Features

- 350 medium stile has 3-1/2" (88.9) vertical stile, 3-1/2" (88.9) top and 6-1/2" (165.1) bottom rail
- 500 wide stile has 5" (127) vertical stile, 5" (127) top and 6-1/2" (165.1) bottom rail
- Door is 2" (50.8) deep
- Door has 3/16" (4.8) wall thickness
- Dual moment welded corner construction
- Single acting
- Infills range from 1/4" (6.4) to 1" (25.4)
- Offset pivot, butt hinges or continuous geared hinge
- MS lock 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 in door frames
- Permanodic™ anodized finishes in seven standard choices
- Painted finishes in standard and custom choices

Optional Features

- Paneline™ exit device or Paneline™ EL exit device
- Wide variety of bottom rail and cross rail
- 3/16" (4.8) heavy wall door frame

Product Applications

- Designed for high traffic applications such as schools, universities and office buildings

For specific product applications, consult your Kawneer representative.
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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LAWS AND BUILDING AND SAFETY CODES GOVERNING THE DESIGN AND USE OF GLAZED ENTRANCE, WINDOW, AND CURTAIN WALL PRODUCTS VARY WIDELY. KAWNEER DOES NOT CONTROL THE SELECTION OF PRODUCT CONFIGURATIONS, OPERATING HARDWARE, OR GLAZING MATERIALS, AND ASSUMES NO RESPONSIBILITY THEREFOR.

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

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DOOR TYPES/SECT. DIMENSIONS ......................................... 6
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PUSH PULL HARDWARE / EXIT DEVICES ............................. 16
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Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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DUAL MOMENT WELDED CORNER CONSTRUCTION

#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" 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 Dual Moment corner construction.

* An arc welding process known as Shielded Inert Gas Metal Arc (SIGMA) or also known as Metal Inert Gas (MIG).
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Additional information and CAD details are available at www.kawneer.com
350 HEAVY WALL DOORS
TRIFAB™ VG 450 CENTER DOOR FRAMES SHOWN
(HEAVY WALL FRAME OPTIONAL)

NOTE:
1. SERIES 350 HEAVY WALL DOORS ARE DETAILED. 500 HEAVY WALL DOORS ALSO MAY BE USED.
2. TRIFAB™ VG 450 CENTER, 1-3/4" X 4-1/2" (44.5 X 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED. REFER TO THE CATALOG INDEX FOR THE APPROPRIATE DETAIL SECTION.

PAIR OF SINGLE ACTING DOORS

More information and CAD details are available at www.kawneer.com
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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

350 HEAVY WALL DOORS SHOWN
TRIFAB™ VG 450 CENTER DOOR FRAMES SHOWN
(HEAVY WALL FRAME OPTIONAL)

**SINGLE ACTING DOORS**

6
TRANSOM HEAD

7
DOOR HEADER/TRANSOM BAR

7A
DOOR HEADER/TRANSOM BAR

8*
BOTTOM RAIL

**NOTE:** Some building codes limit threshold height to 1/2" (12.7) max.

**COC WITH SINGLE ACTING OFFSET ARM**

6
TRANSOM HEAD

7
DOOR HEADER/TRANSOM BAR

7A
DOOR HEADER/TRANSOM BAR

8*
BOTTOM RAIL

**NOTE:** Some building codes limit threshold height to 1/2" (12.7) max.

*NOTE: Some building codes limit threshold height to 1/2" (12.7) max.*
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Additional information and CAD details are available at www.kawneer.com

350 HEAVY WALL DOORS SHOWN
TRIFAB™ VG 451 CENTER DOOR FRAMES SHOWN
(HEAVY WALL FRAME OPTIONAL)

NOTE:
1. SERIES 350 HEAVY WALL DOORS ARE DETAILED, 500 HEAVY WALL DOORS ALSO MAY BE USED.
2. TRIFAB™ VG 451 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. REFER TO THE CATALOG INDEX FOR THE APPROPRIATE DETAIL SECTION.

