

FLAT GLASS PRICE BOOK

Stock Sheet, Cut to Size, Fabrication, Tempering, I.G. Units & Sundries

WHOLESALE PRICING

Effective 11/2025





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QUOTE REQUESTS - SEND ALL QUOTE REQUESTS TO:

quotes@wisconsinshowerdoor.com

ORDER REQUESTS - SEND TO ORDER REQUESTS TO:

- orders@wisconsinshowerdoor.com
- Incomplete orders will be delayed until all information is received; order dates are established once all information is received.

Quotes and Orders will not be processed if sent directly to CSR emails.

Prices does not include applicable surcharges or taxes and are subject to change without notice.

CHANGES or CANCELLATIONS - Materials are put into production upon order generation. Any modifications requested after acknowledgment of order will be billed for the cost of completed materials and a \$25.00 processing fee.

STOCK SHEET - FLAT GLASS

PATTERN GLASS

						PR	ICE PER SQL	JARE FOOT
						V	OLUME PRICINO vith 3/16" or thicker for	<u> </u>
GLASS	;	SHE	ET SIZ	E	ONE	FIVE	TEN	TWENTY+
SS	Non-Glare	36"	48"		7.769	7.434	*CASE OF 4	
SS	Non-Glare	40"	60"		15.083	14.432	*CASE OF 2	
SS	Clear Plate (3 Sheet Minimum)	48	84		0.995	0.952	0.919	0.889
DS	Clear Plate (2 Sheet Minimum)	48 72	84 84		1.311	1.255	1.211	1.171
3/16"	Clear Plate	72	130		2.552	2.442	2.356	2.280
1/4"	Clear Plate	48 60 72	130 130 130		2.733	2.615	2.523	2.441
3/8"	Clear Plate	96	130	#	5.890	5.636	5.438	5.261
1/2"	Clear Plate	96	130	#	6.882	6.585	6.353	6.147
1/4"	Optiwhite	96	130	#	6.540	6.258	6.038	5.842
3/8"	Optiwhite	96	130	#	14.032	13.426	12.954	12.534
1/2"	Optiwhite	96	130	#	15.369	14.705	14.188	13.728
3/4"	Optiwhite (Call for Availability)	65	96	#	35.145	33.627	32.445	31.393
3/16	Robax®	43	77		35.784			
1/8"	Bronze/Grey Plate	B: 65	96		5.587	5.345	5.157	4.990
3/16"	Bronze/Grey Plate	65	96		5.990	5.731	5.530	5.351
1/4"	Bronze/Grey Plate	96	130	#	6.122	5.858	5.652	5.468
3/8"	Bronze/Grey Plate	96	130	#	17.678	16.914	16.320	15.791
1/8"	Midnight Grey	72	84		8.747	8.369	8.075	7.813
1/4"	.030 Clear Laminated	36 40 48 60	84 80 84 96		7.618	7.289	7.033	6.805
1/4"	.030 Bronze Laminated	40	80		8.981	8.593	8.291	8.022
1/4"	.030 Grey Laminated	40	80		8.981	8.593	8.291	8.022
1/4"	.030 Green Laminated	36 48	84 84		8.981	8.593	8.291	8.022
1/4"	.030 Hue White Laminated	60	96		10.672	10.211	9.852	9.532

Split Sheet Pricing - Price for one (1) cut to split sheet from stock sheet size as follows: // Split sheets require one (1) production day and will not be available for next day delivery.

SS - 1/4" - \$9.25 one cut

3/8" - \$18.50 one cut

1/2" - \$18.50 one cut

3/4" - \$62.00 one cut (all 3/4" stock must be split)

Lami - \$18.50 one cut

Robax - \$11.00 one cut

#Jumbo sheet stock – Split charges apply // WSD will not deliver jumbo stock sheets

FGP - 11/2025

STOCK SHEET - MIRROR

					PR	ICE PER SQL	JARE FOOT			
					VOLUME PRICING (cannot mix DS & SS with 3/16" or thicker for quantity discou					
MIRRO	OR	SHI	EET SIZE	ONE	NE FIVE TEN TWENTY-					
DS	Clear Mirror (2 Sheet Minimum)	48	84	3.224	3.083	2.978	2.880			
3/16"	Clear Mirror	72	120	4.727	4.520	4.367	4.223			
1/4"	Clear Mirror	48 60 72	120 120 120	4.962	4.745	4.584	4.433			
1/4"	Grey Mirror	72	130	9.807	9.378	9.060	8.761			
1/4"	Clear Laminated Mirror	48	84	17.333	16.574	16.013	15.484			

STOCK SHEET - PATTERN GLASS

PRICE	PER	SQUAR	E FUUI

		SHE	ET SIZE	
GLASS	j	W	Н	PRICE
1/8"	Pattern #62	72	84	3.971
1/8"	Velour on Soda Lime	65	96	6.111
5/32"	Cottswald	52	84	8.182
5/32"	Flemish	72	96	9.955
5/32"	Renaissance	65	85	8.000
3/16"	Aquatex	72	84	4.797
1/4"	Aquatex	72	84	7.045
1/4"	Flemish	72	96	11.157

		CI	IEET CI	, F	
		Sh	HEET SIZ	<u>L</u>	
GLASS	GLASS		Н		PRICE
1/4"	Pattern #62	72	84		5.516
1/4"	Rain	72	84		6.318
1/4"	Reeded	72	100		9.982
1/4"	Velour on Soda Lime	96	130	#	6.273
3/8"	Rain	60 72 72	84 84 96		12.289
3/8"	Reeded	72	84		15.022
3/8"	Rolled Cast Glass	72	96		22.985
3/8"	Velour on Soda Lime	96	130	#	9.297
3/8"	Velour on Starphire	96	130	#	17.578
1/2"	Velour on Soda Lime	96	130	#	14.455

CUT-TO-SIZE

WSD WILL NOT TEMPER CUSTOMER'S FABRICATED GLASS

	E PER SQUARE FOOT	DD	ICE			DD	ICE.
	_	PR			-		TEMPERED
PLΔTF	GLASS	AIVIVEALED	TEMPERED	LOW F	(ENERGY ADVANTAGE)	AININEALED	ICIVIPERED
SS	Non-Glare (36" x 48" max)	9.12		1/8"	Low E (Energy Advantage)	7.30	8.22
SS	Non-Glare (40" x 60" max)	18.00		3/16"	Low E (Energy Advantage)	8.92	9.90
SS	Clear Plate	2.33		PATTE	RN GLASS		
DS	Clear Plate	3.21	4.01	1/8"	German New Antique	22.78	
3/16"	Clear Plate	3.53	4.77	1/8"	Pattern #62	6.75	7.58
1/4"	Clear Plate	3.66	4.96	1/8"	Velour on Soda Lime	7.17	7.92
3/8"	Clear Plate	7.38	7.84				-
1/2"	Clear Plate	8.55	10.80	5/32"	Cottswald	12.11	
	0.00			5/32"	Flemish	15.59	
1/4"	Optiwhite	8.27	9.20	5/32"	Renaissance	11.83	
3/8"	Optiwhite	16.82	18.85				
1/2"	Optiwhite	21.38	28.48	3/16"	Aquatex	6.58	7.61
3/4"	Optiwhite	50.92					
				1/4"	Aquatex	11.31	13.75
3/16"	Robax®	59.35		1/4"	Flemish	17.78	20.20
	o cuacc			1/4"	Pattern #62	9.77	11.43
	D GLASS	7.22	7.12	1/4"	Rain	9.82	11.57
1/8"	Bronze/Grey Plate	7.22	7.42	1/4"	Reeded	18.54	20.85
3/16"	Bronze/Grey Plate	7.88	7.92	1/4"	Velour on Soda Lime	7.74	9.51
1/4"	Bronze/Grey Plate	8.13	8.23				
3/8"	Bronze/Grey Plate	22.64	25.95	3/8"	Rain	17.83	20.53
1/8″	Midnight Grey	9.22	17.76	3/8"	Reeded	22.88	24.67
LAMIN	ATED			3/8"	Rolled Cast Glass	35.50	38.40
1/4"	.030 Clear Laminated	11.63		3/8"	Velour on Soda Lime	13.98	16.58
1/4"	.030 Bronze Laminated	13.09		3/8"	Velour on Starphire	26.76	29.35
1/4"	.030 Grey Laminated	13.09					
1/4"	.030 Green Laminated	13.09		1/2"	Velour on Soda Lime	19.81	22.37
1/4"	.030 Hue White Laminated	15.39					
MIRRO	חח						
1/8"	Clear Mirror	5.20					
3/16"	Clear Mirror	6.23					
1/4"	Clear Mirror	6.40					
174	Ciedi IVIIITOI	0.40			ern glass orders are to be drav		
1/4"	Grey Mirror	11.02		Refer to ft calcul	CUT-TO-SIZE SPECIFICATIONS ations.	(page 7) to deter	mine accurate sc
1/4"	Antique Mirror-Clear ¹	12.89			Mirror is sold "as-is". This is a custo dustry specifications.	m fabricated produc	ct and is not held to
1/4"	Clear Laminated Mirror	19.92		²Discontii	nued Patterns - Limited quantities	call for availability	
				² Discontii	nued Patterns - Limited quantities,	call for availability.	

