Casement and Projected Windows



Commercial Casement and Projected Windows for Retrofit and New Construction



Legacy on the Lake - Austin, TX Series 835, 850, Sandstone



Bon Villa Apartments - Oak Park, IL Series 800, 810, 850, Black



Town Center at Parole - Annapolis, MD Series 800, 850, Indy Green, White



Park Place Condominiums - Annapolis, MD Series 800, 850 Bone White

12805 E. 31st St • Tulsa, OK 74146 (800) 259-7580 • Fax (918) 665-2197 Email: info@thermalwindows.com www.thermalwindows.com

PROJECTED / CASEMENT WINDOWS

Standard Features

- Custom Sizes
- Integral Thermal Barrier throughout frame and sash
- AAMA 2604 organic powder coat finish
- 5 standard powder coat finish colors (see 'Finishes' section)
- Tested to AAMA specifications
- 1/8" Insulated glass (1" in Series 8xx)
- Extruded screen frame with fiberglass mesh

Available Options

- 25/8" or 31/4" frame depth
- Dual seal
- Anodized finishes
- AAMA 2605 high-performance finishes
- Tier 2 colors at no additional charge (minimums apply)
- Hundreds of special colors
- Low-E glass; tinted glass; obscure (frosted) glass
- Spandrel glass; insulating panels
- Wire screen mesh
- Panning, receptor systems, snap trim, angle trim
- Internal, external and special angled mullions
- Nailing fin
- Pole operators
- Crank, manual or motorized operators
- Internal and external applied muntins

SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 800" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 800" is an operable, outswing sash with concealed hinges, cam handles with a thermally improved frame and vent. The specifications and materials for the "Series 800" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a minimum nominal thickness of .062". Main frame shall be 2.625" in depth. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of two face-mounted cam locking assemblies. Window operator mechanism shall be the single arm by Truth. Operator shall be of drag arm / link design and constructed of Corrosion Guard components, hardened steel worm and gearing and high pressure zinc alloy die cast housing. Each vent shall have cam handle locks in a painted finish.

<u>Hinges</u> - Shall consist of a two stainless steel, four bar, adjustable friction concealed hinges meeting AAMA 904.1. Hinges shall be constructed of high quality stamped and roll formed materials.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

<u>Assembly</u> - Main frame shall be coped, butt joined and mechanically fastened with two screws. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The sash shall be mitered, sealed and crimped into corner inserts. All screws at joints shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass units shall be 1" overall thickness with the interior lite of double strength glass, separated by a .750" air space

for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Screens shall be full length.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The ventilator projects out to a 90 degree position for the widest possible egress opening. Hinges shall be non-handed and project the vent while opening to avoid interference between main frame and sash.

IV. PERFORMANCE:

<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AW-PG70 specification.

<u>Thermal</u> - Shall meet the requirements of AAMA 1504.88 CRF 79 / 63.

 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and

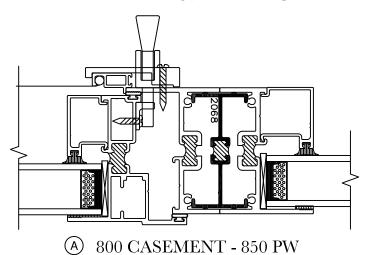
<u>Forced Entry</u> - Shall meet the requirements for ASTM F588 Load Identification Grade 10.

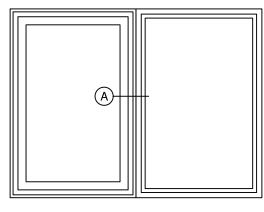
<u>Sound Transmission Class</u> - Shall meet the requirements of ASTM E90. Ratings vary depending upon glazing. See Product Selection Guide for summary.

V. INSTALLATION:

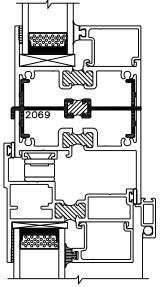
Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

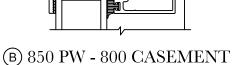
Typical Configurations (Scale: Half Size)

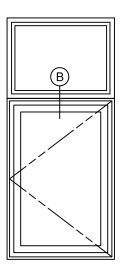




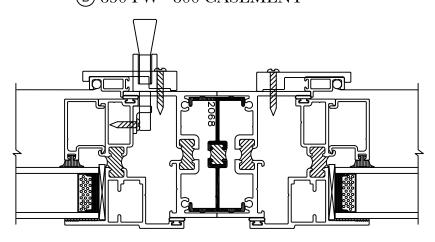
800 CASEMENT - 850 PW



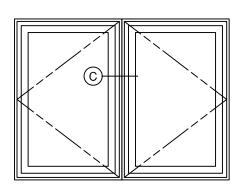




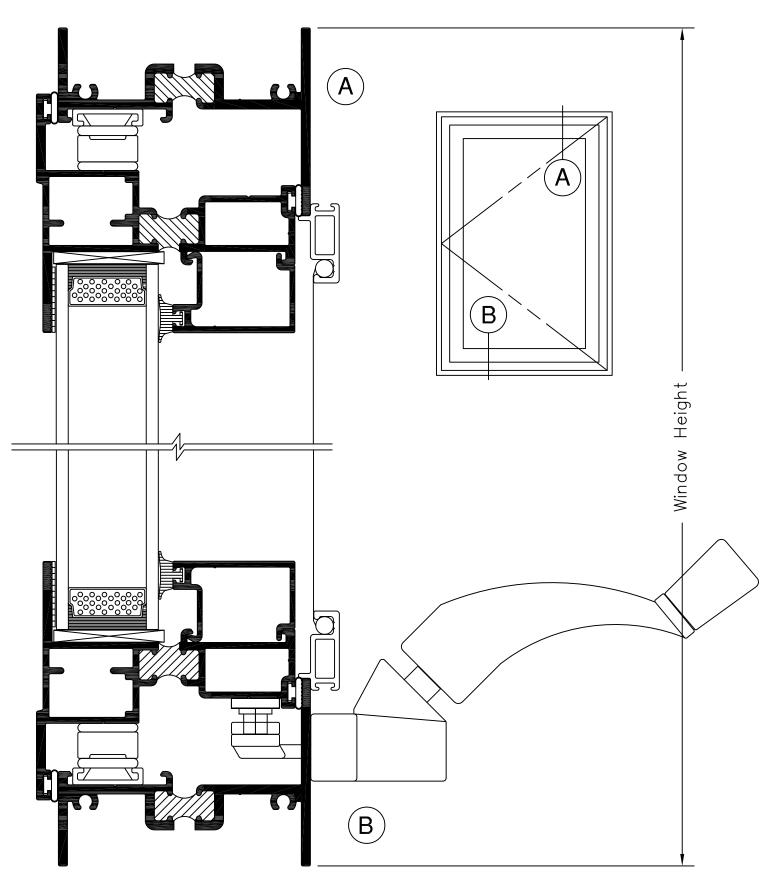
850 PW - 800 CASEMENT

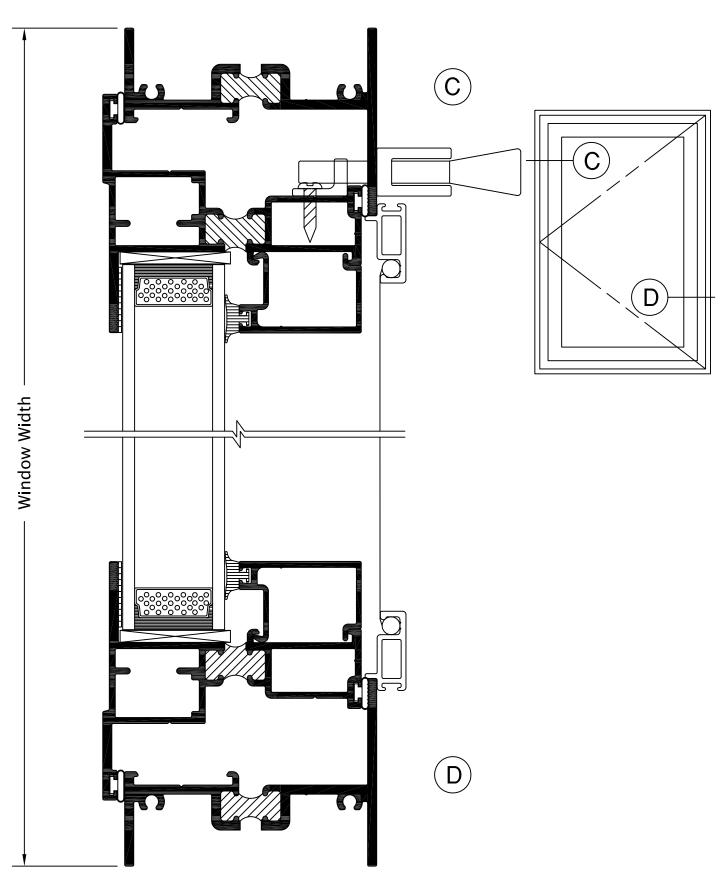






800 CASEMENT - 800 CASEMENT





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 800U" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 800U" is an operable, outswing sash with concealed hinges, cam handles with a thermally improved frame and vent. The specifications and materials for the "Series 800U" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a minimum nominal thickness of .062". Main frame shall be 2.625" in depth. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of glass-reinforced 28mm twin polyamide strips.

