

# PASSENGER LIFT

FOR MID RISE BUILDINGS



# AN OVERVIEW



## ABOUT US

Nippon Lift has been providing elevator solutions to customers all around the globe for more than 30 years.

## FACILITIES

From design, manufacture and site installation, to the smallest component on each NIPPON elevator, we carry out elaborate checks on the final product and the manufacturing process itself. By continuously improving

the manufacturing process, we are able to provide high quality products to our vast customer base worldwide.

Our manufacturing floor has the world's most advanced Salvagnini metalwork machining center, first-class CNC machining lines which include precision machining devices such as Komatsu CNC plasma cutting machine, AMADA laser cutter, AMADA CNC multi-station punch press, AMADA CNC bending machine, CNC grooving machine, American 'FLOW'

CNC water jet cutting machine, AMADA non-mark spot welder, and automated painting and manufacturing lines.

## QUALITY

All our products are designed according to EN81 for lifts and EN115 standards for escalators. Each individual component is subjected to tight quality control. Every lift and escalator model is certified with TUV and CE marking to meet the strictest safety requirements.



Our manufacturing floor has the world's most advanced Salvagnini metalwork machining center.

“ WE HAVE ALWAYS BEEN, AND WILL CONTINUE TO BE, THE TRUSTED CHOICE BY STAYING TRUE TO ONE SIMPLE MISSION - **TO MAKE THE BEST ELEVATOR AVAILABLE.** ”





Louis Vuitton Boutique,  
Shanghai



Louis Vuitton Boutique,  
Gingko, Kun Ming



Louis Vuitton Boutique,  
Mix C Mall, Hangzhou



Louis Vuitton Boutique,  
Plaza 66



Premier Hotel,  
South Africa



Germany Pavilion

## RELIABLE OPERATIONS

Durable to withstand high traffic and movement with low maintenance costs.

A sturdy chassis ensures a quiet and smooth ride even with a heavier load.

Experienced technical support.

## ENERGY EFFICIENT

Up to 30% lesser power consumption with the gearless MagnetSync machine.

VVVF inverter controlled for higher energy savings.

Minimal energy consumption when elevator is in idle mode.

## SAFE & INTELLIGENT

Improved accessibility for those with special mobility requirements.

Enhanced safety features to protect passengers, especially children.

Smooth ride and entry/exit for fragile loads.





Sultan Sultan H. AL Abdulla Project,  
Doha, Qatar



Al-Ansar Residential,  
Doha, Qatar



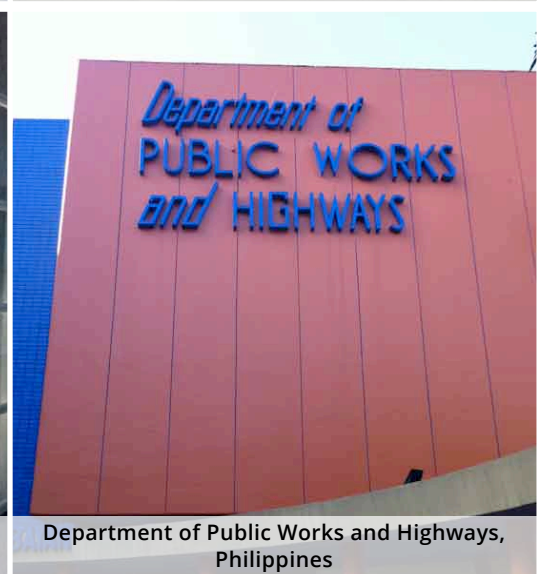
Gulf Mall,  
Doha, Qatar



SACOM, Vietnam



International School of Victory Bekasi,  
Indonesia



Department of Public Works and Highways,  
Philippines

## MODERN DESIGNS

A wide range of visually appealing designs for every part of the cabin.

Versatile and flexible combinations to match the aesthetics of your building.

High quality and easy to care for finishes.

## FOR MID-RISE BUILDINGS, CHOOSE NIPPON PASSENGER LIFT

Nippon offers Passenger Lifts for all types of mid-rise buildings. Where passenger lifts are required, the buildings which house them are generally open environments, so it is important that the flow of people into, through, and out of them is efficiently controlled.

With NIPPON Passenger Lift, you are assured of a reliable operation, reduced noise level, and outstanding performance.

Max. Speed: 1.75m/sec  
Max. Load: Up to 2,000 kg

Max. Travel: 75m  
Max. Stops: 24 stops



# SMART & RELIABLE

Delivering more services, better tech, more user-intuitive features, all while consuming lesser power.