TEMP. LIMITATIONS

CUT-TO-SIZE SPECIFICATIONS

EDGE TREATMENTS

			GI	ASS THICKNE	-55		
	DS & SS	5/32	3/16"	1/4"	3/8"	1/2"	3/4"
Minimum Quantities							
Annealed - Translucent & Mirror per order			1 sq ft	- All glass thic	knesses		
Annealed - Pattern Glass		1 sq ft per piece 3 sq ft per order					
Annealed - Robax	No Min.						
Tempered - All Glass Types per piece		3	3 sq ft - All gla	ss thicknesse	25		
Dimensions & Tolerances							
Out of Square	WSD do	es not charge	for out of squ	are condition	s (except for D	Oouble Out Cor	nditions)
Double Out Condition Available on seamed or polished only			\$9!	5.00	·		
Tolerances	±1/16"	±1/16"	±1/16"	±1/16"	±1/8"	±1/8"	±3/16"
Hold Exact Size			Д	dd 20% to orc	ler		
Edgework Requirements							
Annealed	All anr	nealed shipped	d goods will b	e seamed // S	eaming charge	es apply (see p	age 8)
Tempered	All t	All tempered includes seaming in tempering price Satin Polish (charges apply)					
Size Charges							
Undersize Items	Lit	ces with a wid		n 10″ will be c glass thicknes		minimum of 1	0"
Undersize Charge Charged on items less than 8" down to 2" that require bevel or miter					\$110.00	\$110.00	\$110.00
Oversize Charge (per piece)			\$28.00 mult	inlied by Over	size Quantity		
0- (L, L	Oversize Qua	ntity Example	,	· · · · ·	·	olow)	
Oversize Quantity = sq ft of piece / thickness figure Note: Oversize Quantity must be 1 or greater for oversize	sq ft of piece thickness figure	(" glass) = 36 sq ft = 1.5	24 sq ft	24 sq ft	kness Figure (b	15 sq ft	7 sq ft
charge to apply	and the state of t	- 1 17					
Tempered Oversize Charge Charged on glass ≥120″		Ac	ld 75% to sq	uare foot pr	ice		
Other Charges							
EnduroShield - Includes Both Sides			Add \$3.85	per sq ft X s	q ft of piece		

EDGE TREATMENTS

EDGE TREATMENTS

STRAIGHT LINE EDG						ER INCH	
			ALI	NAYS USE NEX	I EVEN INCH	x PRICE OF EL	DGE WORK
			GL	ASS THICKNESS	5		
TREATMENT	1/8"	3/16"	1/4"	1/4" LAMI	3/8"	1/2"	3/4"
Seamed Edge	0.064	0.064	0.064	0.064	0.122	0.162	0.229
Flat Polish Edge	0.095	0.095	0.095	1.134 1	0.202	0.271	0.405
½" Bevel	0.188	0.135	0.135		0.343	0.405	0.648
¾" Bevel		0.174	0.174		0.386	0.445	0.702
1" Bevel		0.224	0.224		0.436	0.500	0.796
1 ¼" Bevel		0.271	0.271		0.486	0.548	0.919
1½" Bevel		0.365 NT	0.365 NT		0.585	0.658	1.107
2" Bevel NT			1.215 NT		1.478 NT	1.663 NT	2.754 NT
Double Bevel NT			Quote		Quote	Quote	Quote
Dual Bevel NT					Quote	Quote	Quote
0-45° Miter			0.811		0.946	1.148	1.499
Chamfer					0.946	1.148	1.499
Pencil Polish	Pencil Polish	n Minimum \$26.25	0.513		0.581	0.662	1.148

SHAPE / DIAMETER EDGE	TREATMENT	Г	ALV	NAYS USE NEXT	EVEN INCH x	PRICE PE	
			GLA	ASS THICKNESS			
TREATMENT	1/8"	3/16"	1/4"	1/4" LAMI	3/8"	1/2"	3/4"
Seamed Edge	0.064	0.064	0.064	0.064	0.122	0.162	0.229
Flat Polish Edge		0.513	0.513	1.134 ¹	0.581	0.662	1.148
½" Bevel	0.960	0.960	0.960		1.107	1.189	2.113
¾" Bevel		1.040	1.040		1.201	1.282	2.268
1" Bevel		1.134	1.134		1.282	1.364	2.458
1¼" Bevel		1.201	1.201		1.432	1.518	2.713
1½" Bevel			1.756 NT		1.917	2.032	3.659
Double Bevel NT					Quote	Quote	Quote
Dual Bevel NT					Quote	Quote	Quote
Pencil Polish			0.513		0.581	0.662	1.148

REQUIREMENTS & ADDITIONAL CHARGES

Polish 5 to 8 straight-sided pieces – Requires shapes polish

Pieces greater than or equal to 120" in length – Requires shapes

Trapezoids and parallelograms – Requires shapes polish

Bevel 5 to 8 straight-sided pieces – Add 35% to order (Use straight line bevel charge)

Special degree bevel – \$33.50 Setup plus per inch bevel

Add 35% to Edge Treatment for customer supplied glass

NT - Not able to be tempered

¹ - Laminated requires minimum width of 4" in order to polish

See page 12 for profiles of edge treatments.

MINIMUM CHARGES

Straight Line Edge Work on Bevel Only - \$16.50 per order

Shape Edge Treatment – \$32.50 per piece

2" Bevel – \$33.50 Setup Charge plus \$58.30 Edge Work minimum

PROFILES & SHAPES

CORNERS, NOTCHES, HOLES

Flat (or Pencil) Polish Radius Corner up to 10" (Max 4 corners per piece) Add one (1) Setup Charge for up to (4) corners plus Shape Edge Treatment (per inch) for entire perimeter Radius Corner on 1/8" - Seamed or Satin Polish Only Seam: 0.064 Satin: 0.513 Clipped Corners up to 6" x 6" (Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page 13) 1 ½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" R./	12.50 0.513 12.50 1.407 4.50 7.00 21.00	1/4" 12.50 Shape Edg 0.513 12.50 21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	SS THICKNES 1/4" LAMI Setup Charge ge Treatment (pr	21.00	28.50 0.662 28.50 28.298 28.298 63.683 NT 7.046 10.00 16.00 48.00	3/4 42.50 1.144 42.50 56.58 56.58 91.854 N 10.290 45.00
Flat (or Pencil) Polish Radius Corner up to 10" (Max 4 corners per piece) Add one (1) Setup Charge for up to (4) corners plus Shape Edge Treatment (per inch) for entire perimeter Radius Corner on 1/8" - Seamed or Satin Polish Only Clipped Corners up to 6" x 6" (Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page 13) 1½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" R. Hinge/Clip Notch	12.50 0.513 12.50 1.407 4.50 7.00	12.50 Shape Edg 0.513 12.50 21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	Setup Charge ge Treatment (p	21.00 er inch) 0.581 21.00 21.179 21.179 56.585 NT 3.497 7.75	28.50 0.662 28.50 28.298 28.298 63.683 NT 7.046 10.00 16.00	42.5 1.14 42.5 56.58 56.58 91.854 N 10.29 35.0
(Max 4 corners per piece) Add one (1) Setup Charge for up to (4) corners plus Shape Edge Treatment (per inch) for entire perimeter Radius Corner on 1/8" - Seamed or Satin Polish Only Clipped Corners up to 6" x 6" (Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page13) 1½" Beveled (Illustration on page13) 1", 1½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" R./	0.513 12.50 1.407 4.50 7.00	12.50 Shape Edg 0.513 12.50 21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	ge Treatment (p	21.00 21.179 21.179 56.585 NT 3.497	0.662 28.50 28.298 28.298 63.683 NT 7.046 10.00	1.14 42.5 56.58 56.58 91.854 r 10.29 35.0
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Edge Treatment (per inch) for entire perimeter Radius Corner on 1/8" - Seamed or Satin Polish Only Clipped Corners up to 6" x 6" (Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page13) 1'/2" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" Radius Corner National Seams (1980) Radius Radius Corner National Seams (1980) Radius Corner National Seams	12.50 1.407 4.50 7.00	0.513 12.50 21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00		0.581 21.00 21.179 21.179 56.585 NT 3.497 7.75	28.50 28.298 28.298 63.683 NT 7.046 10.00	42.5 56.58 56.58 91.854 10.29 35.0
Radius Corner on 1/8" - Seamed or Satin Polish Only Seam: 0.064 Satin: 0.513 Clipped Corners up to 6" x 6" (Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page13) 1 ½" Bevel (Illustration on page13) 1 ½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" Radius Corner NT Hinge/Clip Notch	12.50 1.407 4.50 7.00	12.50 21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	3.497	21.00 21.179 21.179 56.585 NT 3.497 7.75	28.50 28.298 28.298 63.683 NT 7.046 10.00	42.5 56.58 56.58 91.854 10.29 35.0
(Max 4 corners per piece) Requires Shape Edge Treatment 1" Bevel (Illustration on page 13) 1 ½" Bevel (Illustration on page 13) 1", 1 ½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 1", 1 1/16", 1 3/16", 1 1/4", 2 1/2" 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" Radius Corner NT (Illustration on page 13) 12.50 12.50 12.50 12.50 12.50 1.407	1.407 4.50 7.00	21.179 21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	3.497	21.179 21.179 56.585 NT 3.497 7.75	28.298 28.298 63.683 NT 7.046 10.00	56.58 56.58 91.854 10.29 35.0
1 ½" Bevel (Illustration on page 13) 1", 1 ½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 1", 1 1/4", 2 1/2" 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA	4.50 7.00	21.179 NT 56.585 NT 1.407 4.50 7.00 21.00	3.497	21.179 56.585 NT 3.497 7.75	28.298 63.683 NT 7.046 10.00	56.58 91.854 10.29 35.0
1", 1 ½" Beveled Radius Corner NT (Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA	4.50 7.00	56.585 NT 1.407 4.50 7.00 21.00	3.497	56.585 NT 3.497 7.75 14.25	63.683 NT 7.046 10.00 16.00	91.854 10.29 35.0 45.0
(Illustration on page 13) Bump Corners 1.407 HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 13/4", 2", 2 1/4", 2 1/2" 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RAIS EDGE // ALL NOTCHES	4.50 7.00	1.407 4.50 7.00 21.00	3.497	3.497 7.75 14.25	7.046 10.00 16.00	10.29 35.0 45.0
HOLES 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RAIS EDGE // ALL NOTCHES ALL NOTCHES HAVE 3/8" RAIS EDGE // ALL NOTCHES	4.50 7.00	4.50 7.00 21.00	3.497	7.75 14.25	10.00	35.0 45.0
1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 7.00 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA	7.00	7.00		14.25	16.00	45.0
5/8", 3/4" 1", 1 1/16", 1 3/16", 1 1/4", 1 1/2", 1 5/8", 1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA	7.00	7.00		14.25	16.00	45.
1 3/4", 2", 2 1/4", 2 1/2" 3" to 8" 21.00 Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA		21.00				
Countersink Holes Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES - MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" Ri Hinge/Clip Notch	21.00			39.00	48.00	
Up to 1 1/2" diameter Countersink Relief Cuts - If needed NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" Rounder Round Properties Hinge/Clip Notch						62.
NOTCHES — MILLED SATIN ARIS EDGE // ALL NOTCHES HAVE 3/8" RA		Н	lole Pricing 2X			
Hinge/Clip Notch		Н	lole Pricing 2X			
0 1	ADIUS (N	(MUMININ				
	15.00	15.00		18.00	21.00	
Edge/Corner — Minimum Charge up to 30 U.I. Replaces Edge Notch (Hinge Notch)	33.00	33.00		46.00	52.00	67.
Edge/Corner - > 30 U.I. to 100 U.I. (per inch)	1.158	1.158		1.620	1.826	2.3
Edge/Corner – >100 U.I.	Quote	Quote		Quote	Quote	Quo
NTERNAL CUTOUT – MILLED SATIN ARIS EDGE // ALL CUTOUTS HA	VE 3/8"	RADIUS (MIN	IMUM)			
Single Switch Cutout (Std. Size - 2 1/4" x 4 1/2")	22.50	22.50				
Double Switch Cutout (Std. Size - 4 1/4" x 4 1/2")	22.50	22.50				
Internal Cutout – Minimum Charge up to 30 perimeter inches	33.00	33.00		46.00	52.00	67.
Internal Cutout — > 30 in. to 100 in. (per inch)	1.158	1.158		1.620	1.826	2.3
Internal Cutout – > 100 in.	Quote	Quote		Quote	Quote	Quo
SANDBLASTED PLATE RAIL – \$32.50 Setup Charge per piece + \$2.1	142 per ir	nch				

