STULLER PRODUCTION STANDARDS

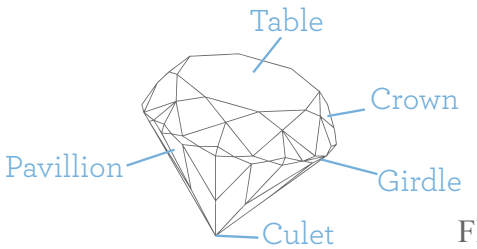


FIGURE A

Preferred File Types:

3dm NURB file

- not unioned/joined; not one solid mesh
- STL files are accepted

All stones must remain in the file

- if your software does not allow this, please provide ALL stone sizes

NOTE: Mod fees may incur when you request specific modifications beyond what you have submitted.

The Basics:

Account for up to 0.2mm of metal to be removed from your design during polishing.
Stones must have a minimum clearance of 0.5mm from the culet of the stone to the finger rail. (SEE FIGURE B)
In order for your piece to cast, the minimum amount of metal required is 0.5mm thickness and 0.6mm depth.
In order for openings to not fill in during casting, they must be a minimum of 0.5mm wide. (SEE FIGURE C)
All design elements must be a minimum of 0.2mm from the finger rail to not be removed during polishing.
If the design can support pilot holes then they will be used, but a minimum of divots is required.

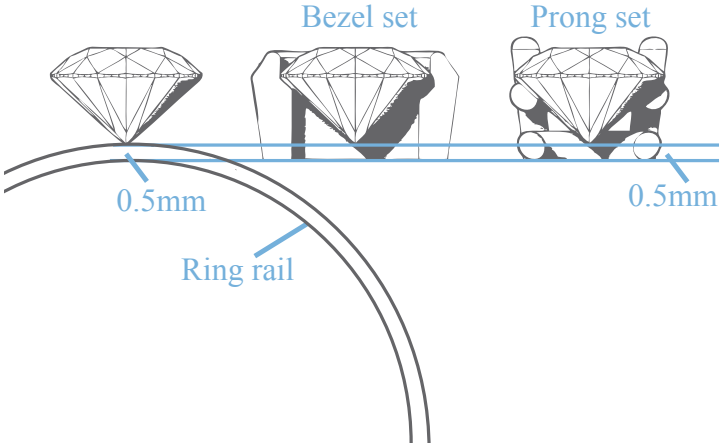


FIGURE B

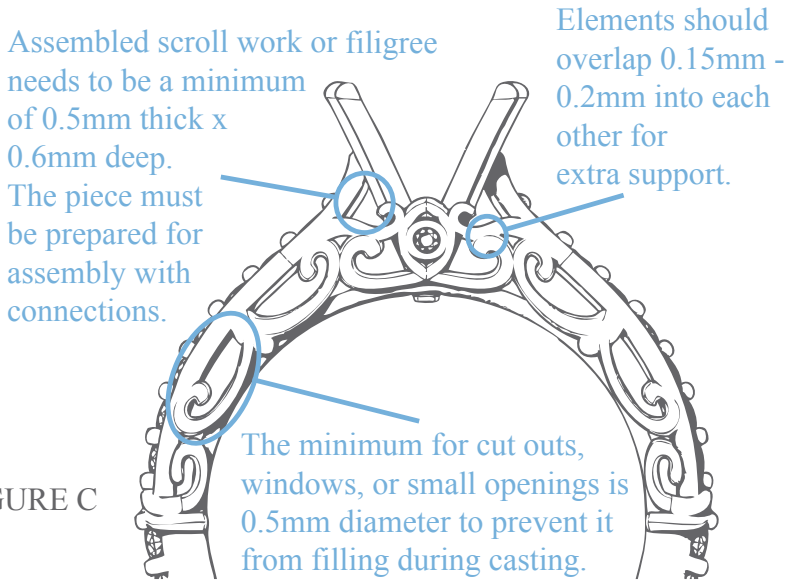


FIGURE C

See the chart below for the average stone depths of Stuller stones:

Stone Depth Chart			
STONE	DEPTH (%)	STONE	DEPTH (%)
ROUND	70	MARQUISE	65
BAGUETTE	65	OVAL	70
CUSHION	80	PEAR	65
EMERALD	70	PRINCESS	80
HALF MOON	65	RADIANT	70
HEART	65	TRILLION	65

Customer Stones:

We only accept stones within a 0.1mm tolerance from the stones sent in the CAD file.
Please provide corner to corner dimensions for any stone with cut corners.
You can send in the stone to be digitally scanned for an additional charge (plus S&H), and Stuller CAD/CAM Services will create the design to fit your customer stone.

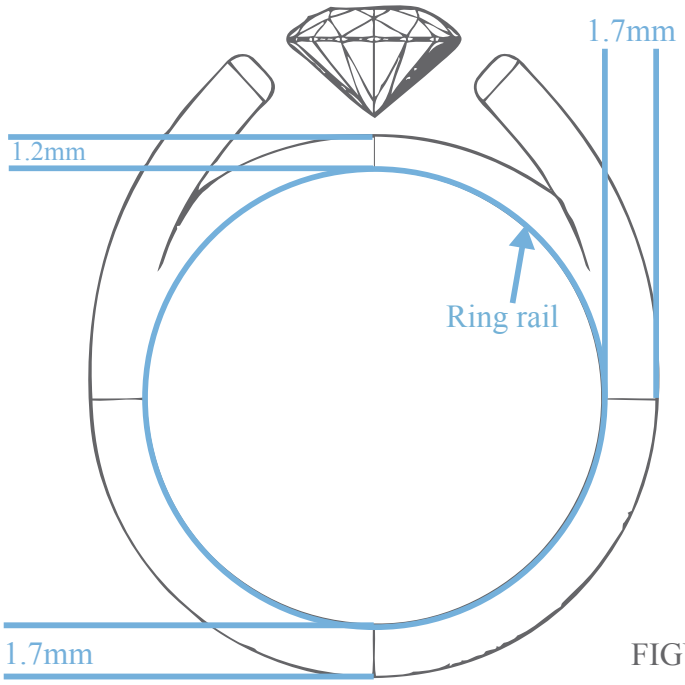
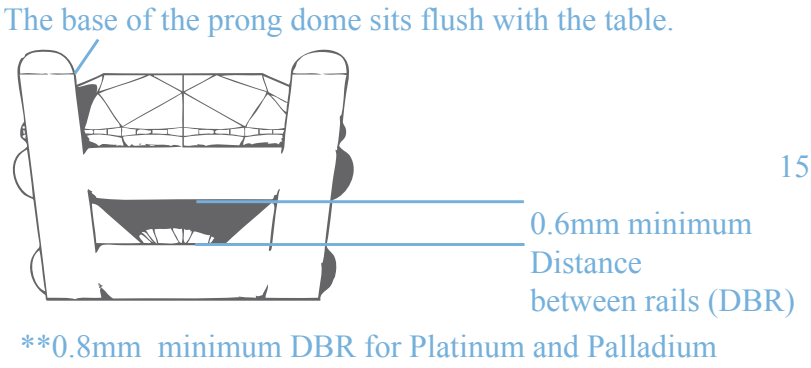


FIGURE D

Shank: (SEE FIGURE D)
Profile Width - minimum of 1.5mm wide
Profile Height - minimum of 1.7mm thick
Bridge Width - minimum of 1.5mm wide
Bridge Height - minimum of 1.2mm thick
Surprise Gems - minimum of 0.3mm from the lowest part of the bezel to the finger rail
Stone Height - minimum of 0.5mm from the culet of the stone to the finger rail



