SECTION 12 24 13

MANUAL AND MOTORIZED ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* WT Shade; roller shades.
This section is based on the products of WT Shade, which is located at:
77 Second Ave.
Garden City Park, NY 11040
Toll Free Tel: 877-294-3580
Tel: 516-294-3580
Fax: 516-294-0444
Email: info@WTShade.com
Web: [www.WTShade.com](NULL)

WT Shade was started in 1977 and is a leading manufacturer of manual and motorized roller shade products. From their state of the art facility in Long Island, NY they produce high quality products that get shipped around the globe. WT Shade is a frontrunner in innovative daylight management control and has solutions for virtually any window.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below that are not required for your project.

* + 1. Roller shades including the following:
			1. Single roller shades.
			2. Double roller shades.
			3. Shade accessories.
			4. Fabrics.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Add related sections as required for your project.

* + 1. Section 06 10 00 - Rough Carpentry. Wood blocking for the attachment of brackets.
		2. Section 09 59 00- Acoustical Ceilings. Shade accessories including shade pockets and tile support
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Provide elevation of each type of installation and details for mounting.

\*\* NOTE TO SPECIFIER \*\* Delete requirement for selection samples if colors have already been selected.

* + 1. Selection Samples: Two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each fabric specified, two samples (minimum size 2 inches square) representing actual material and color.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Minimum 10 years of experience manufacturing similar products.
		2. Installer Qualifications: Minimum 5 years of experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size or complexity warrants the need.

* + 1. Mock-Up: Provide a finished mock-up with correct fabric and accessories representative of the project.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Child Safety Standards: Shades and installation shall be in compliance with ANSI/WCMA child safety standards.
	1. PRE-INSTALLATION MEETINGS
		1. Conduct on-site meeting prior to starting work of this section to review project requirements.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handling: Handle materials to avoid damage.
		3. Roller shade installation to commence once all finish work has been completed.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions between 32 and 104 degrees Fahrenheit and humidity below 90%. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: WT Shade: 77 Second Ave.; Garden City Park, NY 11040; Toll Free Tel: 877-294-3580; Tel: 516-294-3580; Fax: 516-294-0444; Email:info@wtshade.com Web:[www.wtshade.com](http://www.wtshade.com)

\*\* NOTE TO SPECIFIER \*\* Delete either B or C below depending on requirements for your project.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Manual shade systems are composed of fabric and one manually operated clutch. Manual roller shades can be raised or lowered by pulling the side mounted chain, attached to the roller clutch. Clutches are available in different lifting capacities. Delete if not required.

* 1. SINGLE ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* The HeliaRise Slim system features a small profile for narrow installation spaces. The Slim bracket does not allow for any type of fascia and would be used typically inside of a ceiling pocket or in an application where fascia is not desired. The HeliaRise Slim system comes in three sizes; H100, H200 and H300 depending on the size of the windows. Delete all of Section A if this system is not required.

* + 1. Product: HeliaRise Slim Manual Roller Shade as manufactured by WT Shade.

\*\* NOTE TO SPECIFIER \*\* Delete model not required.

* + - 1. Model options based on shade size: H100 Slim, H200 Slim, H300 Slim.
			2. Clutch shall have metal hook attachment to bracket for maximum stability and safety.
			3. Clutch has integrated safety hold-down screw physically locking the clutch to the mounting bracket.
			4. Reinforced chain skirt has combined stainless steel plate for increased strength.
			5. Universal Mounting Bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings. Unless noted in drawings, shade dealer is responsible for selecting proper size of brackets based on window sizes and maintaining consistency within spaces.
			6. Regular or Reverse Roll available. Refer to drawings.
			7. Maximum Roll Diameter: H100= 2-1/4 inches (57 mm). H200= 2-3/4 inches (70 mm). H300= 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternate materials and colors available. Click here for available options if stainless steel chain is not desired. [Chain Selection](http://wtshade.com/product/chain-selection/%20)

* + - 1. #10 Stainless steel chain. Nickel plated steel chain shall not be accepted.

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

* + - 1. Hembar: Aluminum slat heat sealed inside 1-3/4 inch (44 mm) hem pocket (to include side pockets, SSP)
			2. Clutch mechanism shall have an interchangeable drum to accommodate multiple tube sizes. Clutch mechanism shall have a metal attachment point for strength and safety. Clutch mechanisms with plastic attachment points shall not be accepted.
				1. Composition: 30 percent glass filled nylon.
				2. Finish: White (-10) or Black (-90). Clutch will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.
			3. Idler mechanism shall be spring loaded with interchangeable housing to allow for multiple tube sizes. Spring loaded idler shall have a metal axle for added strength and safety. Idlers with plastic attachment points shall not be accepted.
				1. Composition: 10 percent glass filled nylon.
				2. Idler Finish: White (-10) or Black (-90). Idler will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

\*\* NOTE TO SPECIFIER \*\* Delete finish not required.

