

HITACHI
Inspire the Next

EX Series
MOVING SIDEWALKS

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EX Series

MOVING SIDEWALKS

Hitachi moving sidewalks are at work moving people everywhere... in hotels, offices, department stores and many other types of places. Advanced technology is used for the sole purpose of upgrading comfort. This is combined with a creative ability to flexibly modify products so that they blend in with the surrounding environment.

The EX Series The Design Concept of the Future

Developed through many years of dedication and experience, Hitachi moving sidewalks feature a variety of innovations including the 8 mm Side Cleats, the All-Stainless Steel pallets and the Independent Top Drive System. Taking full advantage of these high-tech features, Hitachi has created a new image for its moving sidewalks, resulting in the development of the innovative EX Series. Hitachi's comprehensive command of electrical and electronic technology has brought moving sidewalks a great deal closer to perfection. Moving sidewalks are now slimmer, more fashionable and more user-friendly than ever.



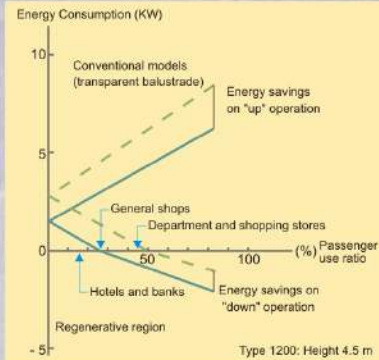
30% Reduction in Energy Consumption

Moving sidewalks efficiently move large numbers of people with minimum waiting time. However, they operate constantly regardless of the number of passengers they carry. Therefore, even a small decrease in energy consumption produces substantial savings. Hitachi has made a number of improvements to the drive mechanism in its easy-to-maintain top machine room which has been proven superior over many years of experience. An approximate 30% reduction in energy consumption has been achieved by enhancing drive transmission efficiency and reducing friction. The power efficiency of the EX Series makes it especially attractive to department stores and shopping complexes.



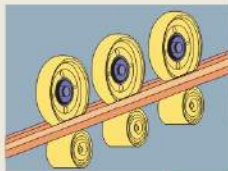
New Drive Gears Enhance Power Transmission Efficiency by 15%

One of the major factors which determines moving sidewalk power transmission efficiency is its reduction gears. Hitachi has developed a new line of parallel-axis helical-gear speed reducers which greatly increase efficiency compared with conventional worm reduction gears.



Drive System Enables not only Energy Saving, but also Extends Life Expectancy of Handrails

Drive system does not require tension of handrail which conventional traction drive does.
Drive system does not require reverse curve which creates cracks on handrail lips.



Stainless Steel Pallets with Raised Cleats

Hitachi is the first in the industry to introduce stainless steel moving sidewalk pallets. They are pressed from stainless steel sheets. The higher strength of stainless steel prevents the step surface or riser from being deformed by umbrella tips or other sharp objects. This substantially extends the lifespan of the pallets.

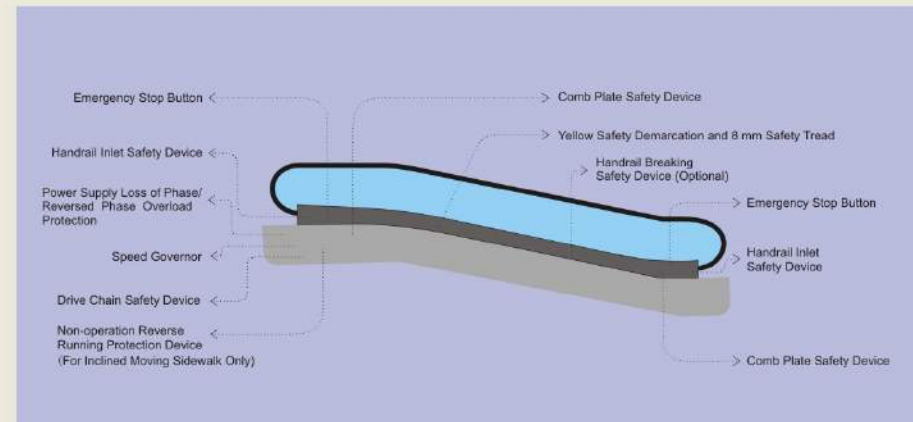
The Unique Safety Technology of Hitachi

- Unique slip-resistant notched design can prevent the passengers from slipping on the pallet.
- On both sides of the pallets, there are 8mm wide yellow demarcation lines of synthetic resin, which can help passengers distinguish the stepping area and therefore can protect passengers effectively.



