IMPACT GRADE

BLAST GRADE



Series 660 Single Hung* • Series 670 Double Hung • Series 6600 Fixed** 3 %" Heavy Commercial Hung Thermal Window

*BLAST & IMPACT GRADE **IMPACT GRADE

Configurations Single Hung • Double Hung • Fixed

This product family of hung windows retains an AAMA Heavy Commercial and Architectural Grade rating to meet the most demanding specifications and is a proven performer in projects ranging from historical replication to new construction. This hung window series is an attractive and economical product for a wide range of applications. Multiple glazing options offer flexibility to meet specific design requirements. A thermal barrier in the frame and sash improves thermal performance enhancing energy saving potential. Offered with a complete line of sub frames, mullions and architectural sills, this product family provides the complete solution for fenestration needs.

Manufacturer

EFCO

0f

Architectural

And

Commercial

Grade

Windows,

Curtain Walls,

Entrances,

And

Storefronts

EFCO CORPORATION 1000 COUNTY RD MONETT, MO 65708 800.221.4169

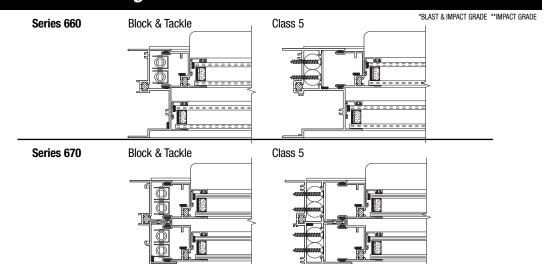
Features Benefits

Thermal barrier in vent and frame	Improves U-Value performance Enhances energy saving potential
Weather-stripped sash and sill	Provides superior air and water performance
Continuous interlock meeting rails	Improves air infiltration resistance
Accommodates glazing units from ½" to 1 ½" depth	Expands design and energy saving options
Inside or outside glazed sash	Flexibility in design requirements for glazing
Dual glazing with optional integral blinds	Improved energy savings and interior light or privacy control with low maintenance
Automatic top and bottom sash locks available	Increased convenience
Screen frames of extruded aluminum alloy are available	Stronger more durable screens
Trim-All™ panning available	Allows matching of existing sight lines in restoration projects
Accessory line of subframes, mullions, and architectural sills	Allows custom designs with standard product
Anodized or painted finishes available	Unlimited options to answer economic and aesthetic concerns
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Performance Data

S-660 Single Hung	Heavy Commercial
AAMA Rating (NAFS-02)	
Air Infiltration	<.10 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±75.0 psf
CRF-Frame (1503-98)	
CRF-Glass (1503-98)	
U-Value (1503-98)	
U-Value (NFRC-102)	

o valao (mino roz)	
S-670 Double Hung	Heavy Commercial
Air Infiltration	. <.10 cfm/sf @ 1.56A psf
Water	No Leakage @ 12.0 psf
Structural	±75.0 psf
CRF-Frame (1503-98)	
CRF-Glass (1503-98)	
U-Value (1503-98)	
U-Value (NFRC-102)	

S-660 Single Hung	Architectural Grade
AAMA Rating (NAFS-02)	
Air Infiltration	<.10 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±75.0 psf
CRF-Frame (1503-98)	
CRF-Glass (1503-98)	
U-Value (1503-98)	
U-Value (NFRC-102)	

S-670 Double Hung	Architectural Grade
AAMA Rating (NAFS-02)	
Air Infiltration	18 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±75.0 psf
CRF-Frame (1503-98)	
CRF-Glass (1503-98)	
U-Value (1503-98)	
U-Value (NFRC-102)	

C = Dual glazed
D = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear
E = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" air, 1/4" clear
F = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" argon, 1/4" c
G = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear (Low Emissivity)

A = Estimated values and/or designations B = Non-standard size or configuration

Grade		iding Fixed Window
H-AW50	Architec	tural Grade
6.24 psf		F-AW80
12.0 psf		<.06 cfm/sf @ 6.24 psf
75.0 psf		No Leakage @ 15.0 psf
51 ⁶		±120.0 psf
59 ⁶		
56 ^g	U-Value (1503-98)	
52 ^g	U-Value (NFRC-97)	

S-660 Single Hung & S-670 Double Hung Hardware Chart	Sweep Lock	Auto Head Lock	Auto Sill Lock	Pole Ring Sweep Lock	Pole Socket	Access Controlled Sweep Handle	2 or 4 Block & Tackle Balances	2 or 4 Class 5 Balances
Single Hung	S		0	0	0	0	S	0
Double Hung	S	S	0	0	0	0	S	0

Some size restrictions may apply depending on hardware selected. 0 -Optional S--Standard blank - N/A

Inside Glazed S-660 Single Hung & S-670 Double Hung		Polycarbonate			Glass or Panel															
Glazing Chart		1/8"	3/16"	1/4"	1/8"	.156"*	3/16"	.200"*	1/4"	1/4"**	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"	1-3/4"	2"
Monolithic & Insulated Glass					Α	Α	Α	Α	Α	Α	Α	Α	Α		Α		Α			
Dual Glazing	Exterior Lite				I	I	ı	ı	I	Α	Α	Α								
Dual Glazilly	Interior Lite						Α	Α	Α											

*-Obscure Glass
Thickness
**-Laminated
Glass Thickness
A -Available
Glazing Option
I -Internal Blinds
Can Be Used With
This Type of Dual
Glazing
blank - N/A

Outside Glazed S-660 Single Hung & S-670 Double Hung		ycarbon	ate		Glass or Panel														
Glazing Chart	1/8"	3/16"	1/4"	1/8"	.156"*	3/16"	.200"*	1/4"	1/4"**	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"	1-3/4"	2"
Monolithic & Insulated Glass							Α	Α	Α	Α	Α	Α		Α	Α	Α			

