

SX Series Escalator

Energy-saving • Safe • Reliable
Developed in harmony with the environment

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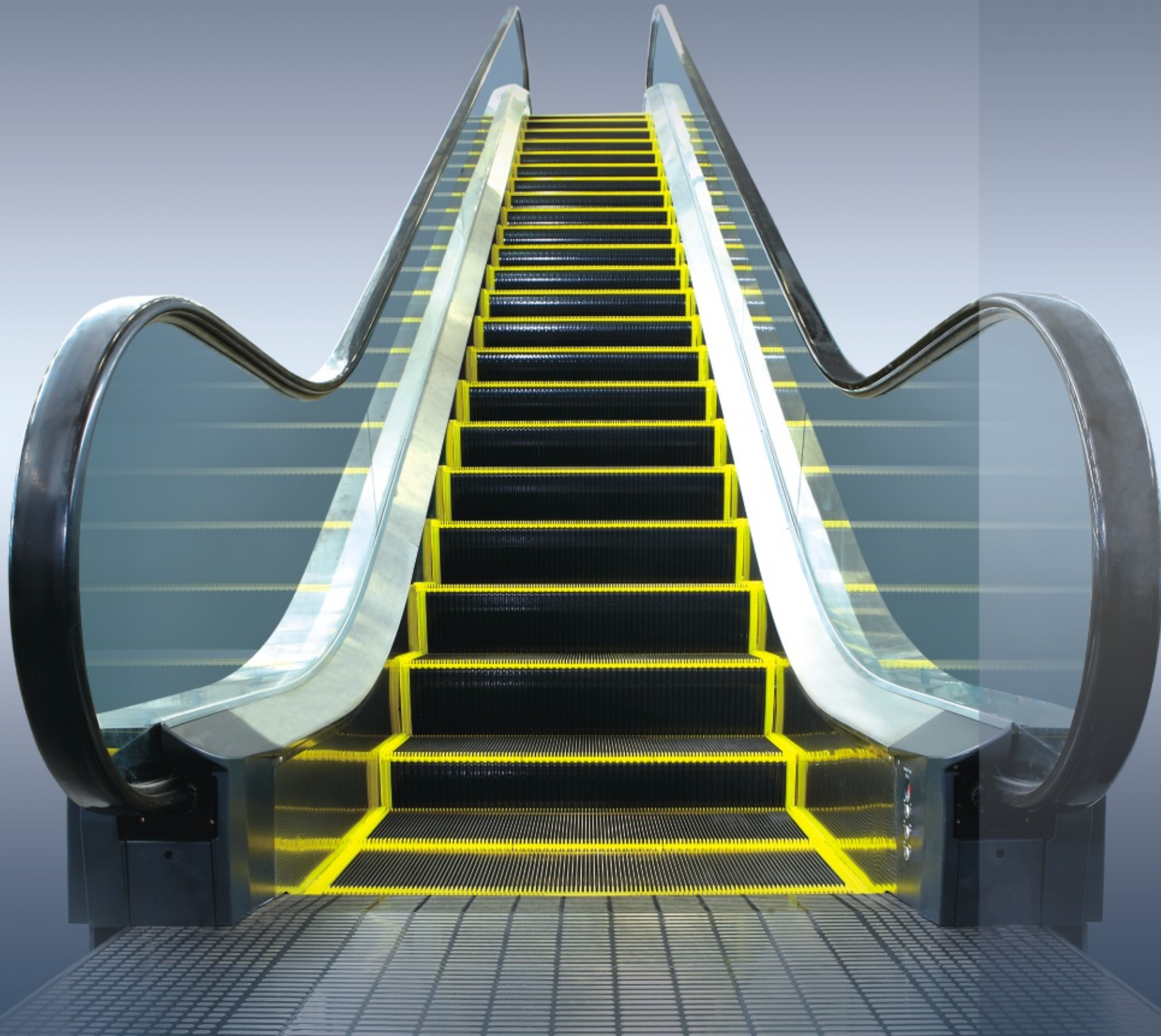


 **日立电梯(中国)有限公司**
Hitachi Elevator (China) Co., Ltd.

HITACHI
Inspire the Next

The World Renowned Hitachi SX Escalator,
combining elegance with perfection.

Displaying outstanding performance with solutions-based
and quality-focused technology to meet rising global demands.



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Comfort and Elegance

Hitachi presents the all-new generation of Hitachi SX Escalator. Integrating technological trends with ergonomical focused designs to bring you our distinctly stylish escalators.

SX Hitachi Escalator

Brilliant Handrail Designs

Embracing the latest LED lighting feature that is aesthetically appealing, energy saving and environmentally friendly.

LED Handrail Lighting

Utilising the innovative system of the LED lighting technology that is built for endurance, it has also met with rising global environmental-focused demands and cost-effective energy savings solutions.

LED Skirt Guard Lighting (Optional)

LED lighting application that surrounds along the skirt guard. Beautifully crafted to increase visibility, creating an impactful visual statement within the escalators.