Safety Devices

Hitachi moving sidewalks are equipped with the following safety devices.



Comfort and Convenience

All Stainless Steel Appearance Design

The components of pallets, deck covers, landing plates and handrail frames, etc. adopt stainless steel finish, so that the moving sidewalks are sturdier and more beautiful.

Escort Line for Natural Handrail Grasping/Releasing

The "escort line" is a terminal line developed taking into account ergonomic considerations to allow the handrail to be grasped with a more natural action when stepping on or off the moving sidewalk.



Slim Handrail

The width and thickness of the "slim" handrail have both been reduced to make it easier for all passengers to grip, especially for children. This is just one more example of the attention Hitachi pays to the convenience of passengers.



Approach Lane Guides Entrance and Exit

In order to make traffic flow clear when entering and exiting, an approach lane leading to the pallets is employed on the cover plate. The patterned width is the same as that of the pallets to guide entering and exiting of passengers.



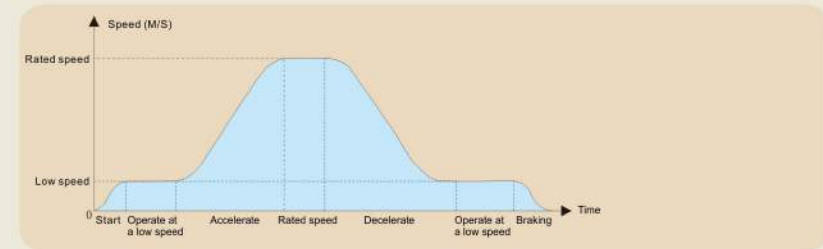
Approach lane

Advanced Microcomputer Control System Technology (Optional)

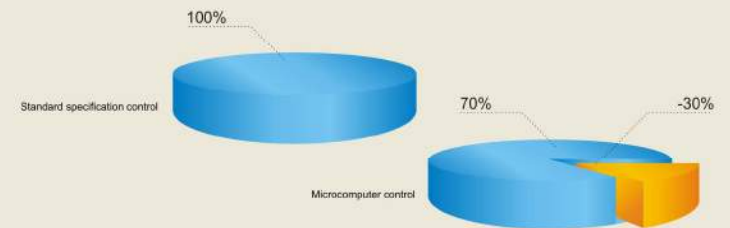
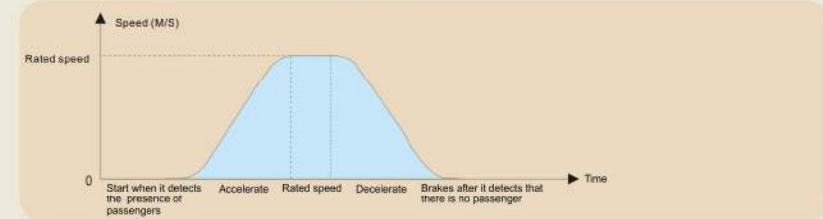
The optional microcomputer control system technology can reduce energy consumption by 10% to 30%.

When the moving sidewalk is operating in no-load status, the moving sidewalk will automatically switch to one of the following operation modes

