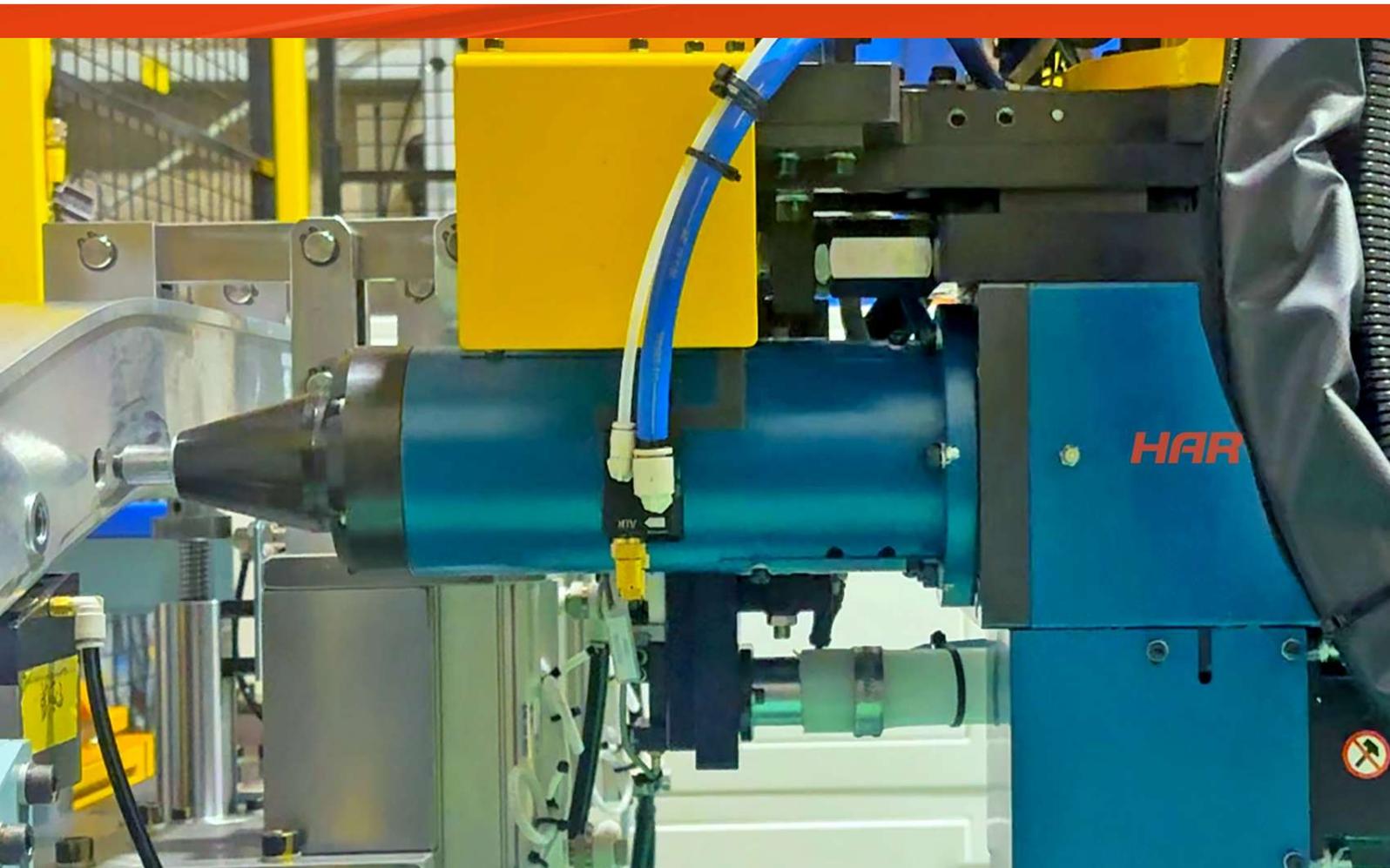


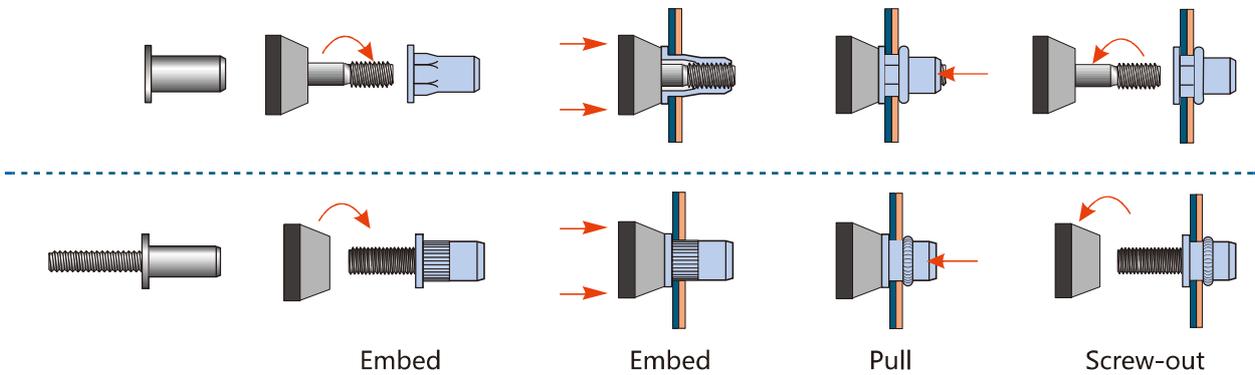


HARDY 

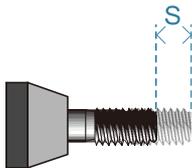
HDRNS

Automatic Rivet Nut System



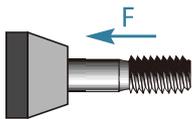


Riveting Control Solutions