Streamline Handrail Design

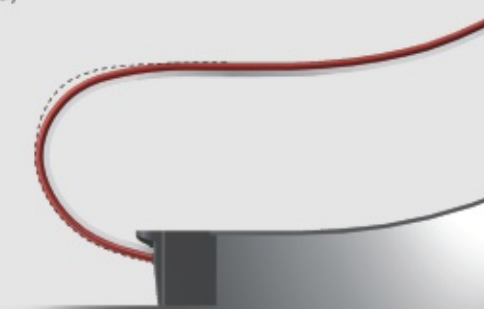
Combining ergonomical-based solutions and streamline design concepts, the end result is one of the finest escalators engineered.

Handrail

With a broad spectrum of colours to choose from to complement all types of architectural style.

Escort Line

Ergonomically designed Escort Line Handrails allow for better grip, thus increasing safety levels.

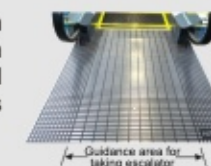


Safety Guided Design

Adapting a simplistic design feature that provides users with safe use of escalators.

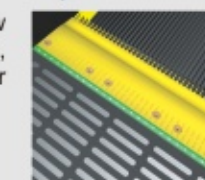
Guided Enter and Exit Platform

The all-new Enter and Exit platform with strikingly clear design consisting of simple patterns and colour demarcations guiding users safely onto the escalators.



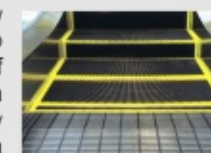
LED Comb Lighting (Optional)

Combining its fluorescent yellow comb with LED flickering lighting, users are guided towards the Enter and Exit area of the escalator.



Superb Visionary Safety Boundary

Hitachi's unique fluorescent yellow boundary design allows users to identify the movement direction of escalator even in areas with dim lightings. It also increases the safety level of users entering and exiting the escalator's platform.



Direction Display (Optional)

Through the LED displays, users are provided directional guidance, hence preventing against entering prohibited direction.



Safety and Ergonomical

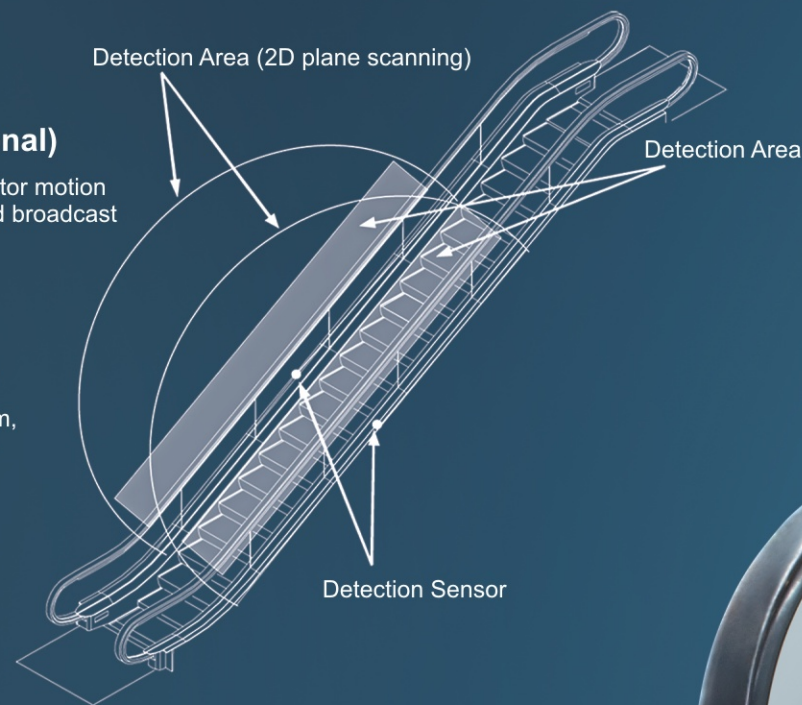
Safety and ergonomically-focused designs are the key features of Hitachi SX Escalator. Our comprehensive and meticulous safety technology create an ergonomically-friendly application space for users.

Sensor Detection Feature (Optional)

This Sensor automatically engages the escalator motion to detect a user outside the handrail areas and broadcast an announcement to alert user.

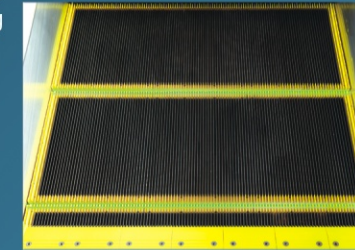
Automatic Broadcast (Optional)

Through an automatic broadcast sound system, users are reminded to ride safely while on the escalator.



Step Demarcation Lighting (Optional)

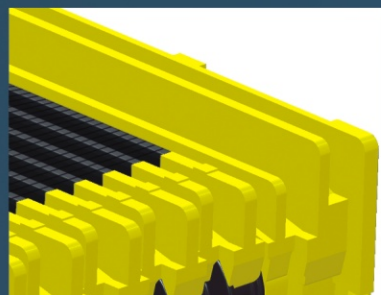
Lights are installed below escalator steps at the Enter and Exit platform to provide visibility hence ensuring users safety.



