

**Recommendations for cutting Radianz® Quartz to minimize crack during fabrication:**

1. Use required engineered stone blade for cutting.
2. Should not move during the cutting process when using saw blade.
3. Working table should be flat.
4. Do not plunge cut. Always start from the outside. When doing sink cut-outs or cook-top cut-outs, it is highly recommended to do such cut-outs after other necessary fabrication such as cutting.
5. Do not stop in the middle of cutting process
6. Enough water should be used at all time during cutting.
7. There should be no bevel edge cracking
8. Recommended cutting speed are as follow: THK.20 : 3m/min, THK.30 : 2m/min
9. Keep the blade sharp by running the blade through sandstone off cuts.
10. Using portable circular saw has high chance of causing crack during cutting. Cut-outs should be cut with bridge saw.

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## Straight Cut

- **Revolution of saw**

Diameter	300mm(12")	350mm(14")	400mm(16")
Revolution	≅ 1,780rpm	≅ 1,540rpm	≅ 1,340rpm

\* The revolutions of the cutting blade can be different according to the specifications of Bridge machine and saw.

- **Cutting speed**

< 3.0m/min (Thickness : 20mm)

< 2.0m/min (Thickness : 30mm)

- **Cutting saw**

- Required engineered stone blade should be used.

- Granite cutting saw : Unacceptable (Risk of crack)

- Marble cutting saw : Partially allowed but consumption of the blade can be high.



Rail saw



Bridge machine

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## CASE 1-1 : Cut-out area (Sink, cook top etc.)

- **After fabrication or installation**

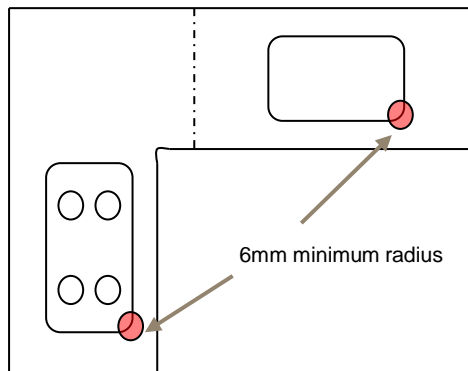


- **Cause**

- Do not comply with fabrication manual.
- Radius inside corners to a minimum of 6mm will reduce corner stresses.

- **Solution**

- Any inside corner must have 6mm minimum radius.



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## CASE 1-2 : Cut-out area (Sink, cook top etc.)

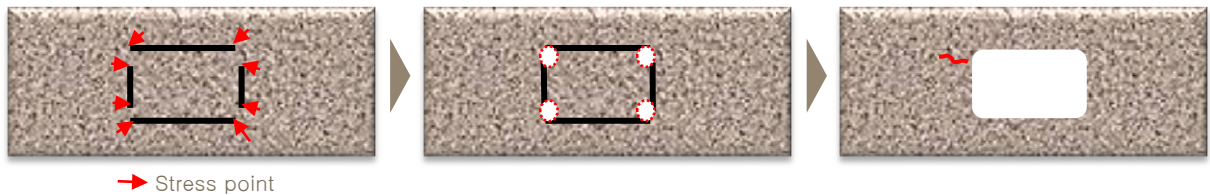
- **Cause**

- Do not comply with fabrication manual.
- Straight cut without corner drilling.

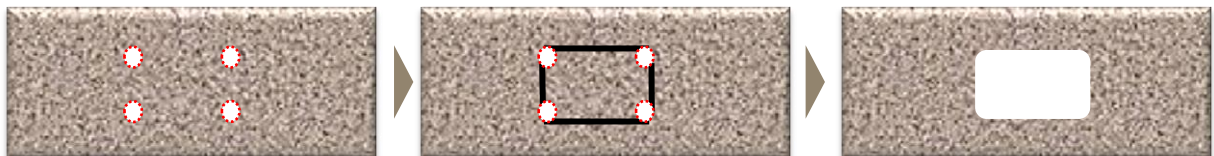
- **Solution**

- Sink & Bowl cutout should be using the core bit to drill-press the four corner and use circular saw to cut between the holes.

### ■ Incorrect process



### ■ Correct process

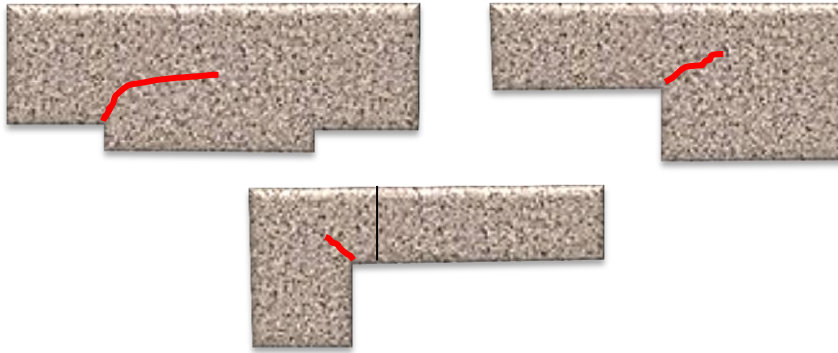


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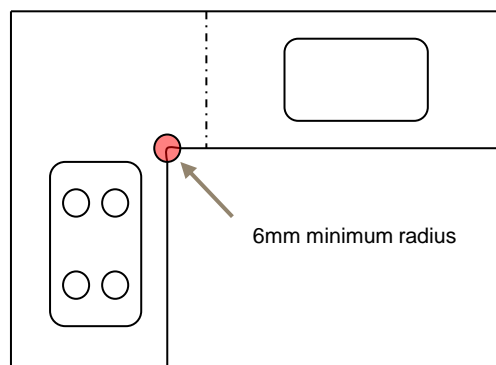
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## CASE 2 : Square inside corner

- **After fabrication or installation**



- **Cause**
  - Do not comply with fabrication manual.
  - Straight cut Without corner drilling.
  - Radius inside corners to a minimum of 6mm will reduce corner stresses.
- **Solution**
  - Any inside corner must have 6mm minimum radius.



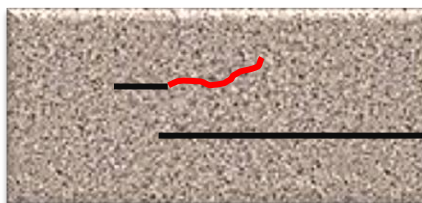
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### CASE 3 : Straight cut

- **During fabrication**



- **Cause**

- Do not comply with fabrication manual.
- No radius and Product should be cut from edge.

- **Solution**

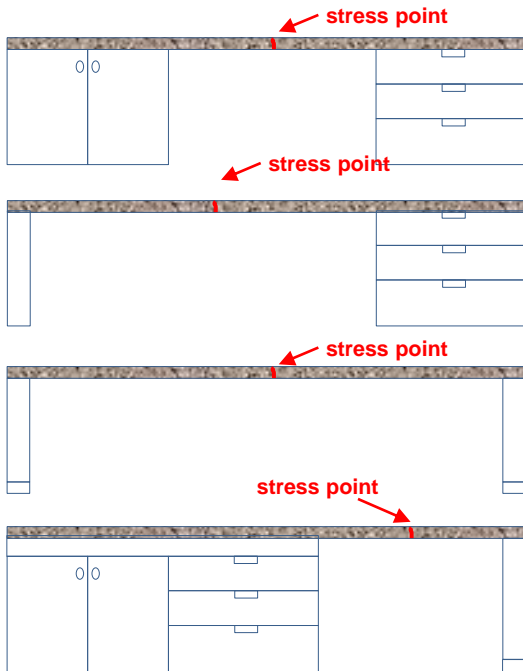
- Never stop saw in the middle of cutting process

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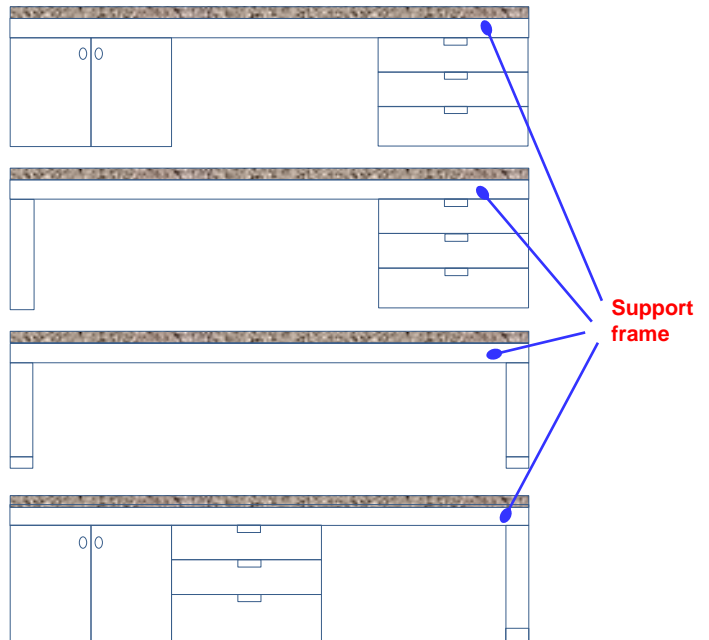
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## CASE 4 : Improper support frame