PAIR OF DOUBLE ACTING DOORS

NOTE:
1. SERIES 350 HEAVY WALL DOORS ARE DETAILED, 500 HEAVY WALL DOORS ALSO MAY BE USED.
2. TRIFAB™ VG 451 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. REFER TO THE CATALOG INDEX FOR THE APPROPRIATE DETAIL SECTION.

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

350 HEAVY WALL DOORS
TRIFAB™ VG 451 CENTER DOOR FRAMES SHOWN (HEAVY WALL FRAME OPTIONAL)

SINGLE ACTING DOORS

COC WITH SINGLE ACTING OFFSET ARM

**NOTE:** Some building codes limit threshold height to 1/2" (12.7) max.

*NOTE:* Some building codes limit threshold height to 1/2" (12.7) max.
Additional information and CAD details are available at www.kawneer.com

**TRANSMO JAMBS**

**CONTINUOUS HINGE JAMB**

**STANDARD SIZES (TRIFAB™ VG 450 CENTER DOOR FRAMES)**

<table>
<thead>
<tr>
<th>Door Opening Dimension (DOW)</th>
<th>Overall Frame Dimension (OFW)</th>
<th>Masonry Opening Dimension (MOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3' 0&quot;</td>
<td>3' 3-1/2&quot;</td>
<td>3' 4-1/4&quot;</td>
</tr>
<tr>
<td>(914)</td>
<td>(1,003)</td>
<td>(1,022)</td>
</tr>
<tr>
<td>3' 6&quot;</td>
<td>3' 9-1/2&quot;</td>
<td>3' 10-1/4&quot;</td>
</tr>
<tr>
<td>(1,067)</td>
<td>(1,156)</td>
<td>(1,175)</td>
</tr>
<tr>
<td>6' 0&quot;</td>
<td>6' 3-3/4&quot;</td>
<td>6' 4-1/4&quot;</td>
</tr>
<tr>
<td>(1,829)</td>
<td>(1,934)</td>
<td>(1,937)</td>
</tr>
</tbody>
</table>

**STANDARD SIZES (TRIFAB™ VG 451 CENTER DOOR FRAMES)**

<table>
<thead>
<tr>
<th>Door Opening Dimension (DOW)</th>
<th>Overall Frame Dimension (OFW)</th>
<th>Masonry Opening Dimension (MOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3' 0&quot;</td>
<td>3' 4-1/4&quot;</td>
<td>3' 10-3/4&quot;</td>
</tr>
<tr>
<td>(914)</td>
<td>(1,016)</td>
<td>(1,178)</td>
</tr>
<tr>
<td>3' 6&quot;</td>
<td>3' 10&quot;</td>
<td>3' 10-3/4&quot;</td>
</tr>
<tr>
<td>(1,067)</td>
<td>(1,168)</td>
<td>(1,187)</td>
</tr>
<tr>
<td>6' 0&quot;</td>
<td>6' 4&quot;</td>
<td>6' 4-3/4&quot;</td>
</tr>
<tr>
<td>(1,829)</td>
<td>(1,930)</td>
<td>(1,949)</td>
</tr>
</tbody>
</table>

**WITH AND WITHOUT TRANSOM**

OFW = DOW + 2 FSL
MOW = OFW + 3/4"

**Note:** Dimensions shown above reflect A1 Price Book standard stock door frame height with transom at 10' 3-1/2" (3,137).
Additional information and CAD details are available at www.kawneer.com
### 350/500 Heavy Wall™ Entrances

