

## Gas-liquid booster press machine

### HST-CE series



#### Working principle and application

The gas-liquid booster press machine requires no hydraulic system; it only needs 4-7 kg of compressed air to generate a high-pressure output force of 1-20T. It uses a pneumatic-hydraulic booster cylinder and a pneumatic-electric control unit as the power actuator. After connecting to a 220V power supply, the high-pressure gas generated by the compressor is delivered to the electromagnet via an air supply pipe. The movement of the electromagnet, controlled by a foot switch or other control methods, controls the working state of the pneumatic-hydraulic booster cylinder on the machine, completing punching and other processing operations. By changing different molds, it achieves multi-purpose economic benefits. Currently, it is widely used in metal stamping, tight assembly, riveting connections, embossing, bending profiles, profile welding, extrusion forming, flattening and straightening, riveting and forging, sheet metal forming, mold punching, and steel cutting.

#### Technical parameters

| Parameters/Pressure | Unit                                                                                                      | HST-CE-02                 | HST-CE-03 | HST-CE-05 | HST-CE-08 | HST-CE-10 | HST-CE-15 | HST-CE-20 |
|---------------------|-----------------------------------------------------------------------------------------------------------|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Preload stroke      | mm                                                                                                        | 100                       | 100       | 100       | 100       | 100       | 100       | 100       |
| Boosting stroke     | mm                                                                                                        | 10                        | 10        | 10        | 10        | 10        | 10        | 10        |
| Action frequency    | times/minute                                                                                              | 25-30                     | 25-30     | 25-30     | 20-25     | 20-25     | 15-20     | 15-20     |
| Driving method      | High-pressure air drives the booster cylinder to perform oil-gas conversion for press-fitting operations. |                           |           |           |           |           |           |           |
| Power connection    | V                                                                                                         | Single-phase AC220V, 50HZ |           |           |           |           |           |           |
| Ambient temperature | ℃                                                                                                         | 0~40 No fogging           |           |           |           |           |           |           |
| Travel range        | mm                                                                                                        | 200-300                   | 200-300   | 200-300   | 200-300   | 250-350   | 250-300   | 250-350   |
| Closure height      | mm                                                                                                        | 300                       | 300       | 300       | 300       | 350       | 350       | 350       |

|                            |     |                                                                                                                                                                    |         |         |         |         |         |         |
|----------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
| D                          |     |                                                                                                                                                                    |         |         |         |         |         |         |
| Workbench Size J*I         | mm  | 400*300                                                                                                                                                            | 400*300 | 400*300 | 400*300 | 450*350 | 450*350 | 450*350 |
| Deep throat C              | mm  | 160                                                                                                                                                                | 160     | 160     | 160     | 180     | 180     | 200     |
| Mold shank hole size F     | Ø   | 25H7                                                                                                                                                               | 25H7    | 25H7    | 30H7    | 30H7    | 30H7    | 35H7    |
| Pressure holding time      | s   | 0-9999                                                                                                                                                             |         |         |         |         |         |         |
| Operation method           |     | Double button/foot switch                                                                                                                                          |         |         |         |         |         |         |
| Control Mode               |     | Molding mode/Pressure fitting mode                                                                                                                                 |         |         |         |         |         |         |
| Safety protection          |     | Two-hand switch/ <b>Safety light grid</b>                                                                                                                          |         |         |         |         |         |         |
| T-slot width G             | mm  | 12                                                                                                                                                                 | 12      | 12      | 12      | 14      | 14      | 14      |
| Mounting hole spacing T*B  | mm  | 530*300                                                                                                                                                            | 530*300 | 530*300 | 530*300 | 590*380 | 590*380 | 610*340 |
| Mounting hole diameter R   | Ø   | 12                                                                                                                                                                 | 12      | 12      | 12      | 14      | 14      | 14      |
| Platform face diameter E   | Ø   | 80                                                                                                                                                                 | 80      | 80      | 80      | 80      | 80      | 80      |
| External dimensions A*J    | mm  | 630*400                                                                                                                                                            | 630*400 | 630*400 | 630*400 | 690*450 | 690*450 | 710*450 |
| Machine height H           | mm  | 1178                                                                                                                                                               | 1148    | 1182    | 1210    | 1278    | 1322    | 1378    |
| Equipment weight (approx.) | KG  | 270                                                                                                                                                                | 275     | 295     | 320     | 360     | 365     | 390     |
| Air source pressure        | Mpa | 0.4-0.7                                                                                                                                                            |         |         |         |         |         |         |
| Use air pressure           | Mpa | Theoretical output force (KG)                                                                                                                                      |         |         |         |         |         |         |
| 0.4                        | Mpa | 1230                                                                                                                                                               | 1990    | 4000    | 5020    | 6250    | 10250   | 13950   |
| 0.5                        | Mpa | 1540                                                                                                                                                               | 2490    | 5000    | 6280    | 7820    | 12810   | 17440   |
| 0.6                        | Mpa | 1850                                                                                                                                                               | 2990    | 6000    | 7530    | 9380    | 15370   | 20930   |
| 0.7                        | Mpa | 2160                                                                                                                                                               | 3480    | 7000    | 8790    | 10950   | 17940   | 24420   |
| Remark                     |     | The equipment's stroke and other structural parameters can be customized. Red indicates an optional accessory; this feature is not included in the standard model. |         |         |         |         |         |         |

### Model Selection Guide

| Model  | Maximum pressure(T) | Maximum travel(mm) | Force Stroke(mm) | On-Off mode(M/F)  | Pressure digital display | Safety light grid |
|--------|---------------------|--------------------|------------------|-------------------|--------------------------|-------------------|
| HST-CE | 02                  | 50                 | 5                | M:Hand-on mode    | S                        | G                 |
|        | 03                  | 100                | 10               | F:Foot pedal mode |                          |                   |

|  |    |     |    |  |  |  |
|--|----|-----|----|--|--|--|
|  | 05 | 150 | 15 |  |  |  |
|  | 08 | 200 | 20 |  |  |  |
|  | 10 | 250 | 25 |  |  |  |
|  | 15 | 300 | 30 |  |  |  |
|  | 20 |     |    |  |  |  |