250T/350T/500T Insulpour® Thermal Entrances

Features

- 250T narrow stile has 2-1/2" (63.5) vertical stile, 2-15/16" (74.6) top and 3-7/8" (98.4) bottom rail
- 350T medium stile has 3-1/2" (88.9) vertical stile, 3-1/2" (88.9) top and 6-1/2" (165.1) bottom rail
- 500T wide stile has 5" (127) vertical stile, 5" (127) top and 6-1/2" (165.1) bottom rail
- Door is 2-1/4" (57.2) deep
- Door has 1/8" (3.2) wall thickness
- Dual moment welded corner construction
- IsoPour® thermal break
- Single acting
- Infills include 1" (25.4) and 1-1/2" (38.1)
- Offset pivots, butt hinges, continuous geared hinge
- MS locks or exit device hardware
- Surface mounted or concealed closers
- Architects Classic push/pulls
- Adjustable astragal utilizing pile weathering with polymeric fin at meeting stiles
- Polymeric bulb weatherstripping and secondary weathering in door frames
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices

Optional Features

- Wide variety of bottom rail and cross rail
- Two color finish capability

Product Applications

- 250T narrow stile - engineered for moderate traffic in applications such as offices and stores
- 350T medium stile - provides extra strength for schools, institutions and other high traffic applications
- 500T wide stile - creates a monumental visual statement for banks, libraries or buildings that experience heavy traffic conditions
- Engineered for high performance buildings

For specific product applications,
consult your Kawneer representative.

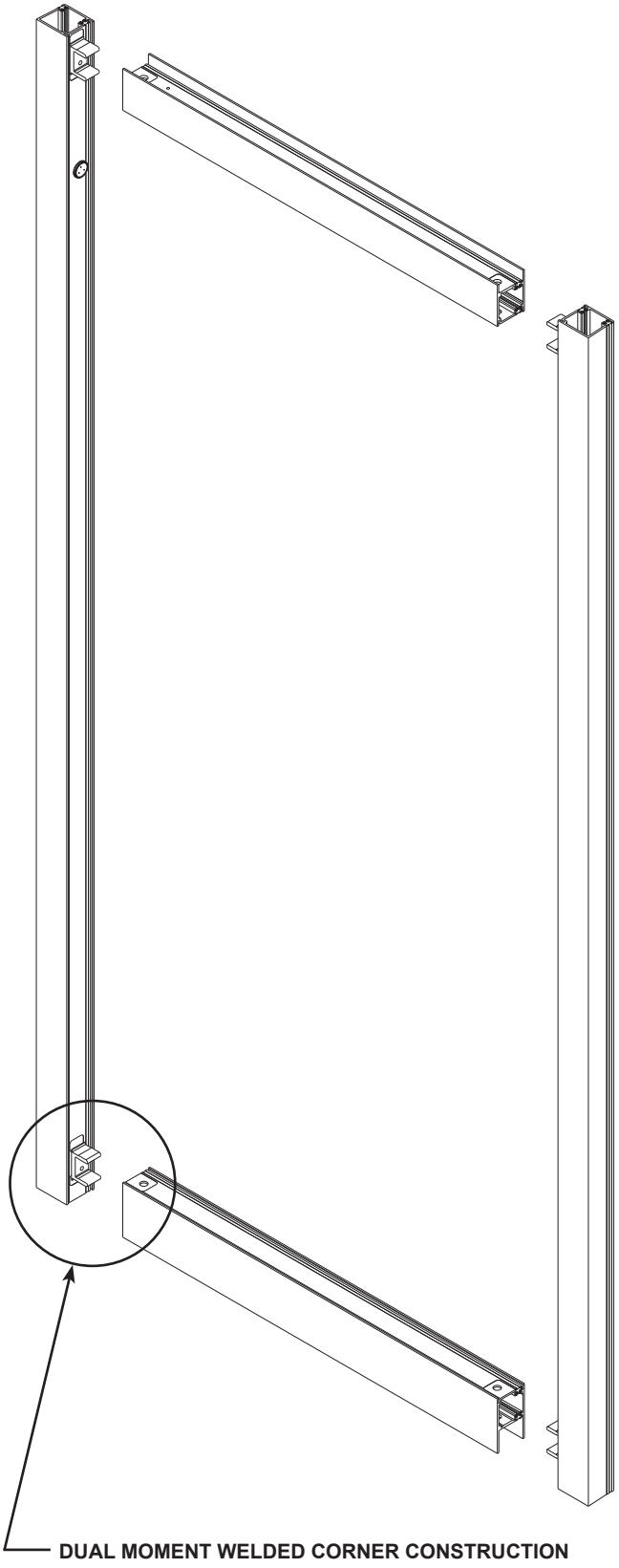
Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

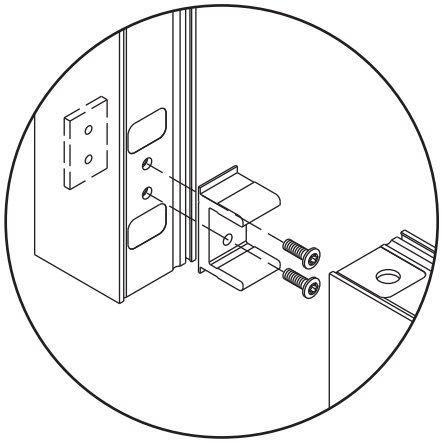
250T/350T/500T Insulpour® Thermal Entrances

PICTORIAL VIEW

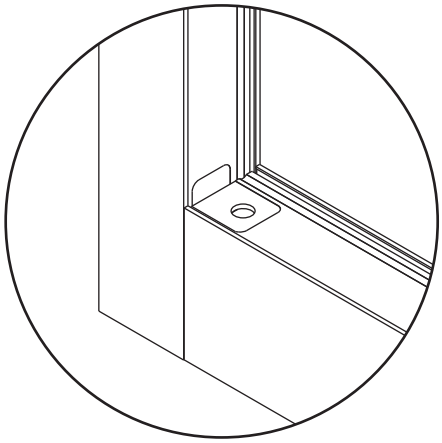


DUAL MOMENT WELDED CORNER CONSTRUCTION

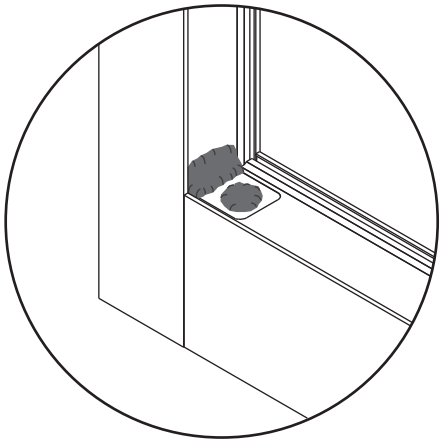
*** An arc welding process known as Shielded Inert Gas Metal Arc (SIGMA) or also known as Metal Inert Gas (MIG).**



#1 MECHANICAL FASTENING is accomplished by attaching a 5/16" (7.9) thick extruded aluminum channel clip to the vertical stile with 1/4"-20 heat strengthened bolts and 3/16" (4.8) thick steel nut plates for a high strength welding base for attachment horizontal member.



#2 SIGMA* DEEP PENETRATION PLUG WELDS are made top and bottom after the horizontal is properly positioned over the channel clip to help provide the strongest door corner joint currently available.



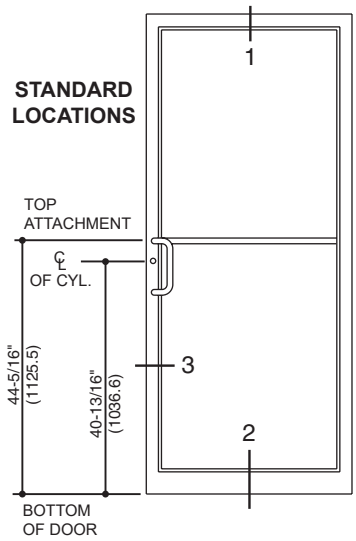
#3 SIGMA* FILLET WELDS along both top and bottom webs of the rail extrusion complete the welded corner construction.

250T/350T/500T Insulpour® Thermal Entrances

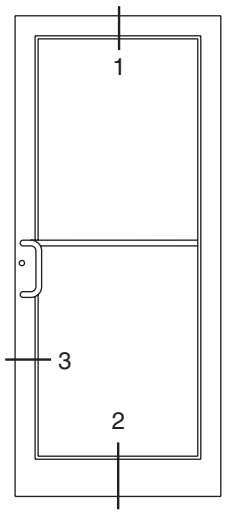
DOOR TYPES/SECTION DIMENSIONS

Additional information and CAD details are available at www.kawneer.com

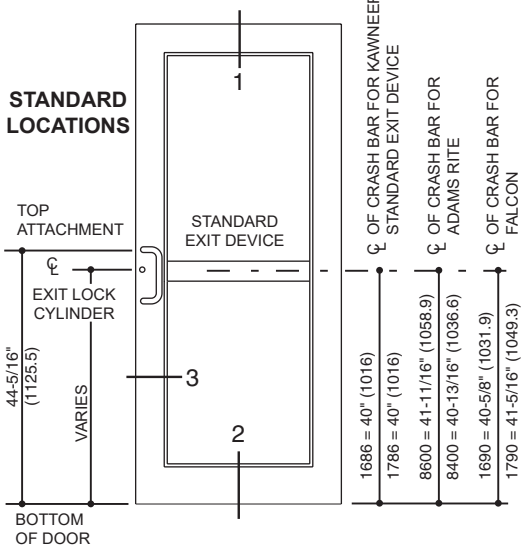
250T NARROW STILE

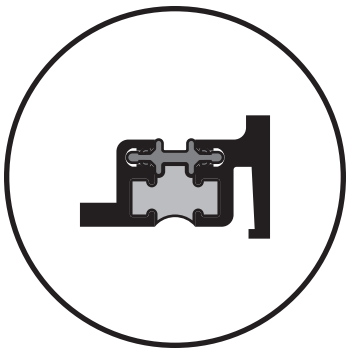


350T MEDIUM STILE

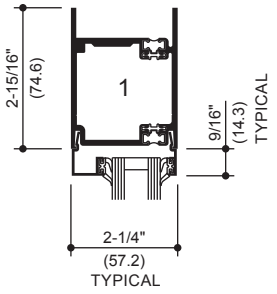


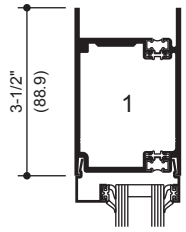
500T WIDE STILE

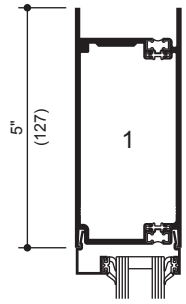


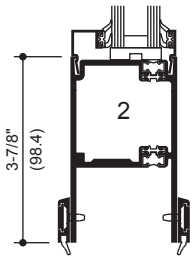


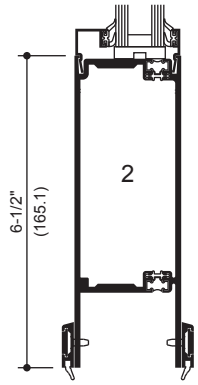
IsoPour® THERMAL BREAK

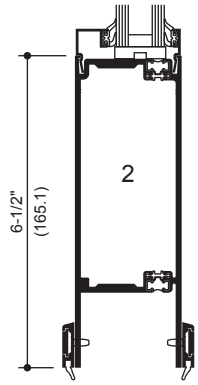


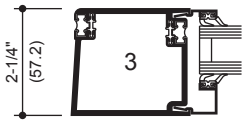


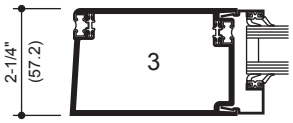












250T NARROW STILE SINGLE ACTING

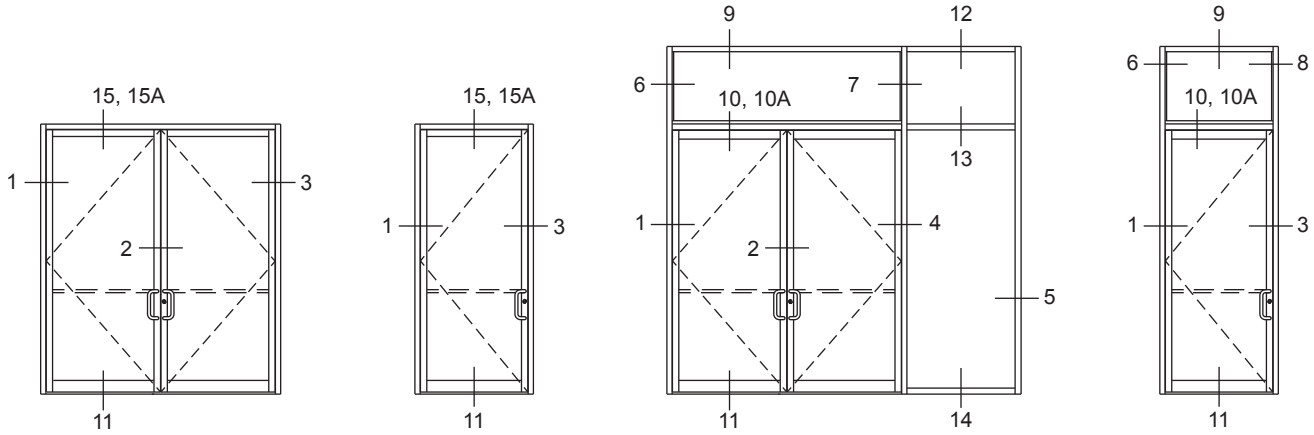
350T MEDIUM STILE SINGLE ACTING

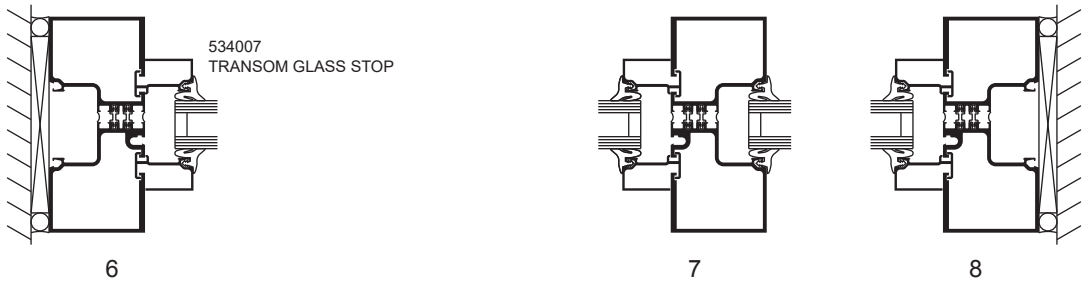
500T WIDE STILE SINGLE ACTING

Note: 1-1/2" (38.1) Triple Insulating Glass Unit infill available.

Additional information and CAD details are available at www.kawneer.com

NOTE:
1. SERIES 250T NARROW STILE DOORS ARE DETAILED, MEDIUM STILE 350T DOORS AND WIDE STILE 500T DOORS ALSO MAY BE USED.
2. TRIFAB® VERSAGLAZE® 451T CENTER, 2" x 4-1/2" (50.8 x 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED.





