

Anthony Curved Glass Solutions

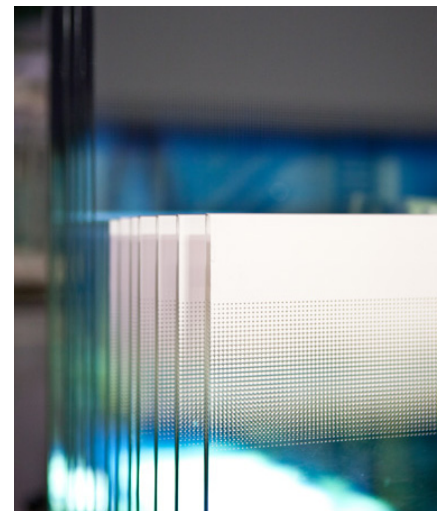


A History Of Superior Quality / Anthony Overview W/Curved Glass

For over 30 years, Anthony has produced tempered glass for customers around the world, offering curved and flat glass panels and custom shapes that are available with silk-screen and digital print design, custom drilling, and finished edges. This includes single- and multi-pane tempered flat or curved glass (heated/non-heated, anti-reflective, anti-fog), to meet exacting specifications.

Let Anthony help you with clearly eye-catching, innovative, durable, and energy-efficient glass for your application. Our specialty is developing innovative solutions for the food and retail display case industries as well as other industrial applications for glass.

- Standard shapes
- Semi-standard shapes
- Custom & proprietary tooling available
- Anti-reflective glass
- Low-emissivity glass
- Pattern and frosted glass
- Thermopane assembly
- Silk-screen and Glass Jet Digital Printing



Anthony's Engineering and Design team has helped transform customer ideas into workable solutions for merchandising, energy conservation, and safety needs. How can we help you?



Product & Glass Solutions/Offerings

GLASS SIZE

- Thickness

Clear Float	4mm (5/32") - flat or bent 5mm (3/16") - flat or bent 6mm (1/4") - flat or bent 8mm (5/16") - flat only 10mm (3/8") - flat only 12mm (1/2") - flat only
Low-E	5mm (3/16") - flat or bent (large radii)
Anti-reflective Glass	5mm (3/16") - flat or bent 6mm (1/4") - flat or bent
Solar Cool	Bronze 6mm (1/4") - flat only Gray - 6mm (1/4") - flat only

Other specialty glass - pattern, frosted, colors - available for custom applications

- Length

Max - 2000mm (78") for 4-6mm (bent) 4-12mm (flat)
 2440mm (96") available upon request
 4-6mm (bent) 4-12mm (flat)
 Min - 450mm (18")

- Width

Max - 1220mm (48") for 4-6mm
 Min - 300 mm (12")



Glass Jet Novo Digital Printer

Shorter Lead-Times for Design Changes

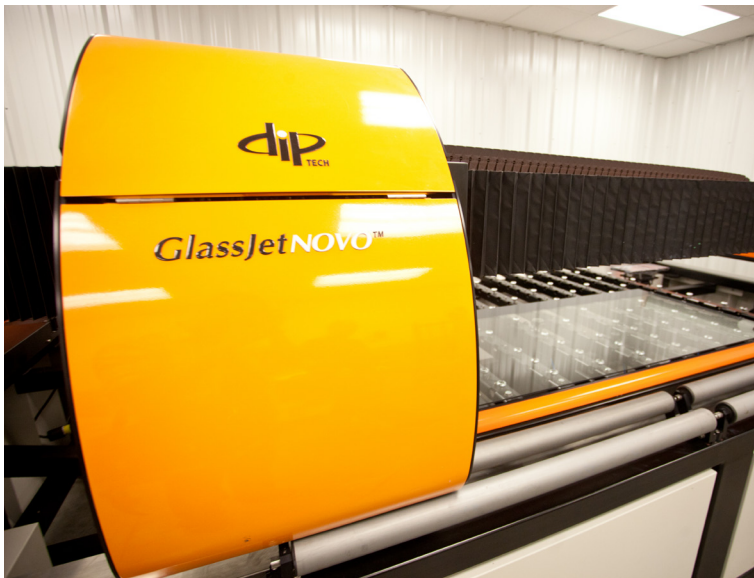
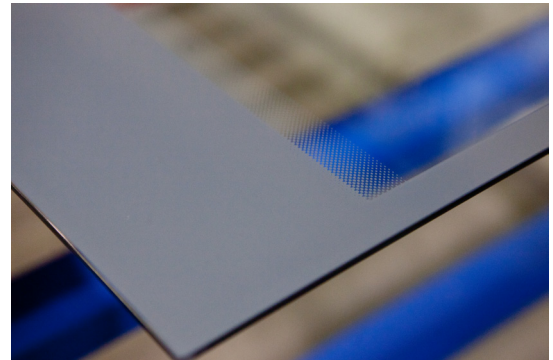
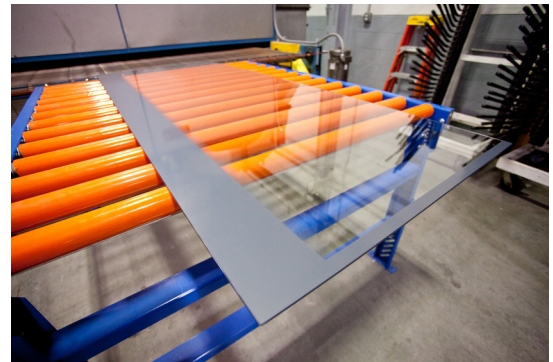
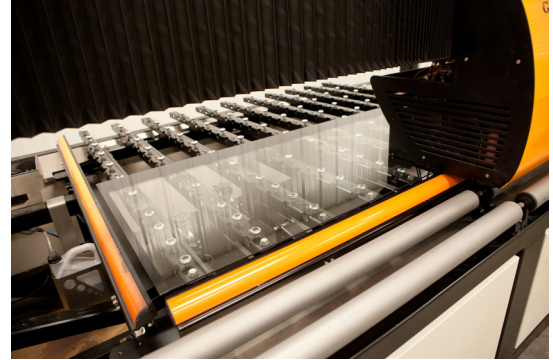
Improves Print Quality and Opacity Control

Decrease Setup/Break-Down Time

Eliminates Silkscreens

- No Need to Purchase, Store, Clean or Maintain Silkscreens

Reduce Enamel and Solvent Waste



Product & Glass Solutions/Offering & Add-Ons

Bent Glass

- Shapes
 - Single curve
 - Double curve
 - Double radius
 - Full arc
 - Full arc with flat
- Radius
 - Min - 4 inches (~100 mm)
 - Max - No limit (flat)
- Flats
 - Min length - 2.5 inches (~63.5mm)
- Profile segments
 - Segments of profiles available for sneeze-guard and self-service design applications

Glass Jet Digital Printing

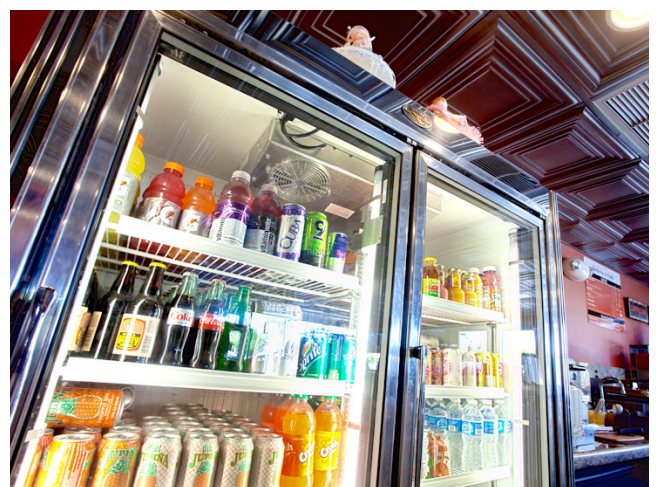
- Colors
 - White, black, gray, and custom colors
- Layers
 - Multi-layer printing available
- Glass size
 - Max - 1220mm x 2438mm (48" x 78")

Additional Services

- CNC Cutting & Edging
- Drilling - holes for mounting hardware. Meets ASTM C-1048 requirement: Distance between the edge of the hole and the edge of the glass must be at least 1.5 times the thickness of the glass.
- Thermopane Assembly - Multi-pane insulated glass assemblies with or without Argon
- Specialty gaskets meeting NSF standards. Wiper gasket and smooth edge available.

Standards & Certifications

- All glass produced by Anthony meets ANSI Z97.1-2004 & 16 CFR 1201 Standards for Tempered Safety Glass



Definitions Of Features & Add-Ons

Glass Solutions For Merchandising

Anti-reflective Glass

is the ultimate tool to dramatically improve the appearance and color of food, floral displays, and merchandise

- Eliminates 90% of glare from overhead lighting and external sources, making merchandise easier to see
- Increases light transmission up to 99%, making glass nearly invisible
- Available for all curved and flat profiles
- Easy to clean and highly durable surface, compliant with all safety and sanitary standards



Anti-reflective Glass

expands merchandising choices with design options:

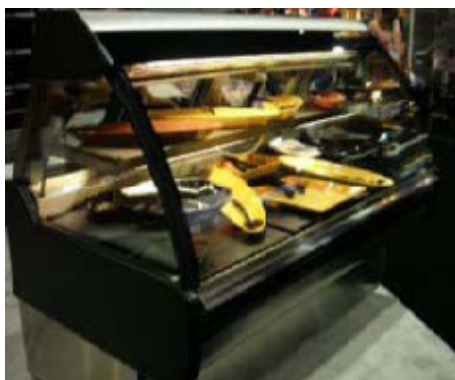
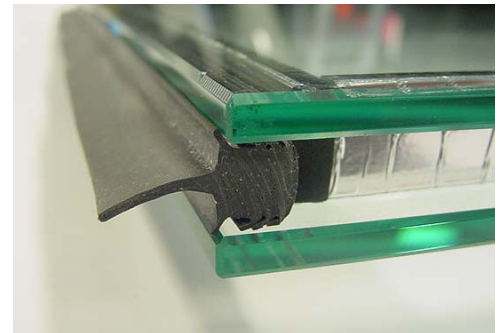
- Screen Printing
- Holes for hardware
- Insulating double pane
- Edge and corner finishing
- Meets ANSI safety glass standards



