



BAIXIE
百协机床

Jiangsu Baixie Precision Forging Machinery Co., Ltd.

CTKA Series Fully Hydraulic Die Forging Hammer

Performances and Features

The fully hydraulic power ram is fixed on the frame with elastic anti-vibrating pad, controlled by advanced tapered valve and driven by combined cylinder, double anti-leakage technique and integrated hydraulic system, so the main oil circuit is substantially simple due to no-pipe connection. Comparing to steam and air hammers in China, our fully-hydraulic forging hammer enjoys the following advantages:

A. Lower noise

The noise of forging hammer is unavoidable but can be reduced. If the striking energy is enough, the forging will be formed without excess strikes, or if the striking energy can be controlled under necessary but not excess amount, the situation will be different.

Traditionally, the striking energy is not adjustable and usually much more than actual requirement. Also the operator is accustomed to strike more times than needed, which can result in waste.

Our forging machine can precisely control the striking energy and each striking can be preset according to designed programs to control the striking energy and striking sequence. Therefore, no surplus energy is wasted and noise will also be reduced accordingly.

B. Constant forging quality

When the forging hammer is operated manually, no matter how skilled the operator is, nobody can guarantee the exact same quality of each forging. However, our fully hydraulic forging hammer is capable of keeping the same forging procedure by using CNC, even if operated by different workers. For some special forgings, the forging procedure can be pre-programmed and digitally stored by CNC, and will be re-used for the same forging blank.

C. Lower running cost

Energy-saving not only means high driving efficiency, but also precise energy control to avoid unnecessary energy consumption, which will also influence service life of forging machines and forging dies because of absorbing excess energy.

D. Wide application

The outstanding advantages of our fully-hydraulic forging hammer are fast striking speed and high striking frequency, making them most suitable for forgings needing multiple times of striking and fast speed deformation to fill in the die impression.

Due to fast forging speed and short die contact time, our forging machine is well-suited to forge thin and light and fast-cooling forgings. When forging these kinds of forgings with complex shapes and weight tolerance

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requirements, the performance and economic advantages of our fully-hydraulic forging hammer are obvious.

Our forging machine is the best equipment in the forging industry and it's perfect for forging products in small batch with various shapes.

E. Lower investment cost

It is obvious economical to innovate old steam and air hammers into hydraulic ones and much cheaper than buying a new fully-hydraulic die forging hammer.

Regardless of the hammer power, steam and air hammers are much cheaper than fully-hydraulic hammer. But as a matter of fact, the driving system of the hammer must be taken into consideration. In this way, the cost between them is almost the same.

F. Easy maintenance and operation

The main features of our fully-hydraulic forging hammer are unique design and reliable safety. By using three hydraulic priority valves, our forging machine can realize oil filling, oil discharge, adjustment and striking operations as well as easy and convenient maintenance.

Our fully hydraulic forging hammer can monitor oil cleanness, temperature, pressure and level by sensors, and will alarm immediately as long as something is wrong and then automatically diagnose and protect itself by stopping the forging or even the hammer. Meanwhile, this sensor system can also monitor other safety auxiliaries in order to let the hammer be operated with suitable conditions.

In order to be convenient for users to maintain the forging machine, normal troubles can be shown on the screen. If there is something wrong, it is quick to find the trouble and solve it at once to shorten the downtime.

Technical Parameters

| Specification | CTKA | 160 | 200 | 250 | 320 | 400 |
|--------------------|-------------------|--------|--------|--------|---------|---------|
| Striking Energy | kJ | 160 | 200 | 250 | 320 | 400 |
| Weight of Ram | kg | 9000 | 10000 | 11500 | 13000 | 17000 |
| Striking Stroke | mm | 1000 | 1050 | 1100 | 1200 | 1300 |
| Striking Frequency | Min ⁻¹ | 60 | 55 | 50 | 45 | 45 |
| Motor Power | kW | 4 × 75 | 4 × 90 | 4 × 90 | 4 × 110 | 6 × 110 |