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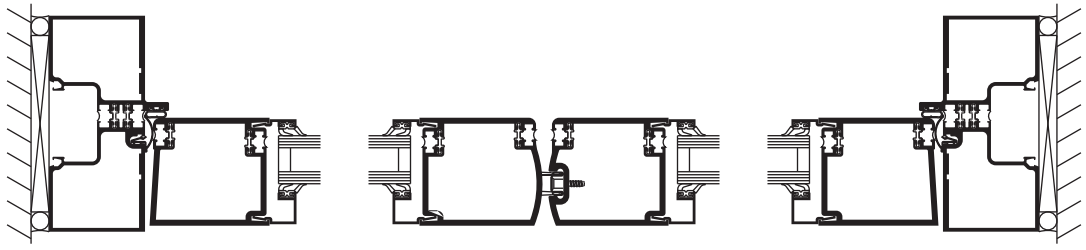
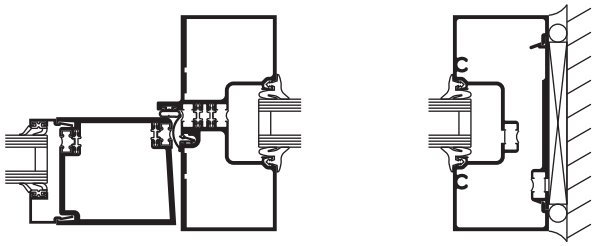


1 2 3

SINGLE ACTING DOORS



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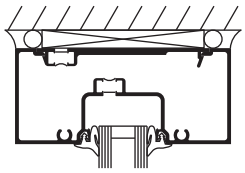
Additional information and CAD details are available at www.kawneer.com



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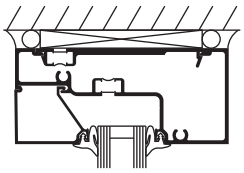
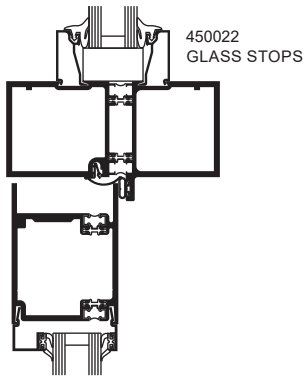


12

SINGLE ACTING DOORS



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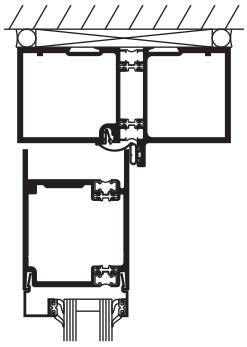

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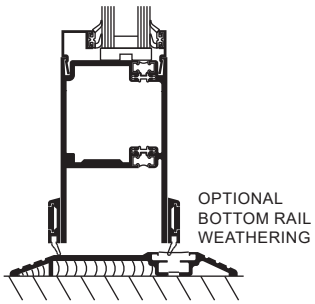
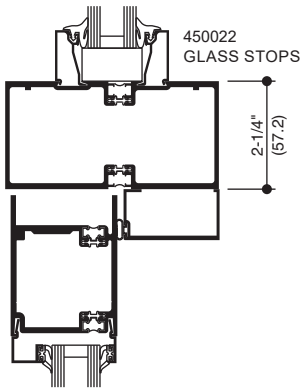


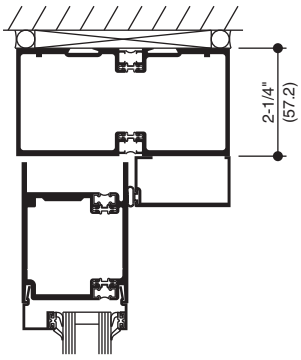
11

SURFACE OVERHEAD CLOSER

COC WITH SINGLE ACTING OFFSET ARM



10A



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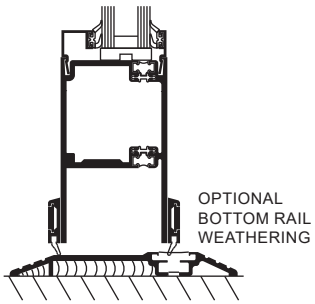
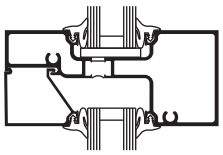


11

CONSEALED OVERHEAD CLOSER



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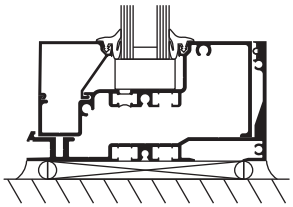

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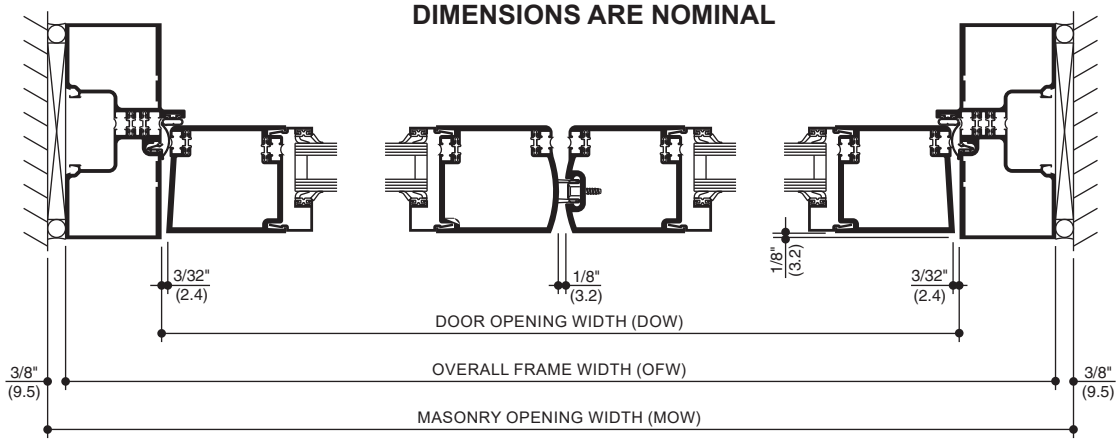
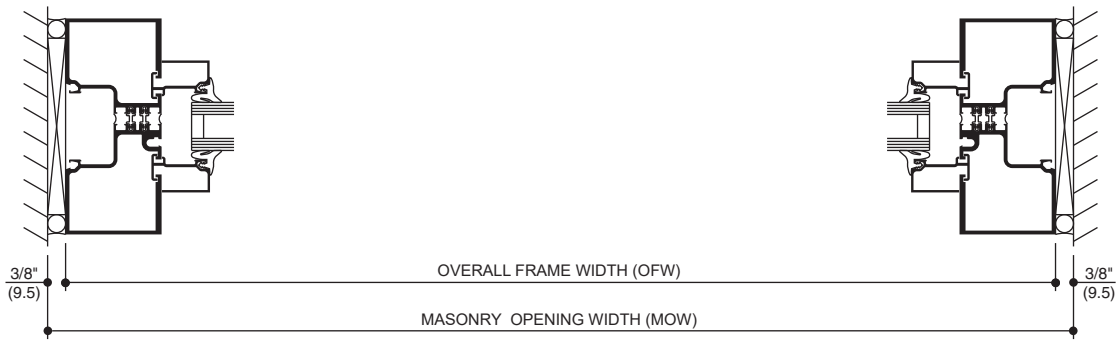
Additional information and CAD details are available at www.kawneer.com

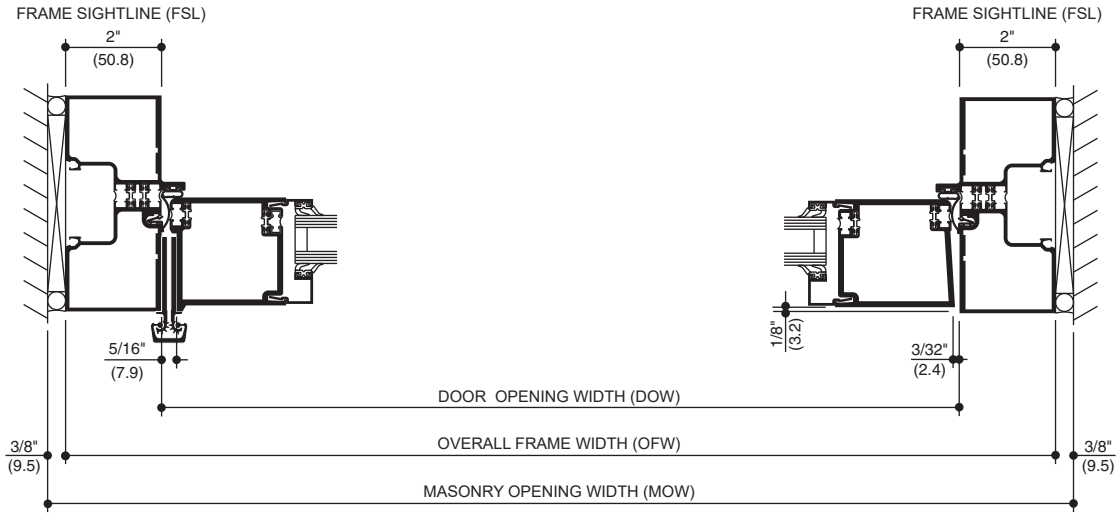
DIMENSIONS ARE NOMINAL



SINGLE ACTING DOORS



TRANSOM JAMBS



CONTINUOUS HINGE JAMB

STANDARD SIZES (TRIFAB® VG 451T CENTER FRAMES)

WITH AND WITHOUT TRANSOM

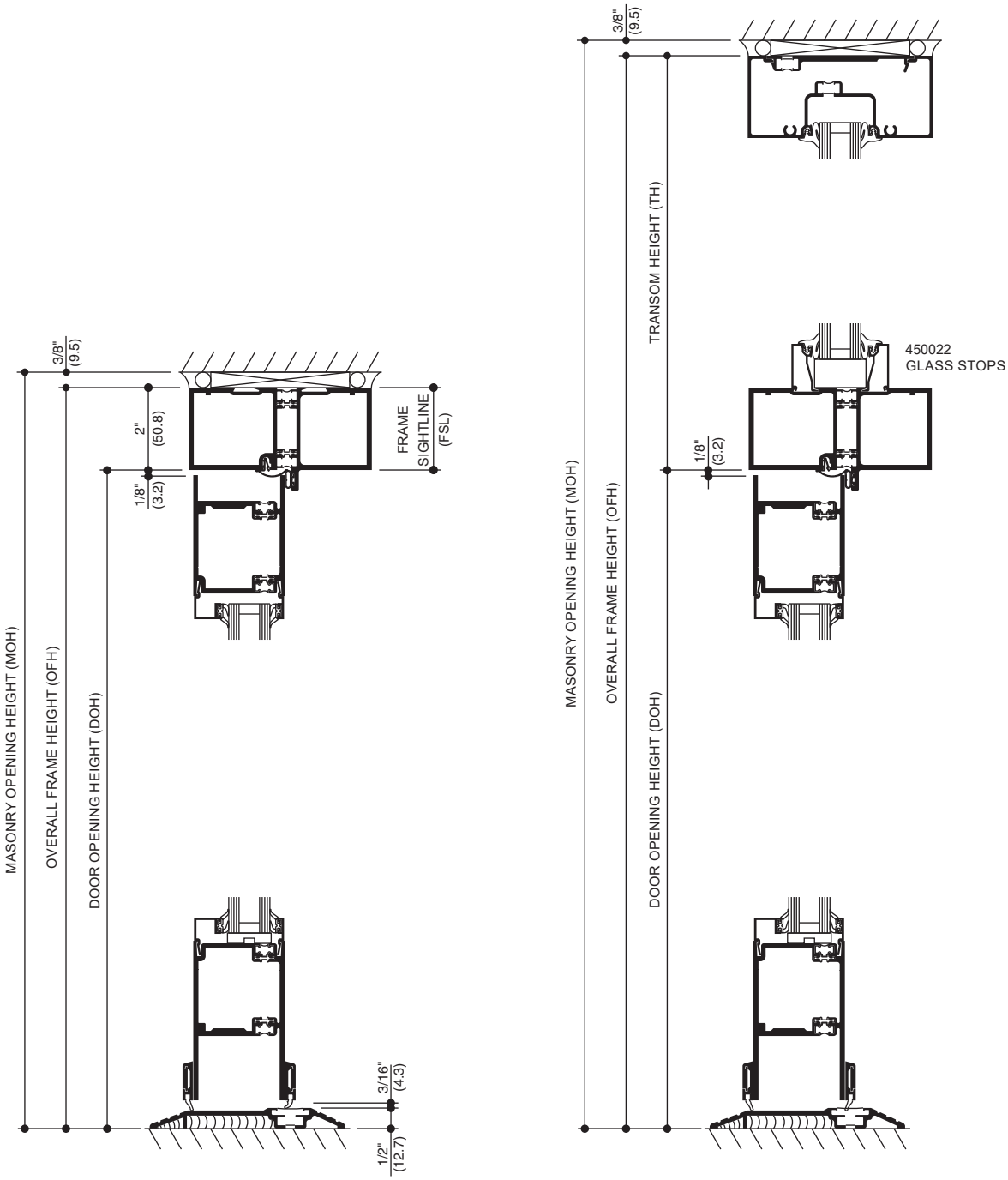
Door Opening Dimension (DOW)		**Overall Frame Dimension** (OFW)		**Masonry Opening Dimension** (MOW)	
3' 0"	(914)	3' 4"	(1,016)	3' 4-3/4"	(1,035)
3' 6"	(1,067)	3' 10"	(1,168)	3' 10-3/4"	(1,187)
6' 0"	(1,829)	6' 4"	(1,930)	6' 4-3/4"	(1,949)

WITH AND WITHOUT TRANSOM

OFW = DOW + 2 FSL

MOW = OFW + 3/4"

Additional information and CAD details are available at www.kawneer.com



STANDARD SIZES (TRIFAB® VG 451T CENTER FRAMES)

WITHOUT TRANSOM

Door Opening Dimension (DOH)		**Overall Frame Dimension** (OFH)		**Masonry Opening Dimension** (MOH)	
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)

WITHOUT TRANSOM

OFH = DOH + FSL
MOH = OFH + 3/8"

WITH TRANSOM

OFH = DOH +TH
MOH = OFH + 3/8"

	NARROW STILE	MEDIUM AND WIDE STILE
Doors	Narrow stile 250T doors prepared for attachment hardware.	Medium stile 350T or wide stile 500T.
Door Sizes Std.	Standard sizes shown on page 10.	Any size up to 4' 0" x 9' 0" (1,219 x 2,743).
Glass Stops	1" (25.4) and 1-1/2" (38.1) infills.	1" (25.4) and 1-1/2" (38.1) infills.
Door Frames	**Trifab® VG 451T** Center - 2" x 4-1/2" (50.8 x 114.3) for double glazing.	Any Kawneer framing system suitable for door frames may be selected, but manufactured per order.
Push-Pulls	**Single Acting:** Architects Classic Hardware CO-9 Pull and CP-II Push Bar. Architects Classic Hardware CO-9 Pull and CP Push Bar.	**Single Acting:** Architects Classic Hardware CO-12 and CP-II push bar. Architects Classic Hardware CO-12 and CP push bar. Architects Classic Hardware CO-9/CO-9 Pulls. Architects Classic Hardware CO-12/CO-12 Pulls.
Door Closers	**Single Acting:** Norton 1601 adjustable or 1601 BF adjustable surface closer with back-check and with or without adjustable hold-open. Standard concealed overhead closer with single acting offset arm.	**Single Acting:** LCN 4040 surface closer with or without adjustable hold-open. LCN 2030 or 5010 concealed overhead closers with or without hold-open. LCN 1260 adjustable surface closer. Norton 8100 surface closer with a 50% spring power adjustment (for opening forces of less than 8 pounds). Closer is available with standard back-checks and with or without the hold-open feature. International single acting concealed overhead closer. Falcon SC 60 Surface closer.
Hinging	**Single Acting:** Kawneer top and bottom offset pivots (or) Kawneer top and bottom 4-1/2" x 4" (114.3 x 101.6) ball bearing butt hinge with non-removable pin (NRP) (or) Kawneer continuous gear hinge.	
Intermediate Pivots/Butts	**Single Acting:** Kawneer intermediate offset pivot (or) Kawneer 4-1/2" x 4" (114.3 x 101.6) ball bearing butt hinge with non-removable pin (NRP).	**Single Acting:** Rixson M-19 or IVES #7215-INT intermediate offset pivot.
Power Transfers	**Single Acting:** Kawneer EL intermediate offset pivot (or) Kawneer EL 4-1/2" x 4" (114.3 x 101.6) ball bearing butt hinge with wire transfer (or) EPT (Electric Power Transfer).	
Power Supply		**NP1 Power Supply:** For use with Kawneer 1686 MEL and 1786 MEL exit devices only.
Locks - Active Leaf	Adams-Rite MS 1850A deadlock with two 1-5/32" (29.4) diameter 5 pin cylinders.	Adams-Rite #4510 latch lock. Adams-Rite #1850A-500 short throw deadlock. Adams-Rite #1850A-505 hookbolt lock. Adams-Rite #4015 two-point Lock. Adams-Rite #4085 three-point Lock. Adams-Rite #4089 exit indicator. Adams-Rite #2190 deadbolt latch lock. Adams-Rite #1890 deadbolt latch lock. Adams-Rite #1850 hurricane 3-point locking. Kawneer cylinder guard. Kawneer thumbturn (in lieu of cylinder).

