



SH-C-2009-4
Escalators & Moving Walks
April 2009

HYUNDAI

Escalators and Moving Walks



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We reserve the right to change designs and specifications
for the product development without prior notice.

www.hyundaelevator.com.cn



HYUNDAI ESCALATORS

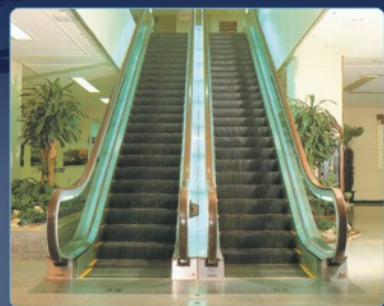
Hyundai escalators are an outstanding class of people moving systems. They offer a streamlined touch of styling and proficiency while addressing the very latest in safety concerns. Their compact design allows them to be placed in minimum sized wellways and that provides you with the flexibility you need to make the most efficient use of your valuable building space.



Dongyang Dept. Store, Taejon, Korea



Lotte Dept. Store, Seoul, Korea



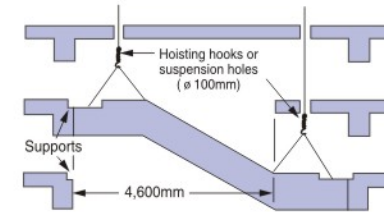
Asan Medical Centre, Seoul, Korea

WORKS TO BE DONE BY OTHER CONTRACTORS

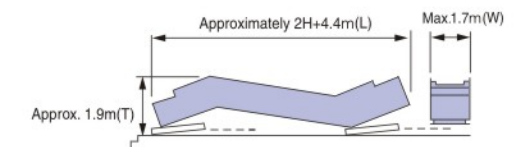
Building Work

1. Necessary properly framed openings in the floors. Necessary supports for the truss per the manufacturer's drawings and information the temporary baffles and barricades. Necessary enclosures, wellway railings, soffit guards, safety nets and other facilities as required. Coordination with the escalator contractor for the location, and installation of the steel member required for truss attachment prior to the pouring of the concrete supports.
2. Covering for the exterior of the escalator from the edges of the decks including covering for the truss and soffit. The materials used shall be fire resistant as required by the applying code and shall weigh not more than 25kgs/m² (5 lbs/ft²) for world Class. Recommended materials are 1.5mm thick hairlined/mirror stainless steel 1.6mm thick laminated/painted steel sheet or similar finish materials.
3. Floor openings for escalators shall be protected against the passage of flame, heat, and/or smoke in accordance with the provisions of the building code.
4. Arrangement for proper ventilation of the machine compartment and controller space.
5. Finished flooring and its base over the escalator contractor's floor support.
6. Provision and maintenance of temporary enclosures or other protection from open wellways during the time the escalator is being installed.
7. Painting and finishing of all material other than that described in this specification.
8. Any governmentally required safety provisions not directly involved in the escalator installation.
9. Soffit guards at the intersecting angle of the outside deck and ceiling.
10. Transparent barriers between adjacent parallel escalators and on the outboard side of single escalators.

Openings and Suspension Holes For Installation (By Others)



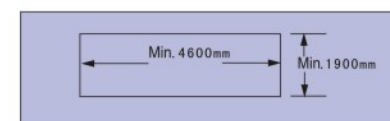
Floor Openings-Side View



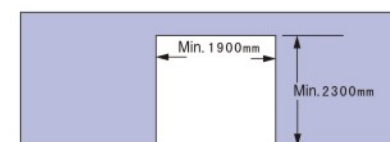
Consult Hyundai for access required when escalator is shipped in two sections.

Building Safety Facilities (By Others)

To ensure passengers' safety, full safety facilities around the escalator must be constructed by other contractors.



Floor Opening-Top View



Wall Opening-Side View

Fire Shutters

Soffit Guard

Guide board

Spring Cooler

Safety Railing & Fence



Electrical Work

1. Permanent electric service as specified to the controller in the machine compartment, and wiring for lighting.
2. Temporary power as required for construction: testing and adjusting of the same characteristics as the permanent power supply.
3. Provide a light and single phase 50 or 60 cycle lighting circuit run to combination receptacle and convenience outlets to be located at the top and bottom of the escalator.
4. Any electric circuits and outlets for special use as required.
5. If escalator is isolated from building structure provide a grounding electrode to the escalator truss.
6. Suitable connections from the power mains to each controller, including necessary circuit breakers and fused mainline disconnect switches.
7. Provide the wiring from the fire shutter sensing switch to the controller.
8. Provide emergency lights and other interior illuminations as required.

World Class

Electric Power Requirements(By Others)

Motor(KW)	Power supply Capacity (KVA)	Power Supply Voltage (AC-3Phase)	N.F.B Rated Current (A)	Power Feeder(mm ²) (from power room to escalator controller)					
				20M	40M	60M	80M	100M	120M
5.5	12	I	50	8	14	22	30	38	38
		II	30	5.5	5.5	8	14	14	14
		III	30	5.5	5.5	5.5	8	8	14
7.5	14	I	60	8	22	30	38	50	50
		II	40	5.5	5.5	8	14	14	22
		III	30	5.5	5.5	5.5	8	14	14
11	19	I	75	14	22	30	38	50	60
		II	50	5.5	8	14	22	22	22
		III	40	5.5	5.5	8	14	14	22
15	27	I	125	22	38	50	80	80	100
		II	75	5.5	14	22	22	30	38
		III	60	5.5	8	14	22	22	22

Lighting Power

Balustrade Type	Vertical Rise(m)	Power Supply Capacity(KVA)	Power Supply Voltage(AC-1phase)	N.F.B Rated Current	Power Feeder(mm ²) (from power room to Escalator Controller) Span of Length(m)					
					20	40	60	80	100	120
With Handrail Lighting	1.83 4.27	1.4	100-110	30	5.5	8	14			
	4.28 7.6	2		40	5.5	8	14	22		
	1.83 4.27	1.4	200-265	20	3.5		5.5	8		
	4.28 7.6	2		20	3.5		5.5	8		
Without Handrail Lighting	-	1.2	100-110	20	2	3.5	5.5	8		
			200-265		2	3.5	5.5	8		

I	3Φ, 340V, 50Hz	3Φ, 220V, 60Hz
II	3Φ, 380V, 50Hz	3Φ, 380V, 60Hz
III	3Φ, 415V, 50Hz	3Φ, 460V, 60Hz

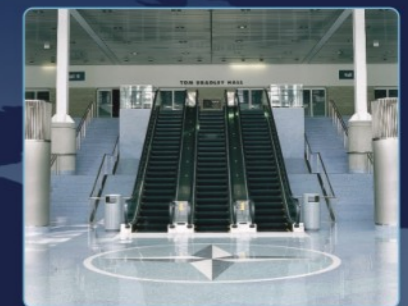
- Notes**
1. The lighting power shall be supplied separately from the main power.
 2. The power feeder sizes are based on using copper conductors and metallic conduit.
 3. The optional combilights can be provided with the given lighting power.
 4. For the application with other voltages consult with Hyundai for the engineering data.
 5. Consult Hyundai when rises over 7600mm.



