

SECTION 12493 [12 24 00]

LIGHTBLOC MANUAL FLEXSHADE WINDOW SHADES

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\*\* NOTE TO SPECIFIER \*\* Draper, Inc.; window shade products.

This section is based on the products of Draper, Inc., which is located at:

 411 S. Pearl Street

 P. O. Box 425

 Spiceland, IN 47385-0425

 Toll Free Tel: 800-238-7999

 Tel: 765-987-7999

 Fax: 866-637-5611

 Email: drapercontract@draperinc.com

 Web: [www.draperinc.com](http://www.draperinc.com)

 [ [Click Here](http://www.arcat.com/arcatcos/cos43/arc43272.html) ] for additional information.

Draper is a leader in the manufacture of window shades, projection screens, and gymnasium equipment. Founded in 1902, Draper maintains a tradition of quality and service. Draper products include FlexShade roller-operated and fixed window shades.

This section can be used for specifying manually operated Draper LightBloc FlexShades, an opaque fabric window shade system for complete blackout of window opening.

 LightBloc FlexShade

1. GENERAL
	1. SECTION INCLUDES
		1. Opaque window shade system: Manually operated, roll-up fabric opaque window shade system for complete blackout of window opening including side and bottom channels, headbox, manual operator, and mounting hardware.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06100 [06 10 00] – Rough Carpentry: Blocking for support of window shade hardware.
		2. Section 07900 [07 90 00] - Joint Sealers: Sealants for perimeter of shade system.
		3. Section 09260 [09 21 23] - Gypsum Board Assemblies: Suspended gypsum board ceilings to contain recessed window shade pockets.
		4. Section 09510 [09 51 23] - Acoustical Tile Ceilings: Suspended acoustical panel ceilings to contain recessed window shade pockets.
		5. Section 11132 [11 52 13] - Motorized Projection Screens: Motorized projection screens to be interfaced with shade controls.
		6. Section 11132 [11 52 13] - Motorized Projector Lifts: Motorized projector lifts and mounts to be interfaced with shade controls.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. NFPA 701-99 - Fire Tests for Flame-Resistant Textiles and Films.
		2. GREENGUARD Environmental Institute Gold.
		3. US Green Building Council.
		4. ANSI/WCMA A100.1-2018
	1. SUBMITTALS
		1. Submit under provisions of Section 01330 [01 33 26] - Submittal Procedures:
		2. Product Data: Manufacturer's data sheets on each product specified, including:
			1. Preparation instructions and recommendations.
			2. Installation and maintenance instructions.
			3. Styles, material descriptions, dimensions of individual components, profiles, features, finishes and operating instructions.
			4. Storage and handling requirements and recommendations.
			5. Mounting details and installation methods.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for projects with complex requirements for window treatment. Delete if not required.

* + 1. Shop Drawings: Plans, elevations, sections, product details, installation details, operational clearances, wiring diagrams and relationship to adjacent work.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met.
		2. Window Treatment Schedule: For all roller shades. Use same room designations as indicated on the Drawings, field verified window dimensions, quantities, type of shade, controls, fabric, and color, and include opening sizes and key to typical mounting details.

\*\* NOTE TO SPECIFIER \*\* Delete Selection Samples paragraph if colors and shade fabrics have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of shade cloth options and aluminum finish color samples representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two complete sets of shade components, unassembled, demonstrating compliance with specified requirements. Shade fabric sample and aluminum finish sample as selected, representing actual product, color, and patterns. Mark face of material to indicate interior faces.
		3. Maintenance Data: Methods for maintaining roller shades, precautions regarding cleaning materials and methods, instructions for operating hardware and controls.
		4. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Obtain roller shades through one source from a single manufacturer with a minimum of twenty years experience in manufacturing products comparable to those specified in this section.
		2. NFPA Flame-Test: Passes NFPA 701. Materials tested shall be identical to products proposed for use.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up of one of each type roller shade assembly specified for evaluation of mounting, appearance and accessories.
			1. Locate mock-up in window(s) designated by Architect.
			2. Do not proceed with remaining work until mock-up is accepted by Architect.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Do not deliver window shades until building is enclosed and construction within spaces where shades will be installed is substantially complete.
		2. Deliver products in manufacturer's original, unopened, undamaged containers with labels intact.
		3. Label containers and shades according to Window Shade Schedule.
		4. Store products in manufacturer's unopened packaging until ready for installation.
	2. SEQUENCING
		1. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
		2. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	3. PROJECT CONDITIONS
		1. Install roller shades after finish work and ambient temperature, humidity and ventilation conditions are maintained at levels recommended for project upon completion.
	4. WARRANTY
		1. Hardware and Shade Fabric: Draper’s standard twenty-five year limited warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Draper, Inc., which is located at: 411 S. Pearl P. O. Box 425; Spiceland, IN 47385-0425. ASD. Toll Free Tel: 800-238-7999; Tel: 765-987-7999; Fax: 866-637-5611; Web: [www.draperinc.com](http://www.draperinc.com).