<u>Hardware</u> - Lock shall consist of two face-mounted cam locking assemblies. Window operator mechanism shall be the single arm Roto operator by Truth. Operator shall be of drag arm / link design and constructed of Corrosion Guard® components, hardened steel worm and gearing and high pressure zinc alloy die cast housing. Each vent shall have cam handle locks in a painted finish.

<u>Hinges</u> - Shall consist of a two stainless steel, four bar, adjustable friction concealed hinges meeting AAMA 904.1. Hinges shall be constructed of high quality stamped and roll formed materials.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

<u>Assembly</u> - Main frame shall be coped, butt joined and mechanically fastened with two screws. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The sash shall be mitered, sealed and crimped into corner inserts. All screws at joints shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass units shall be 1" overall thickness with the interior lite of double strength glass, separated by a .750" air space

for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A". Optional glazing thickness available for increased thermal performance.

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Screens shall be full length.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The ventilator projects out to a 90 degree position for the widest possible egress opening. Hinges shall be non-handed and project the vent while opening to avoid interference between main frame and sash.

IV. PERFORMANCE:

<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AW-PG70 specification.

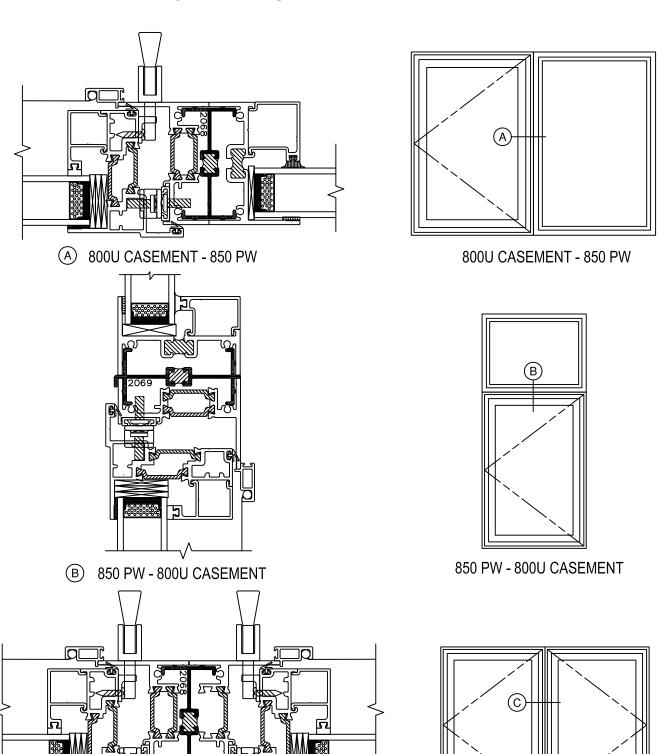
 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and

<u>Forced Entry</u> - Shall meet the requirements for ASTM F588 Load Identification Grade 10.

V. INSTALLATION:

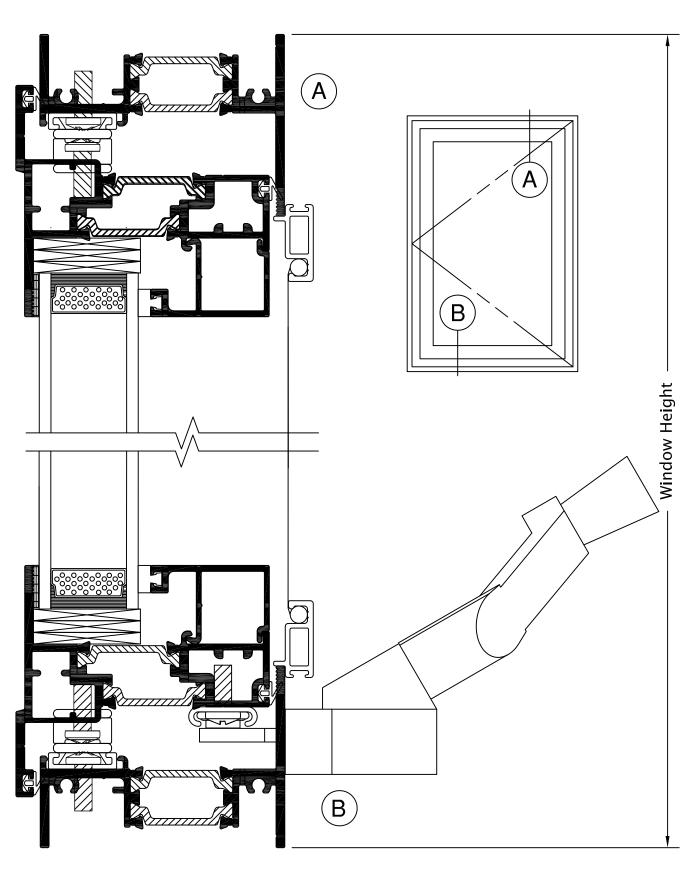
Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

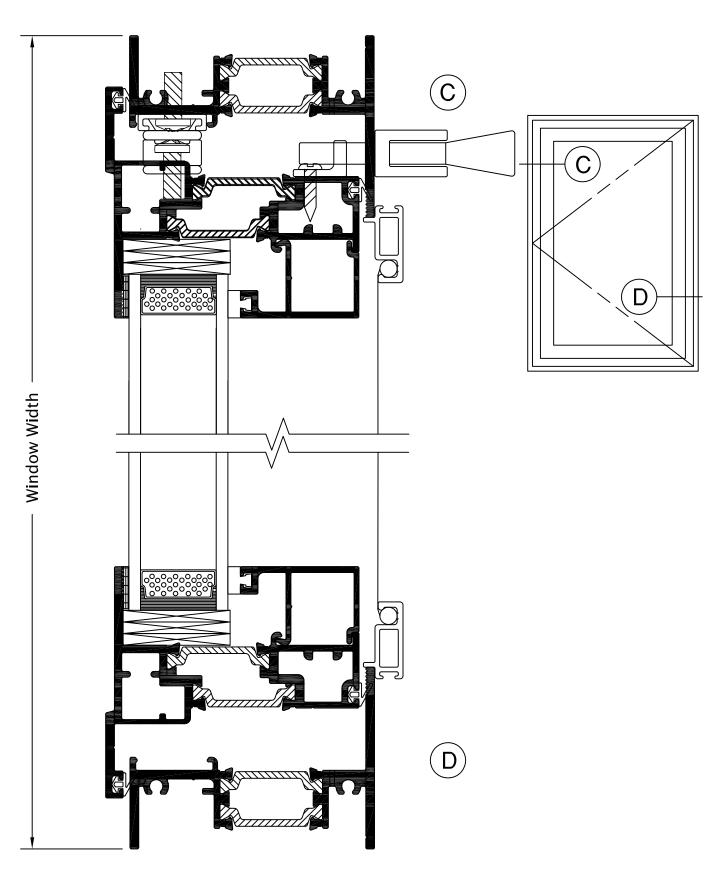
Typical Configurations (Scale: Half Size)



© 800U CASEMENT - 800U CASEMENT

800U CASEMENT - 800U CASEMENT





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 810" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 810" is a double operable, outswing sash with concealed hinges, cam handles with thermally improved frame and vent. The specifications and materials for the "Series 810" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a minimum nominal thickness of .062". Main frame shall be 2.625" in depth. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of two single point locking handle assemblies. Window operator mechanism shall be the Dyad Operator by Truth. Operator shall be of drag arm / link design and constructed of Corrosion Guard® components, hardened steel worm and gearing and high pressure zinc alloy die cast housing.

<u>Hinges</u> - Shall consist of a two stainless steel, four bar, adjustable friction concealed hinges meeting AAMA 904.1. Hinges shall be constructed of high quality stamped and roll formed materials.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

<u>Assembly</u> - Main frame shall be coped, butt joined and mechanically fastened with two screws. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The sash shall be mitered, sealed and crimped into corner inserts. All screws at joints shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass units shall be 1" overall thickness with the interior lite of double strength glass, separated by a .750" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Screens shall be full length.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The ventilator projects out to a 90 degree position for the widest possible egress opening. Hinges shall be non-handed and project the vent while opening to avoid interference between main frame and sash.

IV. PERFORMANCE:

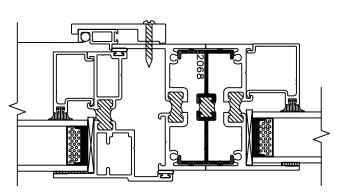
<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AW-PG70 specification.

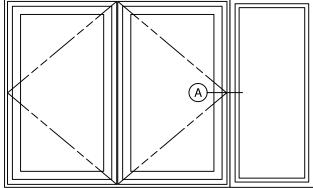
 $\underline{\mathsf{NFRC}}$ – Shall meet the requirements of NFRC 100 and 200.

