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STEEL SECTIONAL DOORS

220

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WAYNE-DALTON COMMERCIAL DOOR SYSTEMS

220

## STEEL SECTIONAL DOORS

WHEN STRENGTH AND IMPACT RESISTANCE ARE CRITICAL ON COMMERCIAL/INDUSTRIAL APPLICATIONS

Wayne-Dalton's 220 steel sectional overhead door provides high impact resistance and industrial strength. Available in a wide variety of standard sizes, the Model 220 is available with 20-gauge ribbed or flush steel skins. A range of lite and insulation options are also available.



COMMERCIAL DOORS & OPERATORS

- 20-GAUGE STEEL CONSTRUCTION
- STANDARD SIZES UP TO 30' 2" WIDE & 22' 1" HIGH
- SUPERIOR STRENGTH AND DURABILITY

# STEEL SECTIONAL DOORS

## MODEL 220

Wayne-Dalton's Model 220 steel sectional door is designed for strength and durability. Available with a ribbed or flush 20-gauge hot-dipped, galvanized steel exterior skin, the Model 220 comes in sizes up to 480 sq. ft.

### Materials & Construction

The 220 door uses "C"-shaped 20-gauge center and 16-gauge end stiles which are formed of galvanized steel with prelocated extruded holes for rapid hinge attachment. Optional 16-gauge center stiles are also available.

Bottom sections feature a flexible bulb-shaped vinyl astragal held in place by a continuous roll-formed steel retainer that reinforces the lower portion of the door at the same time.

Additional options include top head seal, joint seals and jamb seals. Optional insulation, consisting of 1 5/16" expanded polystyrene or urethane and covered with .015" minimum embossed pre-painted white steel provides an R-value of up to 7.64 and a U-value as low as .013. Lite options include insulated or non-insulated factory-glazed lites or complete aluminum full-view sections for maximum visibility. Wayne-Dalton operators can also be specified for use with the Model 220.

Contact Wayne-Dalton for additional sizes and colors.



Optional polystyrene insulation sealed between door panel and embossed steel backing cuts heating/cooling cost.



Model 220 panel profile with shiplap joint (standard).

Model 220 flush profile with shiplap joint (optional).

### Window Options



Insulated Lites allow for visibility while maintaining security



Full view sections allow for maximum natural light and visibility

### Color Options



White Finish

### Operation Options

- Chain Hoist Operation
- Motor Operation

### Performance Options

- High Cycle Spring (25K, 50K, 100K)
- 3" Track Option
- Solid Shafts
- Perimeter Weatherseal

### Safety Options

- Broken Cable Devices
- Safety Edges
- Safety Photo Eyes

### Special Application Options

- Special Track Designs
- Pass Doors
- Mullions



**STANDARD SIZES UP TO:**  
30'2" WIDE & 22'1" HIGH

**20-gauge steel sections**

**WINDLOAD:**



MEET OR EXCEED ANSI/DASMA  
102-2003 IN ACCORDANCE  
WITH ASTM E-330-70  
(with optional windload engineering)

**BEST APPLICATIONS:**

Where usage requirements are moderate  
to heavy.

**General Operating Clearances**

Type	Headroom***		Sideroom**		Depth Into Room 2" & 3" track	Center Line of Springs	
	2" track	3" track	2" track	3" track		2" track	3" track
Standard Lift Manual 12"R	12½-17"	NA	4½"	5½"	Opening Height +18"	Opening Height +12"	NA
Standard Lift Manual 15"R	14½-20"	15½-21"				Opening Height +13"	Opening Height +14"
Standard Lift Motor Oper. 12"R	15-19½"	NA			Opening Height +66"	Opening Height +12"	NA
Standard Lift Motor Oper. 15"R	15-19½"	18-23½"				Opening Height +13"	Opening Height +14"
High Lift Manual	High Lift +12"		24" One Side		Opening Height - Lift +30"	Opening Height	Opening Height
High Lift Motor Oper.						+Lift +6½"	+Lift +7½"
Vertical Lift Manual	Door Height +20"		4½"	5½"	18"	Double Door Height +13"	
Vertical Lift Motor Oper.			24" One Side				
Low Headroom Manual*	6-14½"	6-14½"	6"	9"	Opening Height +20" - 26"	Does Not Apply	
Low Headroom Motor Oper.*	8½-17"	8½-17"			Opening Height +66"		

**Panel/Section Selection Guide**

Door Width	No. Panels	Door Height	No. Sections
Up to 8' 3"	2	Up to 8' 1"	4
8' 2" to 12' 3"	3	8' 4" to 10' 1"	5
10' 2" to 12' 1"	4	10' 2" to 12' 1"	6
12' 2" to 14' 1"	5	10' 2" to 14' 1"	7
14' 2" to 16' 1"	6	14' 2" to 16' 1"	8
16' 2" to 18' 1"	7	16' 8" to 18' 1"	9
27' 7" to 30' 2"	8	18' 2" & up	Call Factory

\* Standard Lift and Low Headroom clearances are for trolley type operators.  
High Lift and Vertical Lift clearances are for jackshaft type operators.

