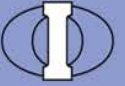


Machine Features

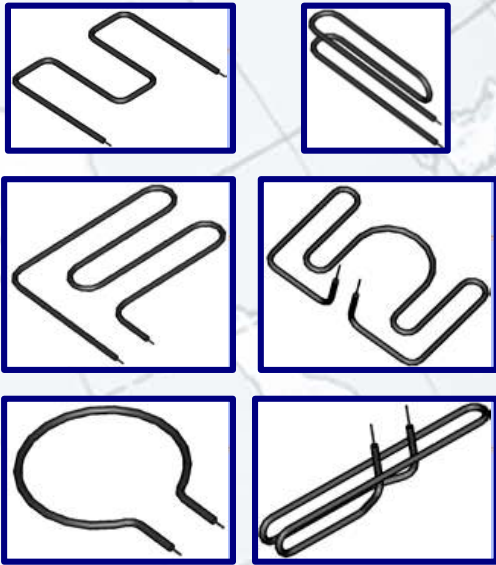
- COMPUTER-CONTROLLED
- STORES MORE THAN **100,000** BEND PROGRAMS
- WINDOWS 2000 PROFESSIONAL BASED OPERATING SYSTEM
- BENDS 1 TO 3 ELEMENTS AT A TIME, DEPENDING UPON ELEMENT DIAMETER AND BEND RADIUS
- DATA ACQUISITION VIA ETHERNET
- CAPABILITY TO GENERATE LARGE RADII
- CAPABILITY TO FORM ELEMENTS WITH BENDS IN A SECOND PLANE
- ELEMENT LENGTHS FROM 400mm TO 6 METERS (16" TO 20 FT.) (MACHINE SUPPLIED IN 3 METER OR 6 METER MODELS)
- IF ELEMENTS ARE CUT TO LENGTH, THEN ELEMENTS UP TO 12 METERS LONG CAN BE BENT



The **Oakley Universal Bender** is designed to form tubular heating elements into a variety of shapes in a single plane in one continuous operation or in multiple planes in several consecutive operations. When bending elements in more than one plane, the operator must remove the element and reposition it prior to bending in another plane. A unique feature of the machine is that each element can be measured for length, and any length variation can be programmed to be distributed over any desired area of the formed element. When the length equalizer is being used or when bending elements in more than one plane, only one element can be formed at a time. If the elements already have a constant length, up to 4 elements can be bent at a time depending upon the element diameter and the bend radius. However, when bending more than 1 element at a time, slightly more variation in the final shape of the elements is to be expected.

The machine is adjustable for various diameters and lengths. The Bending, Feeding, and Head positions are achieved using a 3-axis servo system. An industrial computer, featuring a flat panel touch screen, is used for programming and uses a Microsoft Windows 2000 Professional based operating system. The operator selects a bend program by scrolling through a graphical representation of the parts stored in the database. The operator can make adjustments to any of these programs and then save the part as a new bend program. More than 100,000 bend programs can be stored in separate folders for easy retrieval. In addition to the data required for bending, customer data, production data and part history are stored in the Industrial PC. A standard Ethernet 10/100 card is supplied to enable you to remotely write bending programs and then download them to the machine. The part, material, and tooling data are stored in Microsoft Excel format.

The machine can accommodate element diameters from 5mm to 12mm (.200" to .475") with a maximum length of 6 meters (236") and a minimum length of 400mm (16") and a single bend diameter between 12.7mm and 63.5mm (.500" and 2.50"). The machine also features the ability to generate large radii. If the elements are cut to length and do not require measuring, then longer elements can be run on the machine. One customer has run 12 meter elements on our 6 meter machine. The maximum number of bends that can be programmed in one element is 50.



Machine Specifications

Element Diameters:	5.0mm to 12mm (.200" to .475")
Element Length:	The machine is supplied in 1 meter increments to accommodate each customer's maximum desired element length. The maximum capacity would be 6 meters (236"). The minimum element length is 400mm (16").
Minimum Bend Dia.:	2 times element diameter
Maximum Bend Dia.:	63.5mm (2.500")
Feed Speed:	61 meters (200 ft.) per minute
Bend Speed:	60 rpm
Electrical Supply:	230v—3ph—50/60hz
Pneumatic Supply:	5.6 bar (80 psi)
Length:	maximum element length plus 1300mm (51.18")
Width:	1200mm (48")
Height:	1143mm (45")
Weight:	925 kg. (2,039 lbs.)