Definitions Of Features & Add-Ons Continued

Glass Solutions For Energy Savings And Food Safety

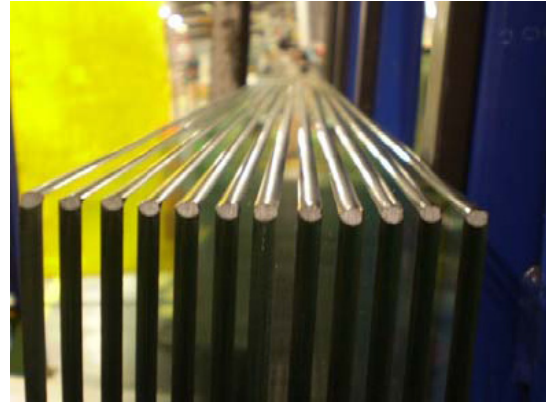
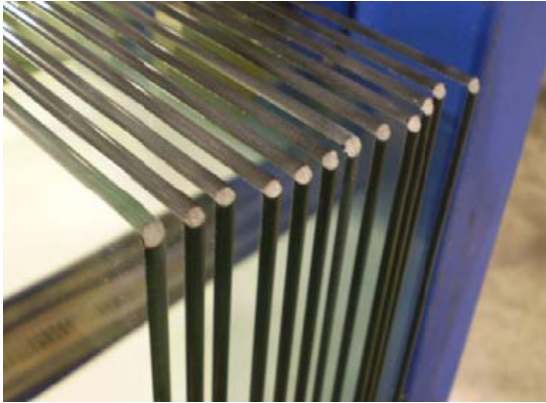
- **Low-E glass** for temperature control and food safety in refrigerated and heated cases
- **Thermopane assemblies with wiper gasket** to prevent air gaps and energy loss. NSF compliant materials for durability, performance and appearance
- **6mm, 8mm and 10mm side panels** with Silk-screen and Glass Jet Digital Printing for improved aesthetics and appearance. More durable than acrylic or polycarbonate
- **Mitered glass**, curved and flat, for a multitude of floor layouts and design flexibility
- **Silk-screen and Glass Jet Digital Printing** for branding as well as masking case interiors
- **Design assistance** for fixed and lifting glass



Definitions Of Features & Add-Ons Continued

Edge And Corner Finish

Pencil edge, satin finish, clipped corner. Corner bumped with a belt sander to remove sharp points. Corner is 1mm-2mm.



Pencil edge, satin finish, radiused corner. Minimum radius is around 10mm (3/8”).



Hole Locations

For hole locations relative to glass edge, refer to **ASTM C1048-04** (*Standard Specification for Heat Treated Flat Glass*). Section 7.9.2 addresses this question. According to **ASTM C1048.04...**

Minimum distance from the edge of a hole to the edge of the glass is 2 times the thickness of the glass.

Minimum distance from the edge of one hole to another is 2 times the thickness of the glass.

Minimum distance from the edge of a hole to a corner on the glass is 6.5 times the thickness of the glass.

SHAPE	TYPE	GROUP	DIFFICULTY
EH	FA	1	Low
AN1	DC	2	Moderate
AN2	DC	2	Moderate
AE	SC	3	Moderate
EI1	DR	2	Moderate
EI2	DR	2	Moderate
AM	DC	3	Moderate
AU	SC	4	Low
PT1	FAF	2	Low
PT2	FAF	2	Low
AP1	FAF	4	Low
PW	DR	3	Moderate
JN	FAF	5	Low
MD	FA	5	Low
PP	FA	5	Low
PR	FA	5	Low
QG	FA	5	Low
QZ1	FA	5	Low
QU	FAF	5	Moderate
QV	FAF	5	Moderate
DL	DR	5	High
IT	FAF	5	High
FLAT	FLAT	n/a	Low

Definitions

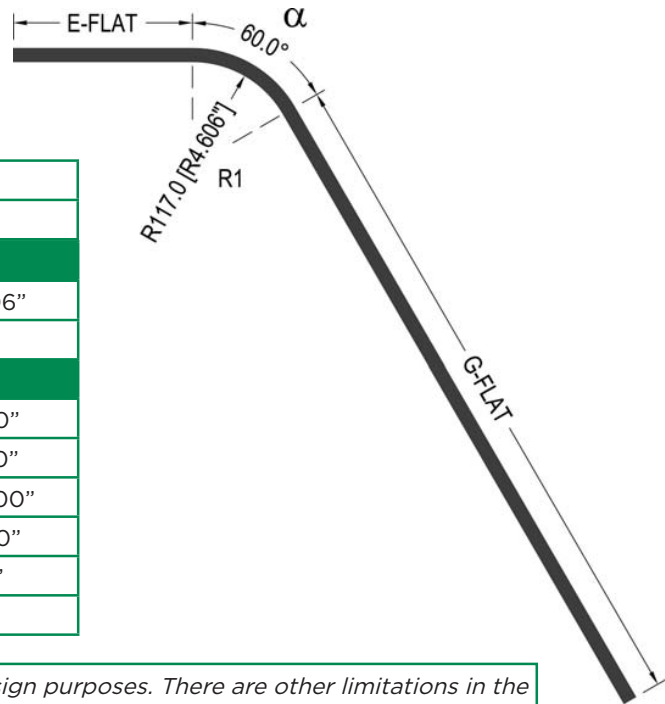
SC	Single Curve
DC	Double Curve
FA	Full Arc
FAF	Full Arc with Flats
DR	Double Radius
FLAT	Flat

GROUPS

1	Standard shapes that are run with high frequency (3-4 weeks)
2	Standard shapes that are run with medium high frequency (4-6 weeks)
3	Standard shapes that are run with medium frequency (6-8 weeks)
4	Standard shapes that are run with low frequency (more than 8 weeks)
5	Shapes that require minimum runs for them to be scheduled (15 pc. min)

Standard Bent Glass Shapes

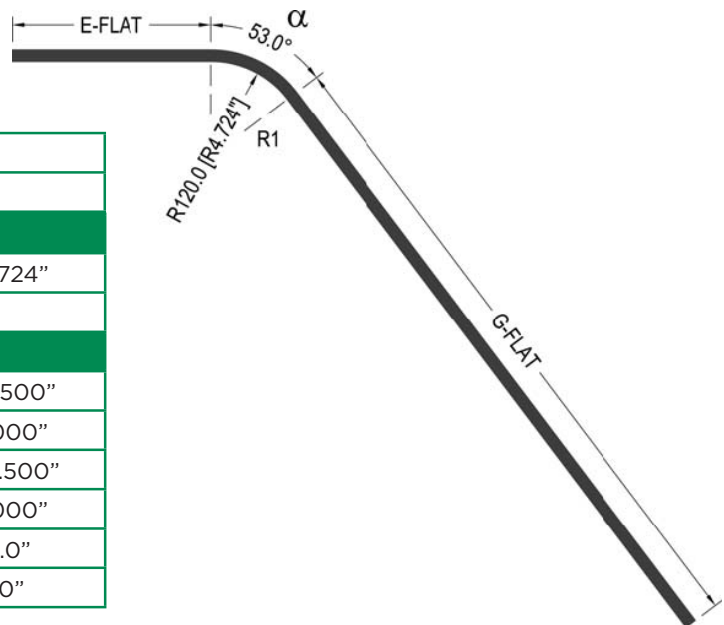
AE



Profile Name:	AE	
Profile Type:	Single Curve	
Fixed Parameters		
Curve Radius (R1):	117.0mm	4.606"
Bend Angle (α):	60.0°	
Variable Parameters		
E-Flat Max:	241.3 mm	9.500"
E-Flat Min:	63.5 mm	2.500"
G-Flat Max:	762.0 mm	30.500"
G-Flat Min:	76.2 mm	3.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.*

AU



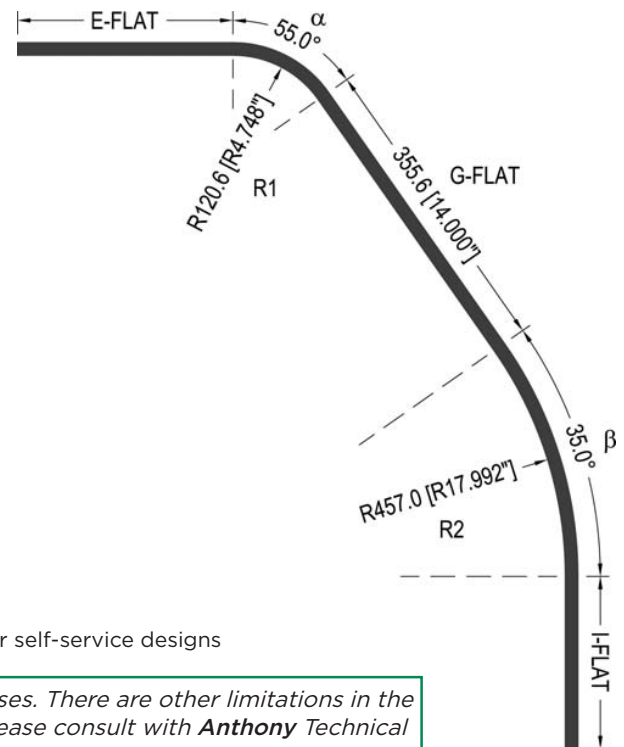
Profile Name:	AU	
Profile Type:	Single Curve	
Fixed Parameters		
Curve Radius (R1):	120.0mm	4.724"
Bend Angle (α):	53.0°	
Variable Parameters		
E-Flat Max:	267.0 mm	10.500"
E-Flat Min:	76.2 mm	3.000"
G-Flat Max:	825.5 mm	32.500"
G-Flat Min:	76.2 mm	3.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

