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**Mat Hoist® Transport & Storage System**

**SPECIFICATIONS FOR MODELS 3000**

## **1.0 GENERAL**

### **1.1 WORK INCLUDED**

- A. One (1) motor operated mat storage unit with five year warranty.
- B. Three (3) adjustable unit clamps with six grade B-7 ¾" x 18" supporting rods.
- C. Installation, adjustment, and demonstration.

### **1.2 WORK SPECIFIED ELSEWHERE**

- A. Electrical work. B. Structural Framing. C. Field painting. D. Wrestling mat.

### **1.3 SUBMITTALS**

- A. **Submit for review: Complete shop drawings including mounting brackets, wiring diagrams, and power requirements.**

## **2.0 PRODUCT**

**2.1** The ceiling mat storage shall be the "Mat Hoist" Transport & Storage System as manufactured by N.G.E., Inc., P.O. Box 370, 320 N. Erickson, Industrial Park (northeast), Roland, IA 50236, (515) 388-4340, having these features:

- A. Mat storage hoist system shall be twenty (20) foot long lift/lower unit consisting of a direct drive (1 ½" diameter) solid keyed shaft with forty (40) foot long load bar and a one-piece 9' x 40' long vinyl/nylon sling. Sling shall be capable of storing (up to one 45' x 45') wrestling/gymnastic mat weighing approximately one pound per square foot with 2,000 lb. sling capacity. Storage system shall be completed with three (3) 5/16" x 35' support steel cables and all accessories required for installation and operation. Travel I beam shall be suspended from ceiling structure as determined by truss design and engineer approval.
- B. Vertical lift movement shall be motor-operated, 1 H.P., 208/230/460 volts three phase complete with both up/down limit switches, 7.4 lb. fast action brake motor. Final output speed of 9.6 rpm -9,352 output lb. in. torque to lift 2,000 lbs. on three 4" diameter drums directly coupled to a 1 ½" diameter x 20' solid keyed shaft. Motor, starter, and thermal overload protection shall be mounted direct to helical geared reducer. Unit shall be factory lubricated and sealed. Motor shall be operated by an electrical key switch with automatic off return and raise/lower legend plate.
- C. **"Mat Hoist"** in-out travel shall be motor operated, ¾ hp, three-phase coupled direct to C-phase 60:1 reducer and complete with in-out limit switches, motor starter, and thermal over load protection. The motor unit shall be mounted directly to the end of the travel beam (gym side) with ¼" galvanized continuous drive aircraft cable for the length of the travel beam. The steel wheel trolley system travels on a S6 x 12.5 travel I beam. The transport motor shall be operated by an electrical key switch with in-out legend plate. The festoon system shall be a NEMA rated flat electrical cable. End plugs supplied by electrician.
- D. **"Mat Hoist" Systems** have been safely load tested by independent testing and successfully obtained a load test capacity of 17,500 lbs. Thus obtaining a 5 to 1 safety factor, without the use of outside sources such as chain hoists, larger

motors, or sprocketed roller between reducer and shaft. The “**Mat Hoist**” **System** shall be a direct drive only system. Upon request manufacturer must submit proof of load testing results.

- E. Manufacturer must provide proof that they have been manufacturing mat hoisting systems for at least five years.

### **3.0 EXECUTION**

#### **3.1 PREPARATION**

- A. Coordinate electrical rough-in requirements and locations with the electrician.
- B. Installation shall be coordinated through the General Contractor.

#### **3.2 INSTALLATION**

- A. Deliver and erect the mat storage system at location with the electrician
- B. Electrical Contractor shall furnish and install electrical raceways, boxes, wiring, and make final connections to the safety disconnect switch, starter, and keyed control switch.
- C. Adjust storage unit to correct height, level and align with floor and walls.
- D. In addition to this specification, the entire installation shall be in accordance with the manufacturer’s installation recommendations.
- E. Instruct owner in the operation, maintenance, and care of the storage system.