TEMP. LIMITATIONS

PATTERNS

EDGE TREATMENTS

PATTERN CHARGES –

	PATTERN CHARGE
Diameter Patterns on 3/8" & 1/2"	25.00
Diameter Patterns on 3/4" & Lami	45.00
Patterns for thicknesses on glass ≤3/16" with a seamed edge	25.00
Patterns on all other glass thicknesses with a seamed edge & Patterns on all glass thicknesses with a polished or beveled edge	60.00
Patterns on laminated glass	80.00

Even if quoted without - if a physical pattern is sent to WSD; the pattern charge will be added.

PATTERN PICKUP - Please indicate pattern material, approximate size, etc. so that we can plan delivery needs to accommodate the pattern pickup/return.

ADDITIONAL CHARGES - Fabricaiton and edgework charges will apply in addition to the listed pattern charge above.

BLOCK SIZE CALCULATIONS - Additional material is required during the fabrication process to create a quality pattern. Use the following table to find your glass thickness and add the listed measurement to each dimension to determine the correct block size needed for your pattern.

N

CUTOUTS – Customers are responsible for cutting out patterns. A full size pattern is require for shapes other than squares, rectangles & diameters. If WSD cuts out pattern, we are not responsible for final fit. Tolerances (see pg 7) still apply to all patterns.

DIAMETERS - Diameters/Patio Tables of 38" or greater on 3/16" & 1/4" pattern glass will be charged the proportional square footage of a stock sheet of pattern glass at cut-to-size pricing.

MATERIAL - Reference the following chart for acceptable pattern materials. WSD will return all patterns submitted on unacceptable materials.

ACCEPTABLE	UNACCEPTABLE
Luan	Tissue Paper
Masonite	Wrapping Paper
White Butcher Paper	Broken Glass
Glass	Newspaper
Cardboard	
Brown Kraft Paper*	
Rosin Paper*	

PATTERN MATCHING - WSD will match the submitted pattern; not dimensions. Submitted patterns must specify viewing from smooth or textured surface.

*QUALITY – The quality of the pattern that you send to WSD directly impacts the quality of the finished goods. WSD reserves the right to refuse/return patterns for poor quality.

FGP - 11/2025

TEMPERING LIMITATIONS

EDGE TREATMENTS

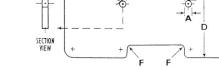
HOLES AND NOTCHES – This chart should be used to determine minimum sizes and placement of holes and notches in tempered glass:

GLASS THICKNESS (t)	1/8"	3/16"	1/4"	3/8"	1/2"	GENERAL RULE
Minimum Diameter of Holes (A)	1/4"	1/4"	1/4"	3/8"	1/2"	A≥t
Distance from Hole Rim to Edge of glass (B)	1/4"	3/8"	3/8"	9/16"	3/4"	B ≥ 1.5t
Distance between rims of holes (C)	3/8"	3/8"	1/2"	3/4"	1"	C ≥ 2t and 3/8"
Distance from Corner to Rim of Hole (E)	13/16"	1 7/32"	1 5/8"	2 7/16"	3 1/4"	E ≥ 6.5 x t
Minimum Fillet Radius (F)	3/8"	3/8"	3/8"	3/8"	3/8"	

- Countersink holes require technical review and approval before order acceptance.
- Large holes and notches greater than 1/3 the narrow dimension require technical review and approval.

HOLE AND NOTCH LOCATION TOLERANCES

- For dimensions of hole center from specified edge $\pm 1/16$ "
- For dimensions between hole centers ± 1/16"
- Chips and flakes will not exceed 1/16'
- Notch dimensions for glass 1/4" and under ± 1/16"
- Notch dimensions for 3/8" and 1/2" \pm 1/8"



TEMPERED SIZE RANGE – Three (3) square foot minimum, odd or fractional dimensions will be billed at the next higher even inch.

THICKNESS	MINIMUM SIZE	MAXIMUM SIZE	GLASS SIZE TOLERANCE
1/8"	— 5" x 11"	32" x 74"	
3/16"	— S X I I	72" x 120"	±1/16"
1/4"	— 3" x 11"	84" x 130"	
3/8" - 1/2"	— 3 X I I	84 X 130	±1/8"
Glass over 120" add 75% to appropriate square foot price			Hold to exact size - Add 20% to order

EDGE TREATMENT - Tempered glass has seamed edges unless ordered with polished edges. The seamed edge is not a suitable exposed finished edge. 1/2" tempered glass requires satin polished edge (charges apply).

TEMPERED CERTIFICATION LOGO - Tempered glass is permanently labeled unless ordered "NO LOGO".

DISTORTION – Heat treating adds distortion to glass products. All requirements for distortion, roller wave, consistent furnace orientation or distortion measurement must be disclosed at quotation and order.

STRAIN PATTERN - Tempered glass contains a strain pattern or "Quench Marks" that appear as areas of shadows in a pattern corresponding to the location of air nozzles in the tempering furnace quench section. This condition becomes more visible:

- Under certain lighting conditions, like polarized sunlight
- When the glass is viewed at glancing angles
- With tinted glass, especially when multiple lites are combined in laminated and insulating constructions

The strain pattern is not considered a defect in tempered glass products.

SPONTANEOUS BREAKAGE - Tempered glass is subject to rare spontaneous breakage, where the glass will break for no apparent reason.

INSTALLATION - Monolithic low light transmitting glass (i.e. Midnight Grey, Low-E, 3/8" and 1/2" Bronze and Grey) should be glazed with a consistent tin side/ air side orientation.

CRATING -WSD no longer offers crating as a delivery option.

FABRICATION - All fabrication that penetrates the glass surface (i.e. holes, notches, sand blasting, cutting) must take place prior to tempering.

GLASS QUALITY - All tempered glass shall conform to Consumer Product Safety Commission (CPSC) Standard 16 CFR 1201.

CERTIFICATE OF TEMPERING - Certificate of tempering are available upon request.

CHANGES or CANCELLATIONS - Materials are put into production upon order generation. Any modifications requested after acknowledgment of order will be billed for the cost of completed materials and a \$25.00 processing fee.

TEMP. LIMITATIONS

EDGE WORK PROFILES

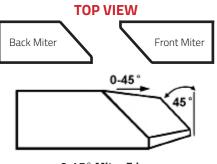
EDGEWORK INCLUDES HIGH POLISH EXCEPT AS NOTED*

EDGE TREATMENTS



Beveled Edge*Available on 1/8", 1/4", 3/8", 1/2", 3/4" glass thickness

*Satin Edge only on glass up to 1/4" High Polish on 3/8" & 1/2"

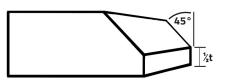


0-45° Miter Edge Available on 1/4", 3/8", 1/2", 3/4" glass thickness



Double Beveled Edge

Available on 1/4", 3/8", 1/2", 3/4" glass thickness



Chamfer Edge

Available on 3/8", 1/2", 3/4" glass thickness



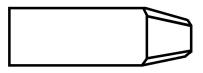
Dual Beveled Edge

Available on 3/8", 1/2", 3/4" glass thickness



Pencil Polish Edge

Available on 1/4", 3/8", 1/2", 3/4" glass thickness



Flat Polish Edge

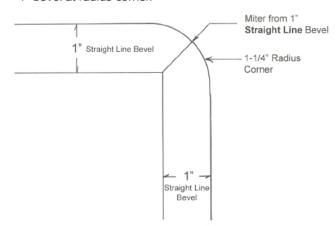
Available on 3/16", 1/4", 3/8", 1/2", 3/4" glass thickness

BEVELED STRAIGHT LINE ILLUS.

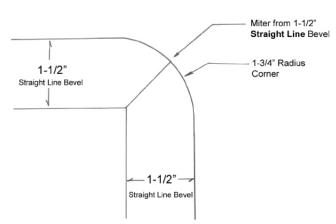
1" straight line bevel with 1-1/4" radius corner to retain

EDGE TREATMENTS

1" bevel at radius corner.

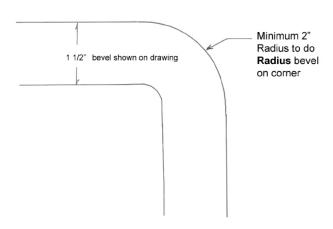


1-1/2" straight line bevel with 1-3/4" radius corner to retain 1-1/2" bevel at radius corner.



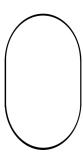
BEVELED RADIUS CORNER ILLUS.

1" or 1-1/2" beveled radius corner - minimum 2" radius on outside corner.



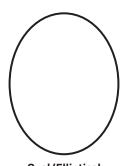
TEMP. LIMITATIONS

SHAPES

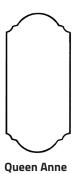


EDGE TREATMENTS

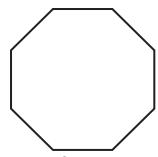
Race Track



Oval/Elliptical Requires a pattern



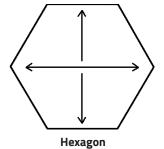
Requires a pattern



Octagon Measure flat to flat or requires a pattern



Requires a pattern



Measure point to point and flat to flat or requires a pattern

FORMULAS FOR CALCULATING INCHES ON SHAPES

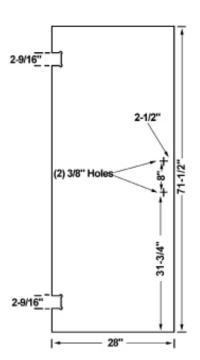
Radius Top	Width x 1.6
Ovals (Ellipticals)	(Length + Width) x 1.7
Circle	Diameter x 3.14
Octagon (8 equal sides)	Width x 3.4
Hexagon (6 equal sides)	Width x 3

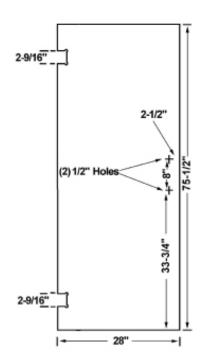
STOCK TEMPERED - DOOR BLANKS

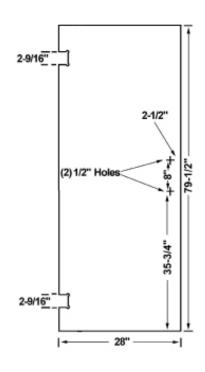
DOOR BLANK SIZE

	28" x 71 1/2"	28" x 75 1/2"	28" x 79 1/2"
3/8" Clear Glass Door Blank	145.00	151.00	158.00

Door Blank Features: 3/8" clear glass, polished on all edges, 8" CTC 1/2" holes for handles and 2 notches for hinges







STANDARD DOOR HEIGHTS FOR HEAVY GLASS STANDARD HINGE DOOR BLANKS

			OVERALL HEIGHT WITH
		OVERALL HEIGHT	A SC-915 CURB
28" x 7	71 1/2"		
	Stand alone	72"	72 7/16"
	SC-646 Header	73 7/8"	74 5/16"
	Horizon Header	73 1/2"	73 15/16"

28" x 7	75 1/2"		
	Stand alone	76"	76 7/16"
	SC-646 Header	77 7/8"	78 5/16"
	Horizon Header	77 1/2"	77 15/16"

28" x 79 1/2"				
	Stand alone	80"	80 7/16"	
	SC-646 Header	81 7/8"	82 5/16"	
	Horizon Header	81 1/2"	81 15/16"	

STANDARD DOOR HEIGHTS FOR HEAVY GLASS PIVOT HINGE DOOR BLANKS

		OVERALL HEIGHT	OVERALL HEIGHT WITH A SC-915 CURB
28" x 7	71 1/2"		
	Stand alone	72"	72 7/16"
	SC-646 Header	74"	74 7/16"
	Horizon Header	73 1/2"	73 15/16"

28" x 7	75 1/2"		
	Stand alone	76″	76 7/16"
	SC-646 Header	78"	78 7/16"
	Horizon Header	77 1/2"	77 15/16"

28" x 7	79 1/2"		
	Stand alone	80"	80 7/16"
	SC-646 Header	82"	82 7/16"
	Horizon Header	81 1/2"	81 15/16"

WALL TO GLASS HINGES

DOOR BLANK SIZE

HINGE	FINISH	28" x 71 1/2"	28" x 75 1/2"	28" x 79 1/2"
	Chrome	246.00	252.00	259.00
Premier	Brushed Nickel	251.00	257.00	264.00
Package	Oil Rubbed Bronze (dark)	239.00	245.00	252.00
	Matte Black	263.00	269.00	276.00
	Chrome	263.00	269.00	276.00
Symphony Package	Brushed Nickel	247.00	253.00	260.00
	Oil Rubbed Bronze (medium)	281.00	287.00	294.00
	Matte Black	262.00	268.00	275.00

Each package will include a door blank (3/8" clear glass, polished on all edges, 8" CTC 1/2" holes for handles and 2 notches for hinges), 2 hinges and an 8" back to back C-Pull. Packages DO NOT include polycarbonate components. Available in 0° as priced.

For 5° Hinges - Add \$15.00 to value package price.



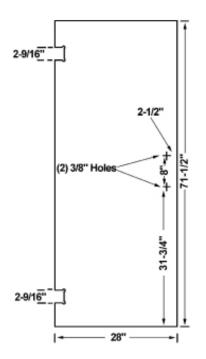
US Horizon Premier HingeWall to Glass hinge with full plate.

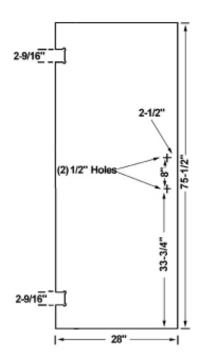


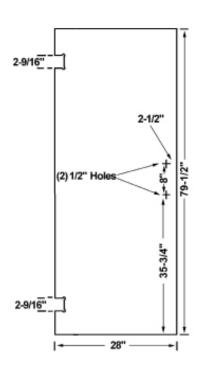
Portals Symphony HingeWall to Glass with full plate.



8" Back to Back C-Pull







180° GLASS TO GLASS HINGES

DOOR BLANK SIZE

HINGE	FINISH	28" x 71 1/2"	28" x 75 1/2"	28" x 79 1/2"
	Chrome	311.00	317.00	324.00
Premier	Brushed Nickel	318.00	324.00	331.00
Package	Oil Rubbed Bronze (dark)	324.00	330.00	337.00
	Matte Black	363.00	369.00	376.00
	Chrome	321.00	327.00	334.00
Symphony	Brushed Nickel	284.00	290.00	297.00
Package	Oil Rubbed Bronze (medium)	383.00	389.00	396.00
	Matte Black	331.00	337.00	344.00

Each package will include a door blank (3/8" clear glass, polished on all edges, 8" CTC 1/2" holes for handles and 2 notches for hinges), 2 hinges and an 8" back to back C-Pull. Packages DO NOT include polycarbonate components. Available in 0° as priced.

For 5° Hinges - Add \$15.00 to value package price.



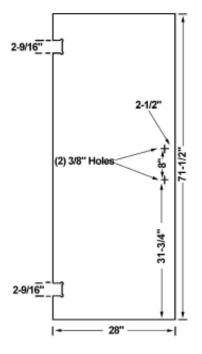
US Horizon Premier Hinge 180° Glass to Glass hinge.

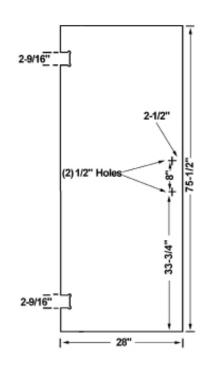


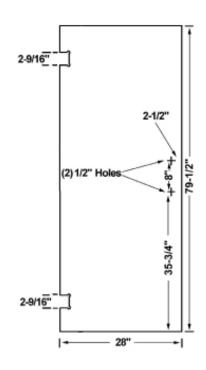
Portals Symphony Hinge 180° Glass to Glass hinge.



8" Back to Back C-Pull







PIVOT HINGES

NON-STOCK ITEMS STANDARD FABRICATION & DELIVERY TIMES APPLY

DOOR BLANK SIZE

HINGE	FINISH	28" x 71 1/2"	28" x 75 1/2"	28" x 79 1/2"
	Chrome	304.00	310.00	317.00
Montreal	Brushed Nickel	314.00	320.00	327.00
Package	Oil Rubbed Bronze (dark)	317.00	323.00	330.00
	Matte Black	324.00	330.00	337.00

Each package will include a door blank (3/8" clear glass, polished on all edges, 8" CTC 1/2" holes for handles and 2 notches for hinges), 2 pivot hinges and an 8" back to back C-Pull. Packages DO NOT include polycarbonate components. Available in 0° as priced.

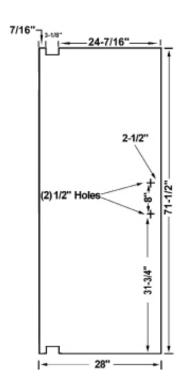
For 5° Hinges - Add \$15.00 to value package price.

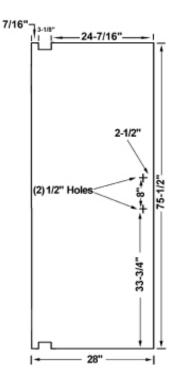


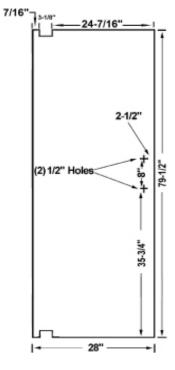


US Horizon Montreal HingeBeveled pivot hinge, ceiling or curb mount.

8" Back to Back C-Pull







STANDARD SIZE MIRRORS

NON-STOCK ITEMS STANDARD FABRICATION & DELIVERY TIMES APPLY

	-	OLICHED		4	/3// DEVE			// DEVE	
	Р	POLISHED		1/	2" BEVEL			" BEVEL	
STANDARD		VOLUME PRICING			VOLUME F	PRICING		VOLUME F	PRICING
SIZES	1-24	25-49	50+	1-24	25-49	50+	1-24	25-49	50+
24" x 30"	33.11	31.70	30.39	36.17	34.62	33.20	42.96	41.12	39.43
24" x 36"	39.08	37.41	35.87	42.48	40.66	38.99	50.02	47.88	45.91
30" x 36"	47.63	45.59	43.72	51.38	49.18	47.16	59.67	57.12	54.77
36" x 36"	56.18	53.78	51.57	60.27	57.69	55.32	69.32	66.35	63.63
42" x 36"	64.73	61.96	59.41	69.16	66.20	63.48	78.96	75.58	72.47
48" x 36"	73.29	70.15	67.27	78.05	74.71	71.64	88.61	84.82	81.33
54" x 36"	81.84	78.34	75.12	86.95	83.23	79.81	98.26	94.05	90.19
60" x 36"	90.39	86.52	82.97	95.84	91.74	87.97	107.90	103.28	99.04
66" x 36"	98.94	94.70	90.81	104.73	100.25	96.13	117.55	112.52	107.89
72" x 36"	107.49	102.89	98.66	113.62	108.76	104.29	127.20	121.75	116.75
24" x 40"	43.06	41.22	39.53	46.69	44.69	42.86	54.73	52.39	50.24
30" x 40"	52.47	50.23	48.16	56.44	54.03	51.81	65.24	62.45	59.88
36" x 40"	61.88	59.23	56.80	66.20	63.37	60.76	75.75	72.51	69.53
42" x 40"	71.30	68.25	65.44	75.95	72.70	69.71	86.25	82.56	79.17
48" x 40"	80.71	77.26	74.08	85.70	82.03	78.66	96.76	92.62	88.81
54" x 40"	90.12	86.26	82.72	95.45	91.36	87.61	107.27	102.68	98.46
60" x 40"	99.53	95.27	91.35	105.21	100.71	96.57	117.78	112.74	108.10
66" x 40"	108.94	104.28	99.99	114.96	110.04	105.52	128.28	122.79	117.74
72" x 40"	118.36	113.29	108.64	124.71	119.37	114.46	138.79	132.85	127.39
24" x 42"	45.05	43.12	41.35	48.80	46.71	44.79	57.09	54.65	52.40
30" x 42"	54.89	52.54	50.38	58.98	56.46	54.14	68.03	65.12	62.44
42" x 42"	74.58	71.39	68.46	79.34	75.94	72.82	89.90	86.05	82.52
48" x 42"	84.42	80.81	77.49	89.53	85.70	82.18	100.84	96.52	92.56
54" x 42"	94.26	90.23	86.52	99.71	95.44	91.52	111.77	106.98	102.59
60" x 42"	104.10	99.64	95.55	109.89	105.19	100.86	122.71	117.46	112.63
66" x 42"	113.95	109.07	104.59	120.07	114.93	110.21	133.65	127.93	122.67
72" x 42"	123.79	118.49	113.62	130.26	124.68	119.56	144.58	138.39	132.70

Standard Size Mirrors Tolerance - ±1/4"

Boxing charge for Standard Size Mirrors & Door Mirrors: Up to 42" - \$9.50 // For 48" up to 72" - \$13.25

SAFETY BACKING

Safety backing provides shatter resistance and keeps glass fragments together should mirrors be accidentally broken. Recommended for mirrored wardrobe doors, bi-fold doors, large mirror walls and furniture mirrors.

Each pull covers ~36" / Multiple labor charges apply if width is greater than 36"

\$20.00 per pull

Add Holes (approx. 5" diam.) in CAT II for Mastic Installation Double Labor Charge

Material Charge (per foot)

OA length rounded to nearest foot + 1' times the number of labor charges

\$2.55 per foot

DOOR MIRRORS

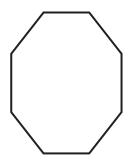
DOOR MIRRORS

NON-STOCK ITEMS STANDARD FABRICATION & DELIVERY TIMES APPLY

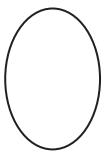
STANDARD SIZES		FLAT POLISH	1/2" BEVEL
16" x 68"	1/4" Clear Mirror	50.35	55.12
18" x 68"	1/4" Clear Mirror	55.49	60.37
20" x 68"	1/4" Clear Mirror	60.64	65.63
22" x 68"	1/4" Clear Mirror	65.78	70.89
24" x 68"	1/4" Clear Mirror	70.93	76.15

Boxing charge for Standard Size Mirrors & Door Mirrors: Up to 42" - \$9.50 // For 48" up to 72" - \$13.25

IMPORTED FRAMELESS SHAPES*







OVAL		1" BEVEL
21" x 31"	3/16" Clear Mirror	57.80
24" x 37"	3/16" Clear Mirror	69.27

Imported Frameless Shapes include backer with individual carton

*Imported Frameless Shapes are sold "as-is". These are not custom mirrors and are not held to normal industry specifications.

MIRROR WARRANTY

Wisconsin Shower Door warrants upon, and subject to the following terms and conditions, that if, under normal usage, as defined below, significant deterioration of the silver should occur during a period of five (5) years from the date of manufacture of the mirror it will within a reasonable time, as its option, either refund the purchase price of the mirror, or deliver a replacement mirror.

Conditions, Exclusions and Limitations

Mirror breakage from any cause is not covered by this warranty.

Subject to normal conditions and usage shall, for the purpose of this warrant, mean an installation in the interior of a building.

This warranty shall be void in each of the following circumstances

- (1) Shipping & Handling If the mirror is damaged by improper shipping, handling or storage.
- (2) Installation If the Mirror is not installed in accordance with normal industry practice. Never install mirrors on unpainted plaster, drywall or cement walls. The leaching of the lime in such will eat through the paint backing. Solvents in newly painted walls will also soften the paint backing. Adequate air-space between the Mirror and supporting wall or other surface must be left. In wet areas such as bathrooms and kitchens mirrors should be set up off the bases to prevent pooling of water at the bottom edge.

If the Mirror is installed in a shower door, or any other installation, without adequate provision being made to drain the water from the back and edges of the Mirror, or is installed in areas subjected to extreme temperature and/or humidity including, but not limited to, saunas, or the immediate surroundings of indoor swimming pools.

If the materials used to install the Mirror are not compatible with the backing paint and/or safety-backing on the Mirror, or if adhesive films/vinyl safety backing or other coatings are applied to the mirror, this includes the use of silicones and mastics. If silicone must be used ensure from the manufacture that it is compatible

(3) Cleaning - Never use cleaners with Acid, Alkali or Ammonia bases, most household or glass cleaners are ammonia based. These will attack the mirror edges and backing causing blackened edges. Do not allow the mirror edges to remain wet. Cleaners should be applied with a soft cloth and wiped onto the mirror. Spray cleaners may cause "puddling" at the mirror edges.

WARRANTY

I.G. UNIT FABRICATION

				I	PRICE PER SC	UARE FOOT
					V – E Advantage)	LOW-E (7036 ClimaGuard)
GLASS		ANNEALED	TEMPERED	ANNEALED	TEMPERED	ANNEALED
SS	Clear	7.29				11.44
DS	Clear	7.29	9.61	10.74	13.47	11.44
3/16"	Clear	8.40	11.09	12.73	15.15	14.26
1/4"	Clear	8.90	11.61			
DS	Bronze/Grey	10.35	12.98	13.26	15.91	14.13
3/16"	Bronze/Grey	11.47	14.27	15.17	17.92	17.29
1/4"	Bronze/Grey	11.94	15.10			
1/8"	Pattern #62	11.35	13.51			
3/16"	Aquatex	14.02	15.13			
1/4"	.030 Clear Laminated	26.36				
DS	Clear Patio 34" x 76"		115.66		176.06	
5/32"	Clear Patio 46" x 76"		165.65		243.08	

SPECIAL SHAPES AND COMBINATION	NS
Archtops	add 60%
Octagons	add 70%
Rectangle Grids (flat muntins avail in 5/8" & 3/4")	add \$3.75 per divided lite (available in green, bronze, champagne, beige, tan, white)
Contour Grids (see page 25)	add \$3.75 per divided lite (available in tan and white)
Trapezoids & Triangles	add 30%
Triple Glazed	add 65%
Argon for annealed and tempered units	add \$0.315 per sq. ft.; minimum order of \$3.15

INSULATED GLASS ORDER REQUESTS - SEND TO:

igorders@wisconsinshowerdoor.com

Wisconsin Shower Door I.G. Unit Fabrication 5803 Packer Drive Wausau, WI 54401

P: 888.329.5194

MUNTIN OPTIONS

I.G. UNIT SPECIFICATIONS

SPECIFICATIONS & ADDIT	TONAL CHARGES				
	I.G. L	JNITS USING (GLASS THICK	NESS	
		SS	DS	3/16"	1/4"
Pricing Specifications					
Insulated Glass Units per unit	Pricing based (on 3 sq ft mini	mum - All gla	ss thicknesse	S
Size Calculation	Odd or factiona	l dimensions v	will be billed a	t next even inc	ch
Changes or Cancellations	Materials are put into produ after acknowledgment of o	'	d for the cost o	,	
Dimensions & Tolerances					
Maximum Area by Thickness		16 sq ft	16 sq ft	35 sq ft	42 sq ft
Tolerances		±1/16"	±1/16"	±1/16"	±1/8"
Hold Exact Size		Add 20%	to order		
I.G. Oversize Charge					
Oversize Charge (per unit)	\$28.0	0 multiplied b	y Oversize Qu	iantity	
Oversize Quantity = sq ft of	Oversize Quantity Example (using ¼" glass)		Thickness F	igure (below)	
piece / thickness figure Note: Oversize Quantity must be 1 or greater for oversize charge to apply	$\frac{\text{sq ft of piece}}{\text{thickness figure}} = \frac{22.5 \text{ sq ft}}{15 \text{ sq ft}} = 1.5$			20 sq ft	15 sq ft

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• <u>igorders@wisconsinshowerdoor.com</u>

Wisconsin Shower Door I.G. Unit Fabrication 5803 Packer Drive Wausau, WI 54401

P: 888.329.5194

CONTOUR MUNTIN - IN-LINE CLIP

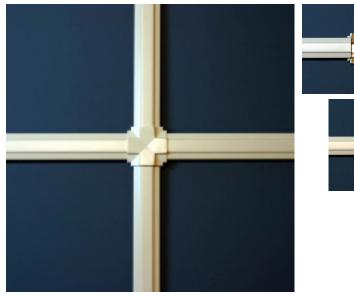


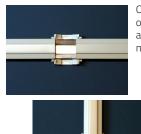


The muntins slide onto the in-line muntin clip.

