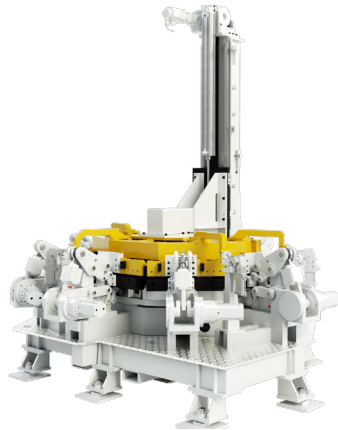


FlexTTH

Flexible Table Top Hemming



ABB's Table Top Hemming provides a flexible and modular solution to improve hemming quality and increase body-in-white production speed, this can reduce traditional hemming cycle time by up to 50 percent.

High quality output with 50% shorter cycle time

ABB's Table Top Hemming provides a flexible and modular table top hemming solution and it is able to perform optimized motions with a short cycle time and high accuracy. This solution improves hemming quality and increases Body-in-White production cycle speed with a total lower cost of ownership. ABB's novel kinematic hemming motion reduces hemming cycle time and consumes less energy, with reductions of up to 50% of traditional hemming cycle time. This solution is particularly suitable for high-volume production.

Flexible and precise process control

Optimized kinematic itinerary makes it possible to hem up to 105° open angle in only two steps. The reinforced Gripper structure together with the proven docking design, assures a stable and effective downholder pressure. As well as being quick to configure to allow the engineer to focus on the design of blades and die. Class-A surface assembly and any quality requirement on hemming thickness and roll-in are all being considered by design simulations and maintained by a dedicated and experienced team of experts.

Robot based technology

The Table Top Hemming uses the same IRC5 robot based technology as other ABB Robots. This means that no special software or training is required. Robot programmers and maintenance personal can immediately begin to use the product with the same interface they are used to.

Offline programming in RobotStudio®

The hemming path can be quickly programmed offline in the ABB virtual simulation software, RobotStudio®. It can program the servo unit like a robot, and allows robot programming to be done on a PC in the office without shutting down production.

Advantages

- Table Top Hemming process is fast and accurate
- Space needed is less than Press Hemming
- Multiple materials can be hemmed together eg. Sheet metal + plastic.
- Optimum panel quality guaranteed through the hemming principle of the closed ring

Features:

- Flexible and precise process control;
- Excellent hemming quality
- Quick & easy system design and setup
- Low effort trial and commission
- Short cycle time
- Integration of additional operations possible
- Minimal maintenance
- Low noise operations

Specifications

- Maximum weight of hemming blade 25 kg per hemming unit
- Pre hemming force up to 38KN / stroke 27mm
- Final hemming force up to 100KN / stroke 100mm
- Hemming flange angle up to 105° (tested on 110 °)
- Hemming time - 4 seconds
- Cycle time (Hemming + docking + undocking) - 14 seconds

- 01 Technical illustration
- 02 Technical illustration
- 03 Standard Hemming Unit
- 04 Window Channel Hemming Unit

Specification

	Typical Dimensions (X Y Z)	Weight
Complete Station	3.3m X 3m X 3.8m	7,000 kg
Elevator		1,584 kg
Hemming Unit		338 kg
Window Channel Unit		510 kg

Performance

Hemming Station

Cycle time	14 seconds (Docking + Hemming + UnDocking)
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Standard Hemming Unit

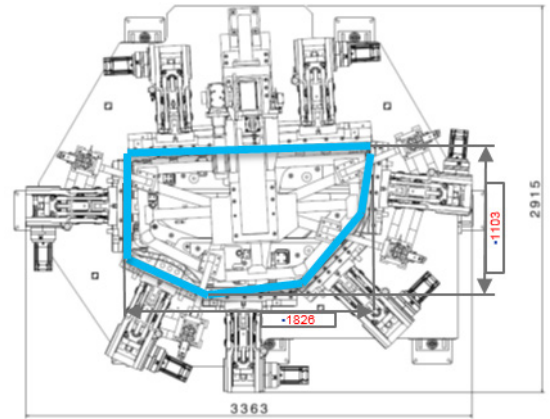
Max Blade Weight	25 kg
Pre Hemming Force	38 kN
Pre Hemming Stroke	27 mm
Final Hemming Force	100 kN
Final Hemming Stroke	100 mm
Hemming Time	4 seconds
Hemming Flange Angle	Up to 105 degree for two step hemming. Up to 124 degree for three step hemming.

Window Channel Hemming Unit

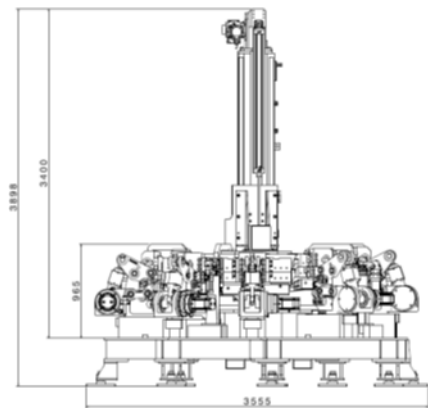
Hemming Time	8 seconds
Pre Hemming Stroke	20 mm
Final Hemming Force	90 kN
Final Hemming Stroke	30 mm

Elevator

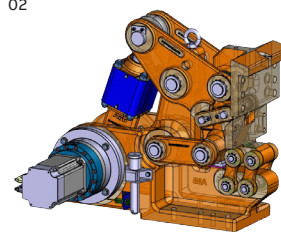
Stroke	1200 mm
Time	4 seconds



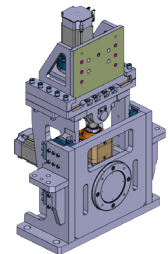
01



02



03



04

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