

**TECHNICAL ATTACHMENT**

**N. 01** Back geared eccentric press, mod. **T-450 R CE** along with maintenance keys, instruction manual and designed with technical specifications as follows

**CE marking**

and conformity according to European directive 2014/30/CE  
"electromagnetic compatibility" and 2014/35/CE "low voltage"

**NOMINAL STROKE AND FORCE**

- |  |         |
|--|---------|
| <input checked="" type="checkbox"/> Tonnage rating point from Bottom Dead Center with maximum stroke | 7 mm    |
| <input checked="" type="checkbox"/> Capacity   | 4500 kN |

**FRAME**

- |  |            |
|--|------------|
| <input checked="" type="checkbox"/> Electrical welded S355 steel, with thermal distension treatment  |            |
| <input checked="" type="checkbox"/> C-frame depth  | (N) 530 mm |
| <input checked="" type="checkbox"/> Front gap between uprights   | (O) 760 mm |
| <input checked="" type="checkbox"/> Distance between the working table and the ram (measured at the Top Dead Center with maximum stroke and ram regulation up) | (H) 850 mm |

**WORKING TABLE**

- |  |                        |
|--|------------------------|
| <input checked="" type="checkbox"/> Width x depth  | (M x L) 1800 x 1000 mm |
| <input checked="" type="checkbox"/> N° 2 frontal and n° 2 longitudinal T-slot                                | DIN 650-28             |
| <input checked="" type="checkbox"/> Central hole in the table Ø with rabbet                                  | 280 mm                 |
| <input checked="" type="checkbox"/> Height of the working table from the floor (without anti-vibration pads) | (F) 1100 mm            |

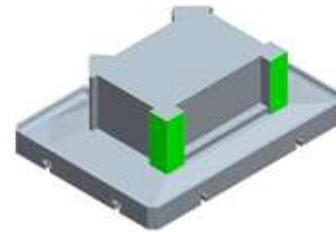
**BOLSTER PLATE**

- |   |                |
|---|----------------|
| <input checked="" type="checkbox"/> Width x depth                             | 1800 x 1000 mm |
| <input checked="" type="checkbox"/> Thickness                                 | (G) 110 mm     |
| <input checked="" type="checkbox"/> N° 2 frontal and n° 3 longitudinal T-slot | DIN 650-28     |



## **RAM AND GUIDES (n° 6 sliding surfaces)**

- ☑ Ram surface (width x depth) (S x R) 1400 x 900 mm
- ☑ Sliding surfaces with adjustable gibs and antifriction material 6
- ☑ N° 2 to the front at 45°
- ☑ N° 4 to the back at 90°
- ☑ T-slots DIN 650-28
- ☑ Spigot lock hole Ø 60 H7 mm
- ☑ Additional fixing holes for dies 120 mm
- ☑ Ram adjustment
- ☑ STANDARD: Motorized adjustment of the ram by means of a gearmotor acting on an endless screw with carburization, hardening and grinding processes connected to a bronze gear. With position viewer
- ☑ Ejection system with knock-out bar (adjustable stroke)
- ☑ Oil collector system for recovery and recycling
- ☑ Lock-ring for clearance recovery between bronze bushing and the sphere of ram screw



## **CONNECTING ROD**

- ☑ With bronze bushing diametrically divided
- ☑ Lengthening adjustment with mechanical stop system to the maximum length.
- ☑ Spherical connection system between connecting rod and ram
- ☑ Screw adjustment clamping system by means of threaded bronze parts

## **BALANCING CYLINDERS**

- ☑ Balancing cylinders with maximum force exerted with air pressure at 5,5 bar
- ☑ Air tanks for the balancing cylinders

## **HYDRAULIC OVERLOAD SYSTEM - ADJUSTABLE**

- ☑ Located under the connecting rod, to avoid getting stuck and to protect the machine from overload
- ☑ Automatic oil pressure release to gain the clearance to complete the cycle and stop at TDC
- ☑ Automatic restore to the default pressure setting
- ☑ Adjustable overload limit that allows to set a tonnage of reaction lower than the nominal one

## **ECCENTRIC SHAFT**

- ☑ Made from forged alloy steel (Ni Cr Mo), chrome plating and precision grinding
- ☑ Rolls on bronze bushings with oil retainer rings.
- ☑ Stroke change system with frontal toothed coupling
- ☑ Easy and fast stroke adjustment with coupling / uncoupling through a small eccentric shaft
- ☑ Available 20 - 52 - 84 - 115 - 144 - 171 - 194 - 214 - 229 - 241 248 - 250 mm strokes



