

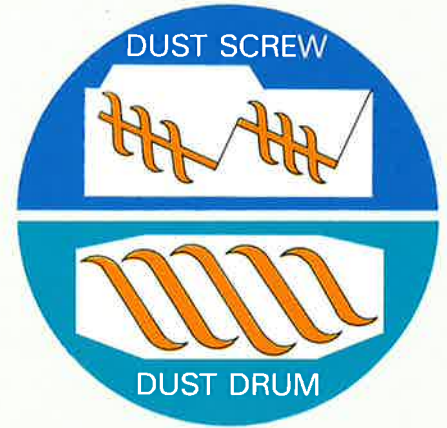
# ShinMaywa

## DUST SCREW & DUST DRUM

Refuse Storage and Handling Equipment



**DUST SCREW**  
Screw-Type Refuse Storage and Handling Equipment



**DUST DRUM**  
Drum-Type Refuse Storage and Handling Equipment.





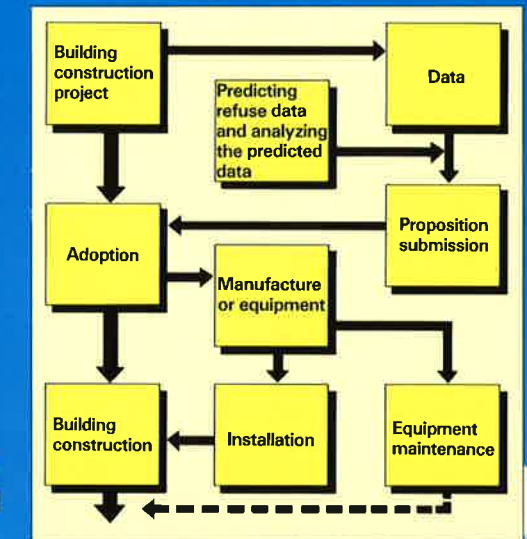
# ShinMaywa Environmental Sanitation Maintenance Equipment Contributes to the Creation and Preservation of Beautiful Cityscapes.

## DUST SCREW DUST DRUM

DUST SCREW and DUST DRUM have been developed to enhance the efficiency of refuse handling work at condominiums, medium- and high-rise buildings. As part of the vitally important facilities indispensable to the preservation of our living environment, they are designed to safely and hygienically dispose of large amounts of refuse produced and discarded daily. ShinMaywa Industries, Ltd. is committed to the creation and preservation of beautiful cityscapes with its unique, state-of-the-art technologies and far ranging engineering capabilities.

### Major Features

- 1. Refuse can be disposed of at any time**  
Tenants can feel relaxed about their refuse since they are permitted to dispose of it at any time at their leisure without the need for consulting their community's garbage-collection schedule.
- 2. The capability to efficiently store large amounts of refuse**  
Since they are designed to make effective use of a small space, they are capable of storing a large amount of refuse in a limited volume.
- 3. No leakage of bad odor and foul water**  
Their sealed constructions prevent bad odor and foul water from escaping.
- 4. Conventional refuse collection trucks can be used:**  
Since DUST SCREW and DUST DRUM permit stored refuse to be carried away by conventional refuse trucks, they are compatible with currently used refuse collection systems.
- 5. Easy, safe and hygienic refuse collection**  
Unloading from DUST SCREW or DUST DRUM can be safely and hygienically performed at the push of a button.



At work in field, measuring up to user's demanding expectations!!



DUST SCREW



DUST DRUM





# ShinMaywa DUST SCREW

● Inversive charger equipped throw-in type



● Direct throw-in type



● Control volume hopper throw-in type



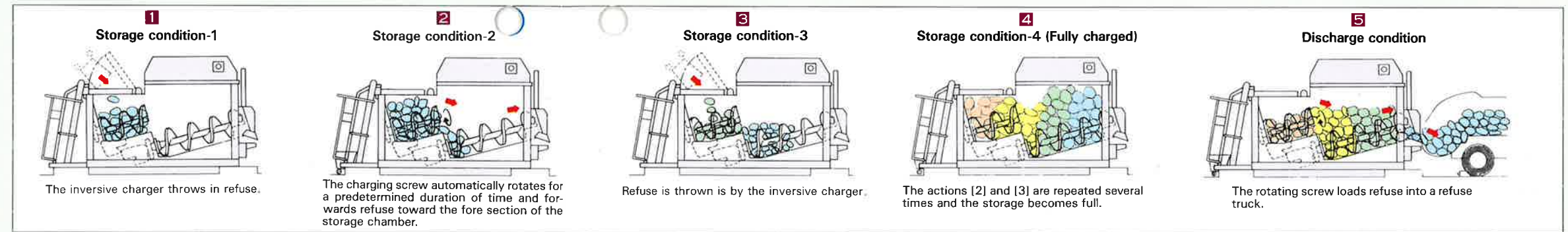
● Control volume hopper equipped refuse inlet