Fixed S-6600		Pol	ycarbor	nate		Glass or Panel														
Glazing Chart		1/8"	3/16"	1/4"	1/8"	.156"*	3/16"	.200"*	1/4"	1/4"**	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"	1-3/4"	2"
Monolithic & Insulated Glass			Α	Α			Α	Α	Α	Α	Α	Α	Α		Α	Α	Α	Α	Α	Α
Dual Glazing	Exterior Lite				ı	I	I	I	I	I	I	I		I			Α			
Dual diazing	Interior Lite						Α	Α	Α											

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Frame Construction

The frames have a depth of 3 7/8" and are constructed of 6063-T6 aluminum alloy. The nominal material wall thickness for the frame is .080", and the sill has a minimum wall thickness of .094". Corners are of screw spline construction and sealed. See Illustration 1.

Sash Frame Construction

The sash consists of aluminum members with .080" nominal material wall thickness of 6063-T6 alloy. Corners are of screw spline construction and sealed. Dual weather-stripped, continuous interlock at the sash meeting rail(s) offers superior weathering and structural performance. See Illustration 2.

Weather Stripping

All sash are weather-stripped with FIN-SEAL® or equal. Two holes or slots per sash through the window frame facilitate weepage.

Screens

Screen frames are extruded 6063-T6 aluminum alloy. Screens are easily removed by retracting two plungers located on the interior face of the screen frame near the sill at each jamb. Full or half screens are available. 18 x 16 mesh screens are available in fiberglass and .011" diameter aluminum. 18 x 18 mesh screens are available in .009" diameter stainless steel.

Thermal Barrier

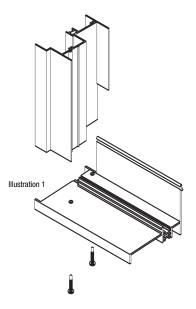
Sills are thermally isolated with two thermal struts, consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions. All other frames and sash are thermally broken using the latest technology in two-part high density polyurethane. See Illustration 3.

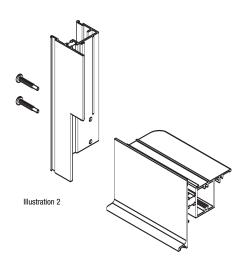
Hardware

Sweep locks, access controlled sweep locks, pole ring sweep locks, and keepers are of cast white bronze with a US25D finish. Automatic head and sill locks are fabricated of aluminum alloy and finished to match the window. Two types of balance systems are available. A spring loaded block and tackle balance rated Class 1 with a .70 MAF* ratio is standard. A high performance torsion spring and extension spring balance rated Class 5 with a .30 MAF* ratio is optional. EFCO reserves the right to substitute a higher performance balance as project conditions dictate, i.e., large, heavy sash requiring minimum operating force. See the Hardware Chart for available hardware types.

Glazing

Sash is inside or outside glazed with an extruded aluminum snap-in glazing bead. Glazing of 1/8" to $1\ 1/4$ " can be accommodated. Dual glazing is also available in 1/8", 3/16", and 1/4" glass. Between the glass 5/8" aluminum blinds are available with dual glazed windows. Series 6600 fixed frame windows accommodate glass or panels from 1/8" to $3\ 1/2$ " thick. See the Glazing Chart for the exact size.





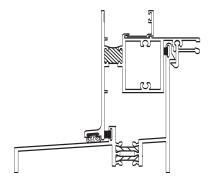
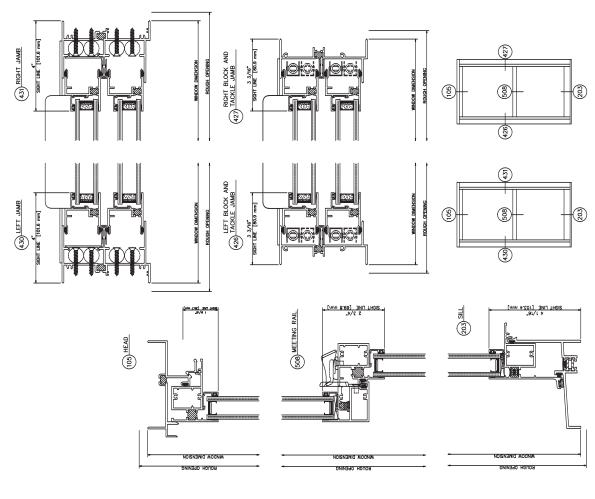
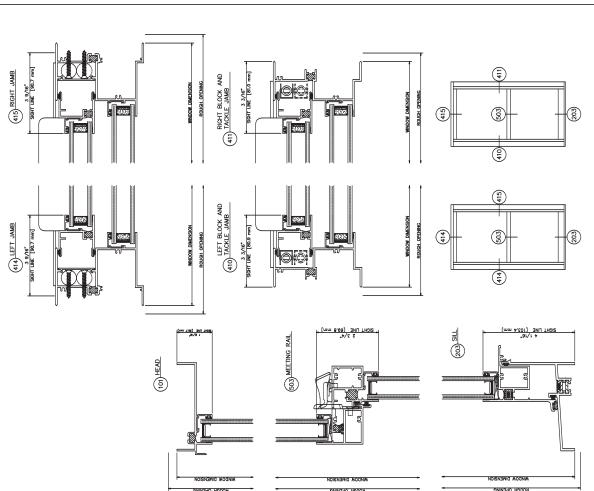


Illustration 3

Inside Glazing with Block and Tackle Balances

660 Single Hung





ER65 — 1/4" Interior Panel 1/4" monolithic



1/4" MONOLITHIC

