



Let the Sun Shine In

Residential Shading 101



Course Number:
RSW101
(1.0 LU/HSW/SD)



NKBA Program
Approved
(0.1 CEU)





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Objectives

- Describe why daylight control is necessary for both aesthetic and occupant comfort.
- Recognize how the advanced functionality of an automated window treatment provides added convenience, elegance, security, and manages energy consumption.
- Recommend proper window treatment to an end user based on functionality and design of the residential space.
- Propose a daylight control solution that both compliments the visual appeal of the space while managing energy consumption.

Note: Upon completion of this course, participants are eligible to complete course 201: Set Your Design in Motion | Specifying Fabrics for Motorized Shading Systems 201



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Course Outline

- Daylight factors
- Results of uncontrolled daylight in a residential space
- Window treatment styles and fabrics
- Benefits of an automated window treatment

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Types of Daylight

Direct



Reflected



Diffused



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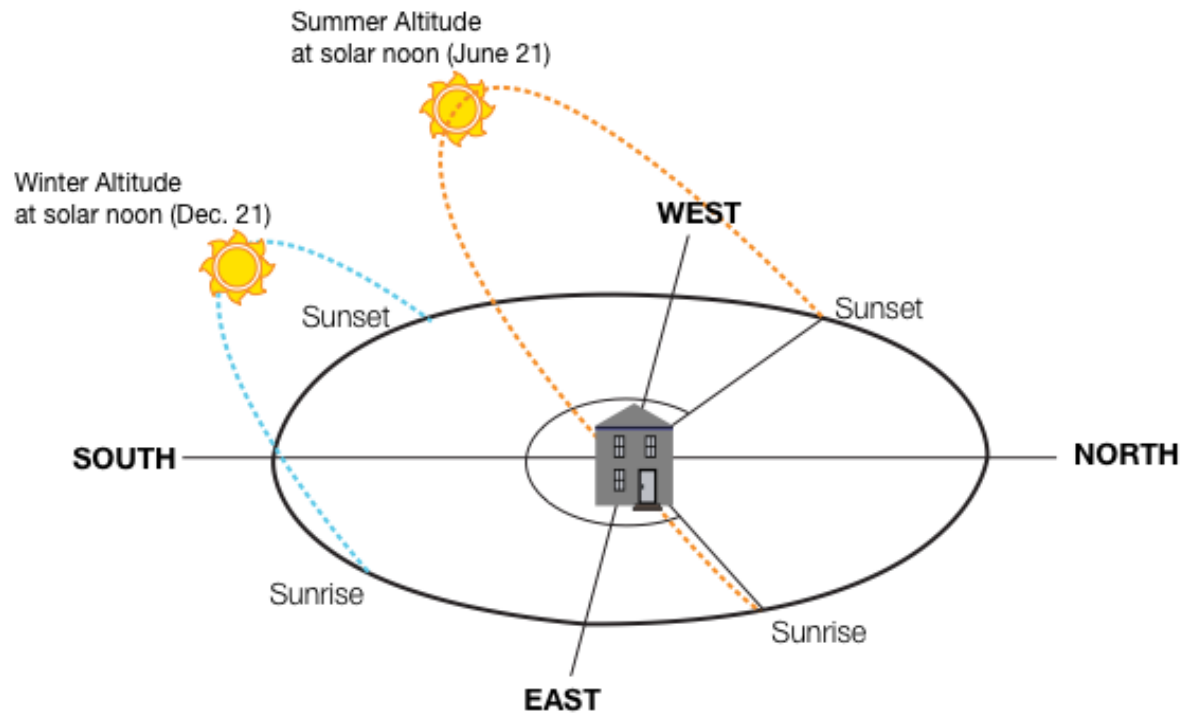
Effect of Natural Occurrences

- Weather

Clear day vs.
overcast

- Season

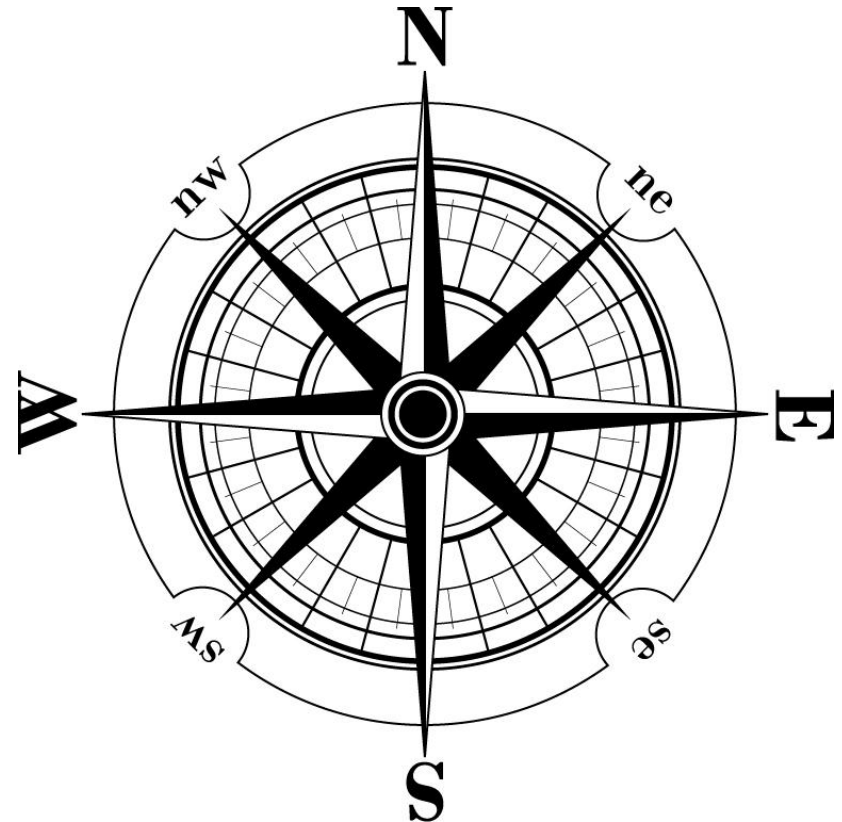
Summer vs.
winter



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Effect of Building Location & Orientation

- Northern hemisphere
 - Less sun exposure
 - Diffused sunlight
 - Less control required
- Western hemisphere
 - Evening
 - Direct sunlight
 - Timeclock control optimal
- Southern hemisphere
 - High sun exposure
 - Direct sunlight
- Eastern hemisphere
 - Morning
 - Direct sunlight
 - Timeclock control optimal



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Effect of Siting and Window Characteristics

Siting

Neighboring homes, tall structures, and reflective surfaces



Window size

Daylight can penetrate the space up to 1.5x the height of the window



Window composition

Tinted or reflective glass can reduce solar heat gain, but also limit visible light



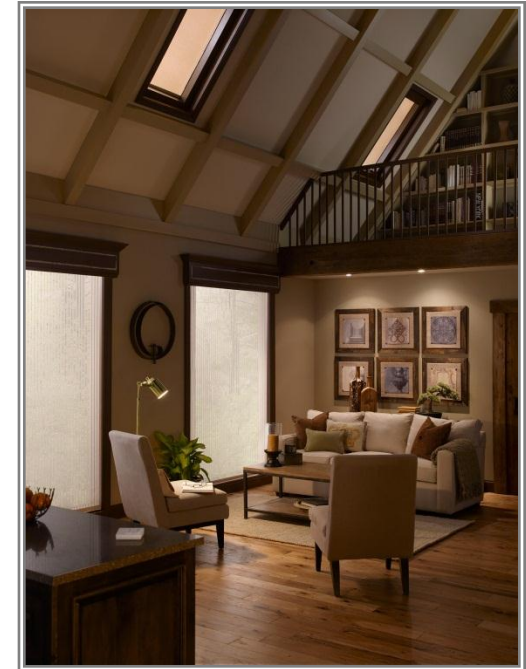
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Results of Uncontrolled Daylight

- Glare
- Solar heat gain
- Uncertainty of daylight
- UV damage



Uncontrolled daylight



Controlled daylight

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Harsh Glare Effects

Eyestrain

TV screens and computer monitors

Aging Eye

Blinding whiteness, blackness, and/or physical safety

Safety



Uncontrolled daylight



Controlled daylight

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Harsh Glare Effects



Uncontrolled daylight

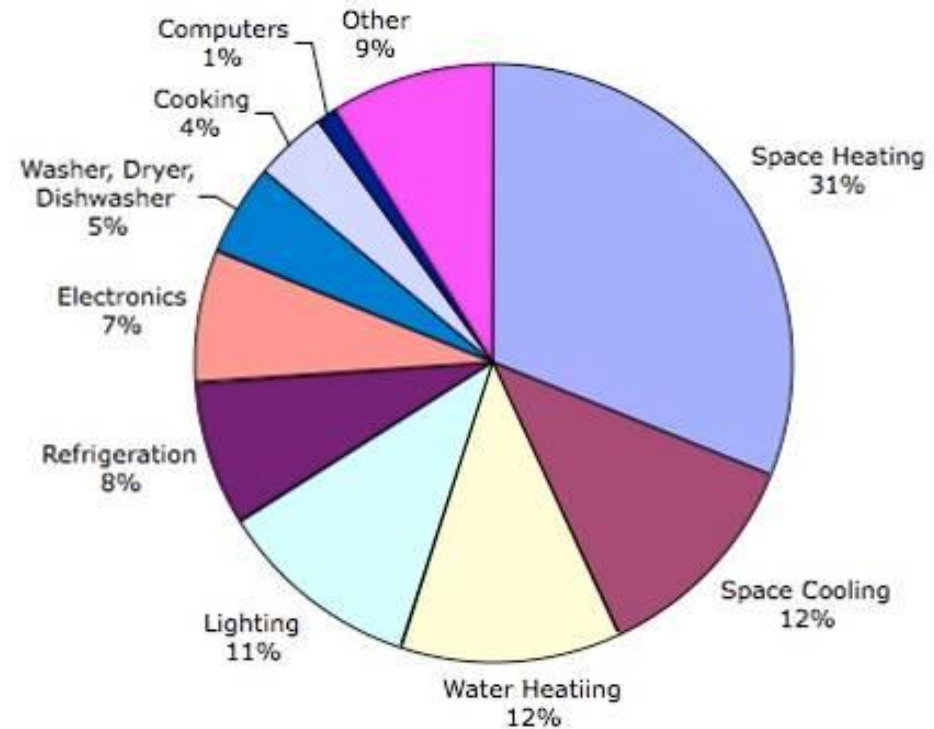


Controlled daylight

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Solar Heat Gain

- As much as 50% of a home's energy costs are attributed to heating & cooling*
- Daylight factors previously discussed can make energy used to heat and cool a space go up or down
- Uncertainty of daylight



*Energy Star, December 2010

Residential Energy Usage, 2006
National Academy of Sciences

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UV Damage

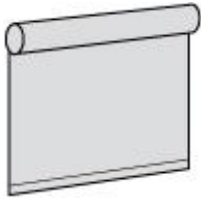
- Discolor furnishings
- Bleaching and fading of artwork
- Cracking, hazing, loss of gloss, and yellowing to varnishes
- Fading of wood surfaces



