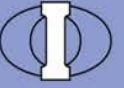


Machine Features

- FAST AND INEXPENSIVE METHOD FOR ANNEALING YOUR ELEMENTS
- ELEMENT LENGTH OR DIAMETER CHANGE TAKES LESS THAN 5 MINUTES
- **INFRARED SENSOR** IS USED TO ACCURATELY CONTROL THE ANNEALING TEMPERATURE
- CAN BE USED TO ANNEAL PORTIONS OF THE ELEMENT OR THE ENTIRE LENGTH
- TRANSFORMER, CABLES, AND ELECTRODES ARE WATER-COOLED
- MESSAGE CENTER PROVIDES MACHINE DIAGNOSTICS TO ASSIST IN TROUBLESHOOTING THE MACHINE
- SAFETY GUARD AUTOMATICALLY COVERS THE MACHINE



The **Oakley Spot Annealing Machine** is designed to quickly and efficiently anneal either particular sections of elements or their entire length after the elements have been reduced. Our system includes a weld transformer with a solid state weld control. The key to the system is an Infra-Red sensor system that measures the actual temperature of the elements as they are being annealed and then turns off the transformer when the appropriate temperature is reached.

Unlike annealing machines that use time-based controls, our machine is not affected by fluctuations in plant voltage or by variations in tube materials or tube wall thickness. The preset temperature can be changed quickly using the operator interface, and the machine allows the operator to program the preset temperature in Celsius or Farenheit. To reduce the changeover time for different element diameters, four-sided indexable blocks are used as the clamping electrode, and each side can be supplied for a different diameter. The machine can accommodate different element lengths by manually moving the carriages and the eject hangers. A combined diameter change and length change can be completed in less then 5 minutes. While the machine is available in either 1 or 2 meter models, longer elements can be annealed in 1 or 2 meter sections.

The elements are hand-loaded into the machine and automatically unloaded if the element length is short enough to be ejected. If the element length is over the eject length, the element must be manually unloaded. The overall cycle time will depend upon the material and diameter of the element and also the length of the element or section being annealed. However, because we use a weld transformer that is considerably over-sized, annealing times are extremely fast.

The following chart gives some typical annealing times for specific elements.

Material	Element diameter	Annealed length	Temperature	Time
Incoloy 840	8mm (.315")	1 meter (39.4")	1200° C (2200° F)	21 seconds
Incoloy 840	6.6mm (.260")	900mm (35.4")	1200° C (2200° F)	20 seconds
Incoloy 840	11mm (.433")	152mm (6.0")	1200° C (2200° F)	8 seconds
Copper	8mm (.315")	430mm (16.9")	659° C (1200° F)	10 seconds

Machine Specifications

Element Diameters:	5mm to 16mm (.200"to .625")
Infra Red Accuracy:	+/- 1% of Reading
Infra Red Repeatability:	+/- 1% of Reading
Maximum Annealed Length:	Two models are available. One will accommodate an element length up to 1 meter (39.4")and the other accommodates an element length up to 2 meters (78.75").Longer elements may be annealed in 1 or 2 meter sections respectively.
Minimum Annealed Length:	150mm (6")
Recommended Temperatures:	760° C (1400° F) for Copper—1200° C (2200° F) for stainless/Incoloy
Maximum Temperature:	The Infra-Red system is capable of reading temperatures up to 1370° C (2500° F)
Electrical Supply:	440/380v—1ph—50/60hz (100 amps)
Power Consumption:	at 380v—60 amps; at 440v—45 amps
Pneumatic Supply:	5.6 bar (80 Psi)
Water Supply:	7.6 liters/min.(2.0 gal./min.)
Length:	1745mm (68.7") for 1 meter machine; 2745mm (108") for 2 meter machine
Width:	1575mm (62")
Height:	1625 mm (64")
Weight:	544 kg. (1200 lbs.) for 1 meter machine; 635 kg. (1400 lbs.) for 2 meter machine