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Standard Bent Glass Shapes

AN1

Profile Name:	AN1	
Profile Type:	Double Curve	
Fixed Parameters		
Curve Radius (R1):	120.6mm	4.748"
Bend Angle (α):	55.0°	
G-Flat:	355.6mm	14.000"
Curve Radius (R2):	457.0mm	17.992"
Bend Angle (α):	35.0°	
Variable Parameters		
E-Flat Max:	254.0 mm	10.000"
E-Flat Min:	76.2 mm	3.000"
I-Flat Max:	200.0 mm	7.874"
I-Flat Min:	0.0 mm	0.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

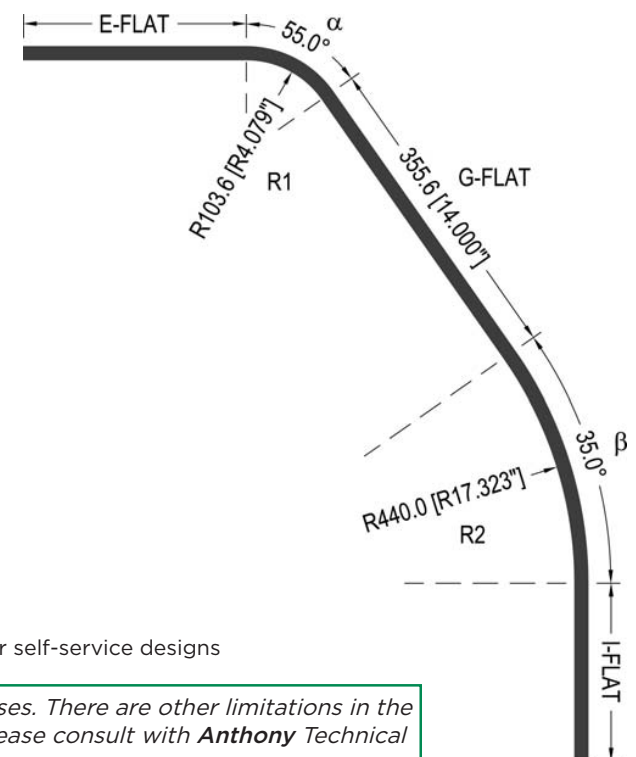


Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs

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AN2

Profile Name:	AN2	
Profile Type:	Double Curve	
Fixed Parameters		
Curve Radius (R1):	103.6mm	4.079"
Bend Angle (α):	55.0°	
G-Flat:	355.6mm	14.000"
Curve Radius (R2):	440.0mm	17.323"
Bend Angle (α):	35.0°	
Variable Parameters		
E-Flat Max:	254.0 mm	10.000"
E-Flat Min:	76.2 mm	3.000"
I-Flat Max:	200.0 mm	7.874"
I-Flat Min:	0.0 mm	0.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

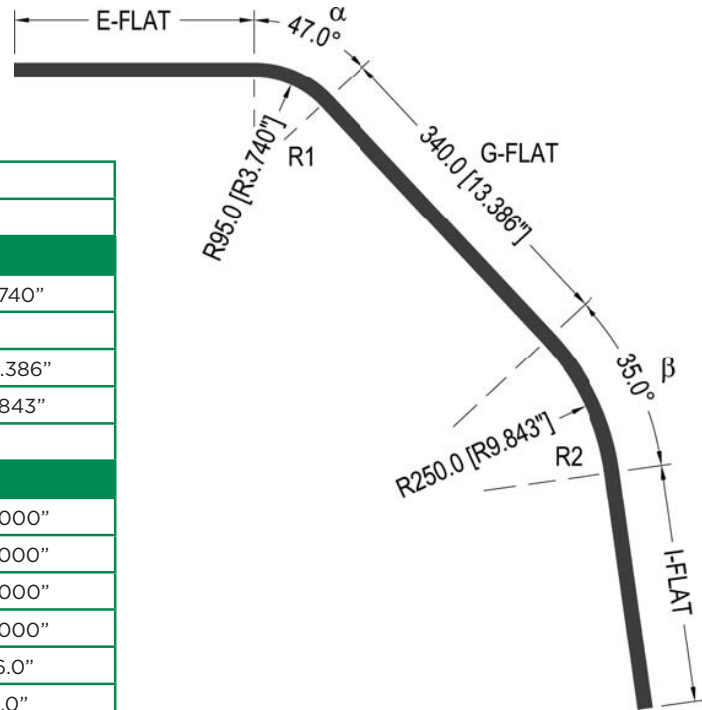


Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs

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Standard Bent Glass Shapes

AM



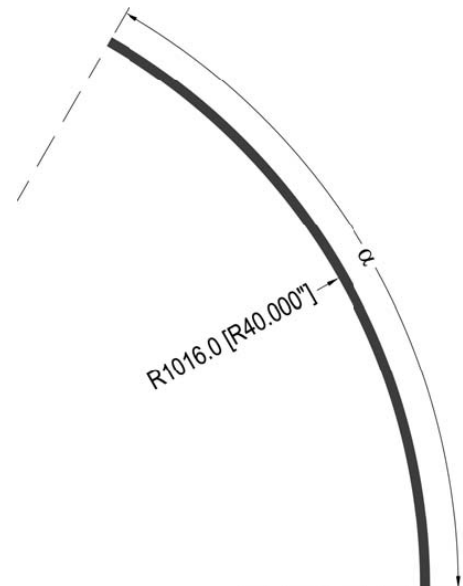
Profile Name:	AM	
Profile Type:	Double Curve	
Fixed Parameters		
Curve Radius (R1):	95.0mm	3.740"
Bend Angle (α):	47.0°	
G-Flat:	340.0mm	13.386"
Curve Radius (R2):	250.0mm	9.843"
Bend Angle (α):	35.0°	
Variable Parameters		
E-Flat Max:	203.2mm	8.000"
E-Flat Min:	76.2mm	3.000"
I-Flat Max:	228.6mm	9.000"
I-Flat Min:	76.2mm	3.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs

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EH

Profile Name:	EH	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	1016.0mm	40.000"
Variable Parameters		
Max Bend Angle (α):	68.5°	
Max Girth:	1219.2 mm	48.0"
Min Bend Angle (α):	17°	
Min Girth:	304.8 mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"



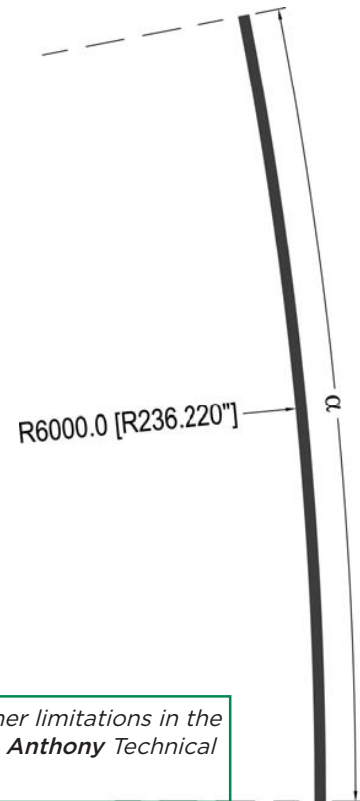
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Standard Bent Glass Shapes

MD

Profile Name:	MD	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	6000.0mm	236.220"
Variable Parameters		
Max Bend Angle (α):	11.6°	
Max Girth:	1219.2mm	48.0"
Min Bend Angle (α):	2.9°	
Min Girth:	304.8mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

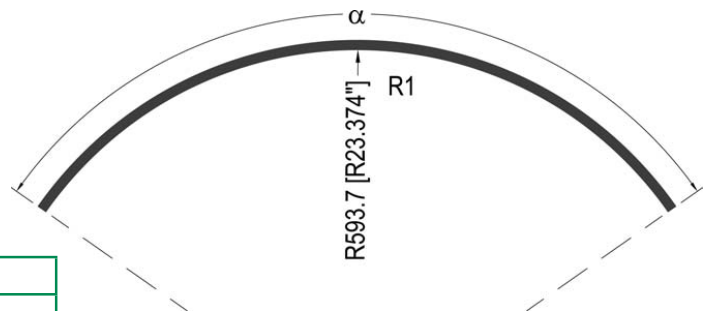
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QG

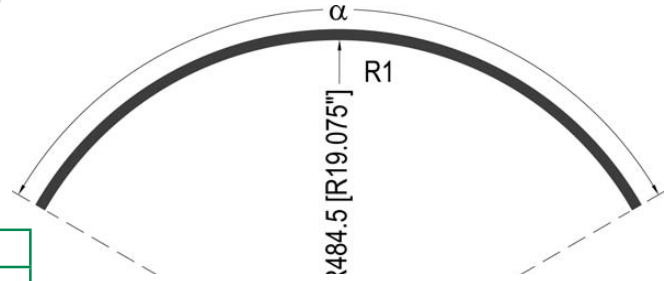
Profile Name:	QG	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	593.7mm	23.374"
Variable Parameters		
Max Bend Angle (α):	110°	
Max Girth:	1147.5 mm	45.177"
Min Bend Angle (α):	29.2°	
Min Girth:	304.8 mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

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Standard Bent Glass Shapes

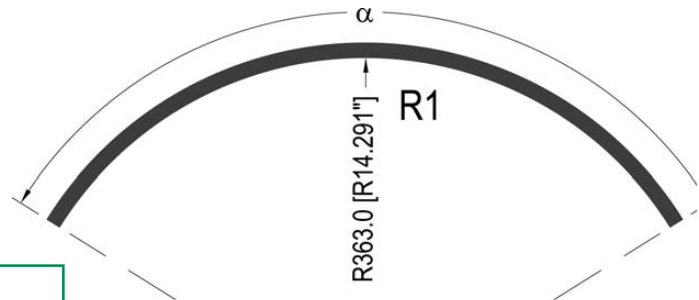
PP



Profile Name:	PP	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	484.5mm	19.075"
Variable Parameters		
Max Bend Angle (α):	120°	
Max Girth:	1021.0mm	40.198"
Min Bend Angle (α):	35.8°	
Min Girth:	304.8mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