<table>
<thead>
<tr>
<th>ENTRANCE OFFERINGS</th>
<th>JANUARY, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 97911-191</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Door Sizes Std.</th>
<th>Standard sizes shown on pages 12 and 13.</th>
<th>Any size up to 4' x 8' (1,219 x 2,438)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass Stops</td>
<td>Beveled glass stops for 1/4&quot; (6.4) or 3/16&quot; (4.0) infill.</td>
<td>Square glass stops for 3/16&quot; (4.0) or 1/4&quot; (6.4) infill. Also 1&quot; (25.4) stops.</td>
</tr>
<tr>
<td>Door Frames</td>
<td>Trifab™ VG 450 Center - 1-3/4&quot; x 4-1/2&quot; (44.5 x 114.3) for single glazing.</td>
<td>Heavy Wall Trifab™ VG 450 Center - (3/16&quot; Wall).</td>
</tr>
<tr>
<td></td>
<td>Trifab™ VG 451 Center - 2&quot; x 4-1/2&quot; (50.8 x 114.3) for double glazing.</td>
<td>Heavy Wall Trifab™ VG 451 Center - (3/16&quot; Wall).</td>
</tr>
<tr>
<td></td>
<td>Push-Pulls</td>
<td>Any Kawneer framing system suitable for door frames may be selected, but manufactured per order.</td>
</tr>
<tr>
<td></td>
<td>Single Acting:</td>
<td>Architects Classic Hardware CO-9 Pull and CP-II Push Bar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architects Classic Hardware CO-9 Pull and CP Push Bar.</td>
</tr>
<tr>
<td></td>
<td>Single Acting:</td>
<td>Architects Classic Hardware CO-12 and CP-II push bar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architects Classic Hardware CO-12 and CP push bar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architects Classic Hardware CO9/CO-9 Pulls.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architects Classic Hardware CO12/CO-12 Pulls.</td>
</tr>
<tr>
<td>Door Closers</td>
<td>Single Acting:</td>
<td>Norton 1601 adjustable or 1601 BF adjustable surface closer with back-check and with or without adjustable hold-open.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard concealed overhead closer with single acting offset arm.</td>
</tr>
<tr>
<td></td>
<td>Single Acting:</td>
<td>LCN 1260 adjustable surface closer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCN 4040 surface closer with or without adjustable hold-open.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Norton 8100 surface closer with 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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Falcon SC 60 surface closer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International single acting concealed overhead closer.</td>
</tr>
<tr>
<td>Hinging</td>
<td>Single Acting:</td>
<td>Kawneer top and bottom offset pivots (or)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawneer top and bottom 4 1/2&quot; x 4&quot; (114.3 x 101.6) ball bearing butt hinge with non-removable pin (NRP) (or)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawneer Continuous Gear Hinge.</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Single Acting:</td>
<td>Rixson M-19 or IVES #7215-INT offset pivot (or)</td>
</tr>
<tr>
<td>Pivots/Butts</td>
<td></td>
<td>Kawneer 4-1/2&quot; x 4&quot; (114.3 x 101.6) ball bearing butt hinge with non-removable pin (NRP).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Offset Pivots are not available for use with Heavy Wall Frames.</td>
</tr>
<tr>
<td>Power Transfers</td>
<td>Single Acting:</td>
<td>Rixson M-19 intermediate pivot with wire transfer (or)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawneer standard (4-1/2&quot; x 4&quot;) (114.3 x 101.6) ball bearing (NRP) butt hinge with wire transfer (or)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EPT (Electric Power Transfer)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>SP-1000X Power Supply: For use with Paneline™ EL exit devices.</td>
<td>NP1 Power Supply: For use with Kawneer 1686 MEL and 1786 MEL exit devices only.</td>
</tr>
<tr>
<td>Locks - Active</td>
<td>Adams-Rite MS 1850A deadlock with two 1-5/32&quot; (29.4) diameter 5 pin cylinders.</td>
<td>Adams-Rite #4510 latch lock.</td>
</tr>
<tr>
<td>Leaf</td>
<td></td>
<td>Adams-Rite #1850A-500 short throw deadlock.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adams-Rite #1850A-505 hookbolt lock.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adams-Rite #4015 two-point Lock.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adams-Rite #4085 three-point Lock.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adams-Rite #4089 exit indicator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawneer cylinder guard.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawneer thumbturn (in lieu of cylinder).</td>
</tr>
</tbody>
</table>
### 350/500 Heavy Wall™ Entrances

