

STANDARD SPECIFICATION  
JANUARY 2010

**DIVISION 11**

**SECTION 11C TRASH COMPACTOR EQUIPMENT**

11C.01 GENERAL: Comply with all of the Contract Documents.

11C.02 SCOPE OF WORK: Refer to "Division Scope of Work"

**11C.03 MATERIALS**

- A. Trash compactor shall be a "Model 8J" as manufactured by Multi-Pak Sales Corporation or approved equal. Compactor shall be constructed and operate in a manner meeting the approval of all City and/or State Agencies having jurisdiction over same. Compactor manufacturer shall have been in business at least five (5) years making approved commercial and/or industrial compactors. The compactor shall be hydraulically operated Ram-Type compactor. The ram housing, compaction chamber and discharge tube shall form an integrally welded body of high abrasion-resistant steel. Ram face shall be minimum 3/4" steel plate.
- B. Hydraulic power pack shall be 3000 psi system operating at an average of 2000 psi.
- C. Motor shall be 2 HP, 1800 RPM, 120/208 volt 3 phase, 60 HZ complete with motor starter. Control and logic shall be 110 volt.
- D. Automatic refuse sensor shall be a photo-electric receiver with solid state components.
- E. Normal standby position of ram shall be fully retracted to allow refuse to fall as deep into chamber as possible. This is to prevent refuse from "bridging."
- F. Capacity shall be approximately 1200 lbs. per hour (based on average weight of 125 lbs. per cubic yard of loose refuse).
- G. Automatic insecticide and deodorizer dispenser shall be a spray, activated by automatic solenoid, using a non-toxic to potable water based insecticide concentrate.
- H. Prior to shipping, compactor shall factory wired and pre-tested. Disassembled components shall be of sections which will pass through standard size door opening.

**11C.04 COMPACTOR CHARACTERISTICS**

- A. Compactor shall conform to the following characteristics to insure a high quality product.
  - 1. Physical:
    - \*Throat clearing area: 22" x 24" minimum
    - \*Hopper charging area: 23" x 29" minimum

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- \*Ram face area: 16" diameter
- \*Overall Dimension: 93" x 66 1/2" x 33".

Compactor shall be compatible with either bags or reusable 2 cubic yard containers. Machine body shall be supported above floor sufficiently to allow for cleaning underneath.

2. Mechanical:

- \*Hoper Fabrication: side and front to be minimum 10 gauge hot rolled steel
- \*Hopper Access Door: to be 24" x 24" minimum size
- \*Impact Plate: 3/8" thick minimum
- \*Compactor Ram: minimum 3/4" thick face \*
- Ram Thrust: 24,900 lbs. minimum at 3000 psi
  
- \*Developed Compact Force: 124 psi minimum ram thrust.

3. Electrical:

- \*Motor: 120/208 VAC, 3 phase, 1800 RPM, 60HZ, 2 H.P.
- \*Control: 110/120 VAC, 60 HZ
- \*Service requirements: 3 phase, 4 wire, 30 amps.
  
- \*Disconnect switch, pipe and wiring by others, to within 24" of power unit location.

4. Hydraulic:

- \*Minimum: 3 1/4" bore x 28" stroke tie rod construction.
- \*Hoses: must meet SAE 100 Rs (two steel wire braid).
- \*Pump: two stage gear type
- \*Directional Control Valve: 2 coil, neutral center, NEMA 12.

\*All components to meet a 4 to 1 safety factor for burst pressure.

- \*Capacity: approximately 1200 lbs. per hour
- \*Cycle Time: 38 seconds
- \*Compaction Ratio: 4 to 1
- \*Cubic feet per hour Output: 254 cubic feet
- \*Cubic feet per hour Output: 61 cubic feet.

5. Control:

The compactor logic controls shall be accomplished by means of programmable micro-processor control system to achieve desired inputs and outputs between controller and

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controlled components. Limit switch status should be sampled by the micro-processor at a rate of 20 times per second. The hopper door switch and emergency stop switch shall also have contact sets to be sampled by the micro-processor to effect a redundant safety feature, in order to provide maximum protection to operators from moving parts. To further protect personnel, no 110 volt A.C. may be present on any limit switch or control on the compactor chassis. Any 110 volts A.C. circuit such as fire sensing devices or remote alarm outputs shall be run in separate conduits. The system shall be self-supervising. The controller shall also have the necessary hardware and software to sense and indicate a failure in particular location. The control panel display shall consist of high liability indicators for specific modes and operations.

The entire controller shall be housed in a standard enclosure, the door of which allow the indicators to show through a laminated 1/4" Lexan panel that has all switches and indicators labeled in English and Spanish by silk screen from the inside to eliminate the possibility of labels becoming worn off.

11C.05 INSTALLATION

- A. The manufacturer shall deliver the rig into place, install, start-up and instruct the operating personnel using his own forces.
- B. Installation shall Include:
  - 1. Thermostat controlled fire extinguishing system and insecticide system independently fed as required by code. Insecticide system is to be fed from domestic cold water with back-flow prevention. Compactor shall be equipped to accept 1" pipe for fire extinguishing system and 1/2" pipe for insecticide system.
  - 2. Electric wiring from nearest 3 phase connection to the power package.
  - 3. Slider bed conveyor with rotary supply.
  - 4. Control wiring from nearest single phase supply.
  - 5. Full maintenance for ninety (90) days after date of start up and one (1) year warranty against defects in workmanship or material.
  - 6. To prevent compaction of unauthorized refuse such as building material, installation shall start after receipt of the certificate of occupancy and shall be completed in five (5) working days.

11C.06 SHOP DRAWINGS

- A. Shop drawings of the trash compactor indicating materials, construction, sizes,

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installation details, relationship to adjoining work and completing operating procedure description, shall be submitted for approval by Architect/Engineer prior to fabrication.

11C.07 TESTING AND INSTRUCTIONS

- A. Test each item of operational equipment including safety devices and fire protection equipment. Instruct Owner's operational personnel in proper use and maintenance of equipment, and demonstrate capacity ratings safety features, cleaning procedures, and proper storage and handling of raw and processed waste materials.

11C.08 GUARANTEES

- A. Guarantee all items of work furnished and installed under this Section for (1) one year, in addition to manufacturer's standard warranties. All guarantees to be from the date, when **Final Certificate of Occupancy** is issued from Department of Buildings.

END OF SECTION