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 window and insulation options are also available.

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

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. Window options include insulated or non-insulated factory-glazed windows or complete aluminum full-view sections for maximum visibility.

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).

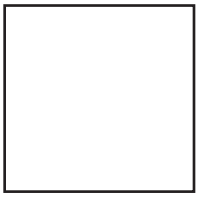
Model 220 flush profile with shiplap joint (optional).

Window Options

Insulated Windows 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

Safety Options

- Broken Cable Devices
- Safety Edges
- Safety Photo Eyes

Performance Options

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

Special Application Options

- Special Track Designs
- Pass Doors
- Mullions

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

20-gauge steel sections

WINDLOAD OPTIONS AVAILABLE:

Wayne Dalton Certified windSAFE

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

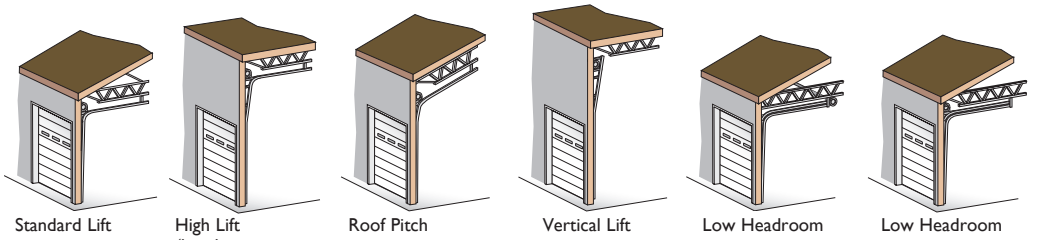
Type	Headroom		Sideroom		Depth Into Room	Center Line of Springs	
	2" track	3" track	2" track	3" track	2" & 3" track	2" track	3" track
Standard Lift Manual 12"R	13"-17"	NA	4½"	5½"	Opening Height +18"	Opening Height +12"	NA
Standard Lift Manual 15"R	15"-20"	16"-21"				Opening Height +13"	Opening Height +14"
Standard Lift Motor Oper. 12"R	15"-20"	NA			Opening Height +66"	Opening Height +12"	NA
Standard Lift Motor Oper. 15"R	15"-20"	18"-24"				Opening Height +13"	Opening Height +14"
High Lift Manual	High Lift +12"				Opening Height – Lift +30"	Opening Height +Lift +6½"	Opening Height +Lift +7½"
High Lift Motor Oper.			24" One Side				
Vertical Lift Manual	Door Height +20"		4½"	5½"	18"	Double Door Height +13"	
Vertical Lift Motor Oper.			24" One Side				
Low Headroom Manual	6"-15"	6"-15"	6"	9"	Opening Height +20" - 26"	Does Not Apply	
Low Headroom Motor Oper.	9"-17"	9"-17"			Opening Height +66"		

Panel/Section Selection Guide

Door Section and Lite Selection			Door Height and Section Selection	
Door Width	No. Panels	Max. No. Windows	Door Height	No. Sections
Up to 9'2"	2	2	Up thru 8'1"	4
9'3" to 12'2"	3	3	8'2" thru 10'1"	5
12'3" to 16'2"	4	4	10'2" thru 12'1"	6
16'3" to 19'2"	5	5	12'2" thru 14'1"	7
19'3" to 24'2"	6	6	14'2" thru 16'1"	8
24'3" & up	Call Factory		16'2" & up	Call Factory

NOTES:
1. For low headroom, springs must be rear mount to achieve minimum headroom listed. Front mount torsion headroom depends on drum size, and varies over the range listed. See approval drawings.
2. Side-room of 8" required, one side, for doors with chain hoist.
3. Headroom depends on drum size, and varies over the range listed. See approval drawings.

Track Selection Guide



Standard Lift

High Lift (break-away is standard, straight incline is available)

Roof Pitch (standard or high lift)

Vertical Lift

Low Headroom (rear mount torsion)

Low Headroom (front mount torsion)

Wayne Dalton

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 [manual push-up] [chain hoist] [motor] [motor with chain hoist] 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 102-2004.
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 = 24 for insulated product.
H. **ASTM E1332-90** – Outdoor-indoor transmission class = 20 for insulated product.

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**.

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 pinstripes [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 hoist or jackshaft operation with the following track systems:
- 12" or 15" radius standard lift with roof pitch < 2:12
- 32" radius standard lift with no roof pitch, unless vertical track is extended 5"
- Low headroom track
- High lift < 24" with no roof pitch

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, SpecWizard™, and Sweets.com®.

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Wayne Dalton

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