

\*Note that this chart shows starting adjustments, a visual inspection of the weld always remains necessary. Refer to the manual for an example of a good weld. Several factors can influence the welding (external temperature, the external humidity rate. The color and pattern of tubing. The temperature of the tubing itself if it is exposed to the sun or not.) For better stability of operation, it is strongly advised to operate the Spinseal with a battery voltage above 19 volts.

	Welding time (sec.) at 10°C (50°F) or more	Cooling time (sec.)	Welding time (sec.) at 10°C to 0°C (50°F to 32°F)	Cooling time time (sec.)	Welding time at 0°C to -10°C (32°F to 14°F)	Cooling time (sec.)
CDL HD Tubing Blue, Black, Green						
3⁄4''	2 to 2.5	15	2 to 2.5	15	2 to 2.5	10
1''	2 to 2.5	15	2 to 2.5	15	2.3 to 2.8	10
1 ¼"	2.2 to 2.5	15	2.2 to 2.6	15	2.3 to 2.8	10
1 1⁄2''	2.2 to 2.5	15	2.2 to 2.6	15	2.5 to 2.8	10
Versapipe Blue and Black Fusion tubing						
3⁄4''	2 to 2.5	15	2 to 2.5	15	2.2 to 2.5	10
1″	2.2 to 2.5	15	2.2 to 2.5	15	2.4 to 2.7	10
1 ¼''	2.3 to 2.6	15	2.3 to 2.6	15	2.5 to 2.8	10
1 1⁄2''	2.4 to 2.7	15	2.4 to 2.7	15	2.5 to 2.8	10
2''	2.5 to 2.8	15	2.5 to 2.8	15	2.8 to 3.1	10
Versaprofile Rapitude Blue						
3/4''	2.0 to 2.2	20	2.0 to 2.2	15	2.2 to 2.5	15
1''	2.0 to 2.2	20	2.0 to 2.2	15	2.2 to 2.5	15
CDL Spinseal tubing						
3/4''	2.0 to 2.2	20	2.0 to 2.2	15	2.2 to 2.5	15
1″	2.0 to 2.2	20	2.0 to 2.2	15	2.2 to 2.5	15
1 1⁄4''	2.2 to 2.5	20	2.2 to 2.5	15	2.3 to 2.5	15
1 1⁄2''	2.2 to 2.5	20	2.2 to 2.5	15	2.3 to 2.5	15

## **TROUBLESHOOTING CHART**

Problems	Causes	Solutions	
The machine won't start	<ul> <li>Battery too low</li> <li>(17.9 V and -) / defective</li> <li>Defective fuse</li> <li>Motor temperature too high due to very high outside temperature.</li> <li>(thermal protection of the motor)</li> </ul>	<ul> <li>Replace the battery</li> <li>Replace the fuse</li> <li>Let the motor cool down</li> </ul>	
The unit no longer displays the battery voltage	<ul> <li>Standby mode activated</li> <li>Battery incorrectly connected</li> </ul>	<ul> <li>Press the green button (Enter)</li> <li>Reconnect the battery</li> </ul>	
The battery doesn't last long	<ul><li>Battery too old</li><li>Battery under 5A</li></ul>	<ul> <li>Change the battery</li> <li>Use a 5A battery</li> </ul>	
The welding cycle does not start by itself	• Manual mode on	<ul> <li>Reset to automatic mode</li> </ul>	
<ul> <li>Difficulty clearing the fusion connection</li> <li>Plastic residues on tubing</li> </ul>	<ul><li>Used drill bit</li><li>Damaged drill bit</li></ul>	• Change the drill bit	
The fitting appears to fuse at the surface of the tubing	<ul> <li>Spring mechanism</li> <li>Welding time too low <ul> <li>Low RPM</li> <li>Low battery</li> </ul> </li> </ul>	<ul> <li>Confirm that the spring system is not blocked</li> <li>Put some lubricant on the sliding guide</li> <li>Adjust the welding time</li> <li>Motor problem</li> <li>Replace battery</li> </ul>	
The fitting seems to fuse too deep	<ul> <li>Check the welding pipe model</li> <li>Incorrect settings</li> </ul>	<ul> <li>Adjust the settings</li> </ul>	

CDL Maple Sugaring Equipment inc.