



FORWARD TECHNOLOGY

a Crest Group Company



(shown with optional features)

DLVW-2472

Digital (Servo Drive) Linear Vibration Welder

The DLVW-2472 is a hydraulic motion controlled digital (servo-electric) drive linear-vibration welder capable of welding parts up to 24" x 72" (610mm x 1829mm) or multiple smaller parts.

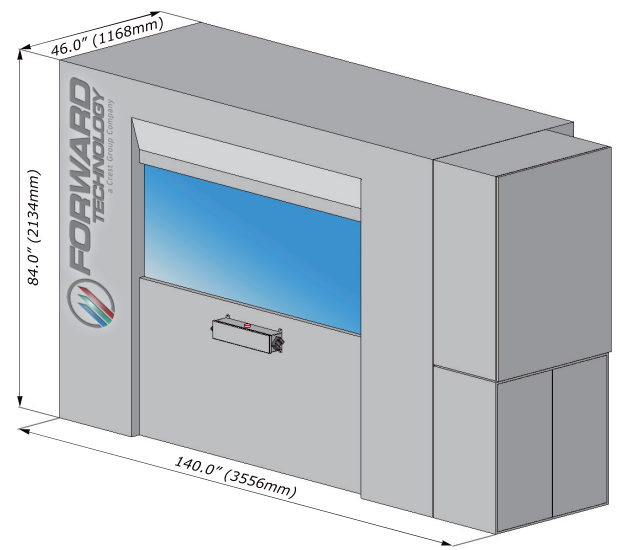
The patented 2-pole digital (servo) drive technology allows vastly improved process control while substantially increasing the available power. This technology offers improvements in overall efficiency (significant power increase), capability (amplitude/process control), and productivity (application benefits) beyond any vibration welding designed currently on the market.

Standard Features

- **Patented High Output 2-Pole Digital (Servo) Electromagnetic Drive System** allows higher efficiency and a significant increase in weldable area over industry standard 3-Pole systems. Can drive larger/heavier tools with a lower power demand.
- **Up to 70 in² (452cm²) Weldable Surface Area (Polypropylene)** – the most powerful welder in its class.
- **0-260 lb (0-118kg) Upper Tool Weight** capability makes this welder able to drive the heaviest production tools.
- **Patented Position-Based Amplitude Control Network** allows ramp up to full amplitude in as little as 0.04 seconds. Amplitude adjustment from 0.040" – 0.070" (1.02mm – 1.78mm) peak-to-peak in increments of 0.001". Over-Travel Protection that guards the machine from potentially damaging operation. X-Axis and Y-Axis (vibration direction and perpendicular to vibration direction) repeatability of ± 0.001 ".
- **Continuous Tuning by Closed-Loop Digital Control** eliminates the need for a separate auto-tuning step during setup and assures that the machine operates at peak performance throughout the weld cycle.
- **Precision Digital Distance Measurement System** allows welding by Time, Collapse Distance, or Absolute Distance with a repeatability of ± 0.001 in (± 0.025 mm) and/or alarm monitoring these values. A High-Resolution Encoder integrated into the welder Lift Table monitors processing dimension variables.
- **Allen Bradley CompactLogix PLC with PanelView Plus 7 - 700 Color 6.5" Touch-Screen Graphical Display** simplifies parameter input and allows the following to be displayed:
 - Weld Program/Setup #
 - Frequency
 - Amplitude
 - Contact Time and Force
 - Weld Steps 1 through 8 (Time, Amplitude, Force)
 - Cooling Time and Force
 - Ethernet Connectivity
- **25 Weld Program/Setup Memory** allows storage for instant recall, minimizing tool change time.
- **Process Verification Windows** (pass/fail) compare and alarm the user when actual parameters are outside customer programmed minimums & maximums.
- **Multi-Level Passcode Protection** limits parameter adjustment to qualified personnel only.
- **External 120VAC Duplex Electrical Outlet** allows user to easily connect small auxiliary equipment such as computers, printers, radios, etc.
- **Enhanced Sound Enclosure** for maximum noise reduction (<80 dBA). Enclosure is completely de-coupled from the equipment frame to isolate noise from the swing frame.
- **Zero-Force Opti-Touch Cycle Start Switches** minimize operator fatigue.
- **Two Valve Lower Tooling Actuation Pneumatic Valve Pack** allows user to program additional pneumatic motion on lower tooling such as part clamping or part eject.

Optional Features

- "Pass-Thru" Rear Access Safety Door w/ Light Screen Safety Protection
- Extended Machine Height
- Special Energy Star Compliant Operating Voltages Transformer
- Larger Operator Interface
- Pendant Arm Mounted User Interface
- LED Four Color Light Tower
- Light Curtains
- Quick Change Base Plates
- Upper Tooling Vacuum System
- Programmable Vacuum Sensing Switch with LCD Readout
- Quick Disconnect Outlets & Sensors



MECHANICAL SPECIFICATIONS

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|---|--|
| Weight: | ~7500 lbs (3402kg) |
| Overall Dimensions: | 46.0" D x 140.0" W x 84.0" H (1168mm x 3556mm x 2134mm) |
| Front Door Opening: | 25.0" H x 73.0" W (635mm x 1854mm) |
| Daylight Opening (between Lift Table & Drive Platen): | 23.0" (584mm) |
| Lift Table: | |
| Dimensions: | 24.0" D x 72.0" W (610mm x 1829mm) |
| Center Opening: | 12.0" D x 34.0" W x 31.0" H (305mm x 864mm x 787mm) |
| Height from Floor: | 38.0" (965mm) |
| Variable Stroke: | 20.0" (508mm) |
| Drive Platen: | |
| Dimensions: | 14.7" D x 63.0" W (373mm x 1600mm) |
| Center Opening: | 7.0" D x 30.8" W x 12.0" H (178mm x 782mm x 305mm) |

PERFORMANCE SPECIFICATIONS

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|--|--|
| Maximum Upper Tool Weight: | 260 lb (118kg) |
| Maximum Weldable Area (Polypropylene): | 70.0 in ² (452cm ²) |
| Output Frequency: | 180Hz to 250Hz |
| Amplitude Range: | 0.040" - 0.070" (1.02 - 1.78mm) Peak-Peak |
| Maximum Clamp Force: | 8000 lbs @ 1500 PSI (35.6kN @ 103 Bar) |
| Lift Table Speed: | 10.0"/second (254mm/second) |
| Noise Level: | <80 dBA |
| Warranty: | 2 Years (Parts & Service) |

OPERATING REQUIREMENTS

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|--------------------------|---|
| Electrical Requirements: | 240VAC, 3PH, 35A, 60Hz |
| Pneumatic Requirements: | 80 PSI, 0.5" ID (5.5 Bar, 13mm ID) Supply Line |

System includes Filter/Regulator/Lubricator



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