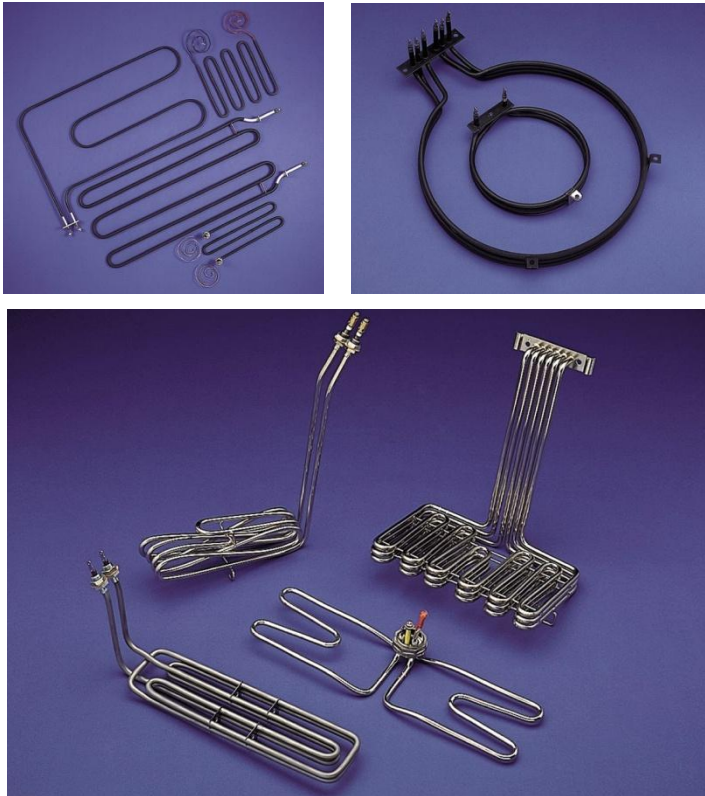


SHAPED ELEMENTS EL RANGE



ELEMENT APPLICATIONS

The Howden EL range of elements are manufactured to customer requirements. Howden Electric specialises in small to medium batch volumes.

Shaped elements are suitable for a wide range of applications including catering, air heating, immersion heating, sterilising, steam raising, oven heating, and many more.

STANDARD RANGE

kW loadings at voltages from 24V to 690V are available. The maximum straight length of an element is 5m (196").

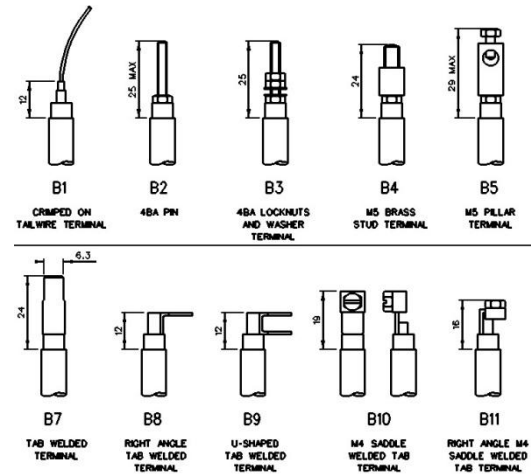
The cold length at the ends of the element (known as the "cold end") can be specified to suit application requirements. Cold ends allow the element to project through areas not requiring heat and prevent fixings from heating up.

Element diameters available depend on the sheath material with 8mm being the most common but the following are also available: 6mm, 9.5mm, 11mm and 12mm. The following sheath materials are available:

- **Copper**
Suitable for the general purpose heating of water although not recommended for use in hard or aggressive waters.
Maximum sheath temperature is 200°C.
- **Stainless Steel 304 and 321**
Widely used in catering equipment or in applications where hygiene is important. Other uses include low intensity air heating and oil heating.
Maximum sheath temperature is 450°C.
- **Nicalloy 800**
A nickel based alloy highly suited to high temperature applications such as air heating or use in ovens. It may also be used in certain chemical environments. It is more corrosion resistant than stainless steel.
Maximum sheath temperature is 800°C.
- **Nicalloy 825**
A nickel based alloy with a high corrosion resistance for use in hard and aggressive waters and a wide range of chemical environments.
Maximum sheath temperature is 600°C.

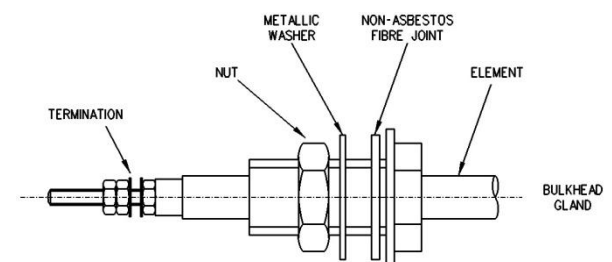
TERMINATIONS

Elements can be supplied with plain pins suitable for spot welding or with 4BA or M4 threaded pins. Various other element terminations are available, as shown below.



MOUNTING

Elements can be supplied brazed or crimped into bulkhead glands (as shown in diagram) or into brackets manufactured to customer specifications. Compression type glands can also be supplied loose.



VOLTAGE

Elements can be manufactured to order and therefore any voltage from 24V to 690V can be supplied. The limiting factor is the current consumption and this is dependent on the element pin diameter.

CONSTRUCTION

Elements are manufactured generally to BS 7351.

The elements consist of a resistance heating coil surrounded by compacted magnesium oxide in a tubular metal sheath.

Advanced manufacturing techniques and stringent quality control allows the manufacture of complex element shapes while reducing the risk of cracking or current leakage.

