

Portable Servo Drilling Unit For Aerospace Industry

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ELECON FEEDER

The Elecon feeder is a compact, high-performance, high-powered portable NC drilling unit developed for the Aerospace Industry.



Features

1. Combined Ball Screw with Servo Motor Control Achieves Optimal Cutting Conditions for Complex Laminated Material

For laminations consisting of different materials and thicknesses, spindle speeds and feed rates change automatically per material, so that the optimal cutting conditions can be achieved. Improvement of drilling accuracy and cutting tool life are to be expected.

2. Control Delamination and Burr Generation

Elecon feeder can adjust the feed rate at drill bit breakthrough which minimizes an exit burr and delamination.

3. Capable of Drilling $\phi 16\text{mm}$ in Titanium Material.

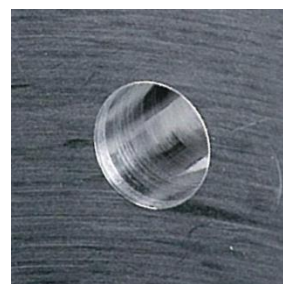
Rated for a $\phi 16\text{mm}$ in titanium material, by engineering a high powered-efficient motor with a convenient compact size.

Effect of adjusting feed rate at breakthrough position

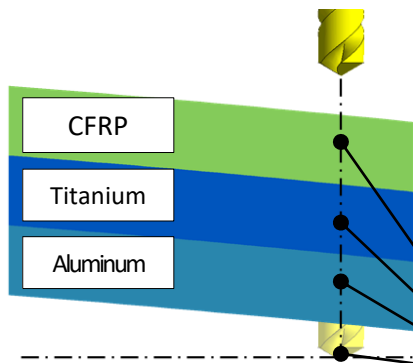
Without adjusting the feed rate



With adjusting the feed rate



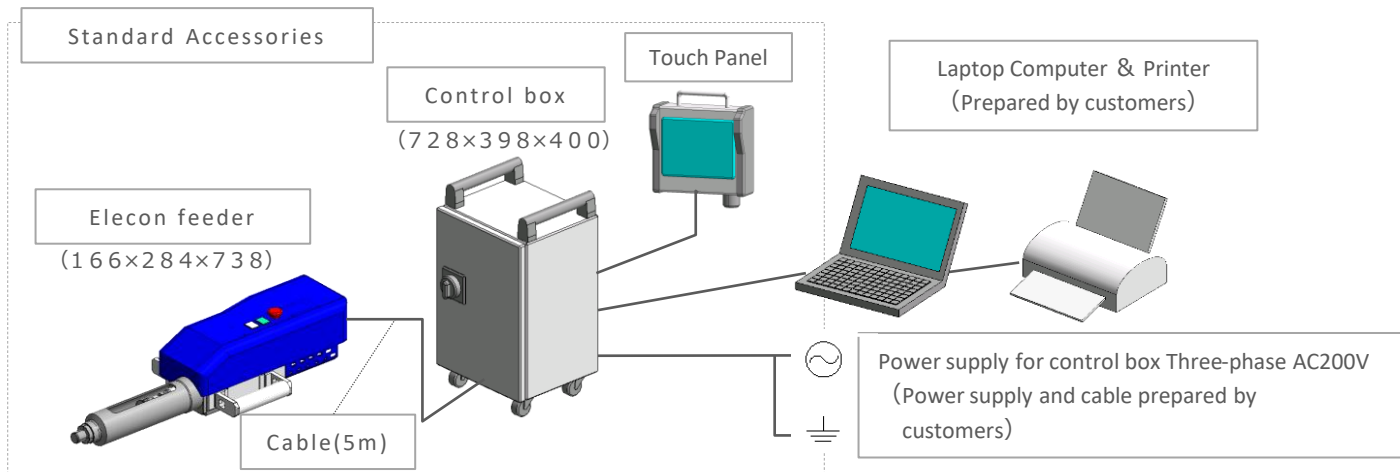
What is "Stroke Free Program"?



It automatically detects load variation, and reads pre-registered spindle speed for each material. Then these functions enable Elecon feeder to perform optimal drilling operations corresponding to concurrent detection of the drilling load, Even varying thicknesses of different materials which are laminated are freely drilled without pre-setting stroke lengths, It achieves drastic reduction in change over time.

Not required to set stroke length!!

Component



Note. The figure in parentheses is a reference size. The size is different according to the spindle model. (Height×Width×Depth mm)

Specifications

Specs	Spindle speed(no load)		Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	50Hz	60Hz			Ti *	Al *	CFRP							
Model	min ⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N (kgf)	mm/sec	mm/sec	kg
EF2-1342	428~4280		JT6 Collet holder ER-20	Max. φ 13	φ 7	φ 13	φ 13	Max.120	Max.0.9 DC brushless motor	0.4 AC servo motor	4300 (440)	Max.83	Max.16.7	12
EF2-2009	92~920		JT6 Collet holder ER-32	Max. φ 20	φ 16	φ 20	φ 20							

Notes 1.To select your model, refer to the work piece configuration, material, cutting properties, diameter of the hole and rotation speed. (cutting speed)

2.The drilling capacity shown above is for a depth equivalent to the drill diameter times two.

3.The power voltage of the main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz.

4.Ti * : Titanium , Al * : Aluminum , CFRP : Carbon Fiber Reinforced Plastic

5.Nose piece and cables are not contained in the weight.

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