#### Entrance Offerings

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>OPTIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Locks - Inactive Leaf</strong></td>
<td><strong>Controller™</strong> is a 3-point locking system consisting of a two point locking device in the inactive leaf in lieu of flush bolts, working in conjunction with the MS 1850A deadlock in the active leaf. This combination provides for greater security than possible with flush bolts and complies with the life safety considerations of building codes which prohibit the use of flush bolts.</td>
</tr>
<tr>
<td>One pair of Kawneer flush bolts in the inactive leaf of a pair of doors.</td>
<td><strong>Controller™</strong> is a 3-point locking system consisting of a two point locking device in the inactive leaf in lieu of flush bolts, working in conjunction with the MS 1850A deadlock in the active leaf. This combination provides for greater security than possible with flush bolts and complies with the life safety considerations of building codes which prohibit the use of flush bolts.</td>
</tr>
<tr>
<td><strong>Thresholds</strong></td>
<td><strong>Thresholds</strong></td>
</tr>
<tr>
<td>A 1/2&quot; x 4&quot; (12.7 x 101.6) aluminum mill finish threshold.</td>
<td>A 1/2&quot; x 6-3/4&quot; (12.7 x 171.5) aluminum mill finish threshold.</td>
</tr>
<tr>
<td><strong>Weathering</strong></td>
<td>Bottom Door Sweep</td>
</tr>
<tr>
<td><strong>Weathering</strong></td>
<td>Bottom Door sweep</td>
</tr>
<tr>
<td>Single Acting:</td>
<td>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 the bottom door rail with concealed fasteners).</td>
</tr>
<tr>
<td><strong>Exit Device</strong></td>
<td><strong>Exit Device</strong></td>
</tr>
<tr>
<td><strong>Exit Device</strong></td>
<td><strong>Exit Device</strong></td>
</tr>
<tr>
<td><strong>Exit Device</strong></td>
<td><strong>Exit Device</strong></td>
</tr>
<tr>
<td><strong>Exit Device Pulls:</strong></td>
<td><strong>Exit Device Pulls:</strong></td>
</tr>
<tr>
<td>Architects Classic CPN Pull for Paneline™ and Paneline™ EL exit devices.</td>
<td>Architects Classic CO-12 Pull. (except for Paneline™ and Paneline™ EL exit devices).</td>
</tr>
</tbody>
</table>

---

Reference Hardware section for additional information
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

ARCHITECTS CLASSIC (PUSH PULL SETS)

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

**ARCHITECTS CLASSIC (COMPONENTS)**

CO-9 / CP
CO-12 / CP

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

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

**EXIT DEVICES**

**KAWNEER PANELINE™ / PANELINE™ EL**

EXTERIOR VIEW OF 190 DOOR (350/500 SIMILAR)

CPN PULL ON EXTERIOR OF DOOR

SEE PAGES 17 & 18 FOR COMPLETE PANELINE™ INFORMATION

**EXIT DEVICES AND PULLS**

RIM LATCH
Falcon 1690
Falcon EL 1690

RIM LATCH
Falcon 1790
Falcon EL 1790

CONCEALED ROD
Falcon 1686
Kawneer 1686
Kawneer 1686 CD
Kawneer 1686 MEL

LEVER HANDLE
Kawneer 1686
Kawneer 1786

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.
The Paneline™ concealed rod exit device will accommodate variations in door width as shown in the following illustrations. Sidelites adjacent to Paneline™ equipped doors not requiring exit devices may be fitted with fixed panels as detailed below to match the general appearance of the Paneline™ cross rail.

The Optional Paneline™ EL device is designed for electrified access control and is compatible with most key pad and card reader systems.

See Hardware Section for complete description of Paneline™ hardware, including finish of units.

Paneline™ uses mortise cylinder in lieu of the normal rim-type.

Dummy Paneline™ units should not use any type of lock.

