

Ultrasonic Metal Welding Machine For Glovebox Use

Item Number: DH08



Introduction

Ultrasonic metal welding machine for glovebox use supports 0.1 mm aluminum strip to cap welding with a 1.5 x 3 mm weld area 220V power configurable tooling for battery cell cap assembly in controlled laboratory environments with bilingual control software.

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Application	Description	Key Benefit
18650 cylindrical cell cap welding	Joining 0.1 mm aluminum strip to caps used in 18650 battery-cell assembly and development work.	Applies the specified aluminum-strip-to-cap process to a widely used cylindrical cell format.
21700 cylindrical cell cap welding	Performing cap interconnection work for 21700-format cells using the stated weld geometry.	Supports a larger cylindrical cell format without changing the core application focus.
Similar cylindrical battery formats	Evaluating or implementing cap welding for cylindrical cells beyond the specifically listed 18650 and 21700 sizes.	Extends use to similar cap configurations where compatible customized tooling is selected.
Battery R&D process development	Establishing and documenting a defined weld area for aluminum-strip-to-cap joining during cell-development programs.	Provides reference-backed utility, geometry, and installation parameters for process planning.
Pilot cell assembly	Supporting controlled cap-welding steps in pilot-scale cylindrical cell assembly environments.	Enables a compact generator and welding-head layout to be considered in workcell planning.
Glovebox-adjacent battery processing	Positioning the welding head and generator according to the available controlled-environment workflow and the specified 3 m connection length.	Helps teams plan physical separation between the process head and electrical control box.
Materials joining evaluation	Assessing aluminum strip and cap joining requirements where a 1.5 x 3 mm weld area is appropriate.	Allows the application-specific tooling requirement to be defined from the target joint geometry.

Parameter	Specification
Site-facing identifier	DH08
Equipment type	Ultrasonic metal welding machine for glovebox use
Referenced welding process	0.1 mm aluminum strip + cap
Welding area	1.5 x 3 mm
Welding tooling	Can be customized
Referenced cap applications	18650, 21700, and similar caps
Power supply voltage	220V ±10%
Air supply pressure	0.4 to 0.6 MPa
Air humidity requirement	Less than 48%
Ambient temperature requirement	Not higher than 45°C
High-power generator dimensions (L x W x H)	480 mm x 365 mm x 202 mm
Welding head dimensions at highest point (L x W x H)	420 mm x 180 mm x 290 mm
Transducer emission-line length to electrical control box	3 m

Parameter	Specification
Instrument units	All metering instruments use metric units
Program language requirement	Chinese and English