### DRIVE SHAFT

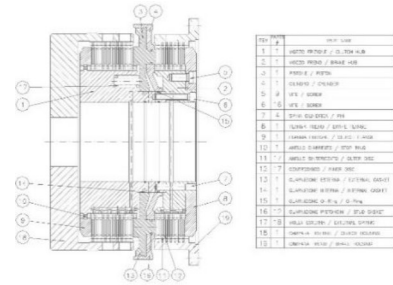
- Made from forged alloy steel (Ni Cr Mo), chrome plating and precision grinding
- Rolls on cylindrical roller bearings with oil retainer rings

### GEAR AND PINION

- Helical toothing gear with keyless locking system
- Pinion toothing made on the drive shaft
- Oil bath lubrication

### HYDRO-PNEUMATIC CLUTCH BRAKE UNIT

- Clutch/brake combined units that allow to transmit high torques and to engage/disengage at high rates despite their low amount of space and their low moment of inertia.
- They also allow to keep the work environment uncontaminated thanks to an oil bath system with centralized and cooled unit.



### SAFETY VALVE

- Double valve control system with fast exhaust capability and silencer

### SPEED

- Nominal speed (in continuous mode)
- Clutch engagements/minute permitted in single stroke at nominal speed

34 Strokes/min  
8 Strokes/min

### MOTOR

- Brand **ABB** or **SIEMENS**
- Power
- Voltage

37 kW  
400 V – 50 Hz



## **ELECTRICAL CONTROL PANEL**

- Programmable logic PLC **SIEMENS** and **pi2** safety modules
- SIEMENS** touch-screen HMI, easy to learn and operate with
- It includes the following working functions:
  - Inching, by two-hand control
  - Single stroke mode with two-hand control activation
  - Continuous stroke mode with two-hand control activation
  - Single stroke with foot pedal activation
  - Continuous stroke mode with foot pedal activation and stop with pedal at T.D.C.
  - Continuous stroke mode with foot pedal activation and stop with push-button at T.D.C.
  - Single stroke mode for closed dies with foot pedal activation
  - Continuous stroke mode for closed dies with foot pedal activation and stop with pedal at T.D.C.
  - Motor reverse rotation allowed in inching mode
- Each one of above selections automatically activates corresponding safety control in order to guarantee maximum safety level for the operators
- The control panel is equipped with:
  - Total and partial stroke-counter
  - Information about press use and work hours counter
  - Start timer safety programming
  - Press working condition monitoring
  - Lubrication rate adjustment
- Control panel on console with cables length of 4 meters
- Interface connection for external device available on the machine. Ask for more information about it.



## **FOOT PEDAL CONTROL**

### **SHUT-OFF VALVE**

- Located at the entrance of the pneumatic circuit
- 3-way valve with rapid release
- Lockable

### **FILTER REGULATOR LUBRICATOR WITH PRESSURE GAUGE**

- Air preparation solution
- Provides accurate pressure regulation
- Minimum pressure level switch



### **AUTOMATIC LUBRICATION SYSTEM**

- Centralized and progressive lubrication system with adjustable flow to ensure safe operation of the machinery
- Metering valves for specific oil flow rate on each lubricated point like gibs, connecting rod bronze bushing, right and left shaft bronze bushings
- Oil recovery with filtering and re-circulation in order to avoid wasted lubricant
- Oil tank with constant oil pressure and oil level monitoring and related machine stop signal if necessary

### **WORKING CONDITIONS**

- Environmental temperature from 12°C to 38°C and relative humidity < 60%

### **MECHANICAL SAFETY GUARDS**

- Mechanical safety guards are placed over the dangerous area of the machine, that is to say in the places where the operator or other persons could easily be exposed to dangerous moving parts
- Frontal and lateral opening for an easy die installation
- Every operating mode selected on the control panel activates the related protection guards in order to guarantee the maximum safety level for the operator
- It is provided with safety limit switches and closing with key-lock



### **PAINTING**

- Embossed painting

### **WEIGHT**

- Approximate press weight 50000 kg

### **OVERALL DIMENSIONS**

- Width (B) 2780 mm
- Depth (C) 2880 mm
- Height (A) 4960 mm

### **ANTI-VIBRATION PADS**

- Rubber pads to suspend presses (Kit of 4 pcs.)
- Adjustable height.