* + - 1. Bracket Finish: Zinc Plated (-49).

\*\* NOTE TO SPECIFIER \*\* The HeliaRise SoloMount H100, H200, and H300 Fascia system features a 2 7/8”, 3 3/8”, and 4 7/16” front and/or rear fascia options respectively for a more concealed finish. Delete all of Section B if this system is not required.

* + 1. Product: HeliaRise SoloMount Manual Roller Shade as manufactured by WT Shade.
			1. Model options based on shade size: H100 SoloMount, H200 SoloMount, H300 SoloMount. SoloMount brackets are available with front fascia and/or rear fascia.
			2. Clutch shall have metal hook attachment to bracket for maximum stability and safety.
			3. Clutch has integrated safety hold-down screw physically locking the clutch to the mounting bracket.
			4. Reinforced chain skirt has combined stainless steel plate for increased strength
			5. Universal Mounting Bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings. Unless noted in drawings, shade dealer is responsible for selecting proper size of brackets based on window sizes and maintaining consistency within spaces.
			6. Regular Roll or Reverse Roll. Refer to drawings.
			7. Maximum Roll Diameter: H100= 2-1/4 inches (57 mm). H200= 2-3/4 inches (70 mm). H300= 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternate materials and colors available. Click here for available options if stainless steel chain is not desired. [Chain Selection](http://wtshade.com/product/chain-selection/%20)

* + - 1. #10 Stainless steel chain. Nickel plated steel chain shall not be accepted.

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

* + - 1. Hembar: Aluminum slat heat sealed inside 1-3/4 inch (44 mm) hem pocket (to include side pockets, SSP)
			2. Clutch mechanism shall have an interchangeable drum to accommodate multiple tube sizes. Clutch mechanism shall have a metal attachment point for strength and safety. Clutch mechanisms with plastic attachment points shall not be accepted.
				1. Composition: 30 percent glass filled nylon.
				2. Clutch and SoloMount Bracket Finish: White (-10) or Black (-90). Clutch and SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.
			3. Idler mechanism shall be spring loaded with interchangeable housing to allow for multiple tube sizes. Spring loaded idler shall have a metal axle for added strength and safety. Idlers with plastic attachment points shall not be accepted.
				1. Composition: 10 percent glass filled nylon.
				2. Idler Finish: White (-10) or Black (-90). Idler will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

\*\* NOTE TO SPECIFIER \*\* Delete sizes and finishes not required.

* + - 1. Available Notchless Front and/or Rear Fascia sizes: H100= 2-7/8”: H200= 3-3/8”: H300= 4-7/16”
			2. Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

\*\* NOTE TO SPECIFIER \*\* optional. End caps cover the ends of the brackets if the brackets are going to be exposed to sight. Delete if not required.

* + - 1. Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount brackets. Taping is not acceptable. End Cap finish is to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Double shade systems are composed of two shades, hung one in front of the other, and operated by two separate clutches. There are two types: Tandem (when the shades are mounted so that one shade is directly in front of the other and Piggyback (when the shades are mounted in a staggered position so that one is above the other. Delete all of Section 2.3 if Double shades are not required.

* 1. DOUBLE ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* The HeliaRise Piggyback Fascia system in H100 and H200 features two adjacent roller shades on one bracket with 4 7/16” and 6 13/16” front and/or rear fascia options respectively for a more concealed finish. Delete if not required.

\*\* NOTE TO SPECIFIER \*\* The H Series Piggyback system features two staggered roller shades on one bracket. Delete if not required.

* + 1. Product: HeliaRise Piggyback SoloMount Manual Roller Shade as manufactured by WT Shade.
			1. Model options based on shade size: H100 Piggyback SoloMount, H200 Piggyback SoloMount.
			2. Clutch shall have metal hook attachment to bracket for maximum stability and safety.
			3. Clutch has integrated safety hold-down screw physically locking the clutch to the mounting bracket.
			4. Reinforced chain skirt has combined stainless steel plate for increased strength
			5. Universal Mounting Bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings. Unless noted in drawings, shade dealer is responsible for selecting proper size of brackets based on window sizes and maintaining consistency within spaces.
			6. Regular Roll only.
			7. Maximum Roll Diameter: H100= 2-1/4 inches (57 mm). H200= 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternate materials and colors available. Click here for available options is stainless steel is not desired. [Chain Selection](http://wtshade.com/product/chain-selection/%20)

* + - 1. #10 Stainless steel chain. Nickel plated steel chain shall not be accepted.

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

* + - 1. Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP)
			2. Clutch mechanism shall have an interchangeable drum to accommodate multiple tube sizes. Clutch mechanism shall have a metal attachment point for strength and safety. Clutch mechanisms with plastic attachment points shall not be accepted.
				1. Composition: 30 percent glass filled nylon.
				2. Clutch and Tandem SoloMount Bracket Finish: White (-10) or Black (-90). Clutch and Tandem SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.
			3. Idler mechanism shall be spring loaded with interchangeable housing to allow for multiple tube sizes. Spring loaded idler shall have a metal axle for added strength and safety. Idlers with plastic attachment points shall not be accepted.
				1. Composition: 10 percent glass filled nylon.
				2. Idler Finish: White (-10) or Black (-90). Idler will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.
			4. Available Notchless Front and/or Rear Fascia sizes: H100= 4-7/16”: H200= 6-13/16”
			5. Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90)

\*\* NOTE TO SPECIFIER \*\* optional. End caps cover the ends of the brackets if the brackets are going to be exposed to sight. Delete if not required.

* + - 1. Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount brackets. Taping is not acceptable. End Cap finish is to be exact
	1. MOTORIZED ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* Delete sections below that are not required. Section A is comprised of line voltage motor systems and Section B is comprised of low voltage motor systems.

* + 1. Line Voltage Systems: 120VAC/230VAC:
			1. Available Motor Types:

\*\* NOTE TO SPECIFIER \*\* Delete motor types not required. Select corresponding control system in section 2.5. Motor types can be seen here [Motor Reference Guide](http://wtshade.com/wp-content/uploads/2017/03/MotoRise-Motor-Reference-Guide.pdf)

* + - * 1. Wired-To-Switch Technology
				2. RTS Radio Controlled Technology
				3. Digital Technology
			1. Motors shall be fabricated with quick disconnect 12" away from motor unless otherwise noted.
			2. Tubular, asynchronous motors with thermal overload protection.
			3. Total hanging weight of shade band(s) shall not exceed 80 percent of the rated lifting capacity of the shade system.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Slim. Delete all of Section a below if not required.

* + - 1. Available Shade Systems
				1. Motor: MotoRise MR250 Slim System as manufactured by WT Shade.

Model MotoRise MR250 Slim.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-1/16 inches (106 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim Brackets in Zinc Plated (-49).

Multi-banded up to six (6) bands.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Fascia System. Delete all of Section b below if not required.

* + - * 1. Motor: MotoRise MR250 SoloMount System as manufactured by WT Shade.

Model MotoRise MR250 SoloMount. SoloMount brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-1/16 inches (106 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to six (6) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Piggyback Slim Systems for double shade configuration. Delete all of Section c below if not required.

* + - * 1. Motor: MotoRise MR250 Piggyback Slim System as manufactured by WT Shade.

Model MotoRise MR250 Piggyback Slim.

Mounting bracket shall be Ceiling or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-1/16 inches (106 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim brackets in Zinc Plated (-49).

Multi-banded up to six (6) bands.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Piggyback Fascia Systems for double shade configuration. Delete all of Section d below if not required.

* + - * 1. Motor: MotoRise MR250 Piggyback SoloMount System as manufactured by WT Shade.

Model MotoRise MR250 Piggyback SoloMount. SoloMount Brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-1/16 inches (106 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to six (6) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable

\*\* NOTE TO SPECIFIER \*\* Optional MR350 Slim System for large shades (typically wider than 13 feet and taller than 20 feet). Delete all of section e below if not required.

* + - * 1. Motor: MotoRise MR350 Slim System as manufactured by WT Shade

Model MotoRise MR350 Slim

Universal mounting brackets shall be Ceiling, Wall, or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-5/8 inches (118 mm)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP)

Heavy Duty Idler Mechanism with Set Pin to be Zinc Plated (-49).

Finish: Slim Brackets in Zinc Plated (-49).

Optional MR350 Safety Brackets with Catch Pins and Retainer Rings available for extra large or high bay applications.

1. \*\* NOTE TO SPECIFIER \*\* Optional MR450 Catch Brackey System for shades up to 32 feet tall. Delete all of section f below if not required.
	* + - 1. Motor: MotoRise MR450 Catch Bracket System

Model MotoRise MR450 Catch Bracket

Mounting brackets shall be Safety Brackets with Catch Pins and Retainer Rings and can be Ceiling or Wall Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 5-1/4 inches (133 mm)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP)

Heavy Duty Idler Mechanism with Set Pin to be Zinc Plated (-49).

Finish: Slim Brackets in Zinc Plated (-49).

* + 1. Low voltage systems 24V DC
			1. Available motor types:
				1. Wired-To-Switch Technology
				2. RTS Radio Controlled Technology
				3. Digital Technology
			2. Total hanging weight of shade band(s) shall not exceed 80 percent of the rated lifting capacity of the shade system.
			3. Available shade systems:
				1. Motor: MotoRise MR150 Slim System as manufactured by WT Shade

Model MotoRise MR150 Slim

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim Brackets in Zinc Plated (-49).

Multi-banded up to three (3) bands.

* + - * 1. Motor: MotoRise MR150 SoloMount System as manufactured by WT Shade

Model MotoRise MR150 SoloMount. SoloMount brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to three (3) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable.

* + - * 1. Motor: MotoRise MR150 Piggyback SoloMount System as manufactured by WT Shade

Model MotoRise MR150 Piggyback SoloMount. SoloMount Brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to three (3) bands.

Optional Notchless Front and/or Rear Fascia size: 6-13/16 inches. (21 mm)

Front Fascia and Rear Fascia finishes are 6061-T6 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable

* 1. CONTROLS
		1. Wired Technology:
			1. Line Voltage Switching via single pole double throw (SPDT) or double pole double throw (DPDT) switches. Switches can be either momentary or maintained.
			2. Motors shall have rapid limit switches to set the upper and lower limits of the shade.
		2. RTS (Radio Controlled Technology):
			1. Furnish with wireless handheld remote transmitter.
			2. Furnish with wireless wall switch.
			3. Options:
				1. Interior Sun & Temperature Sensor. Refer to drawings.
				2. RTS Repeater. Refer to drawings.
				3. Timer and Sun Sensor. Refer to drawings.
				4. Universal RTS Interface for 3rd Party Integration. Refer to drawings.
		3. Digital - Fully Scalable Motor Network:
			1. Intelligent encoded programmable/addressable motors for shade grouping.
				1. Up to 16 addresses for a multitude of overlapping groups.
				2. Motors are capable of up to 16 custom intermediate shade positions.
			2. The system shall have the capability of two way digital communication over the entire network.
			3. Available with Line Voltage or Low Voltage systems.
			4. Network communication of up to 4000' per network.
			5. Single point of integration to 3rd party systems.
			6. Electronic limits for accurate shade positioning.
			7. Available with optional comprehensive solar management system to minimize the use of electric light by maximizing controllable usable daylight into the space through precise automated movements of motorized shades.
		4. Dry Contact:
			1. Motors shall be equipped with dry contacts to support moving the shades up and down and setting the limits.
			2. Available with Line Voltage or Low Voltage systems.
	2. SHADE ACCESSORIES

\*\* NOTE TO SPECIFIER \*\* Optional. See light blocking accessories here: [Light Blocking Accessories](http://wtshade.com/shop/?product-cat=light-blocking-accessories&parent-id=38). Delete all of Section A below if not required.

* + 1. Light Blocking: Provide side channels, center channels, sill channel and light stop angles to seal interior space from exterior light source.
			1. Extruded 6061-T6 aluminum.
			2. 1/4 Inch (6 mm) non-adhesive brush insert Grey (-80).
			3. Color: White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).
			4. Provide channel top caps and hole plugs with channels.
			5. Provide where indicated or required by drawings.

\*\* NOTE TO SPECIFIER \*\* Optional. See shade pocket options here: [Shading Enclosures](http://wtshade.com/shop/?product-cat=shading-enclosures&parent-id=38). Delete all of Section B below if not required.

* + 1. Shade pockets: Provide shade pockets as indicated or required by drawings.
			1. Extruded 6061-T6 aluminum (.060" thick) in White (-10) or 20 gauge galvanized 1018 CRS in mill finish.
			2. Provide splice pins and end caps where indicated or required by drawings.
			3. Provide ceiling tile support where indicated or required by drawings.
			4. Sizes:

\*\* NOTE TO SPECIFIER \*\* Delete sizes not required.