V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

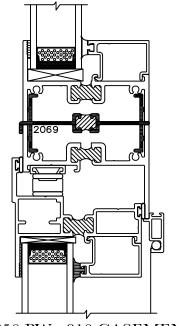
Typical Configurations (Scale: Half Size)

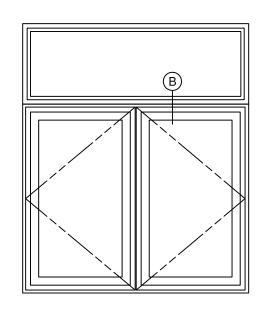




(A) 810 CASEMENT - 850 PW

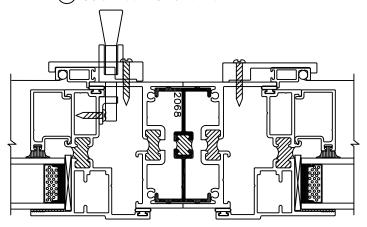
810 CASEMENT - 850 PW

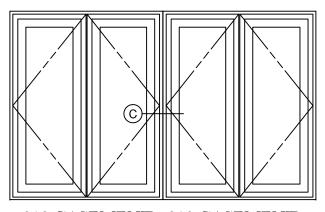




B 850 PW - 810 CASEMENT

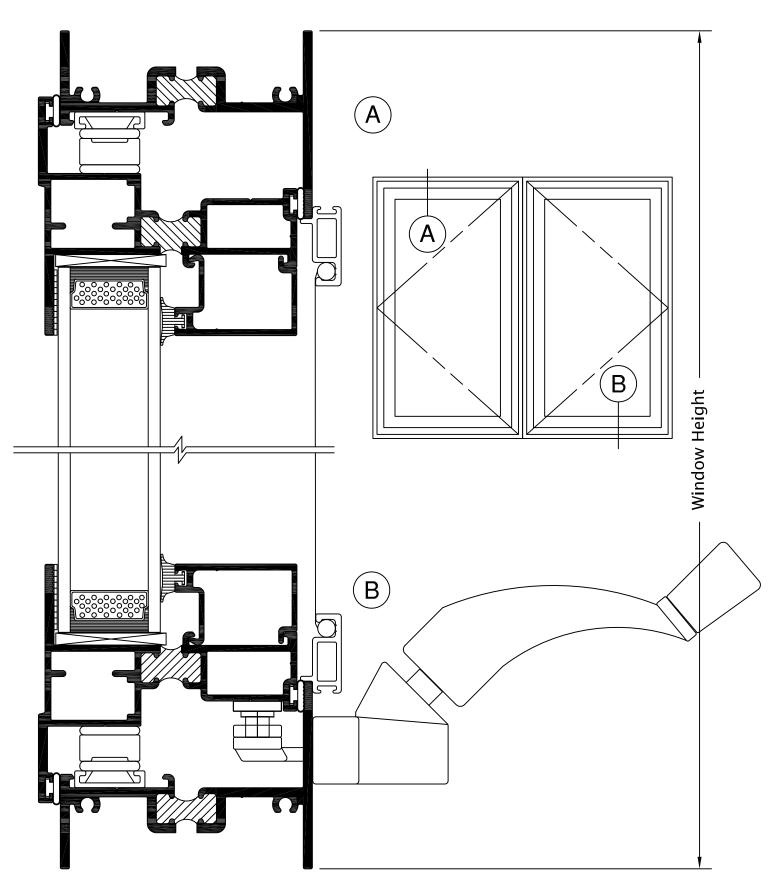
850 PW - 810 CASEMENT

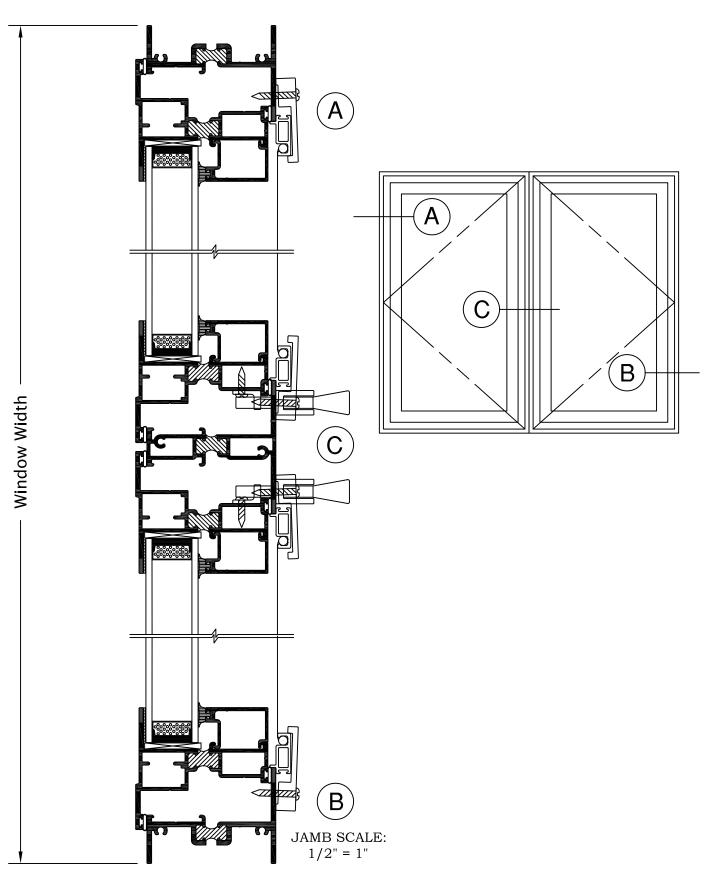




© 810 CASEMENT - 800 CASEMENT

810 CASEMENT - 810 CASEMENT





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 820" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 820" is an operable, inswing sash with concealed hinges, cam handles with a thermally improved frame and vent. The specifications and materials for the "Series 820" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a minimum nominal thickness of .062". Main frame shall be 2.625" in depth. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of a high quality white bronze cam handle manufactured by Bronze Craft. Handle assemblies shall be finished to US-25-D.

<u>Hinges</u> - Shall consist of two butt hinges cast of white bronze (BCA-100) with burnished finish, 1/4" diameter stainless steel pin, and nylon bearing washers.

Weatherstripping - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be coped, butt joined and mechanically fastened with two screws. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The sash shall be mitered, sealed, and crimped into corner inserts. All screws at joints shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass units shall be 1" overall thickness with the interior lite of double strength glass, separated by a .750" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Screens shall be full length.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The ventilator projects out to a 90 degree position for the widest possible egress opening. Hinges shall be non-handed and project the vent while opening to avoid interference between main frame and sash.

IV. PERFORMANCE:

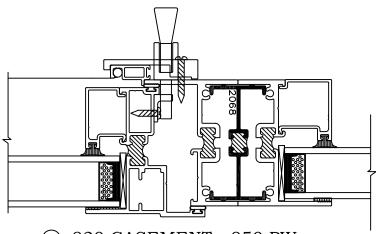
<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AW-PG70 specification.

 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and 200.

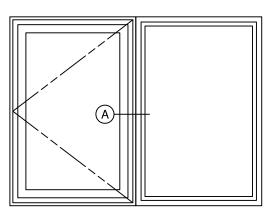
V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

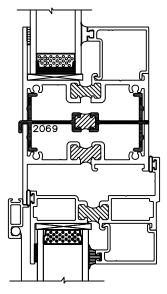
Typical Configurations (Scale: Half Size)