## LESSER ENERGY, MORE DRIVE

Our dedication to higher efficiency and lower power consumption has resulted in the revolutionary MagnetSync, which removes the use of the power-consuming geared traction.

MagnetSync is a permanent magnet gearless motor which has higher mechanical and electrical efficiency than the geared traction system, yet it is physically smaller and weighs lesser.

The MagnetSync machine consumes 30% LESSER power, and is twice as efficient. As it is gearless, MagnetSync reduces torque, noise and heat. Best of all, zero maintenance is required on lubrication.



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## Minimal force

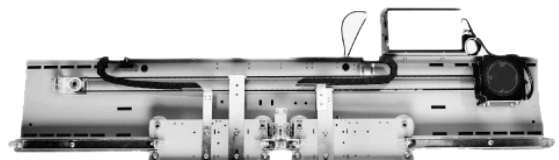
NIPPON Passenger Lift is propelled by our innovative traction machinery which manipulates the weight of the load to re-generate energy for the elevator. Therefore, it takes only minimal force to drive the cars, which means lesser energy consumption.

## Load detection

The speed of the elevator will be maximized when the load of the car is lesser than the counterweight when travelling upwards or when the load of the car is greater than the counterweight when travelling downwards. And vice versa.

## Re-generating energy

When the elevator travelling upwards is lighter than the counterweight or when the elevator travelling downwards is heavier than the counterweight, the energy that is generated from the traction machine can be restored and reused by integrating an additional power feedback device.



## VVVF inverter technology

By converting line power to variable voltage variable frequency to suit exact load and speed, energy is consumed proportionally without any wastage.



## More savings in idle mode

When it comes to energy, it's the little things that eventually will add up. This is why we find ways to minimise energy consumption when the elevator is idle.

- Doors slowly close when they have remained open for longer than preset time.
- Car lighting is switched off automatically when the car is not in use.
- Ventilation fan is turned off when the car is not in use.
- Indicators are dimmed when not in use.
- Drive machinery automatically lapses into idle mode when no activity is detected after a period of time.

COSTS SAVINGS IN  
IDLE MODE

**35%**

## Enjoy the benefits of LED

By replacing conventional incandescent light bulb with LED, power consumption for lighting an elevator cabin is greatly reduced by up to 50%.

The use of LED also lowers the temperature inside the cabin as there is less heat generated.

The use and advantages of LED is extended to displays and indicators. Cost of maintenance is considerably lowered due to the longer lifespan of LEDs. The lifespan of one LED is 25 times longer than one conventional incandescent light bulb.

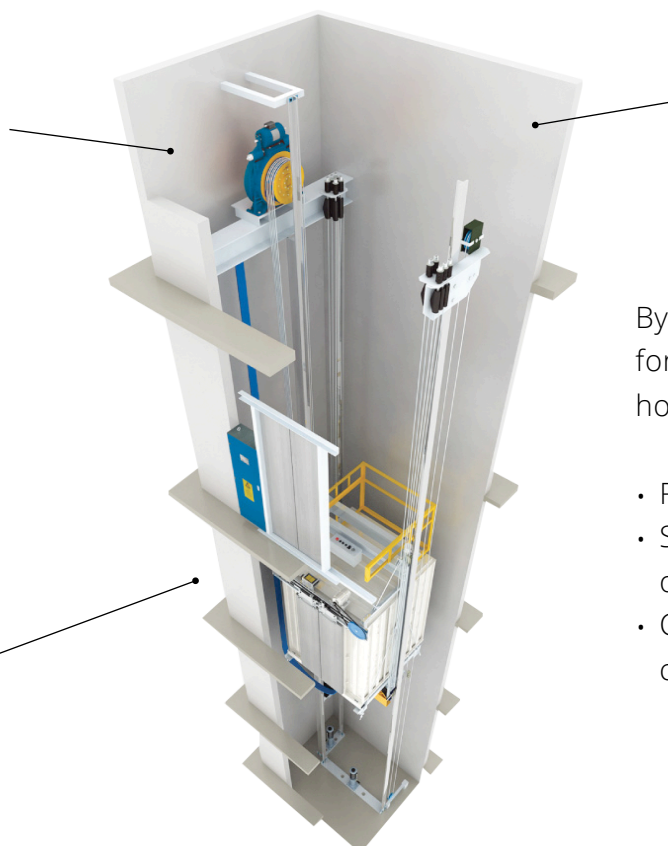
COSTS SAVINGS BY  
USING LED

**50%**

## SAVES SPACE FOR TOTAL DESIGN FREEDOM

The reduced physical size of the MagnetSync machine allows it to be installed in the hoistway overhead, thus eliminating the need for a separate machine room over the hoistway.