[ Unacceptable ]



[ Solution ]

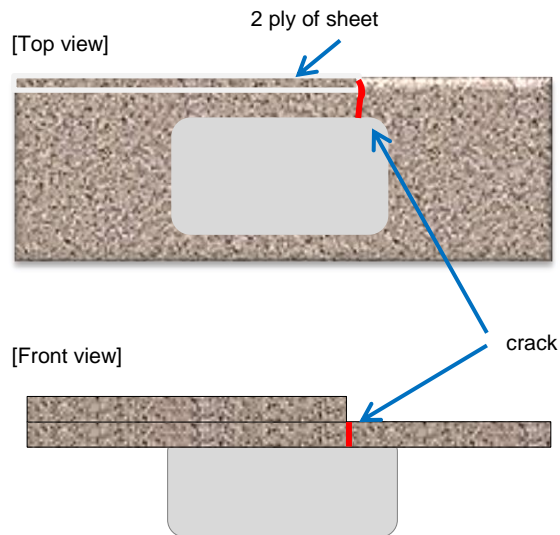


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## CASE 5 : Handling error

- **After fabrication**



- **Cause**

- Handling error

- **Solution**

- The area of stress point should be handled after the reinforcement.
- Always carry the top on edge. Do not carry the top flat.

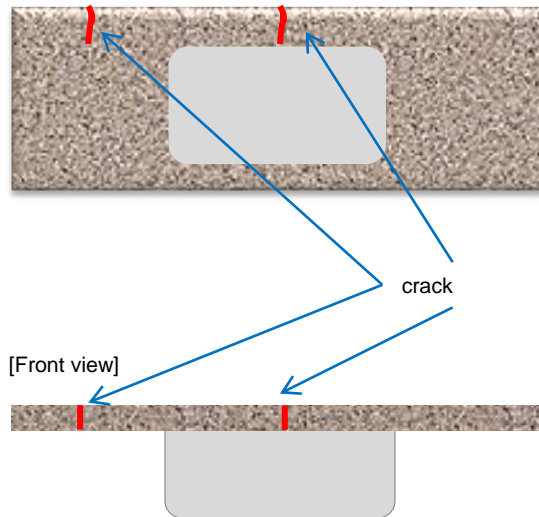
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## CASE 6 : Edge crack

- **After installation**

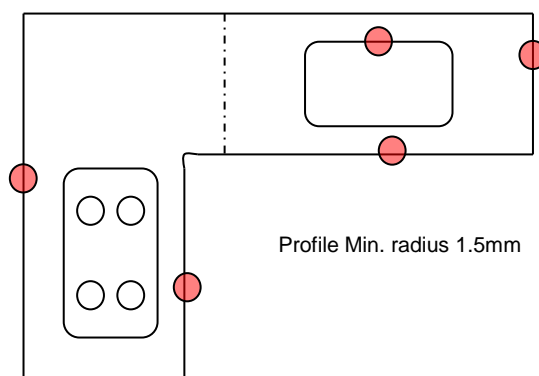


- **Cause**

- Do not comply with fabrication manual.

- **Solution**

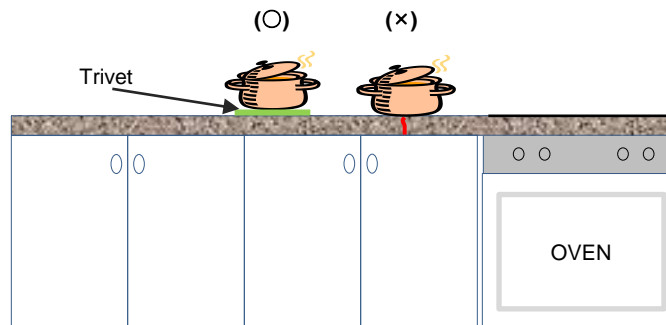
- Radius all top and bottom straight edge profiles to a minimum of 1.5mm radius.



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## CASE 7 : Thermal shock (Cook top area)



- **Cause**
  - Hot pot placed directly on Top.
  
- **Solution**
  - Trivets or hot pads should always be used.

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## CASE 8 : Brittleness by low temperature

- **During fabrication**



- **Cause**

- Increased brittleness cause by low temperature.

- **Solution**

- Decelerate the cutting speed 20%~30%.
- If the stored at outside or low temperature, move the slab to building inside or warm place at least 24 hours at 15~20 °C.

\* Reference

Working Temperature	Cutting speed	
	20mm THK.	30mm THK.
5 °C ~ 30 °C	< 3.0 m/min	< 2.0 m/min

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