	NARROW STILE	MEDIUM AND WIDE STILE
Locks - Inactive Leaf	One pair of Kawneer flush bolts in the inactive leaf of a pair of doors.	
Thresholds	A 1/2" x 4" (12.7 x 101.6) aluminum mill finish threshold.	
Weathering	**Single Acting:** Weathering system in the door and frame consisting of a dense, bulb polymeric material, which remains resilient and retains its weathering ability under temperature extremes. (The system is complete with an optional EPDM blade gasket sweep strip applied to interior and exterior of bottom door rail with concealed fasteners).	Bottom Door Sweep
Exit Device	**Kawneer 1686 Concealed Rod Exit Device** with or without a mortised type cylinder. **Kawneer 1786 Rim Exit Device** is a rim type exit device with or without a rim type cylinder. Pairs of doors require a Kawneer RM-86 removable mullion.	Kawneer 1686 MEL Concealed Rod Exit Device electric modification is available. Kawneer 1786 MEL Rim Exit Device electric modification is available. Kawneer 1686 CD Concealed Rod Exit Device available with cylinder dogging. Kawneer 1786 CD Rim Exit Device available with cylinder dogging. Kawneer 1686 Lever Handle is available for the Kawneer 1686 concealed rod exit device. Kawneer 1786 Lever Handle is available for the Kawneer 1786 rim type exit device. Falcon 1690 Concealed Rod Exit Device with or without a mortised type cylinder. Falcon 1790 Rim Exit Device is a rim type exit device with or without a rim type cylinder. Falcon EL 1690 electric modification is also available. Falcon EL 1790 electric modification is also available Falcon 1990 is a concealed rod exit device with or without a rim type cylinder. Falcon 2090 is a rim type exit device with or without a rim type cylinder. Pairs of doors require a removable aluminum mullion. RM-70 with the Falcon 2090 exit device. Falcon HH1690 Conc. Rod Exit Device (EL option) Von Duprin 9947 Concealed Rod Exit Device Von Duprin HH-KAW-9947 Concealed Rod Exit Device Von Duprin 3347A Concealed Vertical Rod Exit Device Von Duprin 99 XP Rim Device Corbin Russwin ED5200SA Rim Device Adams-Rite 8600 Concealed Rod Exit Device. Adams-Rite 8400 Rim Exit Device.
	Exit Device Pulls: Architects Classic CO-9 Pull with Kawneer 1686 and 1786 exit devices. Architects Classic.	**Optional Exit Device Pulls:** Architects Classic CO-12 Pull with Kawneer 1686 and 1786 exit devices.

APPLICATION CRITERIA

As indicated on Page 10, the standard sizes of swing doors are 3' 0" x 7' 0" (914.4 x 2,133.6) or 3' 6" x 7' 0" (1,067 x 2,134) for single doors and 6' 0" x 7' 0" (1,828.8 x 2,133.6) for pairs of doors. When these sizes are exceeded the following criteria should be administered.

1. Larger doors should not be subject to heavy traffic or strong prevailing wind conditions.
2. Larger doors should use a door closer with a good back check action.
3. When a door exceeds 9' 0" (2,743) in height, a cross rail is required to reinforce the vertical stiles.
4. When an offset hung door exceeds 7' 6" (2,286) in height, an intermediate butt or offset pivot should be used.
5. Tall doors should be prevented from racking by proper utilization of hardware, including door closers, door holders and door stops.

NOTE: CONTACT YOUR FACTORY REPRESENTATIVE FOR APPLICATION ASSISTANCE.

Hurricane Resistant Product

LOCKING OPTIONS	MAXIMUM DOOR SIZE	MAXIMUM DESIGN PRESSURE	HINGING OPTIONS	GLAZING STOP OPTIONS	GLASS THICKNESS
MS 1850 3-Point Lock (Active leaf) Flushbolts (Inactive leaf)	Single 4' 0" x 8' 0" (1,219.2 x 2,438.4) Pair 8' 0" x 8' 0" (2,438.4 x 2,438.4)	± 70 PSF	Offset Pivots Butt Hinges Continuous Hinge	**1, 2**	1" (25.4)
Kawneer 1686 Concealed Rod Exit Device	Single 4' 0" x 8' 0" (1,219.2 x 2,438.4) Pair 8' 0" x 8' 0" (2,438.4 x 2,438.4)	± 70 PSF	Offset Pivots Butt Hinges Continuous Hinge	**1, 2**	1" (25.4)
Falcon HH1690 Concealed Rod Exit Device (EL option)	Single 4' 0" x 8' 0" (1,219.2 x 2,438.4) Pair 8' 0" x 8' 0" (2,438.4 x 2,438.4)	± 70 PSF	Offset Pivots Butt Hinges Continuous Hinge	**1, 2**	1" (25.4)
Von Duprin HH-KAW-9947 Concealed Rod Exit Device	Single 4' 0" x 8' 0" (1,219.2 x 2,438.4) Pair 8' 0" x 8' 0" (2,438.4 x 2,438.4)	± 70 PSF	Offset Pivots Butt Hinges Continuous Hinge	**1, 2**	1" (25.4)

Glazing Stop Options:

1 - Structural silicone with 0.090 Kuraray or Eastman PVB inter layer or 0.090 Kuraray Sentry Glas® inter layer.

2 - 3M VHB structural tape with 0.090 Kuraray or Eastman PVB inter layer or 0.090 Kuraray Sentry Glas® inter layer.

LOCKING OPTIONS	MAXIMUM DOOR SIZE	MAXIMUM BLAST LOADING	HINGING OPTIONS	GLAZING STOP OPTIONS	GLASS THICKNESS
MS 1850 3-Point Lock (Active leaf) Flushbolts (Inactive leaf)	Single 4' 0" x 8' 0" (1,219.2 x 2,438.4) Pair 8' 0" x 8' 0" (2,438.4 x 2,438.4)	Peak Pressure: 6 PSI Impulse: 42 PSI/M-SEC	Butt Hinges Offset Pivots	1, 2	1" (25.4)

Test conditions shown. Other conditions may be supported through calculation.

Glazing Stop Options:

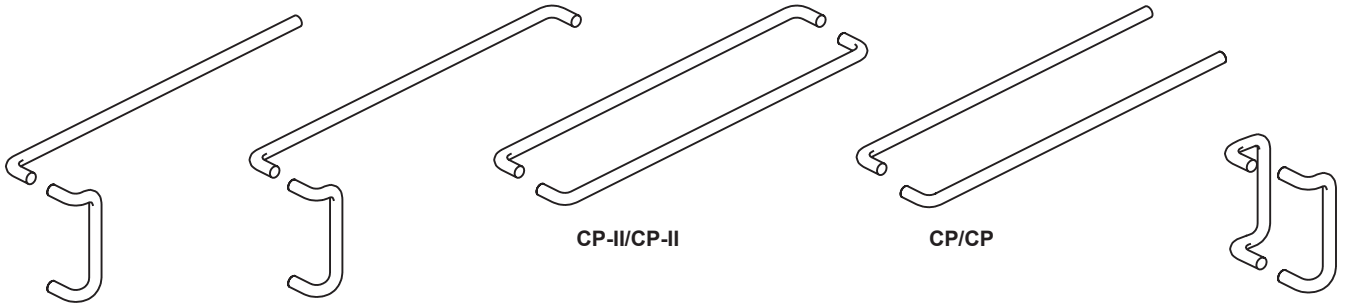
1 - Structural silicone with 0.060 Kuraray or Eastman PVB inter layer.

2 - Door size tested in stock tube. Larger door sizes supported through engineering analysis.

REFER TO **HARDWARE SECTION** FOR COMPLETE HARDWARE INFORMATION.

ARCHITECTS CLASSIC (PUSH PULL SETS)

SINGLE ACTING DOORS USE A PULL HANDLE AND PUSH BAR AS STANDARD



CO-9/CP
CO-12/CP

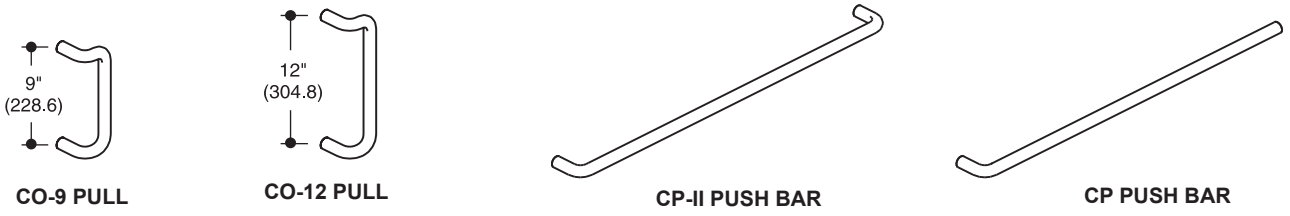
CO-9/CP-II
CO-12 /CP-II

CP-II/CP-II

CP/CP

CO-9/CO-9
CO-12/CO-12

ARCHITECTS CLASSIC (COMPONENTS)



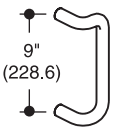
CO-9 PULL

CO-12 PULL

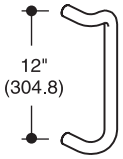
CP-II PUSH BAR

CP PUSH BAR

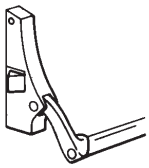
EXIT DEVICES AND PULLS



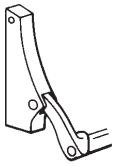
CO-9 PULL



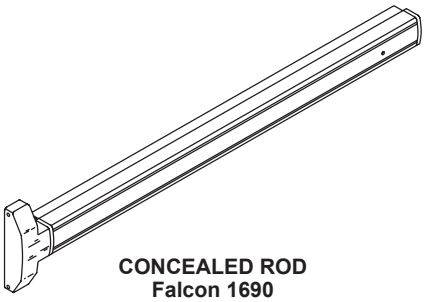
CO-12 PULL



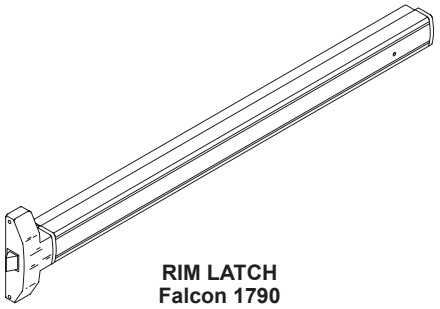
RIM LATCH
Falcon 2090



CONCEALED ROD
Falcon 1990

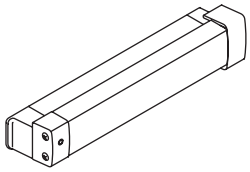


CONCEALED ROD
Falcon 1690
Falcon EL 1690
Falcon HH1690

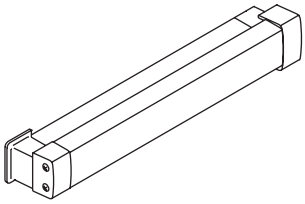


RIM LATCH
Falcon 1790
Falcon EL 1790

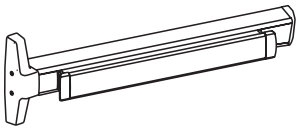
c UL US LISTED



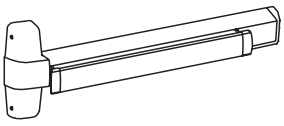
MORTISE EXIT DEVICE
Adams-Rite 8400



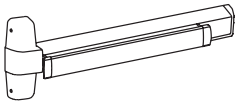
CONCEALED EXIT DEVICE
Adams-Rite 8600



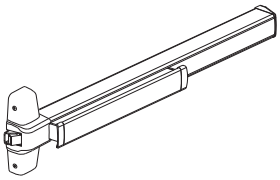
CONCEALED EXIT DEVICE
Von Duprin 3347A



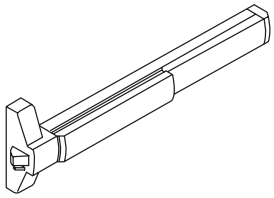
CONCEALED EXIT DEVICE
Von Duprin 9947



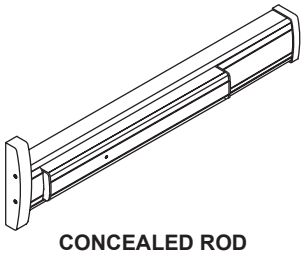
CONCEALED ROD
Von Duprin
HH-KAW-9947



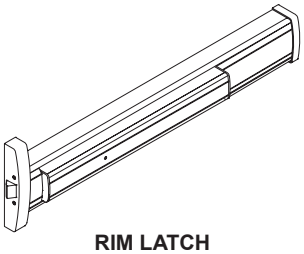
RIM EXIT DEVICE
Von Duprin 99 XP



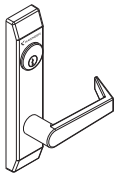
RIM EXIT DEVICE
Corbin Russwin
ED5200S



CONCEALED ROD
Kawneer 1686
Kawneer 1686 MEL
Kawneer 1686 CD



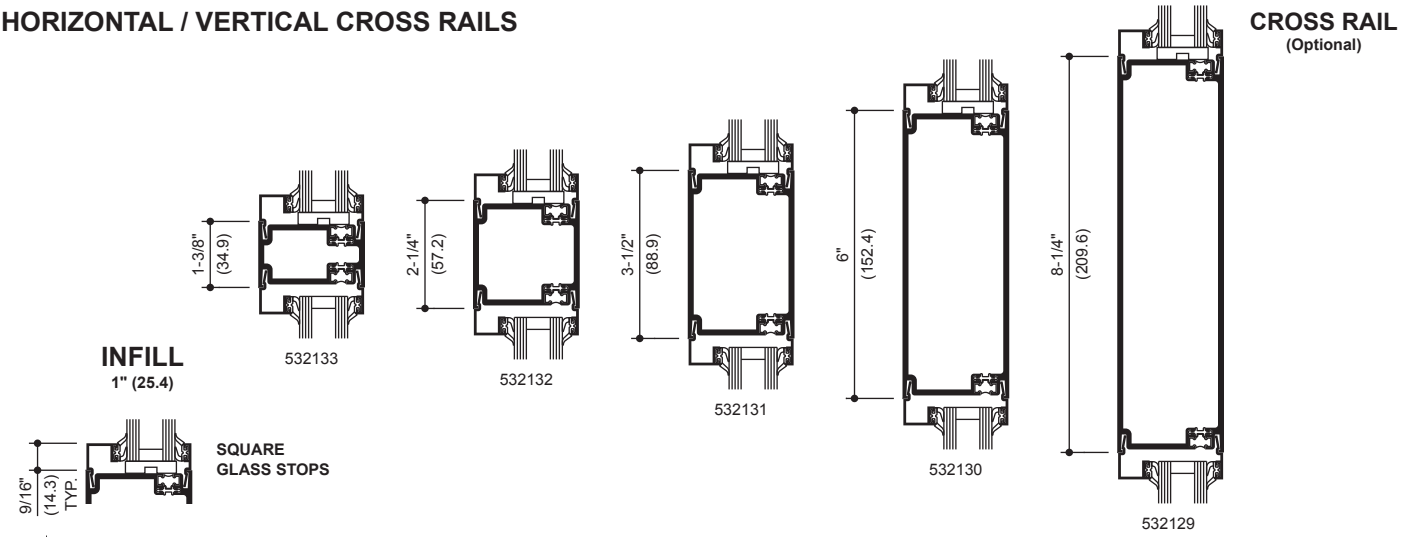
RIM LATCH
Kawneer 1786
Kawneer 1786 MEL
Kawneer 1786 CD



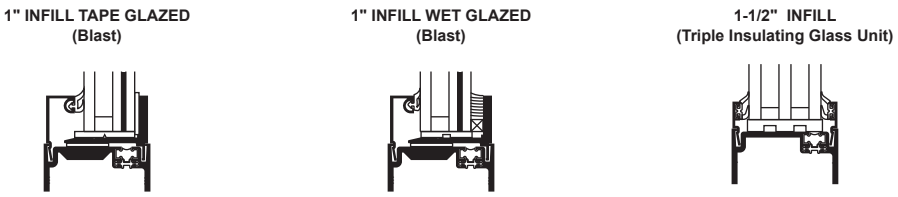
LEVER HANDLE
Kawneer 1686
Kawneer 1786

Additional information and CAD details are available at www.kawneer.com

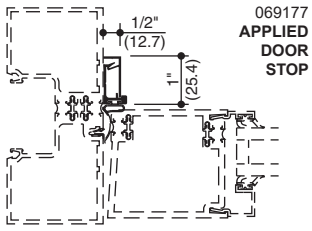
HORIZONTAL / VERTICAL CROSS RAILS

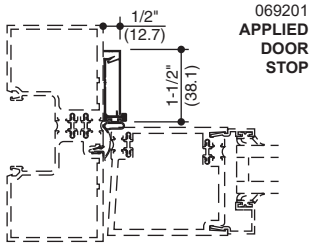


INFILL OPTIONS



ACCESSORY ITEMS

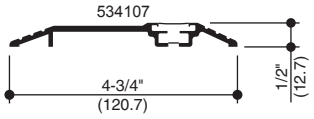




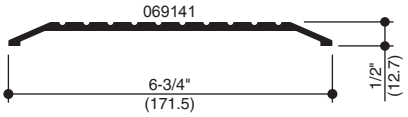
THRESHOLDS

APPLICATION

FOR SINGLE ACTING DOOR

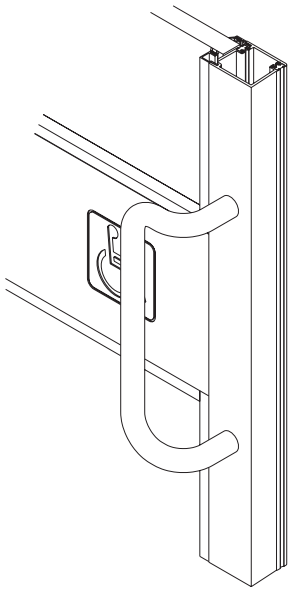


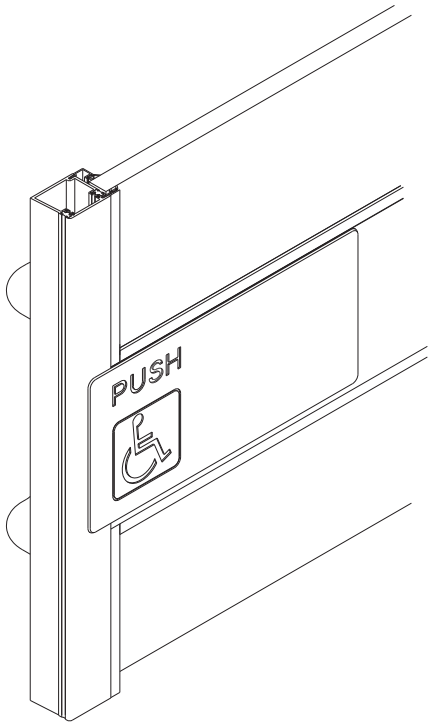
FOR FLOOR CLOSERS



SOME BUILDING CODES LIMIT THRESHOLD HEIGHT TO 1/2" (12.7) MAX.

PUSH-PULLS





Description	Architects Classic CO-12 Pull	BF3 Push Shield with symbol
Application	Door with or without exit device	Door cross rail (omit w/exit device)
Length/Size	12" OC Pull attachment	15-7/8" x 7-7/8" (403.2 x 200.0) 1/8" (3.2) Thick
Height Location	44-5/16" from Top Mounting Hole to Btm. of Door	
Total Projection	3-1/4" (82.6)	1/8" (3.2)
Material / Finish	See Hardware Section	Black Plastic Pebble Finish

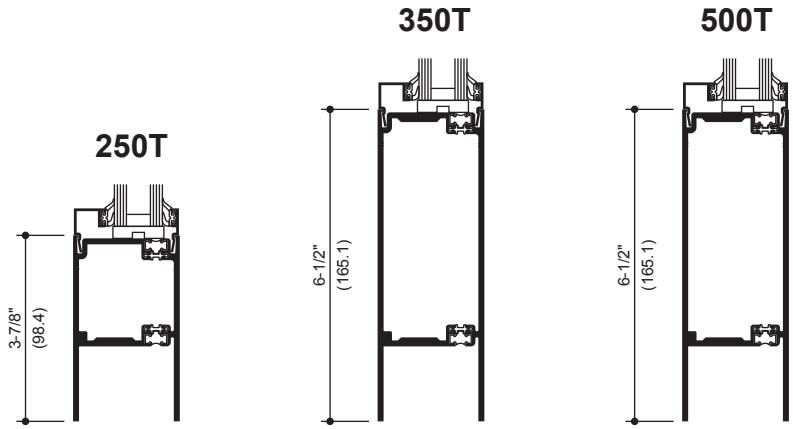
Note: The symbol of access is an adhesive backed decal applied to the surface of the optional cross rail. Letters and symbols on plastic push shield are engraved and filled with white epoxy enamel.

Additional information and CAD details are available at www.kawneer.com

STANDARD BOTTOM RAILS

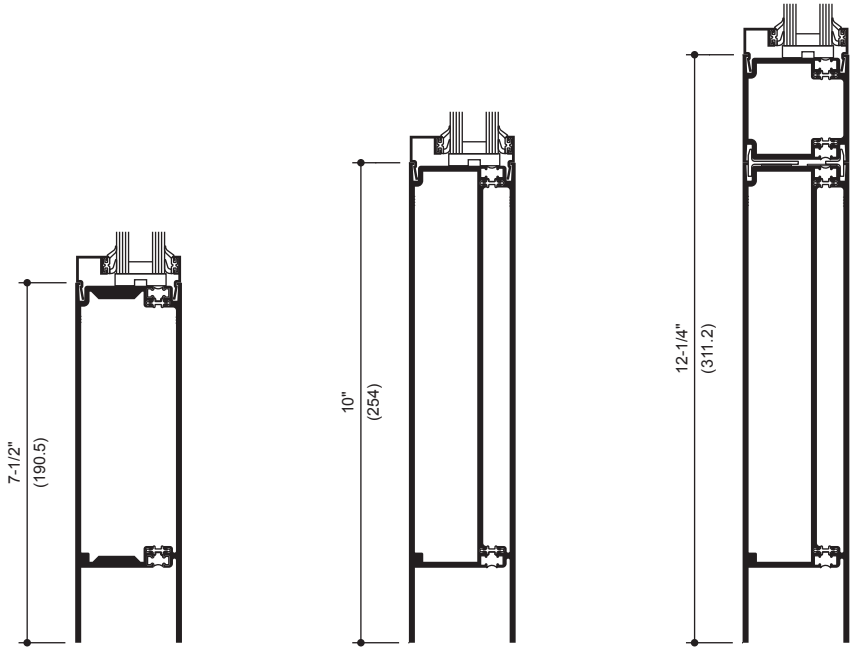
Rail heights shown may be used on 250T, 350T, and 500T doors.

NOTE:
See Page 18 for available Horizontal Intermediate Members.



OPTIONAL BOTTOM RAILS

Rail heights shown may be used on 250T, 350T, and 500T doors.
Custom heights available.



WIND LOAD CHARTS

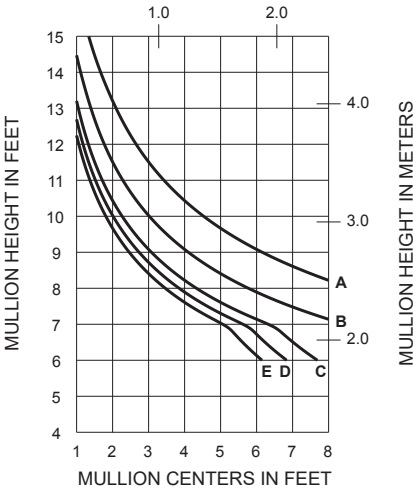
Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13' 6" and L/240 +1/4" above 13' 6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

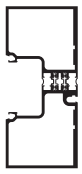
DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1/4" (6.35) thick glass supported on two setting blocks placed at the loading points shown.

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	45 PSF (2160)	75 PSF (3600)
E =	50 PSF (2400)	83 PSF (4000)

WITH HORIZONTALS

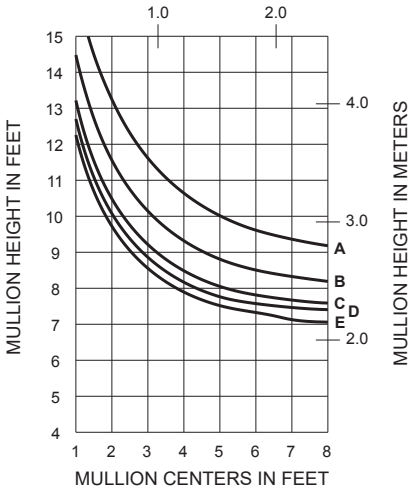




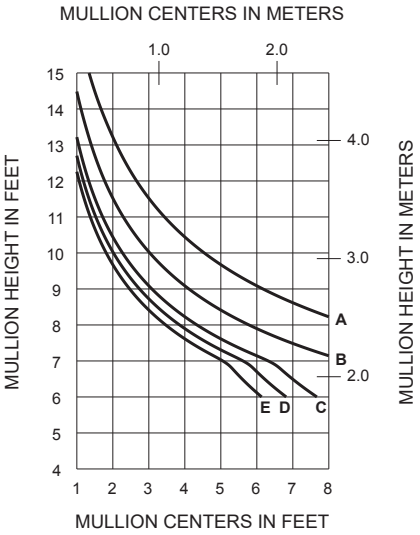
534109

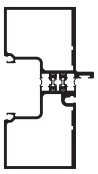
WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

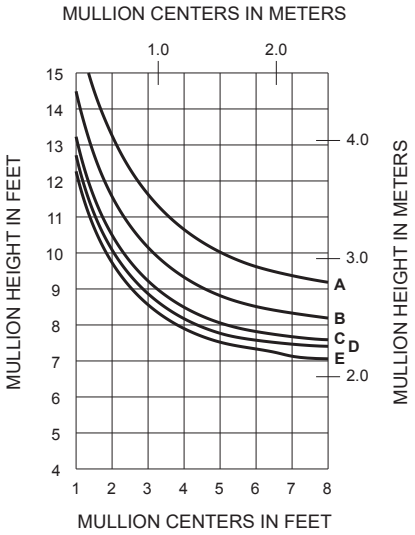




534103

WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

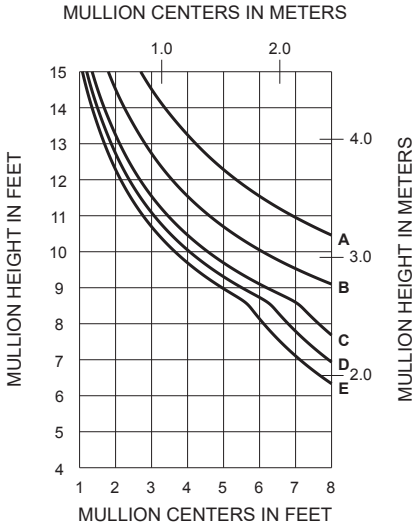
WITHOUT HORIZONTALS

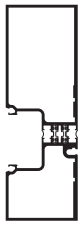


250T/350T/500T Insulpour® Thermal Entrances

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	45 PSF (2160)	75 PSF (3600)
E =	50 PSF (2400)	83 PSF (4000)

WITH HORIZONTALS

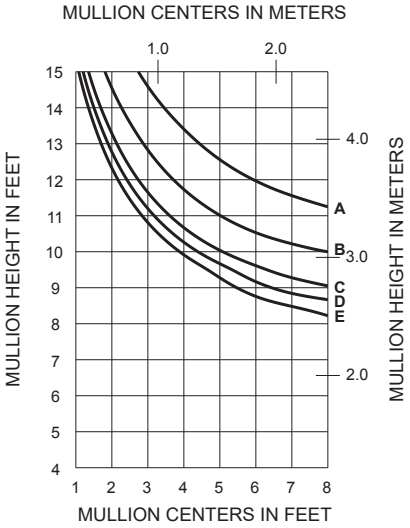




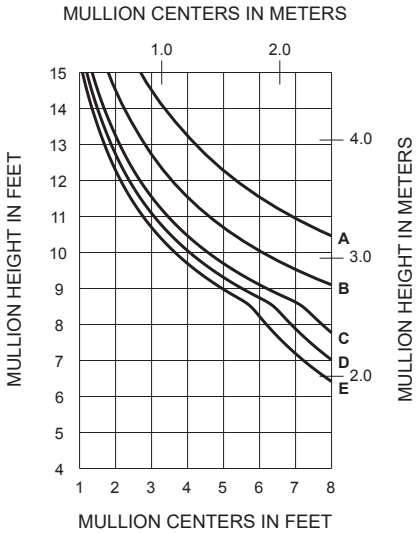
534110

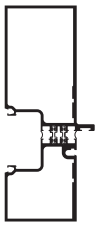
WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

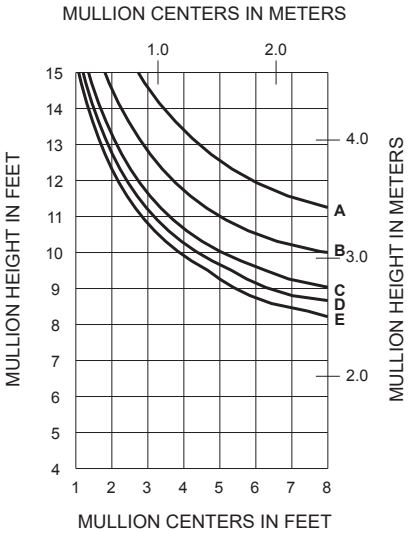




534106

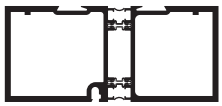
WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

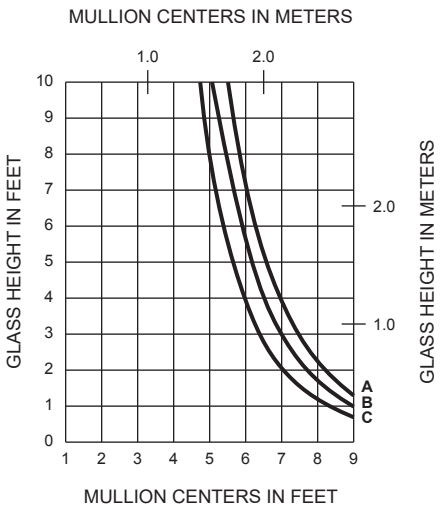
WITHOUT HORIZONTALS



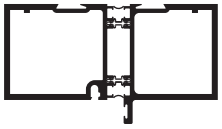
A - 1" GLASS (1/8 POINT LOADING)
B - 1" GLASS (1/6 POINT LOADING)
C - 1" GLASS (1/4 POINT LOADING)