Operate at low speed when there is no passenger

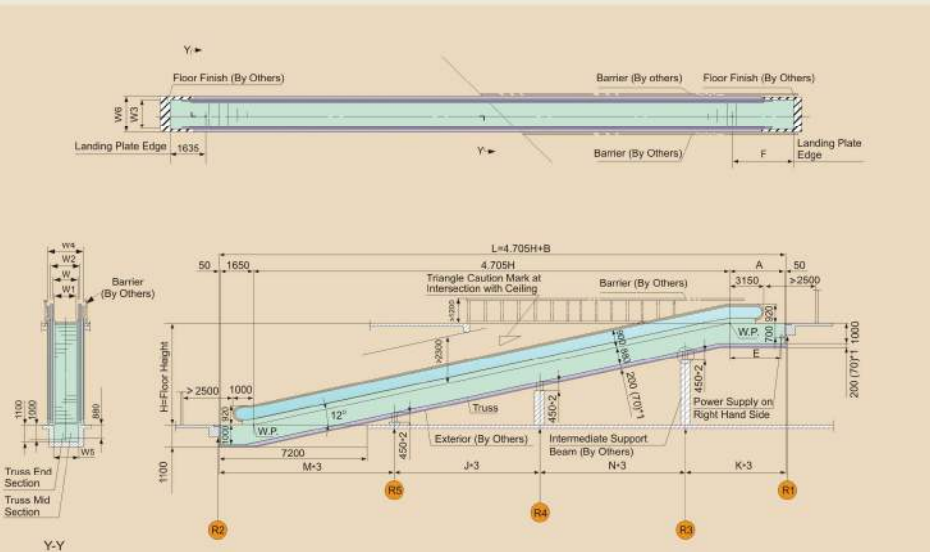


Stop automatically when there is no passenger



Comparison of energy consumption in automatic stop mode when there is no passenger

Inclined Moving SideWalk Dimensions



External Dimensions(Width) (mm)

	1200 Type
W (Balustrade)	1200
W1 (Pallet)	1004
W2 (Handrail)	1210
W3 (Landing Plate)	1350
W4 (Frame Width)	1510
W5 (Overall)	1550
W6 (Plt,Min)	1590

A, B, E, F External Dimensions (Length)

Rise H (mm)	Motor Capacity (kW)	A (mm)	B (mm)	E (mm)	F (mm)
1650<H<5000	< 7.5	4100	5850	3950	4085
5000<H<8000	11				

When microcomputer control system is adopted, size A, B, E, F shall be extended based on the following table.

Rise H (mm)	Motor Capacity (kW)	A,B,E,F (mm)
1650<H<5000	< 7.5	Extend 200
5000<H<8000	11	Extend 300

Remarks:

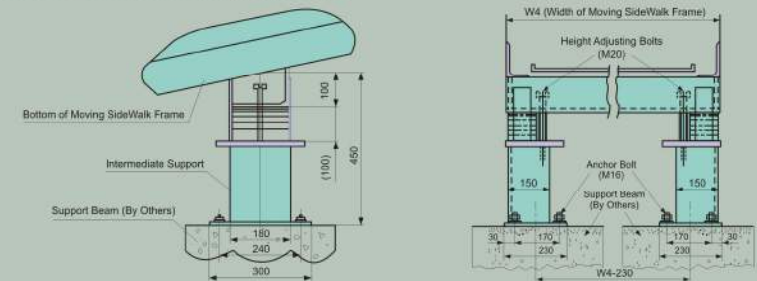
- 1.If there is no bottom light or piping to be installed in between the truss and the exterior panel, this dimension shall be 70 mm.
- 2.When the height dimension of the intermediate support exceeds 450 mm,the Customer shall supply the support beam.
- 3.The dimensions M,N,J,K shall not be bigger than 13000 mm.
- 4.When the distance between the centerline of the handrail and any obstacle of the building or the moving sidewalk is less than 500 mm, there shall be a triangle caution mark installed at the intersection.

Inclined Moving SideWalk Reaction Load and Dimensions

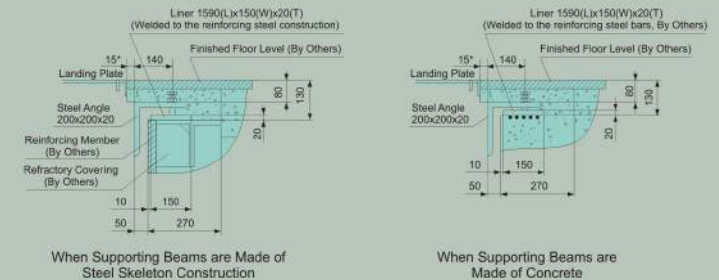
Reaction Load

Projection Length (mm)	Number of Supporting Points	Motor Capacity (kW)	R1 (N)	R2 (N)	R3 (N)	R4 (N)	R5 (N)
L ≤ 13000	2	≤ 7.5	23.5H+35000	23.5H+25000	—	—	—
13000 < L ≤ 26000	3		5.5K+20000	5.2(M+J+N)+10000	5.4L	—	—
26000 < L ≤ 39000	4	7.5	5.5K+20000	5.2(M+J)+10000	5.4(K+N)	5.2(M+J+N)	—
		11	5.5K+25000		5.4(K+N)+3000		
39000 < L ≤ 52000	5	11	5.5K+25000	5.2M+10000	5.4(K+N)+3000	5.2(N+J)	5.2(J+M)

