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neoceram

bent glass panels

Product Specification neoclear® , round bent and angular bent panels

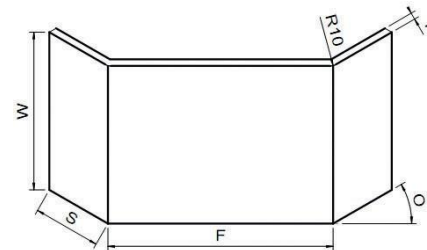
Product standard for bent neoclear® glass ceramic panels for fireplace and stove windows, translation according to manufacturer specification „Spec.No.65-IP-3-5A“.

Application

This specification is only applicable for round bent and angular bent neoclear® glass cerami panels.

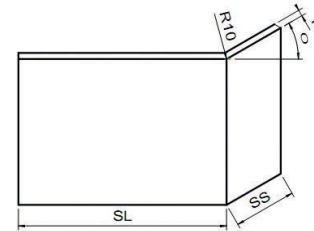
1. Standard dimensions U-bent glass

Thickness	T =	4 or 5mm
Angle	$\theta =$	18° - 90°
Length, front	F =	185mm – 1195mm
Length, sleeve	S =	30mm – 310mm
Height	W =	115mm – 625mm
Angle radius	R =	10mm (Bent) 12mm (Bent plus)



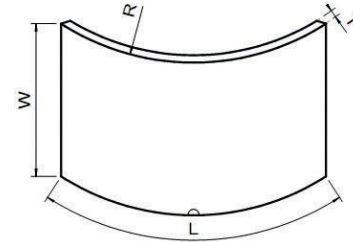
2. Standard dimensions L-bent glass panels

Thickness	T = 4 or 5mm	90°	
Angle	$\theta = 20^\circ - 89^\circ$		
Length, short side	SS = 60-565mm		155-1390mm
Length, long side	SL = 30-450mm		75-600mm
Height	W = 230-600mm	300-800mm	



3. Standard dimensions R-bent (round bent) glass

Thickness	T = 3 or 4 or 5mm
Radius	R = 130 – 3100mm
Arc length	L = 70 – 1410mm
Height	W = 60 – 1200mm



Dimensional tolerances for standard dimensions

1. Thickness: (T)= Nominal dimension $\pm 0,3\text{mm}$
2. Height: (W)=Nominal dimension $\pm 1,5\text{mm}$
3. Length: (F, S, SL, SS, L) =Nominal dimension $\pm 2,0\text{mm}$
4. Permissible deviation of the edge form

a) Double bent and L- bent glasses

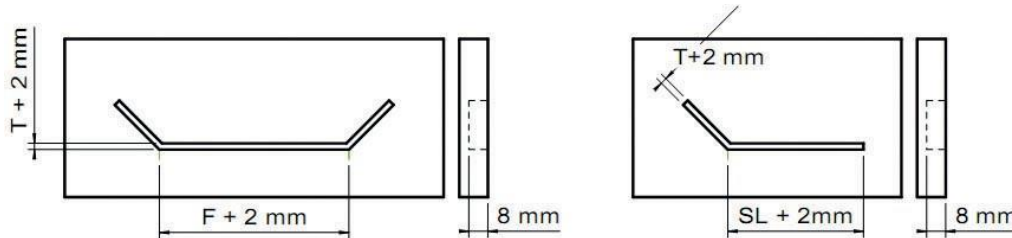
It must be possible to insert the upper and the lower edge of the glass into the test template without using force.