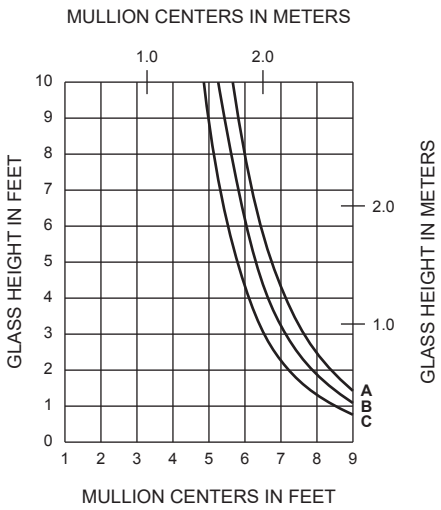
534111



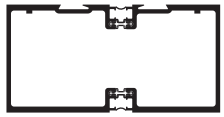


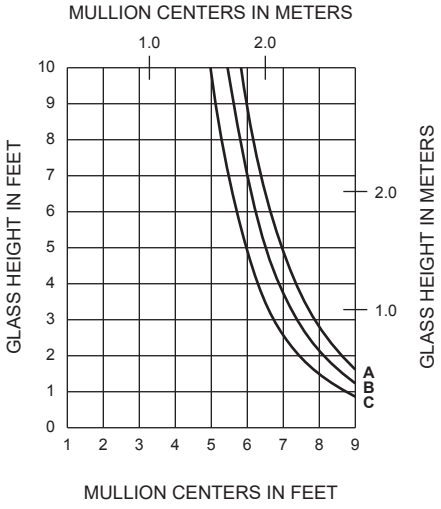
534102



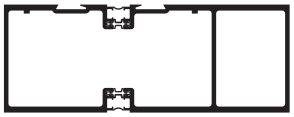


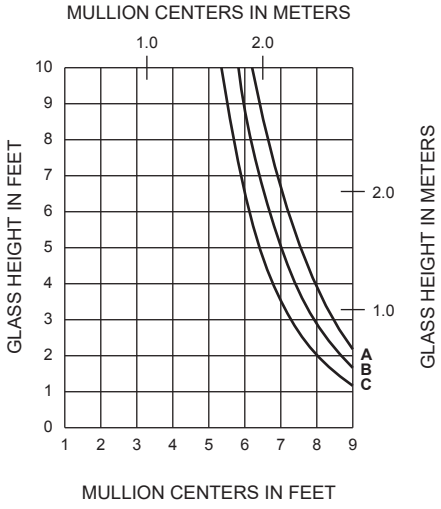
534101





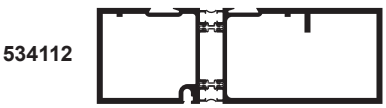
534104

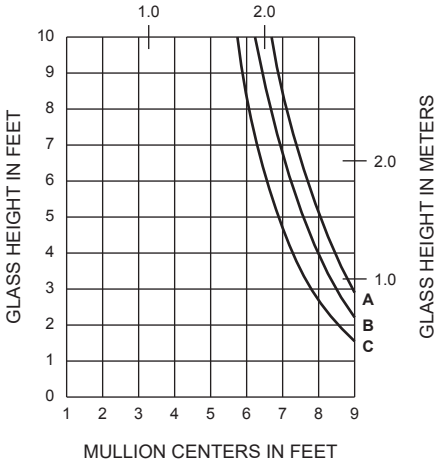




A - 1" GLASS (1/8 POINT LOADING)
B - 1" GLASS (1/6 POINT LOADING)
C - 1" GLASS (1/4 POINT LOADING)

534112





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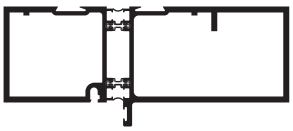
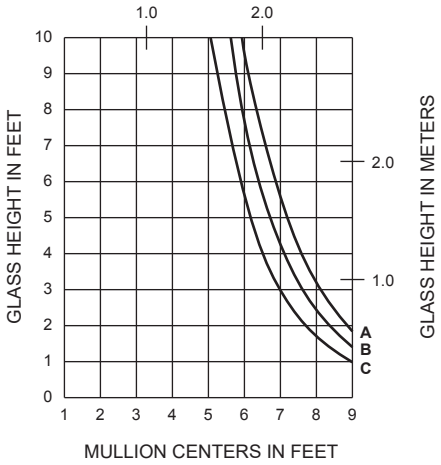
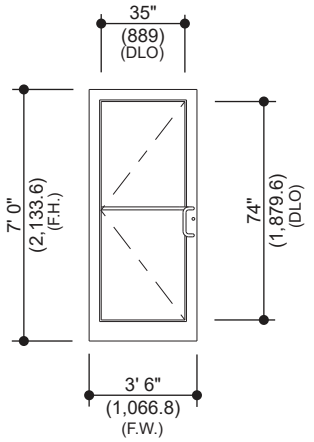




Generic Project Specific U-factor Example Calculation
(Percent of Glass will vary on specific products depending on sitelines)



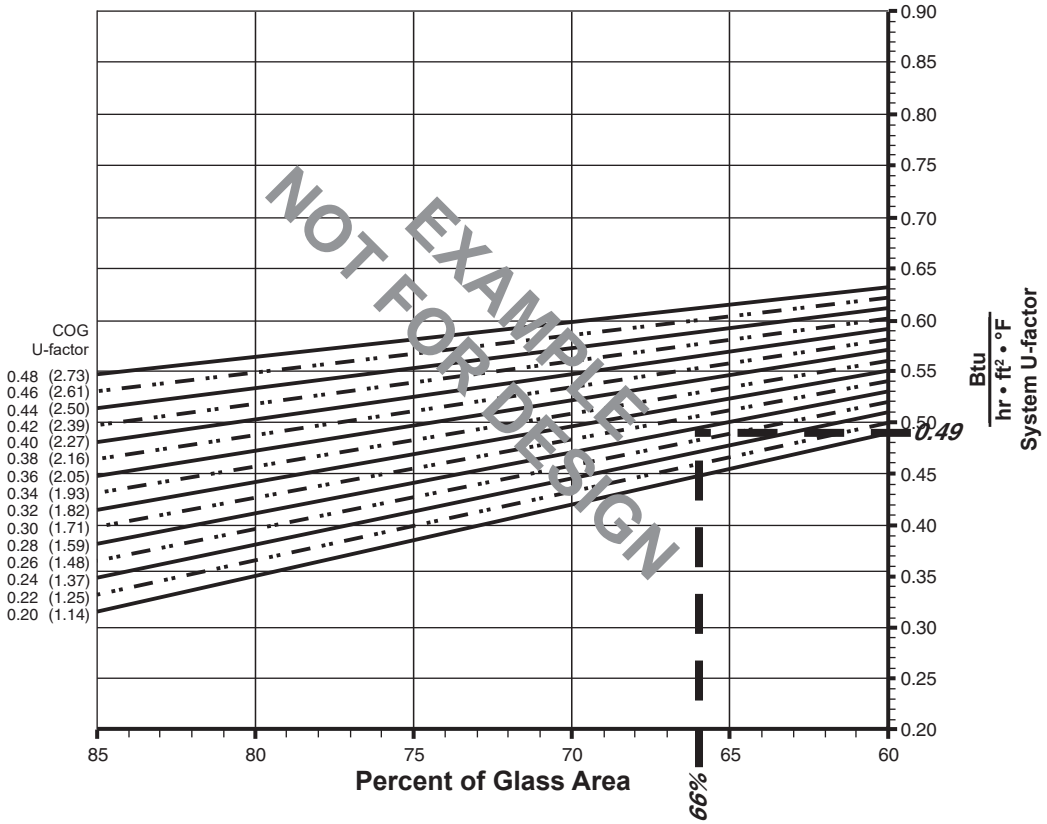
Example Glass U-Factor = 0.28 Btu/hr • ft² • °F

Total Daylight Opening = 30.125" x 75.75" = 15.85 ft²

Total Projected Area = 3' 4" x 7' 2" = 23.9 ft²

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100
= (15.85 ÷ 23.9)100 = 66%

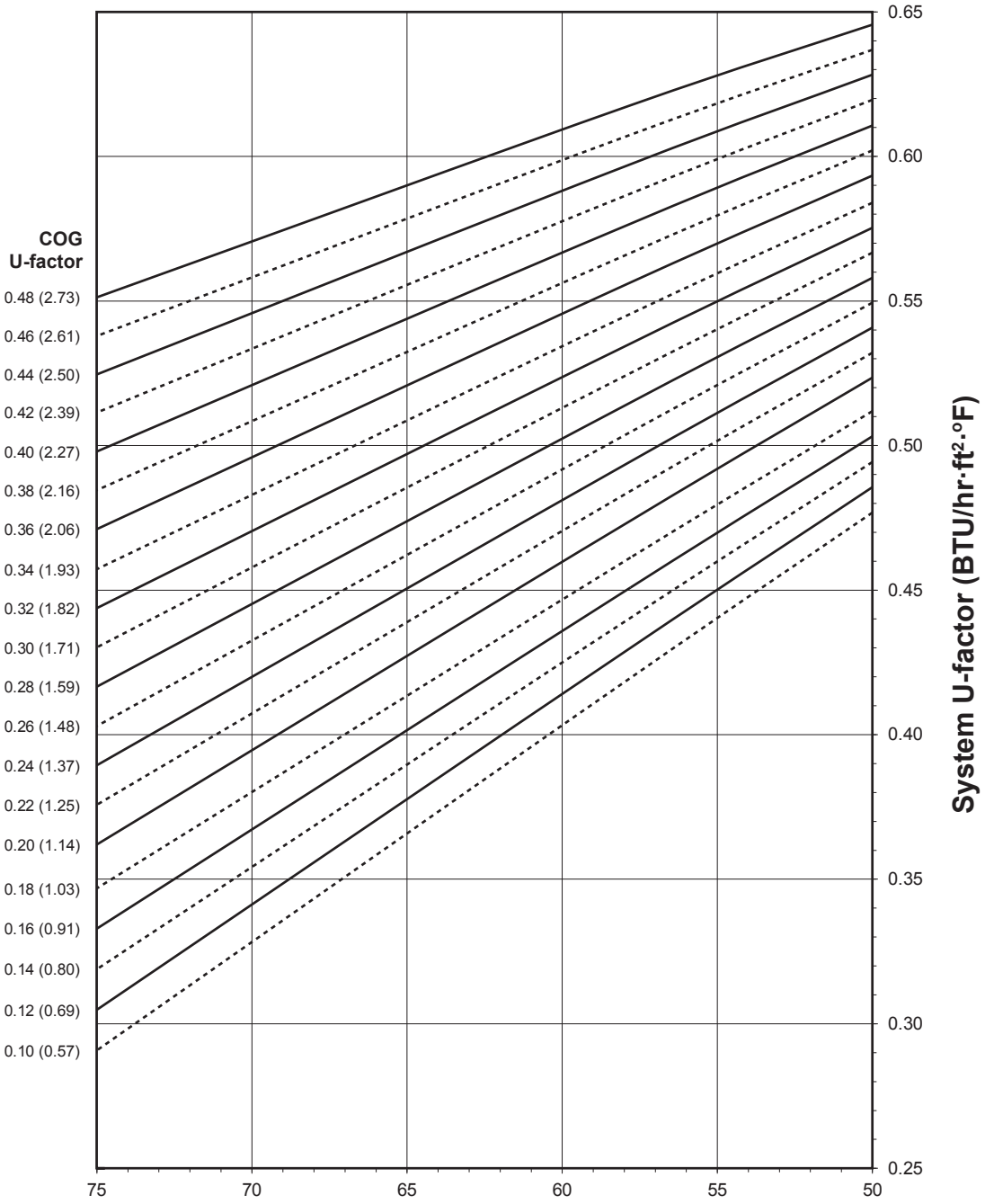
System U-factor vs Percent of Glass Area



Based on 66% glass and center of glass (COG) U-factor of 0.28
System U-factor is equal to 0.49 Btu/hr • ft² • °F

250T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System U-factor vs Percent of Glass Area



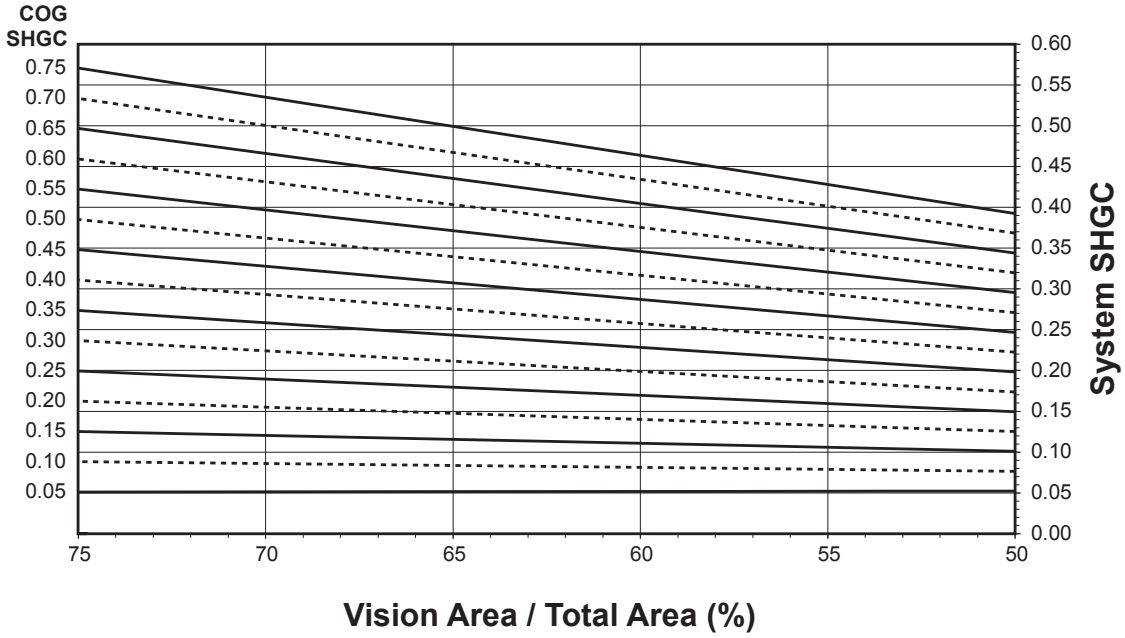
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

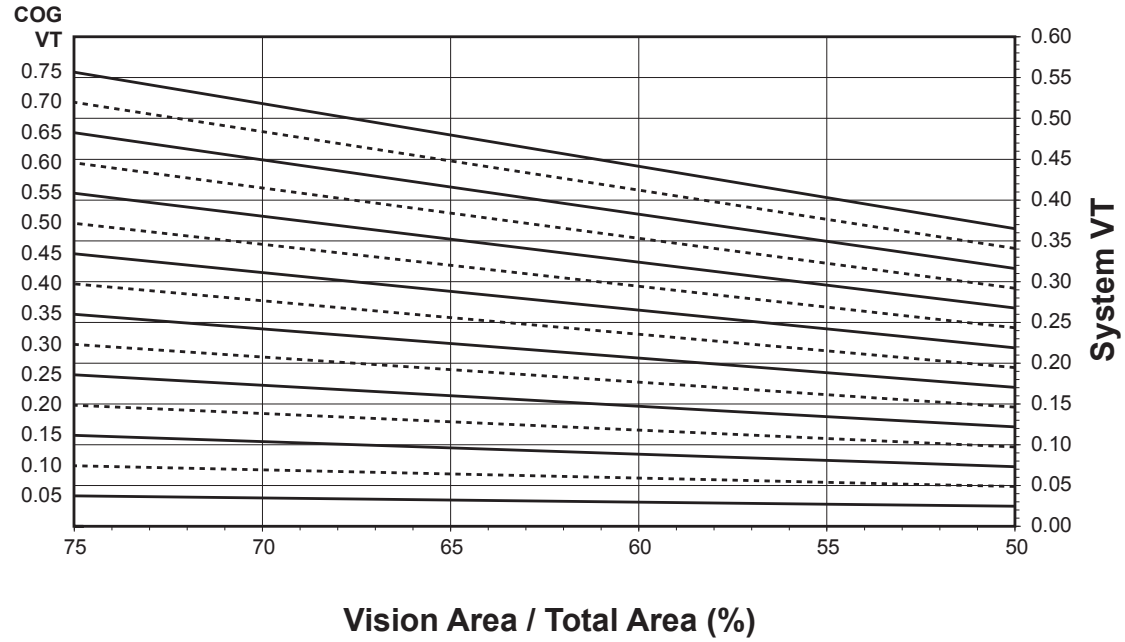
Glass properties are based on center of glass values and are obtained from your glass supplier.