Stainless Steel Steps

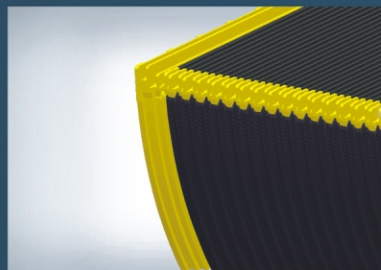
Raised Cleats on Both Sides

8mm high raised cleats are fixed on both sides of the steps to effectively guide users onto the riding area.



Knurled Finishing on Step Surface

Step surface has knurling finishing that act as an anti-slip feature to improve user's safety.

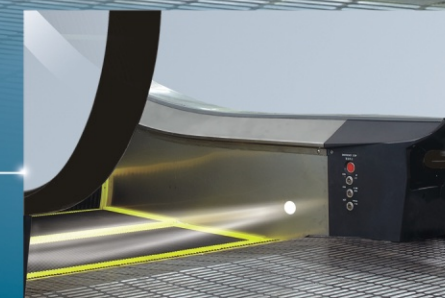


Skirt-Guard Safety Boundary

8mm high skirt-guard safety boundary ensures that passengers' shoes do not come into contact easily with the skirt guard. This will prevent their shoes from being trapped in between the steps and skirt guard.

LED Foot Light (Optional)

Brightening up the areas along escalator's Enter and Exit platform increasing safety level during riding journey.



Energy-saving and Technology

"Inspire the Next" brand philosophy is about embracing evolving technology, which serves as the fundamental value on the creation of all Hitachi escalators. Under a comprehensive technological framework, the Hitachi SX Escalator is developed.

SX Hitachi Escalator

Energy-saving Dual-speed Operation

When there are no users onboard for a period of time, the escalator will operate at a slow speed; when there are users, it will safely accelerate to rated speed.

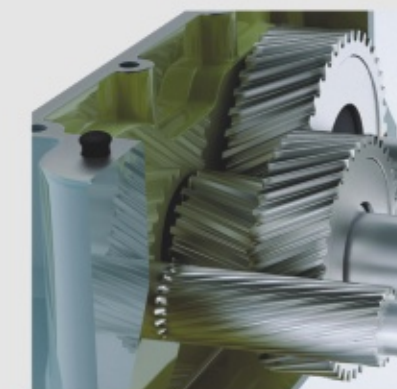
Energy-saving Effect

Dual-speed Energy-saving Effect
28% *1

Note: * 1. Calculation based on 15 dual-speed operation cycles per hour.

Technology Helical Gear Speed Reducers

Helical transmission features a high degree of instantaneous gear contact, which increases transmission rates of traditional worm drive by 15%. Adopting the multi wedge belts system, it effectively increases the lifespan of the belt, thereby reducing the number of tension corrections and maintenance and repair requirements.



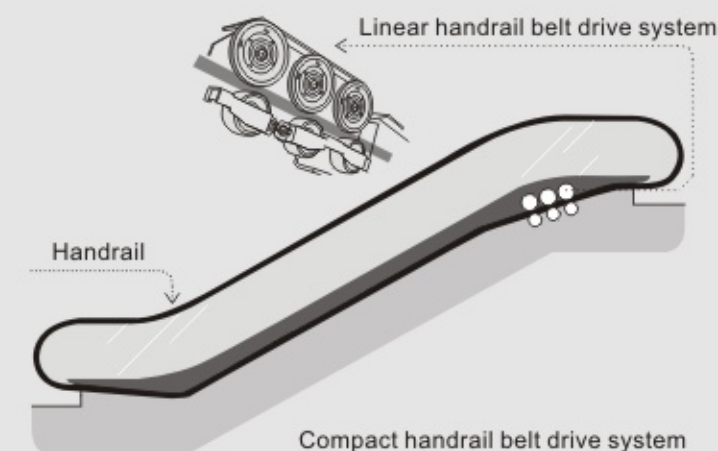
32-Bit Microprocessor

Hitachi has upgraded its escalator hardware operational system, comprehensively utilising a 32-bit Microprocessor to provide a new generation of frequency configuration technology. This feature further enhances our escalator's safety and energy-saving levels.

Compact feature with an advanced technology integration. This intelligent digital feature has a track record of proven processing capability with operational efficiency.