Slit dimensions

Slit depth = 8mm

Slit width = $T + 2\text{mm}$

Slit length = $F + 2\text{mm}$



- Angle tolerances are determined by the test template and are not specified individually.

b) R-bent glass panels

It must be possible to insert the upper and the lower edge of the glass into the test template without using force

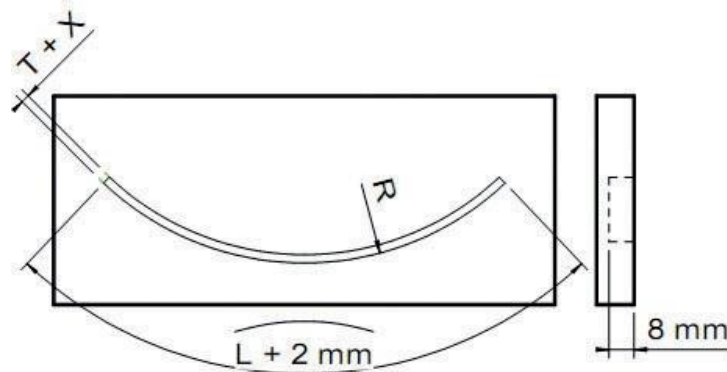
Slit dimensions:

Slit depth = 8mm

Slit width = $T + X$ (X = allowance for arc length)

Slit length = $L + 2\text{mm}$

Arc (L)	Slit width (T)
$L \leq 418\text{mm}$	Nominal thickness + 1,5mm
$418\text{mm} < L \leq 534\text{mm}$	Nominal thickness + 2,0mm
$L > 534\text{mm}$	Nominal thickness + 2,5mm



5. Deformation

a) U-bent and L-bent glass panels

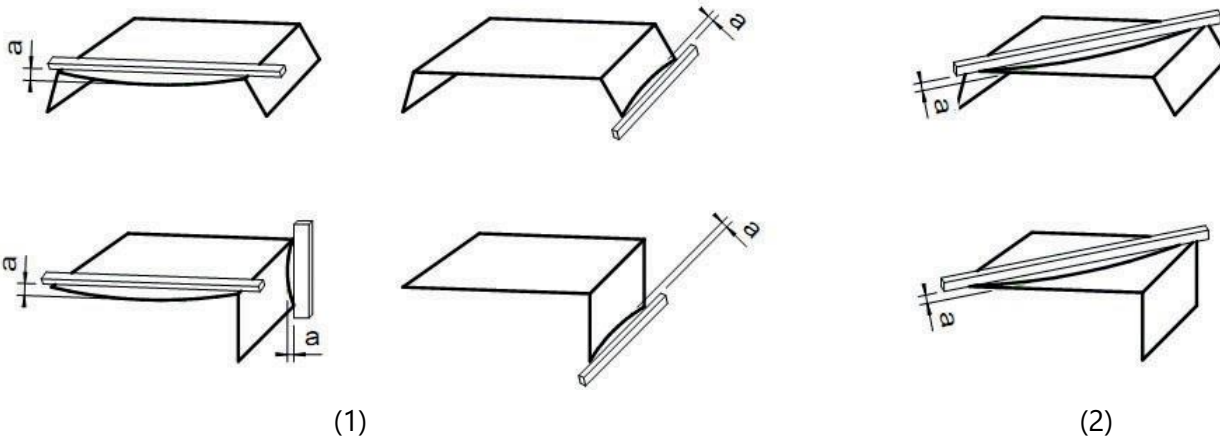
(1) Straightness of upper and lower edges

Acceptable deviation (a) of edge parallelism = max. 1,5mm

(2) Flatness of front and side surface

Acceptable deviation (a) of surface parallelism = max. 2,0mm

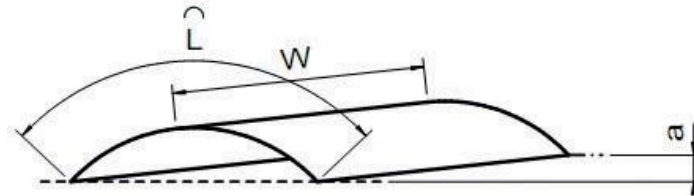
(place gauge or test equipment diagonally across the surface)



b) R-bent glass panels

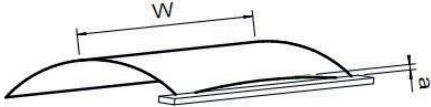
(1) Twist of the complete panel

Arc length (L)+Width (W)	Allowable gap (a) to test desk
<500mm	Max. 1,5mm
≥500mm	$(L + W) \times 0,3\%$ (Max. 4.0mm)