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600.

\*\* NOTE TO SPECIFIER \*\* Select the shades required from the following paragraphs. For each Draper window shade there are options for size, fabric, operator, operator location, controls, method of installation, hardware, and hardware finish. Refer to Draper product literature for availability of options and selection guidelines. Various options are listed in this specification section, but not all options apply to all window shades. The specifier will need to select the appropriate options, verify their availability, and delete non-applicable models and options.

\*\* NOTE TO SPECIFIER \*\* Draper LightBloc FlexShade System can be manually operated. Manual shades are provided in two operating styles: chain and clutch, and crank. Refer to Draper product literature for selection guidelines. Select operation type from the following. Delete those not required.

* 1. OPAQUE WINDOW SHADE SYSTEM
		1. Operation Type: Bead chain and clutch operated, vertical roll-up, fabric, opaque window shade system, complete with headbox, side and sill channels for total opacity; LightBloc FlexShade System as manufactured by Draper, Inc.
		2. Operation Type: Crank operated, vertical roll-up, fabric, opaque window shade system, complete with headbox, side and sill channels for total opacity; LightBloc FlexShade System as manufactured by Draper, Inc.

\*\* NOTE TO SPECIFIER \*\* For Chain and Clutch Operated LightBloc FlexShade System include the following paragraph. Delete if not required

* + 1. Operation: Bead chain and clutch operating mechanism allowing shade to stop when chain is released. Designed never to need adjustment or lubrication. Provide limit stops to prevent shade from being raised or lowered too far.
			1. Clutch mechanism: Fabricated from high carbon steel and molded fiberglass reinforced polyester.

\*\* NOTE TO SPECIFIER \*\* Select stainless steel or plastic bead chain from the following. Delete the one not required.

* + - 1. Bead chain loop: Stainless steel bead chain hanging at side of window.
			2. Bead chain loop: Plastic bead chain hanging at side of window, Ivory, Grey, or Black color as selected by Architect.
			3. Idler Assembly: Provide roller idler assembly of molded nylon with adjustable length idler pin to facilitate easy installation, and removal of shade for service.

\*\* NOTE TO SPECIFIER \*\*For Crank Operated LightBloc FlexShade System include the following paragraph. Delete if not required.

* + 1. Operation: Crank and gear box operated shades.
			1. Gear box: Die cast aluminum and steel construction. Injection molded nylon and steel crank insert installed in roller to engage gear box.
			2. Crank handle:

\*\* NOTE TO SPECIFIER \*\* Crank handle can be detachable or permanently mounted, select one of the following paragraphs.

* + - * 1. Detachable anodized aluminum and chrome plated steel handle.
				2. Permanently mounted anodized aluminum and chrome plated steel handle.

\*\* NOTE TO SPECIFIER \*\* Crank handle can be provided in lengths up to 10 feet., select one of the following paragraphs.

* + - * 1. Size: 4 feet (122 cm).
				2. Size: 6 feet (183 cm).
				3. Size: 10 feet (305 cm).
			1. Idler assembly: Provide roller idler assembly of molded nylon with adjustable length idler pin or spring-loaded idler to facilitate easy installation, and removal of shade for service.
		1. Roller Tube: Fabricated from extruded aluminum, galvanized steel, or enameled steel. Diameter, wall thickness, and material selected by manufacturer to accommodate shade type and size. Fabric connected to the roller tube with LSE (low surface energy) double sided adhesive specifically developed to attach coated textiles to metal. Adhesive attachment to eliminate horizontal impressions in fabric.

\*\* NOTE TO SPECIFIER \*\* Draper LightBloc FlexShade System is provided in two configurations: one for exposed surface installation and the other for recessed pocket installation. Delete the one not required.

* + 1. Headbox: Consists of extruded aluminum sections with endcaps and opacity plates.
			1. Size: 4-1/8 inches (105 mm) high by 3-1/2 inches (89 mm) wide by length required for shade being provided.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for exposed headbox. Delete if not required.

* + - 1. L-shaped removable front face and bottom cover and L-shaped back and top.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for recessed headbox. Delete if not required.