### Interior Elevations

**NOTE:** Sidelites must be stop glazed above and below rail.

---

### Interior View

- **Lock Stile Trim Filler Width** varies with stile width
- **Dogging Lock** (typical)
- **Pivot Stile Trim Filler Width** varies with door width

#### Door Opening Width

- **350HW Door**
  - **Max.** 4’ 0” (1,219.2)
  - **Min.** 3’ 0” (914.6) ADA MIN.

- **500HW Door**
  - **Max.** 4’ 0” (1,219.2)
  - **Min.** 3’ 0” (914.6) ADA MIN.

---

### Paneline™ EL Components

- **Power Transfer**
  - Intermediate Butt Hinge
  - Intermediate Offset Pivot

- **Electric Power Transfer** (EPT)

- **SP-1000X Power Supply**
Sidelites adjacent to Paneline™ equipped doors not requiring exit devices may be fitted with fixed panels as detailed below to match the general appearance of the Paneline™ cross rail.

See Hardware Section for complete description of Paneline™ hardware, including finish of units.

Paneline™ uses mortise cylinder in lieu of the normal rim-type. Dummy Paneline™ units should not use any type of lock.

**NOTE:** Sidelites must be stop glazed above and below rail.

**ALTERNATE CROSSRAIL FOR VESTIBULE DOORS**

(Without Exit Device or Lock)

**LOCK STILE TRIM FILLER WIDTH**

VARIES WITH STILE WIDTH

**PIVOT STILE TRIM FILLER WIDTH**

VARIES WITH DOOR WIDTH

**DOGGING LOCK**

(TYPICAL)

**DOOR OPENING WIDTH**

8’ 0” (2,438.4) MAX.

6’ 0” (1,828.8) ADA MIN.

**INTERIOR ELEVATION**

350HW DOOR

**EXTERIOR ELEVATION**

350/500 Heavy Wall™ Entrances

**PANELINE™ / PANELINE™ EL EXIT DEVICE**

**EC 97911-191**

JANUARY, 2019

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

HORIZONTAL / VERTICAL CROSS RAILS

INFILL OPTIONS

BOTTOM RAILS

ACCESSORY ITEMS
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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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 = 28.813" x 75.156" = 15.04 ft²

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

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area) x 100
= (15.04 ÷ 23.9) x 100 = 63%

**System U-factor vs Percent of Glass Area**

Based on 63% glass and center of glass (COG) U-factor of 0.28
System U-factor is equal to 0.51 Btu/hr • ft² • °F
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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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 (winter conditions) and are obtained from your glass supplier.
350 Heavy Wall™ (SINGLE DOOR)

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

System Visible Transmittance (VT) vs Percent of Vision Area
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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### Thermal Performance Matrix (NFRC Size)

#### 350 Heavy Wall™ (SINGLE DOOR)

**Thermal Transmittance** (BTU/hr • ft$^2$ • °F)

<table>
<thead>
<tr>
<th>Glass U-Factor</th>
<th>Overall U-Factor</th>
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</thead>
<tbody>
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<tr>
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**SHGC Matrix**

<table>
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<th>Glass SHGC</th>
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**Visible Transmittance**

<table>
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<th>Glass VT</th>
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<tr>
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<tr>
<td>0.05</td>
<td>0.03</td>
</tr>
</tbody>
</table>

**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 Matrices are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

---

**ADMA030EN**
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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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 (winter conditions) and are obtained from your glass supplier.
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### 350 Heavy Wall™ (PAIR OF DOORS)

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

![Graph of System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area](image)

#### System Visible Transmittance (VT) vs Percent of Vision Area

![Graph of System Visible Transmittance (VT) vs Percent of Vision Area](image)
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---

### Thermal Transmittance

<table>
<thead>
<tr>
<th>Glass U-Factor</th>
<th>Overall U-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47</td>
<td>0.79</td>
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<td>0.44</td>
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<td>0.73</td>
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<td>0.60</td>
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### Visible Transmittance