250T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.62
0.46	0.61
0.44	0.60
0.42	0.59
0.40	0.58
0.38	0.57
0.36	0.56
0.34	0.55
0.32	0.54
0.30	0.53
0.28	0.51
0.26	0.50
0.24	0.49
0.22	0.48
0.20	0.47
0.18	0.46
0.16	0.45
0.14	0.44
0.12	0.43
0.10	0.42

250T
SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

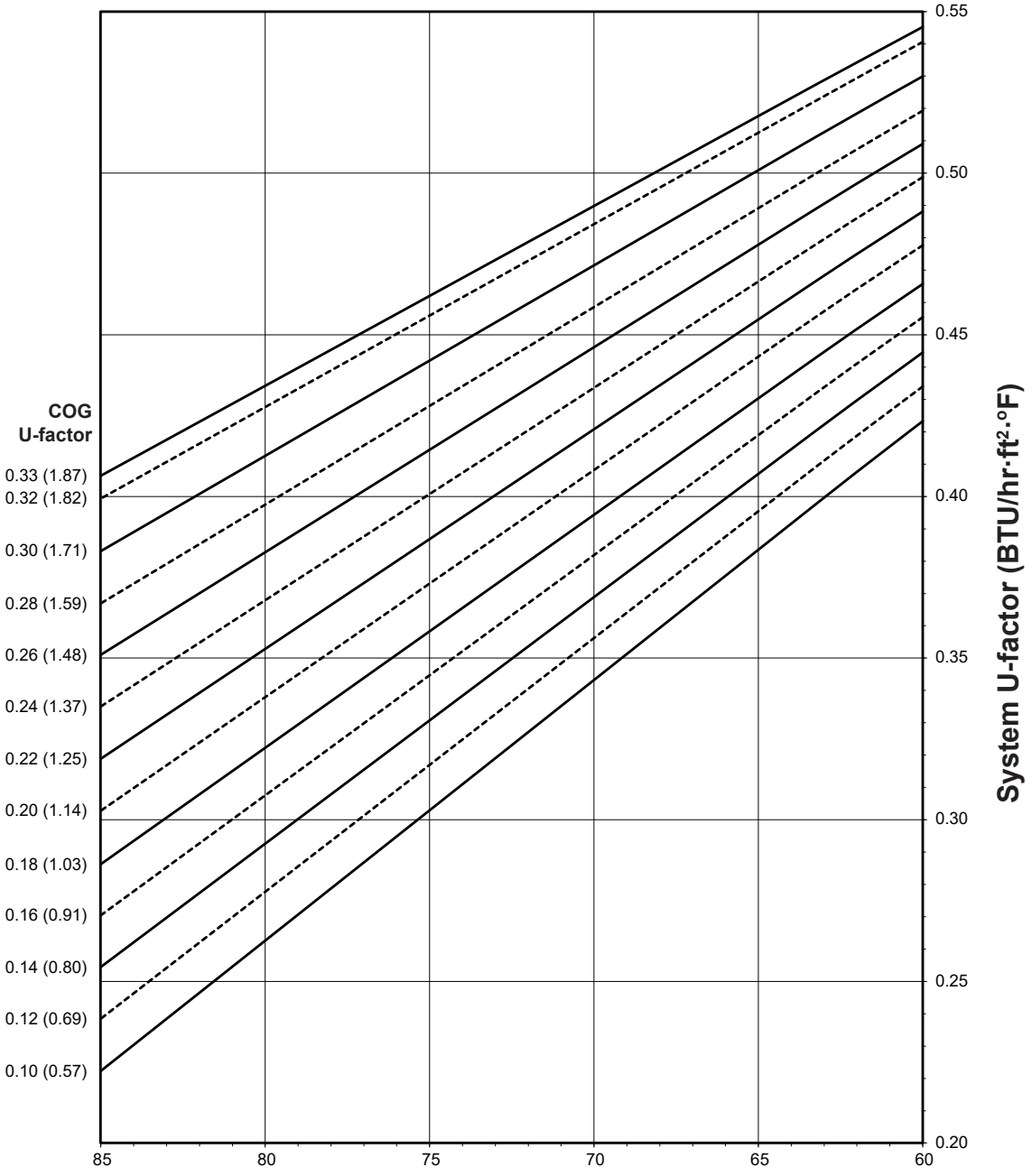
Glass SHGC [3]	Overall SHGC [4]
0.75	0.45
0.70	0.42
0.65	0.39
0.60	0.36
0.55	0.33
0.50	0.31
0.45	0.28
0.40	0.25
0.35	0.22
0.30	0.19
0.25	0.17
0.20	0.14
0.15	0.11
0.10	0.08
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.42
0.70	0.40
0.65	0.37
0.60	0.34
0.55	0.31
0.50	0.28
0.45	0.25
0.40	0.23
0.35	0.20
0.30	0.17
0.25	0.14
0.20	0.11
0.15	0.08
0.10	0.06
0.05	0.03

250T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System U-factor vs Percent of Glass Area



Percent of Glass = Vision Area/Total Area
(Total Daylight Opening / Projected Area)

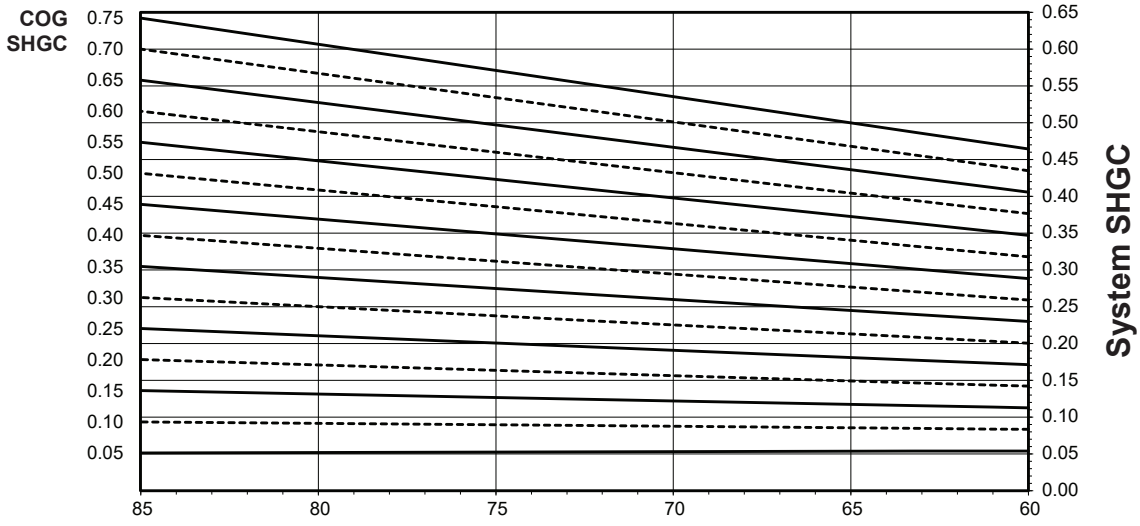
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

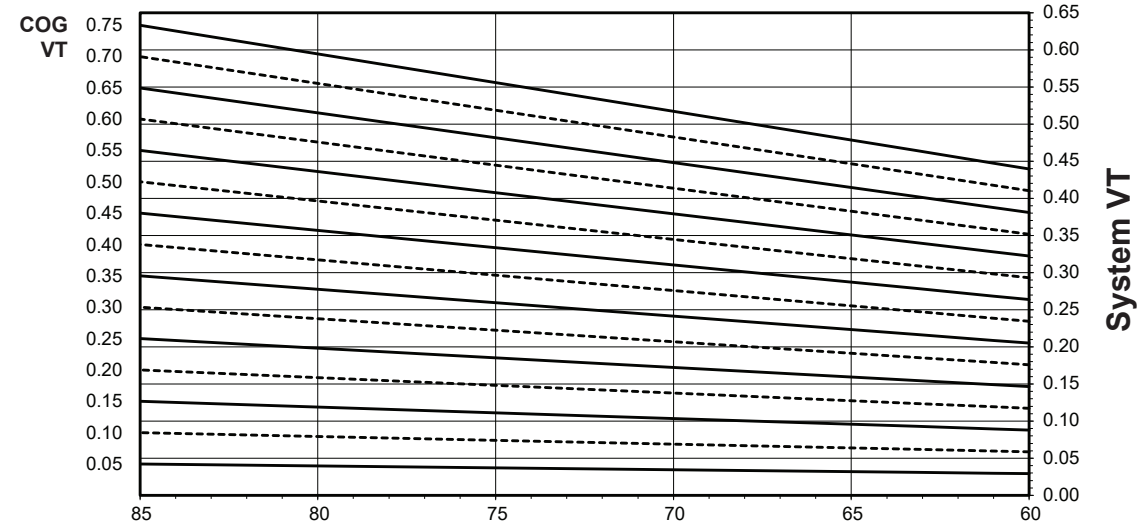
Glass properties are based on center of glass values and are obtained from your glass supplier.

250T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.33	0.53
0.32	0.52
0.30	0.51
0.28	0.50
0.26	0.49
0.24	0.48
0.22	0.47
0.20	0.45
0.18	0.44
0.16	0.43
0.14	0.42
0.12	0.41
0.10	0.40

250T
SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

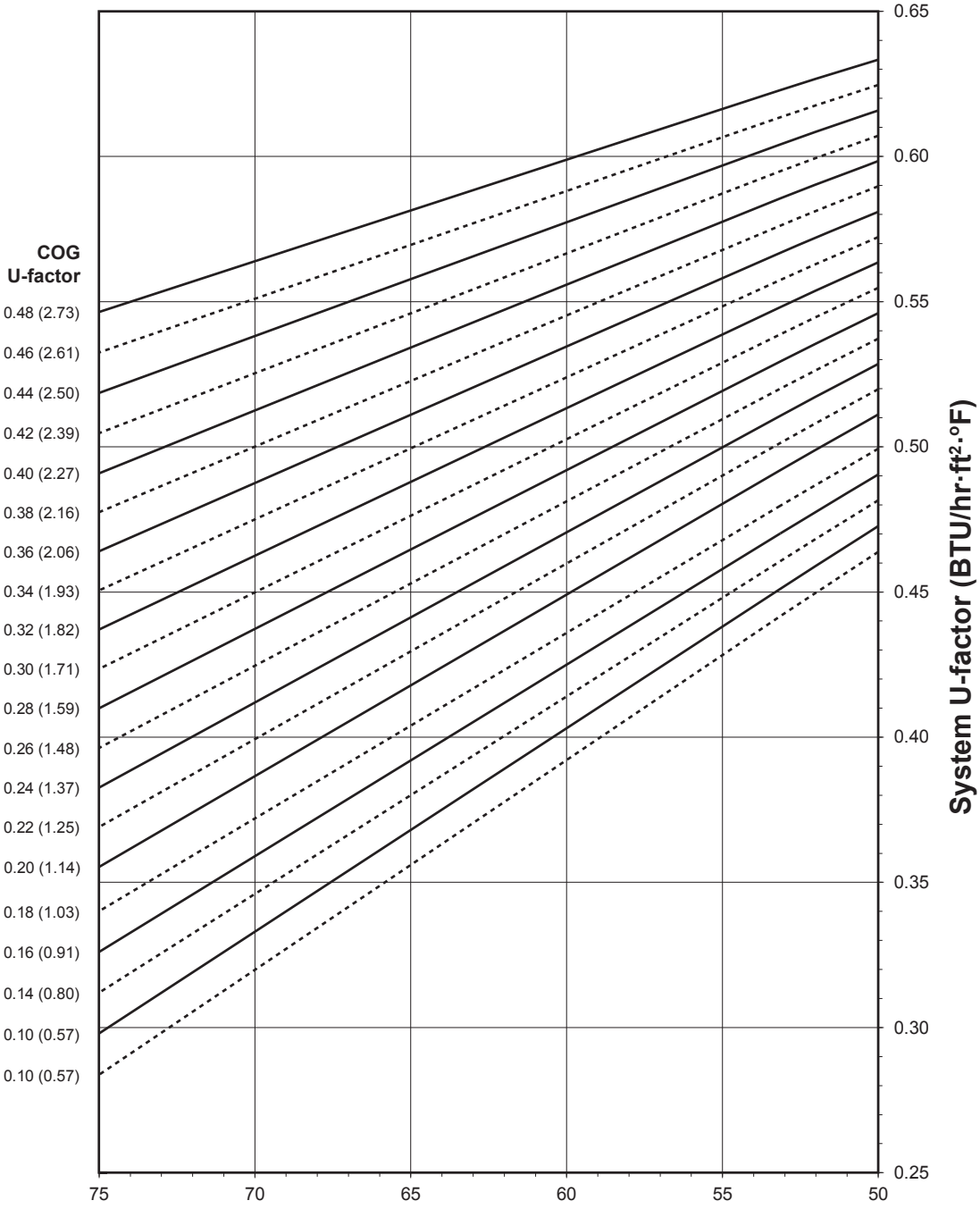
Glass SHGC [3]	Overall SHGC [4]
0.75	0.49
0.70	0.46
0.65	0.43
0.60	0.39
0.55	0.36
0.50	0.33
0.45	0.30
0.40	0.27
0.35	0.24
0.30	0.21
0.25	0.18
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.46
0.70	0.43
0.65	0.40
0.60	0.37
0.55	0.34
0.50	0.31
0.45	0.28
0.40	0.25
0.35	0.22
0.30	0.19
0.25	0.15
0.20	0.12
0.15	0.09
0.10	0.06
0.05	0.03

350T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System U-factor vs Percent of Glass Area



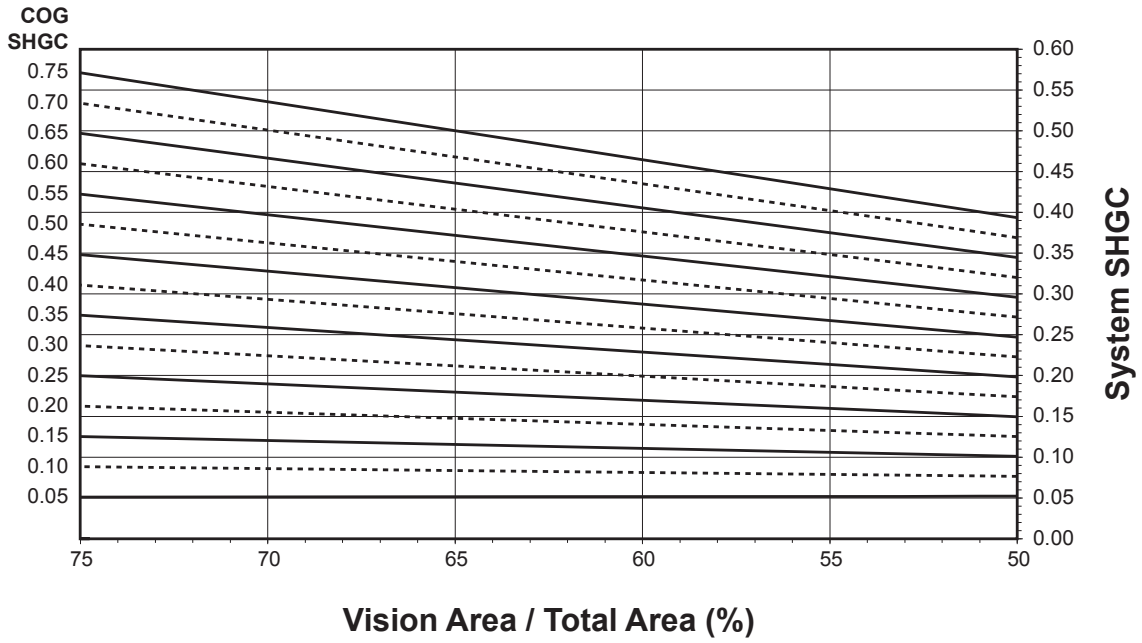
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

