

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. All materials and labor necessary to complete the installation of the Vertical Reciprocating Conveyor (VRC).
- B. Obtain all information affecting work at the job site. Include verification of field dimensions, anchoring and storage. Verify voltages and power requirements on electrical drawings.

1.02 REFERENCES

- A. The VRC shall be designed and tested in accordance with ANSI/ASME B 20.1.
- B. All electrical components shall meet the requirements of the National Electric Code (NEC).
- C. All designs, clearances, construction, workmanship and installation shall be in accordance with the requirements and code adopted by the authority having jurisdiction. The VRC shall be subject to local, city and state approval prior to and following installation

1.03 SYSTEM DESCRIPTION

- A. The product described herein manufactured by National Wheel-O-Vator, is a Vertical Reciprocating Conveyor (VRC) Series ND-2000 consisting of two machine towers with lifting platform, selected and dimensioned to provide adequate lifting height and capacity to suit the individual project requirements.
- B. Performance
1. Load Capacity: _____
 2. Speed: 15 fpm
 3. Travel: _____
 4. Platform Size: _____

1.04 SUBMITTALS

- A. Submit shop drawings and manufacturers literature for approval. Drawings shall show dimensional and wiring requirements.

1.05 QUALITY ASSURANCE

- A. Manufacturer: Company experienced in the design and fabrication of VRC's.
- B. Technical Services: Manufacturer and authorized dealer shall work with architects, engineers and contractors to adapt the VRC to the design and structural requirements of the building, site, and code requirements.

1.06 WARRANTY

- A. Unit shall have a one (1) year limited parts warranty on all components.

PART 2 - PRODUCT

2.01 MANUFACTURER

- A. Manufactured by: National Wheel-O-Vator, a division of ThyssenKrupp Access as distributed by _____
- B. No substitution shall be considered unless written request for approval has been submitted and received by the architect at least ten (10) days prior to the bid date.

Each substitution request shall include the name of the material for which it is to be substituted and a complete description of the

proposed substitutions including drawings, performance and test data, a list of projects similar in scope, photographs of existing installation, design differences and other information necessary for evaluation.

2.02 FABRICATION

- A. The lift platform shall be constructed of a steel deck plate with a platform enclosure. The enclosure shall include an 84" tall guard on the mast side. The lower 48" of the guard on the mast side shall be solid steel construction and upper 36" shall be a bolt on, expanded metal guard. A 48" minimum height guard rail shall be provided on the ends not used for loading and double cross chains shall be provided on the ends used for loading.
- B. There shall be a fabricated mast weldment constructed of structural steel and flat bar stock to support the main lift platform on two sides.
- C. The hydraulic power unit shall consist of a pump, motor and operational valve sized and constructed to meet the capacity and travel height requirements of the project. A flow control valve shall be provided to control platform decent in the event of a hydraulic line rupture.
- D. The platforms shall be raised and lowered by two hydraulic cylinder either directly driving the platform or thru a 2:1 chain system.
- E. The VRC platform shall be guarded by a safety gate/door at each landing used for operation. Gates/doors may be vertical, swinging or side sliding. Each gate/door shall be equipped with a combination mechanical lock with electrical contact which will prevent the platform from moving if the gate/door is not closed and prevent the gate from opening if the platform is not at the landing.
- G. Each VRC shall be provided with a sign that reads "NO Rider". The letters shall be not less than 2" high.
- H. Motor horsepower and amperage shall be determined based on the capacity and speed requirements of the project.
- I. All motors will have a 3 phase power requirement unless otherwise specified.
- J. Operating controls will be provided at each landing and contain an up and down push button and an emergency stop switch.
- K. A pre-wired main control panel shall be provided.
- M. A fusible lockable disconnect switch sized appropriately for the motor specified shall be provided by the building owner at the site of the main control panel.

2.04 FINISHES

- A. Finish shall be electro-statically applied powder coating, oven baked to cure or industrial enamel finish over primer. The manufactures standard color shall be **blue**. Other optional colors are available.

2.05 AVAILABLE ACCESSORIES/OPTIONS
(But not limited to)

- A. Platform safety drop bar (replaces std. safety chains)
- B. Platform safety scissor gate (replaces safety chains)
- C. Mechanical and hydraulic drive options
- D. Solid steel panel or wire mesh enclosure options
- E. Optional lifting speeds to 30 FPM
- F. Fixed ramp (where pit cannot be provided)
- G. Wire mesh, sold steel panel or fire rated landing doors.

PART 3 – EXECUTION

3.01 ACCEPTABLE INSTALLERS

- A. Subcontractor Qualifications: A company that is listed as a National Wheel-O-Vator dealer.
- B. Electrical devices, services and final connections shall be by a qualified electrician.
- C. Prior to installation the installer shall examine the site conditions and notify the architect in writing of any conditions detrimental to a proper installation.

3.02 INSTALLATION

- A. Unit shall be installed and operated in accordance with ANSI/ASME B-20.1
- B. The vertical reciprocating conveyor shall be installed as shown on the shop drawings provided.
- C. Coordinate all work with the general contractor.
- D. Leave standard electrical connection drawings with electrical contractor to make final electrical connection.
- E. The installation of the vertical reciprocating conveyor shall be made in accordance with the approved plans and specifications and the manufacturers installation instructions.
- F. **No on site field welding or fabrication will be required.**
(Custom applications may require some field welding)

3.03 FIELD QUALITY CONTROL:

- A. Load the VRC to full rated capacity and test for several cycles by lifting and lowering the load the entire travel distance to insure proper operation. No mechanical failures shall occur and no wear that would affect the reliability of the unit shall be detected or the unit will fail this test.
- B. Verify that the travel speed with the platform loaded at full rated capacity is equal to that which is specified.

End of Section

**For more details, call National Wheel-O-Vator's
Design Line 800-968-5438**

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