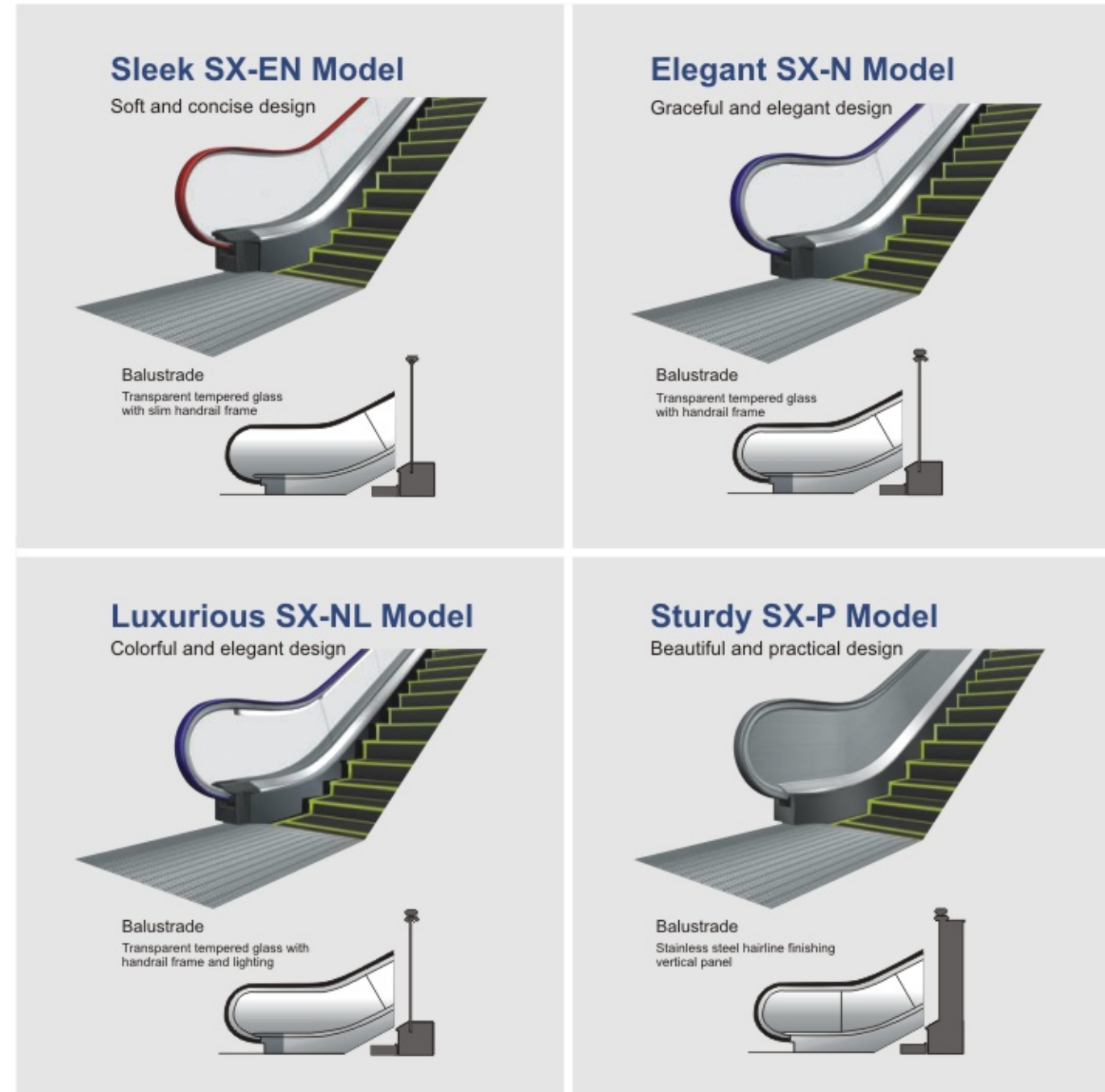
Handrail Belt Drive System

In comparison with the conventional traction drive system, this system featuring fewer bends with less resistance and higher transmission efficiency, provides an effectively stable handrail belt drive operation.



Premium Choice of Contemporary Designs

Select from our solution-based design range of models:



Our Handrails come in a wide array of colours:



Note: Printed colours and actual product colours may differ slightly.

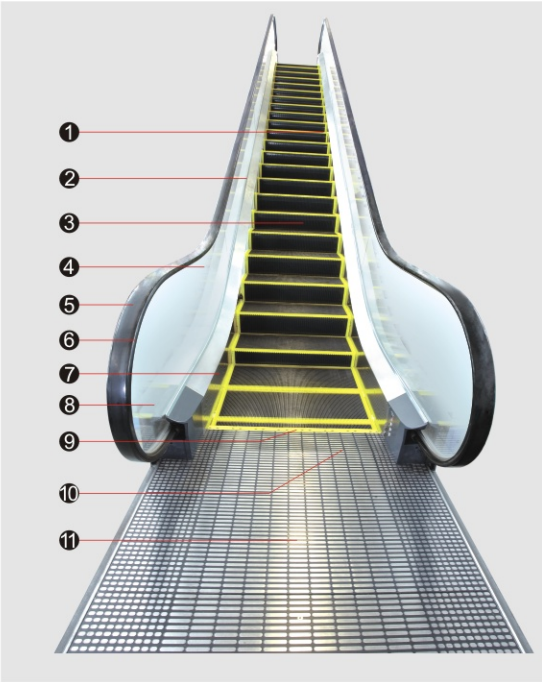
Functional Configuration

Features	Standard	Option
Safety Device	Step Chain Safety Device (TCS)	<input type="radio"/>
	Skirt Guard Safety Device (SGS)	<input type="radio"/>
	Driving Chain Safety Device (DCS)	<input type="radio"/>
	Step Travel Safety Device (SRS)	<input type="radio"/>
	Comb Plate Safety Device (CMS)	<input type="radio"/>
	Handrail Inlet Safety Device (TIS)	<input type="radio"/>
	Magnetism Brake (Mg. B)	<input type="radio"/>
	Overspeed And Non-Operation Reverse Running Protection Device	<input type="radio"/>
	Step Sinking Safety Device (STS)	<input type="radio"/>
	Power Supply Loss Of Phase / Reversed Phase Overload Protection	<input type="radio"/>
	Emergency Stop Button	<input type="radio"/>
	Safe Stopping Distance Protection	<input type="radio"/>
	Control Panel Fault Detection	<input type="radio"/>
	Protective Device For Missing Step (MSD)	<input type="radio"/>
	Landing Plate Close Abnormality Detection (MIS)	<input type="radio"/>
	Handrail Running Speed Abnormality Detection (HSD)	<input type="radio"/>
	Handrail Breaking Safety Device (HRS)	<input type="radio"/>
	Brake Safety Device (MGS)	<input type="radio"/>
Automatic Operation	Auxiliary Brake (ABS)	<input type="radio"/> (H > 6m) <input type="radio"/> (H ≤ 6m)
	Auto Dual Speed	<input type="radio"/>
	Auto Start - Stop	<input type="radio"/>
Fault Alarm	Auto Dual Speed + Auto Start - Stop	<input type="radio"/>
		<input type="radio"/>
Fire Alarm Operation Interface	When escalator receives fire signal, escalator immediately stops.	<input type="radio"/>
Fault Diagnosis And Fault Display	Control Panel	<input type="radio"/>
	Skirt Guard	<input type="radio"/>
Fault Recording		<input type="radio"/>
EN115-2008		<input type="radio"/>
Automatic Lubrication	<input type="radio"/>	
Automatic Sound Broadcasting		<input type="radio"/>
Earthquake Operation Sensor	When sensor is activated, escalator immediately stops.	<input type="radio"/>

Escalator Standard Specifications

	Type1200	Type1000
Nominal Width (mm)	1200	1000
Step Width (mm)	1004	802
Nominal Transportation Capacity (Persons/Hour)	9000	6750
Rated Speed (m/s)	0.5	
Inclination Angle	30°/35°	
Power Supply	50/60 Hz, AC 3-phase 220/230/380/400/415/440V, Single-phase 110/220/230/240V	
Motor	Three-phase AC Induction Motor	
Operation Mode	Key Switch Operation, Reversible	
Control Mode	Inverter Control	
Operating Environment	Indoor	

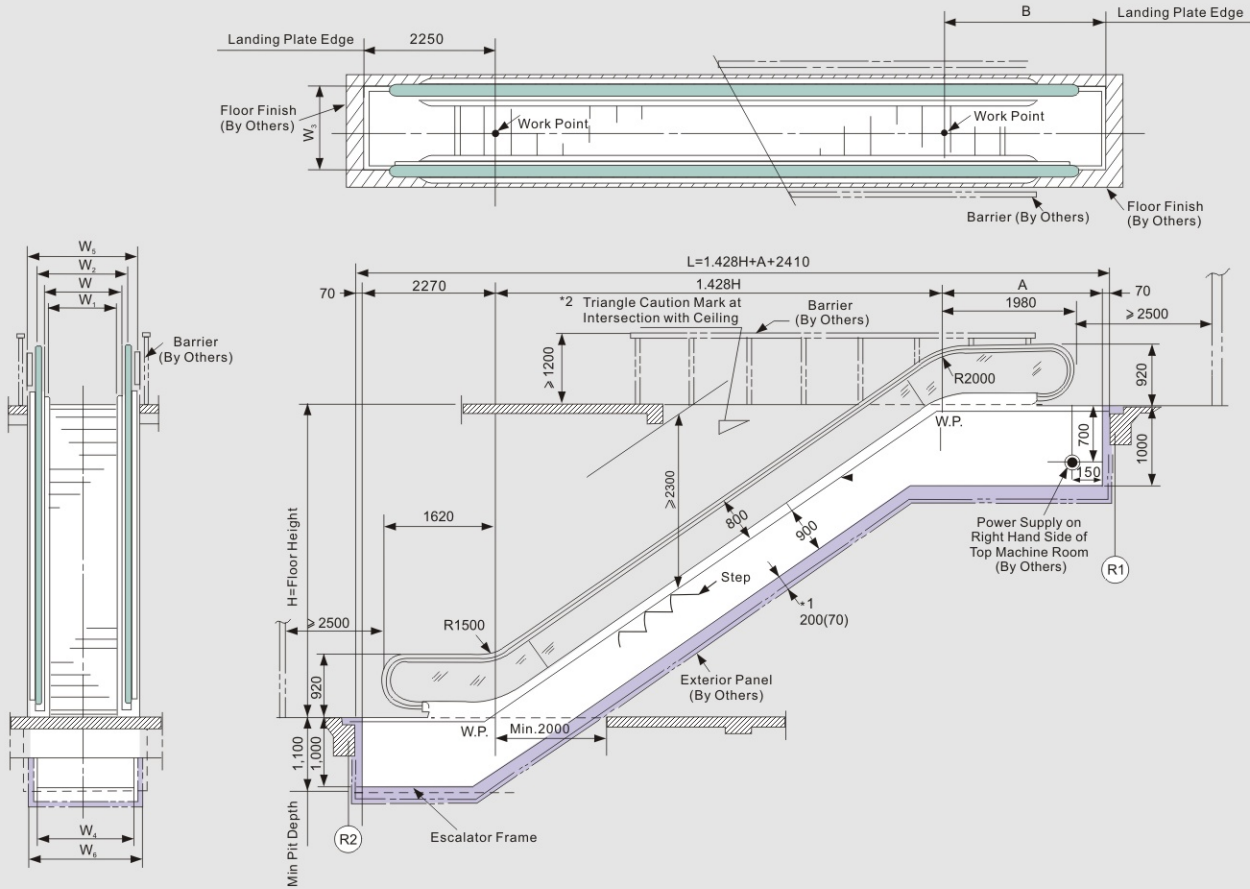
- ❶ Demarcation Line❷ Inner Deck Cover❸ Step❹ Interior panel
- ❺ Handrail❻ Handrail Frame❼ Skirt Guard❽ Outer Deck Cover
- ❾ Comb❿ Comb Plate⓫ Landing plate



Description	Model		SX-EN	SX-N	SX-NL	SX-P
Balustrade	Standard	Interior Panel	Transparent Tempered Glass	Transparent Tempered Glass	Transparent Tempered Glass	Stainless Steel Hairline Finish
		Handrail Light	/	/	LEDs	/
		Handrail Frame	/	Stainless Steel Hairline Finish	Stainless Steel Hairline Finish	Stainless Steel Hairline Finish
		Handrail	Synthetic Rubber (Black)			
		Skirt Guard	Raw Stainless Steel			
		Inner /Outer Deck Cover	Stainless Steel Hairline Finish			
		Dress Guard	Safety Brush			
	Optional	Annular Lamp	/	/	/	Circular Lighting
		Foot Light	LEDs			
		Skirt Guard Light	LEDs			
Motor	Standard		Three-phase AC Induction Motor			
Floor	Standard	Comb	Synthetic Resin (Fluorescent Yellow)			
		Comb Plate	Stainless Steel			
		Landing Plate	Stainless Steel			
	Optional	Comb Lighting	LEDs			
Step	Standard	Tread Board/ Washboard	Stainless Steel Plate			
		Demarcation Line	Fluorescent Yellow Safety Demarcation (Synthetic Resin) Around Four Edges			
	Optional	Demarcation Lighting	Under-step Lighting			

Escalator Dimensions

For 35° Inclination Escalators with Height H≤6000 mm



External Dimensions (Width) (mm)

	Type 1200	Type 1000
W (Balustrade)	1200	1000
W ₁ (Step)	1004	802
W ₂ (Handrail)	1210	1010
W ₃ (Landing Plate)	1350	1150
W ₄ (Truss)	1510	1310
W ₅ (Overall)	1550	1350
W ₆ (Pit , min.)	1590	1390

Reaction Load:

	Type 1200	Type 1000
Floor Height H (mm)	H≤6000	H≤6000
R1 (N)	8.5H+37300	7.4H+33400
R2 (N)	8.5H+30400	7.4H+27400

External Dimensions (Length) (mm)

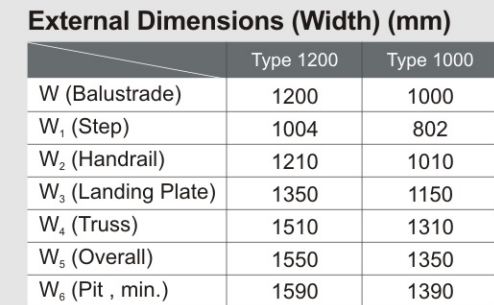
Model	A (mm)		B (mm)	
	Standard	EN115:2008	Standard	EN115:2008
Type 1200	2830	2830	2810	2810
Type 1000	2830	2930	2810	2910

Motor Capacity

Model	Floor Height H (mm)	Motor Capacity (kW)
Type 1200	H≤4500	5.5
	4500<H≤6000	7.5
Type 1000	H≤5500	5.5
	5500<H≤6000	7.5

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 distance between the centerline of the handrail and any obstacle of the building or the escalator is less than 500 mm, there shall be a triangle caution mark installed at the intersection.