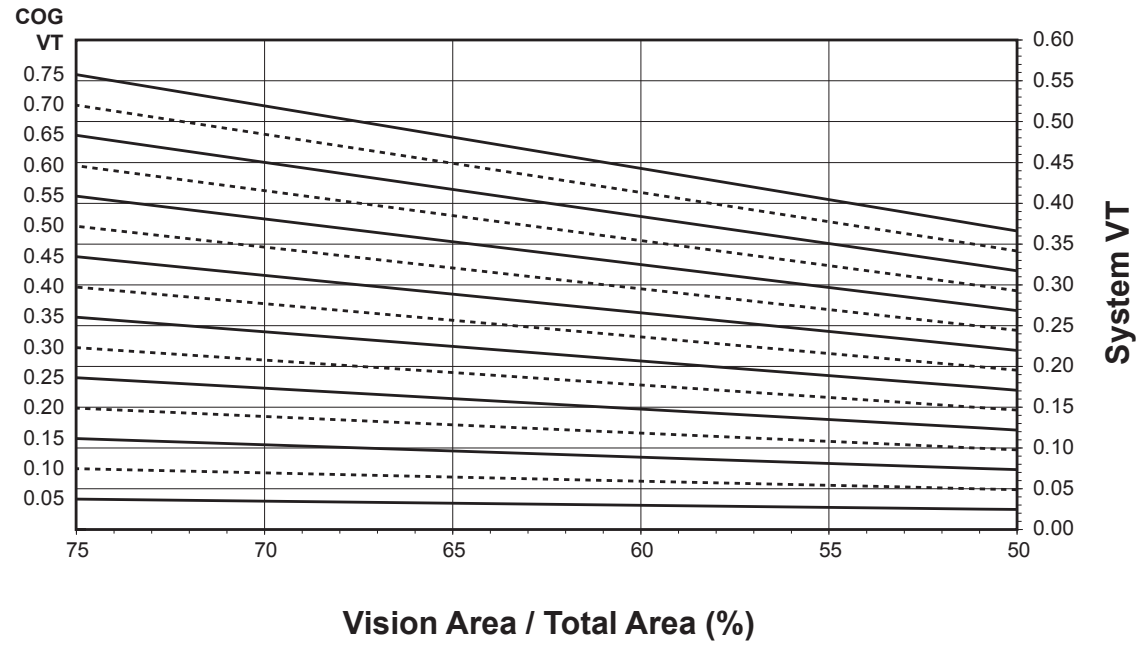
Glass properties are based on center of glass values and are obtained from your glass supplier.

350T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.62
0.46	0.61
0.44	0.60
0.42	0.59
0.40	0.59
0.38	0.58
0.36	0.57
0.34	0.56
0.32	0.55
0.30	0.54
0.28	0.53
0.26	0.52
0.24	0.51
0.22	0.50
0.20	0.49
0.18	0.48
0.16	0.47
0.14	0.46
0.12	0.45
0.10	0.44

350T
SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

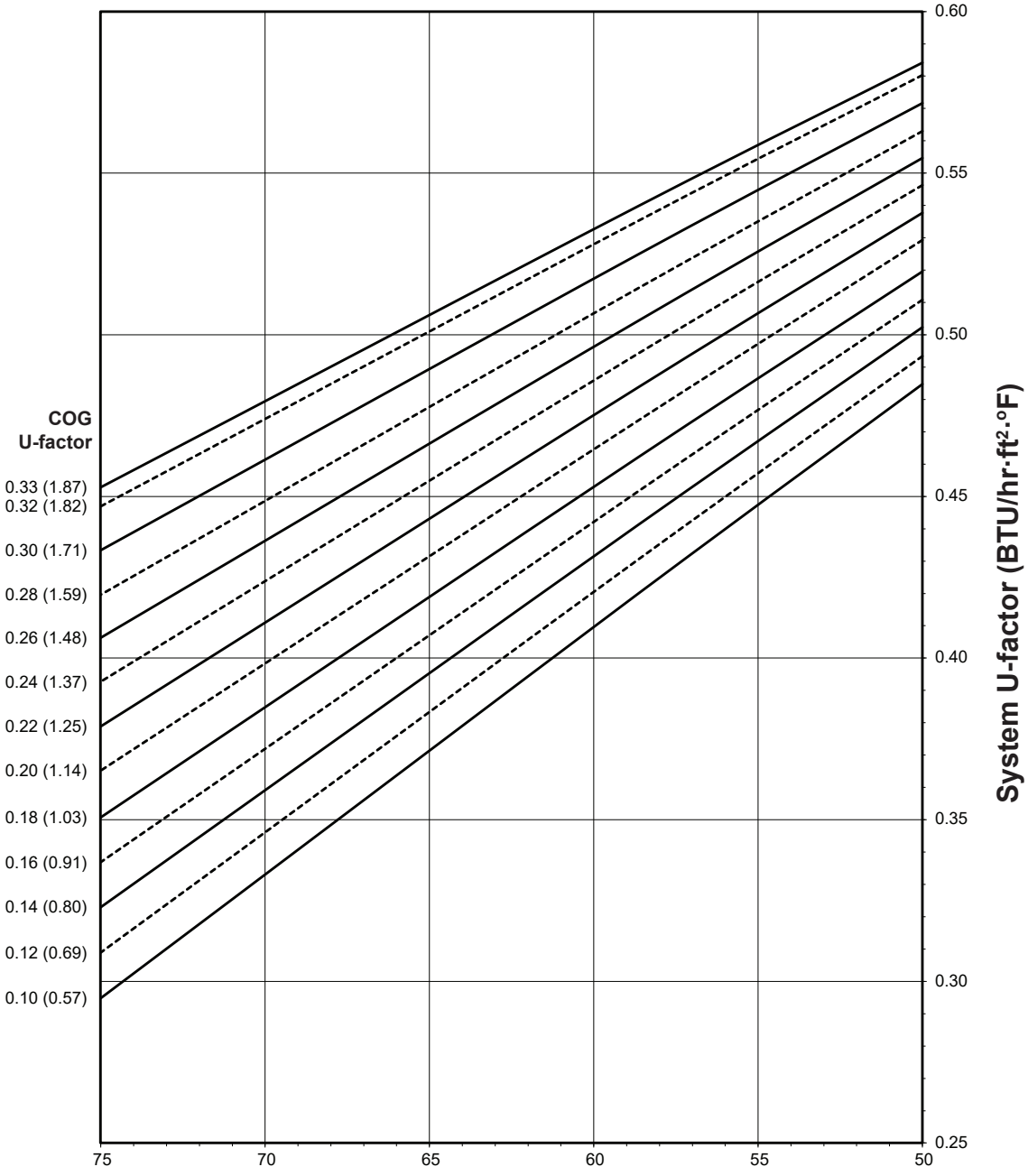
Glass SHGC [3]	Overall SHGC [4]
0.75	0.42
0.70	0.39
0.65	0.36
0.60	0.34
0.55	0.31
0.50	0.29
0.45	0.26
0.40	0.23
0.35	0.21
0.30	0.18
0.25	0.16
0.20	0.13
0.15	0.10
0.10	0.08
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.39
0.70	0.36
0.65	0.34
0.60	0.31
0.55	0.29
0.50	0.26
0.45	0.23
0.40	0.21
0.35	0.18
0.30	0.16
0.25	0.13
0.20	0.10
0.15	0.08
0.10	0.05
0.05	0.03

350T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System U-factor vs Percent of Glass Area



Percent of Glass = Vision Area/Total Area
(Total Daylight Opening / Projected Area)

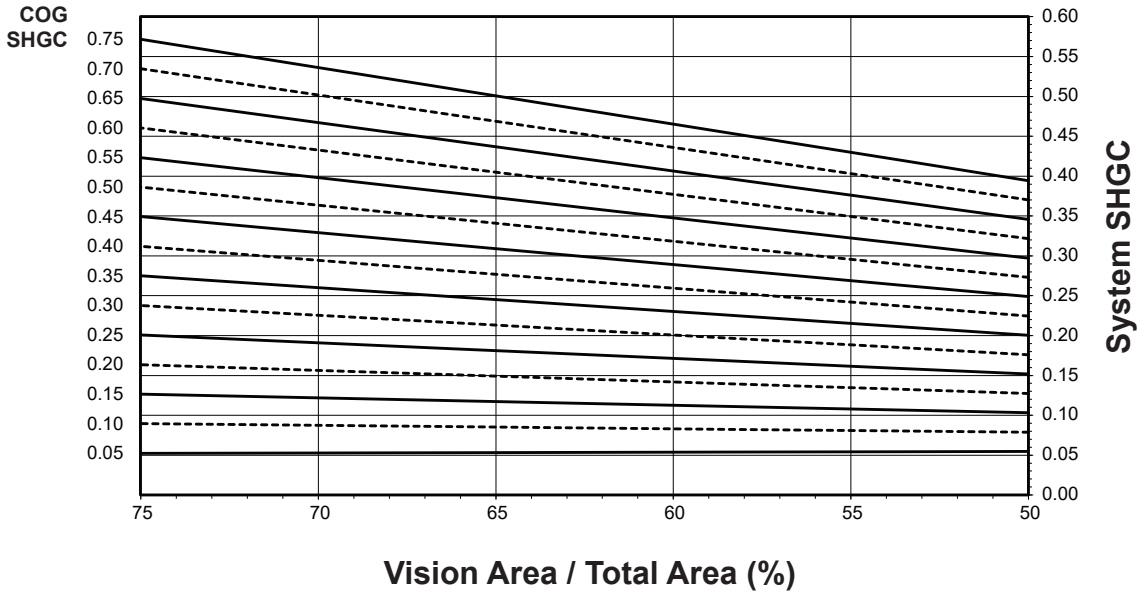
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

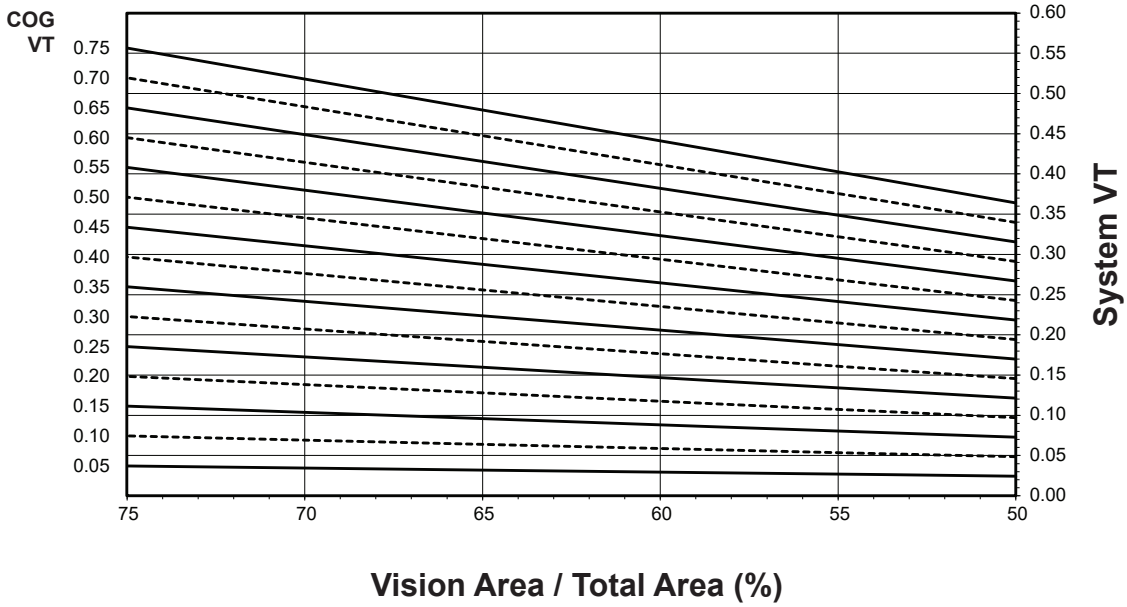
Glass properties are based on center of glass values and are obtained from your glass supplier.

350T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.33	0.54
0.32	0.54
0.30	0.53
0.28	0.51
0.26	0.50
0.24	0.49
0.22	0.48
0.20	0.47
0.18	0.46
0.16	0.45
0.14	0.44
0.12	0.43
0.10	0.42

350T
SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

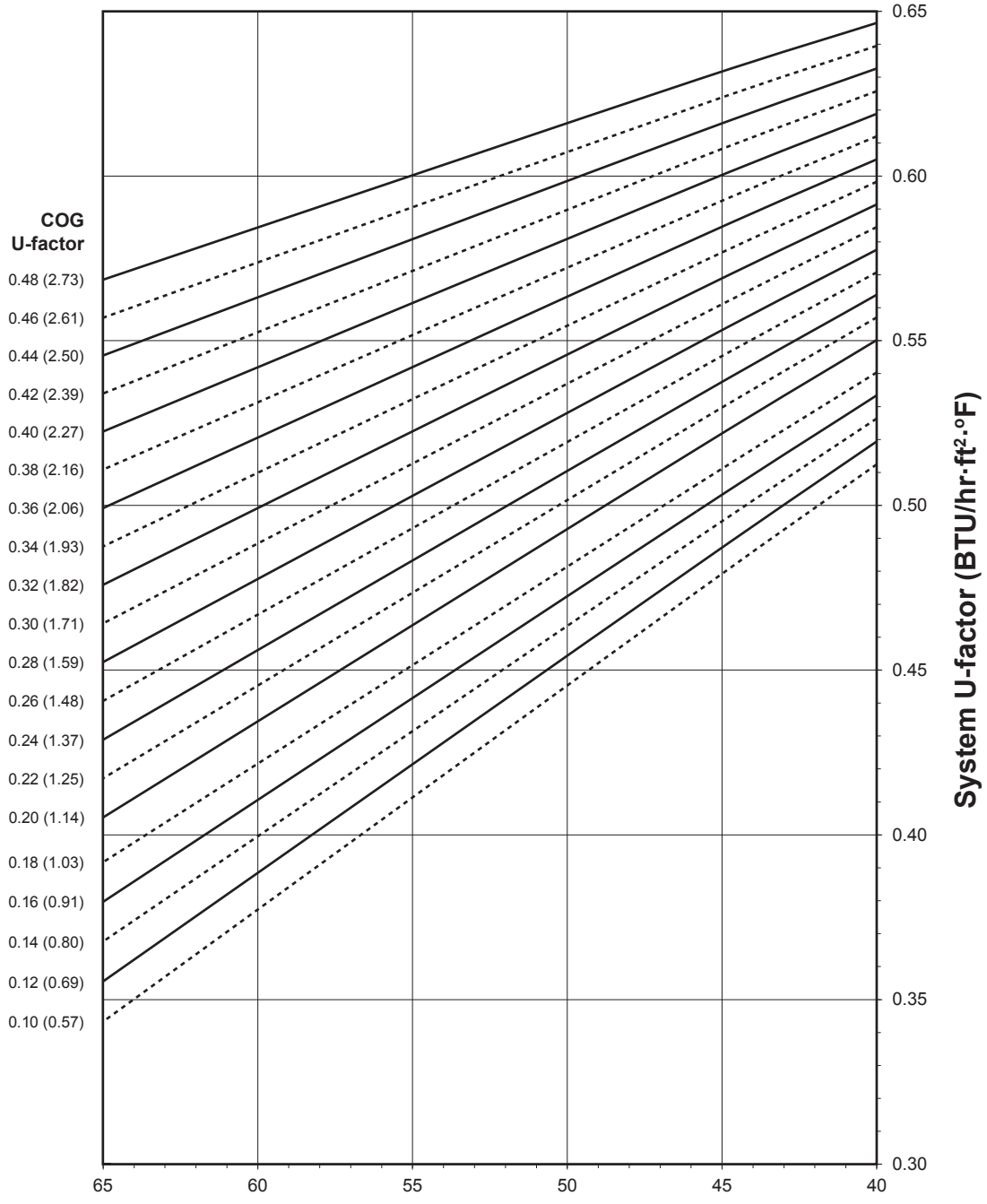
Glass SHGC [3]	Overall SHGC [4]
0.75	0.46
0.70	0.43
0.65	0.40
0.60	0.37
0.55	0.34
0.50	0.31
0.45	0.28
0.40	0.25
0.35	0.23
0.30	0.20
0.25	0.17
0.20	0.14
0.15	0.11
0.10	0.08
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.43
0.70	0.40
0.65	0.37
0.60	0.34
0.55	0.32
0.50	0.29
0.45	0.26
0.40	0.23
0.35	0.20
0.30	0.17
0.25	0.14
0.20	0.11
0.15	0.09
0.10	0.06
0.05	0.03

500T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System U-factor vs Percent of Glass Area



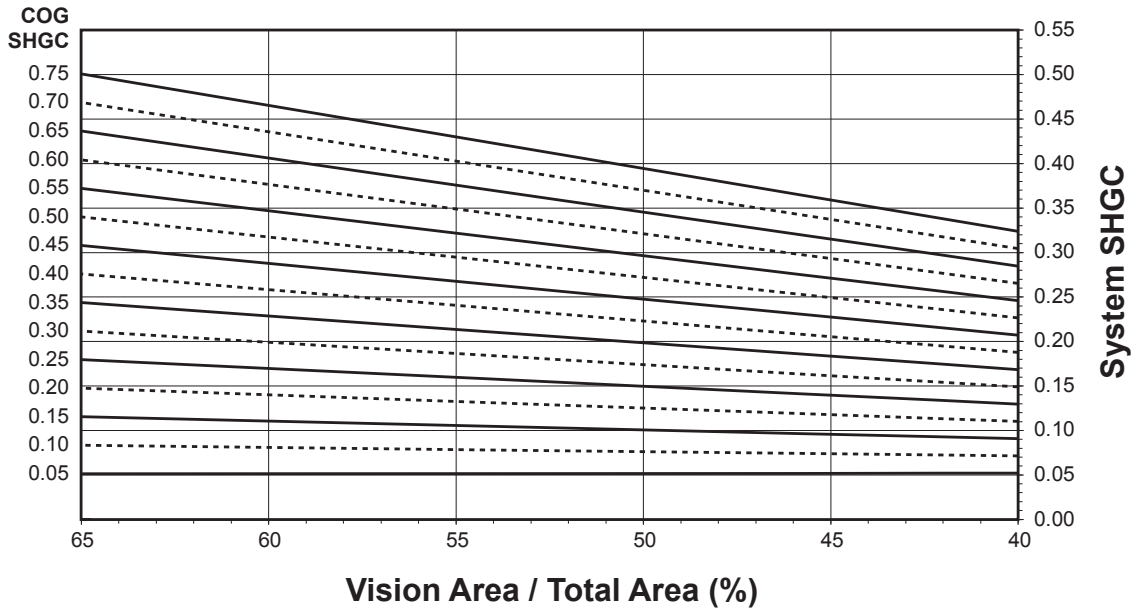
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

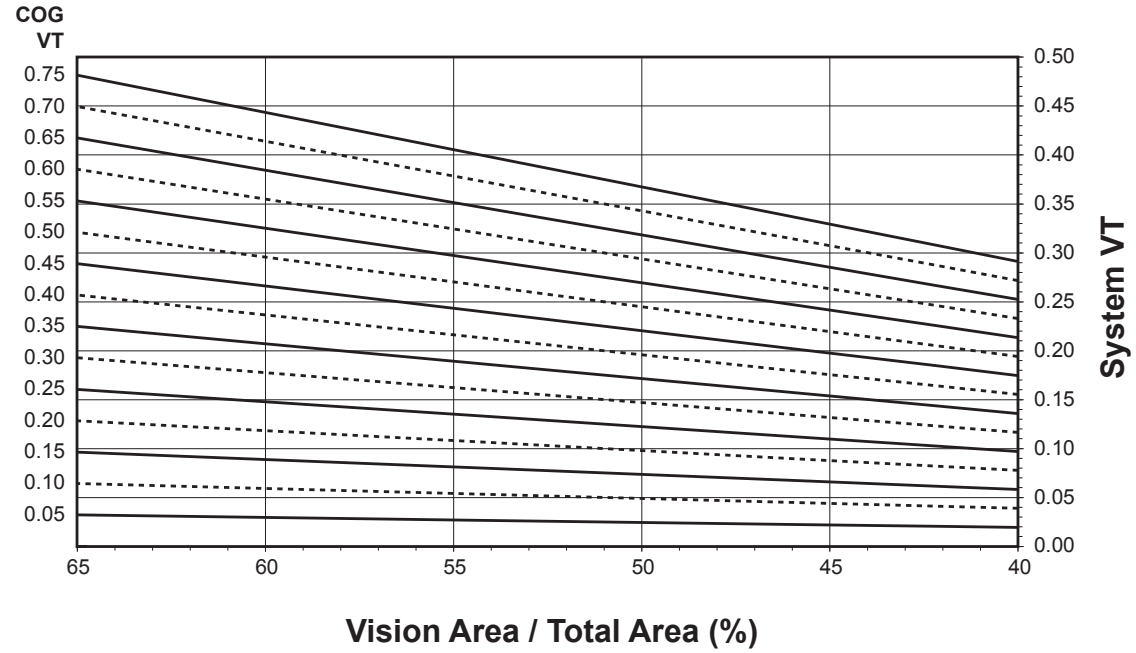
Glass properties are based on center of glass values and are obtained from your glass supplier.

500T SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.63
0.46	0.62
0.44	0.61
0.42	0.61
0.40	0.60
0.38	0.59
0.36	0.58
0.34	0.57
0.32	0.57
0.30	0.56
0.28	0.55
0.26	0.54
0.24	0.53
0.22	0.53
0.20	0.52
0.18	0.51
0.16	0.50
0.14	0.49
0.12	0.48
0.10	0.47

500T
SINGLE DOOR / PAIR OF DOORS
(1" Double Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

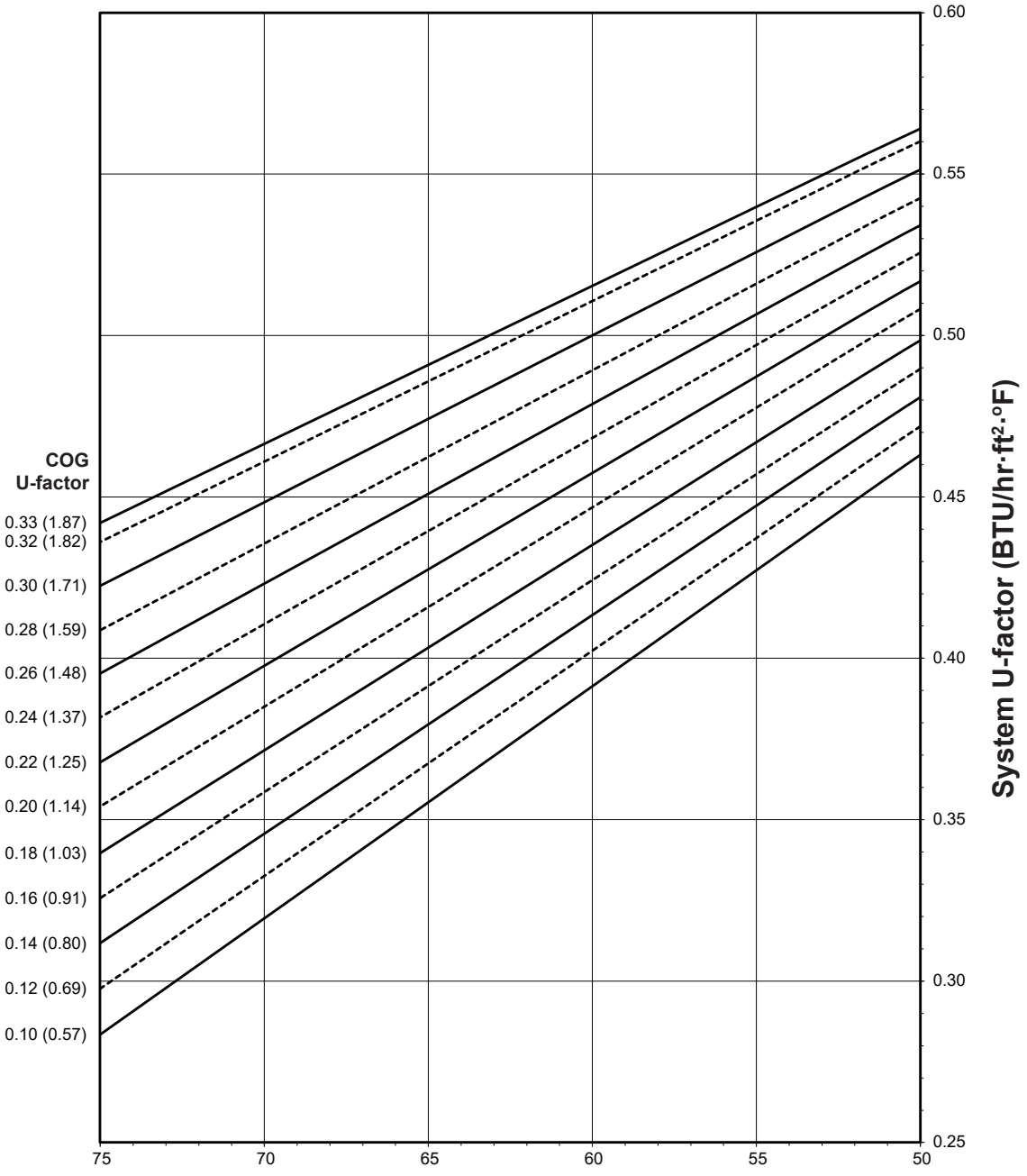
Glass SHGC [3]	Overall SHGC [4]
0.75	0.36
0.70	0.34
0.65	0.32
0.60	0.30
0.55	0.28
0.50	0.25
0.45	0.23
0.40	0.21
0.35	0.19
0.30	0.16
0.25	0.14
0.20	0.12
0.15	0.10
0.10	0.07
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.34
0.70	0.31
0.65	0.29
0.60	0.27
0.55	0.25
0.50	0.22
0.45	0.20
0.40	0.18
0.35	0.16
0.30	0.13
0.25	0.11
0.20	0.09
0.15	0.07
0.10	0.04
0.05	0.02

500T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System U-factor vs Percent of Glass Area



Percent of Glass = Vision Area/Total Area
(Total Daylight Opening / Projected Area)

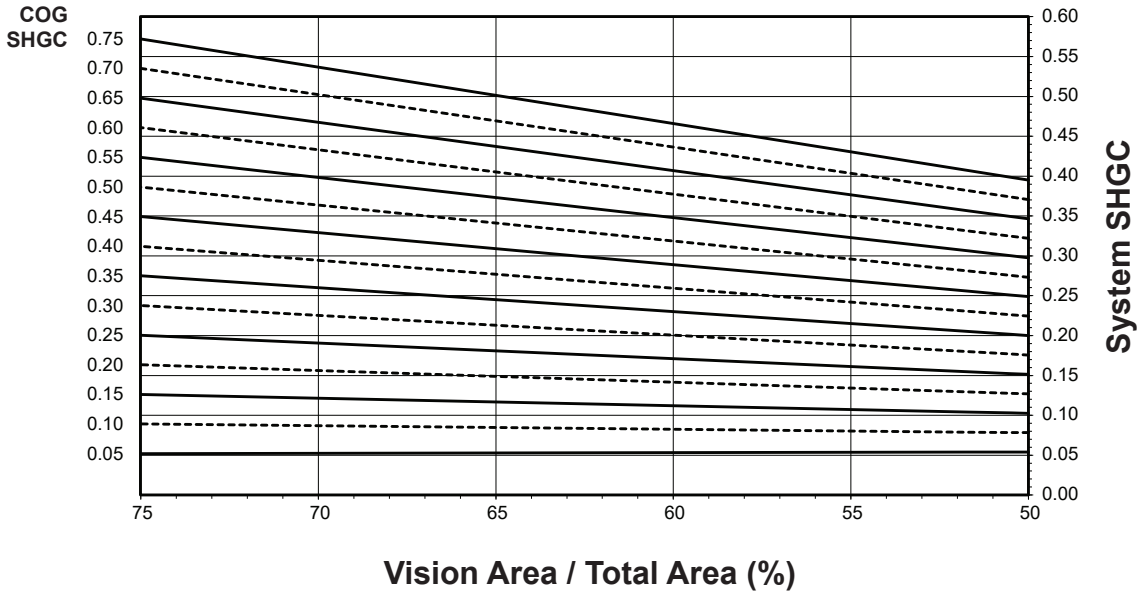
Notes for System U-Factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

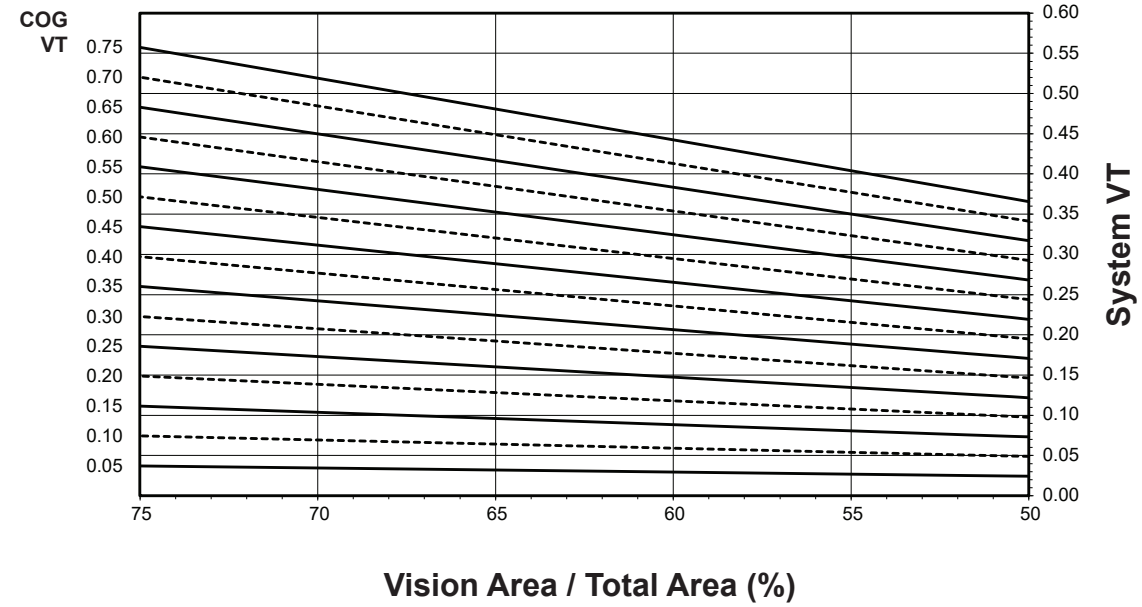
Glass properties are based on center of glass values and are obtained from your glass supplier.

500T SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.33	0.56
0.32	0.55
0.30	0.54
0.28	0.53
0.26	0.52
0.24	0.52
0.22	0.51
0.20	0.50
0.18	0.49
0.16	0.48
0.14	0.47
0.12	0.46
0.10	0.45

500T
SINGLE DOOR / PAIR OF DOORS
(1-1/2" Triple Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.41
0.70	0.38
0.65	0.36
0.60	0.33
0.55	0.31
0.50	0.28
0.45	0.26
0.40	0.23
0.35	0.21
0.30	0.18
0.25	0.15
0.20	0.13
0.15	0.10
0.10	0.08
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.38
0.70	0.35
0.65	0.33
0.60	0.30
0.55	0.28
0.50	0.25
0.45	0.23
0.40	0.20
0.35	0.18
0.30	0.15
0.25	0.13
0.20	0.10
0.15	0.08
0.10	0.05
0.05	0.03