

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
		1. Sectional overhead doors of the following types:
			1. Light Ribbed steel doors, thermally-broken, polystyrene insulated. (Model 3209)
			2. Electric door operators
	2. RELATED SECTIONS

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

* + 1. Section 05500 - Metal Fabrications: Steel channel opening frame.
		2. Section 06100 - Rough Carpentry: Rough wood framing and blocking for door opening.
		3. Section 08710 - Door Hardware: Lock cylinders.
		4. Section 11150 - Parking Control Equipment: Remote door control.
		5. Division 16 Sections: 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 A 653/A 653M - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
		2. ASTM A 924/A 924M - Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
		3. ASTM B 209/209M - Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
		4. ASTM B 221/221M - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
	1. SUBMITTALS
		1. Submit under provisions of Section 01300.
		2. [ [Product Data](http://www.arcat.com/arcatcos/cos31/arc31487.cfm) ]: 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: For each finish specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		3. Verification Samples: For each finish specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
	1. WIND PERFORMANCE REQUIREMENTS
		1. Design doors to withstand positive and negative wind loads as calculated in accordance with applicable building code.

\*\* 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. Design Wind Load: \_\_\_\_\_\_\_\_lb/sf (\_\_\_\_\_kPa).
			2. Safety Factor: 1.5 times design wind load.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing the types of doors specified in this section, with not less than ten years of documented experience.
		2. Installer Qualifications: Company specializing in installing the types of products specified in this section, with minimum of five years of documented experience, and approved by the door manufacturer.
	2. WARRANTY
		1. Finish Warranty: Provide manufacturer's standard finish warranty against rust through.

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

* + - 1. Warranty period: 10 years.
		1. Delamination Warranty: Provide manufacturer's standard warranty against delamination.
			1. Warranty period: 10 years.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Clopay Building Products Company, which is located at: 8585 Duke Blvd. ASD; Mason, OH 45040-3101; Toll Free Tel: 800-526-4301 prompt #3; Fax: 888-434-3193; Email: CIA@clopay.com Web: [www.clopaycommercial.com](http://www.clopaycommercial.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 \*\* Delete door type and models not required.

* 1. LIGHT RIBBED STEEL 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, unless otherwise specified.
			3. Reinforcing: Galvanized and primed steel reinforcement located under each hinge location, pre-punched for hinge attachment.
			4. Handle: High impact polymer step plate/lift handle on bottom panel section.
		2. Heavy Duty Door: Clopay Model 3209.
			1. Maximum Door Size: 20 ft, 2 inches (6.2 m) wide by 18 ft (5.5 m) high.
			2. Overall Panel Thickness: 2 inches (51 mm).
			3. Steel Skin Thickness: Minimum 24 gauge 0.022 inch (0.56 mm) exterior; minimum 28 gauge 0.015 inch (0.38 mm) interior.
			4. Stiles: Steel prepainted end stiles, minimum 0.049 inch (1.25 mm) thick, engineered for easy hardware attachment through pre-punched holes.
			5. Thermal Resistance (R-value): 9.1 deg F hr sq ft/Btu (1.6 (K sq m)/W); calculated door section R-value in accordance with DASMA TDS-163.

\*\* NOTE TO SPECIFIER \*\* Window paragraphs below are optional. Delete if not required.

* + - 1. Windows: None.

\*\* NOTE TO SPECIFIER \*\* Glazing. Delete glazing not required.

* + - 1. Window: PVC windows measuring 19-1/2 inches by 16 inches (495 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.
			2. Window: PVC 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.
			3. Finish: Light Ribbed exterior design with stucco embossment, white interior and exterior as follows:
				1. White.
				2. Almond
				3. Desert Tan.
				4. Bronze.
				5. Chocolate Brown.
				6. Gray.
				7. Black.
				8. Sandtone.
				9. Trinar White.

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

* + - 1. Locking: No Lock.

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

* + - 1. Locking: Inside spring loaded slide bolt lock on end stile that engages slot in track.

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

* + - * 1. Provide one inside slide lock.
				2. Provide two inside slide lock.

\*\* NOTE TO SPECIFIER \*\* Paragraph below is optional.

* + - * 1. Provide five pin cylinder lock with outside key.
			1. Weatherstripping: Provide complete perimeter seals. Provide flexible top seal, flexible jamb seal and U shaped bottom seal.
			2. Tracks: Vertical tracks minimum 0.061 inch (1.55 mm) galvanized steel tapered and mounted for wedge type closing. Horizontal tracks minimum 0.075 inch (1.91 mm) galvanized steel, reinforced with minimum 0.0897 inch (2.28 mm) galvanized steel angles as required:

\*\* 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. Track Width: 2 inches (50 mm).
				2. Track Width: 3 inches (75 mm).

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

* + - * 1. Provide standard lift tracks with 15 inches (381 mm) radius track as indicated.
				2. Provide vertical lift tracks as indicated.
				3. Provide high lift tracks as indicated.
				4. Provide tracks that follow roof slope tracks as indicated.
				5. Provide low headroom tracks as indicated.
			1. Spring Counterbalance: Torsion spring counterbalance mechanism sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of die cast aluminum 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.
	1. 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