



NOVA3 RW Series Resistance Welding Workstation

DESCRIPTION

Amada Miyachi Europe offers its expertise to all of its customers to correctly match any welding application with the correct resistance welding power supply, weld heads, electrodes, tooling and process parameters. The Miyachi resistance welders can join a wide range of materials such as (stainless) steels, nickel alloys, titanium, and copper.

Typical resistance welding applications include welding of medical devices, battery packs, coil wires, sensors, and spot welding of small mechanical parts. Applications can be found in the medical, military, aerospace, automotive, electronics industry and many others.

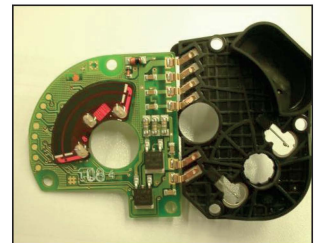
KEY FEATURES

- Modular system adaptable to specific production requirements
- Integrated touchscreen for easy programming
- Stable platform for resistance welding parts with the highest quality and accuracy
- Fits Miyachi, Peco and Unitek power supplies and weld heads
- Servo motor driven axis (XY, with optional Z and turn axis)
- Several door configurations possible: opening direction horizontal or vertical
- Actuation method manual, pneumatic or motorised
- Optional Light guard
- Data logging of system messages
- Password controlled user levels
- Ergonomic platform for continuous production and stress-free, concentrated and effective operators
- Produce your parts at an efficient cost point and maximize the profit per product.

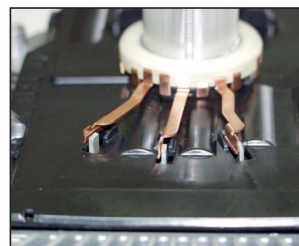
TYPICAL APPLICATIONS



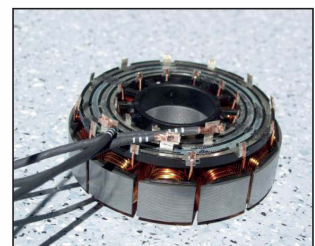
Battery pack welding



Welding of Automotive Electronics



Welding stranded wire to terminal



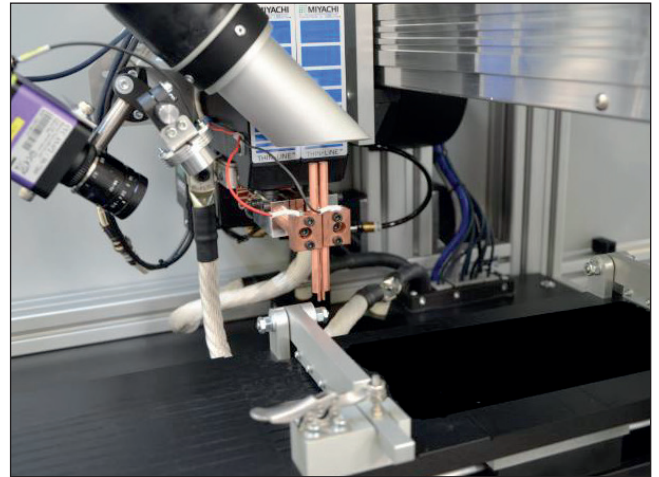
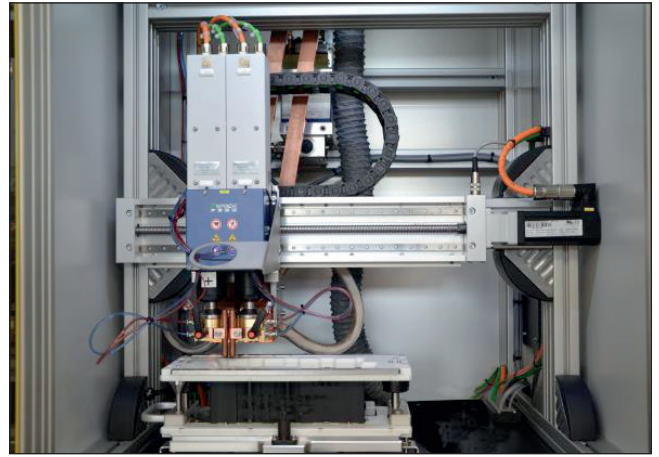
Coil Wire Welding

