

# PROTOCOL CHARACTERISTICS OF THE CHROMIUM-COBALT OVERFLOW RING

## IMPORTANT NOTE:

- The machined connection must be protected from any alteration that could cause a slight movement of the overflow ring on the implant. However, if you wish to remove the oxide layer, use glass beads of 50 µm between 2 and 3 bar. Then use pumice with water jet and a micro-polishing soft brush with a polishing paste. Do not use electrolytic polishing, nor a rubber or silicone polisher. Do not sandblast with aluminium oxide, unless the connection is protected with the overflow ring screwed on top of an analogue.
- For temporary screwing, the laboratory screw delivered with the overflow ring should be used, with slight manual screwing, in order to avoid the activation of the morse taper.

### WARNING:

Protocol only applies to the following overflow rings:

O-MS301 / O-MSR301

M-MS307 / M-MS507 / M-MS507 / M-MS300 / M-MS400 / M-MS500 / M-MSNR300 / M-MSNR400 / M-MSNR500 / M-MSN300 / M-MSN400 / M-MSN500 / M-MSR300 / M-MSR400 / M-MSR500 / ZM-MS400 / ZM-MS500 / ZM-MS600 / ZM-MSR400 / ZM-MSR500 / ZM-MSR600 According to ISO5832-12: Implants for surgery – metallic materials: wrought cobalt-chromium-molybdenum alloy

### ALLOY COMPOSITION:

Iron: 0,75 % max.

Molybdenum : 5,0 to 7,0 %

Manganese: 1,0 % max.

- Silicium: 1,0 % max. Chromium : 26,0 to 30,0 %
  - Carbon: 0.14 % max.
  - Nickel: 1,0 % max.
  - . Nitrogen: 0,25 % max.
  - Cobalt: the rest
- Yield strength (Rp 0.2%):> 827 MPa • Elongation:> 12%
- HRC hardness:> 44-45 HV10 Hardness: 310

### **DENSITY:**

• 8.3 g/cm3

#### **MELTING RANGE:**

• 1370 - 1420°C

# **OVERFLOW PROTOCOL ON A MANUFACTURED BASE**

### **MAQUETTE:**

3 Δ 1 Model at maximum 5-7 mm from the superior edge of the cylinder

• Tensile strength (Rm):>1172 MPa

MECHANICAL PROPERTIES (part-hot processed):

- 2 Junction between the rod and the castable sheath : 3 mm Ø
- **3** Rod: 5 mm Ø, 15 mm minimum length for single elements and more for several elements
- 4 Ø 4 mm

Size of the cylinder according to the number of pieces. Place them in order to be at least 7 mm from the cylinder edges (except from the superior edge).

Do not put the pieces into the thermal center.

We advise to place the hexagonal connection upwards (see the model picture).

5 Octagonal connection overflow rings might require a chamfer on angle 6 in order to adapt the prosthesis to the diameter of the implant.

### COATING:

- Type: oxyphosphated and non-graphitic coatings for a maximum protection of the base from oxidation during the cylinder thermal cycle.
- Correct proportioning and protocol: respect the manufacturer's information. Example : GC Fujivest® Premium.

### **MELTING - CASTING:**

- Protocol : respect the manufacturer's instructions and information.
- Non-precious metal alloys adapted to ceramo-metal restorations and not to removable prostheses.
- Nickel and beryllium free chromium-cobalt (non-recycled) alloys according to ISO9693 and ISO22674.
- The casting temperature must not exceed 1500°C.
- We advise the use of the following alloys: Wirobond® SG, Argeloy NP Special®, Remamium 2000+®.

### **REMOVAL FROM THE MOULD:**

Leave it to cool slowly at room temperature.