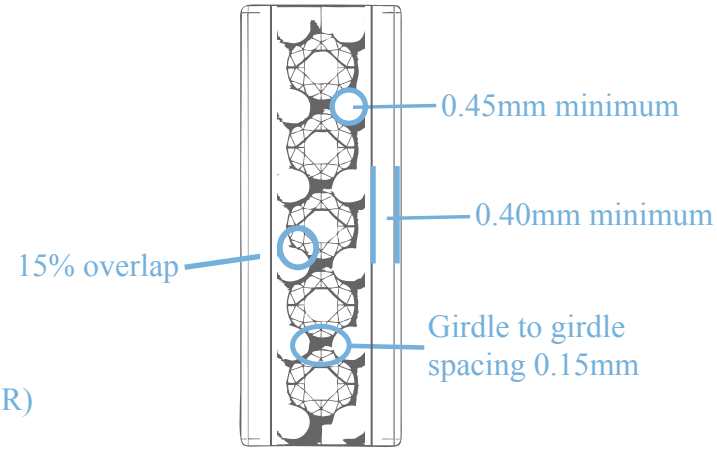


FIGURE E

Prong Settings: (SEE FIGURE E)
Height - the base of the prong dome should sit flush with the table of the stone
Taper - 20.00
Size - proportionate to stone size, but a minimum of 0.45mm.
Nudge/Prong Overlap of Girdle- 0.15 into the stone or 15%
Prong Spacing - prongs need to be completely separated from each other and not touching the channel walls.
Stone Spacing - 0.15mm from girdle to girdle
Surface Width - minimum of 0.4mm from the outer edge of the wall to the edge of the prong base

Channel Cutter for Shared Prong/Pinpoint Setting:

Cutter Profile Shape - (SEE FIGURE F)
Width - 110% (the channel wall should not overlap the prongs)
Depth - 60% (the culet of the stone should touch the channel floor)
Cap Length - 1.5 (the last set of prongs should be visible)
Channel Wall Thickness - minimum of 0.4mm from the outer edge of the wall to the edge of the prong base
Drop/Depth - the prong base must drop below the channel floor

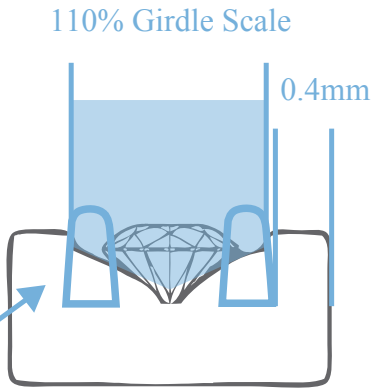


FIGURE F

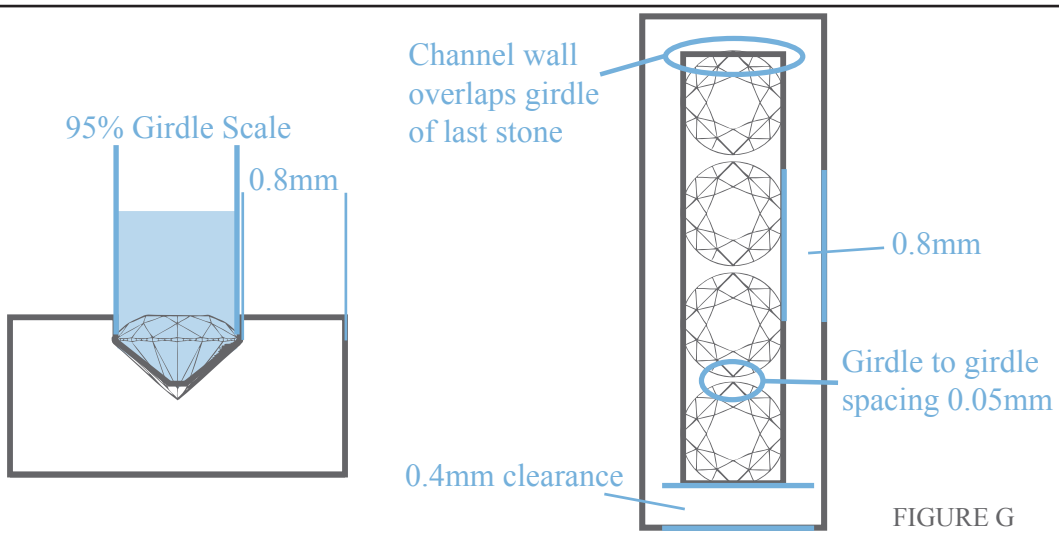


FIGURE G

Channel Set Stones:

Cutter Profile Shape - (SEE FIGURE G)
Width - 95%
Depth - 65% (the culet of the stone should touch the channel floor)
Cap Length - 1.0 (the end of the channel should overlap the girdle of the last stone)
Channel Wall Thickness - minimum of 0.8mm from the outer edge of the wall to the inner edge of the wall
Stone Spacing - 0.05mm from girdle to girdle
Placement - the table of the stone should be flush with the top surface of the channel wall
Stone Height - Minimum 0.5mm of metal underneath the stone from the culet to the finger rail
Interference - a mimimum of 0.4mm of clearance from the end of the channel to the next design element

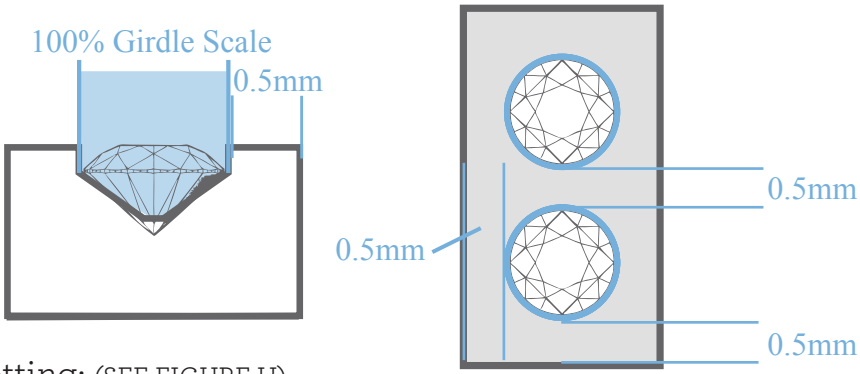


FIGURE H

Gypsy Setting: (SEE FIGURE H)

Stone table should be flush with surface of the metal in which to be set
Use an azure cutter to cut away the material above the stone at 100% girdle scale
Minimum space between stones and around stones:

- 1.10mm stones and smaller = 0.35mm spacing
- 1.15mm to 1.8mm stones = 0.45mm spacing
- 1.85mm and larger stones = 0.5mm spacing

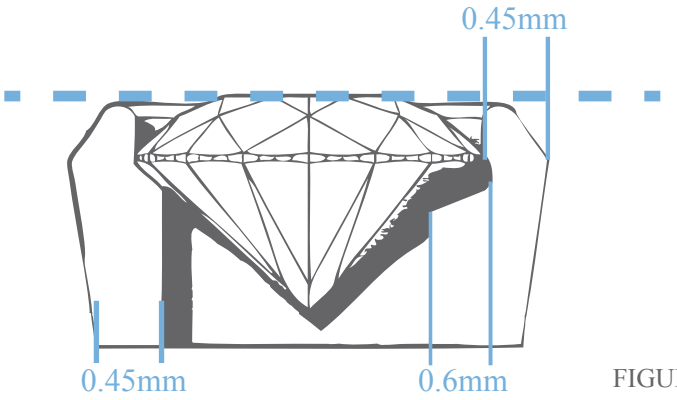


FIGURE I

Bezel Setting: (SEE FIGURE I)
Top wall thickness - minimum 0.45mm
Bottom wall thickness - 0.45mm
The overlap and location is set at 0.00
Seat height - table of the stone should sit flush with the top of the bezel wall
Seat Length - 0.6mm

Divot Cutters

FIGURE J

Divots: (SEE FIGURE J)
If pilot holes cannot be used then a minimum of divots must be used.
Girdle Scale - 98%
Depth - 110%
The divot should not come to a point at the bottom.

