

RetroWAL™

INTERIOR CURTAIN WALL RETROFITS by
THERMOLITE 



www.RetroWAL.com
574-234-4004

RetroWAL™

THE **WORLD'S FIRST** DO-IT-YOURSELF
COMMERCIAL WINDOW RETROFIT SYSTEM



REDUCES ENERGY USE BY 20%



BETTER ALTERNATIVE TO FILM



EASY-TO-INSTALL (DIY)

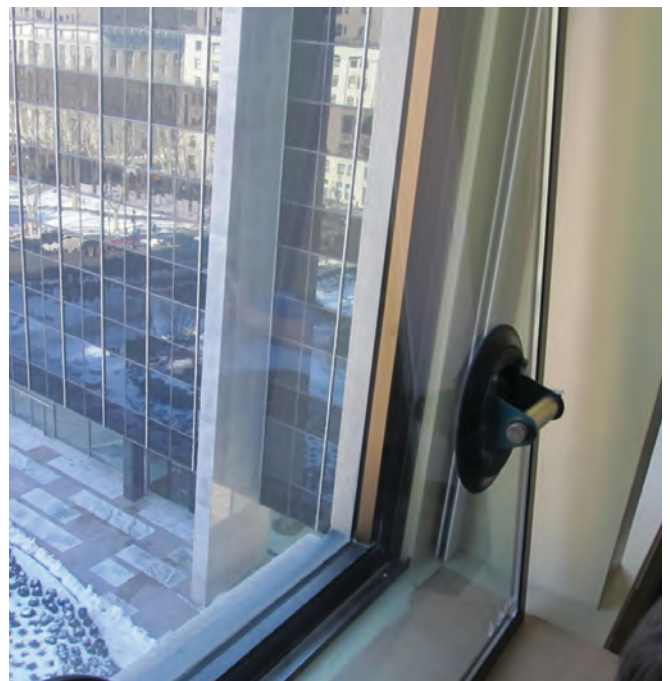


LIGHTWEIGHT AND SAFE



IMPROVES SOUND CONTROL

RetroWAL™ is the most affordable and effective solution for improving the energy efficiency of curtainwall, storefront and window wall buildings. Unlike traditional replacement windows, the RetroWAL™ system installs quickly and easily on the interior of a building's existing windows, creating an insulating dead air space. The existing glass stays in place, eliminating the costly need for scaffolding or intrusive downtime. RetroWAL™ not only reduces energy consumption, but also reduces energy demand and provides sound control.



RetroWAL™ Interior Windows

High Performance Window Replacement Alternative

Thermolite's RetroWAL™ Interior Window System is an affordable and permanent solution for improving the energy performance of buildings with single pane windows. Unlike expensive replacement windows, RetroWAL™ installs quickly and easily on the interior of your building's existing windows. No scaffolding, special tools or permits are required. The RetroWAL™ system transforms single pane windows into a high-performing double-pane system, reducing your annual energy costs by an average of 15-30%.

Existing Window

Your existing windows stay in place, saving you the costly expenses involved with removing and replacing glass. No special tools, scaffolding or permits are required.

Insulating Air Cavity

RetroWAL™ creates a dead air space between your prime window and the Thermolite window, providing an extra layer of insulation for your building.

Low-E Glass Panel

Thermolite high-performance window pane featuring laminated, tempered or insulating glass with low-e coating keeps your building warm during winter months and cool during summer months.

Aluminum Frame

Thermolite frames attach easily to your window opening, forming an air-tight seal that reduces air infiltration by 50-90%.



RetroWAL™ Performance

	1/4" Clear Glass	1/4" Clear + RetroWAL™ Silver	1/4" Clear + RetroWAL™ Gold
R Value	1	3	5
U Value	1.02	.36	.18
SHGC	.83	.70	.44
VT	.89	.77	.61

Center of Glass Value

RetroWAL™ Silver Series



PERFORMANCE OVERVIEW

The RetroWAL™ Silver Series uses monolithic low-e glass to simulate the performance of an insulating glass unit by creating a one- to two-inch air gap. The center of the glass U value is improved from 1.02 to .36. RetroWAL™ Silver not only improves insulation values, but also reduces solar heat gain and virtually eliminates air infiltration in the window opening. In buildings with high window to wall ratios, Thermolite has documented case study savings of more than 23% of the annual utility costs.

EASY INSTALLATION

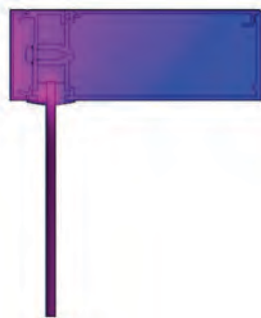
RetroWAL™ is the world's first Do It Yourself (DIY) commercial retrofit window system for curtain wall, storefront and window wall buildings. The RetroWAL™ system installs easily and quickly on the interior of existing windows, eliminating the need for costly scaffolding or intrusive downtime. No special tools, drilling or fixture alteration is required. In fact, RetroWAL™ installation is such a simple process that building owners and tenants can be trained to install RetroWAL™ windows themselves, further reducing labor costs.

ADDITIONAL BENEFITS

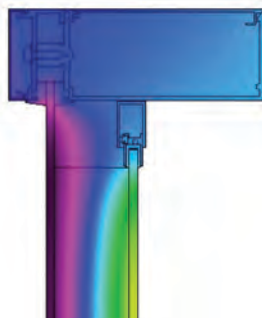
- RetroWAL™ windows weigh less than 4 lbs. per square feet, yet contribute significantly to the building's frame structure
- The air cushion created by RetroWAL™ reduces the flexibility of the exterior glass (which causes breakage), extending the life cycle of the building's original window panes
- Eliminates condensation
- RetroWAL™ windows can be fitted with laminated glass, reducing outside noise to a STC level of 49

RetroWAL™ Silver Series

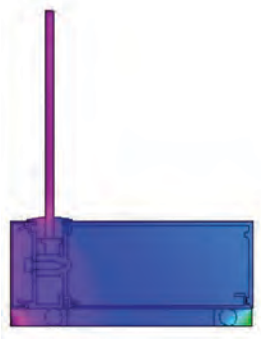
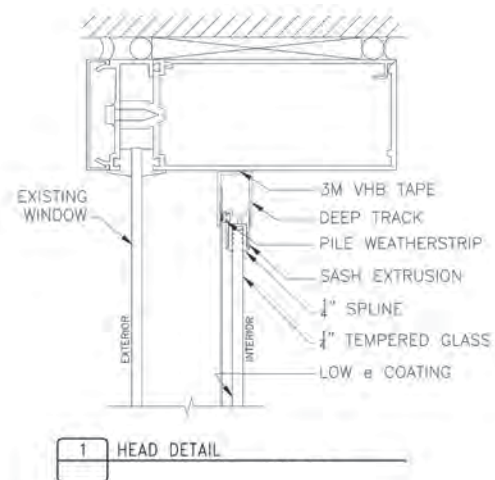
Color Infrared Frame Head



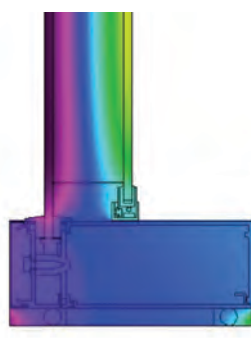
without Thermolite



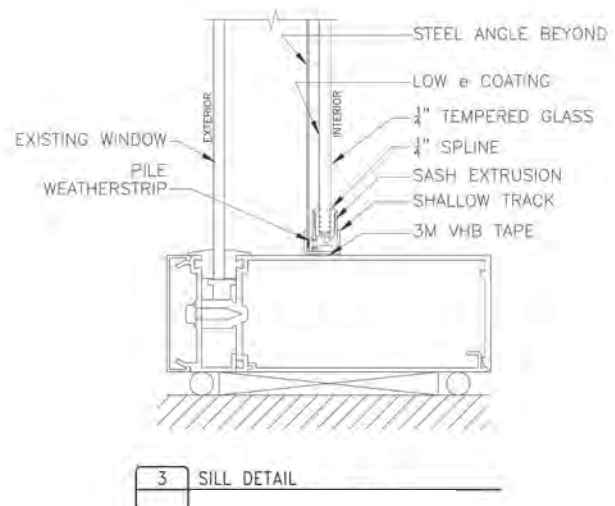
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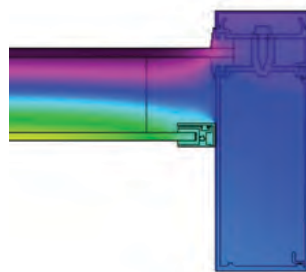
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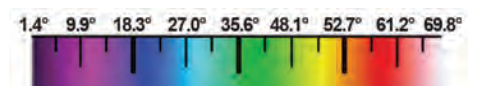
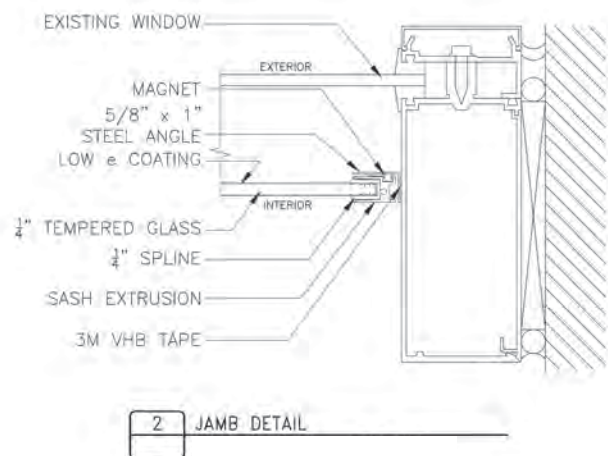
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without Thermolite



with Thermolite



RetroWAL™ Gold Series



PERFORMANCE OVERVIEW

For deeper energy retrofits, building owners can utilize RetroWAL™ Gold to achieve a high efficiency glazing system. The RetroWAL™ Gold Series uses insulated low-e glass with an argon fill to simulate the performance of a triple pane window system. The center of glass U value is improved from 1.02 to 0.18.

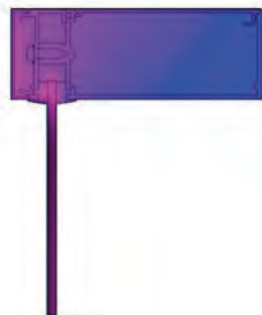
RetroWAL™ Gold is used to reduce heating and cooling loads by over 30% and is deployed in buildings where boiler and chiller replacements are most expensive. By improving the building envelope to perform like triple glazing, the need for an expensive HVAC investment is either completely eliminated or reduced so significantly that it pays for the glass window retrofit entirely. RetroWAL™ Gold also reduces the solar heat gain coefficient from .83 to .44, providing a significant improvement in comfort for tenants during warmer months. Owners and managers of curtainwall buildings constructed between 1950 and 1978 with monolithic glass should look at RetroWAL™ Silver or Gold as a primary strategy to reduce energy consumption, energy demand and greenhouse gases.

EASY INSTALLATION & ADDITIONAL BENEFITS

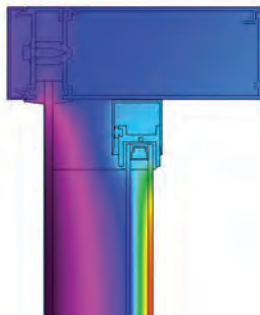
Like the RetroWAL™ Silver Series, RetroWAL™ Gold installs quickly and easily on the inside of a building's existing glass, and in a fraction of the time that it takes to install traditional replacement windows. RetroWAL™ Gold features all of the additional benefits as RetroWAL™ Silver, including improvements to the building's frame structure, reduction of the flexibility of exterior glass caused by wind, the elimination of condensation, and laminated glass options for improved sound control.

RetroWAL™ Gold Series

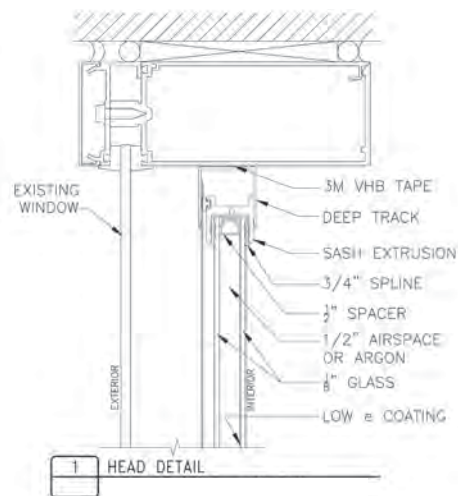
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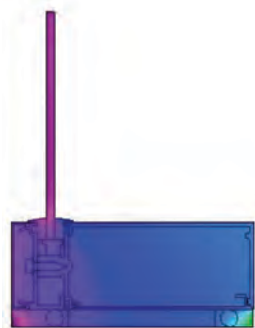


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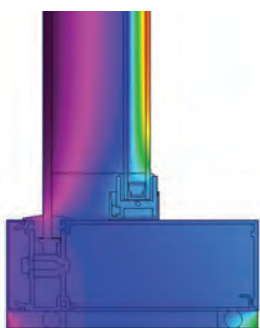


1 HEAD DETAIL

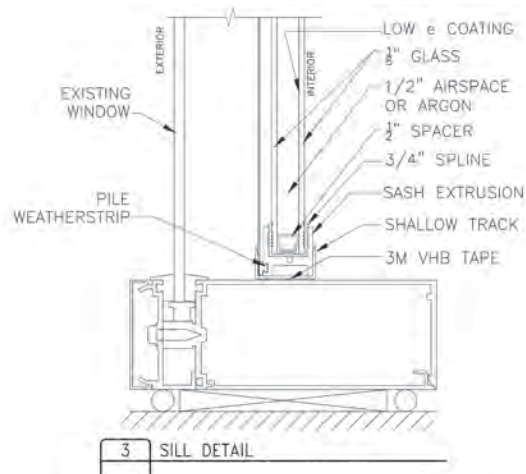
Color Infrared Frame Sill



without Thermolite

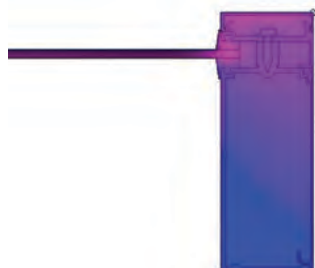


with Thermolite

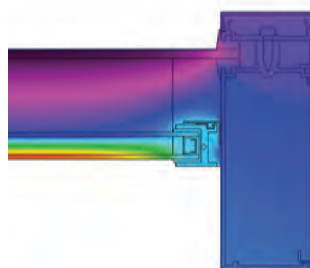


3 SILL DETAIL

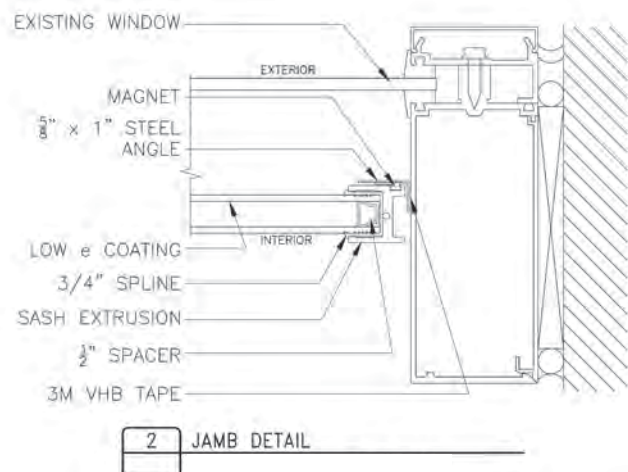
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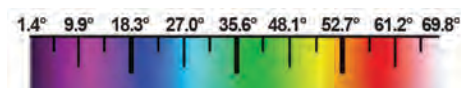
without Thermolite



with Thermolite



2 JAMB DETAIL



RetroWAL™ Installation Overview

DESCRIPTION OF UNIT

Made in the USA, RetroWAL™ is the single most affordable and effective solution for improving energy performance in curtain wall, storefront and window wall buildings. Unlike traditional replacement windows, RetroWAL™ installs quickly and easily on the interior of a building's existing windows, creating an insulating dead air space. The existing glass stays in place, eliminating the need for costly scaffolding or intrusive downtime. Installing the RetroWAL™ Gold Series and Silver Series is a simple process. Both window types can be installed without any prior experience or special tools. Should you have any questions regarding your new RetroWAL™ windows, contact Thermolite at 574-234-4004 or info@thermolitewindows.com.

MATERIALS INCLUDED

- | | |
|--|--|
| <input type="checkbox"/> Shallow Tracks (one per window) | <input type="checkbox"/> Activator |
| <input type="checkbox"/> Deep Tracks (one per window) | <input type="checkbox"/> Caulk (caulk gun not included) |
| <input type="checkbox"/> Steel Angles (two per window) | <input type="checkbox"/> Touch-Up Paint with Marble Applicator |
| <input type="checkbox"/> Sashes (4 per window) | <input type="checkbox"/> Fastening Screws (if needed) |
| <input type="checkbox"/> Glass Panels (one per window) | |

MATERIALS NOT INCLUDED

- | | |
|--|--|
| <input type="checkbox"/> Window Cleaning Fluid | <input type="checkbox"/> Caulk Gun |
| <input type="checkbox"/> Clean Cloths | <input type="checkbox"/> Paint Scraper |
| <input type="checkbox"/> Trash Bags | <input type="checkbox"/> Glass Suction Cups |
| <input type="checkbox"/> Magic Erasers | <input type="checkbox"/> Magnetic Level (for windows more than 2' in height) |

PREPARATION: CLEAN GLASS PANEL & PREPARE THE FRAME

SUPPLIES NEEDED: Window Cleaning Fluid, Clean Cloth, Caulk and Caulking Gun, Paint Scraper

STEP ONE: INSTALL THE SHALLOW TRACK

SUPPLIES NEEDED: Activator, Screws (if needed)

STEP TWO: INSTALL THE DEEP TRACK

SUPPLIES NEEDED: Activator, Screws (if needed)

STEP THREE: INSTALL THE STEEL ANGLE

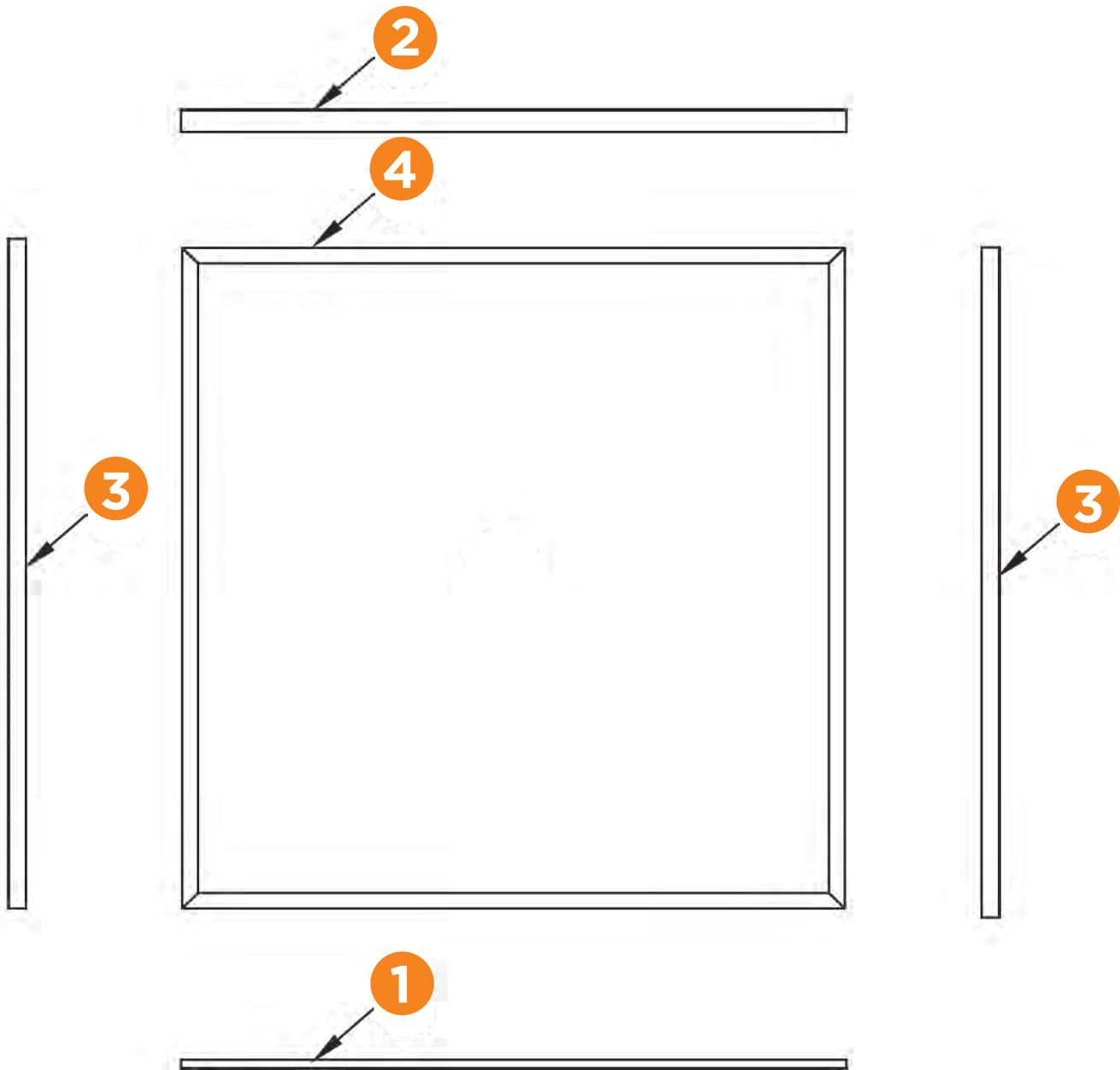
SUPPLIES NEEDED: Activator, Screws (if needed), Magnetic Level (helpful with large windows)

STEP FOUR: INSTALL THE GLASS PANEL

SUPPLIES NEEDED: Window Cleaning Fluid, Clean Cloth, Glass Scraper, Glass Suction Cups

RetroWAL™ Bill of Materials

PART #	PART NAME	QTY.
	SHALLOW TRACK	1
	DEEP TRACK	1
	STEEL ANGLE	2
	SASH	4
	GLASS PANEL	1





ABOUT THERMOLITE, LLC: Since 1979, Thermolite has been a leading innovator in secondary interior window systems including energy efficient windows, blast-proof windows, hurricane windows, signal defense windows, sound control windows, and more. A proud member of the U.S. Green Building Council®, Thermolite is a GSA-certified governmental contractor serving areas nationwide, with notable projects in Washington, D.C., New York City, Chicago and Detroit. To learn more about our patented window systems, visit www.thermolitewindows.com.

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THERMOLITE ™