As all components are above ground, installation, maintenance and servicing are both easier and cheaper.



*No  
machine  
room  
needed!*

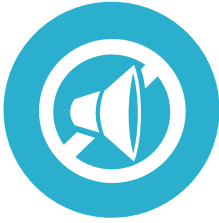
By removing the need for a separate room to house the machine:

- Rooflines remain clean
- Space can be fully optimised
- Construction costs considerably lowered



# INTUITIVE & RESPONSIVE

Everything you expect from an elevator, and more!



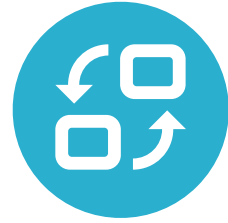
## No noise

Runs quietly to prevent disturbances to people, accommodation or offices near the elevator shaft.



## Magic doors

Floor to ceiling beam sensors at the entrance detect even the smallest object to stop the doors from closing in.



## Auto-leveling

Aligns precisely with the nearest floor allowing for a smooth flow of people, wheelchairs, and trolleys.



## Tough yet light

A sturdy chassis made from industrial lightweight steel copes with high traffic easily.



## Breathe easy

A ventilating fan allows better air circulation even if the car is full of passengers.



## Floor restriction

Service to certain floors can be disabled using the car operating panel.



## Bypass full loads

When the load of the car reaches max capacity, hall calls will be ignored to reduce unnecessary stops and shorten traveling time.



## No nuisance

If the numbers of registered car calls does not correspond to the car load, all calls are cancelled to avoid unnecessary stops.



## Overload switch

To prevent overloading, doors remain open, car does not move, the alarm buzzes on until enough passengers exit the car.



# NIPPON

## PASSENGER LIFT

*Mid Rise: Data Sheet*

Note:

The contents of the following data sheet(s) are applied to standard specifications only.  
Please consult our local agents for other specifications.

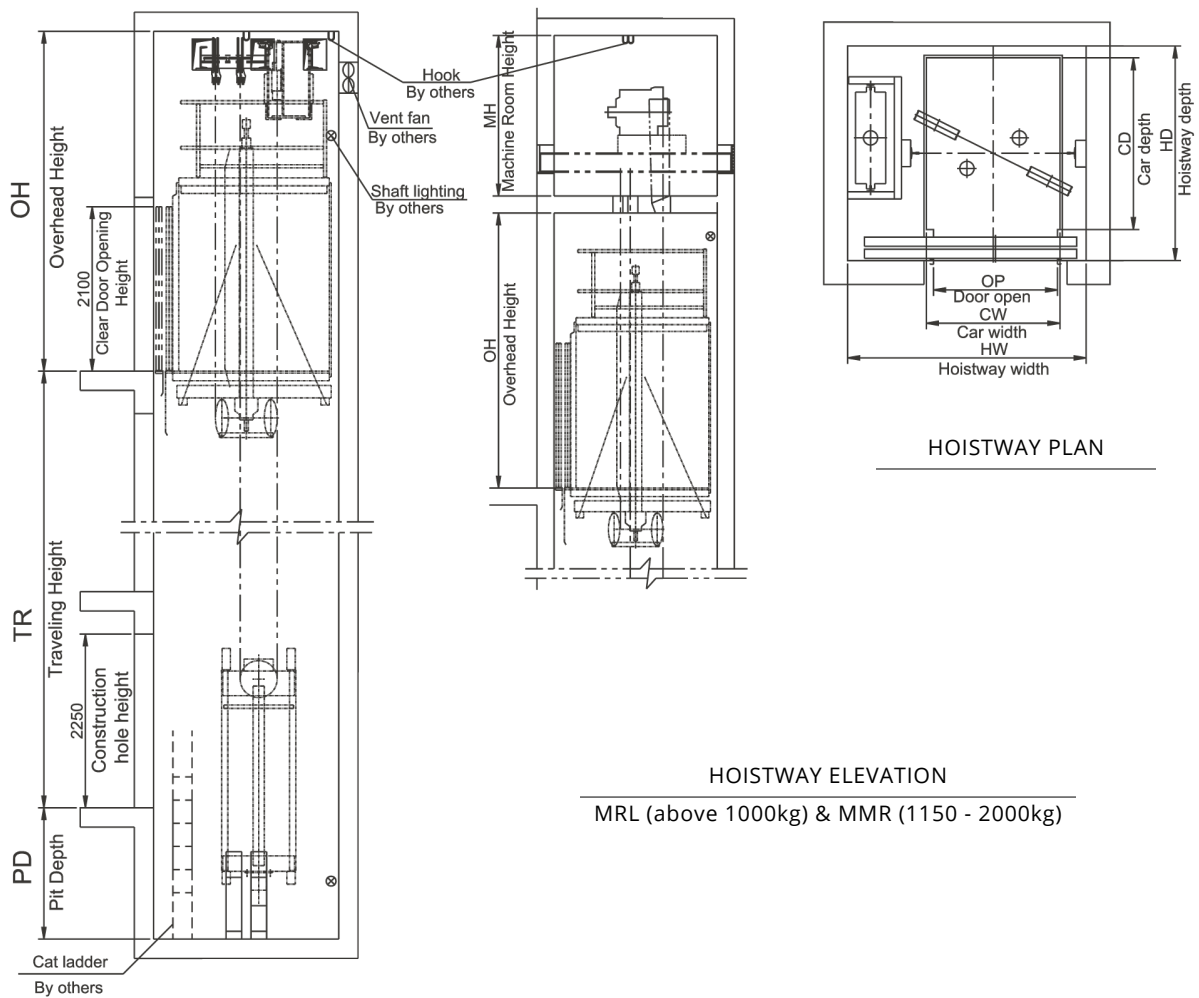
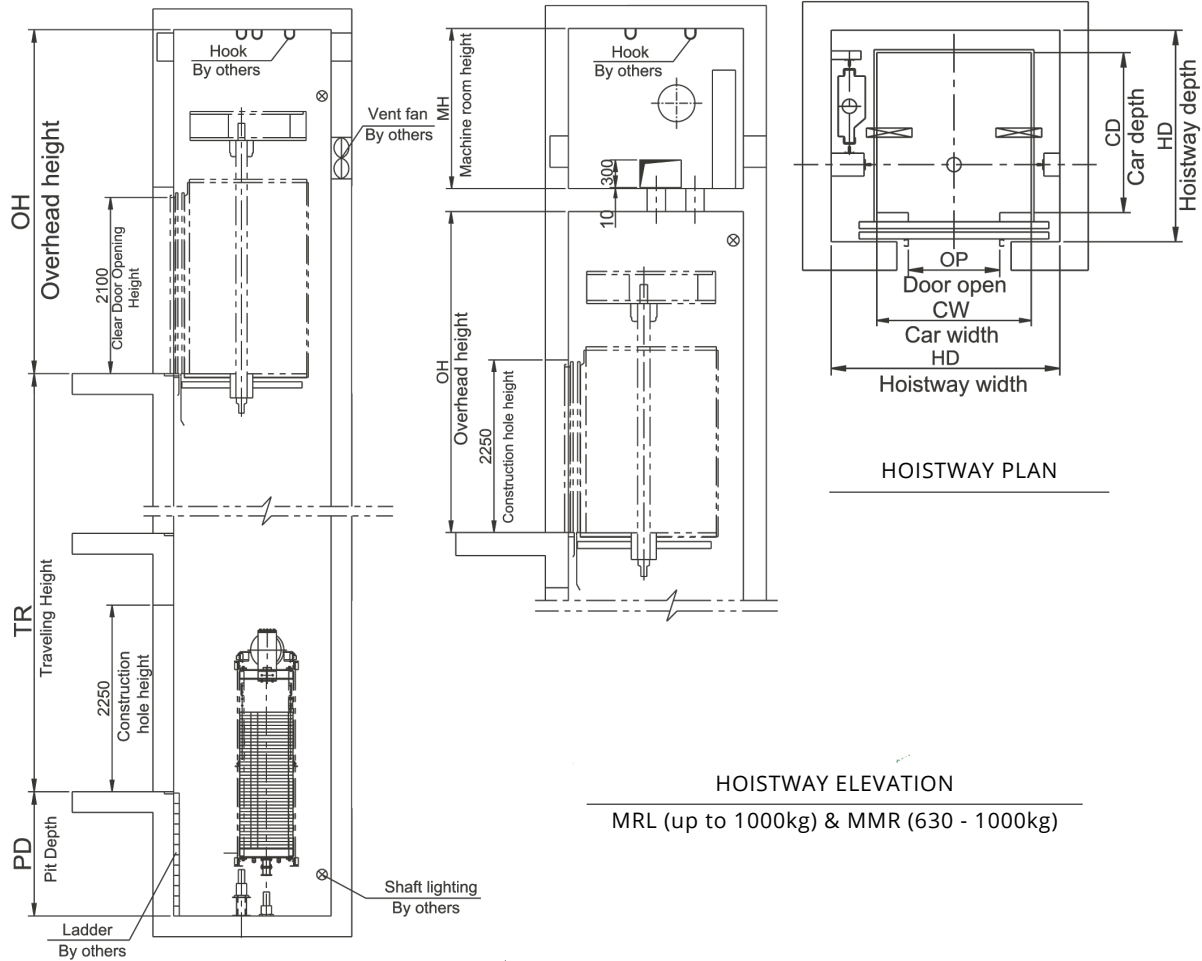