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Window Treatment Styles

Roller Shade



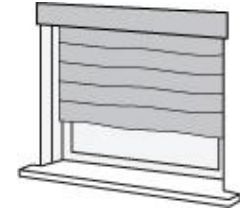
Cellular Shade



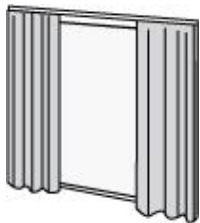
Sheer Louver Shades



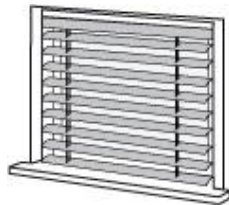
Roman Shade



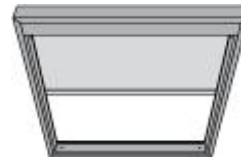
Drapery Track



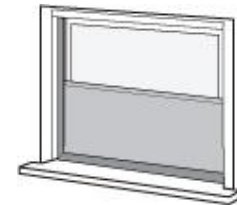
Venetian Blind



Skylight Shade






Bottom-Up Shade



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Window Treatment Overview






Roller and Cellular Shades

Type	Style Options	Considerations	Best Applications
 Roller	Sheer (Dark, Gray, White, Dual-sided), Translucent, Blackout	Installation Type, Operation, Client Needs	All areas of home, Small and Large windows
 Cellular	Translucent, Blackout	Sheer not available, Choose stronger material	Bedroom, General Areas, Curved windows
 Tensioned	Roller Shade or Cellular shade	Fabric sagging, Visible cable guides, Pre-assembly	Skylight, Meet-in-the-middle, Bottom-up

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Window Treatment Overview

Blinds and Soft Treatments

Type	Style Options	Considerations	Best Applications
 Sheer Louver	Sheer and Translucent	Blackout not available	Multi-purpose rooms that do not need blackout
 Roman Shade	5 Styles, Sheer, Translucent, Blackout, Woven Woods	Uptake System – Cords versus Bands	Wide range of fabrics and styles – formal or casual
 Drapery	Pinch pleat, Ripplefold, Sliding Panel	“Stack” – 1/3 length of track, Fabric weight	M. Bedroom, Theater, Lg. Window, Sliding Door
 Vertical Drapery	Sheer and Translucent	System Capacity	Theater room, French doors, floor to ceiling windows
 Venetian Blind	Hardwoods, Plastics, Aluminums, Valance, Tapes	Blind Control (Height and Slat Angle), “Stack”	All around the home

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Roller Shades | What are they?

- Straight, simple, clean lines
- Offered in a number of sizes
- Three ways to install for varying visual effects:
 - 1) In a pocket
Rolling seamlessly out of view
 - 2) Inside mount
Tucking cleanly into window sill
 - 3) Outside mount
Hiding portions of window frame



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Roller Shades | Benefits

- Maintain uniform appearance
 - Interior and exterior
- Accommodate most window sizes
- Highly functional
- Smooth operation
- Minimal light gaps between shades



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Cellular Shades | What are they?

- Individual cells glued together to form a 'honeycomb' appearance
- Horizontal, vertical skylight, & bottom-up available
- Softer alternative to wooden blinds

Benefits

- Energy efficient
 - More cells = greater insulation
- UV protection
- Noise reduction
- Personalize privacy by opening shade from top and bottom



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Sheer Louver Shades | What are they?

- Two sheer fabrics that form a soft horizontal blind

Benefits

- Maintain privacy while preserving the view
- Filter out harsh UV rays



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Roman Shades | What are they?

- Uses lift bands or cords to move fabric up and down
- Forms soft fabric pleats

Benefits

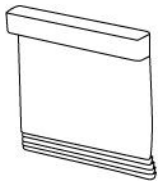
- An inviting, warm aesthetic that still has the ability to control daylight
- Variety of styles available for a signature look



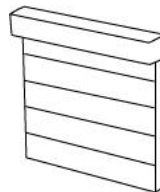
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Roman Shades | Pleat Styles

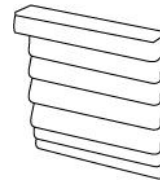
Flat



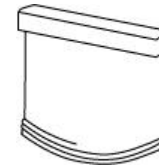
Knifed



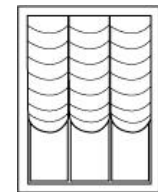
Hobbled



Casual



Austrian



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Roman Shades | Considerations

- Uptake system
- Lift cords versus bands
 - Movement
 - Reliability
 - Performance
 - Aesthetic
 - Safety
- Consumer Product Safety Commission (CPSC) Recall
 - Manufacturers in compliance have seen improved performance with innovative uptake systems



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Drapery | What is it?

- Straight or curved track configurations that move fabric from side-to-side

Benefits

- Provide added insulation
- Noise reduction
- Thermal blanket
- Create movie magic
- Provide true blackout for long night's rest
- Transform a room by adding a soft look to a large portion of the space



Left draw



Right draw



Center draw



Tandem or
Curved Track

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Vertical Drapery System | What is it?

