

CKMACHINE VIN 3-in-1 Machine

Model DHY3-23 | Frame VIN marking, steel bowl pressing and grease injection at one station

Introduction

The 3-in-1 machine marks the frame, presses the steel bowl and injects grease at a single station; an optional barcode printer issues the label automatically. The marking head carries an automatic floating mechanism that corrects the squareness of the mark, which removes manual steps and raises marking speed.

The worktable sits low, so the operator does not have to hold the frame up by force. The bowl is dropped into the head tube - the pressing head is magnet-assisted - and once the frame sensor triggers, every following action completes automatically. That takes the physical load out of the bowl-pressing station while the frame number and the grease are finished in the same cycle.



VIN 3-in-1 machine, model DHY3-23

Applications

E-bike, scooter and motorcycle frames, plus agricultural, special-purpose and construction-equipment frames. The frame is located on the lower head seat, the bowl sits in the head tube, and the VIN position must fall inside the 110 x 30 mm marking field.



Marking Results

17-digit VIN dot-peened directly into the frame tube: 250 strikes per second through an HRC85 pin, depth 0.01-0.35 mm depending on material, character height set by the character die. The floating head keeps character height even on the concave and the convex side of a longitudinal beam.



Frame number marked on the tube surface

Specifications

Item	Specification
Machine	VIN 3-in-1 machine (pressing + marking + grease injection)
Model	DHY3-23
Structure	All steel
Power	500 W
Voltage	AC 220V 50Hz, single phase
Air pressure	0.4-0.6 MPa
Air consumption	120 L/min
Hydro-pneumatic cylinder	1-6 tonnes
Cycle time	45 seconds or less
Marking depth	0.01-0.35 mm (depending on material)
Engraving speed	110 mm/s
Pin strike frequency	250 times per second
Pin hardness	HRC85
Marking field	110 x 30 mm
Identification content	VIN, chassis number, motor code; digits, letters, symbols and graphics
System integration	Pressing, marking and grease injection in one cycle
Marking head	Sealed against dust; automatic floating correction
Barcode printer	Optional
Machine weight	24 kg gross
Packaging	65 x 45 x 45 cm
Certification	CE (M.2024.206.C107312, M.2022.206.C76434); ISO 9001
Warranty	1 year, with 1-year global spare parts support
Origin	Chongqing, China

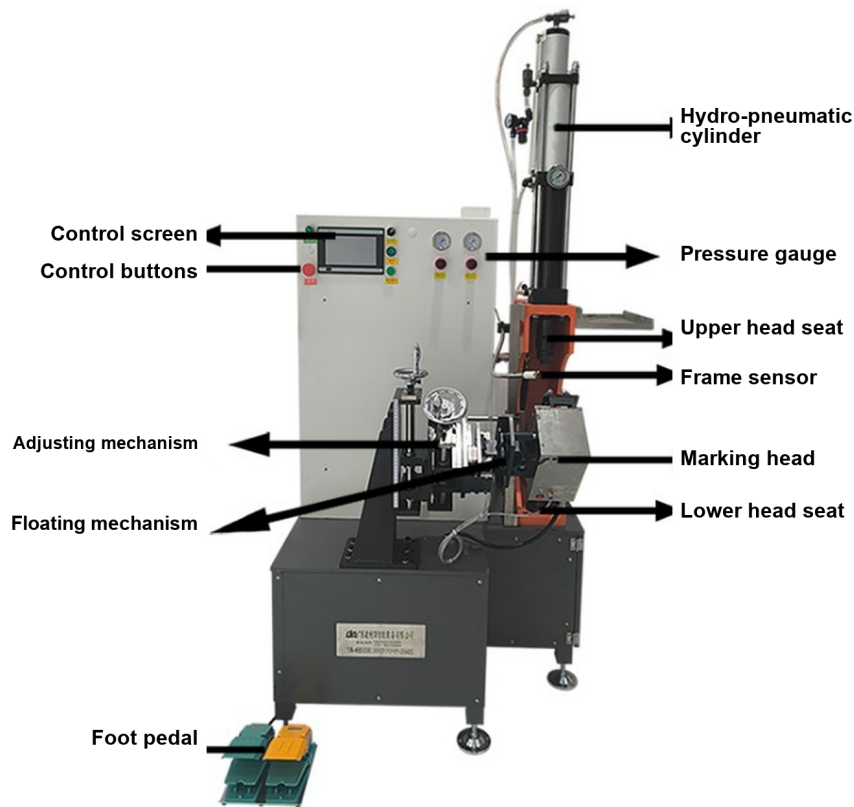
Every figure above follows the supplier parameter table for model DHY3-23. Pressing force, marking depth and cycle time are the three values that decide whether the machine fits an existing line, and all three are fixed by that table rather than estimated.

