

Wilkinson-Hi-Rise

The World's Leader in Chutes for Trash, Linen & Debris, Garbage Compactors & Automated Recycling Enhancements. Wilkinson-Hi-Rise is America's premier chute and compactor company with 76 years of quality products and experience. Specializing in waste and linen handling equipment and waste compactors, we also offer a variety of buildings and specialty fabricated products such as ADA compliant chute intake doors, kick plates, corner guards tenant storage lockers.

We provide, project specific waste and recycling system design for architects, engineers and developers, please call from anywhere in North America at **1-800-231-3888** for any questions or to request a hard copy or specifications on disk. For the most up to date information and specification in CSI format visit our web site at **WWW.WILKINSONCHUTES.COM**.

The Wilkinson-Hi-Rise

The Bi-sorter is designed to address the commingled recycling programs and solid waste needs in multi-story buildings. Hi-Rise offers three different designs: In-line unit is built with the containers arranged parallel to each other. The Corner unit is designed with the containers in a compact, perpendicular arrangement. The End-feed unit is designed for linear waste rooms. These designs allow for the use of a 2-cubic yard waste container and industry-standard 90-gallon totes.

The BSI-2RUC / BSC-2RUC / BSE-2RUC models are comprised of a waste recycling chute, ICD-2000 doors, Disinfecting & Sanitation Unit, and add a high volume, Wilkinson container compactor Model 350-C5 and 90-gallon recycling toter. The system software may be programmed to lockout intake doors at selected times, or to lockout specific doors during custom build-out of units, preventing damage to the waste/recycling system and providing an additional safety lock-out. The Bi-Sorter models can also be combined with Wilkinson extruder compactors, when special situations demand.

(DOWN ARROW FOR SPECIFICATIONS)

SECTION 11175

WASTE / RECYCLING SYSTEM

This section is based on a system produced by:

Wilkinson-Hi-Rise
3402SW 26th Terrace Unit B-10
Dania Beach, FL 33312
Telephone: 800-231-3888

The two separation waste recycling system, manufactured by Wilkinson-Hi-Rise is comprised of a waste recycling system chute with door control panels at interlocked chute doors, a Wilkinson-Hi-Rise Bi-Sorter Model BSI-2RUC), as appropriate to the installation, a waste compactor: Wilkinson Model 350-C5, compacted waste containers, recycling containers, a disinfecting and sanitation unit, and other components.

Part 1 GENERAL

1.1 RELATED DOCUMENTS

- A. The general provisions of the contract, including General and Supplementary Conditions and Division 1, General Requirements, apply to the work specified in this section.

1.2 SYSTEM OPERATION

- A. The Two Component Sorter shall use a single waste recycling chute (hereinafter "chute") in a multi-story building to distribute materials pre-separated by tenants into three separate containers, as determined by the building management. For example, one container will be designated for garbage; a second for newspaper and commingled recyclables. A tenant-activated, membrane keypad switch on a control panel incorporated above each chute intake door shall initiate appropriate container selection. As the correct container is accessed by the chute, the chute intake door is signaled available to the tenant who then disposes of the material. Remaining chute intake doors on other floors shall be disabled during the foregoing operation (program selectable).

1.3 DESCRIPTION OF WORK

- A. Work Included: Furnish and install a Waste Recycling System where shown on drawings.

1.4 SUBMITTALS

- A. Catalog Cuts: Before the waste recycling system is delivered to the job site, submit catalog cuts to the Architect in accordance with these specifications, showing all details of installation and assembly and all requirements for work by other trades.
- B. Product Data: Manufacturer's product specifications, standard details and recommendations for project conditions; indicate selected sizes and installation details specific to the project.
- C. Shop Drawings:
 - 1: Plans: Scale 1/4 inch to 1 foot; indicate locations, dimensions, and required associated construction activities.
 - 2: Elevations/Sections: Scale 1/4 inch to 1 foot; indicate locations, dimensions, and required associated required construction activities.
 - 3: Details: Scale 1/4 inch to 1 foot; indicate:
 - a. Shop drawings specific to project conditions
 - b. Interface with adjacent construction
 - c. Dimensions and tolerances
 - d. Products required for installation of the waste recycling system, but not supplied by waste recycling system manufacturer.
- D. Quality Assurance/Control Submittals:
 - 1: Contractor's Certification that:
 - a. Products of this section are manufactured by Wilkinson-Hi-Rise, LLC.
 - b. Manufacturer's certification that installer of manufacturer's product is approved.
- E. Close-out Submittals:
 - 1. Operation and Maintenance Data:
 - a. Manufacturer's printed Operation and Safety Manual
 - b. Manufacturer's Building Recycling Education Package
 - 2. Warranty Documents: Issued and executed by the manufacturer and installer of the system.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Manufacturer: Minimum five (5) years-documented experience producing products specified in this section.
 - 2. Installer: Approved by the waste recycling system manufacturer, and having a minimum of five- (5) year's experience.
- B. Pre-Installation Meetings:
 - 1. Convene at jobsite a minimum of seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
 - 2. Require attendance by representatives of the following:
 - a. Waste recycling system manufacturer or designated representative
 - b. Installer of this section
 - c. Other entities directly affecting, or affected by, construction activities of this section.
 - d. Notify Architect four (4) calendar days in advance of scheduled meeting date.

