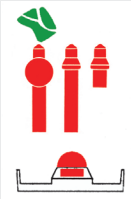


Avtek Ringless Casting Technique

Spruing Single Units

Use direct Reservoir Sprues for heavier and full cast crown and the Feeder Long Sprues for smaller, lighter copings. Using Sticky Wax, attach the pointed tip of the sprue to the thickest area of the pattern, placing it at a 120° (Y) angle. This angle permits the molten alloy to flow uninterrupted to fill the mold cavity with greater force, prevents miscasts, and ensures smooth castings with marginal integrity.



Setting

After filling the ring with investment, allow the ring to bend set for 60 minutes. After investment has hardened, remove crucible former and push the investment out of the ring in order to produce a ringless model. The soft, 3 tapered ring allows for easy removal of the investment from the ring.



Spruing Multi-Units

Using the Feeder Short Sprue, attach patterns to the Circular sprue by positioning the patterns outside of the circle and the thermal zone. Be sure to leave ¼" of space between the patterns and ring wall. Attach the copings to the main circular sprue at approximately a 45° degree angle continuous with the direction of the flow metal.

Casting

After thorough burn-out, the ringless mold is placed in the proper cradle to be cast by the standard technique for the casting machine in use. Both centrifuge and induction casting methods are acceptable. After casting, the mold is then cooled according to alloy manufacturer's instructions. For best results, try to eliminate or reduce size of the button as much as possible.



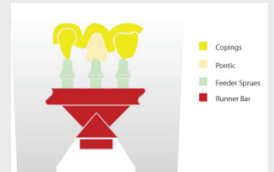
Spruing Bridges

For spruing bridges, use Feeder Short sprues and attach to the pattern. Making sure dies are properly seated, remove bridge from the model and place it into the sprue former. If needed, rotate Runner Bar for proper positioning of the bridge inside the ring, leaving at least ¼" space between ring walls and pattern.



Burn-out

Two-Stage Burn-out. Raise the heat to 250°C (500°F) and hold for at least 30 minutes before raising to top temperature (1600-1650°F for non-precious casting). Absence of a metal ring allows for maximum expansion and gases to escape. One-Stage Burn-out. Place ringless mold in a cold furnace, sprue opening down and raise furnace temperature in no less than one-hour. Avoid rapid heating.



Investing

Mix and invest patterns according to manufacturer's instructions. Fill Super Ring with investment using only low to medium vibration. There are no ring liners needed. Super Rings permit 100% unrestricted investment expansion in all directions.

Be sure that patterns are covered at least ¼" on top and sides. Shorter sprues may require less investment to cover patterns.



Devesting

Super Ring eliminates dig-out procedures entirely. After cooling, lightly tap the cast mold with a hard object to crack the investment. The excess investment particles are easily flaked off the casting. Lightly blast with 50 micron aluminum oxide abrasive powder, and processed to finish using standard laboratory procedures set forth by the manufacturer of that particular alloy.