Features

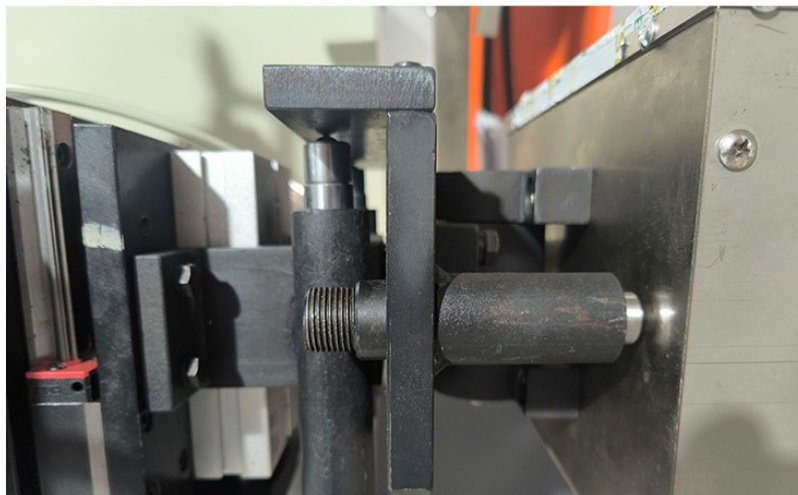
Touchscreen controller	Model programme, VIN import and marking parameters are all selected on screen, so a model change never touches the wiring. Pressure gauges and push-buttons sit beside it.
Lower running cost	A hydro-pneumatic cylinder does the pressing: compressed air works through a small oil volume, so both electricity and oil consumption stay low. 500 W on single-phase AC220V.
Stable and reliable	An all-steel frame carries the 1-6 t pressing reaction and 250 strikes per second at the same time. Few failure points; an operator is productive after half an hour.
Grease injection unit	Integrated under the marking head, dosing on every cycle. Output is adjustable and even, it strips down without special tools, and very little grease is wasted.
Sealed floating head	Sealed against dust and chips. The floating mount finds vertical by itself, so convex and concave beam faces take the same depth and character shape without hand squaring.
Automation	One pedal starts the cycle: pressing, marking, greasing and barcode printing run in sequence within 45 seconds. VIN arrives by USB with automatic serial numbering and linear codes.

Machine Configuration

The callouts below run from the hydro-pneumatic cylinder at the top of the column to the foot pedal. The cylinder delivers 1-6 tonnes of pressing force, the marking head works a 110 x 30 mm field at 250 strikes per second, and the floating mechanism corrects the squareness of the mark automatically. The control screen holds the model programme, the VIN import and the marking parameters; the frame sensor starts the cycle once the part is seated.



Machine structure, model DHY3-23



Marking head with the automatic floating mechanism: it corrects the squareness of the mark, cutting manual steps and raising marking speed.

Workflow

1	Connect power and air supply AC 220V 50Hz, 0.4-0.6 MPa dry air at 120 L/min.
2	Load the part Place the steel bowl in the head tube and seat the frame on the lower head seat. The pressing head is magnet-assisted, so the bowl stays in place.
3	Press the down pedal The upper head descends onto the frame.
4	The cycle runs automatically The frame sensor confirms the part is seated, then pressing, VIN marking and grease injection follow in sequence.
5	Marking complete The VIN is dot-peened; the optional barcode printer issues the label.
6	Press the up pedal and unload The head retracts and the operator removes the finished frame.

About CKMACHINE

Chongqing Chuke Intelligent Machinery & Equipment Co., Ltd. was established in 2016 and runs a 3,826 sq m plant with 9 production lines. The company is a CE-certified and SGS-verified supplier of pneumatic marking and pressing equipment.

Ordering

Send the frame drawing (or the tube section and the VIN location), the model, the daily volume and the number of stations you run today. Character die sets, bowl dies and the clamping method are sized against your cycle time before a quotation is issued.