* + - * 1. 5" x 5" (extruded aluminum).
				2. 5" x 5" with tile support (extruded aluminum).
				3. 6" x 9" with white aluminum closure mount (20 gauge galvanized 1018 CRS).
				4. 6" x 9" with white aluminum closure mount with tile support (20 gauge galvanized 1018 CRS).

\*\* NOTE TO SPECIFIER \*\* Optional. See bottom closure and mount options here: [Shading Enclosures](http://wtshade.com/shop/?product-cat=shading-enclosures&parent-id=38). Delete all of Section C below if not required.

* + 1. Bottom Closure & Closure Mount: Provide where indicated or required by drawings.
			1. Extruded 6061-T6 aluminum (.060 thick).
			2. Finished White (-10).
			3. Sizes:

\*\* NOTE TO SPECIFIER \*\* Delete sizes not required.

* + - * 1. 2" Bottom Closure.
				2. 3" Bottom Closure.
				3. 5" Bottom Closure.
				4. Closure Mount.
				5. Closure Mount with Tile Support.

\*\* NOTE TO SPECIFIER \*\* Optional. See guide track and cable options here: [Guide Systems](http://wtshade.com/shop/?product-cat=guide-systems&parent-id=38). Delete all of Section D below if not required.

* + 1. Guide Track & Cable Kit: Provide where indicated or required by drawings.
			1. Extruded 6061-T6 aluminum.
			2. Finished White (-10).
			3. Type:
				1. Classic Guide Track (15/16" x 1-3/16").
				2. Blackout Guide Track (2-1/2" x 1-3/16") with 1/4" non-adhesive brush insert Grey (-80).
				3. Heavy Duty Guide Track (2-1/2" x 2-1/16").
			4. Guide Wire Cable Kit:
				1. Ceiling, sill, wall or jamb mount ready.
				2. Use 3/64 inch braided stainless steel cable.
				3. Capable of tension adjustment on upper and lower ends of the guide wire cable.
				4. Low profile 1/2 inch (12 mm) sill tensioner.
			5. Idle Cable Support Kit:
				1. Ceiling, wall or jamb mount ready.
				2. Use 3/64 inch braided stainless steel cable.
				3. Use 3/16" clear cable sleeve.
				4. 1 inch (25 mm) tensioner on both ends of the idle cable.

\*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required. If SSP (a hembar surrounded in a sealed fabric pocket) is not selected as standard then select one of the alternative hembar options. See all hembar options here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

* + 1. Alternative Hembar Options
			1. External Hembar with 1/2 inch (12 mm) non-adhesive brush insert Grey (-80)
				1. Extruded 6061-T6 aluminum
				2. Color: White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).
				3. End caps available in White (-10) or Black (-90).
			2. Heavy Duty External Hembar with 1/2 inch (12 mm) non-adhesive brush Grey (-80)
				1. Extruded 6061-T6 aluminum
				2. Color: White (-10).
				3. Color matching end caps and screws
			3. Round External Hembar
				1. Extruded 6061-T6 aluminum
				2. Color: White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).
				3. End caps available in White (-10) or Black (-90)
			4. Round Internal Hembar
				1. Extruded 6061-T6 aluminum wrapped inside shade hempocket.
				2. Color coordinated with shade fabric color.
				3. End caps available in White (-10) or Black (-90)

**\*\*NOTE TO SPECIFIER\*\* Select fabric option for your project below. EcoFabrix can be seen at www.ecofabrix.com/products. WT Shade also carries fabrics from Mermet www.mermetusa.com and Phifer www.phifer.com/suncontrol/interior. When using fabrics from these manufacturers detail in section below.**

* 1. FABRICS
		1. Product: ECOFABRIX Solar Protective Sheer Fabrics.
			1. Sheer Fabric: 3 percent to 15 percent Openness Factor
			2. UV Blockage: 97 percent-85 percent.
			3. Ecofabrix 25X Series
				1. 250 Fabric (Openness Factor: 10 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.025", Fabric Weight: 11.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 253 Fabric (Openness Factor: 3 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.024", Fabric Weight: 12.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 255 Fabric (Openness Factor: 5 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.023", Fabric Weight: 12.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - 1. Ecofabrix 45X Series
				1. 450 Fabric (Openness Factor: 10 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.028", Fabric Weight: 14.1 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 453 Fabric (Openness Factor: 3 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.029", Fabric Weight: 16.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 455 Fabric (Openness Factor: 5 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.029", Fabric Weight: 15.3 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - 1. Ecofabrix 35X Series
				1. 353 Fabric (Openness Factor: 3 percent), Twill Weave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.026", Fabric Weight: 12.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 355 Fabric (Openness Factor: 5 percent), Twill Weave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.026", Fabric Weight: 12.1 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

Ecofabrix 363 Fabric

* + - * 1. 363 Fabric (Openness Factor: 3 percent), Twill Weave.