**Note:** 8" side room required, one side, for doors having chain hoists.

\*\* Headrooms change with drum size on standard lift, for larger size openings (over 20' x 18') consult factory.

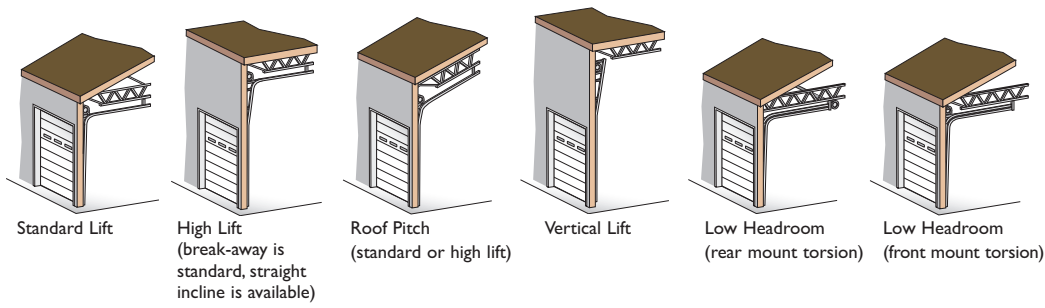
- Trolley operators require 48" minimum depth into room.

† Rear Mount required for minimum headroom.

Wayne-Dalton strongly recommends only using trolley type operators in the following situations:

- with standard lift track
- low headroom track
- high lift track through 19"
- 2" track utilizing 32" radius through 29" of high lift

**Track Selection Guide**



# STEEL SECTIONAL DOORS

## MODEL 220

**Note to specifiers:** Words in parentheses indicate frequently specified and highly recommended options.

### PART I – GENERAL

#### 1.01 Section Includes

- A. Sectional overhead doors [manually] [motor] operated with accessories and components.

#### 1.02 Related Work

- A. Opening preparation, miscellaneous or structural steel work, access panels finish or field painting are in the scope of work of other trades and divisions of these specifications.

#### 1.03 Reference Standards

- A. **ANSI/DASMA 102** – American National Standards Institute [A216.1] Specifications for sectional overhead doors published by Door & Access Systems Manufacturers Association International in bulletin 102-1990.
- B. **ASTM A123** – Zinc [hot-dipped galvanized] coatings on iron and steel products.
- C. **ASTM A216** – Specifications for sectional overhead type doors.
- D. **ASTM A229** – Steel wire, oil-tempered for mechanical springs.
- E. **ASTM A-653-94** – Steel sheet, zinc-coated [galvanized] by the hot-dipped process, commercial quality.
- F. **ASTM E330** – Structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
- G. **ASTM E413-87** – Sound transmission class. Acoustical performance value = 24.
- H. **ASTM E1332-90** – Outdoor-indoor transmission class. Acoustical performance value = 20.

#### 1.04 Quality Assurance

- A. Sectional overhead doors and all accessories and components required for complete and secure installations shall be manufactured as a system from one manufacturer.

#### 1.05 Systems Description

- A. Sectional Overhead Door: Type: **Model 220**
- B. Mounting: Continuous angle mounting for [steel] [wood] jambs [bracket mounting for wood jambs]
- C. Operation: [manual push-up] [chain hoist] [motor] [motor with chain hoist]
- D. Material: Galvanized steel with polyester finish paint
- E. Insulation: Optional [polystyrene] [polyurethane]

#### 1.06 Submittals

- A. Shop Drawings: Clearly indicate the following:
  - 1. Design and installation details to withstand standard windload.
  - 2. All details required for complete operation and installation.
  - 3. Hardware locations.
  - 4. Type of metal and finish for door sections.
  - 5. Finish for miscellaneous components and accessories.
- B. Product Data: Indicating manufacturer's product data, and installation instructions.

