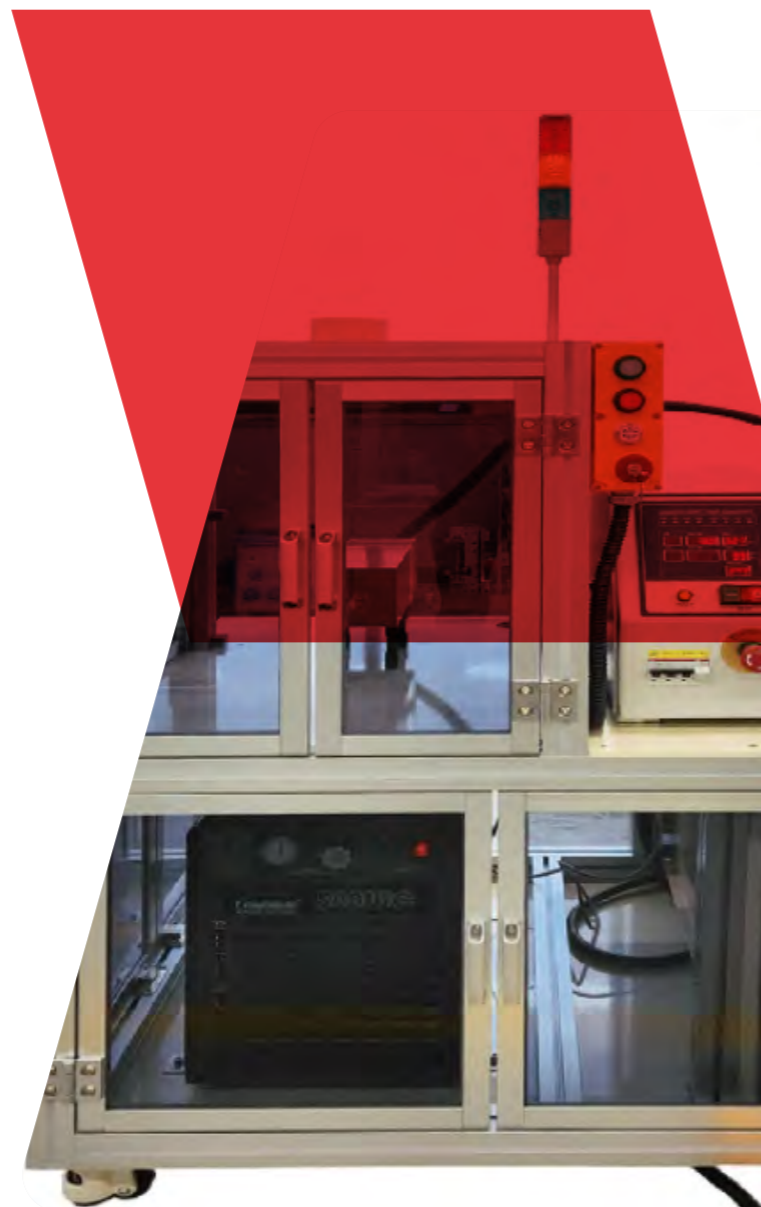
Single station induction brazing machines.

For relatively small quantities, a single station induction brazing machine is a good choice. These machines are divided into brazing in an open air atmosphere and brazing in a gas atmosphere like hydrogen, nitrogen, argon, helium, mixed gas or vacuum.

Single station induction brazing machines in an open air atmosphere.

Single station carbide tool induction brazing machines.

The machines below are mainly designed for brazing carbide tips and faithful to the principle of brazing technology. In induction brazing, an induction coil design and a heating principle are very important for good brazing.



Single station induction soldering machine(7.5 KW).

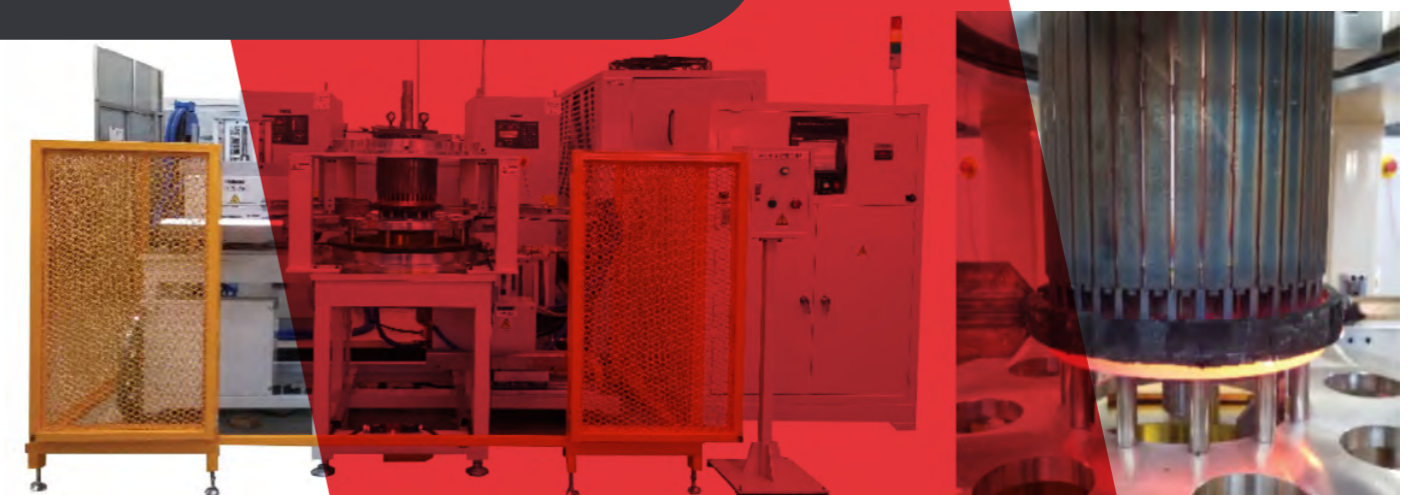
This single station induction soldering machine is for soldering of PC boards.

