MODEL “HDF”
Heavy Duty Fabric

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PART 1 - GENERAL

1.1 SECTION INCLUDES:

.01 Steel channel door frames and reinforcing steel. Section 05500.

.02 Electrical power supply. Division 16, Electrical.

1.2 DESIGN CRITERIA

.01 Rolling door to provides full perimeter weather seal to minimize air infiltration.

.02 After accidental impact, door must be capable of automatic reset on the next opening cycle without the use of ladders, tools or lift equipment.

.03 Rolling door Polyester curtain for service temperature range of -20°F to +180°F (-29°C to +82°C). When applicable PVC vision panel service temperature range of -10°F to +150°F (-23°C to +66°C).

1.3 SAMPLES

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

1.4 SHOP DRAWINGS

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

.02 Indicate each type of door arrangement of hardware, required clearances, electrical characteristics including voltages, size of motors, auxiliary controls and wiring diagrams.

.03 Indicate assembly details and dimensions of fabrication, required clearances and electrical connections.

PART 1 – GENERAL

1.5 MAINTENANCE DATA

.01 Provide operation and maintenance data for the Model “HDF” door and hardware for incorporation into manual specified in Section 01730 [Division 1 - General Requirements] - Operation and Maintenance Manual.

.02 Maintenance data shall include:

- a complete description of operation in order of task
- wiring diagrams showing all electrical connections
- a list of parts requiring replacement
- a parts list with illustrations and identifications
- identification numbers for each door

1.6 QUALITY ASSURANCE

.01 Installer with Factory-Approved qualifications.

PART 2 - PRODUCTS

2.1 PRODUCTS

.01 The acceptable fabric roll-up door is to be the Model “HDF” non-counter balanced design as manufactured by TNR Industrial Doors.

.02 Substitutions will not be accepted.

2.2 CURTAIN

.01 Polyester 1.2mm (0.05”) thick. Material provides normal resiliency and flexibility at temperatures ranging from -20° F to +180°F (-29°C to +82°C). PVC vision panel standard.

.03 Panels are held together with the use of semi-rigid beams which also hold the curtain in the guides under low pressure changes.

PART 2 – PRODUCTS

2.2 CURTAIN

.03 Standard Color: Blue
Also available in red, orange

2.3 GUIDES

.01 Side curtain retention: The guide shall be of sufficient depth to allow the curtain to move freely in the guides at all times. The members are to be of sufficient thickness and rigidity to maintain the Curtain within the guides during normal operation while enabling the bottom bar arm to release during accidental impacts.

.02 Side frame: Mounting channel is provided for installation directly onto concrete or steel door framing. Additional customization of door frame is not required.

2.4 BOTTOM RAIL

.01 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 two aluminium extrusions bolted together.

.02 Knock-away bottom bar to be reset automatically on the next open cycle without the need to open side frames. Steel bottom bars will not be accepted.

2.5 ROLL-UP DOOR SYSTEM

.01 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. Both the drive barrel shafts are to be constructed of minimum 38mm (1 1/2") C1018 Cold Rolled steel shafts.

PART 2 - PRODUCTS

2.5 ROLL-UP DOOR SYSTEM

.02 Door shall be designed to operate safely without the use of a counterbalance system (springless design).

.03 End brackets are constructed of 4.75mm (3/16") hot-rolled steel plate c/w sealed heavy-duty, self-aligning bearings with cast iron housings to support the drive barrel. Bearings shall be load-rated at 2540 kg (5600 lbs.) dynamic and 1524 kg (3360 lbs.) static.

.04 Optional one piece roll cover hood.

2.6 REVERSING EDGE

.01 Door to be equipped with wireless reversing sensing edge to stop and reverse door to manufacturer’s standard. A 1/8” thick EPDM rubber loop shall wrap the reversing edge. Both the reversing edge and rubber loop must be replaceable without removing the bottom bar from the curtain. Coil cords will not be accepted.

2.7 ACCESSORIES

.01 Various accessories are available i.e.: radio controls, motion sensors, loop detectors, pull cords, traffic lights etc…

2.8 CONSTRUCTION

.01 Doors: constructed of steel, aluminum and polyester curtain.

.02 Structural elements: assembled by welding or by mechanical fasteners.

2.9 OPERATION OF DOOR

.01 Doors shall be equipped for operation by electric operator.

PART 2 - PRODUCTS

2.10 MANUAL OPERATION

.01 Emergency manual chain hoist shall be provided to allow manual door operation in the event of a power failure.

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

2.11 ELECTRICAL OPERATION

.01 Electric door operators shall be CSA/UL approved, high RPM, heavy-duty worm gear type c/w pre-wired, number coded control cabinet as required, to manufacturer’s standard. Panel enclosure to NEMA-4 rating.

.02 Motor to be NEMA 4, high-starting torque, direct drive, hoist-type, operating through a worm gear reducer mechanism. Sprockets and chains will not be accepted.

.03 Motor to be of capacity to open door at maximum speeds of up to 60" per second, depending on door size to manufacturer’s standard, rated for X-HP power, “X” Voltage, “X”-phase, “X” Hz.

.04 Operator shall be equipped with digital encoder limit switches to control open and close door positions as well as an electro mechanical brake system to stop and hold door in any position to manufacturer’s standards. Rotary cam limit switches optional.

2.12 ELECTRICAL OPERATION

.05 Operator shall be equipped with built-in manual emergency chain hoist. Built-in electrical interlock shall prevent motor operation during use of manual chain hoist.

2.13 ELECTRICAL OPERATION

.06 Control Panel:

Panel enclosure shall be NEMA-4 and wiring shall be completed by manufacturer and shall be UL listed. Drive system shall be controlled by programmable logic controller (PLC) c/w inverter drive for soft start and soft stop door operation. Motor control by a reversing contactor is not acceptable. Control panel shall have fused primary power, adjustable closing timer, three (3) push buttons for open, close and stop functions, push/pull mushroom button E-stop and a cycle counter.

PART 3 - EXECUTION

3.1 INSTALLATION

.01 Install doors in accordance with manufacturer's printed instructions.

.02 Install electrical motors, controller units, push-button stations and other electrical equipment required for door operation.

.03 All electrical wiring including power supply, control and interface located near the door to be installed by an electrical contractor (to be put into electrical contractor's specification).

.04 Upon completion of the door and electrical installation, the door installer must make necessary adjustments to the door to ensure smooth operation.