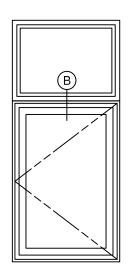
(A) 820 CASEMENT - 850 PW



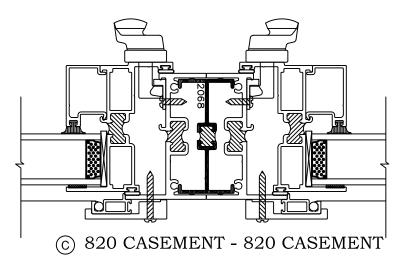
820 CASEMENT - 850 PW



B 850 PW - 820 CASEMENT

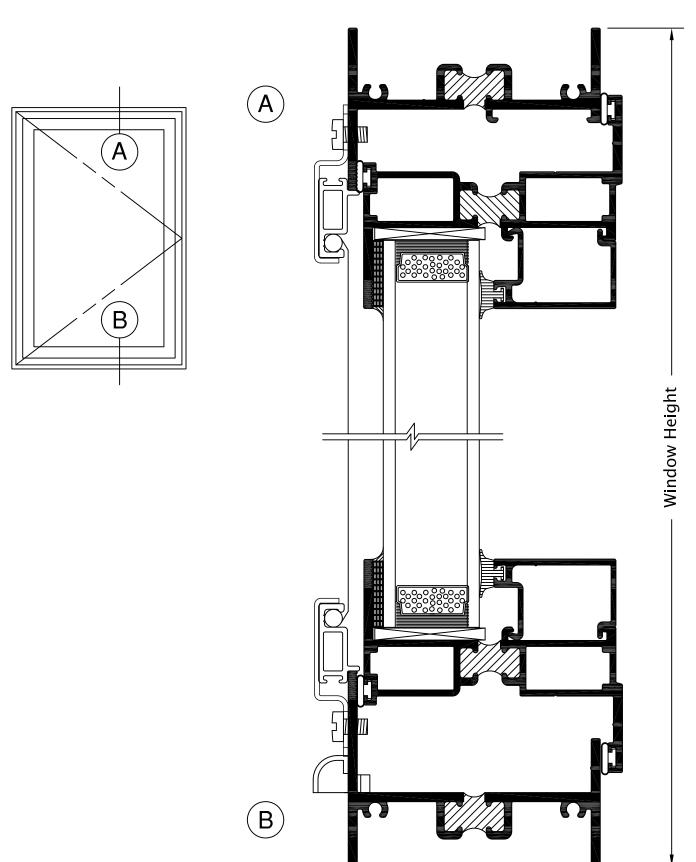


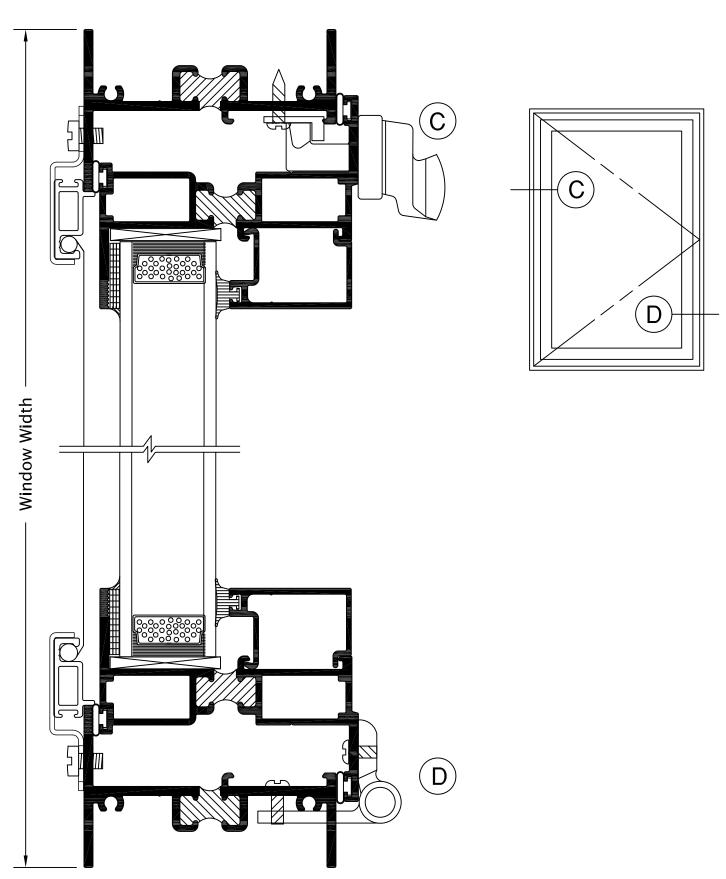
850 PW - 820 CASEMENT



C

820 CASEMENT - 820 CASEMENT





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 825" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 825" is a single vent project out awning with thermally improved main frame and vent consisting of a telescoping push bar and side hinges. The specifications and materials for the "Series 825" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a .094" nominal thickness. Main frame shall be 2.625" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of two face-mounted cam locking assemblies. Window operator mechanism shall be the Roto Gear Awning Operator by Truth.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used shall be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass units shall be 1" overall thickness with the interior lite of

double strength glass, separated by a .750" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of roll formed aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by screen retainer clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The vent is operable on the "Series 825" awning window and will project out for ventilation.

IV. PERFORMANCE

<u>Structural</u> - Shall meet the requirements of AAMA A440-08, AW-PG80 specification.

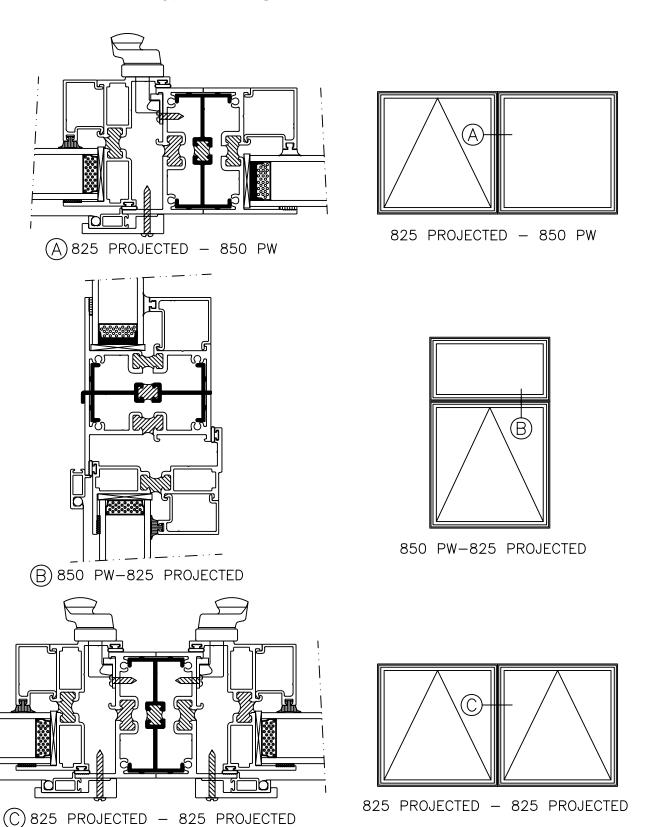
 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and 200.

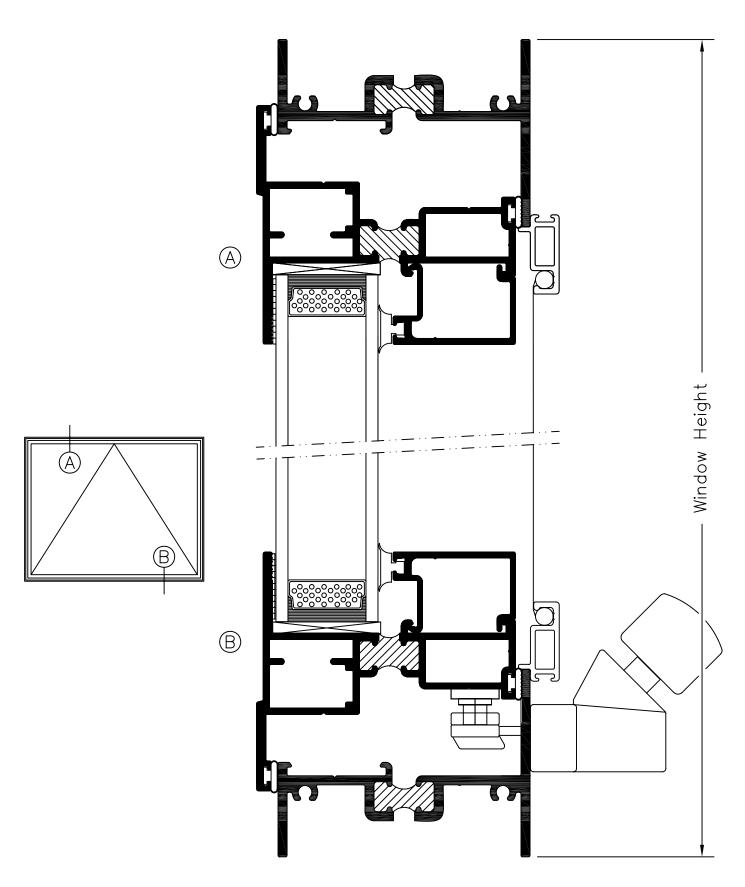
<u>Sound Transmission Class</u> - Shall meet the requirements of ASTM E90. Ratings vary depending upon glazing. See Product Selection Guide for summary.

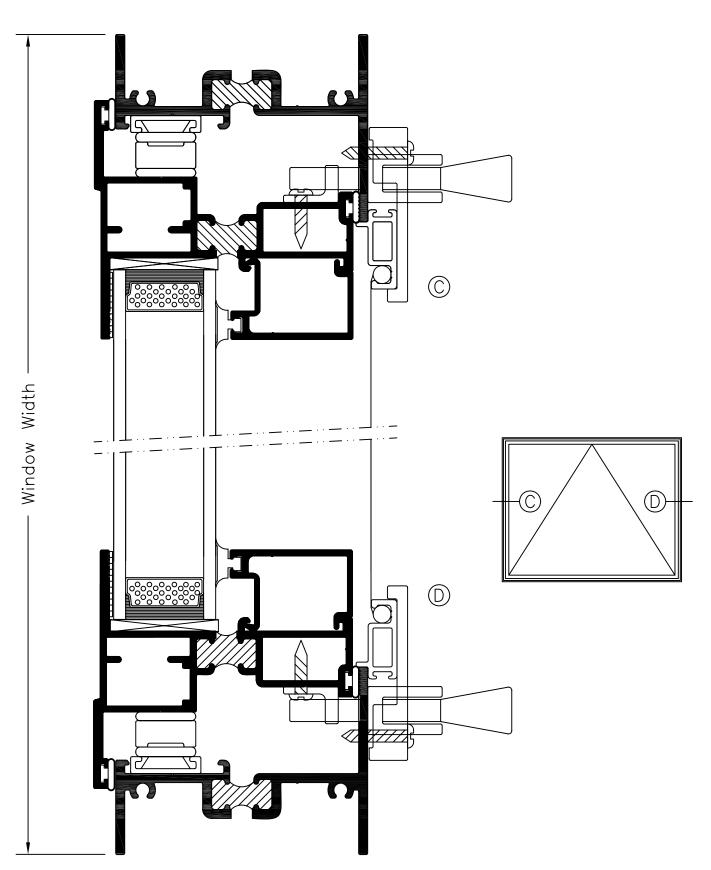
V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

Typical Configurations (Scale: Half Size)







SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 835" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 835" is a single vent project in hopper with thermally improved main frame and vent consisting of a cam handle with concealed pawl and side hinges. The specifications and materials for the "Series 835" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a .094" nominal thickness. Main frame shall be 2.625" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Window locks shall be of concealed pawl design and utilize a cast bronze keeper. The lock handle shall consist of a high quality white bronze cam manufactured by Bronze Craft. Handle assemblies shall be finished to US-25-D.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

<u>Assembly</u> - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass in the vent shall be factory glazed using butyl glazing tape with extruded aluminum glazing bead and vinyl wedge at interior of glass. The insulated glass

units shall be 1" overall thickness with the interior lite of double strength glass, separated by a .750" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of roll formed aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by screen retainer clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

<u>Operation</u> - The vent is operable on the "Series 835" hopper window and will project in for ventilation.

