

Manual Sprung Rubber Dock Door

Model HDM-1000

PART 1 – GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Steel channel door frames and reinforcing steel. Section 05500.

1.2 DESIGN CRITERIA

- 1.2.1 Rolling door to have NEWGEN® Guide and Curtain Lok™ system to provide a near airtight seal and knock-away feature for easy reassembly upon impact.
- 1.2.2 After accidental impact, door must be capable of reset from ground level without the use of ladders, tools or lift equipment.
- 1.2.3 Rolling door SBR curtain for service temperature range of -40°C to +85°C (-40°F to +180°F).
- 1.2.4 Counterbalance springs to be inboard 25,000 cycle.

1.3 SAMPLES

- 1.3.1 Submit samples in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.

1.4 SHOP DRAWINGS

- 1.4.1 Submit shop drawing in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.
- 1.4.2 Indicate each type of door arrangement of hardware, required clearances, electrical characteristics including voltages, size of motors, auxiliary controls and wiring diagrams.
- 1.4.3 Indicate assembly details and dimensions of fabrication, required clearances and electrical connections.

1.5 MAINTENANCE DATA

- 1.5.1 Provide operation and maintenance data for the Model HDM-1000 door and hardware for incorporation into manual specified in Section 01730 [Division 1 - General Requirements] – Operation and Maintenance Manual.
- 1.5.2 Maintenance data shall include:
 - a complete description of operation in order of task
 - a list of parts requiring replacement
 - a parts list with illustrations and identifications
 - identification numbers for each door

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1.6 QUALITY ASSURANCE

- 1.6.1 Installer with factory-approved qualifications.

PART 2 – PRODUCTS

2.1 PRODUCTS

- 2.1.1 The acceptable rubber roll-up door is to be the Model HDM-1000 spring counterbalanced design as manufactured by Hörmann.
- 2.1.2 Substitutions will not be accepted.

2.2 CURTAIN

- 2.2.1 Two (2) layers of Styrene Butadiene Rubber (SBR) each 3.2 mm (1/8 in) thick, 70 durometer, reinforced with 1-ply, 50 kg (110 lb) polyester cord centre. Overall thickness is 6.4 mm (1/4 in). Material provides normal resiliency and flexibility at temperatures ranging from -40°C to +85°C (-40°F to +180°F).
- 2.2.2 Complete with molded Curtain Loks™ that are mechanically attached to the vertical edges of the curtain material. This retention system maintains and holds the curtain in guides under heavy windload conditions.
- 2.2.3 Continuous glued SBR windlock or moulded in place Teflon windlock designs will not be accepted.
- 2.2.4 Standard Color: Black. Also available in Blue or Grey Ethylene Propylene Diene Monomer (EPDM), Black nitrile, flame-retardant self-extinguishing Black Mine Safety and Health Administration (MSHA) rated.

2.3 GUIDES

- 2.3.1 Side curtain retention: NEWGEN® Guides shall be one-piece extruded aluminum to form a slot of sufficient depth to allow the Curtain Lok™ to move freely in the guides at all times. Aluminum members are to be of sufficient thickness and rigidity to maintain the Curtain Lok™ within the guides during normal operation while enabling the Curtain Lok™ to release during accidental impact.
- 2.3.2 Steel guides (bolted or spring-loaded) will not be accepted.
- 2.3.3 Side frame: Mounting steel angle is provided for installation directly onto concrete or steel door framing. Additional customization of door frame is not required.

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2.4 BOTTOM RAIL

- 2.4.1 Bottom bar shall extend the full width of the curtain, sufficient to maintain the bottom edge of the curtain parallel to the door threshold at all times. The bottom bar shall be constructed of aluminum extrusion and shall have a pivoting knock-away bottom bar arm on each end to reduce the risk of damage during accidental impacts.
- 2.4.2 A 1/8" thick EPDM rubber loop shall be attached to the knock-away bottom bar and act as a weather seal. The rubber loop must be replaceable without removing the bottom bar from the curtain.
- 2.4.3 Knock-away bottom bar to be reset without the need to open side frames. Single angle design will not be accepted.

2.5 ROLL-UP DOOR SYSTEM

- 2.5.1 The curtain is to be rolled on a barrel of sufficient size to carry the door load with a deflection of not more than 2.5 mm/m (.03" per foot) of opening width and is to be evenly balance by 25,000 cycle oil-tempered, helical inboard torsion springs. Both the drive barrel shafts are to be constructed of minimum 32 mm (1 ¼ in) C1018 Cold Rolled steel shafts.
- 2.5.2 Door shall be designed to operate safely with the use of a spring counterbalance system (i.e. – sprung design).
- 2.5.3 End brackets are constructed of 6.4 mm (1/4 in) hot rolled, zinc coated steel plate complete with sealed heavy-duty, self-aligning bearings with cast iron housings to support the drive barrel. Drive shaft bearing shall be load rated at 2032 kg (4470 lb) dynamic and 1404 kg (3090 lb) static.

2.6 ACCESSORIES

- 2.6.1 Various accessories are available, for example: guide guards, hoods

2.7 CONSTRUCTION

- 2.7.1 Doors: constructed of steel, aluminum and SBR rubber/woven curtain.
- 2.7.2 Structural elements: assembled by welding or by mechanical fasteners.

2.8 OPERATION OF DOOR

- 2.8.1 Doors shall be equipped for operation by a direct drive manual chain hoist. Manual chain hoist with sprockets and chain to connect to the drive barrel are not acceptable.

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2.9 MANUAL OPERATION

- 2.9.1 Chain hoist shall be of sufficient capacity to operate a door at a maximum pull requirement of 9 to 14 kg (20 to 30 lb). The static load on the hand chain to hold the door in any position must not exceed 5 kg (11 lb).

PART 3 – EXECUTION

3.1 INSTALLATION

- 3.1.1 Install doors in accordance with manufacturer's printed instructions.
- 3.1.2 Upon completion of the door installation, the door installer must make necessary adjustments to the door to ensure smooth operation.