**MACHINE ROOMLESS (MRL) / MINI MACHINE ROOM (MMR)  
MID-RISE PASSENGER LIFT**



**GEARLESS TRACTION MACHINE  
ROPING 2:1**



MACHINE ROOMLESS (MRL) / MINI MACHINE ROOM (MMR) MID-RISE PASSENGER LIFT								
CAPACITY		CAR			DOOR		SHAFT	
Load	Person	Type	Width	Depth	Type	Opening	Width	Depth
kg	P	CT	CW	CD	DT	DO	HW	HD
630	8	Deep	1100	1400	2CO	800	1850	1850
						900	2000	
					2SO	800	1750	
						900		
		Wide	1200	1300	2CO	700	1650	1900
						800	1800	
800	10	Deep	1100	1700	2CO	800	1850	2150
						900	2000	
					2SO	800	1720	
						900		
		Wide	1400	1350	2CO	800	1850	1950
						900	2000	
						1000	2150	
		1000	13	Deep	1100	2100	2CO	800
900	2000							
2SO	800						1750	
	900							
Wide	1600			1400	2CO	900	2100	2000
						1000	2200	
						1100	2350	
1150	15	Deep	1400	1800	2SO	1100	2500	2250
						1200		
		Wide	1800	1400	2CO	1100	2900	1850
1250	16	Deep	1400	1950	2SO	1100	2500	2400
						1200		
		Wide	1950	1400	2CO	1100	3050	1850
1350	18	Deep	1400	2100	2SO	1100	2500	2550
						1200		
		Wide	1950	1500	2CO	1100	3050	1950
1600	21	Deep	1400	2400	2SO	1100	2500	2850
						1200		
		Wide	1950	1700	2CO	1100	3050	2150
2000	26	Deep	1600	2500	2SO	1400	2700	2950
		Wide	1950	2100	2CO	1100	3050	2550
Max. Travel: 75m								

Speed	Capacity	Overhead	Pit	Car Clear Height		Door Height
m/s	kg	mm	mm	mm		mm
1.0	800-1000	3800	1400	2200 with suspension ceiling		2100
	1150-2000	4300	1650			
1.5	800-1000	3950	1500			
	1150-2000	4450	1750			
1.75	800-1000	4050	1550			
	1150-2000	4500	1800			
1.0	800-1000	3800	1400			
	1150-2000	3850	1650			
1.5	800-1000	3950	1500			
	1150-2000	4000	1750			
1.75	800-1000	4050	1550			
	1150-2000	4050	1800			