IV. PERFORMANCE

Structural - Shall meet the requirements of AAMA/ WDMA/CSA 101/I.S.2/A440-08, AW-PG80 specification.

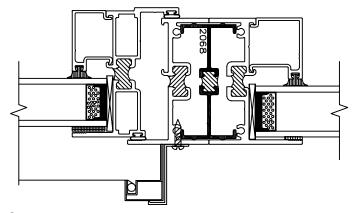
 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and 200.

<u>Sound Transmission Class</u> - Shall meet the requirements of ASTM E90. Ratings vary depending upon glazing. See Product Selection Guide for summary.

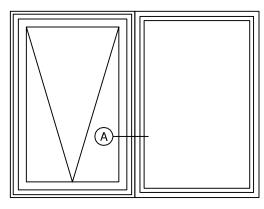
V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

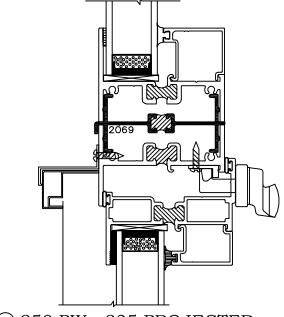
Typical Configurations (Scale: Half Size)



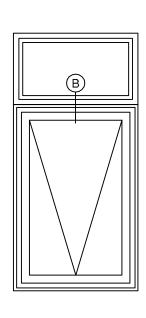
(A) 835 PROJECTED - 850 PW



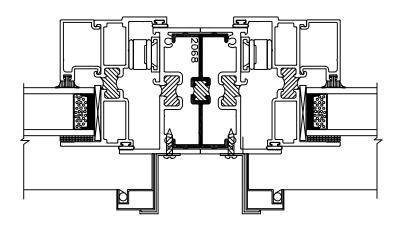
835 PROJECTED - 850 PW

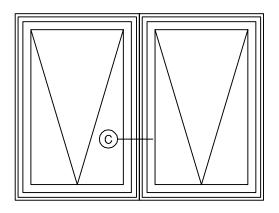


(B) 850 PW - 835 PROJECTED



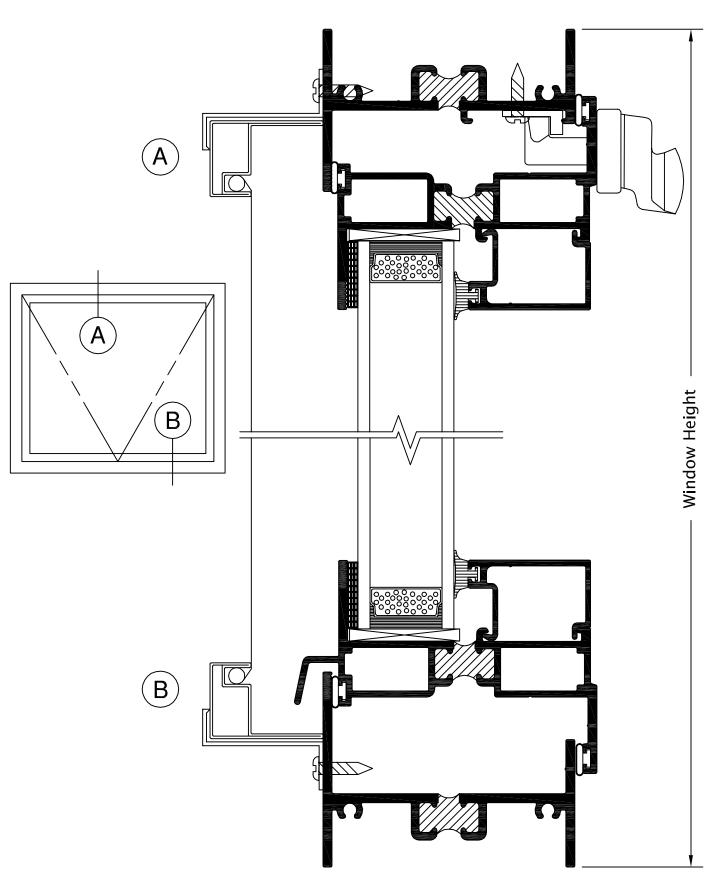
850 PW - 835 PROJECTED

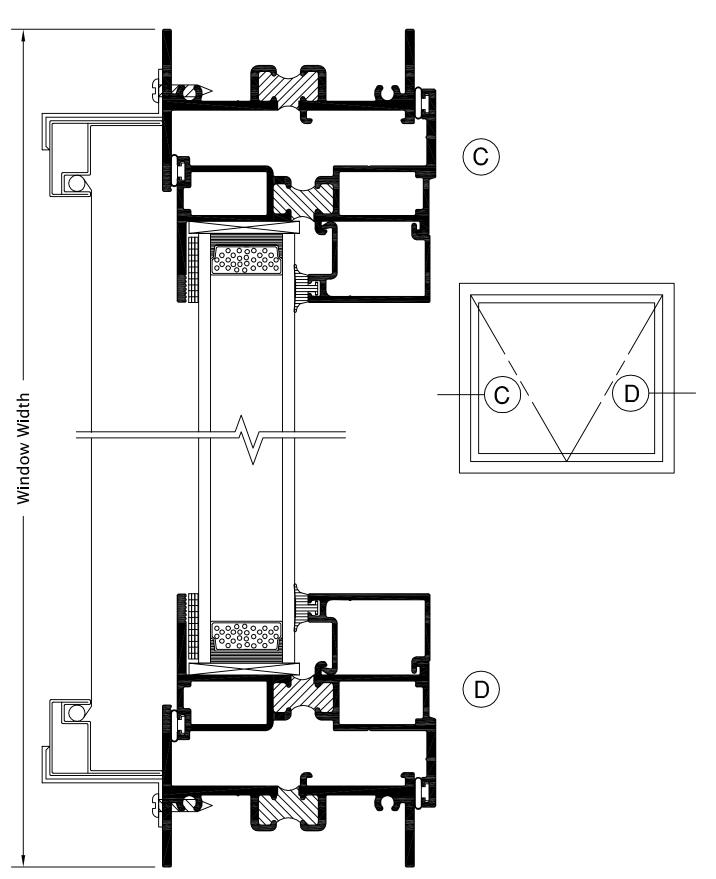




© 835 PROJECTED - 835 PROJECTED

835 PROJECTED - 835 PROJECTED





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 875" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 875" is a single frame window with a picture window stacked on top of a single vent project out awning window with a thermally improved main frame and vent consisting of a cam handle and side hinges. The specifications and materials for the "Series 875" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a .094 nominal thickness. Main frame shall be 2.625" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of a high quality white bronze cam handle manufactured by Bronze Craft. Handle assemblies shall be finished to US-25-D.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used shall be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass shall be inside glazed with a butyl glazing tape and snap in extruded aluminum glazing bead containing a vinyl insert. The insulated glass units shall be 1.000" overall thickness with two lites of glass, separated by an air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2188-02 / ASTM E 2190-02 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by dimple clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Standard Tier I colors available are bronze, white, creme, sandstone, and almond. Bronze anodizing, clear anodizing and high performance AAMA 605.2 finishes are optional.

Operation - The vent is operable on the "Series 875" awning window and will project out for ventilation.

IV. PERFORMANCE

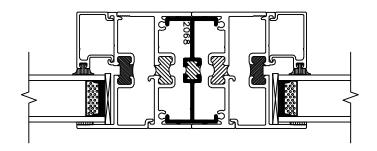
<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AW-PG75 specification.

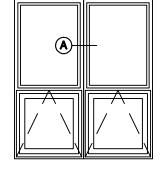
 $\frac{\text{NFRC}}{200}$ – Shall meet the requirements of NFRC 100 and

V. INSTALLATION:

<u>Qualifications</u> - Only skilled mechanics with experience in this trade. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

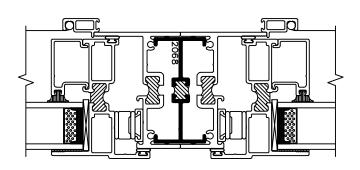
Typical Configurations (Scale: Half Size)

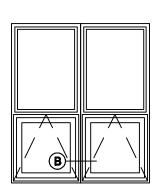




(A) 875 FIXED - 875 FIXED

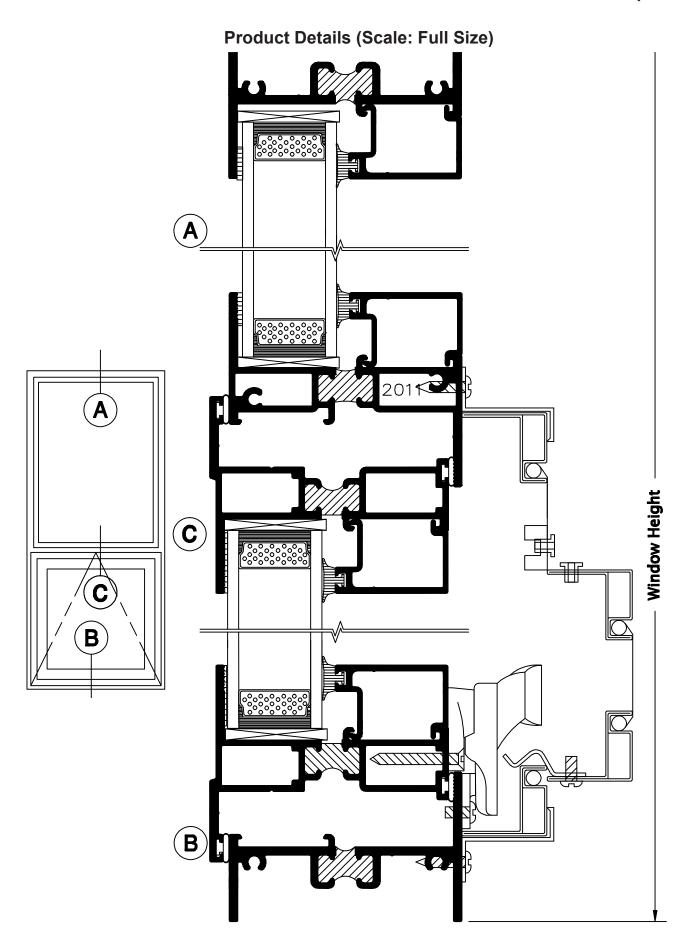
(A) 875 FIXED - 875 FIXED

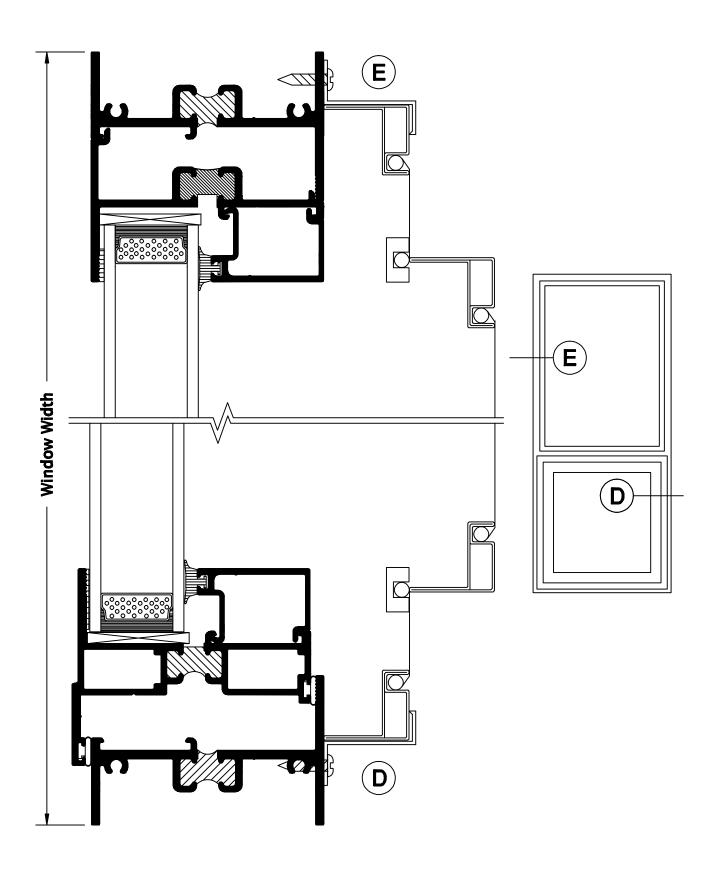




(B) 875 PROJECTED - 875 PROJECTED

B 875 PROJECTED - 875 PROJECTED





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor, and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 885" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 885" is a single frame window with a fixed window stacked on top of a single vent project in hopper window with thermally improved main frame and vent consisting of a cam handle with concealed pawl and side hinges. The specifications and materials for the "Series 885" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame shall be a minimum nominal thickness of .094" and vent members shall be a .094" nominal thickness. Main frame shall be 2.625" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Window locks shall be of concealed pawl design and utilize a cast bronze keeper. The lock handle shall consist of a high quality white bronze cam manufactured by Bronze Craft. Handle assemblies shall be finished to US-25-D.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass shall be inside glazed with a butyl glazing tape and snap in extruded aluminum glazing bead containing a vinyl insert. The insulated glass units shall be 1.000" overall thickness with two lites of glass, separated by an air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2188-02 / ASTM E 2190-02 specification, Class "A".

<u>Screens</u> - Screen frame shall be of roll formed aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by screen retainer clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The vent is operable on the "Series 885" hopper window and will project in for ventilation.

IV. PERFORMANCE:

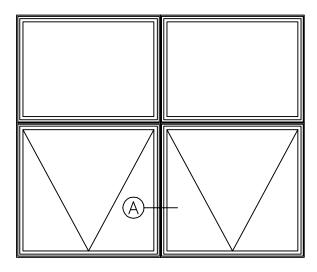
<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2.

 $\underline{\text{NFRC}}$ – Shall meet the requirements of NFRC 100 and 200.

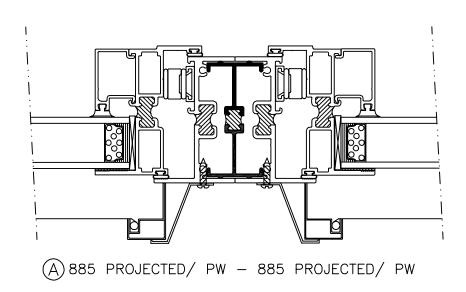
V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

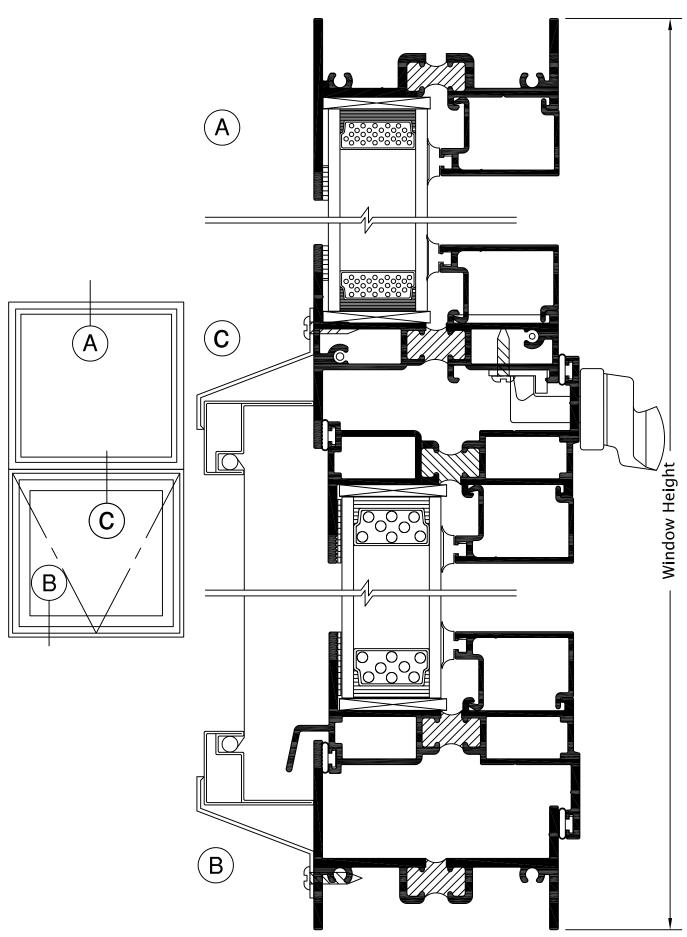
Typical Configurations (Scale: Half Size)

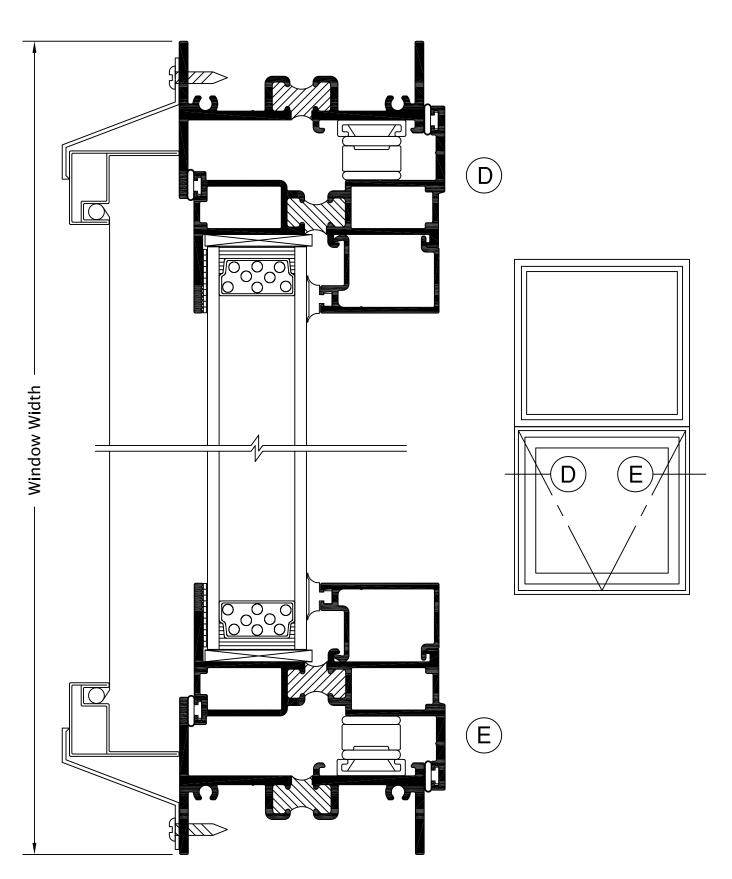


885 PROJECTED/ PW - 885 PROJECTED/ PW



See Accessories section for additional options





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 900" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 900" is a single vent project out casement with thermally improved main frame and vent consisting of a roto-operator and side hinge. The specifications and materials for the "Series 900" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame and sash members shall be a .062" nominal thickness. Main frame shall be 3.25" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of a single throw multipoint latch assembly with progressive locking action and low profile housing. Window operator mechanism should be crank operated and provide smooth operation out to 90 degrees of sash opening. Operator will be of drag arm / link design and constructed of Corrosion Gard components, hardened steel worm and gearing and high pressure zinc alloy die cast housing. Handle shall have the fold-down feature.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass in the operable vent shall be factory glazed with a marine (wrap around) reusable vinyl glazing channel. The insulated glass units shall be .875" overall thickness with two panes of double strength glass, separated by a .625" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A"

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by four dimple clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The vent is operable on the "Series 900" casement window and will project out for ventilation. Standard hinges allow for easy cleaning from the interior.