Pilot hole cutter

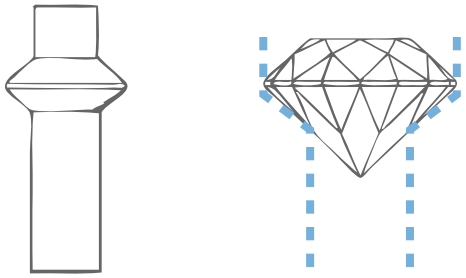


FIGURE K

Pilot Holes: (SEE FIGURE K)
Pilot holes can only be used when the depth of the metal beneath the stone is not more than double the width of the pilot hole. (Example: If the width of the pilot hole is 0.7mm, then the depth of the pilot hole cannot be more than 1.4m.)
Metal between the pilot holes must be a minimum of 0.5mm thick
Girdle Scale - 98%
Girdle Width - 5%
Lower Seat Size - 70%
Z Offset - 4%

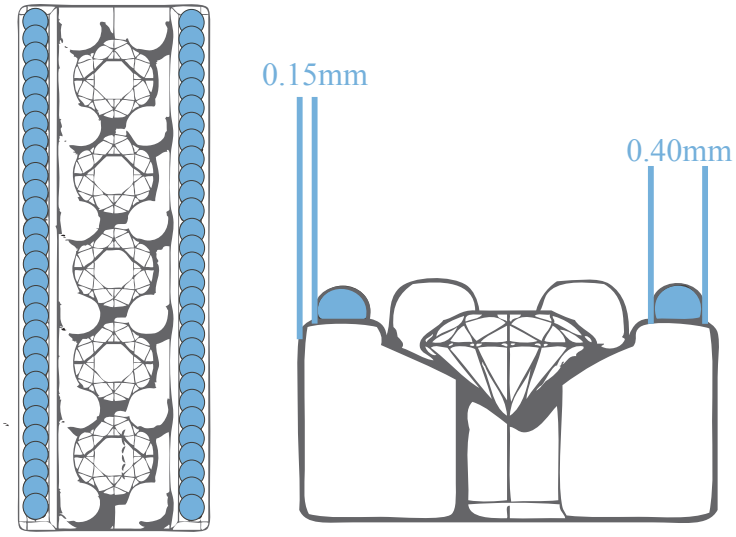
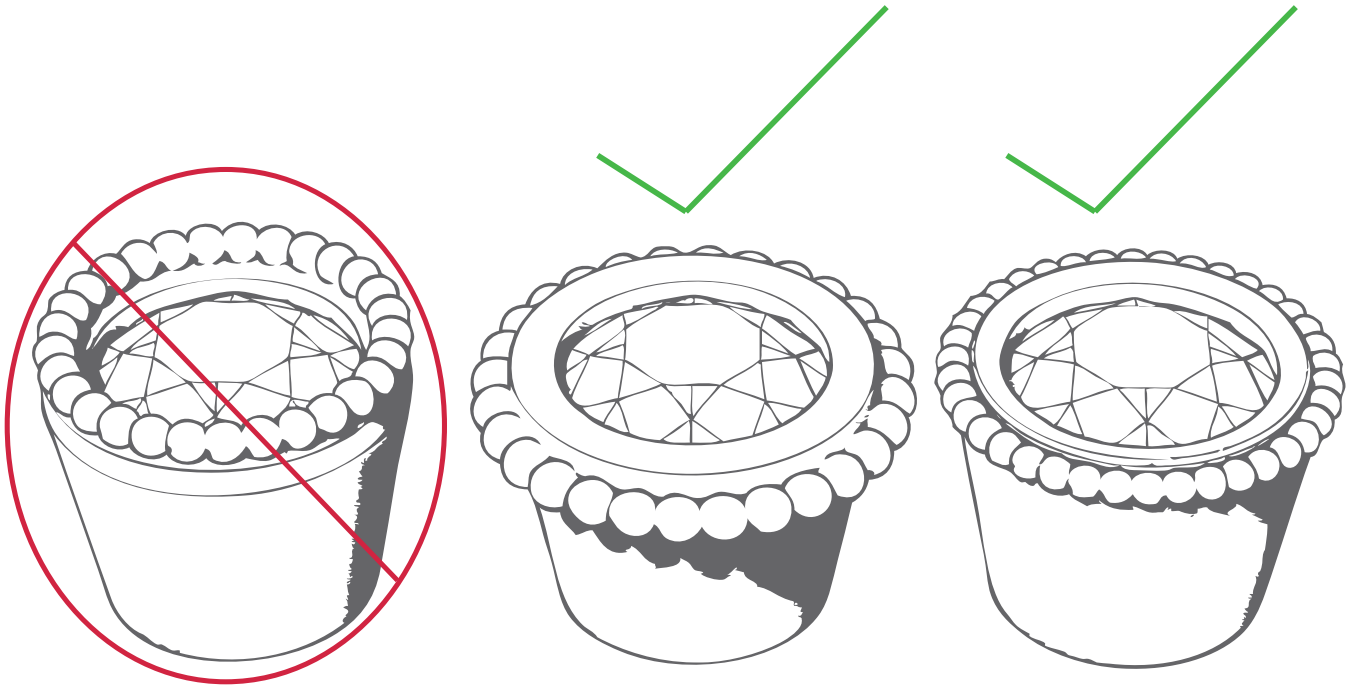


