

Non-precious Metal  
Self-developed  
Strong and Durable  
Good Biocompatibility



**DENTAL CO-CR ALLOY**

## ▶ CoCr Blank

CoCr Blank, a non-precious metal, is innovated based on many years' research and experience of our technicians and is going to revolutionize the traditional PFM manufacturing process. It requires less time, setting the technician free from casting & investing, and at the same time improves product stability and processing level of factory eventually.



X-Sinter Dental Co-cr Alloy

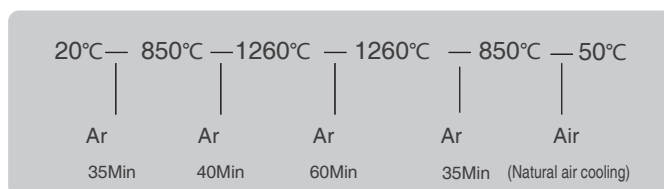
### ▶ Advantages:

- > 1 Cost-effective, compatible with a variety of CAD/CAM system for manufacturing metal copings
- > 2 High strength, solid and excellent toughness, superior wear-resisting property and have a long useful life
- > 3 Non-toxic, non-radioactive and biocompatible
- > 4 Ultra-high machining precision,  $\leq 20\mu\text{m}$
- > 5 Full automatic processing, stable quality, replace the traditional wax casting and reduce working time

### ▶ Composition

Cobalt	$66.0 \pm 2.0\%$
Chrome	$28.0 \pm 2.0\%$
Molybdenum	$5.0 \pm 1.0\%$
Silicium	$< 1.0\%$
Manganese	$< 1.0\%$
Iron	$< 0.8\%$
Carbon	$< 0.8\%$
Other	$< 2.0\%$

### ▶ Co-Cr Alloy Sintering Procedure



Tips: Apply to Co-Cr argon shield sintering furnace.  
Ar is inert shielding gas argon, air is clean gas.

### ▶ Technical Data

Proof strength of 0.2% non-proportional extension	$\geq 500\text{MPa}$
Elongation after fracture	$\geq 2\%$
E-module	$\geq 200\text{GPa}$
Density	$7.9 \pm 0.2\text{g/cm}^3$
Vickers hardness	$270 \pm 27\text{HV}10$
Corrosion resistance	$< 200\mu\text{g/cm}^2$
Solidus temperature	$(1350 \pm 50)^\circ\text{C}$
Liquidus temperature	$(1410 \pm 50)^\circ\text{C}$
Thermal expansion coefficient (CTE) (25 - 500 °C)	$(14.5 \pm 0.5) \times 10^{-6} \text{K}^{-1}$
Metal-ceramic bond characterization	$> 25\text{MPa}$
Tensile strength(RM)	$\geq 800\text{MPa}$