Applicable to Inclined Moving SideWalk



Applicable to Inclined Moving SideWalk

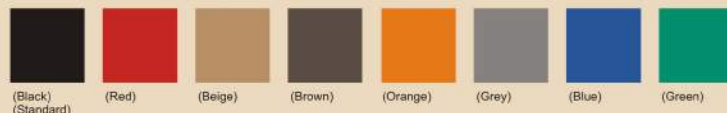


Moving SideWalk Standard Specifications

	1200 Type
Nominal Effective Width (mm)	1200
Step Width (mm)	1004
Nominal Transport Capacity (persons/hour)	9000
Rated Speed (m/s)	0.5
Inclination	0° (Horizontal Type)/12° (Inclined Type)
Power Supply	50/60 Hz, AC 3-phase 380 ~420 V; single phase 220 V
Motor	3-Phase AC Induction Motor
Operation	Key switch operated, reversible



Handrail colors (8 colors)



NOTE: Colors reproduced here vary slightly from the actual

Description	Model	Horizontal Type		Inclined Type
		1200EXH-EN Type (0°)	1200EXH-N Type (0°)	1200EXS-N Type (12°)
Balustrade	Balustrade	Transparent Tempered Glass		
	Balustrade Lighting	-		
	Handrail Frame	-	Stainless Steel Hairline Finish	Stainless Steel Hairline Finish
	Handrail	Synthetic Rubber (Black)		
	Skirt Guard	Stainless Steel Hairline Finish		
Floor	Deck Cover	Stainless Steel Hairline Finish		
	Comb	Aluminum		
	Comb Plate	Cover Plate: Stainless Steel		
Pallet	Landing Plate	Stainless Steel		
	Pallet Tread	Stainless Steel		
	Demarcation Line	Light-Yellow Safety Demarcation (Synthetic Resin) on Two Sides		

Works Done by Others Moving SideWalks

Construction-Related Work (Supply and Install)

Item	Work Description
1.	Opening of holes in floor slabs for installation use and recovery work
2.	Installation of supporting beams for installation use
3.	Opening of suspension holes in floor slabs or sleeve holes for carrying the moving sidewalk into place and performing recovery work
4.	Lowest floor and moving sidewalk bottom pits and waterproofing work (if there is any resident room below the lower machine room, the pit work will be of refractory construction)
5.	Finishing work for floors and ceilings around the moving sidewalk after completion of escalator/moving sidewalk installation
6.	Installation & finishing works to barrier and walls around the moving sidewalk
7.	External panels on moving sidewalk frame (truss)
8.	Installation of triangular guard plates in places where the moving sidewalk and building ceiling or one moving sidewalk and another intersects
9.	If the space between moving sidewalk is a stairwell, installation of intermediate down walls, ceilings, handrails, and advance prevention partitions
10.	Joint work in places where the moving sidewalk and the building's ceiling border
11.	Installation of fall protection nets, etc. if the space between the moving sidewalk and the building's floor is stairwell or the space between one moving sidewalk and another is a stairwell
12.	Preparation of an entrance to carry in the escalator/moving sidewalk and perform recovery work if the moving sidewalk is to be installed in an existing building
13.	Protection work around the moving sidewalk if the moving sidewalk is to be installed in an existing building
14.	Opening of a hole in the wall if the operation panel of the moving sidewalk is to be installed in the building's wall

Electrical Equipment-Related Work(Supply and Install)

