Technical Data Sheet

AirQon Synergies

SoarChute Garbage Collector

SoarChute Garbage Collector is Centralized garbage collection mechanism which usually installs in high rise buildings for single point garbage collection. SoarChute is very efficient and productive in terms of saving time and reducing work load. SoarChute works on a mechanism in which a long cylindrical pipe pass through all floors of building fastened in heavy duty supports and Pipes are connected in male female joint connection mechanism for more strength.

Material

Stainless Steel / Galvanized Iron Sheet / Mild Steel

AirQon highly recommends the use of Stainless-steel Chutes, as it is highly resistant to the humidity, acid and alkalis contained in refuse or garbage. Galvanized Steel: Galvanized steel does not have the same protective characteristics of stainless steel, yet, it is used extensively for Garbage chutes.

Material Thickness

1,2mm (18 Gauge)
1.5mm (16 Gauge)
2.0mm (14 Gauge)
3.0mm (11 Gauge) (when specified).

Usage of 1.5 mm thick material is recommended for buildings up to 10 storey's high, for other heights refer to the following table.

Number of Storey	Storey	Material Thickness
1 – 10	All	1.2 mm (18 gauge)
1 – 20	1 – 9	1.5 mm (16 gauge)
	10 – 20	1.2mm (18 gauge)
1 – 30	1 – 9	2.0 mm (14 gauge)
	10 – 20	1.5 mm (16 gauge)
	21 – 30	1.2 mm (18 gauge)
1 – 50	1 – 9	3.0 mm (11 gauge)
	10 – 20	2.0 mm (14 gauge)
	21 – 30	1.5 mm (16 gauge)
	31 - 45	1.2 mm (18 gauge)

Applications

SoarChute refuse chutes are specially designed for use in flats, hotels, hospitals, apartments, factories, condominiums, offices, commercial complexes and shopping centers.

Material	Kg/m^3
Carboard stacked flat or baled, folded newspaper	500
Food Waste, well compacted	600
Vegetable waste, uncompacted	200
Empty Bottles	300
Mixed general refuse, similar to domestic	150
General office waste and paper	50
Waste paper loose in sacks	20

Chute Size Selection

SoarChute provides a comprehensive range of garbage chutes, both in size and material choice. The choice of refuse chute diameter is shown in table below. However, we strongly recommend the use of 600 mm diameter chutes, as in practical terms this diameter is the least likely to cause any long-term problems. Appreciating that design and space considerations sometimes lead to compromises, this table opposite is given as a guide to assist you in choosing the correct diameter of chute.

Recommended Chute Diameter	Plastic Sack Capacity	No. of Apartments per Chute
500 mm	20 liters	21 – 30
550 mm	30 liters	31 – 40
600 mm	40 – 50 liters	40+
700 mm	40 – 50 liters	40+
800 mm	45 – 55 liters	45+
900 mm	50 – 60 liters	50+

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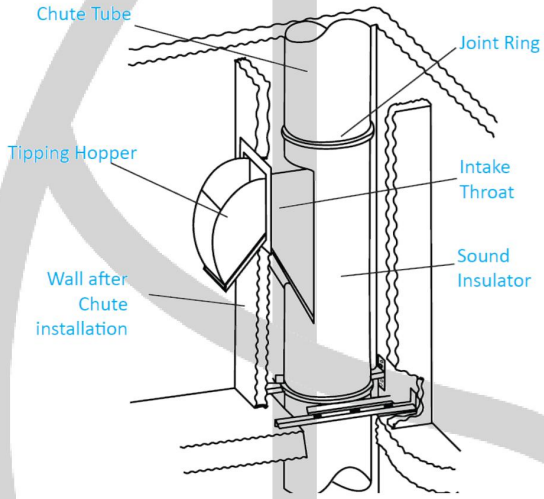
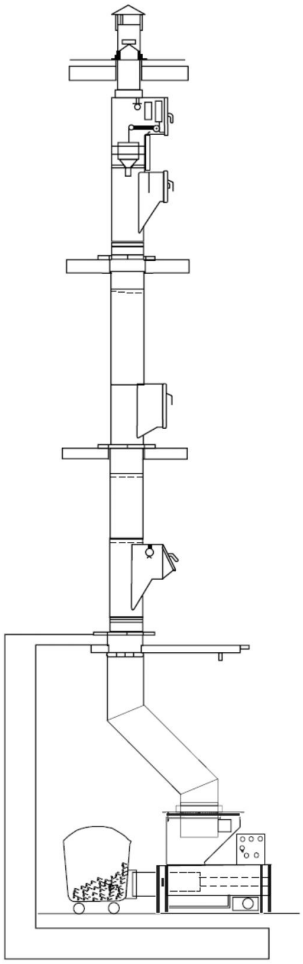
Shaft Sizes

Chute Diameter	Shaft Hole Size
500 mm	600 mm
550 mm	650 mm
600 mm	700 mm
700 mm	800 mm
800 mm	900 mm
900 mm	1000 mm

Components





Height

SoarChute provides garbage chutes within range of 1 – 45 storey buildings. It is recommended to keep single chute for maximum up to 150 meters. After that a second chute should be included, the first terminating at a mid-building level refuse collecting room, the second chute to start at mid-building level and terminating at ground floor or basement level.

Shape

To give an unimpeded free flow of refuse within a chute, the best shape has proved to be circular, SoarChute refuse chutes therefore have a circular cross section. We will make square section chutes to customers special requirements.

Garbage Chute Trunking

Cut to shape from flat metal sheet, mechanical rolled into an accurate cylindrical from. Vertical seams are according to material type and gauge either lock seamed or welded, to give smooth, watertight sealed joints. The entire inner surface area of the Trunking is smooth and free from any projections that will made the free flow of refuse within the total vertical length of the chute.

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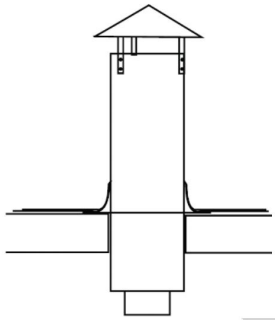
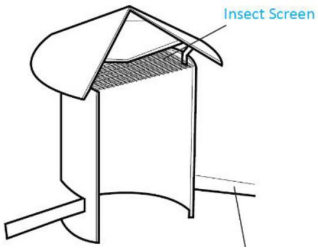
Accessories

Vents & Fans

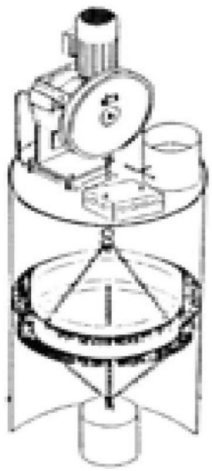
Automatic Foul Air Exhaust Fan installed at the top of the chutes, usually above roof level this ventilator maintains a smooth flow of fresh air within the refuse chute. Normally changing the air approximately 50 times per hour. The foul air exhaust fan helps prevent the escape of any bad odors or explosive gases released by aerosols etc, through refuse hoppers or into the refuse room.

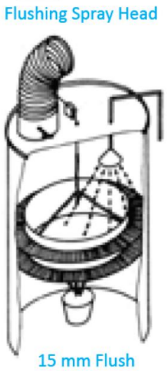


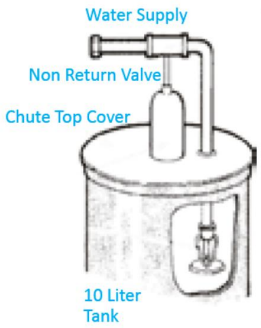


Cleaning Equipments

Specifically designed to clean the total vertical length of the internal surface of all chutes. The system is factory fabricated as an integral unit ready for immediate on site connection. A cylindrical housing with replaceable stiff nylon brushes is automatically lowered and raised by a geared electric motor. The nylon brushes scrape and clean the internal surface as they move down and up the chute. The water supply for flushing the chute, the electric motor and the built-in safety overloads, are all individually controlled by a robust electric logic control circuit.
Designed to give manual or automatic flushing of the internal surface of SoarChutes. Fitted above the topmost entry section of the refuse chutes as part of an automatic or manual cleaning system or on its own. Simple to operate and maintain, a disinfectant or sanitizing unit is recommended for use with every chute installation, particularly as it overcomes one of the problems associated with the use of chutes-strong odors. The specification given above can be changed by using a smaller volume stainless steel tank within an automatic chute cleaning system.







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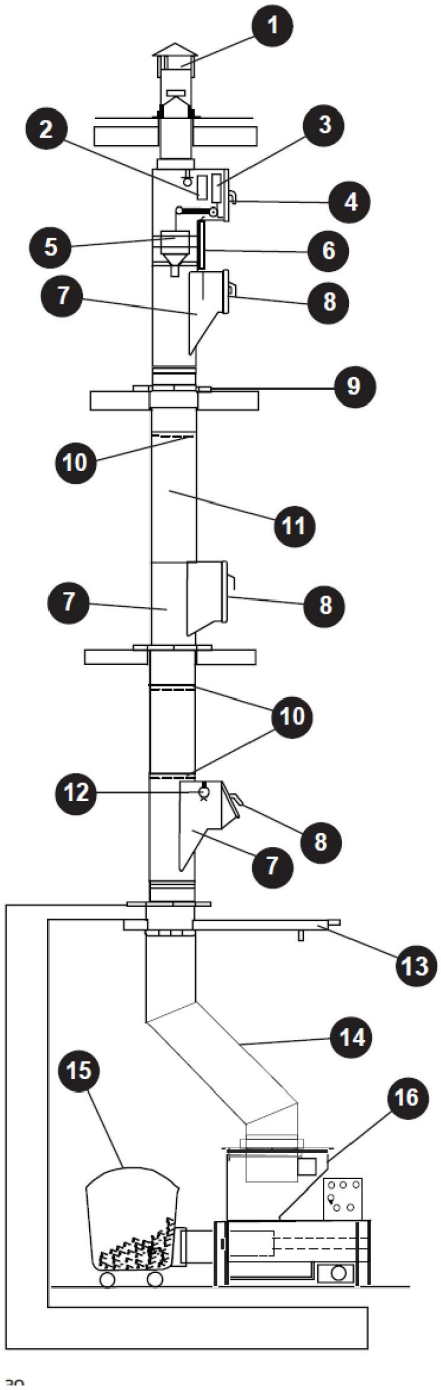

1	Vent Tube & Exhaust Fan
2	Valve
3	Disinfecting & Sanitizing Unit
4	Access Door
5	Cleaning System & Brushing Devices
6	Control Panel
7	Intake Neck
8	Hopper Door
9	Clamp Ring & Frame Support
10	Joint
11	Chute Tube
12	Cleaning & Fire Sprinkler
13	Fire Cut off Door
14	Elbow
15	Garbage Container
16	Compactor

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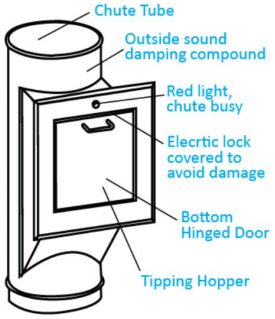
Electric Interlocking System



Electromagnetic door locking systems are used to enhance the safety of garbage and linen disposal chute systems; although not required by law, they considerably improve and ensure proper operation of intake doors.
Electric latches can be incorporated in tipping hopper and side-hinged door fixtures; they can be coupled to warning light indicators, signal light indicators, smoke and fire alarms so that the doors remain closed in an emergency situation. Coupled with timers they can be used to control and dictate operating hours of the chute system. Door control is made at the central switchboard so that when one door is open, all others remain closed.
This arrangement prevents injury to operating personnel by a falling bag should the chute be used simultaneously at two different levels in disposal, for instance.

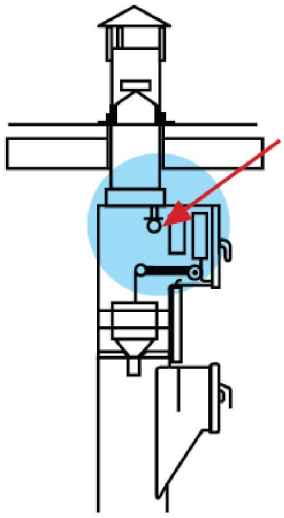
Operating instructions

1. All doors shall be locked when the chute cleaning systems are in operation.
2. Doors can only be opened individually, a feedback contact preventing opening of other doors; an
3. indicator lamp on the switchboard indicates that a door is open.
4. When all doors are locked it may be that the smoke detectors or fire alarms have been triggered.
5. When work is going on in the collection room, personnel safety should be ensured by closing all doors to the system via the switchboard.

SPRINKLERS

CLEANING & FIRE SPRINKLERS

Cleaning Sprinklers



Spray head located in all floors behind the door opening for cleaning issues.

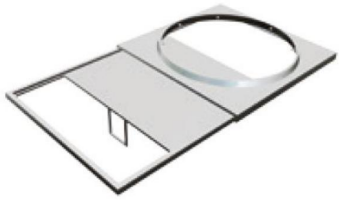
Fire Sprinkler:

Glass bulb sprinklers installed for fire detection inside the chute in each floor.
1/2” IPS, 68°C (165°F).
Glass Sprinklers can be used in conjunction with a normal water supply at a pressure of up to 8 bar.

Smoke Detection System

Smoke Detectors are used for further protection which detects any smoke in chute and take necessary action programmed.

Fire Cut Off Door



Fire Cut Off Door has a horizontal Sliding door held by a spring on each side connected to a fusible link. In case of excessive heat (or fire) the link gets fused at 165° F (68°C) causing the door to slide shut. The discharge is 1.5 hours fire rated.

The Automatic Fire Shutter Door also has a manual closing facility and can be used in certain location as both a fire shutter-door and a manual cut off door.

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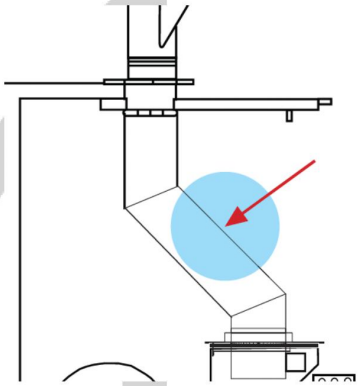
Offset

Factory fabricated from the same material as the refuse chute, but in a heavier gauge to withstand the impact of falling bags. Offsets should not be less than 45° from the horizontal. Offsets are fabricated to all diameters of refuse.



Garbage Container

Specifications:

Garbage container of capacity 1.82 m^3
All made of Stainless steel, 1.2mm thick, reinforced at front top edge by 30mm diameter round bar.
Top edges surrounded by U shaped channels (3mm thick).
Four heavy duty nylon wheels of 6" diameter two with brake and two without brake, Continuous inside welding.

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Compactor

1. Operation: Automatic hydraulically operated.
2. Operating Pressure: 40, 000 lbs. or customized
3. Compaction: Compacts refuse 15-20% of original volume.
4. Packaging: Packages refuse directly into heavy gauge plastic sacks or containers.
5. Capacity: 750kg/hr.
6. Compaction Chamber: 0.20 m^3 with a machine cycle time of 40 seconds giving a theoretical compaction volume of 8 m^3/hr.
7. Construction Compactor: Strengthened 10mm steel plate.
8. Compacting Ram: The compacting ram is made from 6mm plate with the face of the ram increased to 25mm plate to effectively handle the 15 ton pressure.
9. Compaction chamber: Shall have hardened steel shearing blades.
10. Hydraulic Power Pack: Pre-packed fully connected integrally mounted system to develop over 3000 PSI. Normal operating pressure 1000 PSI (Approx).
11. Motor: 40 Second cycle. Time 4 kw ; 1450 RPM.
12. Pump: Pressure balanced, external oval gear type.
13. Electrical control: Housed in a keyed access cabinet.
14. Other Feature: Repeat hammer action and automatic attendant alarm.