* + - 1. U-shaped front, back, and top and removable bottom.
		1. Endcaps: Stamped steel with universal design suitable for mounting to ceiling, wall, and jamb. Provide size compatible with roller size.
		2. Side Channels: Double chamber fabricated from 0.06 inch (1.5 mm) thick extruded aluminum sections. One chamber accepts fabric and contains groove for fabric retainer. Other chamber accepts fabric guide and channel locator.
		3. Sill channel: 0.06 inch (1.5 mm) thick extruded aluminum channel to receive slat bar and prevent light leakage.
		4. Slat bar: Extruded aluminum bar attached to bottom of shade. Bar does not retract into headbox.
		5. Channel locator: Injected molded nylon insert to align side and sill channels with headbox.
		6. Fabric guide: Plated steel transition for fabric rolling into side channel.

\*\* NOTE TO SPECIFIER \*\* LightBloc FlexShades with SB9000 and SB9100 fabric use fabric retainers, that includes a patented system which enables shade to withstand reasonable air pressure differentials. However, extreme air currents or physical interference cannot be resisted by fabric retention system and may cause physical damage. Refer to Draper product literature for selection guidelines. (Available with SB9000 and SB9100 fabrics only).

* + 1. Fabric retainer: System designed to prevent disengagement of fabric from side channels due to normal variations of air pressure caused by doors opening, HVAC systems, and temperature differences between room and window well. System consists of horizontal steel stays installed in shade, covered with fabric, and spaced at regular intervals. Grommets installed through stays are held within groove of side channel chamber.
		2. Exposed aluminum finish:

\*\* NOTE TO SPECIFIER \*\* Select the finish required from the following paragraphs and delete those not required.

* + - 1. Finish: Clear anodized aluminum.
			2. Finish: Black.
			3. Finish: White.
			4. Finish: Ivory.
			5. Finish: Bronze.
			6. Custom powder coat as selected by the Architect.
	1. FABRIC

\*\* NOTE TO SPECIFIER \*\* Refer to Draper product literature for available shade fabrics and selection guidelines. Select fabric(s) and color as applicable from the following and delete those not applicable. Use the schedule at the end of this section if required to define location(s) of multiple fabrics.

* + 1. Room Darkening Fabrics
			1. SunBloc Series SB9000: Close woven fiberglass base textile with sun-resistant vinyl film bonded to each side, opaque with minimum tensile strength of 190 pounds for warp and 180 pounds for fill. Fire rating: NFPA 701 1006-Test 1. Washable and stain resistant. Wt. 12 oz/sq yd. Same color both sides, .015 inches thick.
			2. SunBloc Series SB9100: Close woven fiberglass base textile with sun-resistant vinyl film bonded to each side, opaque with minimum tensile strength of 190 pounds for warp and 180 pounds for fill. Fire rating: NFPA 701 1006-Test 1. Washable and stain resistant. Wt. 12 oz/sq yd. White exterior in all colors, .013 inches thick.
			3. Flocke by Mermet: Opaque, PVC-free fiberglass textile with acrylic backing. 17.1 oz/sq yd, .024 inches thick. Fire rating: NFPA 701, both small- and large-scale tests. Antistatic treated. Draper shades made with this fabric are GreenSpec listed.
			4. SheerWeave Series SW7000 by Phifer: PVC-free polyester with acrylic foamed backing. .018 inches thick, 10 oz/sq yd, opaque. Draper shades made with this fabric are GreenSpec listed.
			5. SheerWeave Series SW7100 by Phifer: PVC-coated Fiberglass laminated with a 2-ply PVC film. Fire rating: NFPA 701.023 inches thick, 19.8 oz/sq yd, opaque.
			6. SheerWeave Series SW7500 by Phifer: PVC-free polyester with an acrylic coating. Fire rating: California U.S. Title 19 (small scale), NFPA 101 (Class A Rating), NFPA 701 TM#1 (small scale), BS 5867 Part 2 Type B Performance, CAN/ULC-S 109 (large and small scale), IBC Section 803.1.1 (Class A Rating), CAN/CGSB 2-4.162-M80. Bacterial and fungal resistance: ASTM E 2180 and ASTM G21. GREENGUARD Gold certified. 0.014 inches thick, 12.14 oz/sq yd, opaque.
			7. Avila Twilight by Mermet. 37.5 percent Polyester and 62.5 percent acrylic with foam backing. Duraguard fabric protector and Sanitized Antimicrobial Protection. Plain weave that is 100% PVC free. Fire classifications: NFPA 701-04 TM#1, California U.S. Title 19, Duraguard Stain resistant, Sanitized Mold and Mildew Resistant, GREENGUARD, GREENGUARD Gold. Approximate Openness Factor: 0 percent. Average Fabric Thickness: .020 inches. Average Fabric Weight: 14.5 ounces per square yard Gold.
			8. Vizela 1 percent by Mermet: 100 percent fiberglass with an EVA coating and PVC free. Fire classifications: NFPA 701-10 TM#1, California U.S. Title 19, ASTM E-84, M1 NFP 92 503, GREENGUARD, GREENGUARD Gold, RoHS Lead Free, PVC Free, ASTM G21 Fungal Resistance and ASTM E2180 Bacteria Resistance rated, GREENGUARD, GREENGUARD Gold. Approximate Openness Factor: 1 percent. Average Fabric Thickness: 0.013 inch. Average Fabric Weight: 8.7 ounces per square yard.

