PG-88

COMPOSITION					
Au	**Pt**	**Pd**	**Ag**	**Cu**	**Other**
88	**9.5**	**0**	**0.5**	**0**	**In Fe Ir**

Rich Yellow Porcelain Alloy

APPLICATION

Single Units, Short Span Bridges, Implants

SOLDER Pre: PSF Yellow Post: 720, 650

TECHNICAL DATA

	HARDENED
Vickers Hardness:	175
Proof Stress:	56,000 psi
Tensil Strength:	68,000 psi
Elongation:	11%
Melting Range:	1925-2100°F / 1050-1150°C
Casting Temperature:	2210°F / 1210°C
Density g/cm^3:	19.0
Thermal Expansion:	14.2 @ 500ºC / 14.4 @ 600ºC

TECHNICAL INSTRUCTIONS

WAXING: Maintain optimal pattern thickness of 0.3 – 0.5 mm. Build out deficient areas to insure uniform porcelain thickness. Avoid sharp corners and angles. Provide adequate bulk in connection areas.

SPRUING: *Direct*: Attach 8-10 gauge wax sprue with reservoirs to the heaviest portion of the pattern. Keep pattern(s) 1/4" from top of ring.

Indirect: Attach 10 gauge wax sprue to the heaviest portion of the pattern(s). Trim to 1/8" and attach a 6 gauge runner bar. Build up crucible former with soft wax and attach runner bar to crucible former with 2 or 3, 8 gauge gate sprues.

INVESTING: Use a high heat phosphate bonded investment as per manufacturer's instructions.

BURNOUT: *Single Stage*: Room temperature to 1450-1550°F (788-843°C) at medium rate.
Two Stages: 1. Room temperature to 800°F (427°C) at 20°F/min.
2. 800°F (427°C) to 1450-1550°F (788-843°C) at 30°F/min.
Heat soak at 1450-1550°F (788-843°C) for at least 1 hour. Add 15-20 minutes soak time for each additional ring.

MELTING: Multi-orifice gas/oxygen torch or induction. Do not use flux. Oxygen pressure should be between 6-9 pounds.

CASTING: Allow metal to pool to a shiny mirror surface. Continue heating until the shine is reduced to a dull, flat white color, and cast. Bench cool to room temperature.

FINISHING: Use high quality aluminum oxide barrel stones, carbides or sintered diamond points to achieve a smooth scratch-free surface. Blast with 50 micron aluminum oxide. Clean in distilled water using ultrasonic cleaner for 10 minutes

OXIDATION: Air fire at 1200-1850°F (650-1010°C). Remove casting and allow to bench cool.

OPAQUING: Fire one thin slurry. Use a second coat to mask remaining oxide show through. Bake to an egg shell finish.