● Screw drive unit



## Flow of refuse (Inversive charger equipped DUST SCREW)



# ShinMaywa DUST DRUM

● Back-door-type throw-in inlet



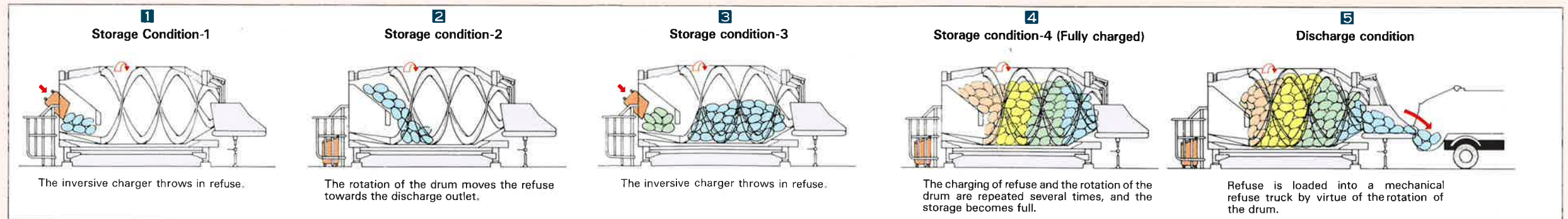
● Drum drive unit



● Control volume hopper equipped refuse inlet

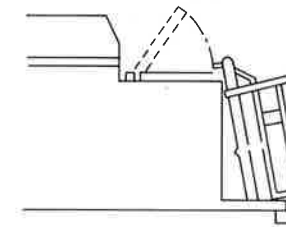


## Flow of refuse (Inversive charger equipped DUST DRUM)

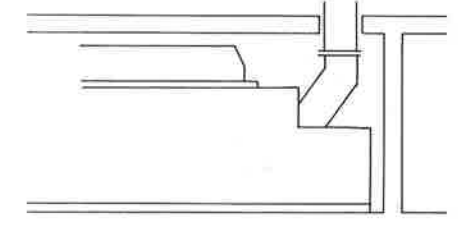


## Refuse throw-in inlet types

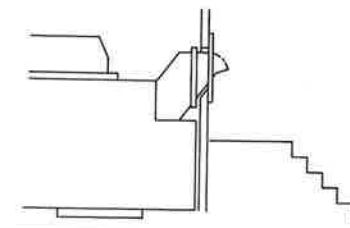
● Throw-in inlet located on the same installation floor (Inversive charger throw-in type)



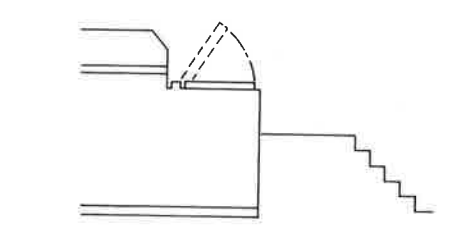
● Dust-chute-connected type



● Throw-in inlet located on the same installation floor (Control volume hopper equipped inlet type)

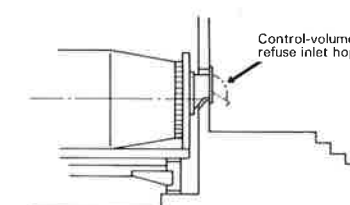


● Throw-in inlet located on the same installation floor (Direct throw-in inlet type)

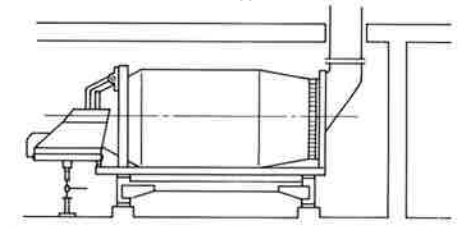


## Refuse throw-in inlet types

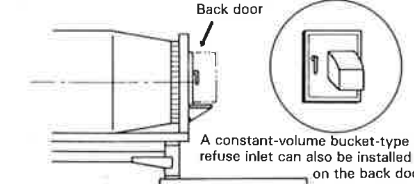
● Throw-in inlet located on the same installation floor (Control volume hopper equipped inlet type)



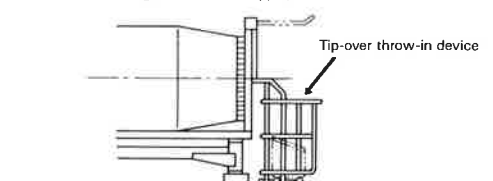
● Dust-chute-connected type



● Throw-in inlet located on the same installation floor (Back-door refuse inlet type)



● Throw-in inlet located on the same installation floor (Inversive charger throw-in type)



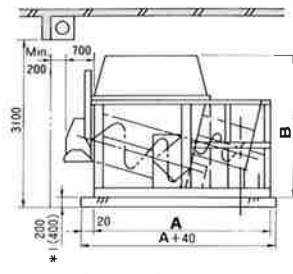
\* There are two back door types to choose from: a doubleleaved hinged type and a single-leaf type.

\* There are two container insertion directions to choose from: from behind or from the right-hand/left-hand side.

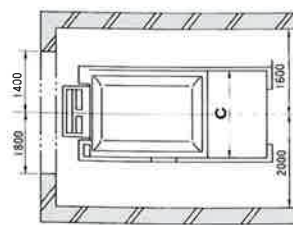


## DUST SCREW Installation Dimensions (Examples)

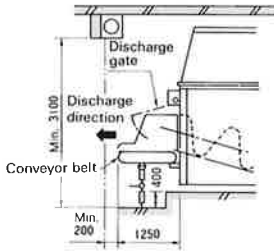
### 1. Vertical gate + chute discharge type



### 2. Reference top view



### 3. Hinged gate + discharge conveyor-equipped type (Horizontal discharge type)



### 4. Refuse inlet located on the same installation floor (Inversive charger throw-in type) [Inclined type]

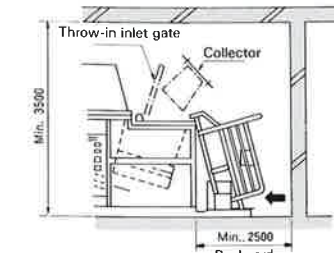


Table A

Item	Type	Specifications
Belt conveyor	Type	Motor pulley-driven type
	Equipment length	1,000mm standard (axis-to-axis distance), Belt width: 700mm
	Motor	3-phase 200V or 400V class, 1.0kW
	Weight	Approx. 500kg
Additional primary power source		3-phase 200V or 400V class, 2 kVA

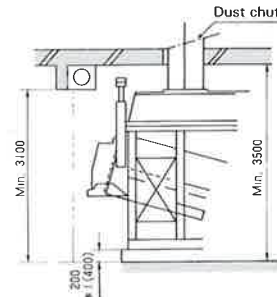
● In addition to the above type, rectangular discharge types are also available. The direction of discharge can arbitrarily be chosen between the right side and the left side.

Table B

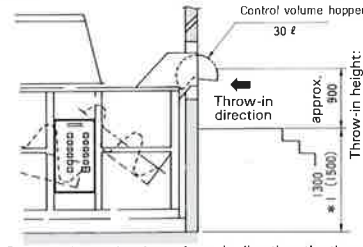
Item	Type	Specifications
Tip-dumper device	Type	Chain-driven fork insertion type
	Applicable collectors	0.2m <sup>3</sup> (for miscellaneous refuse, garbage and combustibles)
	Motor	3-phase 200V or 400V class, 0.75kW
	Weight	Approx. 400kg
Throw-in inlet gate	Type	Electric motor-driven type
	Motor	3-phase 200V or 400V class, 0.1kW
	Additional primary power supply	3-phase 200V or 400V class, 2kVA

● In addition, a vertical type is also available. In the case of the vertical type, a minimum backyard dimension of 2,000mm must be secured.  
● In addition to the collector insertion direction shown above, other setup variations permitting a collector to be inserted from the right-hand or left-hand direction are also available.

### 5. Dust chute-connected type

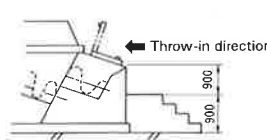


### 6. Refuse inlet located on the same installation floor (Control volume hopper equipped type)



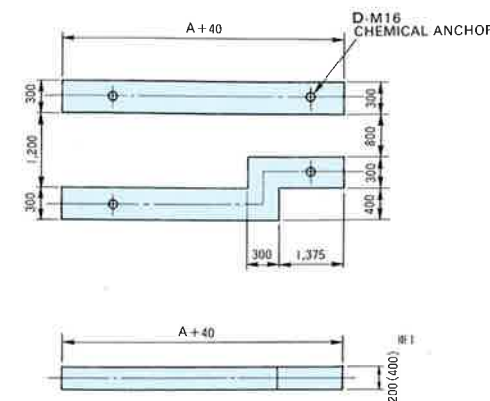
● In addition to the above throw-in direction, the throw-in inlet can also be installed on the right side or the left side.

### 7. Refuse inlet located on the installation floor (Direct throw-in type)



● In addition to the throw-in direction shown above, other setup variations permitting refuse to be thrown in from the right-hand or the left-hand direction are also available.

### 8. Foundation dimensions



\*1 In case of discharge conveyor equipped type, the foundation height increase 200mm to standard height.

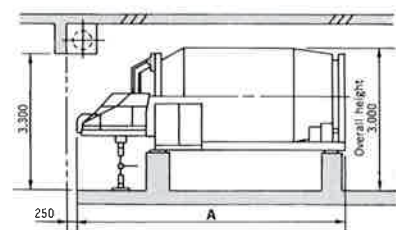
### Installation dimensions (mm)

Classification	Capacity (nominal) m <sup>3</sup>											
	6	7	8	10	12	14	16	18	20	22	24	
Dimension A	3,995			6,590			9,185					
Dimension B	2,485	2,715	2,965	2,465	2,465	2,715	2,965	2,465	2,715	2,965	2,965	
Dimensions C	1,770											
Dimensions D	4			6				8				

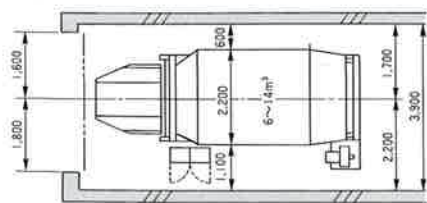
● The above dimensions are subject to change for improvement.  
● Capacities other than those listed above are also available as separate product series. Please consult us for your particular capacity requirements.

## DUST DRUM Installation Dimensions (Examples)

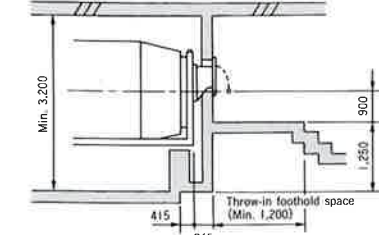
### 1. Reference elevation view



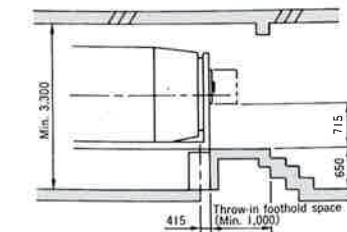
### 2. Reference top view



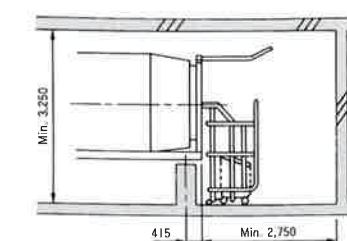
### 3. Refuse inlet located on the same installation floor (Control volume hopper equipped type)



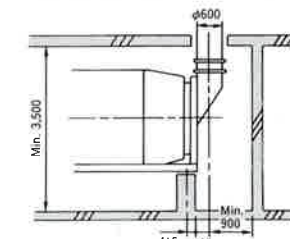
### 4. Dust-chute-connected type



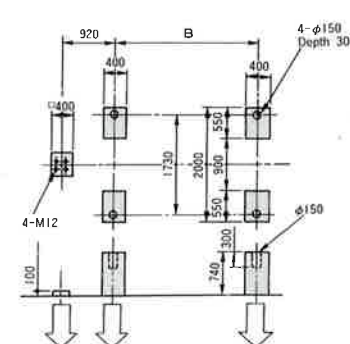
### 5. Refuse inlet located on the same installation floor (Back-door type)



### 6. Refuse inlet located on the same installation floor (Container-tipping throw-in type)



### 7. Foundation dimensions



For dimensions A through E, refer to the table of dimensions in the following page.

### Installation Dimensions (Examples)

Capacity (nominal) m <sup>3</sup>	Dimensions		Dynamic load		
	A (mm)	B (mm)	Variable speed type		
			C (kg)	D (kg)	E (kg)
6	3,870	1,930	500	2,650	2,970
8	4,390	2,450		3,090	3,460
10	4,910	2,970		3,550	3,970
12	5,430	3,490		3,990	4,460
14	5,950	4,010		4,430	4,950
16	6,470	4,530		5,090	5,700
18	6,990	5,050		5,550	6,210
20	7,510	5,570		6,010	6,720
22	8,030	6,090		6,470	7,230
24	8,550	6,610		6,920	7,750

\*1 The above dimensions are subject to change for improvement.  
\*2 In the case of the container-tipping throw-in type, an additional 2kVA power source is required.  
\*3 Capacities other than those listed above are also available as separate product series. Please consult us for your particular capacity requirements.

## Options

### A. Dust bins



### B. Conveyor sliding mechanism

### C. Chemical spray device

### D. Tip-over throw-in device (for container or collector)

### E. Outdoor-type house

### F. Variable speed drum drive motor (for dust drum)

### G. Prefabricated refrigerator for storing garbage

## Adjunctive Building Facilities to be taken into consideration when devising an installation plan

### 1. Water-supply and drainage facilities

Faucets must be installed to facilitate the cleaning of indoor facilities and containers as well as for the convenience of workers who need to clean their hands. It is also advised to provide some inclination to the floor and furnish grooves in the floor for better water drainage.

### 2. Indoor ventilation

The room interior should be well ventilated by means of fans and air ducts so that refuse throw-in and collection tasks can be hygienically performed.

### 3. Indoor illumination

Adequate brightness should be provided so that refuse throw-in and collection work can be safely performed.

### 4. Partitioning off from other places

The entrance for refuse collection trucks should be partitioned off by means of a shutter or a door.

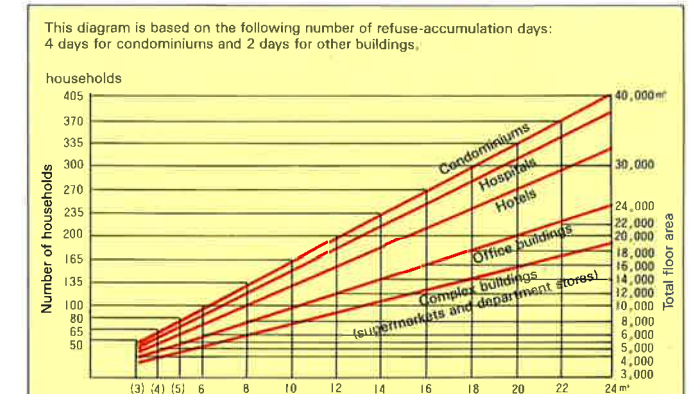
### 5. Guide passageway for refuse collection trucks

Adequate height and width should be provided for an access passageway so that garbage collection trucks can safely connect to the Refuse Storage and Compactor.

## Refuse Volume Determination Table

(for DUST SCREW and DUST DRUM)

[Examples]



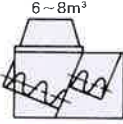
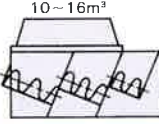
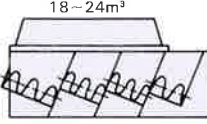
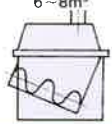
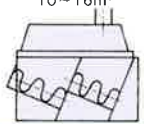
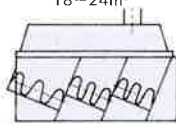
As a general rule, the volume of refuse can be calculated using the following equation.

$$V = \frac{n \cdot Q}{C}$$

V : DUST SCREW capacity  
Q : Amount of refuse produced (m<sup>3</sup>/day)  
n : Number of refuse accumulation days (days)  
C : Compaction rate (-) \*

\* including volumetric efficiency

## ■ DUST SCREW Specifications

In the case of a DUST SCREW unit with an inlet located on the same installation floor Model XLF (Nominal Capacity)		In the case of a DUST SCREW unit connected to a dust chute Model XL (Nominal Capacity)											
		6~8m <sup>3</sup>	10~16m <sup>3</sup>	18~24m <sup>3</sup>	6~8m <sup>3</sup>	10~16m <sup>3</sup>	18~24m <sup>3</sup>						
													
Variations		Capacity (nominal) m <sup>3</sup>											
Item		6	7	8	10	12	14	16	18	20	22	24	
Gate device	Type	Vertical gate equipped with an automatic height adjustment discharge chute											
	Drive system	Electric motor open/close system rated at 3φ 200V or 400V, 0.1kW											
Screws	Charge screw	One unit measuring φ580 × (L) 1,200mm			One unit measuring φ580 × (L) 1,200mm			One unit measuring φ580 × (L) 1,200mm					
	Storage screw	—			One unit measuring φ580 × (L) 2,500mm			Two units measuring φ680 × (L) 2,500mm					
	Discharge screw	One unit measuring φ680 × (L) 2,500mm			One unit measuring φ580 × (L) 2,500mm			One unit measuring φ680 × (L) 2,500mm					
Drive motors	Type	Three-phase induction motor equipped with a .180:1 reduction gear											
	Charge screw	1 unit rated at 3φ200V or 400V, 3.7kW			1 unit rated at 3φ200V or 400V, 3.7kW			1 unit rated at 3φ200V or 400V, 3.7kW					
	Storage screw	—			1 unit rated at 3φ200V or 400V, 3.7kW			2 unit rated at 3φ200V or 400V, 3.7kW					
	Discharge screw	1 unit rated at 3φ200V or 400V, 5.5kW			1 unit rated at 3φ200V or 400V, 5.5kW			1 unit rated at 3φ200V or 400V, 5.5kW					
Discharge capacity		Approx. 1.0m <sup>3</sup> /min.											
Weight (tons)		5.2	5.3	5.4	8.9	8.9	9.1	9.3	10.8	10.8	11.1	11.4	
Primary power source*		Rated at 3φ 200V or 400V, 12kVA			Rated at 3φ 200V or 400V, 17kVA			Rated at 3φ 200V or 400V, 21kVA					

- The specifications listed above are subject to change for improvement.
- Capacities other than those listed above are also available as separate product series. Please consult us for your particular capacity requirements.
- \* In the case of a setup made up of a hinged gate and a discharge conveyor or a tip-over throw-in type setup, an additional primary power-supply source becomes necessary as shown in Tables A and B.
- \* The discharge gate motor (3φ, rated at 0.1kW) is also connected to the primary power source.

## ■ DUST DRUM Specifications

In the case of a DUST DRUM unit with an inlet located on the same installation floor Model XRF (Nominal Capacity)—		In the case of a DUST DRUM unit connected to a dust chute Model XR (Nominal Capacity)—13											
		Capacity (nominal) m <sup>3</sup>											
Item	Variations	6	8	10	12	14	16	18	20	22	24		
Gate device	Type	Hinged gate actuated by a motor-driven cylinder											
	Swing angle	35°											
Conveyor belt	Equipment length (mm)	1000(S.T.D) Belt width:630											
	Belt speed (m/min.)	60Hz:24 50Hz:20											
Variable speed type	Drum main body	Weight (tons)	3.4	3.6	3.8	4.0	4.2	4.8	5.1	5.3	5.5	5.7	
		Max. outer drum diameter (mm)	φ2200										
	Drum drive unit	Motor type	Three-phase induction motor equipped with a variable-speed type reducer										
		Motor output (kW)	5.5			7.5			11			15	
Primary power source	Drum speed (r.p.m.)	Approx 1~6 (Individual speed setting for charge and discharge)											
	Drum's refuse discharge speed (Urban refuse) (m <sup>3</sup> /min.)	1.0											
	Voltage (V)	Three-phase 200V or 400V class											
Capacity (kVA)		15			20			23			31		

- The specifications and features listed in this catalog are subject to change for improvement without advance notice.

Specifications and dimensions are subject to change without notice.

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