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<tr>
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<tbody>
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</tr>
<tr>
<td>0.70</td>
<td>0.39</td>
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<tr>
<td>0.65</td>
<td>0.36</td>
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<td>0.40</td>
<td>0.22</td>
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</table>

### SHGC Matrix

<table>
<thead>
<tr>
<th>Glass SHGC</th>
<th>Overall SHGC</th>
</tr>
</thead>
<tbody>
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<td>0.46</td>
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<tr>
<td>0.70</td>
<td>0.43</td>
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<td>0.21</td>
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<tr>
<td>0.25</td>
<td>0.18</td>
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<tr>
<td>0.20</td>
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<tr>
<td>0.15</td>
<td>0.12</td>
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<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.07</td>
</tr>
</tbody>
</table>

### 350 Heavy Wall™ (PAIR OF DOORS)

**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 Matrices are based on the standard NFRC specimen size of 1,920 mm wide by 2,090 mm high (75-1/2” by 82-3/8”).

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**EC 97911-191**

JANUARY, 2019

THERMAL PERFORMANCE MATRIX (NFRC SIZE)
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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 (winter conditions) and are obtained from your glass supplier.
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### 350/500 Heavy Wall™ Entrances

**THERMAL PERFORMANCE MATRIX (NFRC SIZE)**

<table>
<thead>
<tr>
<th>Glass U-Factor</th>
<th>Overall U-Factor</th>
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</table>

\[\text{Thermal Transmittance} = 0.72 \text{ (BTU/hr} \cdot \text{ ft}^2 \cdot {\circ}F)\]

### 500 Heavy Wall™ (SINGLE DOOR)

**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 Matrices 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**

<table>
<thead>
<tr>
<th>Glass SHGC</th>
<th>Overall SHGC</th>
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<tbody>
<tr>
<td>0.75</td>
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<td>0.09</td>
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<td>0.07</td>
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**Visible Transmittance**

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<th>Glass VT</th>
<th>Overall VT</th>
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<td>0.29</td>
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### System U-factor vs Percent of Glass Area

<table>
<thead>
<tr>
<th>Percent of Glass = Vision Area/Total Area</th>
<th>System U-factor (BTU/hr·ft²·°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COG</td>
<td>U-factor</td>
</tr>
<tr>
<td>0.47 (2.67)</td>
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<tr>
<td>0.46 (2.61)</td>
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<tr>
<td>0.44 (2.50)</td>
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<tr>
<td>0.42 (2.39)</td>
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<tr>
<td>0.40 (2.27)</td>
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<tr>
<td>0.38 (2.16)</td>
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<td>0.36 (2.05)</td>
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<tr>
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<tr>
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<td>0.10 (0.57)</td>
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</tr>
</tbody>
</table>

**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 (winter conditions) and are obtained from your glass supplier.
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350/500 Heavy Wall™ Entrances

500 Heavy Wall™ (PAIR OF DOORS)

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

![Graph showing System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area](image)

**System Visible Transmittance (VT) vs Percent of Vision Area**

![Graph showing System Visible Transmittance (VT) vs Percent of Vision Area](image)
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### 350/500 Heavy Wall™ Entrances

**THERMAL PERFORMANCE MATRIX (NFRC SIZE)**

**JANUARY, 2019**

**EC 97911-191**

<table>
<thead>
<tr>
<th>Thermal Transmittance</th>
<th>1 (BTU/hr • ft² • °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass U-Factor ³</td>
<td>Overall U-Factor ⁴</td>
</tr>
<tr>
<td>0.48</td>
<td>0.82</td>
</tr>
<tr>
<td>0.46</td>
<td>0.82</td>
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<tr>
<td>0.44</td>
<td>0.81</td>
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| 500 Heavy Wall™ (PAIR OF DOORS) |

**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 Matrices are based on the standard NFRC specimen size of 1,920 mm wide by 2,090 mm high (75-1/2" by 82-3/8").

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