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External Dimensions (Length) (mm)					
Model	Floor Height H (mm)	A (mm)		B (mm)	
		Standard	EN115:2008	Standard	EN115:2008
Type 1200	H≤6000	2740	2740	2720	2720
	6000<H≤9500	3150	3150	3130	3130
Type 1000	H≤6000	2740	2840	2720	2820
	6000<H≤9500	3150	3250	3130	3230

No. of Flat Steps	Type	Floor Height H (mm)	Number of Supporting Points	R1 (N)	R2 (N)	R3 (N)	R4 (N)
2	Type1200	2300 < H < 6000	2	8.7H+42000	8.7H+35000	————	————
	Type1000	2300 < H < 6000	2	7.6H+42000	7.6H+35000	————	————
3	Type1200	6000 < H < 9500	3	5.2K+13000	5.2N+5000	5.2(K+N)+5000	————
			4	5.2K+13000	5.2M+5000	5.2(K+J)+5000	5.2(M+J)+2000
	Type1000	6000 < H < 9500	3	4.6K+13000	4.6N+5000	4.6(K+N)+5000	————
			4	4.6K+13000	4.6M+5000	4.6(K+J)+5000	4.6(M+J)+2000

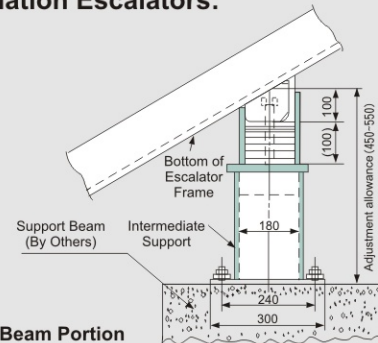
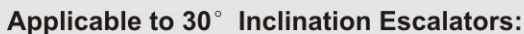
Model	Floor Height H (mm)	Motor Capacity (kW)
Type1200	$H \leq 4500$	5.5
	$4500 < H \leq 6000$	7.5
	$6000 < H \leq 9500$	11
Type1000	$H \leq 5500$	5.5
	$5500 < H \leq 7500$	7.5
	$7500 < H \leq 9500$	11

Remarks:

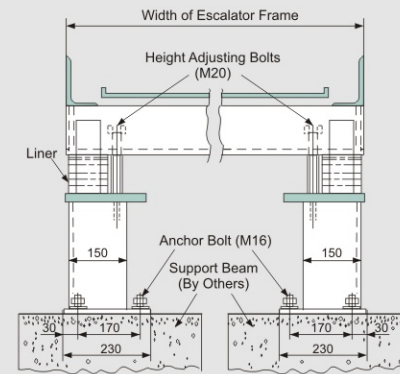
- *1 If there is no bottom light or piping to be installed in between the truss and the exterior panel this dimension shall be 70 mm.
- *2 When the height dimension of the intermediate support exceeds 450 mm, the Customer shall supply the support beam. If the construction layout requires that there shall be no intermediate support, please contact Hitachi for specific requirements.
- *3 The dimensions M, N, J, K shall not be bigger than 12000 mm.
- *4 When the distance between the centerline of the handrail and any obstacle of the building or the escalator is less than 500 mm, there shall be a triangle caution mark installed at the intersection.
- *5 When the floor height exceeds 9500 mm or there is any special requirement, please contact Hitachi.

Design and Specifications

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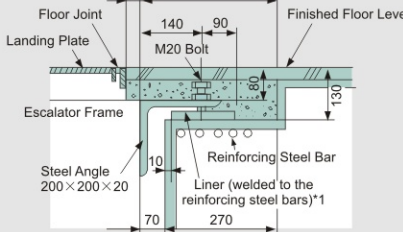


Intermediate Frame Supporting Beam Portion



Technical drawing of the upper holder assembly. The main view shows a cross-section of the assembly. Key dimensions include a total height of 340, a top section height of 140, and a central section height of 70. A horizontal dimension of 140 is shown for the recessed part. Components labeled include 'Liner #1', 'M20 Bolt', 'Lower Holder', and 'Upper Holder'. A circular inset provides a detailed view of the 'Upper Holder' and 'Top Support Plate' interface, showing a 20mm dimension. Text at the bottom right specifies 'Recess Dimension of the Building Structure' with values: 'Type 1200: 495', 'Type 1000: 395', and 'Type 1200: 1590 / Type 1000: 1390 (Opening Dimension)'.

