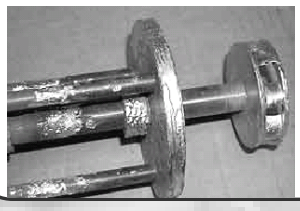
The 10 Most Important Questions You Should Ask About Your Lead-Free Wave Soldering Machine

1. Corrosion Resistance?

Are the base metals of your solder pot, flow ducts, solder nozzles and impellers resistant to the corrosive effects of high tin content lead-free solder alloys?

2. Consistent Performance?



Does the performance of your unprotected impellers and solder nozzles degrade over time due to erosion and the aggressive nature of high-tin lead-free solders?

3. Impervious Materials?

Summary of Base Metals

Material	Positives	Negatives	Longevity
Titanium	Excellent resistance to tin	Can be expensive	10 years
304 Stainless Steel	Inexpensive	No corrosion resistance	1 month
316 Stainless Steel	Inexpensive	No corrosion resistance	3-6 months
Coated Stainless Steel	Good resistance to tin	Will degrade is scratched	6-12 months
Cast Iron	Inexpensive	Difficult to form	1-2 years

Are the base materials used for your machines impellers, solder nozzles, flow ducts and solder pot impervious to the effects of continuous tin scavenging?

4. Wear Parts Replacement?

Are the impellers, solder nozzles, flow ducts and solder pot replaced with parts that will withstand prolonged use and eliminate periodic replacement?

5. Optimized Solder Flow?

Have your solder nozzles been redesigned to provide longer contact time and reduced temperature drop? Is the fall height reduced to minimize dross generation?

6. Solder Alloy Compatible?

Characteristics of Lead-Free Alloys

Alloy Composition	Melting Point (°C)	Solder Pot Temperature (°C)	Density
SnCu	227	270-280	7.29
SnAg	221	265-275	7.44
SnAgCu	217	260-270	7.38
SnAgCuSb	217	260	7.24
SnPb	183	250	8.80

Are your present solder pot and internal solder pot parts truly compatible with all lead-free solder alloys? What is the longevity of your present materials?

7. Machine Compatibility?

Is the retrofit method you are considering compatible with all major brands of wave solder machines on the market? Does the supplier offer on-site installation?

8. Solder Pot Protection?

Does your present solder pot provide long lasting protection against lead-free corrosion? Is it surface coated and will it degrade due to de-dross scratching?

9. Field Retrofittable?

Can the retrofit method you are considering be easily installed at your location with minimal downtime? Does it require an exchange of the entire solder pot?

10. Competitively Priced?

Is the retrofit method you are considering competitively priced? Does it provide impervious base metal parts at a price comparable to a surface coated alternative?

Specnor guarantees to outperform any competitive system!

Contact Specnor today for a quote and product demo.

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Upgrade your wave solder machine for lead-free operation today!

Lost in the conversion to lead-free wave soldering is the actual process of assuring your wave solder machine is compatible with lead-free solder alloys. Determining compatibility can be a time consuming and expensive process. Fortunately, Specnor offers a unique and cost-effective solution. Upgrade your new or existing wave solder machine for lead-free operation with a lead-free retrofit kit from **Specnor**.

Benefits of lead-free retrofit kit

- Highly resistant to corrosive lead-free solders
- Consistent performance without periodic replacement of wear parts
- Impervious to scratching that can damage surface coated metal parts
- Fully optimized solder flow for lead-free operation
- Compatible with all lead-free and tin-lead solder alloys
- Can be installed in all popular models of wave solder machines
- Field retrofittable without exchanging solder pot
- Competitively priced compared to surface coated options

Compatible with all lead-free solder alloys

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SnPb	183°C	250°C	8.80

Retrofit kit includes

- Titanium impellers and solder pump assemblies
- Titanium solder nozzles
- Titanium flow ducts
- Titanium solder pot liner
- New temperature switches and solder level sensors
- All other parts in contact with molten solder made of titanium

Long lasting

Summary of Base Metals

Material	Advantages	Disadvantages	Longevity*
Titanium	Excellent resistance to effects of tin	Can be expensive to fabricate	10 years
304 stainless steel	Inexpensive	No corrosion resistance	1 month
316 stainless steel	Inexpensive	No corrosion resistance	3-6 months
Surface coated stainless steel	Good resistance to effects of tin	Will degrade if scratched	6-12 months
Surface coated cast iron	Inexpensive	Will degrade if scratched	1-2 years

* - Under sustained production conditions with lead-free solder alloy

Available for all major brands of wave solder machines

- Electrovert™
- ERSA™
- Seho™
- Specnor™
- Tamura™
- Technical Devices™
- Vitronics Soltec™

For more information, contact us at specnor@microtec.net and request our white paper "Lead-Free Wave Soldering: A Cost-Effective Alternative." It's full of examples of how we help customers achieve their operational goals by offering innovative soldering products that meet there demanding requirements.

Specnor Tecnic

Serving the Electronics Manufacturing Industry

Wave Soldering Systems

- Fusion 1600
- Fusion 1800

Selective Soldering Systems

- Mini-Wave selective system

Convection Reflow Ovens

- Tornado 5
- Tornado 7
- Tornado 10

Spare Parts for Electrovert™

- Pump accessories
- Pump shafts
- Impellers
- Thermocouples
- Blowers
- Diffuser tubes
- Aerator tubes
- Conveyor fingers
- Other parts available

Retrofit Kits

- Spray fluxer
- Convection preheat
- Dual wave
- Nitrogen inert soldering
- Lead-free wave soldering

Custom Made Accessories

- Stiffeners
- Solder level glasses
- Profiling thermocouples
- Static solder pots

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