#### 1.07 Delivery, Handling, Storage

- A. Deliver products in manufacturer's original containers, dry, undamaged, seals and labels intact.
- B. Store and protect products in accordance with manufacturer's recommendations.

#### 1.08 Warranty

- A. Standard manufacturer's TEN YEAR warranty against cracking, splitting or deterioration due to rust-through.

### PART II – PRODUCTS

#### 2.01 Manufacturer

- A. Wayne-Dalton or approved equal **Model 220** insulated sectional overhead doors of steel construction complete as specified in this section and as manufactured by **Wayne-Dalton Corp.**

#### 2.02 Materials

- A. Door sections shall be of 20 gauge roll formed steel type with C-shaped 16 ga. end stiles and [20 ga.] [16 ga.] intermediate stiles, a smooth finish, and calculated R-value of 7.64 [optional], in accordance with industry guidelines.
  - 1. Exterior Skin: Structural quality, hot-dipped galvanized steel, with smooth finish, and with baked-on polyester primer and white polyester finish coats, and 2 deep stripstrips [optional flush exterior].
  - 2. Insulation: Cavity shall be filled with laid-in-place [polyurethane] [expanded polystyrene] and covered with [0.015" minimum embossed steel] held in place with polymer clips.
- B. Track: Track design shall be [standard lift] [high lift] [vertical lift] [low headroom]. Vertical mounting angles shall be hot-dipped galvanized. Track size shall be [2"] [3"]. Vertical track shall be graduated to provide wedge type weathertight closing with continuous angle mounting for [steel] [wood] jambs, and shall be fully adjustable to seal door at jambs [bracket mount for wood]. Horizontal track shall be reinforced with continuous angle of adequate length and gauge to minimize deflection.

**Note:** Horizontal track applies to standard lift, high lift, low headroom and follow-the-roof designs only.

- C. Hardware: Hinge and Roller Assembly:

- 1. Hinges and brackets shall be made from hot-dipped, galvanized steel.
- 2. Track rollers shall be case-hardened inner steel races with 10-ball [2"] [3"] rollers.
- 3. All factory authorized attachments shall be made at locations indicated.

- D. Counterbalance:

- 1. Springs shall be torsion type, low-stress, helical wound, oil-tempered spring wire to provide minimum [10,000 standard] [25,000] [50,000] [100,000] cycles of use, on continuous steel [solid].
- 2. Spring fittings and drums made of die cast, high strength aluminum.
- 3. Pre-formed galvanized steel aircraft cable shall provide a minimum of a 5:1 safety factor.

#### 2.03 Operation

- A. Operation shall be [manual push-up] [chain hoist] [motor] [motor with chain hoist].

**Note:** Manufacturer does not recommend chain hoists or jack shaft operators on the following track applications.

- 15" radius standard lift with roof pitch less than 2:12
- Hi-lift less than 24"
- Hi-lift between 12" – 23" with roof pitch less than 1:12
- Low headroom track

Special chain hoist assemblies (using a trolley rail) are available for the above track systems.

#### 2.04 Locks

- A. Locks shall engage the right-hand vertical track and utilize [an interior side lock] [standard size rim cylinder].

#### 2.05 Weatherstripping

- A. Doors shall be equipped with vinyl bulb shaped astragal as standard on the bottom section. Optional joint, top head, and jamb seals are available.

#### 2.06 Glazing

- A. Optional.

#### 2.07 Windload

- A. Windload – per DASMA 102-2003 and as required by local codes.

### PART III – EXECUTION

#### 3.01 Installation

- A. General:

- 1. Install doors in accordance with manufacturer's instructions and standards. Installation shall be by an authorized Wayne-Dalton representative.
  - 2. Verify that existing conditions are ready to receive sectional overhead door work.
  - 3. Beginning of sectional overhead door work means acceptance of existing conditions.
- B. Install door complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports in accordance with final shop drawings, manufacturer's instructions, and as specified herein.
  - C. Fit, align and adjust sectional overhead door assemblies level and plumb for smooth operation.
  - D. Upon completion of final installation, lubricate, test and adjust doors to operate easily, free from warp, twist or distortion and fitting for entire perimeter.

**Note:** Architect may consider providing a schedule when more than one sectional overhead door or opening type is required.

#### 3.02 Materials (See note above.)

Specifications and technical information also available at [www.arcat.com](http://www.arcat.com), SpecWizard™, and Sweets.com®.

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COMMERCIAL DOORS & OPERATORS

For technical information, visit:

[www.wayne-dalton.com/commercial](http://www.wayne-dalton.com/commercial)

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