(2) Warpage (distortion)

Height (W)	Allowable gap (a) to test desk
(A) $\leq 400\text{mm}$	Max. 1,5mm
$>400\text{mm}$	Max. 2,0mm



(B) any	Max. 2,5mm
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6. Visual defects

a) Bubbles

- 1,0mm Ø or smaller: any number allowable
 - As long as they are not grouped and do not detract from the overall picture
- 1,01mm to 1,5mm Ø: max. 3 pieces allowable
 - But they have to be at least 300mm away from each other

b) Elongated bubbles

- 0,5mm wide x 2,5mm long or smaller: any number allowable
 - As long as they are not grouped and do not detract from the overall picture
- 0,5mm wide and 2,5mm long to 5,0mm wide and 8mm long: max. 3 pieces allowable
 - But they have to be at least 200mm away from each other

c) Stones

- 1,0mm Ø or smaller: any number allowable
 - As long as they are not grouped and do not detract from the overall picture
- 1,01mm to 1,5mm Ø: max. 3 pieces allowable
 - But they have to be at least 200mm away from each other

d) Devitrifications

- 0,5mm wide x 2,5mm long: any number allowable
 - As long as they are not grouped and do not detract from the overall picture
- 0,5mm wide x 2,5mm to 0,8mm wide and 5,0mm long: max. 3 pieces allowable
 - But they have to be at least 200 mm away from each other

e) Stains

- 1,0mm Ø or smaller: any number allowable
 - As long as they are not grouped and do not detract from the overall picture
- 1,01mm to 1,5mm Ø: max. 3 pieces allowable
 - But they have to be at least 200mm away from each other

f) Scratches

- Heavy scratches: 5mm or less: max. 3 pieces allowable
 - But they have to be at least 400mm away from each other
- Light scratches: 30,0mm or less: max. 3 pieces allowable
 - But they have to be at least 400mm away from each other
- Fine scratches: allowable
- Concentration of scratches: 20,0mm Ø or less: max. 4 pieces allowable

g) Mixture of visual defects

Should a glass contain several of the above- mentioned visual defects, these defects must not be grouped or detract from the overall picture.

7. Definition „visual defects“, with reference to item 6ff

- a & b) bubbles
 - round or elongated, gassy content

- c) stones
 - -turbid, crystalline inclusion in the glass

- d) devitrification
 - Surface defect, usually transparent and comparable to concave bubbles or holes in the surface

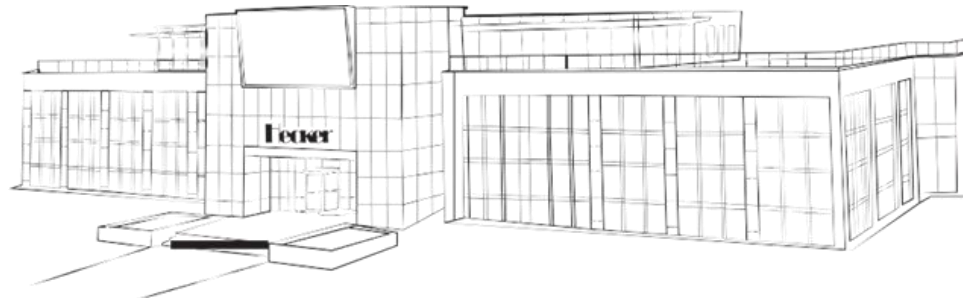
- e) stains
 - surface defect, dull (beamless) stain on the surface

- f) scratches
 - Incision or lap in the glass
 - Heavy scratches: can be easily felt with a finger nail
 - Light scratches: can be weakly felt with a finger nail
 - Fine scratches: only visible, cannot be felt with a finger nail

All indicated values and data represent our current state of knowledge and are based on experience, bibliographical reference, measurements or manufacturer information. Not all manufacturers' information has been verified by us respectively not all information is subject to revision. Depending on test and installation conditions and type or model, results can fall below or exceed the indicated values.

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