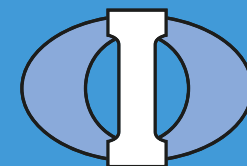




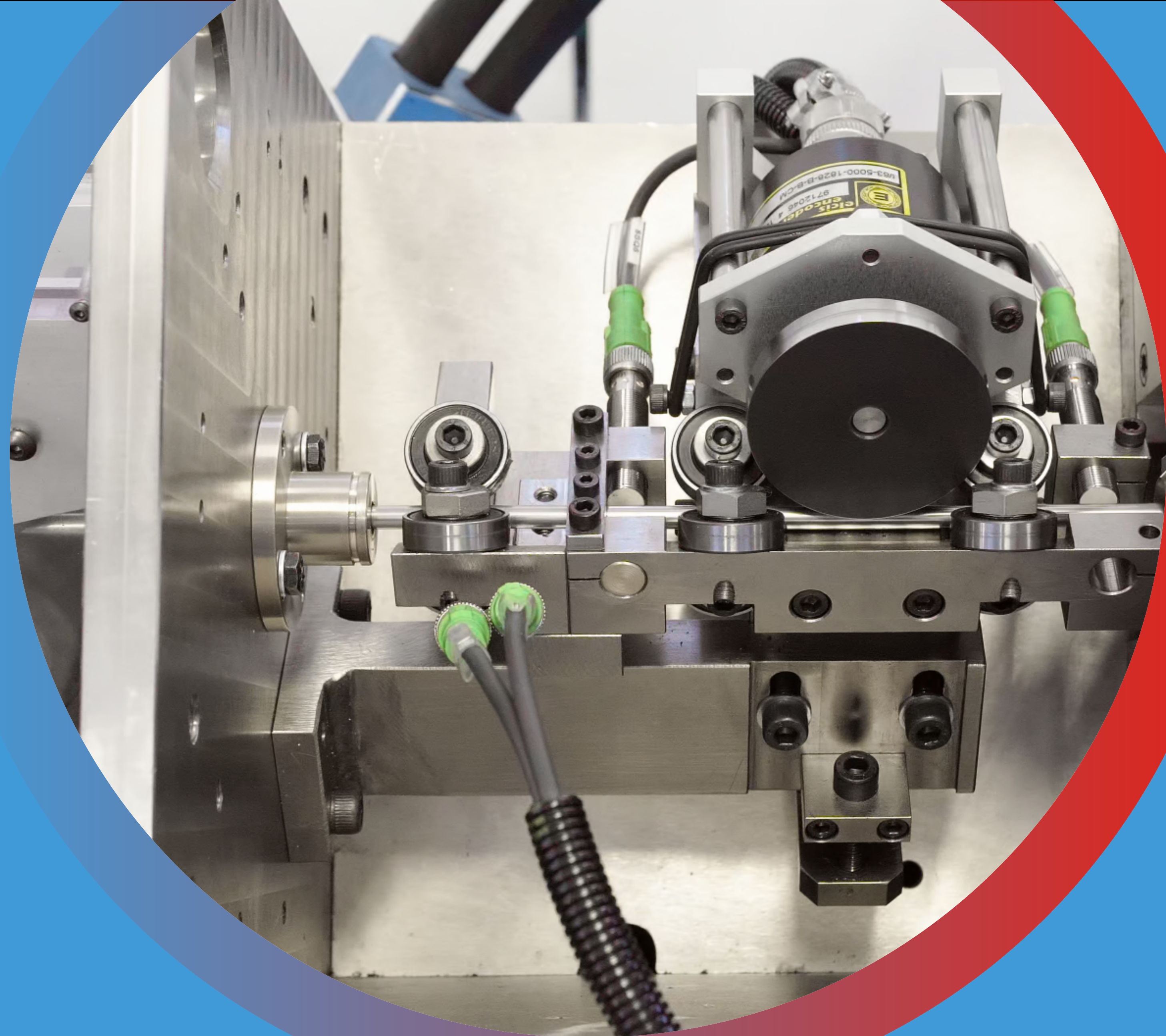
CSM MACHINERY



OAKLEY
INDUSTRIAL MACHINERY

Roll to Length Machine

Machine to recover the difference in length
of heating elements at the exit of the roll
reducing mill.



Machine composition

- **First electronic measuring unit**, with encoder, measuring the tube length as it exits the roll reducing mill. The length difference from the set value (final required length) is automatically calculated and stored.
- **Transfer device**, moving the heating elements from the exit of the first measuring station to the machine.
- **Second electronic measuring unit**, with encoder, measuring the heating element length as it enters the machine for the second diameter reduction.
- **Second diameter reduction unit**, consisting of 2 pairs of motorised rolls. The upper rolls lower via a hydraulic movement to perform the second diameter reduction (0.1 mm, .0039"), producing an elongation equal to the difference between the actual heating element length (measured by the first encoder at the mill exit) and the final set length.
- **Third electronic measuring unit**, with encoder, measuring the element length after the second diameter reduction and storing the value to identify heating elements that have not reached the set length.
- **Straightening unit**, with non-motorised rolls.
- **Unloading unit**, removing the heating elements at the end of the cycle.

The presence of plastic plugs at both ends of the heating element does not affect the accuracy of the tube length measurement, provided their diameter after the reduction does not exceed the heating element diameter by more than 0.3–0.4 mm (.012-.016"); larger diameters could affect the final tolerance of the heating element.