Composition: 15 percent Polyester/ 85 percent PVC.

Fabric Thickness: 0.030", Fabric Weight: 17.4 (OZ/YD).

Recycled Content: 12 percent Pre-Consumer Content.

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - 1. Ecofabrix 683 Fabric
				1. 683 Fabric (Openness Factor: 3 percent), PVC Free Basketweave:

Composition: 100 percent Polyester.

Fabric Thickness: 0.016", Fabric Weight: 7.3 (OZ/YD).

Select color from manufacturers standard colors.

* + - * 1. Ecofabrix 315 Fabric:

315 Fabric (Openness Factor: 15 percent), 1 x 6 Irregular Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.032", Fabric Weight: 14.3 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + 1. Product: Ecofabrix Solar Protective Privacy Fabrics.
			1. Privacy Fabric: 1 percent Openness Factor
			2. UV Blockage: 99 percent

\*\* NOTE TO SPECIFIER \*\* Select fabric from manufacturer.

* + - 1. Ecofabrix 251 Fabric:
				1. 251 Fabric (Openness Factor: 1 percent), 2 x 2 Basketweave.
				2. Composition: 25 percent Polyester/ 75 percent PVC.
				3. Fabric Thickness: 0.028", Fabric Weight: 15.2 (OZ/YD).
				4. Greenguard Gold Certified.
				5. Select color from manufacturers standard colors.
			2. Ecofabrix 351 Fabric:
				1. 353 Fabric (Openness Factor: 1 percent), Twill Weave.
				2. Composition: 25 percent Polyester/ 75 percent PVC.
				3. Fabric Thickness: 0.026", Fabric Weight: 12.7 (OZ/YD).
				4. Greenguard Gold Certified.
				5. Select color from manufacturers standard colors.
			3. Ecofabrix 441 Fabric:
				1. 441 Fabric (Openness Factor: 1 percent).
				2. Composition: 25 percent Polyester/ 75 percent PVC.
				3. Fabric Thickness: 0.039", Fabric Weight: 20.4 (OZ/YD).
				4. Greenguard Gold Certified.
				5. Select color from manufacturers standard colors.
			4. Ecofabrix 840 Fabric:
				1. 840 Fabric (Openness Factor: 3 percent), PVC Free Cloth.
				2. Composition: 100 percent Polyester.
				3. Fabric Thickness: 0.016", Fabric Weight: 6.3 (OZ/YD).
				4. Select color from manufacturers standard colors.
		1. Product: ECOFABRIX Solar Protective Light Blocking Fabrics.
			1. Blackout Fabric: 0 percent Openness Factor.
			2. UV Blockage: 100 percent.

\*\* NOTE TO SPECIFIER \*\* Select fabric from manufacturer.

* + - 1. Ecofabrix 700 Fabric:
				1. 700 Fabric (Openness Factor: 0 percent).
				2. Composition: 75 percent Vinyl / 25 percent Fiberglass.
				3. Fabric Thickness: 0.013", Fabric Weight: 12.5 (OZ/YD).
				4. Greenguard Gold Certified.
				5. Select color from manufacturers standard colors.
			2. Ecofabrix 772 Fabric:
				1. 772 Fabric (Openness Factor: 0 percent).
				2. Composition: 100 percent Polyester.
				3. Fabric Thickness: 0.026", Fabric Weight: 11.2 (OZ/YD).
				4. Greenguard Gold Certified.
				5. Select color from manufacturers standard colors.
		1. Specialty Fabric:
			1. Sheer Fabric: 10 percent Openness Factor
			2. UV Blockage: 100 percent
			3. Ecofabrix 900 Fabric
				1. 900 Fabric (Openness Factor: 10 percent).
				2. UV Blockage: 90 percent
				3. Composition: Metalized Polyester
				4. Fabric Thickness: 0.004", Fabric Weight: 5.0 (OZ/YD).
				5. Select color from manufacturers standard colors.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions. Test for proper operation and adjust until satisfactory results are obtained.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Verify child safety hold-down is installed correctly.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION