

SECTION 08360

OVERHEAD DOORS

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\*\* NOTE TO SPECIFIER \*\* Clopay sectional overhead doors, insulated and non-insulated.

This section is based on the products of Clopay Building Products Company, which is located at:
 Clopay Building Products
 8585 Duke Blvd
 Mason, OH 45040
 Tel: 800-526-4301 prompt #3
 Fax: 888-434-3193
 Email: cia@clopay.com

 Web: [www.clopaycommercial.com](http://www.clopaydoor.com)
 [ [Click Here](http://www.arcat.com/arcatcos/cos31/arc31487.cfm) ] for additional information.

Clopay entered the commercial and industrial upward acting door industry in 1966. For over 3 decades, Clopay has been providing the commercial sectional and coiling steel door market with creative solutions, innovative products, and superior customer service. With its emphasis on innovative design and application, combined with a unique combination of two trusted brands -- Clopay, and Ideal Door -- Clopay Building Products Company is distinguished from all its competitors.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Insulated steel full view sectional overhead door (Model 3159)
		2. Electric Door Operators
	1. RELATED SECTIONS

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

* + 1. 03 30 00 - Cast-In-Place Concrete.
		2. 04 20 00 - Unit Masonry Assemblies.
		3. 05 50 00 - Metal Fabrications.
		4. 06 10 00 - Rough Carpentry.
		5. 07 90 00 - Joint Seals.
		6. 08 71 00 - Door Hardware and locks.
		7. 09 90 00 - Paints and Coatings.
		8. 11 15 00 - Parking Control Equipment: Remote door control.
		9. 16 05 00 - Electrical service and connections for powered operators.
	1. REFERENCES

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

* + 1. [ASTM B 653/653M](https://www.astm.org/Standards/A653)
		2. [ASTM B 209/209M](https://www.astm.org/Standards/B209)
		3. [ASTM B 221/221M](https://www.astm.org/Standards/B221)
		4. [AAMA 2604](https://aamanet.org/)
		5. [DASMA TDS-163](http://www.dasma.com/PDF/Publications/TechDataSheets/CommercialResidential/Tds163.pdf)
		6. [ANSI/DASMA 102](https://www.dasma.com/PDF/Publications/Standards/ANSIDASMA102.pdf)
	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.
			4. Operation and maintenance data.

\*\* NOTE TO SPECIFIER \*\* Delete below if electrically operated doors not required.

* + - 1. Nameplate data and ratings for motors.
		1. Shop Drawings: Include opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
		2. Selection Samples: Upon request furnish color samples or 2’ X 2’ section sample.
	1. WIND PERFORMANCE REQUIREMENTS
		1. Design doors to withstand positive and negative wind loads as calculated in accordance with applicable building code and detailed in structural documents.

\*\* NOTE TO SPECIFIER \*\* If the two paragraphs below are retained, be careful not to specify specific doors in Part 2 that could conflict with these requirements. Instead, select door types required and leave specific door thickness and gauge to manufacturer.

* 1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Minimum ten years of documented experience.
		2. Installer Qualifications: Minimum five years of documented experience, and authorized by the door manufacturer.
	2. WARRANTY
		1. Manufacturers Limited Warranty steel sectional overhead doors:
			1. Standard finish warranty against cracking, checking, or peeling for 10 years.

Custom color option Color Blast Finish limited warranty period for 5 years; Delamination warranty for 5 years; Parts and Hardware for 1 year. Extended 8-Year Hardware Warranty option.

\*\* NOTE TO SPECIFIER \*\* Retain paragraphs above and below for steel doors.

1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Clopay Corporation: 8585 Duke Blvd.; Mason, OH 45040; https://www.clopaydoor.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 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete door type and models not required.

* 1. INSULATED STEEL FULL VIEW DOORS, THERMALLY-BROKEN, POLYSTYRENE INSULATED
		1. Door Construction
			1. Panels: Sandwich construction of exterior and interior steel skins pressure bonded to an expanded core, with skins separated by a continuous silicone filling forming a thermal break.
			2. Steel Skins: Formed from roll formed commercial or drawing quality steel sheet, hot-dip galvanized per ASTM A 924/A 924M and ASTM A 653/A 653M, pre-painted with primer and baked-on polyester topcoat; sections formed to create weather tight tongue-in-groove meeting joint.
			3. Reinforcing: Galvanized and primed steel reinforcement located under each hinge location, pre-punched for hinge attachment.
		2. Heavy Duty Door: Clopay Model 3159.
			1. Style: Minor ribbed insulated steel full view door, thermally-broken, polystyrene insulated.
			2. Overall Panel Thickness: 1-3/8 inches (35 mm).
			3. Steel Skin Thickness: Minimum 27 gauge 0.016 inch (0.40 mm) exterior; minimum 27 gauge 0.016 inch (0.40 mm) interior.
			4. Stiles: Steel pre-painted end stiles, minimum 0.061 inch (1.55 mm) thick, engineered for easy hardware attachment through pre-punched holes.
			5. Astragal: U-shaped flexible PVC in retainer of full-length 0.055 inch (1.4 mm) rigid PVC.
			6. Thermal Resistance (R-value): 6.5 deg F hr sq ft/Btu (1.15 (K sq m)/W); calculated door section R-value in accordance with DASMA TDS-163.
			7. U-Factor: 0.44 (fully glazed)
			8. Air infiltration: 0.41 cfm/ft2

\*\* NOTE TO SPECIFIER \*\* Window and glazing paragraphs below are optional. Delete options not required.

* + - 1. Windows: None.
			2. Windows: Extruded polypropylene windows measuring 19-1/2 inches by 16 inches (495 mm x 406 mm)
				1. Glazing: 1/8 inch (3 mm) tempered
				2. Glazing: 1/8 inch (3 mm) frosted tempered
				3. Glazing: 3/4 inch (19.05 mm) insulated tempered
				4. Glazing: 3/4 inch (19.05 mm) insulated frosted tempered
			3. Windows: Extruded polypropylene windows measuring 42 inches by 16 inches (1067 mm by 406 mm)
				1. Glazing: 1/8 inch (3 mm) tempered
				2. Glazing: 1/8 inch (3 mm) frosted tempered
				3. Glazing: 3/4 inch (19.05 mm) insulated tempered
				4. Glazing: 3/4 inch (19.05 mm) insulated frosted tempered
			4. Finish: Minor ribbed stucco embossed texture, white interior, exterior as follows:

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

* + - * 1. White.
				2. Brown.
				3. Almond
				4. Sandtone
				5. Desert Tan
				6. Bronze
				7. Gray
				8. Mocha Brown
				9. Black
				10. Trinar White
				11. Charcoal
				12. Color Blast® (Sherwin Williams® Color Code - High quality durable two-part Polane® paint system) SW # .

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

* + - 1. Locking:

\*\* NOTE TO SPECIFIER \*\* Delete lock type not required.

* + - * 1. Provide one inside slide lock.
				2. Provide two inside slide locks.
				3. Provide five pin cylinder lock with outside key.
				4. No Lock

\*\* NOTE TO SPECIFIER \*\* Drop door safety devices is optional and available on vertical, high lift and follow the track types only. Delete if not required.

* + - 1. Door Drop Safety Device: Provide brackets designed to stop the fall of the door should lift cables fail.
			2. Weatherstripping: Provide complete perimeter seals.
			3. Track

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two track widths; select track width as required by the size and weight of the door.

* + - * 1. 2 inches (50 mm) track designed for 2” diameter rollers. Vertical tracks minimum 0.061 inch (1.55 mm) galvanized steel. Horizontal tracks minimum 0.075 inch (1.91 mm) galvanized steel).
				2. 3 inches (75 mm) track designed for 3” diameter rollers. Vertical and horizontal tracks minimum 0.096 inch (2.43 mm) galvanized steel.
				3. Provide track configuration to maximize headroom available per plans.
			1. Spring Counterbalance: Torsion spring counterbalance mechanism with high strength galvanized aircraft cable with minimum 7 to 1 safety factor.

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

* + - * 1. Standard Cycle Spring: 10,000 cycle.
				2. High Cycle Spring: 25,000 cycles.
				3. High Cycle Spring: 50,000 cycles.
				4. High Cycle Spring: 100,000 cycles.
				5. Maximum cycles on a single shaft line.

19. Manual Operation

* 1. ControlGard® SD direct drive chain hoist with integral brake mechanism that will immediately stop upward or downward travel and maintain the door in a stationary position when the hand chain is released by the user.
		1. 2.8:1 primary reduction in 1" bore
		2. 2.8:1 primary reduction in 1-1/4" bore
		3. 3.7:1 primary reduction in 1" bore
		4. 3.7:1 primary reduction in 1-1/4" bore
	2. Pull rope.
	3. ELECTRIC DOOR OPERATORS
		1. General: Provide electric door operator provided by door manufacturer for door with operational life specified complete with electric motor and factory pre-wired motor controls, starter, gear-reduction unit, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation. Comply with NFPA 70.

\*\* NOTE TO SPECIFIER \*\*Delete following option if not required. Brake is standard on openers with 3/4 HP or more.

* + - 1. Solenoid-operated brake.
		1. Disconnect Device: Provide hand-operated disconnect or mechanism for emergency manual operation while disconnecting motor, without affecting timing of limit switch. Mount disconnect and operator so they are accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
		2. Design operator so motor may be removed without disturbing limit switch adjustment and without affecting emergency auxiliary operator.
		3. Provide control equipment complying with NEMA ICS1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24-V, AC or DC.
		4. Electric Motors: Provide high-starting torque, reversible, continuous-duty, Class A insulated, electric motor, complying with NEMA MG 1, with overload protection, sized to start, accelerate, and operate door in either direction, from any position, at not less than 2/3 fps (0.2 m/s) and not more than 1 fps (.03m/s), without exceeding nameplate ratings or considering service factor.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following types.

* + - 1. Type: Mechanical.
			2. Type: Solid State.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following types.

* + - 1. Type: Jackshaft.
			2. Type: Trolley.
			3. HP:

\*\* NOTE TO SPECIFIER \*\* Delete all but one of the following types.

* + - * 1. 1/3 hp (246 W).
				2. 1/2 hp (373 W).
				3. 3/4hp (559 W).
				4. 1 hp (746 W).
			1. Power Characteristics:

\*\* NOTE TO SPECIFIER \*\* Delete voltage and phase not required.

* + - * 1. 115 V.
				2. 220 V.
				3. 460 V.
				4. 1 phase.
				5. 3 phase.
			1. Service Factor:

\*\* NOTE TO SPECIFIER \*\* Delete NEMA types not required.

* + - * 1. NEMA MG 1.
				2. NEMA 4 watertight.
				3. NEMA 9 waterproof.
				4. NEMA 10 oil resistant.
				5. NEMA 12 explosion resistant.
			1. Coordinate wiring requirements and electrical characteristics of motors with building electrical system.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following types of remote control station contacts.

* + 1. Remote Control Station: Provide momentary contact, 3-button control station with push - button controls labeled "Open", "Close" and "Stop".
		2. Remote Control Station: Provide continuous contact, 3-button control station with push - button controls labeled "Open", "Close" and "Stop".
		3. Provide interior units, fully guarded, surface mounted, heavy-duty type, with general-purpose NEMA ICS 6 enclosure in one of the following types:

\*\* NOTE TO SPECIFIER \*\* Delete all but one of the following enclosure types.

* + - 1. Enclosure Type: Type 1.
			2. Enclosure Type: Type 4.
			3. Enclosure Type: Type 12.
		1. Obstruction Detection Device: Provide each motorized door with indicated external automatic safety sensor able to protect full width of door opening. Activation of sensor immediately stops and reverses downward door travel.

\*\* NOTE TO SPECIFIER \*\* Delete the safety options not required.

* + - 1. Sensor Edge: Provide each motorized door with an automatic safety sensing edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor immediately stops and reverses downward door travel. Connect to control circuit using manufacturer's standard take-up reel or self-coiling cord. Sensing edge shall be operated by:

\*\* NOTE TO SPECIFIER \*\* Delete all but one of the following types.

* + - * 1. Electric.
				2. Pneumatic.
				3. Electric Fail safe.
				4. Pneumatic Fail safe.
			1. Photo-electric control: Provide each motorized door with a photo-electric device that will stop and reverse the downward door travel if the light beam is broken or blocked. Device shall be:

\*\* NOTE TO SPECIFIER \*\* Delete one of the following types.

* + - * 1. NEMA Type 1.
				2. NEMA Type 4.
		1. Limit Switches: Provide adjustable switches, interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.

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

* + 1. Radio Controls: Provide 3 button radio transmitter to provide remote open, close, stop functionality.
			1. Provide external antenna and coaxial wiring to receiver to enhance radio control reception.

\*\* NOTE TO SPECIFIER \*\* Delete optional safety feature below if not desired. Not commonly used with drawbar type openers.

* + 1. Provide auxiliary chain hoist: for emergency manual operation while disconnecting motor, without affecting timing of limit switch. Mount disconnect and operator so they are accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
1. EXECUTION
	1. EXAMINATION
		1. Examine wall and overhead areas, including opening framing and blocking, with installer present, for compliance with requirements for installation tolerances, clearances, and other conditions affecting performance of Work in this Section.
			1. Proceed with installation only after unsatisfactory conditions have been corrected.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. 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 overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION