TRASH AND LINEN CHUTE

INSTALLATION MANUAL

(INCLUDING OPERATION & MAINTENANCE MANUAL)

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CHUTES International Trash and Linen Chutes are designed to provide a clean and efficient method of removing waste and soiled linens from upper floors to a centrally located discharge area on a lower floor.

CHUTES International's chutes are available in 16 gauge aluminized or stainless steel: aluminized steel is the preferred steel, as it is economical and durable.

Chutes are available in various diameters, however, the NFPA (National Fire Protection Agency) requires a minimum diameter of 24 inches.

Normally, there are two sections of chute for each floor; one straight section (a ‘B’ section) and one section with built-in intake throat and door. Unusually high floors might have extra sections or different configurations depending on the specific jobsite conditions.

Each chute comes with a full diameter vent of same gauge as chute, discharge outlet, sprinkler system, flushing spray head, and various optional accessories, upon request.

INTAKE DOORS
There are two types of standard intake doors. The 15” X 18” bottom hinged, hopper style door is recommended for trash chutes. When opened, the bottom-hinged door allows for easy disposal of waste into the chute, while eliminating unnecessary spillage and overflow of litter on to the floor.

The 18” X 18” side hinged door, typically recommended for linen chutes, provides a greater accessible area to deposit bundles of soiled linen.

Both bottom hinged doors and side hinged doors are self-closing, noiseless and self-latching. Both doors are UL classified for a Chute Frame and Door Assembly with a 1 ½ hour Fire Rating and a Temperature Rise of 250° F Maximum in 30 minutes.

The only maintenance required on the intake doors is to keep them clean and free from structural damage that may be caused from misuse, carelessness, or vandalism and to clean and lubricate door hinges.

VENT
The purpose of a vent is to dissipate odors and hot gases in the event of a fire in the chute.

NFPA codes require a full diameter vent, penetrating and extending 3’ above the roof. CHUTES International’s full diameter vent comes complete with roof flashing and metal cap and is of same gauge as chute.
DISCHARGE
There are three types of discharge outlets.

Accordion Type Direct Discharge: The accordion discharge is recommended for use on trash chutes. The discharge is UL labeled and held open by a 165°F fusible link and is equipped with a tension spring on either side of the damper to permit closing if the link breaks. Monthly inspections of the discharge should be made to ensure that the links are intact and that no waste has collected in the horizontal tracks, which might interfere with its closing path.

Rolling Incline Type Discharge: The discharge door is held open by a 165°F fusible link. The door will roll shut if the link is melted. Monthly inspections of the discharge should be made to ensure that the link is intact and that no waste has collected in the horizontal tracks of the discharge, which might interfere with its closing path.

Hopper Type Discharge: The hopper type discharge is UL labeled and used on linen chutes when a cart or bin is used as a receptacle and the chute is passing through a wall. The discharge is top hinged and held open by a chain with a 165°F fusible link. The hopper type discharge can also extend into the discharge room from the ceiling and be supported on a pedestal. The hopper discharge should be kept clean and free of damage caused from service impact.

SPRINKLER SYSTEMS
Sprinklers at the top intake, at alternate floor levels and the bottom intake for linen and trash chutes, are required. These heads are normally installed in the top corner of the intake throat to protect them from falling material and are hidden behind a shield to prevent water from spraying out of the door and to prevent material that is charged into the throat from contacting the head. These automatic sprinkler heads fuse at 165°F to open up and flood the chute. When the fire is out, the fused heads must be replaced.

FLUSHING SPRAY HEAD
Most chutes are flushed periodically to keep them reasonably clean. A flushing spray head is furnished at the top of each chute as standard equipment. When supplied with water (hook-up by others), the head radiates a flow of water to the inner chute wall. The water will tend to channel when first started, but will spread out as cleaning occurs. How often and how long the chute should be flushed depends upon many variables such as chute usage, size, condition, water temperature and pressure.

ACCESSORIES
DISINFECTING AND SANITIZING UNIT (D&S UNIT)
A disinfecting and sanitizing unit is sometimes requested for a trash chute to control odor and bacteria (hook-up by others). The unit is comprised of a reservoir tank and mixing valve which is located above the top intake of a chute. It injects a disinfecting solution into the water flow from the flushing spray head system.

ACCESS DOOR
The Access Door (installed by others), located above the top intake of the chute, allows access to the valves that operate the flushing spray head and/or sanitizing unit. The access door is 15” X 15”, side hinged, constructed of stainless steel, and is classified for a UL 1 ½ hour max. temperature rise 250º F 30 minute label.

ELECTRIC INTERLOCKS
When chute in use, all other chute doors will remain locked. Maintenance personnel, by means of a switch at the power supply, can control the electric interlocks (wiring and hook-up by others). The locks close all doors when the discharge container is out of position or while maintenance is being performed at the discharge area. The interlock mechanism can be controlled by means of a lock-out switch located at the discharge level.

GENERAL NOTES
Wet linen and many types of rubbish are highly combustible. It is against NFPA code to store rubbish or linen in the chute. The discharge MUST remain open at all times and be equipped with a device that will automatically close the chute in the event of a fire in the collection room. The collection room must have a hose or hand fire extinguisher, as well as an automatic sprinkler system.
Gravity Flow Trash & Linen Chutes

INSTALLATION INSTRUCTIONS FOR TRASH & LINEN CHUTES

PRE-INSTALLATION

- Before start of job, make sure that installation crew foreman reviews and understands the chute shop drawings.

- He should also confirm that the slab penetrations are properly sized (chute diameter plus 4”) and that all openings are aligned plumb per the detailed shop drawing and are clear of obstructions. Also, confirm that floor heights and other applicable dimensions are in accordance with the approved shop drawings.

- Upon receipt of chute, examine all goods carefully and match the individual pieces to the shop drawing and Shipping Memo, confirming job dimensions and quantities.

- A few simple tools and materials are required to install CHUTES International Trash or Linen Chutes:
  - Hammer (recommend rubber mallet)
  - 2 Screw Drivers
  - Screw Gun
  - Hammer Drill/Drive Pins
  - Wrench Ratchet Set (for Discharge)
  - Measuring Tape
  - Level
  - Ladder
  - Self-tapping Sheet Metal Screws

- All materials are prefabricated to dimensions shown on the shop drawings. No field cutting or fitting is required. The joints are 'slip jointed' to permit slight variations in height.

- Fully assembled door and frame are mounted into the chute intake throat with sheet metal screws. Installation may be in masonry or drywall type walls. Door closer tensions are pre-adjusted. Protective covering should be removed after plastering and painting are completed. Trim is packed separately (in the same shipment but not yet installed on door frame). At contractor’s discretion, trim should be installed at time of chute installation or after completion of face wall.
INSTALLATION OF CHUTE SECTIONS

- Distribute chute sections to the appropriate floors. All sections are numbered and should agree with the as-built shop drawing.

- Start installation at the first floor above discharge level.

- Center floor frame over slab opening (if isolator pads are called for, they will be pre-installed on the floor frames).

- Lower intake section down through floor frame and slab opening. Ensure that all four (4) clips are properly engaged on floor frame.

- Insert beaded section into intake section. Ensure that bead is firmly seated against top of intake section.

- Ensure that the face of the intake door is square and plumb to the Control Line (provided by general contractor) of the proposed face wall.

- Proceed up to next floor above and repeat the same 4 steps, inserting the bottom of the next intake section into the top of the beaded section below.

- Repeat the above steps until the top most intake section is installed.

- Install the wash down section, if required, by inserting the beaded end into the top of the last intake section, keeping the 'wash down unit' to the front of the chute, in line with the intake doors.

- Add beaded vent sections, bead down, to the top of the wash down section, until vent risers penetrate top of roof slab. Vent sections (only) may be screwed together at joints with self-tapping sheet metal screws.

INSTALLATION OF ROOF SECTION & FLASHING

- Install roof flashing over vent section protruding through roof slab and seat roof flashing firmly on roof (flat, pitched or curb) per job site conditions.

- Roof flashing is to be attached and sealed to roof by others.

- Install roof section with vent cap over roof flashing, ensuring that bottom of roof section is firmly seated against bead of roof flashing. Secure roof section to roof flashing with 6 (six) self-tapping sheet metal screws.
INSTALLATION OF CHUTE DISCHARGE

- Ensure that the height of discharge door to finished floor level is per approved shop drawing to avoid subsequent problems with installation of carts or compactors.

- Align clips on discharge with clips on bottom of chute section in discharge room.

- Install the four (4) bolts, nuts & washers provided and tighten securely.

- Ensure that discharge is held open by the 165°F fusible link attachment.

- For linen hopper type discharge doors, installation is same as above, except that additional pedestal support should be bolted to bottom of discharge hopper, adjusted to hopper height and lagged to the floor.

- Install floor retainer flange to the ceiling of the discharge room, around the chute.

- Fire caulk the perimeter of the floor retainer flange around the chute and ceiling.

After completing the installation, ensure that all packing covering the intake doors is still intact to prevent damage to door during wall construction. Also, inspect sprinklers and wash down unit to ensure they are ready for connection by others. The automatic sprinkler heads, furnished with the chute, should be installed and piped (by others) in accordance with NFPA standards.

INSTALLATION OF OPTIONAL ACCESSORIES

DISINFECTING & SANITIZING UNIT (D&S Unit)

- Plumbers are to connect the D&S unit to the flushing head.

- The disinfectant is regulated through a proportioning valve in conjunction with the siphoning action.

- In most cases the D&S Unit should be located above the top intake throat. An access door should be used to maintain and service unit.
ELECTRIC INTERLOCKS

- When one intake is used, electric interlocks prevent all other doors from being opened.
- The electric interlock cylinder is mounted on the top of the intake door.
- Electricians are to run all wiring to each intake door and to the power supply (located at discharge).
- A master switch is supplied and should be mounted at the discharge area to enable all the intake doors to be locked to allow for removal of the receiving container.
- Electrical interlock doors will not open unless energized. Interlock door trim must be removed and electric interlock cylinder raised manually, until electrical interlock system is functional, to open doors.

HEAT DETECTION SYSTEM REVIEW w/ Glen

- The interlocking system will lock all intake doors if the heat inside the chute reaches a set temperature. The heating sensor devices are located at the first intake.

SOUND ISOLATION SYSTEM (TWO OPTIONS)

- Floor frames are supplied with isolator pads, when required, preinstalled at the factory.
- Factory applied sound deadening material.

OPTIONAL FLOOR RETAINER FLANGES AT INDIVIDUAL FLOORS

- Mount to the underneath side of the floor slabs or ceilings to hold insulation (mineral fiberfill or fire-safing.)
- These floor retainer flanges should be secured to the floor slab/ceiling.

Should you have any questions regarding the above procedures, please contact your chute dealer or CHUTES International directly at 1-800-882-4883.