FIGURE L



Milgrain or beading is not acceptable on top of the setting area.

Milgrain or beading is acceptable on the side of the bezel below the setting area

It is also acceptable on the side in a recessed channel.

FIGURE M

Milgrain: (SEE FIGURES L AND M)
Bead Size - minimum 0.40mm
Bead Spacing - minimum -0.1mm
Wall thickness - minimum 0.15mm of metal on either side of the beads
Z Offset - 50% of the bead should be visible above the surface of the metal

Structural and external walls are a minimum of 0.8mm thick.

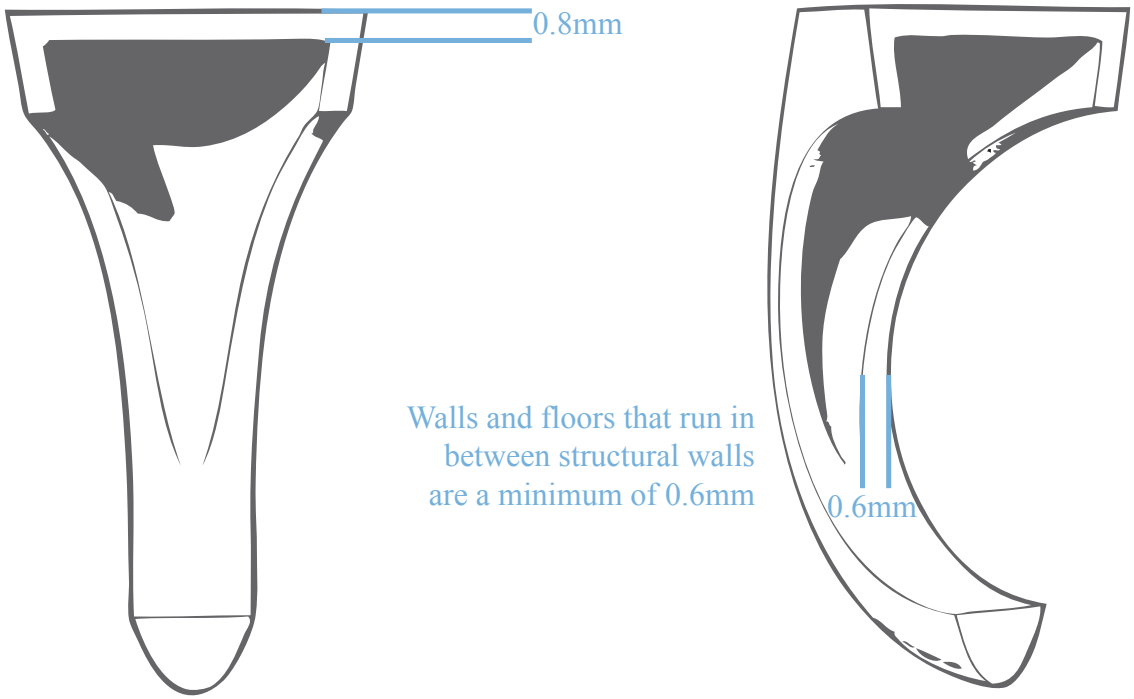


FIGURE N

Letters must always be a minimum of 0.35mm wide regardless of if they are raised or recessed.

The maximum letter or design height from the floor to the top is 0.6mm.

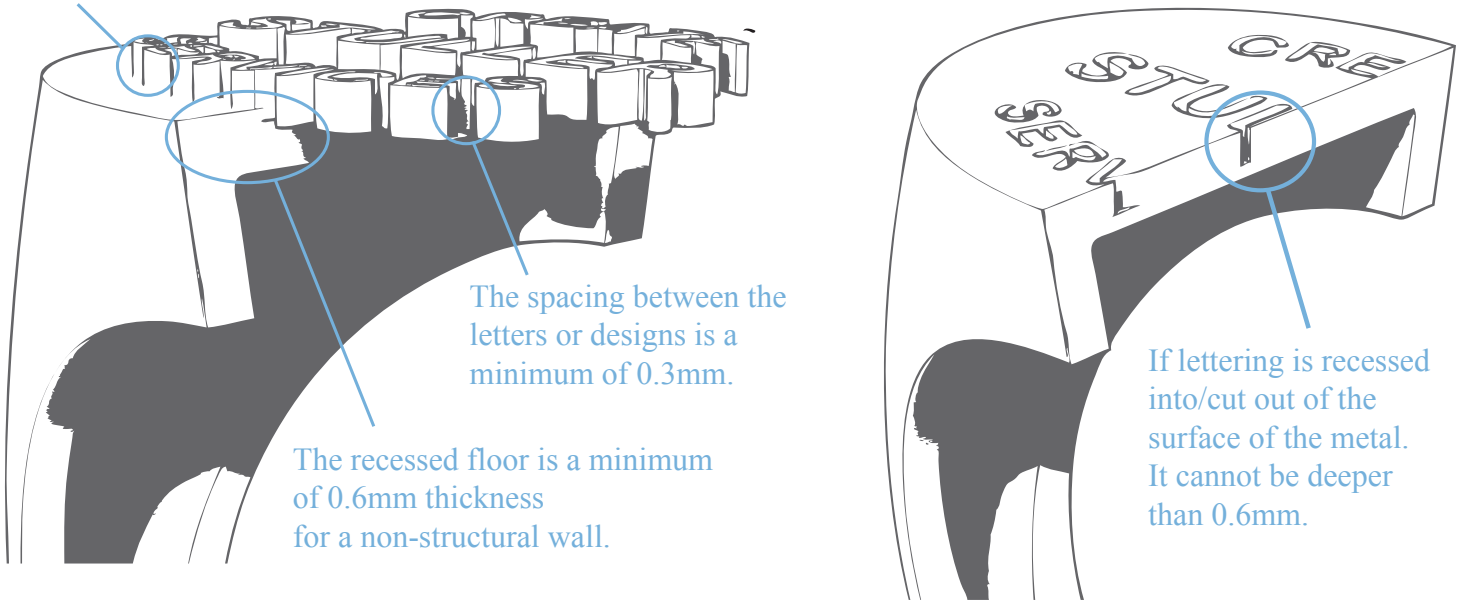


FIGURE O