When Supporting Beams are made of Concrete

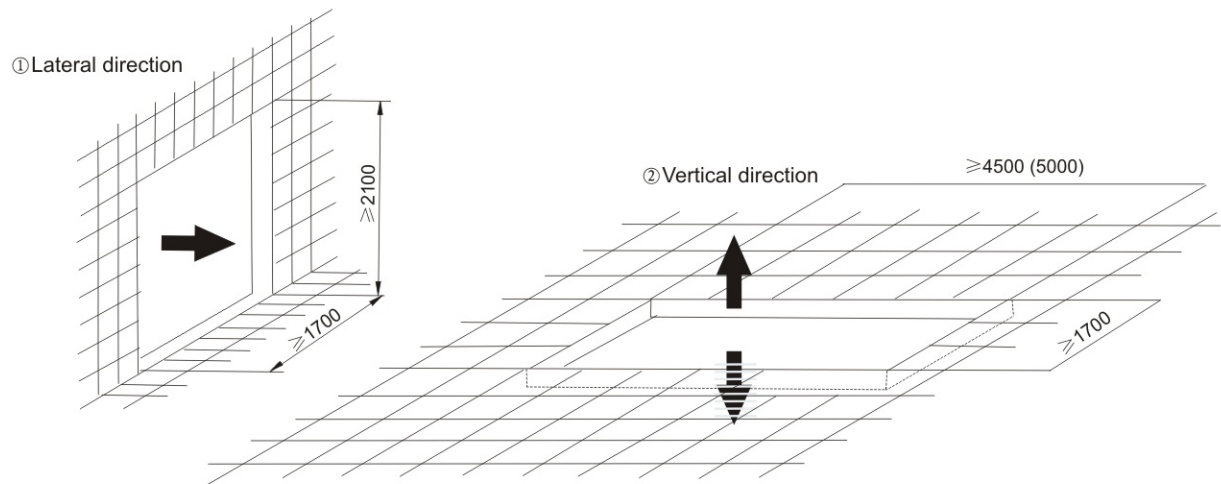


When Supporting Beams are made of Steel Skeleton Construction

Remarks:
*1 Dimensions of Scaleboard Type 1200 :1590 (L) x 150 (w) x 20 (T) / Type 1000 :1390 (L) x 150 (W) x 20 (T). It is up to the customer to embed the scaleboard.

Escalator Dimensions and Weight Data for Installation

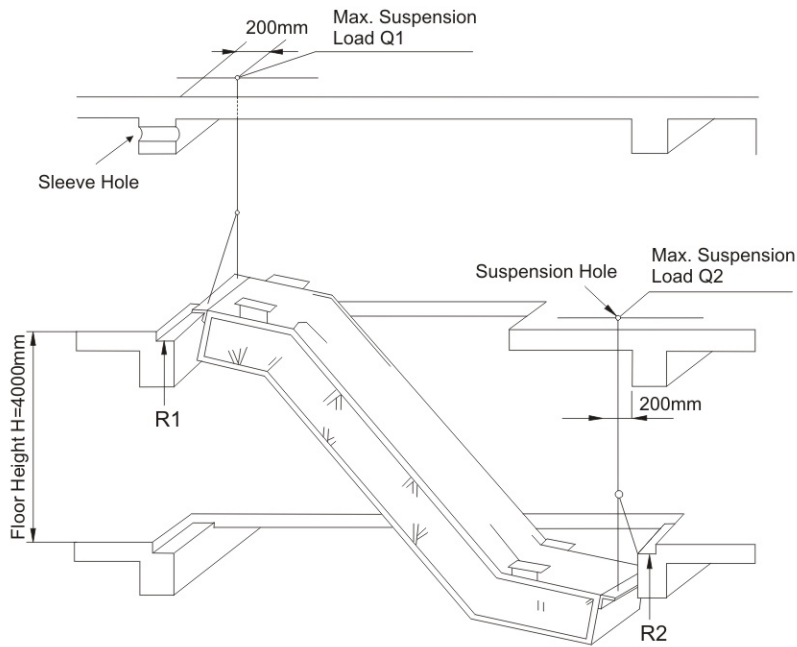
(1) Structure Opening for Shifting of Escalators



Note: The opening may vary for escalators not of standard truss dimension.

(2) Location of Suspension Hole and Load for Escalators

When moving the escalator into place, construction must include a suspension hole in the upper floor and a sleeve hole in suspension beam, as shown in the diagram.



Upper Suspension Load		
Type	Load R1(N)	Max. Suspension Load Q1 (N)
1200	76800	70000
1000	72400	

Lower Suspension Load		
Type	Load R2(N)	Max. Suspension Load Q2 (N)
1200	69800	50000
1000	65400	

Note: The above loads are for escalator of floor height of 4,000mm, 30° .

Works Done by Others For Escalators

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 escalator into place and performing recovery work
4.	Lowest floor and escalator 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 escalator after completion of escalator installation
6.	Installation & finishing works to barrier and walls around the escalator
7.	External panels on escalator frame (truss)
8.	Installation of triangular caution mark in places where the escalator and building ceiling or one escalator and another intersects
9.	If the space between escalators is a stairwell, installation of intermediate down walls, ceilings, handrails, and advance prevention partitions
10.	Joint work in places where the escalator and the building's ceiling border
11.	Installation of fall protection nets, etc, if the space between the escalator and the building's floor is stairwell or the space between one escalator and another is a stairwell
12.	Preparation of an entrance to carry in the escalator and perform recovery work if the escalator is to be installed in an existing building
13.	Protection work around the escalator if the escalator is to be installed in an existing building
14.	Opening of a hole in the wall if the operation panel of the escalator 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 escalator
16.	Power supply for inspection and maintenance (including bottom lighting): lead-in up to the upper control board of the escalator
17.	Grounding wire: lead-in up to the upper power receiving panel of the escalator
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 escalator
19.	Piping and wiring work if the escalator's operation panel is separately installed (built into the wall, etc)
20.	Selector switch and its installation for escalator bottom lighting
21.	Installation of emergency lighting
22.	Installation of sprinklers, broadcasting speakers, guide lights, etc
23.	The intensity of illumination at the entrance and exit of escalator shall be at least 50 lux and 15 lux respectively