\*\* NOTE TO SPECIFIER \*\* Refer to Draper product literature for available shade fabric colors and patterns. Select fabric colors and patterns from the following, delete those not applicable.

* + 1. Color and pattern: \_\_\_\_\_\_\_\_\_\_, No. \_\_\_\_\_.
		2. Color and pattern: As indicated in Color Schedule on Drawings.
		3. Color and pattern: As selected by Architect from manufacturer's standard range.
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

\*\* NOTE TO SPECIFIER \*\* Include one of the following paragraphs. Delete if not applicable.

* + 1. Coordinate requirements for blocking and structural supports to ensure adequate means for installation of window shades.
		2. Coordinate requirements for blocking, construction of shade pockets, and structural supports to ensure adequate means for installation of window shades.

\*\* NOTE TO SPECIFIER \*\* Include one or more of the following paragraphs for window shades with headboxes recessed in ceilings. Delete those not applicable.

* + 1. Coordinate installation of recessed shade pockets with construction of suspended acoustical panel ceilings specified in Section 09510.
		2. Coordinate installation of recessed shade pockets with construction of suspended gypsum board ceilings specified in Section 09260.
	1. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Install roller shades level, plumb, square, and true. Allow proper clearances for window operation hardware.

\*\* NOTE TO SPECIFIER \*\* Draper Type D FlexShade Pockets are designed to be installed prior to or as part of ceiling system installation. Shade and operating mechanism can be site installed in pockets after construction operations that might damage shade are complete. If pockets are to be installed. Include the following paragraph as applicable and delete if not applicable.

* + 1. Shade pockets:
			1. Install shade pockets prior to installation of suspended ceiling system. Attach to supporting structure with screws through top of pocket at 24 inches (610 mm) minimum centers.
			2. Install shade pockets in conjunction with installation of suspended ceiling system. Attach to supporting structure with screws through top of pocket at 24 inches (610 mm) minimum centers.
			3. Install corner pieces securely and in alignment with pockets.
			4. Install pocket ends securely and in alignment with pockets.
			5. After interior construction is essentially complete, install shade and operating mechanism in pocket.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph if fascia or separate closure for site constructed recess is being provided. Note fascia is not applicable if pockets are being provided. Delete if not applicable.

* + 1. Install the following items to conceal roller and operating mechanism. Do not use exposed fasteners.

\*\* NOTE TO SPECIFIER \*\* Select items to conceal roller and operating mechanism from the following as applicable. Delete if not applicable.

* + - 1. Fascias.
			2. Closure panels.
			3. Endcaps.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraphs for LightBloc shades. Delete if not applicable.

* + 1. Install headbox, side channels, and sill channel with sealant specified in Section 07900 - Joint Sealers to eliminate light leaks at perimeter of shade system.
		2. Position shades level, plumb, and at proper height relative to adjacent construction. Secure with fasteners recommended by manufacturer.
	1. TESTING AND DEMONSTRATION

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for LightBloc shades. Delete if not applicable.

* + 1. Test window shades to verify that operating mechanism, fabric retainer, and other operating components are functional. Correct deficiencies.

\*\* NOTE TO SPECIFIER \*\* Select one type operating mechanism from the list below. Delete those not applicable.

* + - 1. Crank.
			2. Chain and clutch.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for LightBloc shades. Delete if not applicable.

* + 1. During daylight hours, lower shades and turn off interior lights. Verify that there are no light leaks at perimeter or within shade assembly. Correct deficiencies.
		2. Demonstrate operation of shades to Owner's designated representatives.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.
	2. SCHEDULES

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below to suit project requirements. Identify products by name on the Drawings or alternately use this paragraph to define the location of each type of material to be used. Delete if not required.

* + 1. Refer to Drawings for shade types and locations.

END OF SECTION