IV. PERFORMANCE:

<u>Structural</u> - Shall meet the requirements of AAMA/ WDMA/CSA 101/I.S.2/A440-08, CW-PG70 specification.

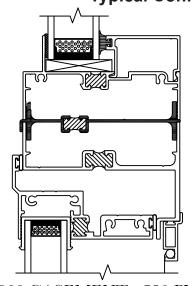
NFRC – Shall meet the requirements of NFRC 100 and 200.

<u>Sound Transmission Class</u> - Shall meet the requirements of ASTM E90. Ratings vary depending upon glazing. See Product Selection Guide for summary.

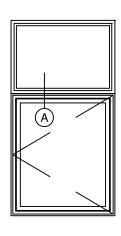
V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

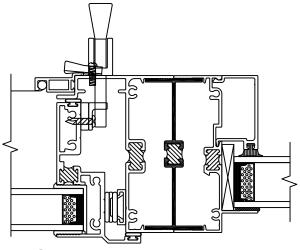
Typical Configurations (Scale: Half Size)



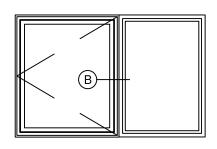
(A) 900 CASEMENT - 750 PW



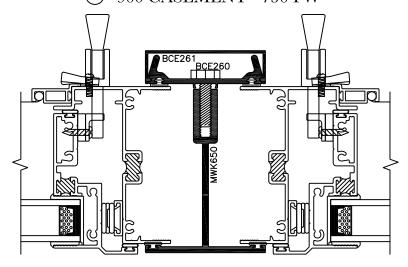
900 CASEMENT - 750 PW



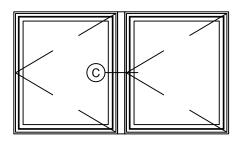
(B) 900 CASEMENT - 750 PW



900 CASEMENT - 750 PW

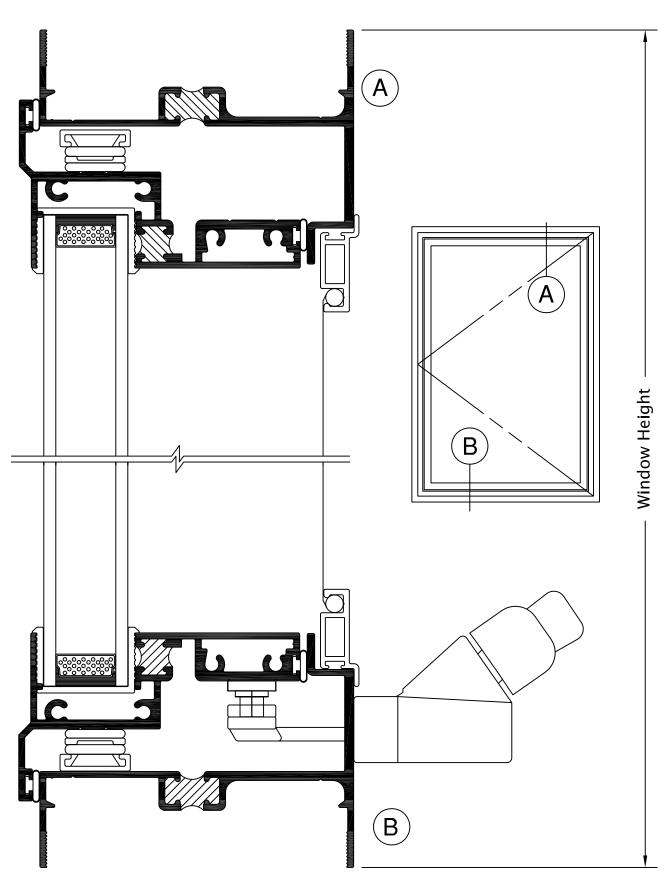


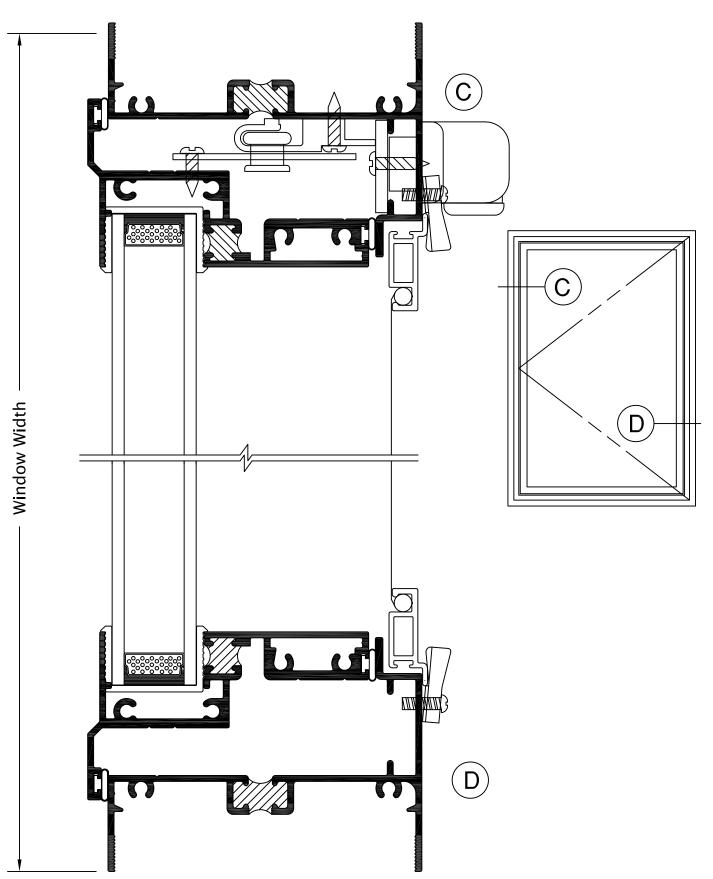
© 900 CASEMENT - 900 CASEMENT



900 CASEMENT - 900 CASEMENT

See Accessories section for additional options





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 910" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 910" is a dual vent project out casement with thermally improved main frame and vents consisting of roto-operators and side hinges. The specifications and materials for the "Series 910" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame and sash members shall be a .062" nominal thickness. Main frame shall be 3.25" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Locks shall consist of a single throw multipoint latch assembly on each vent with progressive locking action and low profile housing. Window operators mechanism shall be crank operated and provide smooth operation out to 90 degrees of sash opening. Operators will be of drag arm / link design and constructed of Corrosion Gard components, hardened steel worm and gearing and high pressure zinc alloy die cast housing. Handles shall have the fold-down feature.

<u>Hinges</u> - Each vent shall contain two stainless steel, four bar type design hinges, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

<u>Assembly</u> - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass in the operable vent shall be factory glazed with a marine (wrap around) reusable vinyl glazing channel. The insulated glass units shall be .875" overall thickness with two panes of double strength glass, separated by a .625" air space for optimum insulation. All insulated glass units shall meet the requirements of ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by four dimple clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - Each vent is operable on the "Series 910" casement window and will project out for ventilation. Standard hinges allow for easy cleaning from the interior.