CONTOUR MUNTIN - SNAP OVER CLIP







One muntin is cut. One side of a snap over clip is placed at the intersection of the muntins.



The next muntin is placed over the clip and precut muntin.



The second side of the snap over clip is put into place and snapped together

INSULATED GLASS DOOR UNITS FOR COMMERCIAL ENTRANCES

TUBELITE DOORLITES

30 9/16" x 76 1/16" x 1" OA

73.83

FOAMTITE STORM WINDOWS

GLASS UNITED INCHES SS 0-40 61.72 41-50 71.53 51-60 81.57	VS
0-40 61.72 41-50 71.53	
41-50 71.53	DS
51-60 81 57	
51 00 01.57	
61-70 91.85	
71-80 102.36	
81-90 113.11	
91-100 128	.81
101-110 140	.82
111-120 153	.13



Helps reduce condensation.

Effective against damaging moisture on wood areas with finishes applied.

Replaces applying plastic on windows annually.

Fits in area used by window screen (operating windows).

Can be used with stationary units and other types of windows.

One (1) lift handle (black only) applied for easy handling.

Available in four colors:

Bronze

Driftwood

White

Mocha

With black Foamtite weatherstripping.

Extruded aluminum frame.

PERFORMANCE CHART

I.G. UNIT LIMITED WARRANTY

For a period of ten (10) years from the date of purchase, Wisconsin Shower Door warranty is as follows: will not develop material obstruction of vision (on internal glass surfaces) as a result of dust or film formation caused by failure of hermetic seal. Glass is not warrantied against breakage.

Precondition of this warranty is that all insulating glass units be installed in accordance to FGMA glazing manual standards and practices. Furthermore, all units must be installed in such manner as to completely repel water for the entire period of the warranty by use of approved sealants only.

This warranty does not apply to insulating glass units used in vehicles, commercial refrigeration, marine, swimming pool enclosures, greenhouses, airports, sloped applications, and skylights. This warranty also does not apply to units manufactured with SuperSpacer. We assume no responsibility for any damage due to thermal breakage or improper use or handling.

This warranty is made to our immediate customer only and all liability shall be limited to replacement of failed unit or refund of the original purchase price. No employee, dealer or agent for Wisconsin Shower Door is authorized to add or modify this warranty.

This warranty is the only warranty made, and it is made expressly in lieu of all other warranties and under no circumstances whatsoever shall we be liable in any way for incidental or consequential damages of any kind with regard to our product.

I.G. UNIT PERFORMANCE CHART

I.G. UNIT GLASS TYPE	% OF VISIBLE LIGHT TRANSMITTANCE	SOLAR HEAT GAIN COEFFICIENT	FADING TRANSMISSION	WINTER U-VALUE AIR / ARGON
Clear/Clear	81	.76	.59	.49 / .47
Clear/Pilkington Energy Advantage (Low E)	77	.75	.49	.33 / .28
Clear/Guardian 7036 ClimaGuard (Low E)	71	.38	.33	.29 / .24

VISIBLE LIGHT TRANSMITTANCE – The percentage of visible light (390 to 700 nanometers) within the solar spectrum that is transmitted through the glass.

SOLAR HEAT GAIN COEFFICIENT – The amount of solar radiation that enters the building as heat. The lower the number, the better the glazing is at preventing solar gain.

FADING TRANSMISSION – The portion of energy transmitted in a special region from 300 to 600 nanometers. This region includes all of the ultraviolet energy and part of the visible spectrum, and will give the best representation of relative fading rates. The lower the number, the better the glass is for reducing fading potential of interior furnishings.

U-VALUE – This represents the heat flow rate through a window expressed in BTU/HR/TR2/°F, using winter weather conditions of 0°F outside and 70°F inside. The lower the number, the better the window system is at reducing heat loss.

Parts & Sundries Index

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ANDSCO	ANDSCOT METALS (Must be purchased in quantities of 2)							
PROFILE	PART	SIZE/ QTY	SILVER	MATTE BLACK	BRUSHED NICKEL	OIL RUBBED BRONZE		
100	ACI-15 – Deep "J" Molding	12'	25.49	28.44	25.68			
11/32	ACI-21 – Shallow "J" Molding	12'	25.46	28.44	25.68	30.04		
1 same F	ACI-26 – L-Bar	12'	21.59					
38 - 395	ACI-51 – Little Lip	12′	19.16					
11/16	ACI-29 – Face Strip	12′	14.67		15.33			
19/32	ACI-30 – End Cap Subject to availability	12'	11.85					

CLEAR MIRROR COVER PLATES							
IMAGE	PART	SIZE/ QTY	PRICE				
3-1/2"	GMP 2C – Single Outlet	each	16.16				
3-1/2"	GMP 3C – Single Switch	each	12.40				
5-1/4"	GMP 6C – Double Outlet	each	22.48				
5-1/4"	GMP 7C – Outlet / Switch	each	18.39				
5-1/4"	GMP 8C – Double Switch	each	14.46				
7-1/4"	GMP 9C – Triple Switch	each	19.28				
子·1/4" 子·1 i	GMP 10C – Outlet / Double Switch	each	21.15				
8-10° 1 1 1 1 5-10°	GMP 11C – Quad Switch	each	24.24				
3-1/2"	GMP 12C – Single G.F.I. / Decora	each	18.61				
5-1/4"	GMP 13C – Double G.F.I. / Decora	each	24.45				
5-1/4"	GMP 14C – Single G.F.I. / Switch	each	23.76				
7-1/4"	GMP 15C – Single G.F.I. / Double Switch	each	31.61				
7-1/4"	GMP 16C – Triple G.F.I. / Decora	each	33.45				
8-1/2"	GMP 17C – Quad G.F.I. / Decora	each	53.67				
[j3]	GMP 18C – Single G.F.I. / Outlet	each	24.45				

CLEAR MIRROR COVER PLATES					
IMAGE	PART	SIZE/ QTY	PRICE		
3-1/2"	GMP 104C – Dimmer Switch	each	19.28		
	GMP 305C — Double G.F.I. / Switch	each	34.81		

STYLMARK

MIRROR COVER PLATES

STYLMARK

SILICON	SILICONE PRODUCTS					
IMAGE	PART	SIZE/ QTY	PRICE EA			
À	SIKASIL-N PLUS US – Neutral Cure Silicone	tube	7.82			
	432053 – Clear	case (24)	167.68			
DOW CORNING®	Dow Corning 786 Silicone	tube	13.39			
786 mildew resistant silicone sealant	Translucent White	case (12)	143.52			

SUNDR	IES			SUNDR	IES		
IMAGE	PART	SIZE/ QTY	PRICE	IMAGE	PART	SIZE/ QTY	PRICE
BEGINN AND AND AND AND AND AND AND AND AND A	Gunther Ultra/Bond Mirror Mastic	each	8.00	0	Butyl Glazing Tape 1/16" x 1/2"	roll	3.12
1	300ml tube	cacii	0.00	9	x 45'	case (28)	83.57
0	Mirror Tape – 1/32" x 1/2" x 216'	roll	13.01	0	Butyl Glazing Tape 1/8" x 1/2" x 30'	roll	5.87
	Willful Tape - 1732 X 172 X 210	1011	15.01	<u> </u>	Butyl diazilig lape 1/6 x 1/2 x 30	case (24)	125.92
Ô	Mirror Tape – 1/16" x 1/2" x 108'	roll	7.61	66	Hang-It™	each	10.28
Ô	Mirror Tape – 1/8" x 1/2" x 75'	roll	10.60	PUREX	Purex Glass Cleaner 5 gallon box	each	100.30
EST	Bruce's Glass Stain Remover	each	7.33				
AND A STATE OF THE	10 oz. container	case (6) 39.30					

10.81

115.84

each

case (12)

Invisible Shield 16 oz. bottle

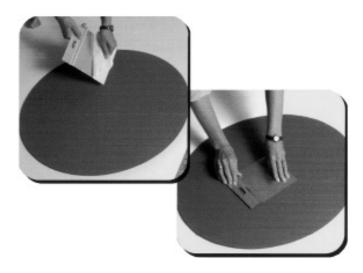
MIRROR COVER PLATES

SUNDRIES

	13
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	77
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STYLMA	ARK		
JIILINIA		SIZE/	
PROFILE	PART	QTY	PRICE
9/16"	Single Channel – 9/16" - 110022 Silver Brushed Nickel	12'	25.38
13/16*	Single Channel – 13/16" - 110023 Silver Brushed Nickel	12'	28.31
- 1 3/16" - J	Double Channel – 9/16" - 110007 Satin Silver Satin Bronze Satin Gold	12'	40.82
1 3/16*	Double Track - 110019 Satin Silver Satin Bronze Satin Gold	12'	26.79
1"	Shoe - 110012 Satin Silver Satin Bronze Satin Gold	12'	39.43
1 3/16"	Deep Shoe - 110067 Satin Silver Satin Bronze Satin Gold	12'	37.03
0	Wheel Assembly - 510001	each	1.27
	Heavy Duty Wheel Assembly - 510041	each	1.51
	Top Guide - 419007	each	0.20
1 1	Glazing Vinyl – 1/4" - 119004	per foot	0.342
	Black	250' roll	76.27
	Door Pull Assembly – Standard - 510016 <i>Satin Silver</i> <i>Black</i>	each	8.55
	Lock Assembly – Chrome - 511040 Brite Silver	each	49.93
	Wardrobe Door - 630017 Standard & Custom Sizes	each	Quote
	Tri-Vue Mirror Frame - 620033 Standard & Custom Sizes	each	Quote

HANG-IT™



Hang-It™ has been designed to be used with all types of mirrors. It's high strength adhesive backing adheres to all mirror paint backings that meet industry standards. Hang-It™ saves time and labor when installing decorator mirrors. Simply peel off the protective paper on the back of the metal hanger, align the saw tooth slot of the metal hanger with centering lines you have established on the mirror, and press in place. Hang your new mirror on the wall making sure the saw tooth slot is positioned where you want the mirror to be hung.

INSTALLATION INSTRUCTIONS

- 1. Clean any contaminates from the back of the mirror, using a mixture of alcohol and water or denatured alcohol.
- 2. Locate the center of the mirror and draw a vertical line from the top to the bottom.
- 3. Measure down 3" to 6" from the top of the mirror and make a mark on the centering line. This marks the location fro the top of the hanger.
- 4. Locate the center of the hanger. Mark with a line. (The saw tooth slot is centered at the top of the hanger.)
- 5. Peel the adhesive protective paper from the back of the hanger. Align the centering marks on the mirror and hanger. Press in place, making sure the Hang-It™ bracket is making full contact with the back of the mirror.

PRECAUTIONS

- 1. Make sure mirror and Hang-It™ are applied at or above 60° room temperature when assembled.
- 2. After installing Hang-It™ on the mirror, wait at least 2 hours before hanging the mirror. The adhesive gains strength in time and fully cures in 7 days.
- 3. Hang-It™ will support decorator mirrors weighting up to 40 lbs.
- 4. Always use gloves when handling mirrors, to protect yourself and avoid damaging the mirror.





ROBAX® GLASS

ROBAX® glass-ceramic has a thermal endurance far exceeding that of normal tempered glass. Tempered glass is generally limited to applications that do not exceed 500° F. However, ROBAX® is designed to operate at temperatures ranging from minus 400° F to plus 1400° F. Because of its special composition and processing, this unique material can withstand a quench into ice water from red hot temperatures.

With ROBAX® glass-ceramic windows in your stove or fireplace, you can enjoy the fire view with the assurance that the window has been designed with a superior margin of safety for your home and your family.

- This material is actually a transparent glass-ceramic manufactured by Schott Glaswerkes.
- Unlike tempered glass, 1400° glass-ceramic is unstressed.
- Easily cut and sanded even drilled.
- Will not shatter (like tempered glass).
- Fire to ice without breaking.
- Good strength.

This is an excellent replacement in most applications for any of the following glasses: PYREX®, BOROFLOAT®, TEMPAX®, VYCOR®, PYROCERAM®, AND NEOCERAM®.

Typical applications include: wood stove, pellet stove and coal stove windows; wood and gas fireplace doors; oven door windows; high intensity light covers; furnace observation windows; barbecue grill windows; spark and flame guard panels.



In the photo above, a cutting torch was placed below the ROBAX® and heated until it was red-hot. Cold water was then poured onto the glass from above. There was NO Breakage.

ENDUROSHIELD









Save time and money with EnduroShield®, the revolutionary, non-stick treatment that is ideal for shower glass. EnduroShield glass treatment makes cleaning shower glass easy and repels soap scum, grime and dirt. EnduroShield reduces your cleaning time by up to 90%.

Untreated glass is porous and as a result absorbs mineral deposits and soap scum, making it more and more difficult to clean overtime. Shower glass is subject to mineral deposits from water, shampoo, soaps, body fats, and harsh scrubbing using toxic cleaners, causing the glass to discolor and develop irremovable staining. EnduroShield is an ultra-thin transparent glass coating that completely adheres to the surface and provides protection that will repel both water and oil based stains. Similar to a non-stick fry pan, cleaning is made easier using a mild detergent or white vinegar with a damp microfiber cloth. No longer is scrubbing with harsh toxic cleaners needed.

WARRANTY

Extensive testing has proven EnduroShield to last beyond 10 years, enabling a genuine 10-year limited warranty* on all new glass surfaces.

CARE & MAINTENANCE

For best results simply drying the glass with a squeegee or towel after each use will help keep the glass clean and reduce mineral spots forming. The glass needs to be cleaned every few weeks using a damp microfiber cloth and a mild detergent to break down soaps, oils, and conditioners on the glass.

The below products have been tested for compatibility with EnduroShield.

- Lysol 4 in 1 Bathroom Cleaner
- Fantastik Orange Action
- Green Works Natural Glass & Surface Cleaner (by Clorox)
- Mr. Clean Magic Eraser (when damp)

A thorough rinse with clean water should follow immediately after use of any cleaner.

CAUTION: Prohibited Products

Be careful not to use any rough, gritty, abrasive, highly acidic or alkaline cleaners as they may damage the protective coating. This includes products such as Comet (powder), Ajax, or cerium oxide which damage or polish back the actual substrate.

For warranty registration, additional information, and full care instructions visit www.enduroshield.com.

MIRROR

QUALITY & INSPECTION

FLAT GLASS

Managing Expectations for Glass Quality

Explaining industry standards to an owner after they've already seen the glass, and found it lacking, can be challenging. It's important to remember that glass isn't perfect, and this fact often causes frustration, especially when industry standards don't match client expectations. This is particularly true in the luxury custom home market, where expectations are high, and glass isn't perfect. In fact, the larger the glass piece, the more imperfections it may have.

Setting Expectations

Managing expectations is crucial in any relationship, including between suppliers, dealers, and clients. We hope this information helps set realistic expectations regarding glass defects and imperfections as we provide product to you an, you in turn, provide it to your customers.

Industry Standards

Visible imperfections in glass are governed by standards set by the ASTM (American Society for Testing & Materials). These mutually agreed upon standards cover a wide range of glass issues, making it complex to determine what constitutes a visible defect.

Identifying Defects

To determine if a defect is present, follow these simple steps for a quick answer:

- 1. Move away from the glass.
- 2. Stand 10 feet back.
- 3. Face the glass straight-on at a 90-degree angle.
- 4. View the glass in daylight, but not direct sunlight.
- 5. Inspect the glass.

If you can't see the defect from 10 feet away under these conditions, it isn't considered a defect.

That's the short answer. The official ASTM version of the answer is much longer and more complex depending on the applicable standard(s) and the defect(s) being identified.

ASTM Standards (www.astm.org)

The official ASTM standards provide detailed criteria for identifying defects, depending on the type of glass:

- Flat glass & glazing ASTM C 1036
- Heat-treated (tempered glass) ASTM C 1048
- Silvered Flat Glass Mirror ASTM C 1503
- Coated glass (used in I.G. Units) ASTM C 1376

Each standard specifies inspection criteria such as distance, lighting, viewing angle, and specimen size. A piece of glass may need to meet multiple ASTM standards depending on its fabrication process.

WSD Quality Standards

At Wisconsin Shower Door, we strive to provide high-quality fabricated goods, adhering to the Q2 tolerances outlined in ASTM C 1036. Our processes include:

- Minimizing glass handling
- Multiple inspection stations during fabrication
- Using glass separation and corner protection during shipping

We provide abridged versions of the ASTM standards for your reference.

Anyone can find imperfections if they look closely enough. Remember, glass is meant to be looked through, not at.

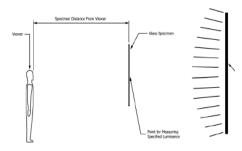
FLAT GLASS INSPECTION

FLAT GLASS CRITERIA

Criteria per ASTM C 1036 (abridged)

Inspection Criteria

- Visual inspection should be done with 20/20 vision (naked eye or corrected)
- The inspector shall place the glass in a vertical position
- View at the distance specified by defect type below
- Inspector shall be positioned perpendicular to the glass surface
- Lighting should be daylight level (without direct sunlight) or other uniform diffused background light that simulates daylight



Point Blemishes

Terminology

Point blemish – crush, knots, dirt, stones, gaseous inclusions, and other similar imperfections

- crush lightly pitted condition with a dull gray appearance
- dirt small particle of foreign matter embedded in the glass surface
- gaseous inclusion (aka seed or bubble) round or elongated bubble in the glass

Allowable Point Blemish (viewing distance 39") - From a distance of 39" the viewer shall inspect the glass. If a blemish is detected, proceed to measure the blemish and distance between blemishes. If not seen at 39", the blemish is allowed without restriction.

To determine point blemish size, measure height and width of blemish and average. Only the point blemish is to be measured, and not any distortion that may be present.

- Blemish size < 0.5mm (0.02") allowed without restriction
- Blemish size ≥ 0.5 mm (0.02") to <0.8mm (0.03") allowed with a minimum separation of 600 mm (24")
- Blemish size ≥ 0.8 mm (0.03") to <1.2mm (0.05") allowed with a minimum separation of 1200 mm (48")
- Blemish size ≥ 1.2 mm (0.05") to <1.5mm (0.06") allowed with a minimum separation of 1500 mm (60")
- Blemish size ≥ 1.5 mm (0.06") none allowed

The values above are for 6.0 mm (1/4") and less. Glass thicker than 6.0 mm (1/4") may contain proportionally larger blemishes for the same minimum separation distances.

Linear Blemishes

Terminology

Linear blemish – digs, rubs scratches, and other similar imperfections

- dig deep, short scratch
- rub abrasion of a glass surface producing a frosted appearance
- scratch damage on a glass surface in the form of a line caused by the movement of an object across and in contact with the glass surface

Blemish Intensity - To determine linear blemish intensity, start at 132" and move closer until blemish becomes visible (refer to table below).

Detection Distance	Blemish Intensity
Over 3.3 m (132")	Heavy
3.3 to 1.01 m (132" to 40")	Medium
1 to 0.2 m (39" to 8")	Light
Less than 0.2 m (8")	Faint

Allowable Linear Blemish

- Faint ≤ 75 mm (3") allowed with a minimum separation of 1200 mm (48")
- Faint > 75 mm (3") none allowed
- Light ≤ 75 mm (3") allowed with a minimum separation of 1200 mm (48")
- Light > 75 mm (3"), medium or heavy linear blemishes none allowed

All listed criteria are based on ASTM C 1036 - 16, Q2.

TEMPERED GLASS INSPECTION

Criteria per ASTM C 1048 (abridged)

Inspection Criteria

- Place sample glass in freestanding vertical position, resting on blocks
- Place a straightedge across the concave surface, parallel to and within 25.4 mm (1") of one edge, and spanning from one edge to the opposite edge
- Measure the maximum deviation with a fine scale ruler

FLAT GLASS

Refer to the table below to determine maximum allowable bow

TABLE 2 Overall Bow, Maximum

					E	Edge Dimen	sion, cm (in	.)			
	0–50 (0–20)	>50-90 (>20-35)	>90–120 (>35–47)	>120–150 (>47–59)	>150–180 (>59–71)	>180–210 (>71–83)	>210–240 (>83–94)			>300-330	>330–370 (>130–146)(
Nominal Thickness Designation mm (in.)	(6 26)	(120 00)	(200)	(* 1.7 00)	,	, ,	sow, mm (in.	,	(2.00)	(2.110-100)	(* 100 - 110)
3 (1/s) 3 (1/s) Alternate Method ^A	3.0 (0.12) 2.0 (0.08)	4.0 (0.16) 2.0 (0.08)	5.0 (0.20) 2.0 (0.08)	7.0 (0.28) 3.0 (0.12)	, ,	, ,	14.0 (0.55) 7.0 (0.28)	, ,	, ,		
4 (5/32)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	7.0 (0.28)	9.0 (0.35)	12.0 (0.47)	14.0 (0.55)	17.0 (0.67)	19.0 (0.75)		
5 (3/16)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	7.0 (0.28)	9.0 (0.35)	12.0 (0.47)	14.0 (0.55)	17.0 (0.67)	19.0 (0.75)		
6 (1/4)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	7.0 (0.28)	9.0 (0.35)	12.0 (0.47)	14.0 (0.55)	17.0 (0.67)	19.0 (0.75)	21.0 (0.83)
8 (5/16)	2.0 (0.08)	2.0(0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.31)	10.0 (0.39)	13.0 (0.51)	15.0 (0.59)	18.0 (0.71)
10 (3/8)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	7.0 (0.28)	9.0 (0.35)	12.0 (0.47)	14.0 (0.55)	17.0 (0.67)
12-22 (1/12 -7/8)	1.0 (0.04)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)	4.0 (0.16)	5.0 (0.20)	5.0 (0.20)	7.0 (0.28)	10.0 (0.39)	12.0 (0.47)	14.0 (0.55)

Terminology

DISTORTION - Heat treating adds distortion to glass products. All requirements for distortion, roller wave, consistent furnace orientation or distortion measurement must be disclosed at quotation and order.

STRAIN PATTERN – Tempered glass contains a strain pattern or "Quench Marks" that appear as areas of shadows in a pattern corresponding to the location of air nozzles in the tempering furnace quench section. This condition becomes more visible:

- Under certain lighting conditions, like polarized sunlight
- When the glass is viewed at glancing angles
- With tinted glass, especially when multiple lites are combined in laminated and insulating constructions

The strain pattern is not considered a defect in tempered glass products.

SURFACE PARTICLES - Minute particles (fines), typically invisible to the naked eye, may adhere to one or both glass surfaces. These surface particles may occur from a variety of sources including, but not limited to, the glass cutting and edging process, typical manufacturing plant airborne debris or dust, refractory particles from the furnace roof, and external airborne dirt and grit carried into the plant by the large volume of quench air used in the process. Surface particles invisible to the naked eye are inherent in the heat-treating process and are not a cause for rejection.

Additional Criteria

Linear and point blemishes in glass should be evaluated per WSD's Flat Glass Inspection Criteria per ASTM C 1036-16. Localized bow for rectangular glass shall not exceed 1.6 mm (1/16") over any 300 mm (12") span.

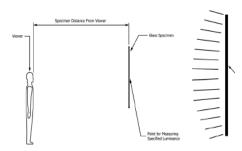
MIRROR INSPECTION

FLAT GLASS

Criteria per ASTM C 1503 (abridged)

Inspection Criteria

- Visual inspection should be done with 20/20 vision (naked eye or corrected)
- The inspector shall place the mirror in a vertical position
- Inspection of the reflective surface only at an angle of 90° ±10° perpendicular to the surface
- Lighting should be daylight level (without direct sunlight) or other uniform diffused background light that simulates daylight
- Additional lighting, such as flashlights or spotlights, is not permitted from either side.



Point Blemishes & Silver Film Blemishes

Terminology

Point blemish – crush, knots, dirt, stones, gaseous inclusions, and other similar imperfections

- crush lightly pitted condition with a dull gray appearance
- dirt small particle of foreign matter embedded in the glass surface
- gaseous inclusion (aka seed or bubble) round or elongated bubble in the glass
- silver film blemishes visible clouding, spot silver faults (pinholes), and other similar imperfections of the silver coating

Allowable Point Blemish (viewing distance 39") - From a distance of 39" the viewer shall inspect the mirror. If a blemish is detected, proceed to measure the blemish and distance between blemishes. If not seen at 39", the blemish is allowed without restriction.

To determine point blemish size, measure height and width of blemish and average. Only the point blemish is to be measured, and not any distortion that may be present.

- Blemish size < 0.3mm (0.012") allowed without restriction
- Blemish size ≥ 0.3 mm (0.012") to <0.8mm (0.032") allowed with a minimum separation of 600 mm (24")
- Blemish size ≥ 0.8 mm (0.032") none allowed

Linear Blemishes

Terminology

Linear blemish – digs, rubs scratches, and other similar blemishes

- dig deep, short scratch
- rub abrasion of a glass surface producing a frosted appearance
- scratch damage on a glass surface in the form of a line caused by the movement of an object across and in contact with the glass surface

Blemish Intensity - To determine linear blemish intensity, start at 72" and move closer until blemish becomes visible (refer to table below).

Detection Distance	Blemish Intensity
Over 1.5 m (60")	Heavy
1.5 to 0.6 m (60" to 24")	Medium
0.6 to 0.2 m (24" to 8")	Light
Less than 0.2 m (8")	Faint

Allowable Linear Blemish

- Faint ≤ 75 mm (3") allowed with a minimum separation of 600 mm (24")
- Faint > 75 mm (3") none allowed
- Light ≤ 75 mm (3") allowed with a minimum separation of 600 mm (24")
- Light > 75 mm (3"), medium or heavy linear blemishes none allowed

All listed criteria are based on ASTM C 1503-24

COATED GLASS INSPECTION

Criteria per ASTM C 1376 (abridged)

Inspection Criteria

- These specifications apply to cut size glass only.
- Visual inspection should be done with 20/20 vision (naked eye or corrected)

FLAT GLASS

- The inspector shall place the glass in a vertical position
- Inspector shall be positioned perpendicular to the glass surface at a distance of 10 ft.
- Lighting should be daylight level (without direct sunlight) or other uniform diffused background light that simulates daylight
- If a blemish is readily apparent under these viewing conditions, the criteria below applies

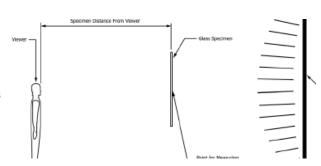


TABLE 1 Quality Specifications for Cut Size Coated Vision Glass (Kind CV)^A

	(**************************************			
Blemish ^{B,C}	Central Area, in. (mm) ^D	Outer Area, in. (mm) ^D		
Pinhole	½16 (1.6) max	3/32 (2.4) max		
Spot	Spot 1/16 (1.6) max 3/32 (2.4) max			
Coating scratch	2 (50) max length	3 (75) max length		
Mark/contaminant	2 (50) max length	3 (75) max length		
Coating rub	none allowed	length plus width not to exceed ¾ (19)		
Crazing	none allowed	none allowed		
Corrosion	none allowed	none allowed		

The central area is considered to form a square or rectangle defined by the center 80% of the length and 80% of the width dimensions centered on a lite of glass. The remaining area is considered the outer area.

Terminology

COATING RUB – a surface abrasion of appreciable width that has partial, or complete, removal of the coating producing a hazy appearance.

COATING SCRATCH - partial, or complete, removal of the coating along a thin straight or curved line.

COATED VISION GLASS – glass used in an .installation in which the lower edge of the glass is a maximum of 6 ft above floor level and the glass can be approached within 10 ft or less.

CORROSION – change in the color or level of reflected or transmitted light over all or part of the glass surface as a result of degradation of the coating from external sources..

CRAZING – a random conglomeration of fine lines or cracks in the coating.

MARK/CONTAMINANT – a deposit of foreign material on the glass surface.

PINHOLE – small area in which the coating is entirely or partially absent.

SPOT – a small, opaque blemish in the coating.

Additional Criteria

Linear and point blemishes in glass should be evaluated per WSD's Flat Glass Inspection Criteria per ASTM C 1036-16.

Tempering blemishes in glass should be evaluated per WSD's Heat-Treated Inspection Criteria per ASTM C 1048-18.



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