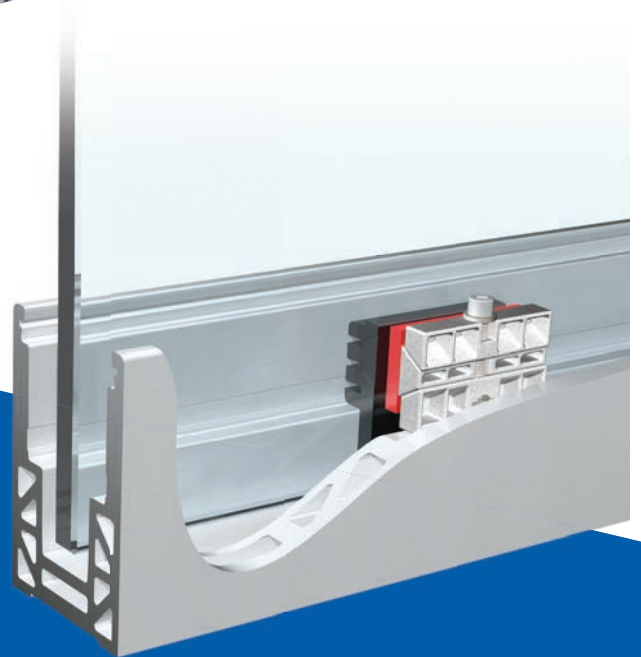


PanelGRIP[®] 2



 WAGNER

*The New Standard
in Glass Railing*

**Clearly the smart choice for
your next glass railing system**

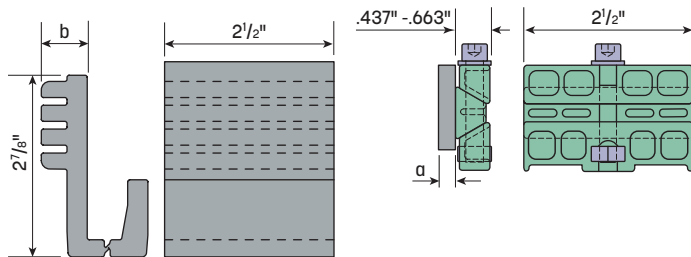
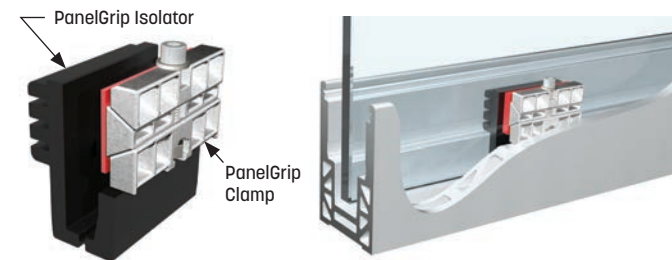
PanelGRIP[®] 2

glass railing system

The **Wagner PanelGrip System** utilizes a unique locking mechanism of high-strength Aluminum and PVC **Isolators** combined with a specially designed Aluminum **Base Shoe Moulding**.

When assembled with tempered or laminated tempered glass of the appropriate size, **PanelGrip** enables the installer to fabricate a structural **Glass Railing System** with significant reductions in labour and freight costs over standard wet glaze options.

The PanelGrip System was tested per ASTM E935, Standard Test Methods for Performance of Permanent Railing Systems and Rails for Buildings. This test report is available upon request.



PanelGrip 2 Clamping Assembly

Plastic Isolator with Aluminum **PanelGrip** Clamp

PanelGrip is set in place using our **SSSMWRENCH** or a $\frac{3}{16}$ " hex head, Allen wrench.

Subject to one or more of the following patents: US7730682, US8181405, NZ581456, CA2697162, EP2171180 and AU2008282693.

PANELGRIP PACKAGE OF 10	a	b	Isolator Colour	Pad Colour	Grip Range*
SSSM2GRIPS1	.250"	.670"	Black	Black	.470" to .550" (12 - 14mm)
SSSM2GRIPS2	.125"	.586"	Grey	White	.650" to .728" (16.5 - 18.5mm)
SSSM2GRIPS3	.035"	.507"	Cream	Red	.805" to .885" (20.5 - 22.5mm)

* Due to glass dimensional tolerances, you must confirm that your selected **PanelGrip** fits properly prior to final installation.

- **Reduce Labour Costs Up To 80% over Wet Glaze**
No sealing of **Base Shoe Moulding**, no **Setting Blocks**, no plumbing of glass, no multiple pours of cement, no waiting for cement to cure, and no messy clean-up.
- **Reduce Freight Costs Up To 30%**
PanelGrip shoe is almost 30% lighter than standard **Base Shoe Moulding** yet meets structural load requirements for railings.
- **Broadest Grip Range In One Base Of Any Dry Glaze Option**
For Monolithic and Laminated Tempered Glass. Options available to work with any panel between $\frac{1}{2}$ " and $\frac{7}{8}$ " (12.7mm and 21.5mm).
- **No Special Tools Required**
All you need is an Allen wrench for installation or removal.
- **No Mess**
No mixing and pouring of expansion cement.
No running of cement on incline.

PanelGrip 2 Base Shoe Moulding

Aluminum, 6005-T5; 10' and 20' Lengths

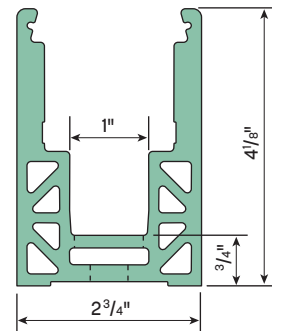
Lighter yet Stronger

For mounting **Glass Railing Systems** with **PanelGrip**.

Produced from extruded Aluminum, they may be painted or clad to match the **Top Rail** or area decor. The shoe is the key to the structural integrity of any **Glass Railing System**. Proper attachment is extremely important.

Subject to one or more of the following patents: US7730682, US8181405, NZ581456, CA2697162, EP2171180 and AU2008282693.

One Aluminum Base Shoe for monolithic and laminated glass from $\frac{1}{2}$ " to $\frac{3}{4}$ ".



COUNTERBORED HOLES		
1"	5.01	20'
1"	5.01	10'

Gasket - Black

For use with **Cladding** only.
 $\frac{1}{8}$ " Wide x $\frac{1}{4}$ " High.

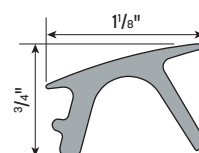
Peel back paper to reveal self-adhesive strip. Stick onto underside of **Cladding** before applying **Cladding** to **Base Shoe Moulding**. Accommodates all glass sizes.



GLASS OVER .460"	
Gasket 40'	SSSM2GASKET1

Gasket - Black, for PanelGrip

For use without **Cladding**.



Gasket 40'	SSSM2GASKET
------------	-------------

PanelGRIP^{®2}

glass railing system

PanelGrip Installation:

1. Plumbing PanelGrip Base Shoe Moulding

Before completing attachment of **PanelGrip Base Shoe Moulding** to substrate - take all necessary steps to assure that the mounted **Shoe** is adjusted such that the inside channel of the **Shoe** is plumb to $\pm 1/8"$ at an extended height of 42". Spend the time required to plumb the **Shoe** to this tolerance since **the glass will only be as plumb as the Shoe**.

2. Clear the PanelGrip Base of All Debris

3. Place Isolators

Place the **PanelGrip Plastic Isolators** into the **Base Shoe Moulding**. On inclines, a dab of silicone may be used to keep them in place while placing glass. Space **Plastic Isolators** a maximum of 14" on center with a maximum of 4" in from the left and right edges of each panel - 4 isolators per 4-foot panel.

4. Place Glass

Place the glass atop the **Plastic Isolators** in the **Base Shoe Moulding**.

*Warning: With multi-panel Railings, do not line up the edge of a panel with the end of the **Base Shoe Moulding** - place the panels so that they span **PanelGrip Base Shoe Moulding** butt joints to assist in alignment.*

5. Insert PanelGrip

Have someone hold the panel in place while you insert the Aluminum **PanelGrip** mechanism into place on the opposite side of the glass in alignment with the **Plastic Isolators**. Make sure that the plastic pad on the **PanelGrip** is facing the glass.

6. Tighten PanelGrip

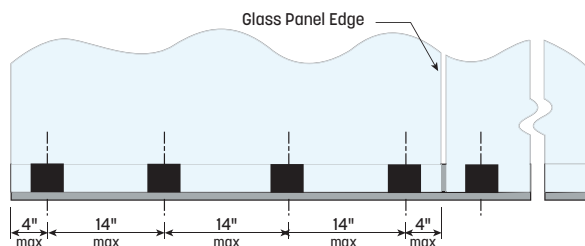
Using a $3/16"$ hex head wrench or the **PanelGrip Torque Wrench SSSMWRENCH**, tighten the **Cap Screw** on the **PanelGrip** mechanism. While tightening, the plastic pad will break away from the Aluminum as the unit expands.