- Drapery that seamlessly moves fabric up and down instead of left and right
 - Eliminates stack back

Benefits

- Unique and unexpected motion that captivates its audience
 - Signature look
 - WOW factor
- Unlike traditional drapery, view is left unobstructed when open
- Maintains soft look of fabric pleats



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Venetian Blinds | What are they?

- Slats of wood, aluminum, or plastic
- Blinds move up & down; slats have ability to tilt fully open to a 90° angle

Benefits

- Ensure optimal privacy while controlling amount of sunlight in a space
- Change angle of daylight streaming into room to highlight various portions of the interior
- Control height of blind and angle of slats independently for precise positioning
- Maintain uniform look
 - Aligned bottom bars
 - Slats that move in unison



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Tensioned Shades | What are they?

Roller or cellular shade held taught within a frame via a tension system that allows shade to be installed at various angles:

Skylight

Block or diffuse daylight by removing intense shaft sunlight



Bottom-up

Superior privacy

Shields interior while allowing light to enter

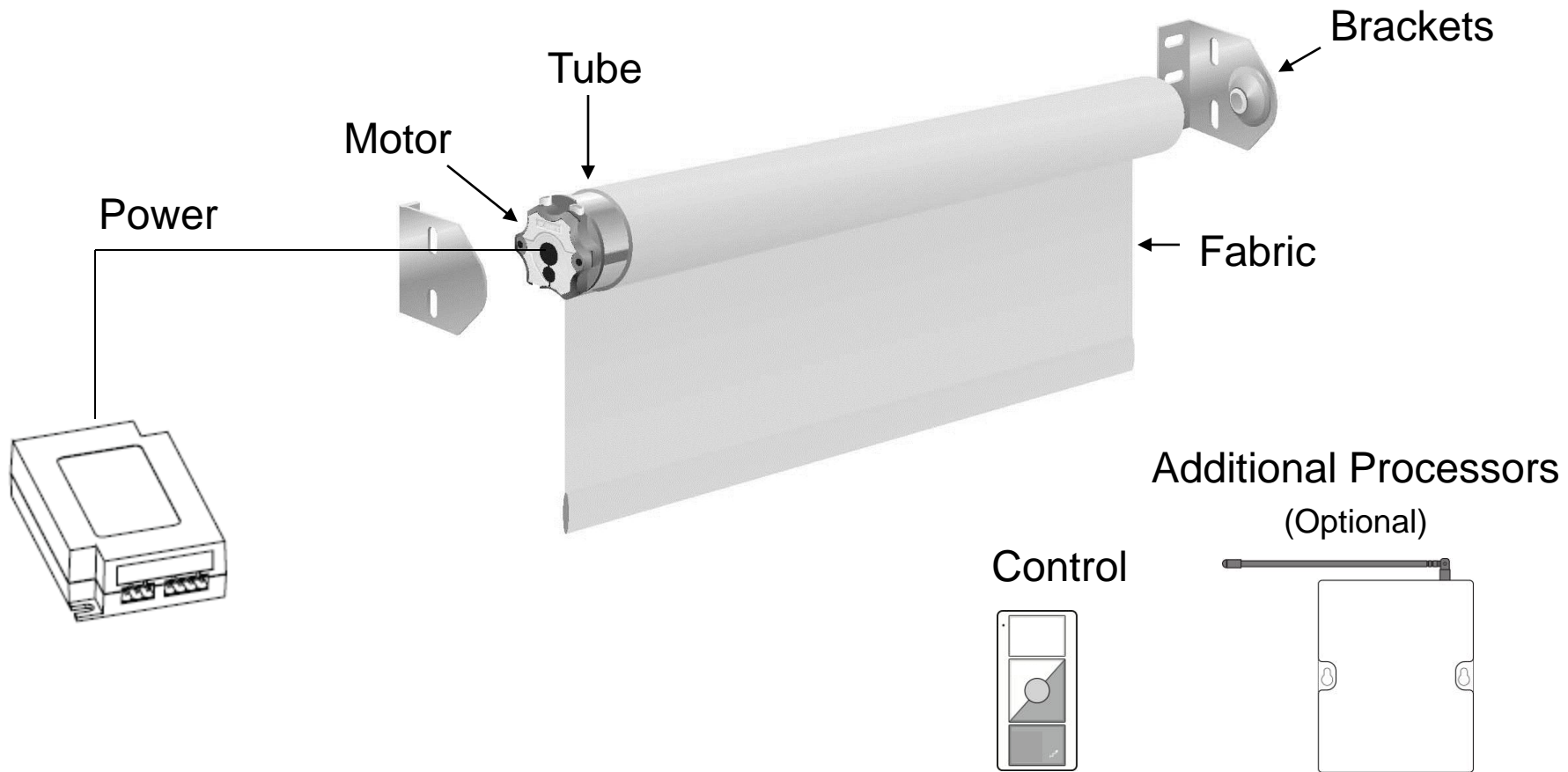
Ideal for spaces located on the ground floor

Often used on tall condominiums & bathrooms to increase privacy



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What is an Automated Window Treatment?



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Motorized Options

- Line Voltage
 - Exterior shades & awnings
 - Noise considerations
 - Tracking of shades
- Battery Powered
 - Ideal for retrofit
 - Quicker, easier installation
 - Battery type considerations
- Low Voltage
 - Lower installation cost compared to line voltage
 - Tracking of shades
- Digital Low Voltage
 - Move in unison



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Control Options

- Handheld Remote
 - Tabletop
 - Universal Remote
 - Touch Screen
- Wall-Mounted Keypad
- Mobile Devices
- Automatic
 - Timeclock
 - Daylight sensors



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Motorized Window Treatments | Benefits

- Convenience
- Elegance
- Aesthetics
- Security
- Energy savings



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Motorized Window Treatments | Convenience

- Control hard-to-reach shades
- Raise & lower an entire group of shades with a single touch of a button
- Create “movie magic” with integrated control
- Sleep on your own schedule with bedside control
- Never forget to close the shades with mobile device applications, ensuring privacy and managing heat gain



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Motorized Window Treatments | Elegance

- One-button press to create smooth transitions of light
 - Balance daylight and electric light
 - Create movement in the space
- Specify quiet, uninterrupted control
 - Client should only notice effect of these transitions on the design
- “Wow” the clients and exceed expectations



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Motorized Window Treatments | Aesthetics

- Ensure perfect alignment of adjacent shades and blinds
- Minimize cords for a clean look
- Layer fabrics to add depth to space
- Coordinate controls to shades
- Select decorative fabric or treatment style



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Motorized Window Treatments | Safety & Security

- Hide expensive furnishings from exterior view
- Elimination of glare in pathways throughout day
- Integration into security system
- Timeclock providing a “vacation mode”



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Motorized Window Treatments | Energy Savings

- Manage HVAC costs
 - Tie shading solution into an electric light and HVAC system
 - Reduce HVAC costs up to 10%*



Winter Day



Summer Day



Nighttime


*Energy Star™, 2010



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Additional Considerations

Fabric that is:

- PVC-free
 - No VOC's
 - Recycled Content
 - Reduced waste going into landfills
 - Decreased need for new or “virgin” materials
 - GREENGUARD® and Oeko-Tex® Standard 100 Certification
 - Better indoor air quality
 - Ensures fabrics are free of harmful concentrations and chemicals
- 



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Review of Benefits

- Motorized shading systems put you more in control of your space, thus adding convenience
- Improves occupant's experience, enhancing tranquility
- It beautifies and improves the appearance of everything in the space while making the space more fashionable
- Improve security and enhance perceived safety, all while saving money by the management of energy consumption!



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Summary

- With the wide variety of window treatments available, consider:
 - Use of the space
 - Aesthetic design
 - Challenges daylight presents in a space
 - Individual client needs
- Specify a controllable solution
 - Make the space more convenient
 - Add elegance
 - Enhance the aesthetic
 - Improve security
 - Provide energy savings solution

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Resources

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