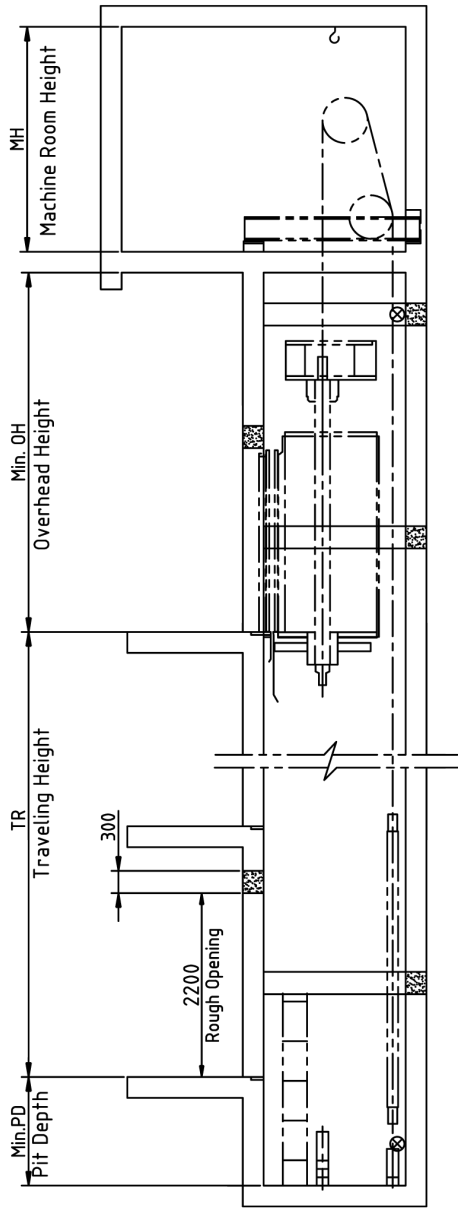


MACHINE ROOM (MRA)  
MID-RISE PASSENGER LIFT

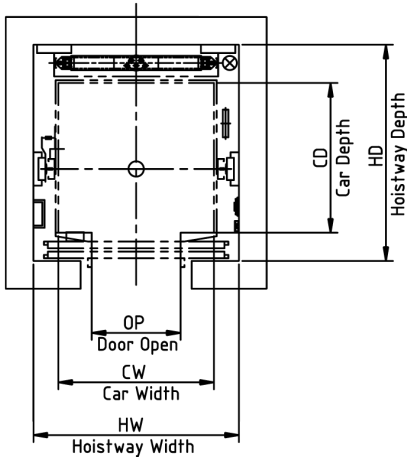


GEARED TRACTION MACHINE  
ROPING 1:1

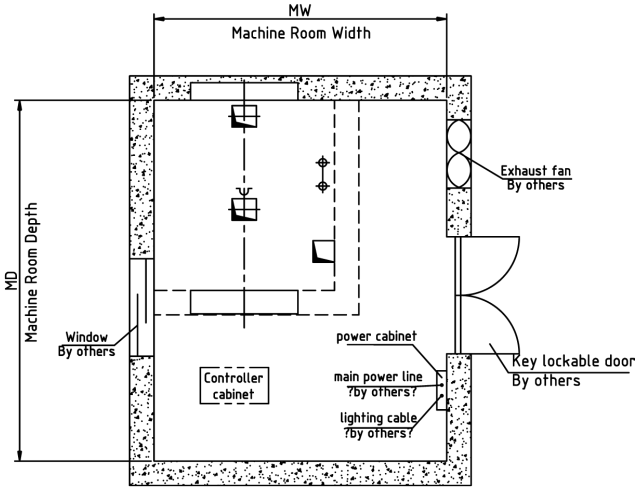
LIFT SHAFT - SECTION VIEW



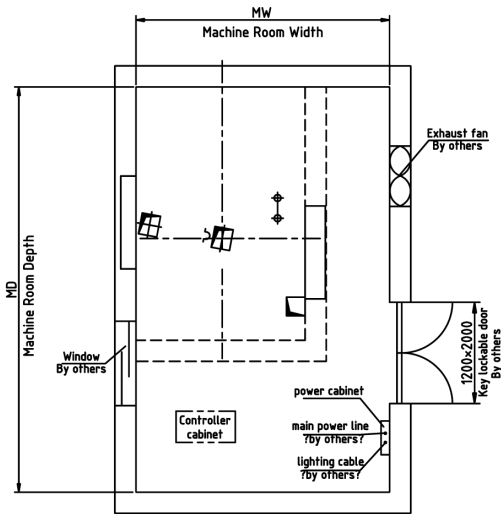
HOISTWAY PLAN  
Wide Car Type



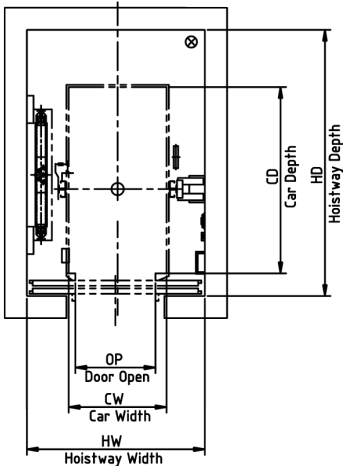
MACHINE ROOM PLAN



MACHINE ROOM PLAN



HOISTWAY PLAN  
Deep Car Type



MACHINE ROOM (MRA)  
MID-RISE PASSENGER LIFT





CAPACITY		CAR			DOOR		SHAFT	
Load	Person	Type	Width	Depth	Type	Opening	Width	Depth
kg	P	CT	CW	CD	DT	DO	HW	HD
630	8	Wide	1400	1100	2CO	800	1850	1700
800	10	Deep	1100	1700	2CO	800	1950	2150
		Wide	1400	1350	2CO	800	1850	1950
						900	2000	
1000	13	Deep	1100	2100	2CO	800	1850	2550
		Wide	1600	1400	2CO	900	2050	2000
						1000	2200	
1150	15	Deep	1400	1800	2SO	1100	2300	2250
						1200		
		Wide	1800	1400	2CO	1100	2400	2100
1250	16	Deep	1400	1950	2SO	1100	2300	2400
						1200		
		Wide	1950	1400	2CO	1100	2550	2200
1350	18	Deep	1400	2100	2SO	1100	2300	2550
						1200		
		Wide	1950	1500	2CO	1100	2550	2300
1600	21	Deep	1400	2400	2SO	1100	2300	2850
						1200		
		Wide	1950	1700	2CO	1100	2550	2500
Max. Travel: 75m								

Speed	Capacity	Overhead	Pit	Car Clear Height	Door Height
m/s	kg	mm	mm	mm	mm
1.0	450-1000	4300	1300	2200 with suspension ceiling	2100
	1150-1600	4400	1500		
1.5	450-1000	4400	1400		
	1150-1600	4500	1600		
1.75	630-1000	4500	1500		







# Emergency Landing System

DURING POWER FAILURE

-  Emergency light in the cabin illuminates upon power failure.
-  Backup power from UPS kicks in to drive the elevator.
-  Elevator automatically lands on the nearest floor and door opens.
-  Elevator's operations shuts down until power is back on.

# Disaster Diagnostics & Recovery

DURING FIRE, FLOOD OR EARTHQUAKE

-  Signal for disaster is sent to the controller. Disaster diagnostics activated.
-  Disaster diagnostics preset rings alarm to alert passengers. All elevator calls cancelled.
-  Elevator moves to preset home floor, lands and opens door for evacuation.
-  Elevator's operations shuts down until manually overridden.

YOUR SAFETY IS OUR  
NO. 1 PRIORITY.



LIST OF FEATURES

S: STANDARD O: OPTIONAL

COMFORT FEATURES	DESCRIPTION	S	O
Adjustable Open Door Time	The doors operation time (opening & closing) are adjustable, depending on whether the stop was called from the hall or the car, to allow smooth boarding or loading.	•	
Animated Display	LCD or Dot Matrix display is installed at the COP to show the current floor, traveling direction, date, time and customized message.	•	
Anti-nuisance at Light-load	If the numbers of registered car calls does not correspond to the car load, all calls are canceled to avoid unnecessary stops.		•
Attendant Service	When a car is operated by attendant, it is allowed to drive a car by controlling the COP on travel direction and/or by passing ride.	•	
Automatic Bypass	A fully-loaded car (usually at 80% of the rated load) bypasses hall calls in order to maintain maximum operational performance.	•	
Automatic Fan & Lighting Power in Car	If there are no calls for a certain period, the car ventilation fan & lighting will automatically be turned off for energy saving.	•	
Automatic Parking	If there are no calls for specified period, the car will automatically return to the main landing.	•	
Automatic Door Open & Close	If the car within the door zone, the door will automatically open and it will be closed after a period of time.	•	
Car-call Cancellation	Passengers can cancel the wrong registration by pressing the same button twice.	•	
Car Alarm Bell	Ring bell for emergency used during distress in the car.	•	
Call Cancelled when Reverse Direction	When a car has responded to the final car call in one direction, the system regards remaining calls in the other direction as errors and clears them the memory.	•	
Direct Landing	On analogue given curve control system slows down the lift by distance for smooth landing.	•	
Emergency Illumination in Car	Emergency lighting illuminates automatically during power failure.	•	
Full Collection Operation	Lift stop in response to the car call while automatically follows landing calls up and down, a passenger can register his or her call at any landing.	•	
Full Height Sensor	Infrared-light beams cover the car height of the doors as used to detect passengers or objects before doors close.	•	
Hall Call for Door Opening	Closing doors can be reopened by pressing the hall button corresponding to the same traveling direction on the car.	•	
Overload Protection	Overload switch functioning, the doors remain open and the car does not move with alarm buzzing on until enough passengers exit the car.	•	

SAFETY & CARE FEATURES	DESCRIPTION	S	O
Anti-Reverse Protection	When the system has detected an inconsistency between call and travel direction for 3 seconds, an emergency stop will be activated with alarm buzzing on.	•	
Auto Run after Power Restore	During automatic drive, when normal power failure and then resumes, if the elevator stops at non-door zone, it will return to ground floor to reset for the sake of safety, and then open door automatically.	•	
Encoder Fault Protection	The system is always checking the encoder operation in order to ensure the feedback system is perfect.	•	
Error Code Log	The system will log the error codes for troubleshooting purpose, this will help to shorten the shutdown time.	•	
Final Terminal Protection	The lift is equipped will final limit travel protection to prevent the lift over-shooting.	•	
Floor Numbering Setting	It is flexible to set any display for the floor numbering.	•	
Jammed Contact Protection	When the system has detected any abnormal jammed contact on the calling push button, it will temporary disable the button to prevent wrong operation.	•	
Over Current Protection	The system is always monitoring the current flow to the motor; the system will shut down the elevator if abnormal over current is detected.	•	
Over Speed Protection (Up & Down Direction)	The elevator is equipped with speed governor to prevent the elevator speed over the rated speed.	•	
Over Voltage Protection	The system is always monitoring the incoming power to protect the over voltage which may be harmful to the system.	•	
Parking Shutdown	With a key switch on the Control Panel or Hall Call, a car can be called to a specified floor after responding to all car calls, and then automatically be shut off for packing.	•	
Remote Monitor Interface	The system provide the dry contact signals for building monitoring system such as elevators' car position, running direction, safety circuit and door circuit conditions, normal/fault, etc.		•
Running Time Protection	The system is always counting the running time between floor to floor to ensure time taken is within the expected time.		•
Running Timer and Counter	The system is equipped with running timer and trip counter in the controller so that the values can be used as references to the maintenance crews.		•
Self Re-Leveling	When the car stops at non-door zone due to any fault, once the fault is removed, it will automatically re-level the nearest floor and then open door automatically.	•	
Service Floor Setting	To enhance security, service to desired floors can be set to disable using the car operating panel.		•

ON REQUEST FEATURES	DESCRIPTION	S	O
Arrival Chime	Electronic chimes sound to indicate that a car will soon arrive. (The chime are mounted either on the top or at the bottom of the car).	•	
Auto Rescue during Power Failure	In the event of power failure, the car equipped with this safety device will function automatically moves and stops the car at the nearest floor using a rechargeable battery to ensure passenger to alight safely.	•	
CCTV cable (from top of car to machine room)	Special type of traveling cable, which has added CCTV cable, will be used for CCTV purpose		•
Door Nudging	A beep sounds and the doors slowly close when they have remained open for longer than the preset time.	•	
Earthquake Control	In the event of an earthquake detected, all cars stop at the nearest floor, and park there with doors open to release the passengers.		•
Fire Emergency Return	Upon activation of a Fire Return Switch, all calls are canceled, all cars immediately return to specified fire home floor and the doors open to ensure safe passengers evacuation.		•
Fireman Service	When the Fireman Switch is activated, all specified car call and hall call are canceled and the car immediately return to fire home floor. The car then responds only to car calls which facilitate fire fighting and rescue operations.		•
Front-back door service	The system is capable to handle both single door as well as through opening doors services	•	
Hall Lantern	The lamp will flash up to indicate that the car will soon arrive.		•
Interphone	In case of lift breakdown, the interphone allows you to talk to control rooms / security.	•	
IC card	A COP can be equipped with an IC proximity card reader to control the access to certain floors with multiple combinations of choices. The Intelligent IC Card Access system is equipped with a card writer, PC, and software to program individual IC Card like password setting, validity period and multiple floor access selection.		•
Operation by Stand-by Power Supply	During power failure, the power generator in the building moves and stops to specified floor, and the doors open to ensure passenger evacuation. After all the only pre-determined car will be available for normal operation to prevent overloading the stand by power supply.		•
Remote Monitor System	The system uses CANBus to connect a PC in remote monitoring room to monitor a commercial building or a residential community. With the monitoring software and the LAN/WAN network, the elevators' running status such as car position, running direction, call registration, error code, system data and etc.		•
Safe Landing	If a car has stopped between floors due to some faulty, the controller check the cause, and if it is considered safe to move the car, it will move to the nearest floor at a low speed and the doors will open.	•	
Sound player (only in English)	A synthesized voice informs passengers inside the car about the arriving floor number, and follow by next serving direction ("Going Up" or "Going Down") when door is fully opened to inform passengers outside the landing.		•
VIP Priority Service	A specified car is withdrawn from group control operation for VIP Service. When activated, the car respond only to existing car call, moves to specified floor and park with doors open. The car will then respond only to car calls.		•

TEAM FEATURES ON REQUEST	DESCRIPTION	S	O
Up Peak Service	Monitors timing and distribution of cars assigned to meet traffic demand during increased upward service.	•	
Down Peak Service	Monitors the number of cars to be allocated to meet increased demand for downward travel such as during office off time, hotel checkout time to minimize passenger waiting time.	•	
Intelligent Cooperation System	The system is applied to select the most rational operational rule which maximizes the efficiency of group control operations by reducing power consumption and waiting time for passengers.		•





*“Where Everything Matters”*

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