FEATURES

The NOVA3 is available in five configurations: for Resistance Welding, Hot Bar bonding, Laser Welding, Laser Marking and Laser Cutting. For Resistance welding it can be equipped with the AWS3 welding system with a choice of motorized or pneumatic weld heads. Other power supplies are available if the application requires it. A wide range of weld pincers, single- and dual weld heads can be mounted inside the system.

OPTIONS

- The following options are available:
- Remote diagnostics by 3G or LAN
- Inline configurations (SMEMA compatible)
- Third axis (Z-axis) can be inside the head, or by additional axis
- Fourth (rotary) axis in several versions
- Automatic tooling recognition
- Part detection
- Water cooling of electrode holders
- Fume extraction and filtration
- Customer specific tooling and parts programming
- “Hanedashi” process flow compatibility, meaning automatic unloading of the work piece, thus providing the proper state for the next work piece to be loaded
- Auto-eject of welded parts onto chutes and containers
- Automatic bins for “not OK” parts



TECHNICAL SPECIFICATIONS AXES

Motion specification X- axis	
Stroke (mm)	330
Repeatability (µm)	±10
Velocity (mm/s)	450
Motion specification Y- axis	
Stroke (mm)	330
Repeatability (µm)	±10
Velocity (mm/s)	450
Motion specification Z- axis	
Stroke (mm)	280
Repeatability (µm)	±20
Velocity (mm/s)	450
Motion specification Rx- axis	
Product dimension diameter x length (mm)	160x180
Static Repeatability (°)	0.2
Velocity (rev/min)	150

TECHNICAL SPECIFICATIONS

Power supplies	
AWS3 weld systems motorized or pneumatic	DC Inverter integrated weld system up to 20kA, for motorized and pneumatic heads
ISQ20-3K,6K,10K,20K, DC Inverter	DC inverter power supply up to 20kA
125, 300, 1000ADP, Capacitor Discharge	Capacitor Discharge power supply up to 1000Wsec (1000 Joules)
HF25, HF27 DC Inverter	DC inverter power supply up to 2.4kA
UB29, DC29 DC power supplies	Linear DC power supply up to 4 kA
MEA-100 AC power supply	AC power supply up to 8kA
Weld heads	
newhorizon motorized and pneumatic weld heads	<p>A full range of resistance welding heads including air-actuated, and motorized with opposed, step, series, and parallel gap electrode configurations. See for technical specification the data sheet of the respective weld heads.</p> <p>Maximum force of heads ranging from 1 to 1100N Maximum force of pincers ranging from 40 to 1100N</p>
newhorizon motorized and pneumatic weld pincers	
F120, FD120 F160, pneumatic weld heads	
F120-Z, F160-Z pneumatic weld pincers	
Thinline 80 series, 180 series pneumatic weld heads	
70 series motorized weld heads	
Options	
Weld cables	Air cooled, optional water cooled
Water cooling	Active water cooling
Fume extraction and filtration	3-stage filter
Vision Camera	Automatic adjustment of parts
Automatic Eject	Custom solution for higher cycle times
Data storage	With extra PC or connection to customer database
Modem	For remote access and remote service

WEIGHT & DIMENSIONS

Dimensions HxWxD (mm), excluding chiller & fume extractor	2000x890x1050 2340x890x1350 (including light tower and HMI)
Weight (kg)	350
Maximum inner space HxWxD (mm)	800x600x900 (Z x X x Y direction)
Minimum available space for product HxWxD (mm)	200x300x450 (Z x X x Y direction)