RYODEN

DUMBWAITER
Table Type / Floor Type

G
series

The Ryoden G-Series Dumbwaiter represents a more advanced environment-friendly model which offers improved operability, functionality, and safety, as well as an automatic energy-saving mode which effectively reduces power consumption.

Enhanced Point! 1
Enhanced Point! 2
Enhanced Point! 3

Enhanced Point! 1

Hands-Free Interphone

● Convenient, requiring few button operations during use.
● Offers clear, distinct sound for a soft voice with a highly sensitive pin microphone.
● Enables a volume corresponding to installed conditions with three-stage volume control.

Enhanced Point! 3

Automatic energy-saving mode

● The energy-saving mode is automatically established if the dumbwaiter is not operated within the prescribed period of time. Compared to the past series, this mode allows up to 53% of energy saving.
Normal dumbwaiter operation can be resumed by pressing the Energy-saving mode release button.

〈Energy-saving mode release button〉

Enhanced Point! 2

Large-Size Display Panel

● Enables sure verification of the car status (arrival, up travel, down travel, and others), even from far away.
● Displays the dumbwaiter status by code (symbols and numbers).
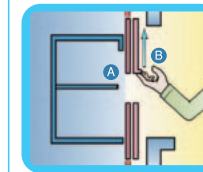
B1/Floor number display

E2/Error display (display example)

Standard Equipment

Simultaneous opening/closing of car door

The car door (inner door) automatically opens and closes when the service door is opened or closed by hand. This eliminates the double work required when taking out or putting in deliverables.
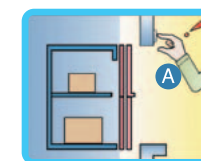
Ⓐ The car door automatically opens when the dumbwaiter arrives on your floor.
Ⓑ Open the service door by hand.
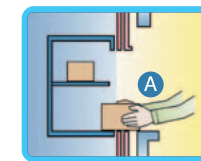
Ⓐ Deliver the deliverables.
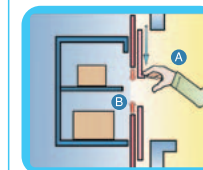
Ⓐ Close the service door by hand.
Ⓑ The car door automatically closes.

Ⓐ Specify the target floor using the operation panel. The car automatically moves to the target floor.

Door switch

Cage operation is disabled by a switch when the door is open. A more reliable forced locking type has also been adopted.

The dumbwaiter does not move.

Equipped with car door gate switch

The car door gate switch keeps the deliverables from sticking out from the cage, preventing dumbwaiter failure.
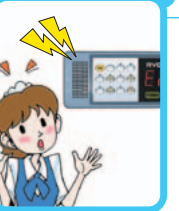
Door lock device

The door remains locked until the car arrives, preventing workers from carelessly opening the door and causing the deliverables to fall out.
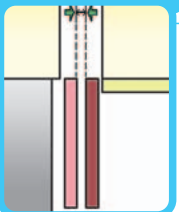
Status display

The dumbwaiter status is displayed on the operation panel with alarm call when trouble occurs, enabling quick response.

10mm space between car and doorsill

The space between the floor-type car and doorsill is 10mm, allowing carts to be smoothly taken out and put in with inverter control.

Overload alarm device

The overload alarm device prevents trouble caused by overload. An alarm call is made when the carrying capacity is exceeded, thereby preventing product failure and accidents.
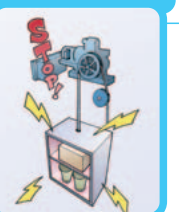
Inverter control

The inverter accurately controls the car stop position. The stop position is maintained with high accuracy, regardless of carrying capacity.

AST system

The AST system automatically stops the motor when trouble is detected during car operation.

Overrun control switch

A switch for preventing the car from passing its destination is provided in duplicate. Users are notified of switch failure by an error code displayed on the operation panel.

Error!

Variable shelf boards

The table type allows the shelf boards to be set at five different heights in accordance with the size of the deliverables.

Environment Compatibility
Friendly specifications for environment

● **Reducing environment risk**
Ryoden has proactively incorporated activities to eliminate substances subject to environmental compliance regulations (such as lead, chromium hexavalent, and cadmium), thereby achieving a Pb free substrate.

● **Recycling**
Ryoden displays the material on molded parts to improve recycle ability.

Table Type

The RT type is provided with an opening at waist height, ensuring smooth operation.
This type is ideal for transporting small deliverables.

● The RT type is available to three types corresponding to the load capacity: 30kg, 50kg, and 100kg. The type can be selected with customer needs.
● The shelf boards inside the car can be changed to the height matched with deliverables.
● The three standard-color panels are available to accommodate the various installed environments.

● Standard-color variation

◆ Note that the actual colors may vary slightly from those below due to the printing process.
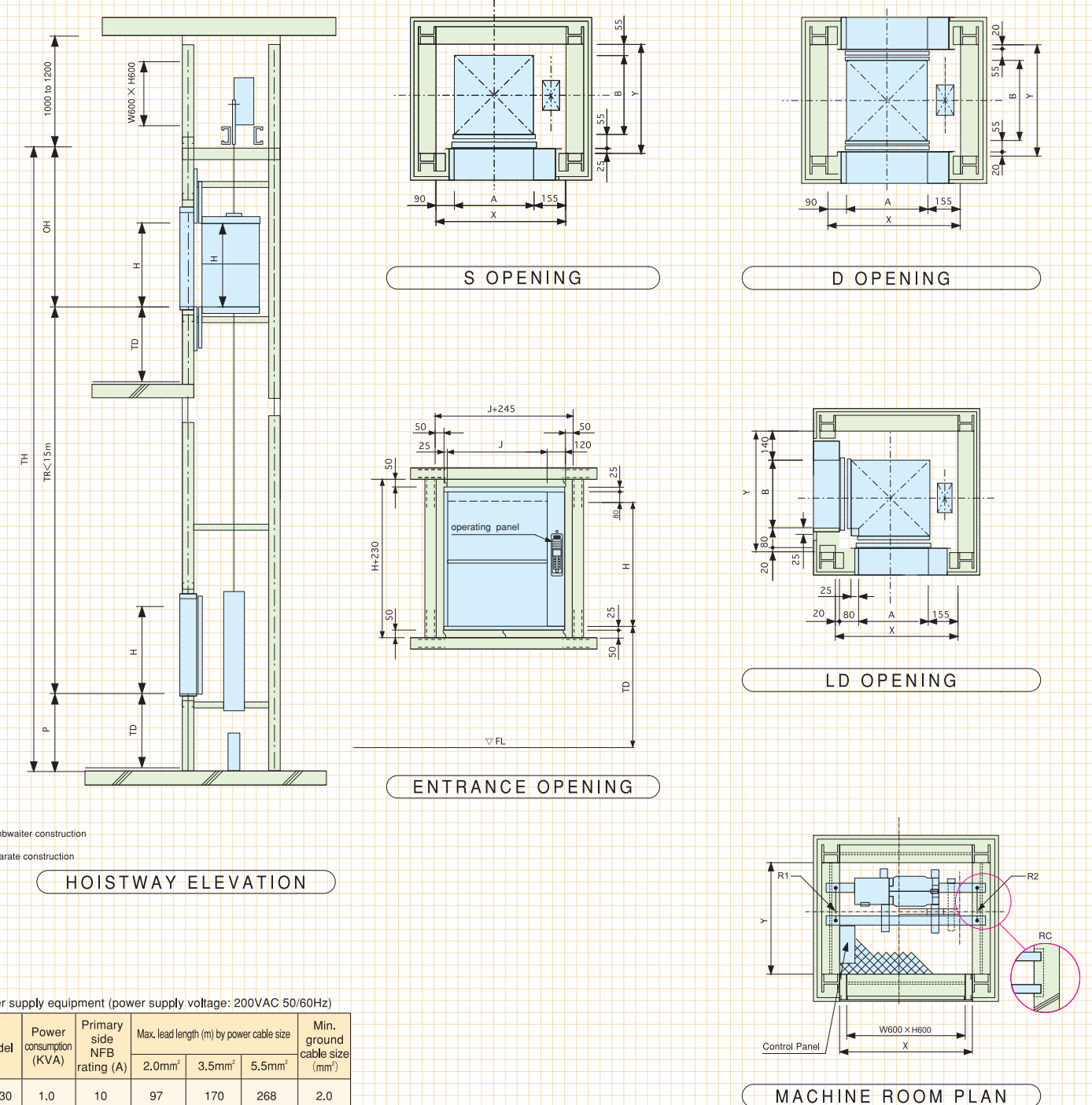
NO.601   NO.602   NO.603

Item	Standard specification		Option specification	
	Material	Front surface finish	Material	Front surface finish
Jamb	Steel sheet	Painted	Stainless steel	Hairline
Service door (Bi-Parting door)	Steel sheet	Painted	Stainless steel	Hairline
Table	Stainless steel	Hairline	—	—
Cage (ceiling and walls)	Steel sheet	Painted	Stainless steel	Hairline
Cage (shelf board)	Stainless steel	Hairline	—	—
Cage (floor)	Stainless steel	Hairline	—	—
Cage (Bi-Parting door)	Steel sheet	Painted	Stainless steel	Hairline
Operating panel	ABS resin	—	—	—

Remark : For other option specifications besides above-mentioned / please apply to RYODEN

Steel Frame Structure

S OPENING

D OPENING

ENTRANCE OPENING

LD OPENING

HOISTWAY ELEVATION

Dumbwaiter construction
Separate construction

MACHINE ROOM PLAN

Control Panel

Power supply equipment (power supply voltage: 200VAC 50/60Hz)

Model	Power consumption (KVA)	Primary side NFB rating (A)	Max. lead length (m) by power cable size			Min. ground cable size (mm²)
			2.0mm²	3.5mm²	5.5mm²	
RT-30	1.0	10	97	170	268	2.0
RT-50	1.0	10	97	170	268	2.0
RT-100	1.7	10	58	102	160	2.0

RT type (table type) common dimensions

	Model	Entrance opening	Capacity (kg)	Motor (kW-poles)	Speed (m/min.)	Cage internal dimensions(mm) (A)×(B)×(H)	Hoistway dimensions (mm)			Entrance dimensions (mm) (J)×(H)	Pit (mm)		Table Height (mm)	Machine beam reaction load		No. of Cage shelf boards
							X	Y	OH		P	TD		R₁(kN)	R₂(kN)	
Table type	RT-30-S-45	Single opening	30	0.4-4	45	500×500×750	745	635	1425	500×750	700	700		1.3	2.5	1
	RT-30-D-45	Front and back opening					745	650								
	RT-30-LD-45	Front and side opening					755	740								
	RT-50-S-45	Single opening	50	0.4-4	45	600×600×750	845	735	1425	600×750	700	700		1.7	3.0	1
	RT-50-D-45	Front and back opening					845	750								
	RT-50-LD-45	Front and side opening					855	840								
	RT-100-S-45	Single opening	100	0.75-4	45	750×750×900	995	885	1650	750×900	650	650		2.8	4.6	2
	RT-100-D-45	Front and back opening					995	900								
	RT-100-LD-45	Front and side opening					1005	990								

● When the hoist distance exceeds 15m, contact Ryoden. ● Take into account building pitch accuracy in hoistway related dimensions.

RYODEN

R L Type

The RL type is capable of transporting handcarts and service tables.
Heavy deliverables can be loaded on handcarts into the car.

Floor Type

● The RL type is available to three types corresponding to the load capacity: 200kg, 300kg, and 500kg.
● The maximum car size of 1000 (W) x 1000 (D) x 1200 (H) (mm) offers a comfortable amount of transporting space.
● The three standard-color panels are available to accommodate the various installed environments.

● Standard-color variation

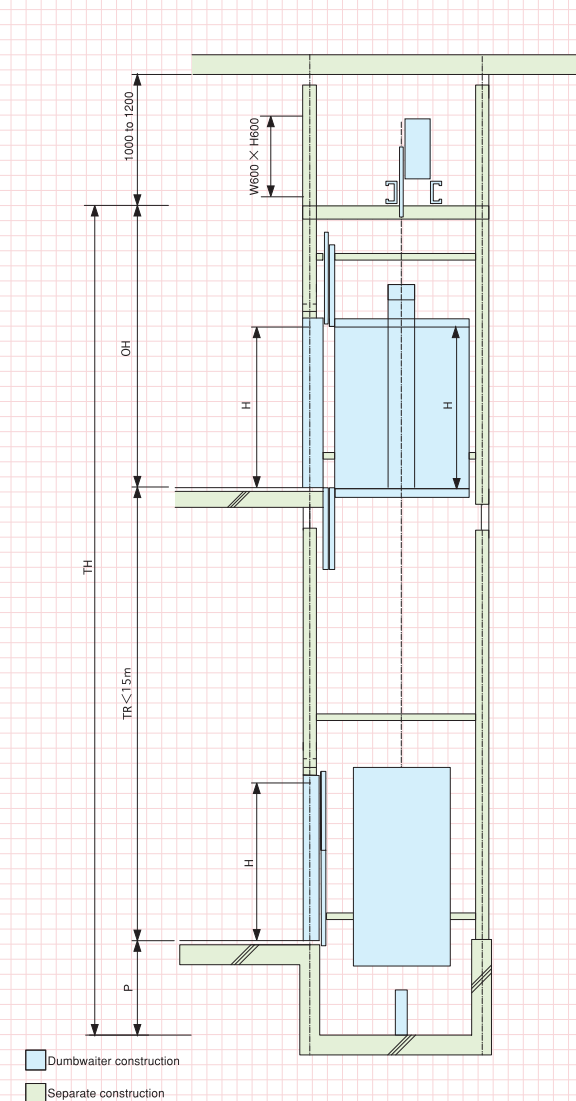◆ Note that the actual colors may vary slightly from those below due to the printing process.

NO.601   NO.602   NO.603

I t e m	Standard specification		Option specification	
	Material	Front surface finish	Material	Front surface finish
Jamb	Steel sheet	Painted	Stainless steel	Hairline
Service door (Bi-Parting door)	Steel sheet	Painted	Stainless steel	Hairline
Doorsill	Angle steel	Painted	Stainless steel	Hairline
Cage (ceiling and walls)	Steel sheet	Painted	Stainless steel	Hairline
Cage (floor)	Checkered steel	Painted	Stainless steel	Hairline
Cage (Bi-Parting door)	Steel sheet	Painted	Stainless steel	Hairline
Operating panel	ABS resin	———	———	———

Remark : For other option specifications besides above-mentioned / please apply to RYODEN

Steel Frame Structure

S OPENING

D OPENING

operating panel

ENTRANCE OPENING

LD OPENING

HOISTWAY ELEVATION

■ Dumbwaiter construction
■ Separate construction

MACHINE ROOM PLAN

Control Panel

W600 × H600

Power supply equipment (power supply voltage: 200VAC 50/60Hz)

Model	Power consumption (KVA)	Primary side NFB rating (A)	Max. lead length (m) by power cable size			Min. ground cable size (mm²)
			2.0mm²	3.5mm²	5.5mm²	
RL-200	3.0	15	29	51	80	2.0
RL-300	4.1	20	21	37	58	2.0
RL-500	4.1	20	21	37	58	2.0

RL type (floor type) common dimensions

| Model		Entrance opening	Capacity (kg)	Motor (kW-poles)	Speed (m/min.)	Cage internal dimensions (mm) 〈A〉×〈B〉×〈H〉	Hoistway dimensions (mm)			Entrance dimensions (mm) 〈J〉×〈H〉	Pit (mm) P	Machine beam reaction load		Roping
							X	Y	OH			R₁ (kN)	R₂ (kN)	
Table type	RL-200-S -45	Single opening	200	1.5-4	45	900×1100×1200	1210	1280	2100	900×1200	700	5.7	8.4	1:1
						1000×1000×1200	1310	1180		1000×1200				
	RL-200-D -45	Front and back opening				900×1100×1200	1210	1300		900×1200				
						1000×1000×1200	1310	1200		1000×1200				
	RL-200-LD-45	Front and side opening				900× 900×1200	1240	1200		900×1200				
	RL-300-S -45	Single opening	300	2.2-4	45	900×1100×1200	1210	1280	2100	900×1200	700	6.8	10.0	1:1
						1000×1000×1200	1310	1180		1000×1200				
	RL-300-D -45	Front and back opening				900×1100×1200	1210	1300		900×1200				
						1000×1000×1200	1310	1200		1000×1200				
	RL-300-LD-45	Front and side opening				900× 900×1200	1240	1200		900×1200				
	RL-500-S -23	Single opening	500	2.2-4	23	900×1100×1200	1210	1280	2100	900×1200	700	7.7	15.1	2:1
						1000×1000×1200	1310	1180		1000×1200				
	RL-500-D -23	Front and back opening				900×1100×1200	1210	1300		900×1200				
						1000×1000×1200	1310	1200		1000×1200				
	RL-500-LD-23	Front and side opening				900×900×1200	1240	1200		900×1200				

● When the hoist distance exceeds 15m, contact Ryoden. ● Take into account building pitch accuracy in hoistway related dimensions.
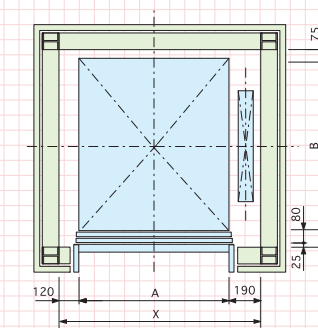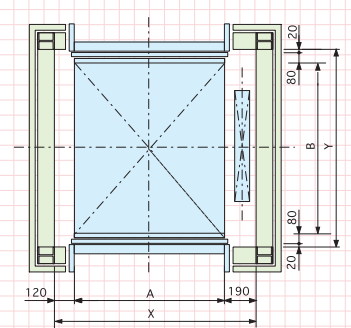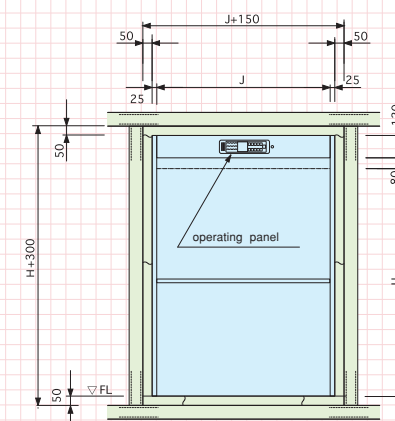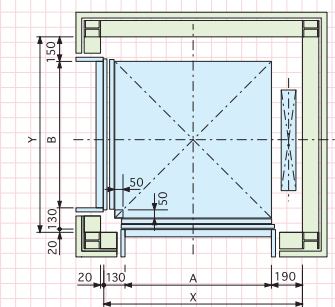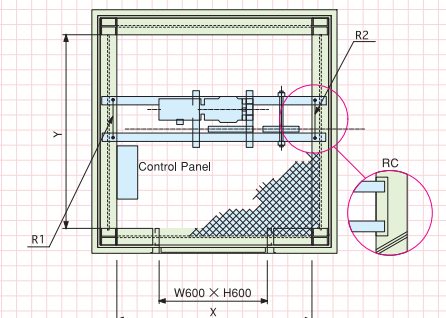
Options

Option

More efficient operability to facilitate ease of use

Convenience

Cage lamp (LED)

Cage lighting ensures that delivered items (even small items) are clearly visible in dark environments.

*This lighting does not apply to some models. For details, please contact Ryoden.

Operation STOP & parking function

This function locks all doors when an operation STOP status exists, thus preventing mischievous operations, etc.

Power service door

Both the service and cage doors can be opened simultaneously by pressing a button. The optional remote control function can also be used for increased convenience. An optional function which automatically opens the doors when the cage arrives is also available.

Additional cage shelf board

An additional shelf board can be added or removed according to the sizes, etc., of the items being delivered.

*RT type only

Return-to-reference-floor function
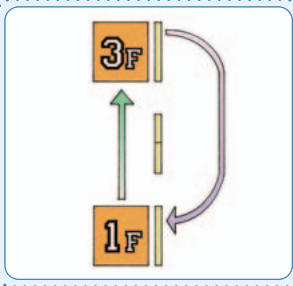
This function automatically returns the cage to a specified floor after its contents have been delivered. In systems where the transport direction is always the same, this function eliminates the need to recall the cage, thus increasing operation efficiency. A learning function can also be added to increase efficiency in systems with frequent-stop floors.

Option

Equipped for better cleanliness

Sanitary

Stainless steel construction

Rust-resistant stainless steel is used at decorative surfaces. This also contributes to a sanitary environment which is ideal for restaurant kitchens, etc.

*Standard construction for the RT type's floor, shelf boards, and table.

Option

For increased operation safety

Safety

Service door lock

The service door can be locked by a dedicated key.

Ryoden G-Series Dumbwaiter

Specifications Table

Basic specifications

Item		Table Type RT	Floor Type RL
Application	Small freight items	●	●
Power supply	3-phase 200 VAC, 50/60Hz * Power transformer is option.	●	●
Control format	Inverter control	●	●
Energy-saving	Automatic energy-saving mode	●	●
Drive format	Traction format	●	●
Operation format	Mutual-floors operation format (SEN)	●	●
Number of stops	2 to 8 stops	●	●
UP/DOWN distance	Max. 15m	●	●
	From 15m to 30m	○	○
Rated speed	45m/min	●	—
	Load capacity: 200, 300kg = 45m/min	—	●
	Load capacity: 500kg = 23m/min	—	●
Door format	Service door: manual upper/lower bi-parting doors	●	●
	Cage door: power upper/lower bi-parting doors	●	●
Communication format	Interphone: hand-free / press & talk (selectable)	●	●
Signal functions	Auto announce	●	●
	Cage position indicator lamp	●	●
	Error code indicator lamp	●	●
	DOOR OPEN warning (buzzer, announcement)	●	●
Safety equipment	Service door lock	●	●
	Service door switch	●	●
	Cage door gate switch	●	●
	Cage overrun limiting switch	●	●
	AST system	●	●
	Emergency Stop button	●	●
	Overload alarm unit	●	●

● : Basic specifications   ○ : Optional (additional fee) specifications

Specifications table

Item		Table Type RT	Floor Type RL
Jamb	Painted steel plate	●	●
	Stainless steel hairline	○	○
Table	Stainless steel hairline	●	—
Threshold	Painted copper plate	—	●
	Stainless steel hairline	—	○
Operating panel	Sealed plastic sheet (splash-proof)	●	●
	Stainless steel hairline face plate	○	○
Service door	Painted copper plate	●	●
	Stainless steel hairline	○	○
Cage interior	Ceiling and walls: painted copper plate	●	●
	Ceiling and walls: stainless steel hairline	○	○
	Cage floor: stainless steel hairline	●	○
	Painted and checkered steel plate for floor	—	●
	Shelf boards: stainless steel hairline	●	—
Cage door	Painted copper plate	●	●
	Stainless steel hairline	○	○
Service functions	Operation STOP switch (with parking function)	○	○
	Return-to-reference-floor function	○	○
	Cage shelf board addition (1 shelf)	○	—
	Power service door	○	○
	Service door lock	○	○
	Cage, weight emergency stop unit	○	○

● : Basic specifications   ○ : Optional (additional fee) specifications

Operation Description
Operation of each section on the operating panel

Talk indicator
Talk button
End button
Volume button
Call indicator
Call button
Floor indicator
Error code display
UP/DOWN indicator
Stop button
Energy-saving mode release button

VOL. END TALK CALL RYODEN 2 3 B1 1 STOP DOOR-CLOSE SERVICE

Speaker
Station indicator
Station selective button
Service indicator
Door-close indicator
Pin microphone
Sending/Calling button

Interphone Operation Section | Indicator Section | Dumbwaiter Operation Section

Automatic energy-saving mode

The operation panel's indicator lamps are switched OFF and the energy-saving mode (control power OFF) is automatically established if the dumbwaiter is not operated within 10 minutes after the Service indicator lamp switches OFF.
To resume dumbwaiter operation from this status, simply press the Energy-saving mode release button.

* The energy-saving mode is disabled when an error is active (when an error No. is displayed)
* The energy-saving mode is automatically established when the dumbwaiter is not in use, even if the interphone is in use or a standby status exists.

Operation of Each Section on the Operating Panel

①Dumbwaiter operation section

Item	Function
Sending/Calling button (your floor is indicated in yellow.)	● Calls or sends the car. ● The target floor name in the indicator section flickers when registered.
Stop button	● Stops the car when the car senses an error during operation. ● The "E0" lamp in the error code display turns on while the button is pressed.

②Indicator Section

Item	Function
Travel indicator (orange)	↕ : Indicates the car is upward. : Indicates the car is downward.
Floor indicator (red)	ON : Indicates the name of the floor where the car is stopped. Flicker : Indicates the target floor name while the car is traveling.
Error code display (red)	E0 to E9 and EA, Eb : Indicates an error occurred.
Door-close indicator (green)	●Indicates that the service door and car door are fully closed.
Service indicator (yellow)	●Indicates that the service door is open, or that the car is in operation.

③Interphone operation section

Item	Function
Station selective button (indicator: red)	●Talk with the target floor. ●The indicator turns on when the station is selected.
Call button (indicator: red)	●Sounds in tremolo on the selected floor. (This button also allows you to call the selected floor by voice.) ●The indicator turns on while the call button is pressed.
Talk button (indicator: red)	●Switches the talk mode from hands-free to press-talk. ●The indicator turns on in press-talk mode. (The indicator turns off in hands-free talk mode.) ●The indicator turns on when the interphone is in use in an area other than your station.
End button	●Ends talking.
Volume button	●Adjust the volume of the call, talk, and auto announcement sound to one of three levels, in the order of low R medium R high.
Speaker	●Sounds call, talk, and auto announcement.
Pin Microphone	●Picks up voices. (The microphone is highly sensitive and does not require proximity during talking.)

How to Use the Dumbwaiter Operation Section

① Call the car.
Press the button of your floor (yellow).

② The car arrives.

③ Load the deliverables.
Open the service door manually and load the deliverables.

④ Send the car.
Manually close the service door, and press the sending/calling button of the destination floor.

⑤ The car arrives.

⑥ Receive the deliverables.
Manually open the service door, and carefully remove the deliverables. After use, manually close the service door.

Remarks

●The service indicator turns on when a car call registration command is received.
●Whether or not the car is on your floor is verifiable by viewing the floor indicator (flickering) and sending/calling indicator (on).

●Car arrival is indicated by the sending/calling indicator turning off and the bells chime. In addition, the car door automatically opens and the service indicator turns off.
●The service indicator turns on once again when the service door is opened.

●The service indicator turns on when a car send registration command is received.
●The car door automatically closes.
●The door-close indicator turns on when the service door and car door are fully closed.
●The start of car travel can be checked by viewing the floor indicator (flickering) of the target floor and the sending/calling indicator (on).

●Car arrival is indicated by chime. In addition, the car door automatically opens and the service indicator turns off.
●The service indicator turns on once again when the service door is opened.
●The car door also automatically closes and the door-close indicator turns on when the service door is closed.
●When the service indicator turns off, the car waits for the next call/send command.

How to Use the Interphone Operation Section

When calling and talking to another party.

① Call the other party.
Press the station selective button of the name of the floor of the party with whom you want to talk, and press the call button.

② Wait for a response from the party.

③ Talk with the party.
[Hands-free talk mode] Talk as is without pressing any buttons.
[Press-talk talk mode] Talk while pressing the talk button.

④ End talking.
Press the end button.

Remarks

●It is not possible to talk with multiple parties at once.
●The station indicator turns on when the station is selected.
●A tremolo sound is produced on the selected floor when the call button is pressed. Call by voice is also possible.

●Once the other party responds, you can talk with each other in hands-free mode.
●The mode switches to press-talk mode and the talk indicator turns on as soon as the talk button is pressed.

※When changing the selected station floor, press the station button of the target station. (Sequential send function)

●Operate the end button on the call side. The call/talk indicator on the floor of the other party turns off.

When called from another party

① A call arrives from another party.
A call arrives, indicated by a tremolo or voice sound.

② Respond to the party.
Respond by voice in hands-free mode.

Remarks

●The call indicator and talk indicator turn on.

●After responding, you can talk with the other party in hands-free mode. (Mutual, hands-free talk mode)

How to Adjust the Volume

【Adjusting the volume of the call sound】
Press the volume button while pressing the call button.

【Adjusting the volume of the talk sound】
Press the volume button while pressing the talk button.

【Adjusting the volume of the alarm and chime】
Press the volume button while pressing the end button.

Remarks

●A confirmation ring sounds in the order of low R medium R high.

●A confirmation chime sounds in the order of low R medium R high.

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