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PR

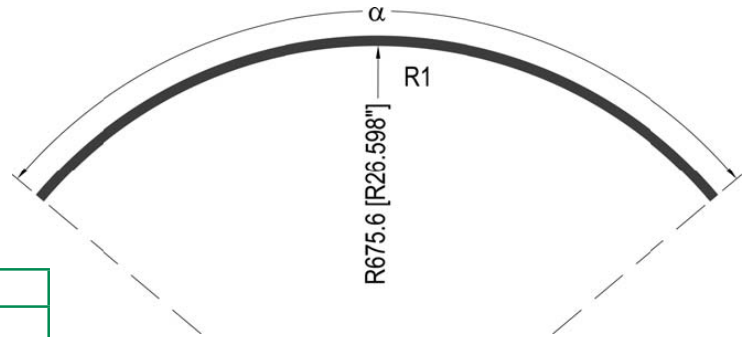


Profile Name:	PR	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	363.0mm	14.291"
Variable Parameters		
Max Bend Angle (α):	120°	
Max Girth:	766.5mm	30.179"
Min Bend Angle (α):	47.7°	
Min Girth:	304.8 mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

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Standard Bent Glass Shapes

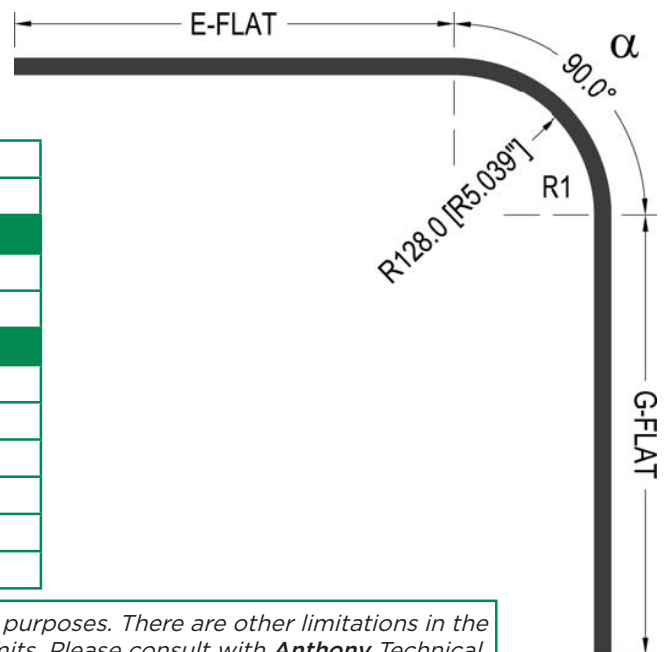
QZ1



Profile Name:	QZ1	
Profile Type:	Full-Arc	
Fixed Parameters		
Curve Radius (R1):	675.6mm	26.598"
Variable Parameters		
Max Bend Angle (α):	100°	
Max Girth:	1184.4mm	46.629"
Min Bend Angle (α):	25.7°	
Min Girth:	304.8mm	12.0"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

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IT



Profile Name:	IT	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	128.0mm	5.039"
Bend Angle (α):	90.0°	
Variable Parameters		
E-Flat Max:	400.0mm	15.750"
E-Flat Min:	152.4mm	6.000"
G-Flat Max:	400.0mm	15.750"
G-Flat Min:	152.4mm	6.000"
Max Length:	2133.6mm	84.0"
Min Length:	609.6mm	24.0"

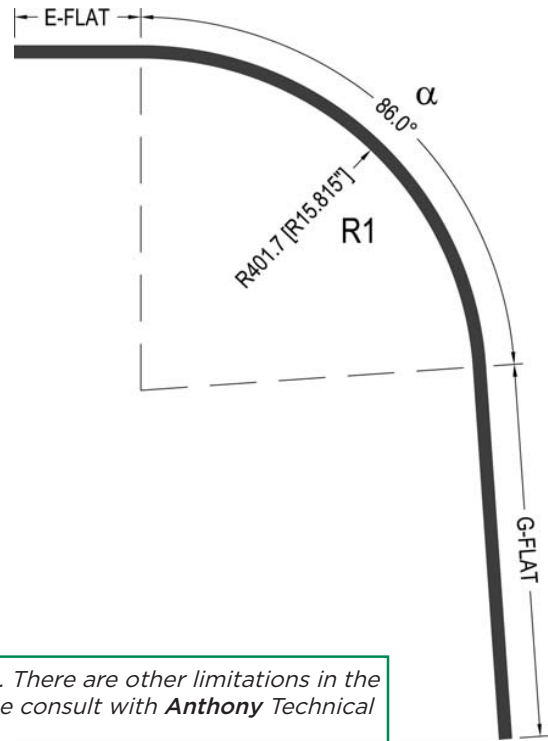
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Standard Bent Glass Shapes

PT1

Profile Name::	PT1	
Profile Type::	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	401.7mm	15.815"
Bend Angle (α):	86.0°	
Variable Parameters		
E-Flat Max:	176.2mm	6.937"
E-Flat Min:	0.0mm	0.000"
G-Flat Max:	451.0mm	17.750"
G-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

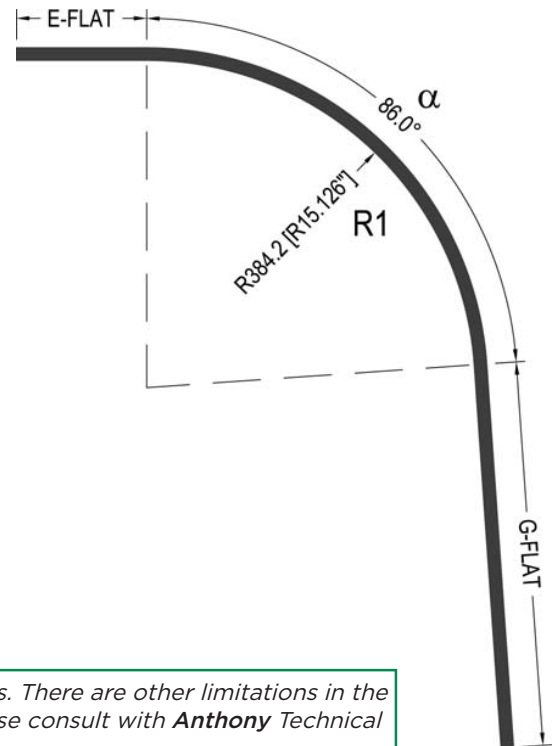
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PT2

Profile Name:	PT2	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	384.2mm	15.126"
Bend Angle (α):	86.0°	
Variable Parameters		
E-Flat Max:	176.2mm	6.937"
E-Flat Min:	0.0mm	0.000"
G-Flat Max:	451.0mm	17.750"
G-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.

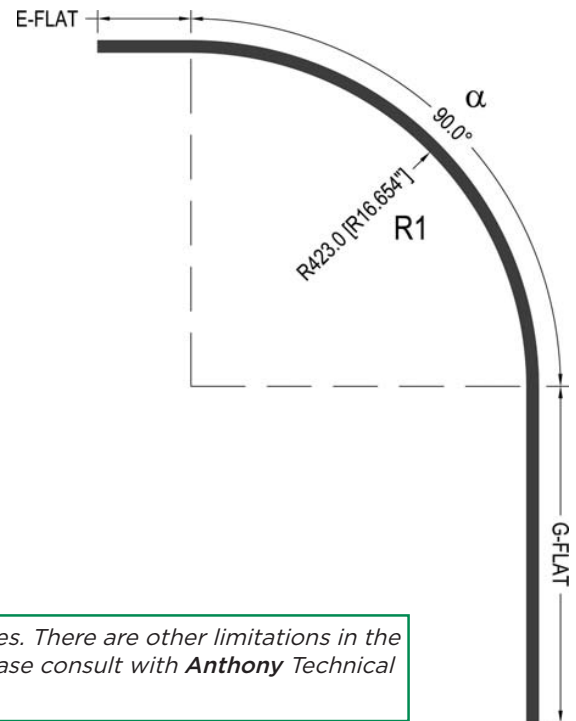


Standard Bent Glass Shapes

AP1

Profile Name:	AP1	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	423.0mm	16.654"
Bend Angle (α):	90.0°	
Variable Parameters		
E-Flat Max:	117.5mm	4.625"
E-Flat Min:	0.0mm	0.000"
G-Flat Max:	425.0mm	16.732"
G-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

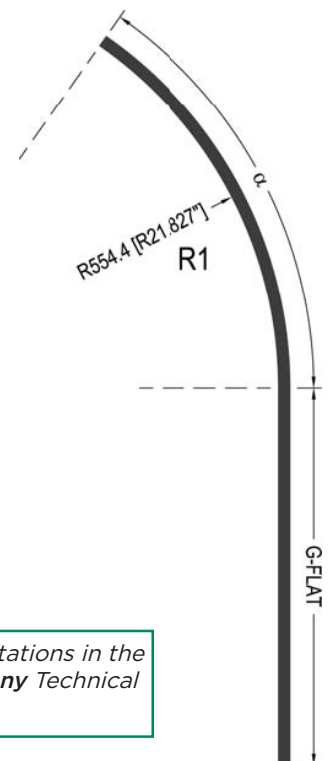
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JN

Profile Name:	JN	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	554.4mm	21.827"
Variable Parameters		
Max Bend Angle (α):	55.0°	
Min Bend Angle (α):	15.6°	
G-Flat Max:	508.0mm	20.0"
G-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