7. Confirm Alignment and Tighten

Confirm alignment and make adjustments prior to final tightening, which will compress and lock the panel into place.

*Remember, **PanelGrip** is self-centering and self-plumbing. Make sure you have properly plumbed the **Shoe** as noted in Step 1.*

PanelGrip Spacing Guidelines



System for 200 lb. point load with a design factor of 4 for safety
14" center-to-center maximum with
4" maximum from center to glass edge.

The New Standard in Glass Railing

Once you have confirmed position, use a $3/16"$ hex head wrench or our **SSSMWRENCH** to make the **PanelGrip Cap Screw** snug-tight, then continue tightening to 10 ft-lbf (120 in-lbf) of torque. Repeat on all other **PanelGrip** mechanisms to secure the panel in position. DO NOT OVERTIGHTEN.

PanelGrip Torque Wrench

$3/8"$ Torque Wrench, $3/8"$ Drive, 20-200 in-lbf. For setting PanelGrip mechanism into **PanelGrip Base Shoe Moulding**.

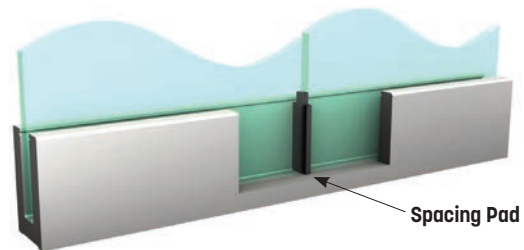


SSSMWRENCH

SSSMWRENCH

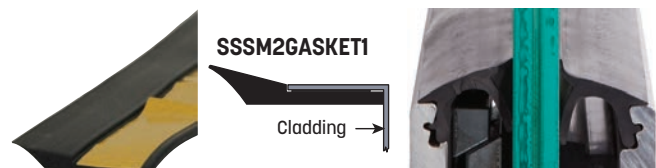
8. Insert Spacing Pads

Repeat with other lites of glass. Insert $1/4"$ **Spacing Pads** between glass panels to prevent glass-to-glass contact. Trim as required.



9. Seal Top of Shoe

Once glass is properly positioned, seal gap at the top of the **PanelGrip Base Shoe Moulding** using one of the two **Gasket** styles shown below. Spray glass cleaner onto glass to facilitate insertion of gaskets.



- **SSSM2GASKET1** is taped to the underside of the top lip of the **Cladding**.

- **SSSM2GASKET** is used without **Cladding**.

Weep holes should be provided with exterior applications.

10. Removal of Glass

Should you need to remove a panel, this can be done simply by loosening the **PanelGrip Cap Screw**.



PanelGrip2
Introduction Video



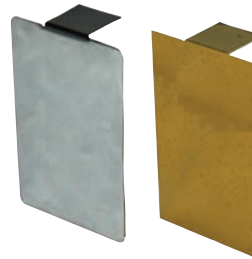
PanelGrip2
Installation Video

Drain Block

These **Drain Blocks** are placed under exterior installed **Base Shoe Mouldings** to provide drainage. One **Drain Block** should be placed under each mounting hole. They may be rotated for use with any available **Base Shoe Moulding**.



Size	Package	Colour	ALUMINUM
2 1/2" x 2 3/4" x 1/4"	10	Black	SSSM2DRAIN

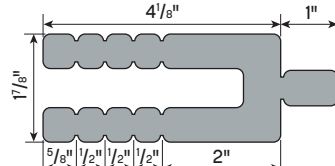


End Caps Formed From Sheet

Stackable Shims

5 1/8" Overall. 5/8" Slot Hole.

May be stacked as necessary. Supplied by the pack - 16 shims, stacked 1" high.



Thickness	Shims per Pack (sold in packs)	PLASTIC
1/16"	16	SSSM2SHIMS

Base Shoe Moulding End Caps - For use without Cladding

Width	Height	SATIN ALUMINUM
2 3/4"	4 1/8"	SSSM2ENDCAP

Base Shoe Moulding End Caps - For use with Cladding

These **End Caps** are for use when **Base Shoe Moulding** uses **Cladding** and **Cladding Tape** results in widening the overall width of the base by 1/8" - 1/16" on each side.