IV. PERFORMANCE:

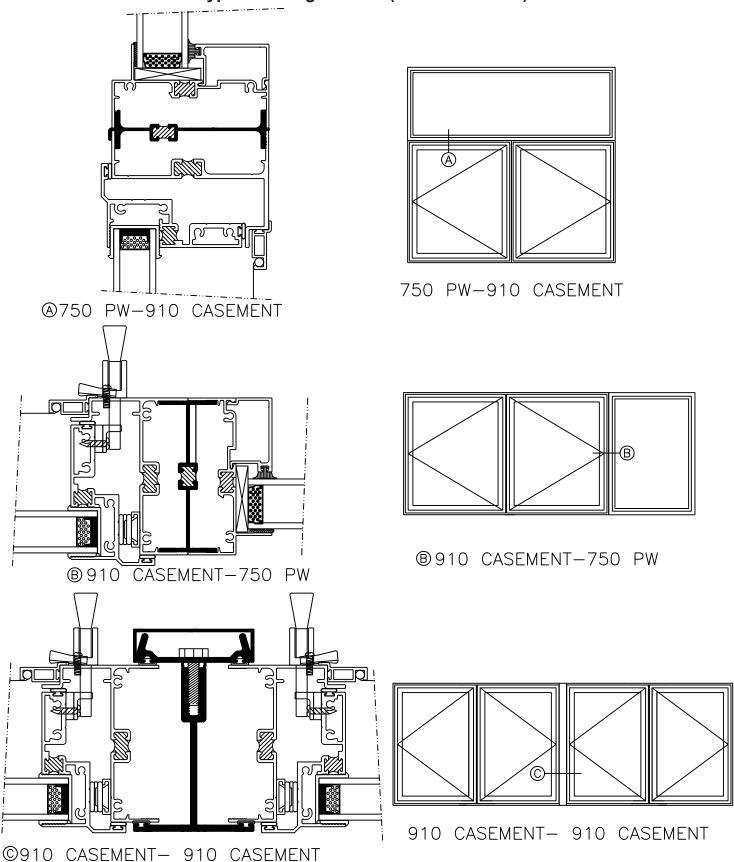
<u>Structural</u> - Shall meet the requirements of AAMA/ WDMA/CSA 101/I.S.2/A440-08, CW-PG70 specification.

 $\underline{\mathsf{NFRC}}$ – Shall meet the requirements of NFRC 100 and 200.

V. INSTALLATION:

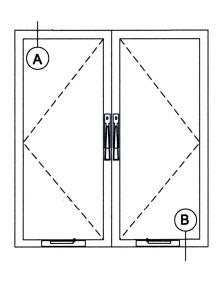
Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

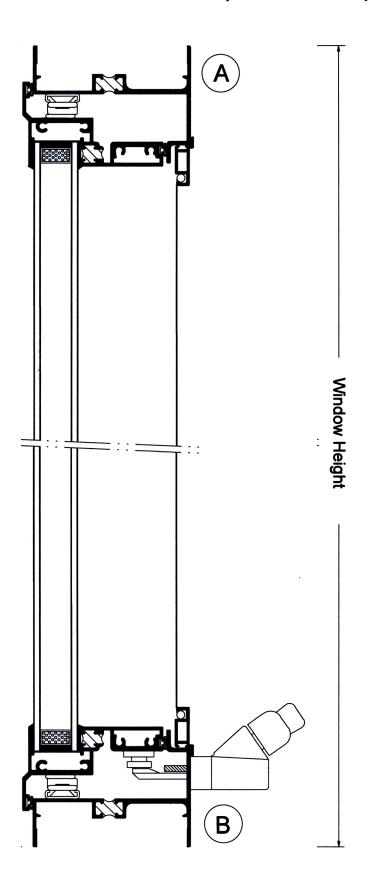
Typical Configurations (Scale: Half Size)



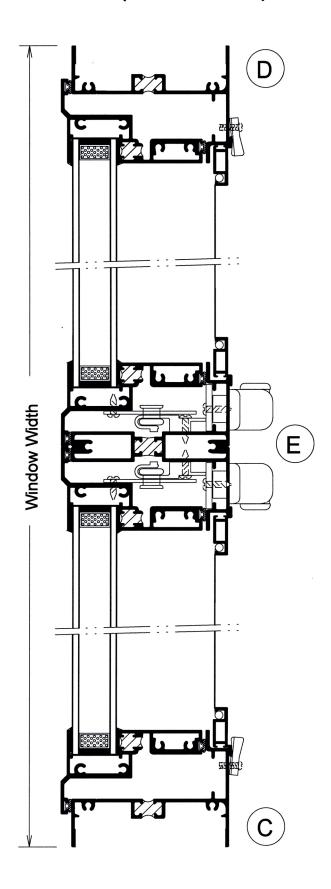
See Accessories section for additional options

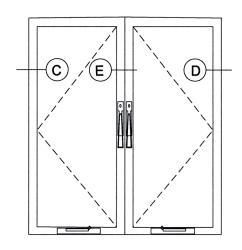
Product Details (Scale: Half size)





Product Details (Scale: Half size)





SPECIFICATIONS

I. GENERAL:

Scope of Work - Furnish all necessary materials, labor and equipment for the complete installation of aluminum windows for this project as shown on the drawings and herein specified. Windows shall be the "Series 925" as manufactured by Thermal Windows, Inc., Tulsa, Oklahoma. The "Series 925" is a single vent project out awning with thermally improved main frame and vent consisting of a roto-operator and side hinge. The specifications and materials for the "Series 925" are as follows:

II. PRODUCTS:

<u>Materials</u> - Aluminum shall be of proper alloy for commercial window construction. All extruded sections shall be of 6063-T5 aluminum alloy.

<u>Frame</u> - Main frame and sash members shall be a .062" nominal thickness. Main frame shall be 3.25" in depth. Horizontal and vertical vent members shall be hollow extrusions. Main frames and vent members are to be extruded aluminum with a structural thermal barrier of high density low thermal conductivity polyurethane, poured and debridged.

<u>Hardware</u> - Lock shall consist of two face-mounted cam locking assemblies. Window operator mechanism shall be the Roto Gear Awning Operator by Truth. Operator will be of scissor arm design driven by hand crank and constructed of Corrosion Gard components, hardened steel worm gear arms and high pressure zinc alloy die castings. Handle shall have the fold-down feature.

<u>Hinges</u> - Shall consist of two stainless steel, four bar type design, utilizing a screw adjusted slide shoe. Hinges shall be constructed of high quality stamped and roll formed materials. Hinges used must be certified to AAMA 904.1 specifications.

<u>Weatherstripping</u> - Shall have two rows of foam filled soft vinyl bulb weatherstrip at full perimeter of vents.

III. CONSTRUCTION:

Assembly - Main frame shall be a mechanically joined construction. Corner joints should be "seam sealed" with a quality grade of sealant meeting the requirements of AAMA 803.3. The vent shall be assembled with four screws at each corner. All screws at joints of vent and main frame shall be secured into integral screw ports.

Glazing - Glass in the operable vent shall be factory glazed with a marine (wrap around) reusable vinyl glazing channel. The insulated glass units shall be .875" overall thickness with two panes of double strength glass, separated by a .625" air space for optimum insulation. All insulated glass units shall meet the requirements of the ASTM E 2190 specification, Class "A".

<u>Screens</u> - Screen frame shall be of hollow extruded aluminum frames. Finish shall match the main frames and sash. Insect screening shall be fiberglass or aluminum wire secured with a vinyl spline. Each screen shall be fastened by dimple clips.

<u>Finish</u> - Shall be a factory applied baked polyurethane powder coat finish meeting the requirements of AAMA 2604 for Pigmented Organic Coating on Extruded Aluminum. Refer to "Colors and Finishes" chart for examples. Bronze anodizing, clear anodizing and high performance AAMA 2605 finishes are optional.

Operation - The vent is operable on the "Series 925" awning window and will project out for ventilation.

IV. PERFORMANCE

<u>Structural</u> - Shall meet the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08, AP-CW70 specification.

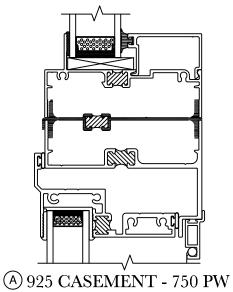
 $\underline{\mathsf{NFRC}}$ – Shall meet the requirements of NFRC 100 and 200.

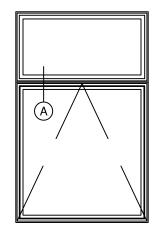
<u>Sound Transmission Class</u> - Shall meet the requirements of ASTM E90. Ratings vary depending upon glazing. See Product Selection Guide for summary.

V. INSTALLATION:

Qualifications - Installation shall be performed by skilled, experienced tradesmen. Units shall be installed plumb, level, square and shall be secured in accordance with detailed shop drawings. A non-hardening sealant compatible with aluminum shall be provided by the installer and applied in sufficient quantity to provide a weathertight seal between the window and surrounding construction.

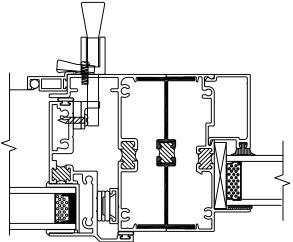
Typical Configurations (Scale: Half Size)



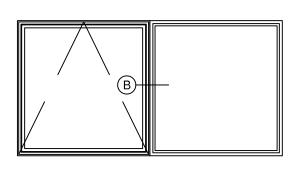


925 PROJECTED - 750 PW

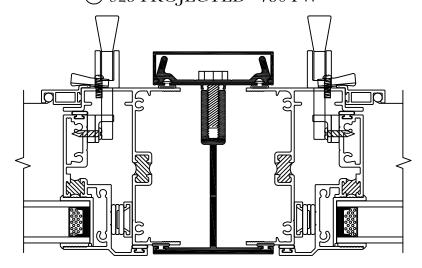


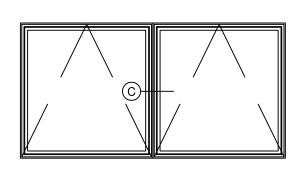


B 925 **PROJECTED -** 750 **PW**



925 **PROJECTED -** 750 PW





© 925 PROJECTED - 925 PROJECTED

925 PROJECTED - 925 PROJECTED

See Accessories section for additional options