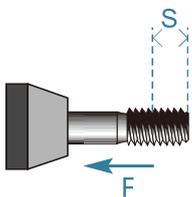
Stroke Control Mode - based on preset stroke parameters

- Ideal for materials with consistent and uniform thickness
- Fast and simple operation



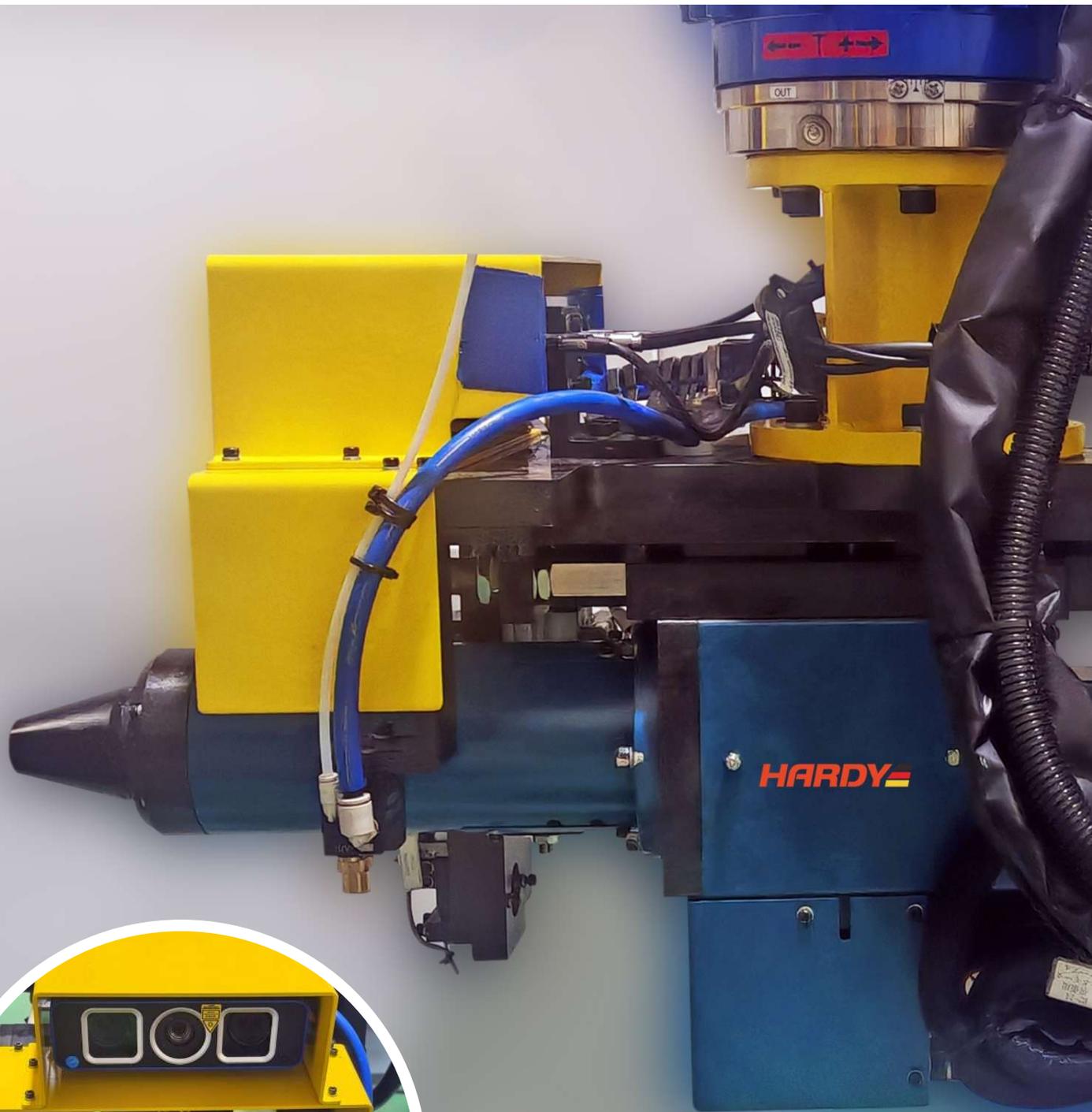
Pressure Control Mode - based on preset riveting force

- Provides stable riveting for materials with thickness variations
- Force sensors enable quality monitoring



Pressure-Stroke Hybrid Control - Simultaneously monitors force and displacement

- Delivers optimal adaptive riveting for variable material thickness
- Enhanced quality control with graphical data visualization & dataization of all riveting anomalies
- Multiple program storage for automatic product changeover
- Maintenance logs for optimal mandrel life management
- Single tool compatibility with various rivet nut specifications



**3D Vision Guidance +
Fully Automatic Servo-Controlled
Rivet Nut Joining System**

Features:

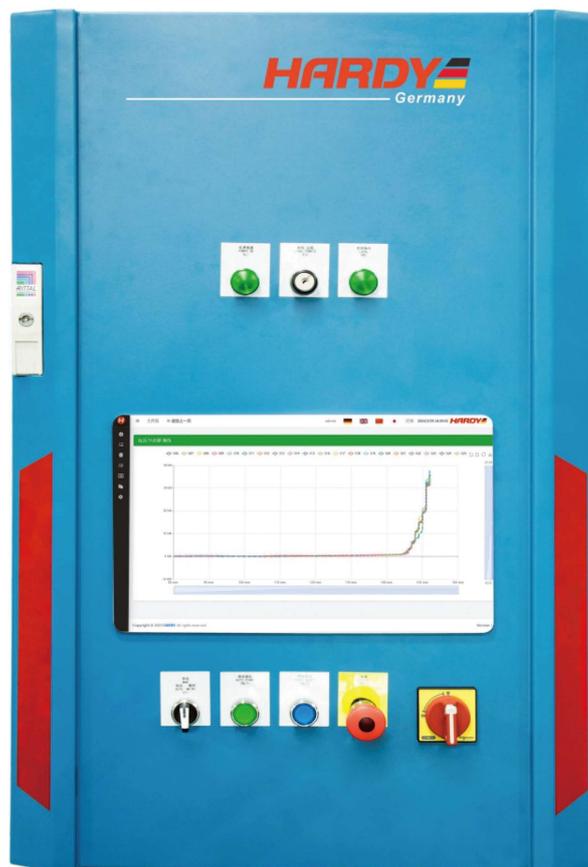
- Patented Floating Rivet Head Design, enables self-adaptive alignment in X/Y axis and angular compensation
- Achieves adaptive riveting for sheet metal assemblies
- Dual Servo Drive System – Provides full-process monitoring during riveting operations.
- Max. 60kN Pull Riveting Force – Meets all pull riveting requirements for M16 and smaller specifications.
- Quick-Change Head

Technical Parameters

Applicable rivet nut/stud	≤M16 (Applicable to rivet nut materials: stainless steel, steel, aluminum)
Applicable sheet thickness	≤14mm
Setting force	≤ 60kN
Setting accuracy	1N
Displacement control accuracy	0.01mm
Driving power	Dual servo system
Power supply	380V/50Hz
Bus Communication Protocol	EtherNet/IP,ProfiNet,DeviceNet etc.



- Standardize "embedded PC" control
- Standard HMI Features for parameter configuration, data curve display, error alarm notification
- Simple and intuitive interface, password protected access levels
- The riveting process is automatically monitored to ensure the quality of riveting
- Critical data acquisition uploads to plant MES for product quality assurance.
- Multiple communication protocols such as EtherNet/ IP, PROFINET, DeviceNet, CC-Link etc.