Width	Height	SATIN STAINLESS
2 7/8"	4 1/8"	SSSM2ENDCAP1



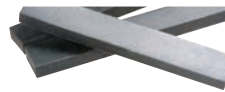
Spacing and Sealing Pads

These die-cut foam pads with adhesive on one side act as spacers for landing applications.

1/4" Thick, 3 7/16" High, High-Density Foam.

SSSM2SPACER

1/2" Glass	SSSM2SPACER
------------	-------------



SSSM2SPACER1

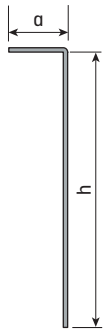
Spacer Blocks and Tool

1/4" x 3 5/16", Rigid Rubber with Adhesive. Required on stair or ramp installations to prevent the glass from sliding down. Trim height as required.

1/2" Glass	SSSM2SPACER1
------------	--------------

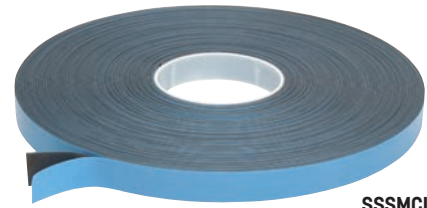


Job: Amway Arena, Orlando, FL
 Fabricator: Dixie Metal Products, Ocala, FL
 Photo by Randle Communications, Inc.



Cladding for Base Shoe Moulding
10' Lengths

a	h	Thick.	SATIN STAINLESS
7/8"	4 1/8"	1/16"	SSSMCLADDING



SSSMCLADTAPE

Cladding Tape

3/4" x 108' Roll

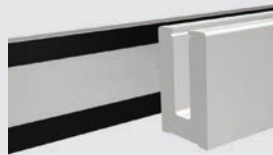
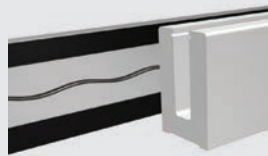
Pressure-sensitive, high-strength adhesive used for adhering **Cladding** and **End Caps** to **Base Shoe Moulding**.

	PART NUMBER
Cladding Tape	SSSMCLADTAPE

Recommended Attachment Options

Take care to properly align **Cladding** before pressing into place.

1. Apply two rows of **Tape** to the vertical face of the **Cladding** and apply a **Silicone** bead between the rows.
2. Apply two rows of **Tape** to the vertical face of the **Cladding**.
3. Apply **Silicone** to the vertical face of the **Cladding**. Use clamps to hold the **Cladding** in place until the **Silicone** cures.



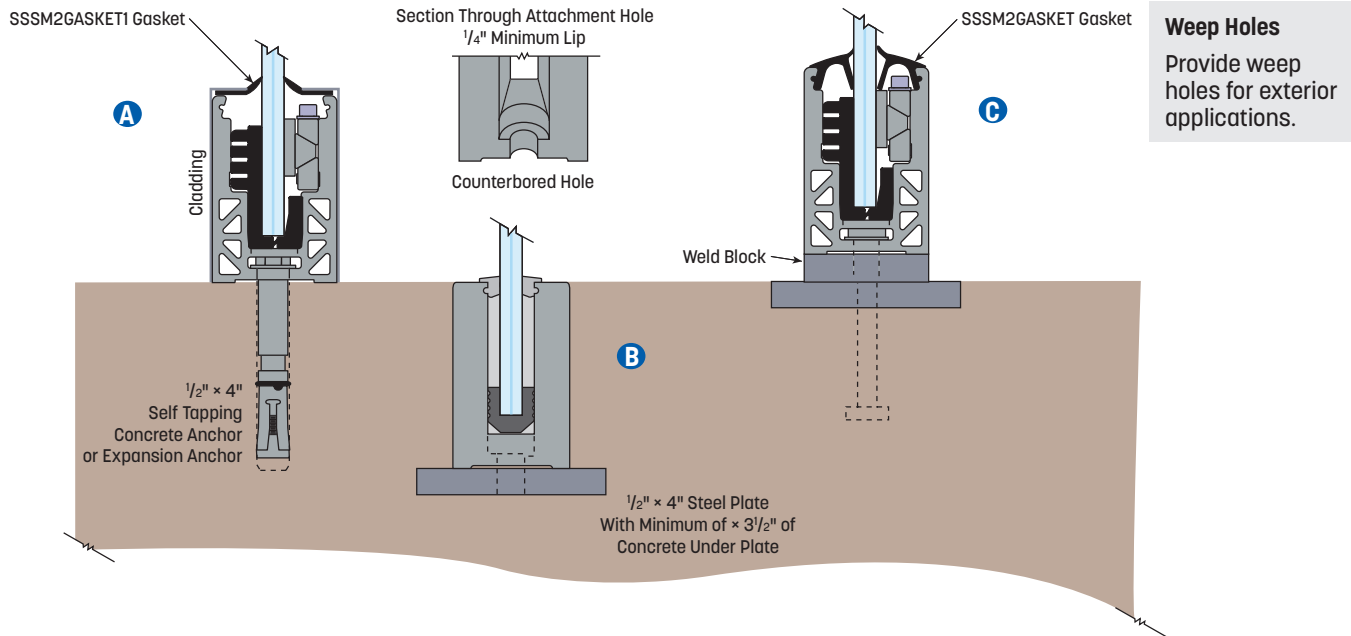
Job: Private Residence
Fabricator and installed by Badger Railing
Milwaukee, WI

Base Shoe Moulding Attachment

Attachment of the **Aluminum Base Shoe Moulding** is critical to the success of any **Glass Railing** installation. These details depict three typical attachment methods. Other methods of attachment are possible, but their integrity would need to be determined by the installer in co-operation with your own engineer. If you choose to mount to wood, consult with an engineer for proper reinforcement of the substrate.

Preparation

1. Prepare substrate for attachment of **Base Shoe Moulding** per your surface and selected choice of fastener (i.e. **Self-Tapping Concrete Anchor** or **Expansion Anchor** attachment to concrete; or high-strength **Low Profile Cap Screw** attachment to Steel).
2. Set **Base Shoe Moulding** into position, aligning holes with those in your substrate.
3. Place your **Anchor** into the holes. Engage **Anchor**, but do not torque into final position at this time.
4. Shim and level length of shoe to same elevation, then tighten per manufacturer's torque recommendations.



Weep Holes

Provide weep holes for exterior applications.

A - Attachment to Concrete

The **Base Shoe Mouldings** may be attached directly to concrete - 4,000 psi minimum - using a **Self-Tapping Concrete Anchor** or **Expansion Anchor**.

- Use the pre-drilled holes in the **Base Shoe Moulding** as a template to drill holes in the concrete. Use a masonry bit appropriate for your selected **Concrete Anchor**.
- Follow manufacturer's recommendations regarding size and depth of hole.
- Vacuum all loose debris from within the hole.
- Insert the **Anchor** through the base **Base Shoe Moulding** and into the drilled hole.
- Continue tightening until firmly seated against the **Base Shoe Moulding**.
- Shim and level **Base Shoe Moulding** before final tightening of **Anchors**.
- Use an impact wrench set to a torque as recommended by the **Anchor** manufacturer for final attachment.

B - Embedded in Concrete

When design parameters require a hidden floor attachment, a poured-in-place **Base Shoe Moulding** may be appropriate. With this attachment method, the glass will appear to rise directly out of the floor.

C - Weld Block with Steel Substrate

If a structurally sound Steel substrate is present and you wish to avoid drilling and matching **Base Shoe Moulding** holes with substrate holes, Steel **Weld Blocks** may be used. Contact us for details.

- **Weld Blocks** are mechanically attached to the base of the **Base Shoe Moulding** with **1/2-13 x 3/4" Low Profile Cap Screws with Washers**.
- The assembly is then placed, plumbed, and aligned in the field, then welded to the steel substrate.
- Custom sized **Cladding** is available to cover your **Weld Block** attachment.
- **Note:** For structural purposes, it may be required to weld **Weld Blocks** on three sides. This will require a thicker **Weld Block** for clearance. Contact Euro with your specifications.

Attachment Locations:

- Lengths less than 1'-6", two attachment minimum.
- Lengths between 1'-6" and 2'-6", three attachment minimum.
- Lengths over 2'-6", space attachments 12" on center.
- The first hole should be located 3" from the end of the **Shoe Moulding** on lengths less than 2'-6" and 6" from the end on lengths over 2'-6".
- Drill additional holes in **Base Shoe Moulding** as required.
- For exterior applications, the heads of the attachments should be covered with **Silicone** and **provide weep holes to avoid water accumulation**.