

**Processing Guide
Secondary Insulation**

**PG-109 –
Vacuum Pressure Impregnating (VPI)
Styrene Polyester Resins**

A member of  **DALTANA**

Processing Guide PG-109 – Vacuum Pressure Impregnating (VPI) Styrene Polyester Resins

Process Step	Optimum	Minimum	Comments
<i>Preheat</i>	1 hour at 135 - 150°C(275 - 300°F) Once unit reaches temperature	None	Relax magnet wire, drives out moisture, thermosets tapes, assists in penetration
<i>Dry Vacuum</i>	2 hours at 29-30 in Hg *see below	1 hour at 27 in Hg	Removes air to allow penetration of resin.
<i>Part Temperature when resin is introduced</i>	50 – 55°C (120°F – 130°F)	25 – 50°C (77°F – 120°F)	Temperature has a direct bearing on resin penetration. If too low resin will not penetrate fully. If too high resin can be damaged
<i>Wet vacuum</i>	None	None	Pressure should be applied as soon as possible to assist with resin penetration.
<i>Gas to release vacuum</i>	Nitrogen	Dry air	Nitrogen is recommended to release vacuum and pressurize tank to insure the safest operation.
Pressure	2 hours 80-90 psi for coils with minimal taping. Add one hour for each layer of tape.	1 hour at 80 psi for coils with minimal taping. Add one hour for each layer of tape.	A short pressure cycle could reduce penetration.
<i>Drain Time</i>	15-30 minutes	10-15 minutes	Longer drain will re-capture more resin.
<i>Bake Schedule</i>	As recommended by product data sheet.	As recommended by product data sheet.	Full cure is required to develop all performance properties.

*Turn off Vacuum pump, close vacuum valve to minimize monomer loss.

Please contact ELANTAS PDG, Inc. Technical Service if you have any questions.

Phone number 1.314.621.5700 Extension 717 or 1.800.325.7492 Extension 717

The above properties are typical values and are not intended for specification use.

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