The machine is equipped with a main electronic board with PC and keyboard.

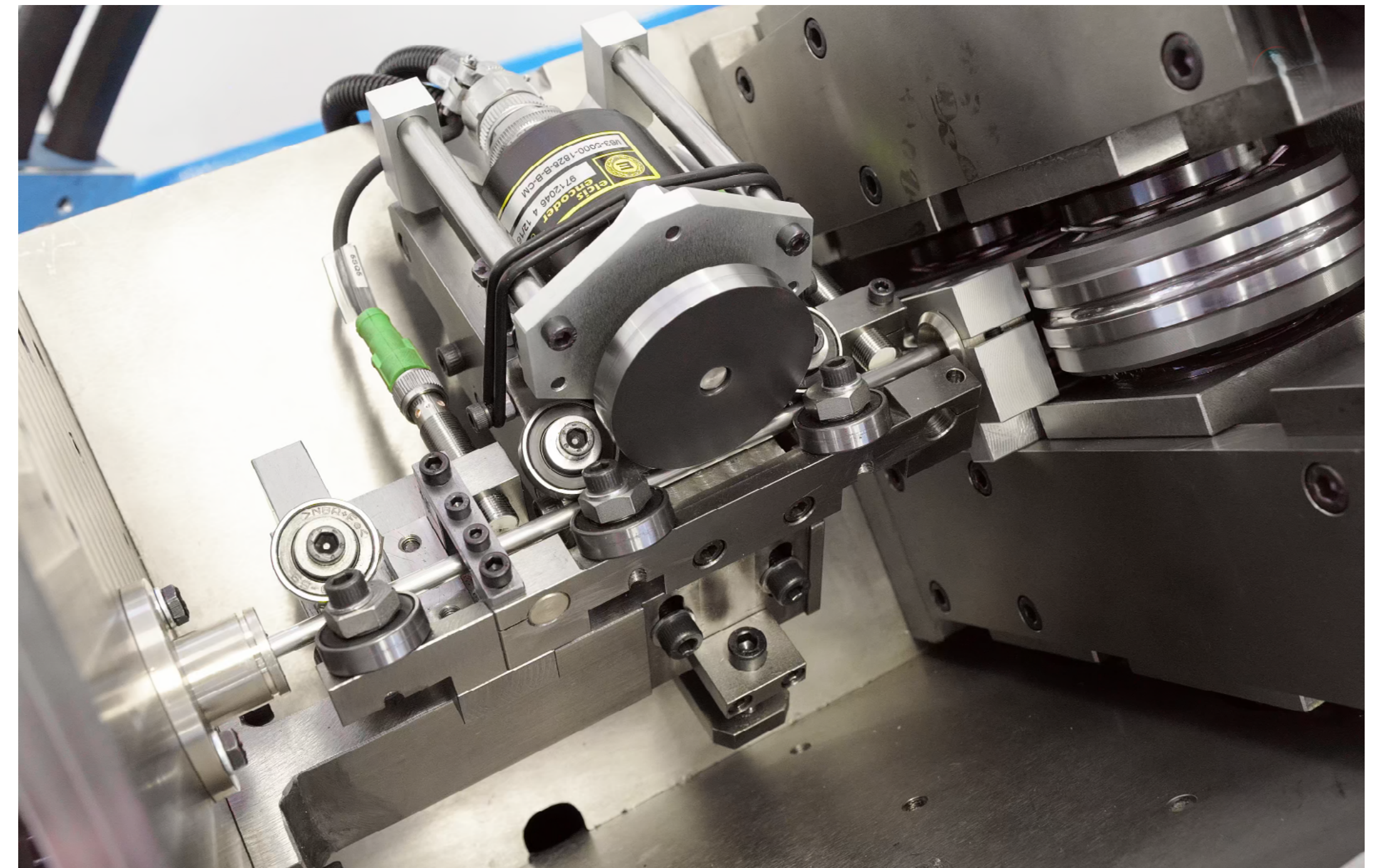


How it works

For easier manufacturing and correct distribution of tolerances along the heating element length during bending, it is important for heating elements to have, where possible, the same length. It is well known that elements exiting the roll reducing mill show length variations of up to 1–2%, depending on the filling machine used. This machine is therefore designed and built to “recover this difference”: once installed in line with the roll reducing mill, it processes the heating elements so that they all reach the same final length, without additional labour costs or loss of production.

The machine’s functions can be summarised as follows:

- Measure the exact length of the heating element tube as it exits the roll reducing mill.
- Elongate the heating element by the amount needed to reach the set value, through a second diameter reduction. This second reduction can be carried out along the entire heating element length, except for a programmable initial and/or final section.



Technical characteristics

Minimum heating element length	to be defined
Maximum heating element length	to be defined
Heating element diameter (to be defined)	6-12 mm (.23-.47")
Advancement speed	20 mt/min (65 ft/min)
Diameter reduction	0,1 mm (.0039")
Power supply	to be defined
Hydraulic pressure	150 Ate
Heating element final tolerance	±1-1,5 mm (.039-.059")

AVAILABLE VERSIONS

Maximum element length	Minimum element length 450 mm (18")
1.250 mm (50")	Mod. 141/50.100000
2.500 mm (98")	Mod. 141/50.200000
3.000 mm (118")	Mod. 141/50.250000
3.600 mm (141")	Mod. 141/50.300000
5.000 mm (196")	Mod. 141/50.400000
6.000 mm (236")	Mod. 141/50.500000