Features:

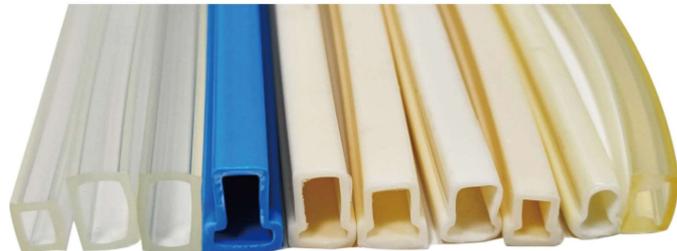
- Direct Blow **fasteners** to Rivet tool Nozzle
- Simplified & Stable Design
- Customizable Feed **tracks** to **ensure full fastener adaptability**
- Modular components for easy maintenance repair

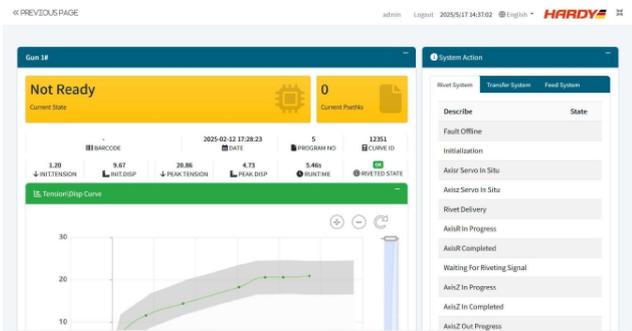


Feeding hose

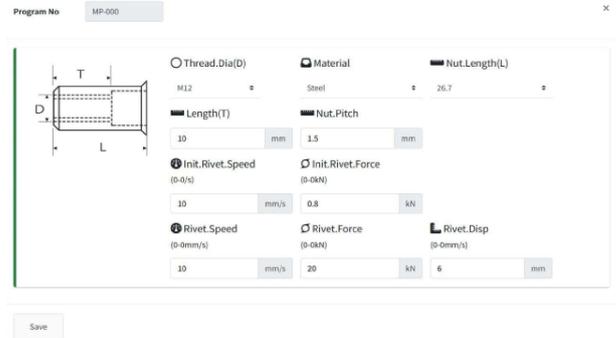
Features:

- **Multiple specifications**
- **Remote transmission**





Status display



Quick program settings

Address	Name	Function	State
+1	DRivet2RdyToCycle	Ready to Start	OK
+2	DRivet2Cycle	In Cycle	OK
+3	DRivet2Finished	Finished	OK
+4	DRivet2Faulted	Fault	OK
+5	DRivet2RunNewOn	Process Monitoring On	OK
+6	DRivet2ToolOff	Tool Disabled	OK
+7	DRivet2RivetLow	Rivets Low	OK
+8	DRivet2ToolHome	Home Position	OK
+9	DRivet2ToolLoad	Load Position	OK
+10	DRivet2RivetSet	Rivet Set	OK
+11	DRivet2Reserved11	(Reserved)	-
+12	DRivet2Reserved12	(Reserved)	-
+13	DRivet2RivetRF	Fault Before	OK
+14	DRivet2RivetRS	Fault During	OK

IO Definition



Curve analysis

ID	Barcode	Peak Strength	Peak Pressure	Program No	State	Run Time (s)	Riveting Time	Curve	Signal
12251		4.73	20.86	5	OK	5.46	2025-02-12 17:28:23	LC	OK
12200		6.46	20.58	5	OK	5.32	2025-02-12 17:28:09	LC	OK
12249		6.41	20.58	5	OK	5.62	2025-02-12 17:27:55	LC	OK
12248		5.78	20.59	5	OK	5.40	2025-02-12 17:27:41	LC	OK
12247		5.81	20.58	5	OK	5.38	2025-02-12 17:27:26	LC	OK
12246		6.14	20.62	5	OK	5.64	2025-02-12 17:27:12	LC	OK
12245		6.37	20.64	5	OK	6.83	2025-02-12 17:23:07	LC	OK
12244		7.81	20.54	5	OK	356.05	2025-02-12 17:17:02	LC	OK
12243		6.96	20.92	5	OK	7.54	2025-02-12 17:26:45	LC	OK
12242		6.99	20.61	5	OK	5.89	2025-02-12 17:26:31	LC	OK
12241		6.69	20.59	5	OK	7.08	2025-02-12 17:26:17	LC	OK
12240		6.86	20.55	5	OK	3447.95	2025-02-12 16:18:40	LC	OK
12239		6.46	20.57	5	OK	5.52	2025-02-12 15:45:34	LC	OK
12238		6.35	20.63	5	OK	5.37	2025-02-12 15:45:19	LC	OK
12237		6.70	20.58	5	OK	5.60	2025-02-12 15:45:05	LC	OK
12236		6.84	21.96	5	OK	5.57	2025-02-12 15:44:51	LC	OK
12235		5.48	21.41	5	OK	5.38	2025-02-12 15:44:37	LC	OK

Data acquisition