1.6 RELATED WORK BY OTHERS SPECIFIED ELSEWHERE

- A. The following work is excluded from the scope of work in this section 11175 and is

included in other divisions of the specifications for inclusion in the scope of work of others.

1. Electrical Standards: The following electrical circuits with disconnects are required and are to be installed by others as shown on the plans:
 - 1 each: Local Load center Nema 13.
Consisting of:
 - Qty.1110VAC 20 AMP 1PH for recycling control panel
 - Qty.1110VAC 20 AMP 1PH for local receptacle
 - Qty.1110VAC 20 AMP 1PH for disinfecting and sanitation unit
 - Qty. 2 208/220 VAC 30 AMP 3PH for Compactors
 - Optional: 1 each: Telephone jack
 - 1 each: Cold water or earth ground.
2. Low-voltage wiring conduit: 1" EMT or flexible conduit for vertical installation located in accordance with shop drawings for connecting master control panel, chute intake door control panel and devices, and other elements indicated on the shop drawings.
3. Flashing at the roof
4. Water supply and valves to flushing and fire sprinkler heads
5. Switch assembly, conduit and/or wiring to solenoid valve for the disinfecting and sanitation unit located behind a plumbing access door directly above the highest intake door.
6. Installation of the plumbing access door provided under this section is to be by the forces erecting the shaft enclosure walls.

1.7 WARRANTY

- A. Manufacturer's warranty: Furnish waste recycling system manufacturer's standard one (1) year warranty from date of temporary certificate of occupancy or similar, locally mandated permission to use the project common areas for their intended use. Warranty shall apply to defects in product workmanship and materials.

1.8 MAINTENANCE

- A. Maintenance service: Waste-recycling system includes maintenance during the one-(1) year, warranty period.

Part 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable manufacturers: Wilkinson-Hi-Rise Telephone: (800) 231-3888.
- B. Substitutions: Not permitted.
- C. Components:
 1. The chute shall be 30" diameter, of U.S. #16 gauge aluminized steel as manufactured by Wilkinson-Hi-Rise.
 2. Intakes Door: ADA PUSH BUTTON Wilkinson-Hi-Rise Model ICD-2000:

- Stainless steel door, 15 inches wide x 18 inches, bottom hinged, hand-operated, self-closing, positive latching doors bearing 1½ hour, Underwriters Laboratories “B” Label designation and rated for a 250° F maximum door temperature rise over 30 minutes. The intake door is integrated with a door control panel which includes the waste recycling system low voltage electronics and interlocks in a UL[®] approved, 1½ hour, “B” Label, 1½ hour assembly. Trim to be provided at additional cost.
3. Discharge: Wilkinson, U.S. #16 gauge aluminized steel type “A” open end chute discharge sliding steel door with 165°F. fusible link hold open on an inclined steel track at the bottom of the chute just above the appropriate TriSorter model to close automatically when the ambient temperature reaches 165°F. as required by city or state building and/or fire codes.
 4. Vent: Chute shall extend full diameter through roof to metal top vent cap 4'-0" above roof level with counter flashing and insect screen. Roof curb (44" x 44" x minimum of 8" high) is required for the flat roof conditions and is provided by others. Specify stainless steel for aggressive environments.
 5. Accessories: 3/4 inch IPS flushing spray head and 1/2 inch sprinkler head above highest intake. Additional 1/2-inch sprinkler heads at every second intake (counting from the top) or as required by local code.
 6. Provide Disinfecting & Sanitizing unit for installation in line to the flushing spray head. Connection to flushing spray head, back flow prevention valve and electric control switch by others.
 7. Provide 15 inches wide x 15 inches high right side hinged, hand operated, self closing, positive latching, UL 1 1/2-hour “B” labeled, stainless steel plumbing access door having stainless steel door trim for installation by forces erecting enclosing shaft wall. Door to have master keyed lock. Cylinder provided by others. Door for access to disinfecting & sanitizing unit above the highest intake door of the chute.
 8. Offsets (bends) in the chute, if required, shall be made the same diameter as the chute of #16 US gauge aluminized steel and have an additional layer of # 13 US gauge aluminized steel reinforcing the impact area. Offsets are not to deviate more than 15° off the vertical axis of the chute.
 9. Provide Daubert 934 sound coat (or equal) vibration dampening compound to the exterior of the chute only. Include Korfund sound isolator pads at each floor support frame. In addition wrap one layer of Kinetics Noise control Type KNM 100 AL around complete chute system.
 10. Bi-Sorter Construction: The Bi-Sorter shall be of 1/4" welded steel plate construction. It shall utilize 1/4" steel diverter blade to deflect materials from the chute to appropriate containers. High torque 110VAC motors driving ball screw actuated jacks shall drive the deflector mechanisms appropriately.
 11. Master Control Panel: A Master Control shall be housed in a UL[®] approved, NEMA 12 enclosure mounted on a wall in the vicinity of the Bi-Sorter in the trash/garbage room a minimum of 55" above the floor to the bottom of the panel. No conduit should access this panel from the bottom. The Master Control Panel shall control and monitor all mechanical and electronic operating functions of the Recycling System. Inherent in the design of the control will be suitable repair and serviceability standards including use of plug-in connectors where possible. Supply power will be 110VAC with a 24 VDC output to the individual control panels and a 24VDC output to the chute intake doors interlocks on each floor. The component of the system shall meet applicable UL[®] specifications and/or standards.