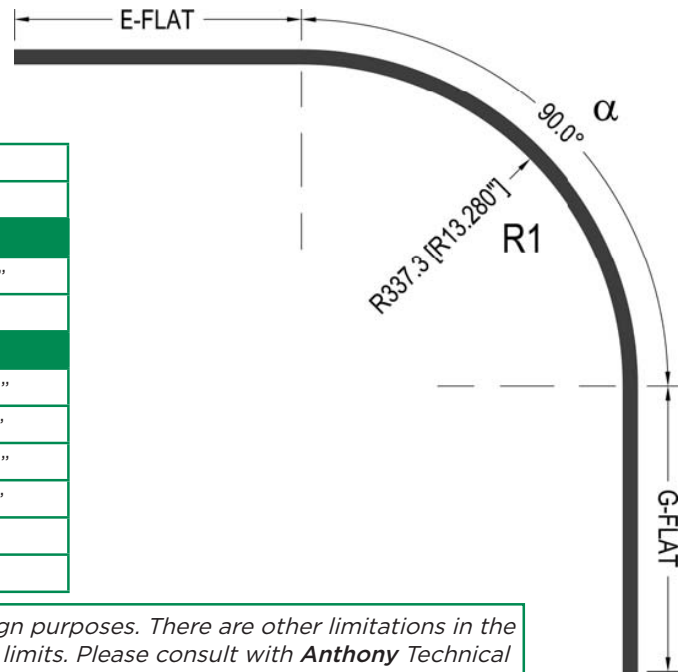
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Standard Bent Glass Shapes

QU

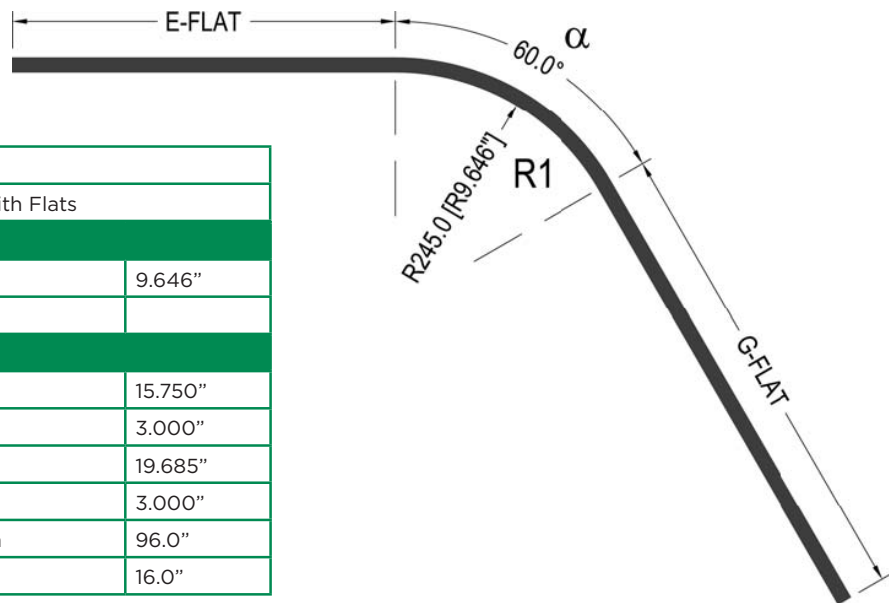
Profile Name:	QU	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	337.3mm	13.280"
Bend Angle (α):	90.0°	
Variable Parameters		
E-Flat Max:	304.8mm	12.000"
E-Flat Min:	0.0mm	0.000"
G-Flat Max:	304.8mm	12.000"
G-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"



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QV

Profile Name:	QV	
Profile Type:	Full-Arc with Flats	
Fixed Parameters		
Curve Radius (R1):	245.0mm	9.646"
Bend Angle (α):	60.0°	
Variable Parameters		
E-Flat Max:	400.0mm	15.750"
E-Flat Min:	76.2mm	3.000"
G-Flat Max:	500.0mm	19.685"
G-Flat Min:	76.2mm	3.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"



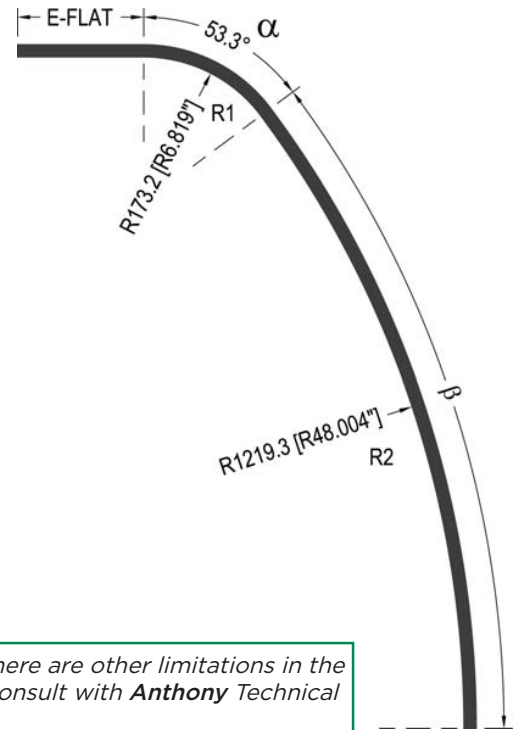
*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony** Technical Services before committing to any design. *15 quantity order minimum.*

Standard Bent Glass Shapes

EI2

Profile Name:	EI2	
Profile Type:	Double Radius	
Fixed Parameters		
Curve Radius (R1):	173.2mm	6.819"
Bend Angle (α):	53.3°	
Curve Radius (R2):	1219.3mm	48.004"
Variable Parameters		
E-Flat Max:	150.0mm	5.905"
E-Flat Min:	76.2mm	3.000"
Max Bend Angle β :	37.7°	
Min Bend Angle β :	12.5°	
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

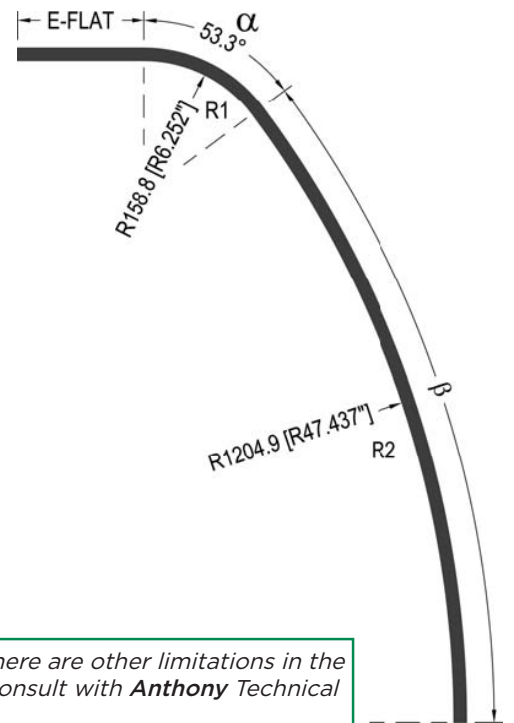
Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.



EI1

Profile Name:	EI1	
Profile Type:	Double Radius	
Fixed Parameters		
Curve Radius (R1):	158.8mm	6.252"
Max Bend Angle (α):	53.3°	
Curve Radius (R2):	1204.9mm	47.437"
Variable Parameters		
E-Flat Max:	150.0mm	5.905"
E-Flat Min:	76.2mm	3.000"
Max Bend Angle β :	37.7°	
Min Bend Angle β :	12.5°	
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"

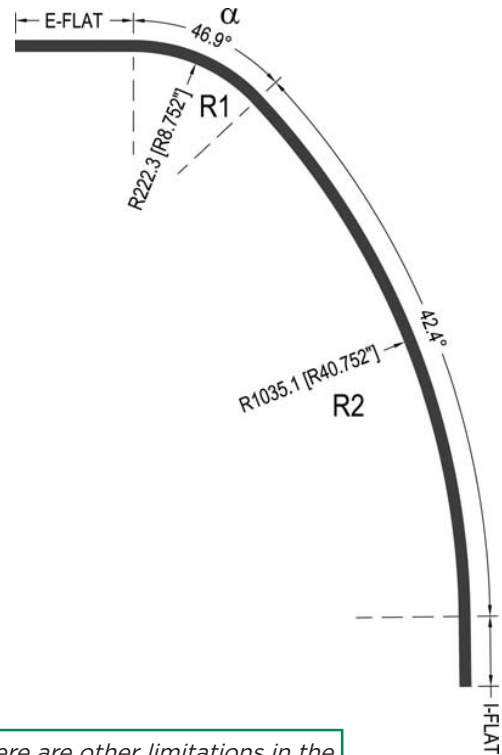
Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.



Standard Bent Glass Shapes

PW

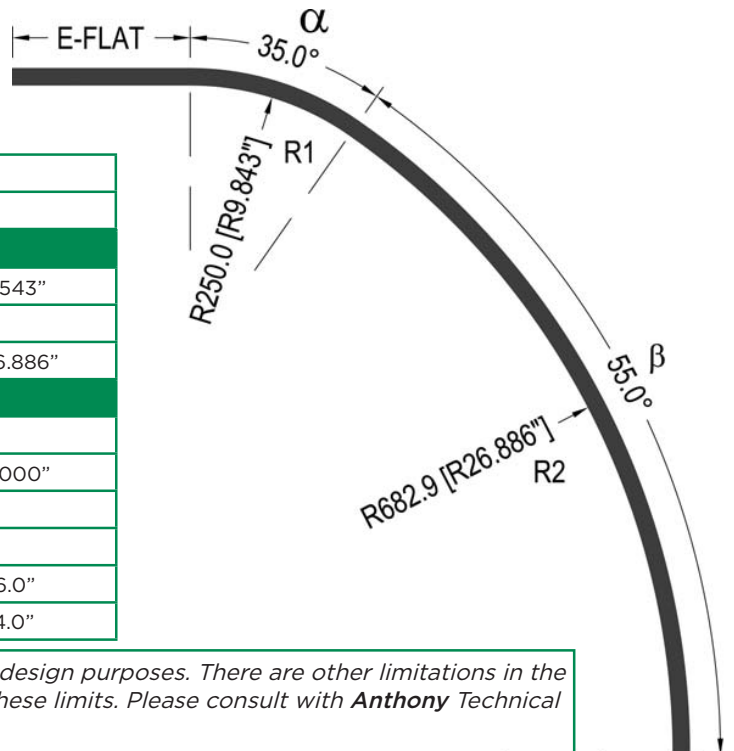
Profile Name:	PW	
Profile Type:	Double Radius	
Fixed Parameters		
Curve Radius (R1):	222.3mm	8.752"
Bend Angle (α):	46.9°	
Curve Radius (R2):	1035.1mm	40.752"
Variable Parameters		
E-Flat Max:	150.0mm	6.300"
E-Flat Min:	76.2mm	3.000"
Max Bend Angle β :	42.4°	
Min Bend Angle β :	5.0°	
I-Flat Max:	95.3	3.750"
I-Flat Min:	0.0mm	0.000"
Max Length:	2438.4mm	96.0"
Min Length:	406.4mm	16.0"



Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.

DL

Profile Name:	DL	
Profile Type:	Double Radius	
Fixed Parameters		
Curve Radius (R1):	250.0mm	9.843"
Bend Angle (α):	35.0°	
Curve Radius (R2):	682.9mm	26.886"
Variable Parameters		
E-Flat Max:		
E-Flat Min:	76.2mm	3.000"
Max Bend Angle β :	55.0°	
Min Bend Angle β :		
Max Length:	2438.4mm	96.0"
Min Length:	609.6mm	24.0"

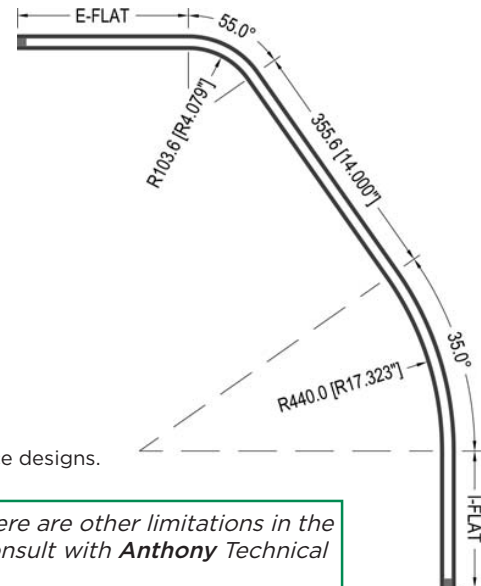


Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.

Standard Bent Glass Shapes

AN Assembly

Profile Name:	AN Insulated Assembly	
Profile Type:	Double Curve	
Details		
Exterior Glass	AN1	
Interior Glass	AN2	
Nominal Thickness	22mm	0.866"
Nominal Airspace	12.7mm	0.500"
Options		
May include wiper gray or black wiper gasket or flat gasket		

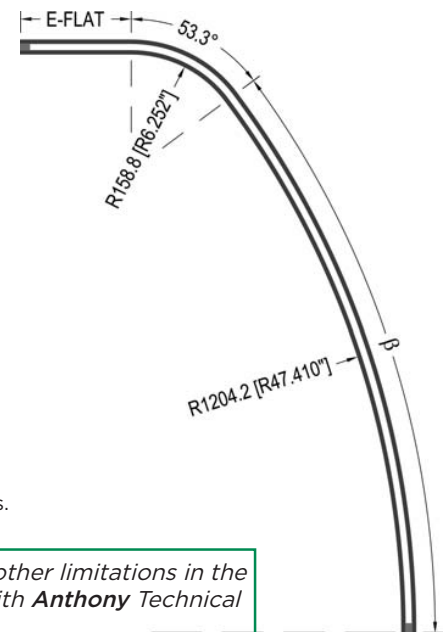


Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs.

*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.*

EI Assembly

Profile Name:	EI Insulated Assembly	
Profile Type:	Double Radius	
Fixed Parameters		
Exterior Glass	EI2	
Interior Glass	EI1	
Nominal Thickness	22mm	0.866"
Nominal Airspace	12.7mm	0.500"
Options		
May include wiper gray or black wiper gasket or flat gasket		



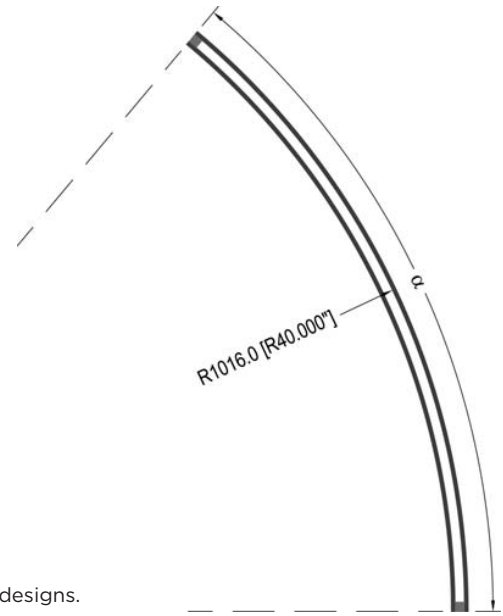
Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs.

*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.*

Standard Bent Glass Shapes

EH Assembly

Profile Name:	EH Insulated Assembly	
Profile Type:	Double Curve	
Details		
Exterior Glass	EH	
Interior Glass	EH5	
Nominal Thickness	22mm	0.866"
Nominal Airspace	12.7mm	0.500"
Options		
May include wiper gray or black wiper gasket or flat gasket		

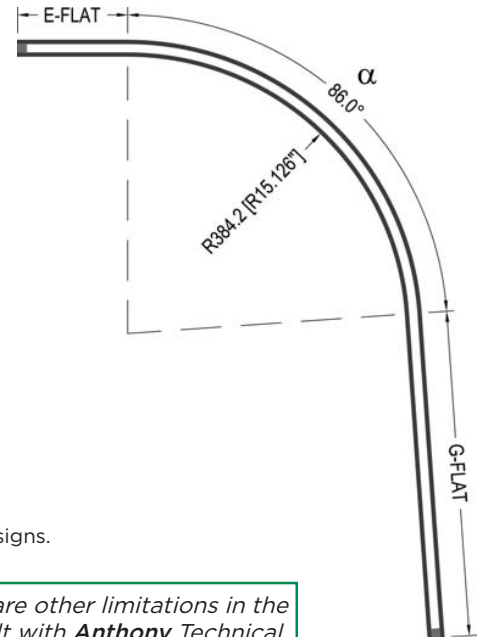


Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs.

*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.*

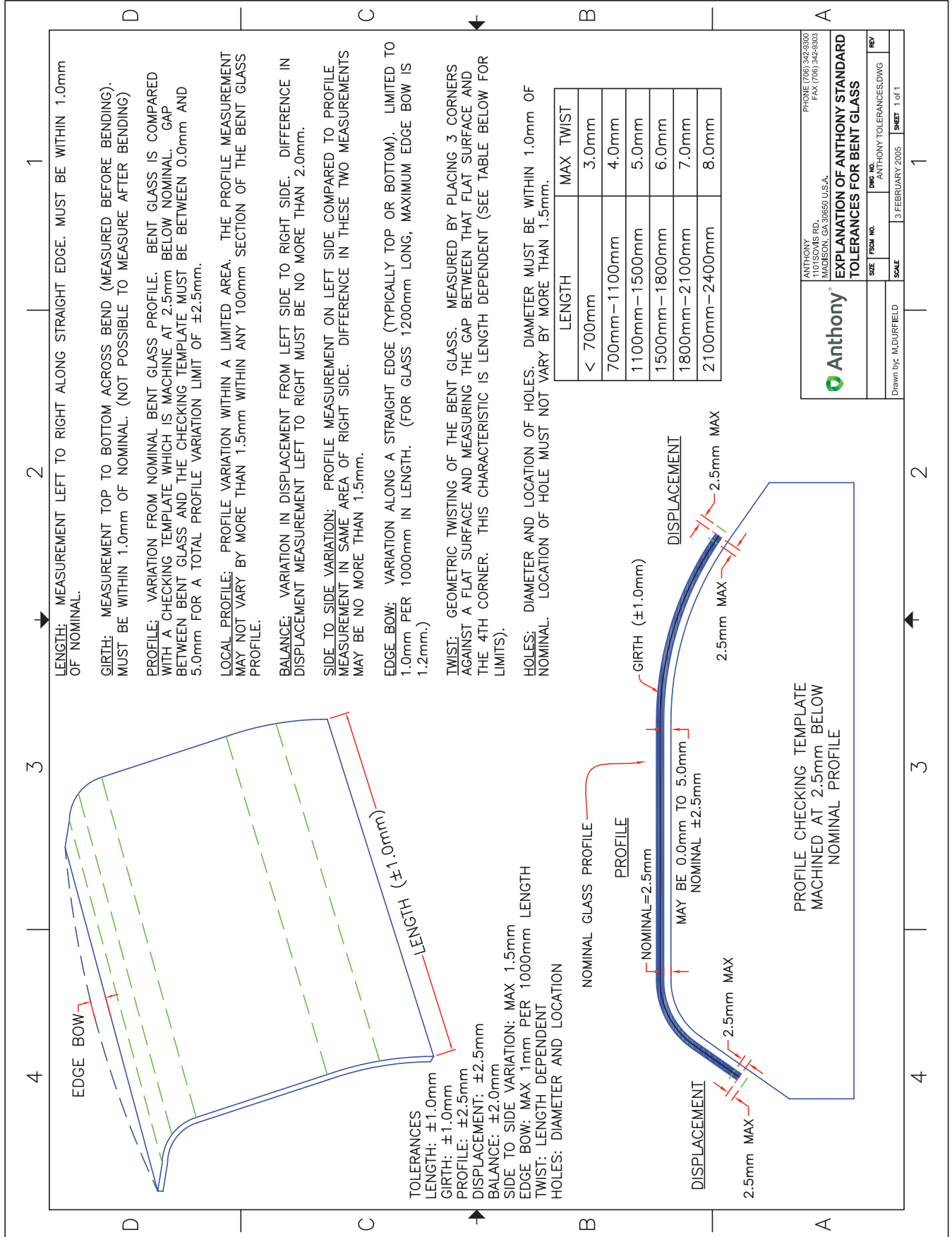
PT Assembly

Profile Name:	PT Insulated Assembly	
Profile Type:	Full Arc with Flats	
Fixed Parameters		
Exterior Glass	PT1	
Interior Glass	PT2	
Nominal Thickness	22mm	0.866"
Nominal Airspace	12.7mm	0.500"
Options		
May include wiper gray or black wiper gasket or flat gasget		



Note... it is possible to produce segments of this profile for sneeze-guard or self-service designs.

*Note: The geometric limits above are given for general design purposes. There are other limitations in the glass bending & tempering processes that may affect these limits. Please consult with **Anthony Technical Services** before committing to any design.*



LENGTH: MEASUREMENT LEFT TO RIGHT ALONG STRAIGHT EDGE. MUST BE WITHIN 1.0mm OF NOMINAL.

GIRTH: MEASUREMENT TOP TO BOTTOM ACROSS BEND (MEASURED BEFORE BENDING). MUST BE WITHIN 1.0mm OF NOMINAL. (NOT POSSIBLE TO MEASURE AFTER BENDING)

PROFILE: VARIATION FROM NOMINAL BENT GLASS PROFILE. BENT GLASS IS COMPARED WITH A CHECKING TEMPLATE WHICH IS MACHINE AT 2.5mm BELOW NOMINAL. GAP BETWEEN BENT GLASS AND THE CHECKING TEMPLATE MUST BE BETWEEN 0.0mm AND 5.0mm FOR A TOTAL PROFILE VARIATION LIMIT OF $\pm 2.5\text{mm}$.

LOCAL PROFILE: PROFILE VARIATION WITHIN A LIMITED AREA. THE PROFILE MEASUREMENT MAY NOT VARY BY MORE THAN 1.5mm WITHIN ANY 100mm SECTION OF THE BENT GLASS PROFILE.

BALANCE: VARIATION IN DISPLACEMENT FROM LEFT SIDE TO RIGHT SIDE. DIFFERENCE IN DISPLACEMENT MEASUREMENT LEFT TO RIGHT MUST BE NO MORE THAN 2.0mm.

SIDE TO SIDE VARIATION: PROFILE MEASUREMENT ON LEFT SIDE COMPARED TO PROFILE MEASUREMENT IN SAME AREA OF RIGHT SIDE. DIFFERENCE IN THESE TWO MEASUREMENTS MAY BE NO MORE THAN 1.5mm.

EDGE BOW: VARIATION ALONG A STRAIGHT EDGE (TYPICALLY TOP OR BOTTOM). LIMITED TO 1.0mm PER 1000mm IN LENGTH. (FOR GLASS 1200mm LONG, MAXIMUM EDGE BOW IS 1.2mm.)

TWIST: GEOMETRIC TWISTING OF THE BENT GLASS. MEASURED BY PLACING 3 CORNERS AGAINST A FLAT SURFACE AND MEASURING THE GAP BETWEEN THAT FLAT SURFACE AND THE 4TH CORNER. THIS CHARACTERISTIC IS LENGTH DEPENDENT (SEE TABLE BELOW FOR LIMITS).

HOLES: DIAMETER AND LOCATION OF HOLES. DIAMETER MUST BE WITHIN 1.0mm OF NOMINAL. LOCATION OF HOLE MUST NOT VARY BY MORE THAN 1.5mm.

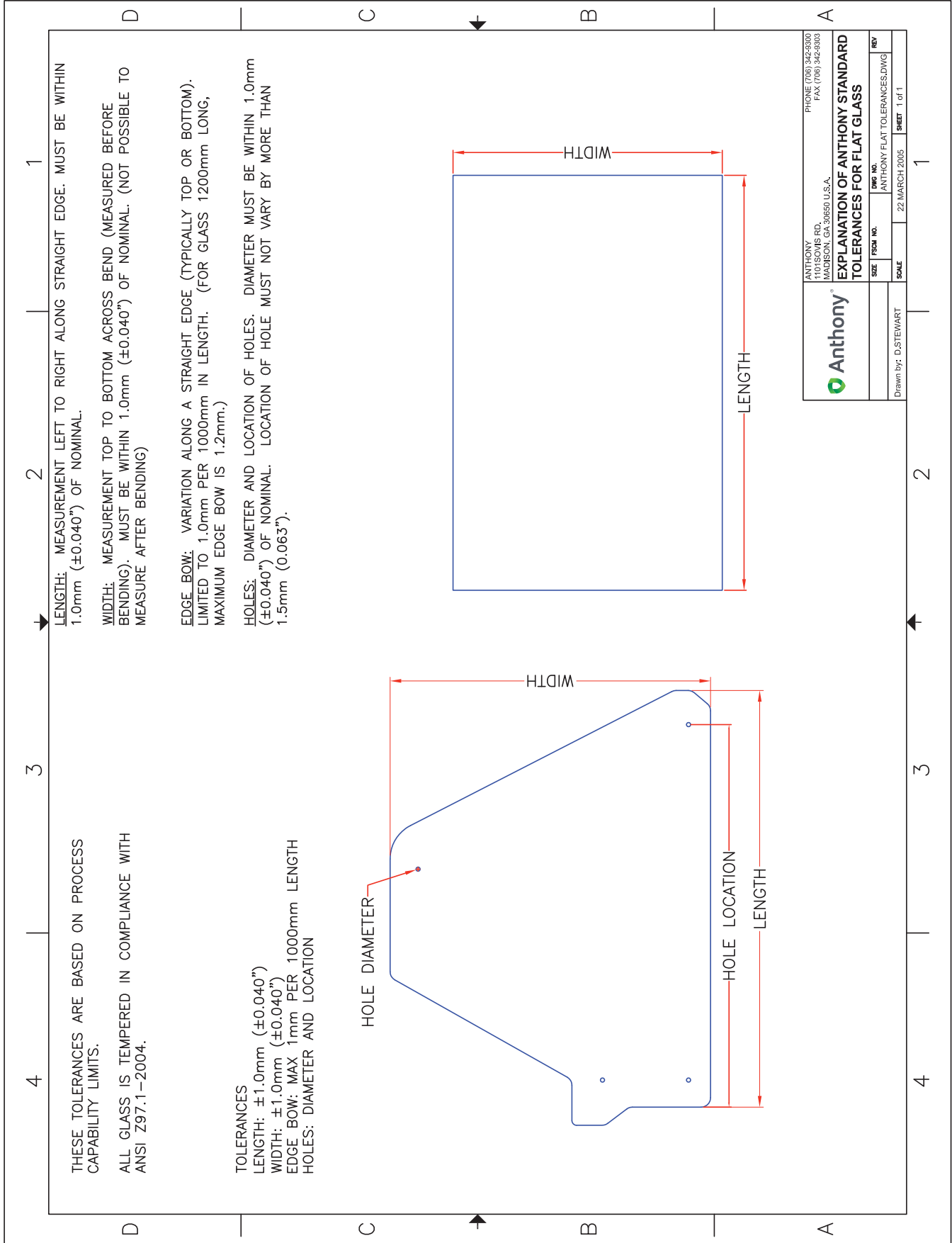
LENGTH	MAX TWIST
< 700mm	3.0mm
700mm-1100mm	4.0mm
1100mm-1500mm	5.0mm
1500mm-1800mm	6.0mm
1800mm-2100mm	7.0mm
2100mm-2400mm	8.0mm

Anthony
 1101SCOVIS RD.
 MADISON, GA 30650 U.S.A.
 PHONE (706) 342-8300
 FAX (706) 342-8303

EXPLANATION OF ANTHONY STANDARD TOLERANCES FOR BENT GLASS

SIZE	FSM NO.	DWG NO.	ANTHONY TOLERANCES/DWG	REV

Drawn by: M.DURFIELD
 SCALE: 3 FEBRUARY 2005
 SHEET 1 of 1



Anthony Glass Quote Request

Company Name: _____ Contact Name: _____ Contact Phone: _____

Anthony Standard Shape: _____ Quantity: _____

Date Product Is Needed _____

Glass Detail: (Circle One)

Shape: SC DC FA FAF DR FLAT

Single Pane or Thermopane Assembly

If Thermopane Argon filled : YES NO ---- Gaskets Required : YES NO

Glass Size:

Length _____ Width _____ Thickness _____

Glass Features (Circle Services Needed)

Glass Printing Needed:

Yes - No: If yes what color, White, Black, Gray or Custom Color _____

Ultra-Vision Anti-Reflective Glass: Yes - No

Low-E Glass: Yes - No

Glass mounting? -Fixed Mount - Hinged Mount

If Hinged Mount what type? _____

Edge and Corner Finish: _____

Pencil Edge - Satin Finish - Radius Corners - Clipped Corners -

Additional detail or Comments _____

Drilling Holes for Hardware Mounts: Yes - No

Design or Drawing assistance needed: Yes - No

Additional Comments or Requests _____



TERMS AND CONDITIONS OF SALE

1. **Acceptance Of Orders/Terms:** All orders are subject to acceptance by Anthony at its Madison, Georgia headquarters, and Anthony reserves the right to reject any order. Possession of a price list does not constitute an offer to sell. Acceptance of any order by Anthony is expressly conditioned on Customers assent to the terms and conditions set forth herein ("Terms") and the waiver by Customer of any terms and conditions contained in any order form, confirmation, or any other communication of Customer, whether previously or hereafter delivered to Anthony, which either add to, differ from, modify, conflict with or are otherwise inconsistent with any term or condition herein. Anthony hereby gives notice of its objection to any additional or different terms or conditions in any such order form, confirmation or communication. Customer's failure to object in writing to these Terms prior to the earlier of Customer's acceptance of the products ordered or fifteen (15) days after delivery hereof to Customer will constitute agreement by Customer to these Terms.
2. **Product Changes:** Anthony reserves the right to discontinue the manufacture or sale of any product at any time or to alter, modify or redesign its products.
3. **Price:** All prices are subject to change without notice. The price charged will be the price in effect at time of order placement and as formally acknowledged by Anthony. Should any governmental action or request prevent Anthony from implementing any price or continuing any price already in effect, Anthony may cancel Customer's order or any part thereof.
4. **Taxes/Duties:** All federal, state or local sales, use or other taxes, and all duties, import fees or other assessments imposed on materials sold hereunder, or on the manufacture, sale or delivery thereof, shall be for Customer's account.
5. **Credit Approval:** Customer credit approval is required prior to any shipment. If Anthony determines at any time that Customer's financial condition does not justify the extension of credit to Customer, then Anthony may require cash payments in advance or other satisfactory security prior to delivery.
6. **Packaging/shipping/Risk of Loss:** Costs for special packaging and/or handling requested by Customer will be billed to Customer. Shipping terms are specified on the face of Anthony's quotation and/or price list, as applicable. Unless otherwise specified by Customer in writing, Anthony shall select the method of shipment and direct shipment of materials to the specified delivery address of Customer. In the event of any general freight increase or any governmental ruling or regulation that results in increased freight costs, Anthony may, without any advance notice, invoice Customer for such additional costs. Title to, and the risk of loss, damage or shortage of, such materials shall pass to Customer upon delivery to the designated delivery location.
7. **Delivery:** Quoted shipping and/or delivery dates are based on estimates at the time of quotation. Anthony will use its best efforts to meet such shipping and/or delivery dates, but Anthony shall not be liable for any direct or indirect costs or damages, including without limitation incidental or consequential damages, resulting from late deliveries. For orders with indefinite delivery dates or blanket orders, Anthony shall have the right to manufacture or procure the materials covered thereby and hold such materials for Customer's account pending receipt of definite shipping instructions. Except as expressly provided otherwise herein, Customer agrees to purchase, and will be charged for, all material ordered.
8. **Acceptance of Products by Customer/Claims:** Upon delivery, shipments must be inspected for damage, loss or shortage prior to acceptance from the carrier. If damage or shortage exists with respect to any Shipment and it is not concealed, Customer shall secure a notation of such damage or Shortage from the delivering agent on the freight bill or delivery receipt. If damage is concealed, Customer must notify Anthony within five (5) days of its delivery and hold the merchandise for its inspection. Any claims for visible loss or damage should be filed by Customer with Anthony in writing immediately upon receipt of the materials. All claims of Customer that materials delivered do not conform to the accepted order shall be handled as claims for breach of warranty and Customer shall be limited to those remedies available for breach of warranty as described in Section 13. Claims that tender of performance by Anthony does not otherwise conform shall be effective only if Anthony shall be notified by Customer in writing of the non-conformity within 30 days of the invoice date describing the non-conformity in reasonable detail and specifying the order, shipment or invoice number. If such notice shall be given on a timely basis and the non-conformity does exist, Anthony shall have a reasonable opportunity to cure same. No claim for visible, external damage or shortage will be allowed unless they are accompanied by an inspection report or signed delivery receipt noting such loss or damage signed by a representative of the carrier and forwarded to the Anthony Vice-President, Marketing & Sales within 30 days of the invoice date.
9. **Payment:** All invoices, whether partial or in full, shall be due Net 30 days from date of invoice and payable in full by Customer pursuant to the terms set forth herein, unless otherwise agreed to in writing by Anthony. All invoices are payable in U.S. Dollars (U.S.\$), unless alternative currency is agreed to by Anthony at time of order placement. Anthony reserves the right to impose a service charge of the lesser of one and one-half percent (1 1/2%) per month (or the maximum interest rate per mined by applicable law) on any past-due unpaid balances. In addition, if it becomes necessary to place Customer's account with an attorney for collection, Customer shall be responsible for all costs and expenses, including reasonable attorney's fees incurred by Anthony in connection therewith. If Customer (i) becomes insolvent files or has filed against it a petition in bankruptcy, makes any assignment for the benefit of creditors, or has a receiver or trustee appointed for it or its property, (ii) takes action to liquidate or otherwise cease doing business as a going concern, (iii) undergoes a change in ownership, (iv) fails to provide adequate assurance or security for credit extended, or (v) takes any other action that Anthony determines in its sole discretion adversely impacts the conditions under which credit was extended, then all amounts outstanding from Customer hereunder shall at Anthony's option become immediately due and payable. **ALL PAYMENTS, WHETHER UNDER THE STANDARD PAYMENT TERMS OR OTHERWISE, SHALL BE CONSIDERED RECEIVED BY ANTHONY AS FOLLOWS: (A) FOR PAYMENTS BY CHECK, WHEN THE CHECK IS RECEIVED AT ANTHONY'S DESIGNATED PAYMENT LOCATION, AND (B) FOR PAYMENTS BY ELECTRONIC FUNDS TRANSFER, THE BUSINESS DAY IMMEDIATELY PRECEDING THE DAY ON WHICH THE FUNDS ARE IMMEDIATELY AVAILABLE TO ANTHONY.** Customer shall pay all undisputed invoices regardless of any dispute that may exist as to other delivered or undelivered goods. With respect to any disputed invoice, Customer shall pay all amounts not in dispute. Customer expressly waives the right to assert any offset or counterclaim with respect to amounts due under any invoice issued by Anthony hereunder.
10. **Cancellation/Change Orders:** Orders for Standard Products (i.e. products other than Non-Standard Products) may only be revised or canceled by Customer prior to the date of packing & loading at the place of shipment, and only with Anthony's prior consent. Orders for No-Standard Product may only be revised or canceled by Customer prior to the commencement of production, and only with Anthony's prior consent.
11. **Non-Standard Products:** Any glass and/or glass assembly which Anthony has the capability of producing but does not normally inventory, and is expressly manufactured for, and to the specifications of, a specific customer.
12. **Returned Materials:** Non-Standard Products may not be returned. Standard Products may be returned, freight prepaid, and only with the prior approval of the Anthony Vice- President, Marketing & Sales. Material returned freight collect and/or without this authorization will not be accepted. A 25% restocking charge will be charged to the account of the Customer. All returned materials must arrive at the point of return designated by Anthony in salable condition, as determined by Anthony's Quality Control Department before any credit will be issued.
13. **Warranty/Limitation of Liability**
 - (A) **Tempered Glass Limited Product Warranty:** Anthony warrants that its tempered glass shall be free from any manufacturing defects for a period of 12 months from the date of manufacture.
 - (B) **Thermopane Assembly Limited Product Warranty:** All glass used in the fabrication of Anthony Thermopane Assemblies is covered by the applicable express Limited Warranty for Anthony tempered glass, in accordance with part A. above. In addition, the assembly itself is further warranted against internal condensation air gap leakage) for a period of five (5) years from date of manufacture, provided that (1) the insulation seal remains intact and has NOT been altered and/or modified in any way; (2) both the inner and outer glass panes are intact, unbroken, and undamaged; and, (3) the installation of the assembly has been in accordance with industry established and recognized proper glazing standards and procedures. In the event that a piece of tempered glass and/or a thermopane assembly is alleged to contain a manufacturing defect, the item must be returned to Anthony at 1101 Sovis Road, Madison, GA. 30650, freight prepaid at the original purchaser's expense, intact and undamaged/unbroken, for inspection and analysis. A claim of an alleged manufacturing defect must be submitted to Anthony in writing as follows:
 - for tempered glass --- within twelve (12) months of date of manufacture of the glass
 - for thermopane assemblies --- within five (5) years of the date of manufacture for claims related to internal condensation air gap leakage) of the assemblyAnthony will not be liable or responsible for any manufacturing defect if the claim is made subsequent to the expiration of the warranty period.

Upon verification of an alleged manufacturing defect by Anthony personnel, or a Anthony authorized inspector, Anthony will either repair or replace, at its option, any glass or assembly that has been determined to have failed due to a manufacturing defect, and ship it prepaid to the original customer delivery location. Anthony's liability is limited solely to such repair or replacement.
 - (C) **Disclaimer:** THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ANTHONY BE RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES OF ANY KIND, INCLUDING, WITHOUT ANY LIMITATION, LABOR CHARGES, LOSS OF SALES AND LOSS OF EQUIPMENT USE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. OR OF ANY EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO CUSTOMER. THE WARRANTY PROVIDED BY ANTHONY GIVES CUSTOMER SPECIFIC LEGAL RIGHTS, AND CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. NO REPRESENTATIVE OF ANTHONY OR ITS DISTRIBUTORS OR DEALERS IS AUTHORIZED TO MAKE ANY CHANGE OR MODIFICATION TO THIS WARRANTY.
 14. **Excused Performance:** Anthony shall not be liable for nor be deemed to be in default of these Terms on account of any failure to perform its obligations or attempt to cure any breach thereof if Anthony has been delayed or prevented from doing so by any cause or condition beyond Anthony's reasonable control. If Anthony determines that its ability to supply the total demand for the products, or obtain any or a sufficient Quantity of any material used directly or indirectly in the manufacture of the products, is hindered, limited or made impracticable, Anthony may allocate its available supply of the products or such material (without obligation to require other supplies of any such products or material) among itself and its customers as Anthony determines in its sole discretion without liability for any failure of performance which may result therefrom. Delivery suspended or not made by reason of this action shall be canceled without liability, but these Terms shall otherwise remain unaffected.
 15. **Fair Labor Standards Act:** Anthony hereby certifies that the materials sold hereunder that were produced in the United States were produced in compliance with all applicable requirements of Sections 6,7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.
 16. **Change in Terms And Conditions Of Sale:** The terms and conditions contained herein constitute the entire agreement between Anthony and Customer and supersede any and all prior representations, agreements or understandings, whether oral or written, relative to the materials delivered hereunder. No course of dealing or usage of trade shall be relevant to supplement or explain any of these terms or conditions. No modification of these terms and conditions shall be effective unless made in writing and executed by Anthony.
 17. **General:** This agreement shall not be assigned by Customer without the prior written consent of Anthony, and any assignment made without such consent shall be null and void. This agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns. This agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its conflicts of law provisions. The courts located in Delaware shall have jurisdiction of all matters relating to or arising out of any sale of materials by Anthony to Customer hereunder, and Customer hereby consents to the jurisdiction of such courts. Any action brought by Customer in connection with Anthony's performance hereunder must be commenced within one year after such cause of action accrues or it will be deemed waived.



Notes





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