

# SVT012VR SVT032VR SVT042VR

## DUAL SERVO SPIN WELDERS



Color touch-screen with intuitive menu controls.



Dukane's **Dual ServoWeld** Spin Welder is designed for welding circular parts that have a tight tolerance requirement for both the orientation between the parts being welded and the overall final welded assembly height. The new design builds on the solid foundation of Dukane's existing single servo-spin welder, by replacing the pneumatic Z-axis drive with a second servomotor. The unit's control system provides the ability to hold orientation tolerances of +/- 0.1 degree of rotation and Z-axis tolerances of 10 microns. In addition, the control system coordinates the performance of both servomotors thereby providing the user with a new welding technology Dukane calls Melt Match. The Melt Match technology uses a constant torque welding mode which provides the user with the ability to specify a torque value that most closely matches the melt flow rate of the material, and the controls system coordinates the Z-axis velocity and RPM to provide this torque throughout the weld cycle.

A user friendly color touch screen operator interface is standard. Setup of machine is virtually effortless thanks to the position jog teach feature. This intuitive interface allows the operator to quickly and simply jog the unit to both the final orientation axis position and the final Z-axis height position. Error conditions are graphically indicated on the panel and include an explanation of the source of the error.

All machine setup parameters are programmed through the password-protected interface. This insures that no unauthorized adjustment of the machine setup can occur. A programmable feature also allows the user to define the "home" position, thereby allowing the elimination of unnecessary vertical stroke and thereby reducing overall cycle time. The machine can store up to eight setup files in local memory, and has programmable limits on up to 11 independent process parameters. All weld data can be exported via RS-232 data port.

### Best-in-Class Standard Features

- Large color touch screen with intuitive menu structure
- High precision servo spin drive with orientation accuracy of +/- 0.1 degree
- Servo vertical actuator with positioning accuracy +/- .001in. (+/- .03mm)
- Trigger by vertical position or spin torque
- Programmable welding methods include Weld by Time, Rotations, Collapse Distance w/orientation, Absolute Distance, w/orientation, Energy and peak Torque.
- Post weld features include Hold by Time, Hold by Collapse Distance, Hold to a Fixed Position, and Hold in Constant Thrust.
- Up to 11 independent programmable upper and lower part limits allow for advance process control

### Best-in-Class Standard Features (continued)

- Additional modes: part pickup, pre-spin orientation, constant torque welding
- Motorized mechanical stop
- Password protection of setup parameters
- On board storage of 8 part setups
- Weld data output to PC via RS-232
- Extra-rigid rectangular tube column with negligible deflection
- Up to 5" (127mm) stroke for greater versatility and easier part load and unload
- Optical cycle activation switches to reduce operator fatigue
- Ergonomic base with status indicators
- Integrated design reduces cables and foot print

- Automation connector for interfacing with custom machinery
- Full two-year parts and labor warranty in North America (contact Dukane office for warranty outside of North America)
- CE and NAFTA certification

### Options

- Spin tool vacuum system for ease of load.
- Available "less base" or "less base and column" for incorporation into automation
- Two-position pneumatic rotary turntable kit allows loading of one fixture up to 12 by 14 inches (305mm by 356mm) while the other is under the spin head, increasing productivity

## Machine Specifications

PARAMETER	MODEL			
	SVT032VR	SVT042VR	SVT012VR	
Motor Type	Direct Drive			
Top Spin Speed	RPM	3000	4000	750
Peak Spin Power	HP	4.2	2.5	4.2
Peak Spin Torque	ft.*lb. (Nm)	16 (21)	10 (14)	47 (64)
Stroke	in. (mm)	5 (127)		
Max. Down Force	lbs. (kN)	700 (3.1)		
Electrical Power	240 VAC, 20A single phase, 50/60 Hz			
Joint Diameters (guidelines only)	in. (mm)	.5-4 (12-100)	<2 (<50)	4-7 (100-180)
Comments	recommended for most applications	small parts (RPM > 3000)	Large parts Max tool dia. 16" (406mm)	
Weight	375 Pounds (170 KG)			
Height Adjustment	14" (357mm) – Max. daylight approximately 20" (540mm)			