12. Manual Switch: As part of the Master Control, manually actuated Switch shall be provided to disable of all chute doors as required for purposes of Systems shut-down for service and other needs.
13. Floor Control Membrane-Type Key Pads: Stations permit user selection of material types for disposal, transmit "In Use" signals to all other floor control panel units, and perform the following additional functions:
 - a. Activate diverter baffles to deflect material into compactor or recycling containers as appropriate to materials selection made at a Floor Control Panel.
 - b. Respond to signal from compactor when garbage container is full, transmitting notification to maintenance personnel on location via monitoring service and transmit "Pick-up in Progress" signal and disables all floor control panels.
 - c. Self-diagnostic program detects system component failure, then transmits notification to maintenance personnel on location via monitoring service and transmits "Pick-up in Progress" signal and disables all floor control panels.
14. Stationary Container Compactor: Qty. 2 Wilkinson Model No. 350-C5 fully automatic, electric eye controlled, hydraulically operated, stationary, ram compactor displacing 54 cubic yards of refuse per hour into a heavy duty compaction container of a design compatible with local requirements. The compactor body, sides and top are 3/16" steel plate reinforced with 3" structural channels for rigidity. Compactor ram is constructed of 1/4" sides and top with 1/4" abrasion resistant steel plate bottom. The ram face is 3/8" steel plate, reinforced. The hopper is made 3/16" steel plate with a 1/4" back plate to take the impact of falling refuse. The compactor floor is 3/8" thick steel. The 350-C5 produces 28,500 pounds of packing force at 2000 psi operating pressure.
15. Hydraulic Power Packs: A prepackaged power system with components rated at 3000 psi maximum operating at a recommended pressure of 2000 psi for long life and low maintenance.
16. 2 YD. Compaction Containers: Waste and co-mingled recyclables.

2.2 FABRICATION

- A. The waste recycling system shall be fully factory assembled and all joints, except those required to separate the sections for shipment and installation shall be welded or lock-seamed tight. The floor intake doors shall be bolted in place on throats formed into the chute. All chute sections shall flash inside the sections below and there shall be no bolts, clips, or other projections inside the chute to snag the flow of material. Pre-positioned support frames shall assure proper intake levels and there shall be an expansion joint in the chute between all support joints. Discharge hoppers and offsets, where required, shall be reinforced and separately supported in the impact area.

Part 3 EXECUTION

3.1 EXAMINATION

- A. Verification of conditions:

1. Area in which system is to be located is correct size and location, and is prepared for installation of waste recycling system components.
 2. Electrical power source is in correct location, and is correct voltage, amperage capacity, and phase for recycling system electrical components.
 3. Low voltage conduit, is in correct location, and is correct size and capacity for waste recycling system low-voltage electrical components.
 4. When used, telephone wiring, with conduit, is in correct location, and is correct size and capacity for waste recycling system communication components.
- B. Installer's examination:
1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if conditions under which construction activities of this section are to be performed are unacceptable.
 2. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.
 3. General Contractor shall verify and record chute alignment with installer immediately following installation.

3.2 INSTALLATION

- A. Install waste recycling system components in accordance with shop drawings and manufacturer's printed installation instructions.

3.3 DEMONSTRATION

- A. Arrange demonstration of system operation, conducted by manufacturer's representative, to Owner's maintenance personnel.

* END OF SECTION *