

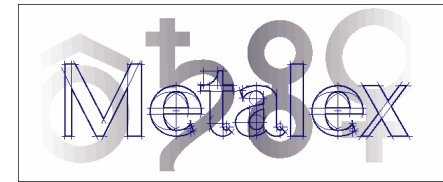
Cathode Blanks (I)

○ Blades

- 316L to A167, 2B Finish to ASTM A-480
- Ti Grade 2 to ASTM B-265/SB265
- Cold rolled 1050 Al alloy to H22 per EN 485-2

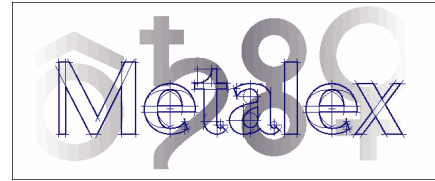
○ Hanger bars

- For 316L and Ti Blanks:
 - Solid Copper to C11000 or C10200
 - Half Hard
 - Rockwell B 38-57
- For Al Blanks
 - 6101 T6 Al alloy for bar
 - C11000 for Contacts



Cathode Blanks (II)

- Quality Control per ISO9002:2002 Certification
- Full Traceability
- Manufacturing Process
 - Blades: Hot Rolling
 - Bars: Extrusion
 - Cladding: Copper suspension bar explosion bonded to Ti or 316L SS tube 1.5 mm minimum thick

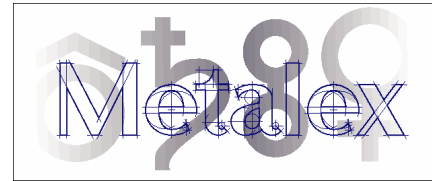


Cathode Blanks (III)

Dimensional Tolerances (+/-)

- Blades
 - Flatness 3.0 mm
 - Camber 1.0 mm
 - Parallel 1.0 mm
 - Diagonals 1.5 mm
 - Width 0.5 mm
 - Length 1.0 mm
 - Thickness 0.07 mm

Cathode Blanks (IV)



Dimensional Tolerances (+/-)

- Bars
 - Straightness 25/L mm
 - Parallel 1.0 mm
 - Twist 1.5 mm
 - Width < 0.25 mm
 - Length < 2.0 mm

- Assembly Maximum +/- 8 mm vertical envelope when hanging