TECHNOLOGY

KINGSLAND TUBEMASTER
automatic tube punching machine

for impressive performances
the automatic positioning unit

An automatic positioning material gripper unit controlled by a single axis Type M550 Control, with a digital display and 24-button keypad.

The software allows for programming of up to 8 programs with 80 position stops, in various modes of generation, including: single position, manual operation and position calculation for bar processing applications.

The positioning unit is supplied complete with conveyor, gripper assembly and controller. The working length of the unit can be varied - depending upon the customer's individual requirements.

The M550 can be DNC-linked to a compatible computer, so that programmes written on an external P.C. using software supplied with the unit can be sent to the M550 Control and visa versa.

the mandrel

The mandrel consists of a precision made die connected to a tube that is mounted on a support block, the whole unit is adjustable in the Z-axis by a hand wheel mounted at the 60P machine table.

When punching, the tube slides on to the mandrel and is punched as it is withdrawn, each size of tube will require a new mandrel, and may require a new bottom die block.

Each different size and shape of hole will require a new punch, mandrel and bottom die block.
operation

Tube is mounted on the in-feed conveyor and one end is placed in the gripper assembly, the other end is located on to an adjustable mandrel. A set of 6 guides and stripper cones align the tube correctly for punching. The control system feeds the tube onto the mandrel, and is supported on rollers integrated into the bed of the conveyors. Punching commences, with the tube being drawn back towards the load/unload position. Depending on the tube size (80mm max.) we can punch right through both sides of the tube in 1 hit.
Using over 44 years experience of designing and manufacturing our range of Steelworkers and Punching machines, we have developed the new Kingsland TubeMaster.

For customers who want fast, accurate, distortion free punching of 'any-shape' of hole in 'any-shape' of tube this is the ideal machine to use.

The standard unit consist of:

- 1 Kingsland 60P hydraulic punching machine (60 tons capacity) with work area guard and tube punch.
- 1 automatic positioning unit (M550 control, gripper and drive assembly).
- 1 adjustable mandrel, tube and support block.
- 1 adjustable table with bottom die block and conical stripper / guides.
- 2 x 4.0M conveyor systems with built-in steel rollers and vertical tube guides.

The standard unit will punch tube from 25mm up to 150mm up to 3.6M long, and can easily be extended to suit specific customer requirements.
the conveyor

Consists of two 4.0M long conveyors, one left and one right hand mounted. The left hand unit supports and keeps the tube central when punching. The right hand unit supports the tube while feeding. Punching is done as the tube is pulled back to the start position.

Each conveyor is mounted on three sturdy legs, 225mm wide steel rollers are integrated into the working surface for a smooth and stable platform when punching. Vertical alignment rollers are used to keep the tube correctly positioned in the X-axis.

The conveyors are available in the following lengths:
- 3.6M working length (4.0M long)
- 4.6M working length (5.0M long)
- 5.6M working length (6.0M long)
- 6.6M working length (7.0M long)
- 7.6M working length (8.0M long)

the 60P Punching Machine

Features:
- Full stroke adjustment
- Low power inching
- Very low maintenance requirements
- 625mm deep throat as standard
- Overload relief on hydraulic system
- Interchangeable bearings, seals and valves
- 5.5 kW motor
- See-through table / work area guard

why use a Kingsland tube-punching machine?

- Fast
- Accurate
- Low tooling cost
- Very flexible regarding the shapes of holes, round, square (which can not be drilled or milled), rectangular and many other shapes
- No messy cooling oils

Due to our program of continuous product development we reserve the right to change the specification and details without prior notice.
The Kingsland range of hydraulic steelworkers

1. COMPACT 40
   - 4 stations
   - Single cylinder hydraulic steelworker
   - 40 ton capacity

2. COMPACT 60
   - 5 stations
   - Single cylinder hydraulic steelworker
   - Available in 45 & 60 ton

3. MULTI 80
   - 5 stations
   - Double cylinder standard throat
   - Available in 60, 70, 80, 95, 125 & 175 ton
   - Available with deep throat

4. PUNCH 60
   - 1 station
   - Single cylinder hydraulic punching machine
   - Available in 60, 70, 80, 95, 125 & 175 ton
   - Deep throat standard

5. 125 D DOUBLE PUNCH
   - 2 stations
   - Double cylinder, hydraulic punching machine
   - Available in 60, 70, 80, 85, 125 & 175 ton
   - Available with deep throat

6. 50P
   - 1 station
   - Single cylinder hydraulic punching machine
   - Standard throat depth 260mm