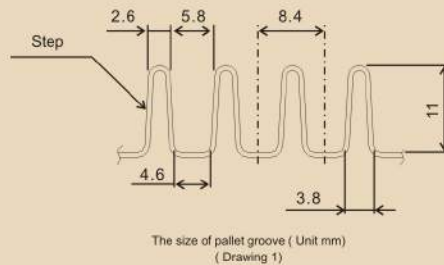
Item	Work Description
15.	Main power supply for the drive motor: lead-in up to the upper control board of the moving sidewalk
16.	Power supply for inspection and maintenance (including bottom lighting): lead-in up to the upper control board of the moving sidewalk
17.	Grounding wire: lead-in up to the upper power receiving panel of the moving sidewalk
18.	Piping and wiring for the supervisory panel: lead-in from the installation area of the supervisory panel to the power receiving panel of the moving sidewalk
19.	Piping and wiring work if the moving sidewalk's operation panel is separately installed (built into the wall, etc)
20.	Selector switch and its installation for moving sidewalk bottom lighting
21.	Installation of emergency lighting
22.	Installation of sprinklers, broadcasting speakers, guide lights, etc

Notes on Choosing Handcarts for Use on Moving Sidewalks (By Others)



1. When choosing the handcarts for use on moving sidewalks, customer needs to take note of the following

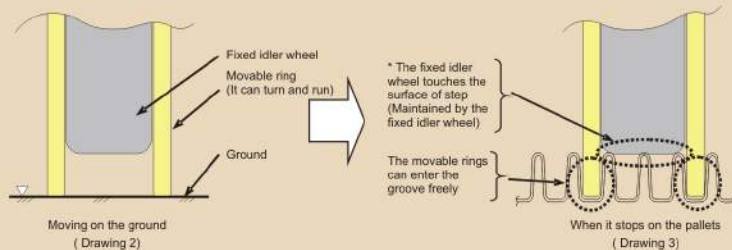
- 1-1. The chosen handcarts need to have braking device or other alternative device
- 1-2. The compatibility between the wheels of chosen handcarts and the size of moving sidewalk pallet groove. Refer to drawing 3 and drawing 5.



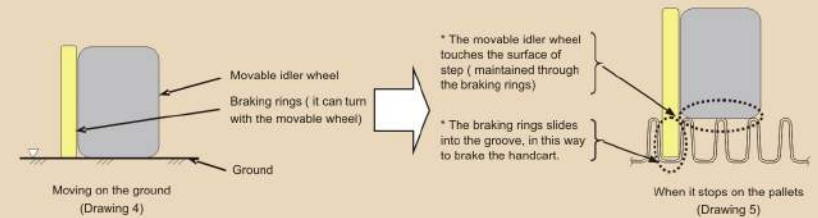
Note: When the wheels and the pallet groove cannot match, the braking device of handcarts might not be able to be released, resulting in the handcarts not being able to move smoothly over the combs.

2. Methods of keeping the handcarts staying on the pallets of the moving sidewalks

2-1. Handcarts without braking device



2-2. Handcarts with braking device



Note: For both methods, it must be easy for the movable rings (braking rings) to enter the pallet groove. Therefore, customer need to ensure the compatibility between the wheels of chosen handcarts and the size of moving sidewalk pallet groove.

According to Drawing 3 (Drawing 5):

- 1. Thickness of movable rings (braking rings) shall not be bigger than 4.6mm.
- 2. Depth of movable rings (braking rings) entering into the pallet groove shall not be bigger than 11mm.
- 3. Thickness of the idler wheel shall be $[12.2 + 8.4n]$ mm (where $n=0, 1, 2$)

3. Important considerations on choosing handcarts

The customer need to pay attention to the situations below when they are choosing handcarts:

- 3-1. The type of chosen handcarts: shopping carts, baby carriages cum shopping carts, baby carriages and so on.
- 3-2. The stopping methods of handcarts: braking type, fixed wheel type and so on
- 3-3. The maximum load capacity of handcarts (kg)
- 3-4. The diameters of handcart wheels (mm)

Note: 1) The maximum load capacity of handcarts should be designed under 50 kg. If the handcarts are overloaded, they can be stuck in the pallet groove and cannot move onto the comb when exiting the moving sidewalk.
2) The diameters of wheels (casters) of the handcarts must be designed to be more than $\phi 125$ (mm). If the diameter of the handcarts wheels are too small, the frame construction of handcarts might hit the comb plate when exiting from the moving sidewalk.