Single station, airplane aluminum parts, coil memory induction brazing machine.

SK Brazing recently developed a single station airplane aluminum parts coil memory induction brazing machine. We made a memory unit of induction coil. We can use for many items with induction coil memory units. Also, we adapted flame heating unit to reduce the heat to a minimum because they are used for airplane application.

Electric motor rotor single induction brazing machine.

This machine is capable of brazing electric rotors by rotating a big motor assembly. This induction brazing machine has very high power(240 KW) to braze Min. 300mm ~ Max. 480mm OD motors with Max. 1.0 tons weight. This machine is capable of 3 stages of heat control.



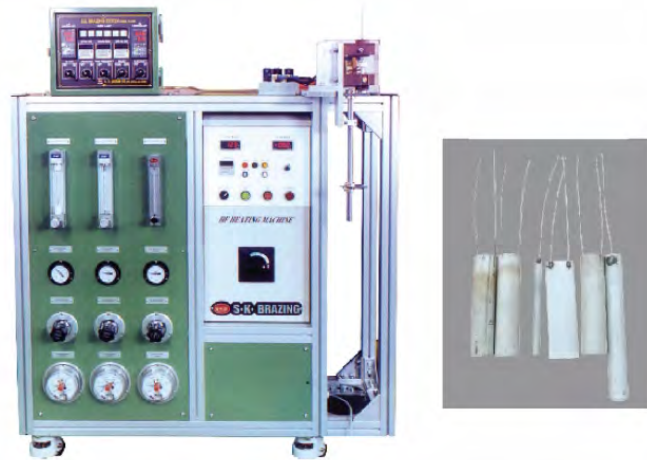
Single station induction brazing machines with gas atmosphere or vacuum.

SK Brazing has been developing a lot of single station induction brazing machines with various gas atmospheres such as hydrogen, nitrogen, argon, helium or mixed gas to improve the brazing quality. Most of these brazing methods do not require flux or acid cleaning after brazing.



Induction atmosphere ceramic heater brazing machine.

This induction brazing machine joins nickel wire to a ceramic heater for a hair dryer.



Ceramic heater brazing machine with inert atmosphere.

Induction atmosphere temperature sensor bulb to capillary tube brazing machine.

SK Brazing developed this induction brazing machine for brazing a stainless steel bulb to a capillary tube in an argon atmosphere without a brazing flux. It makes a very nice brazed joint that does not require a cleaning process after brazing.



Thermo sensor tube brazing machine with inert atmosphere.

Single station semi-conductor parts coil memory argon atmosphere induction brazing machine.

SK Brazing recently developed single station, semi-conductor parts, coil memory induction brazing machine with an argon chamber. We made a memory unit of induction coil. We use argon induction atmosphere to braze copper rod to stainless steel with induction coil memory heating without using a flux. This machine is not for mass production, but it is for special order products for semi-conductor industry.



Induction vacuum chamber brazing machines.

These single station vacuum induction brazing machines are used for induction heating in a vacuum chamber. This machine is a good choice for steady productivity with a high brazing quality. Also, it is used for research in science labs.



Induction atmosphere car muffler brazing machine.

SK Brazing has been developing a single station car muffler induction atmosphere brazing machine for brazing stainless steel tubes to a muffler body. It is made of a type in which an induction coil automatically supplies atmospheric gas.

This induction brazing method is effective in reducing the weight of the vehicle, as well as reducing costs by lowering the tube thickness of the material. This induction brazing method was developed recently and has a promising future.

Shuttle induction brazing machines.

2 station shuttle line up induction two stems brazing machines.

As shown in the photo below, each induction unit is installed at 2 stations to alternately braze the two stems. These machines have the advantage of minimizing space when brazing long straight tubes. It is also capable of detecting a line plug after brazing. These machines have one of the most unique and creative designs in the world.





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