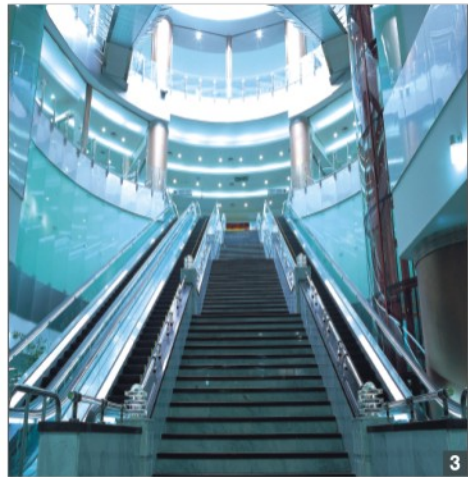
Hakyoul Subway Station, Seoul, Korea



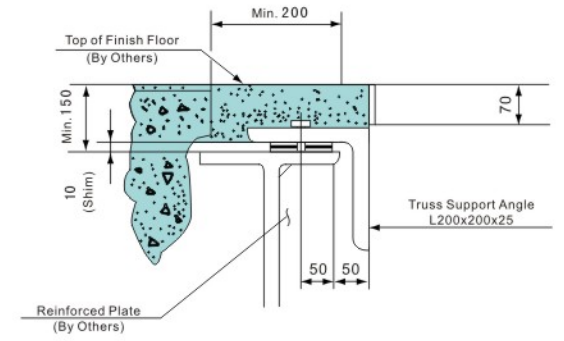
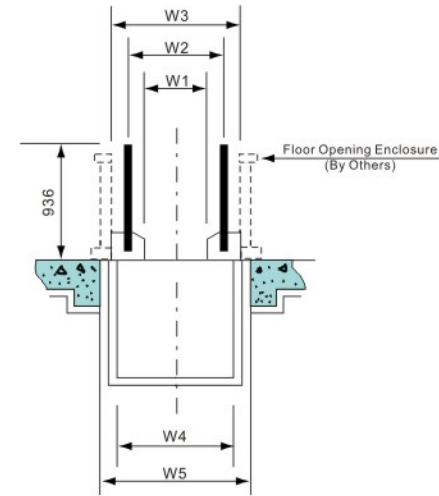
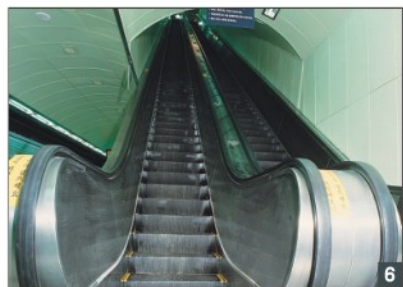
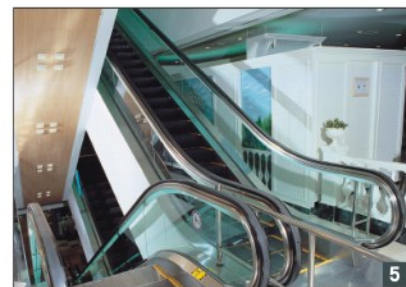
Hotel Hyundai, Kyungju, Korea



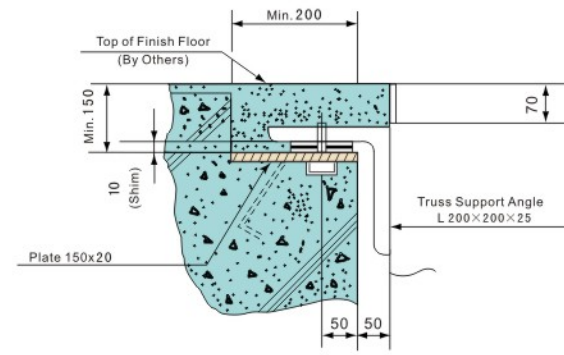
Convention Center, L.A., USA



1. Harrah's Casino, Vicksburg, USA
2. Thamrin Plaza, Medan, Indonesia
3. Noksapyong Subway Station, Seoul, Korea
4. Hilton Hotel, Izmil, Turkey
5. Hyundai Dept. Store, Pusan, Korea
6. Kkzchisan Subway Station, Seoul, Korea
7. John F. (TWA) Airport, New York, USA



Typical Steel Support



Typical Concrete Support

Section Dimensions

Unit: mm

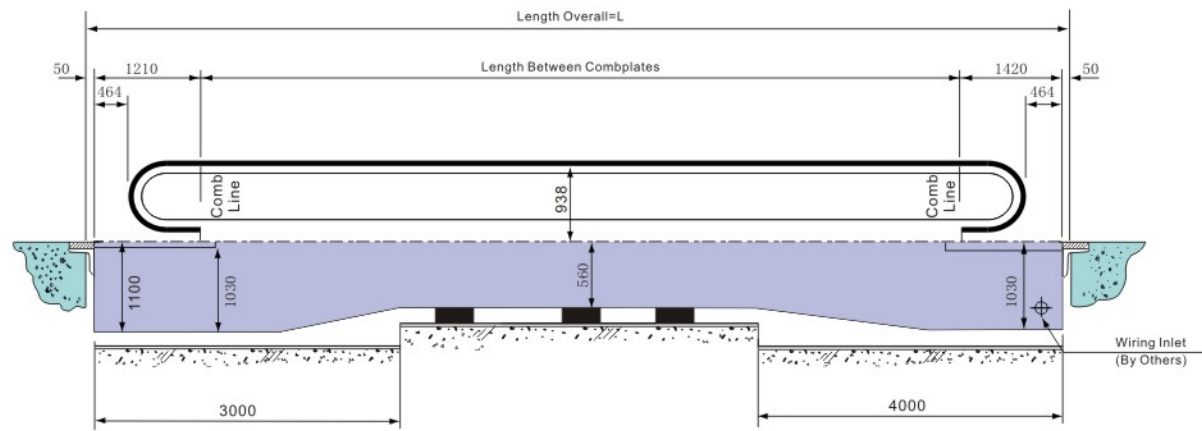
Type	W1000	W1200
W1	800	1000
W2	1037	1237
W3	1330	1530
W4	1300	1500
W5	1400	1600

Handrail Color-Guide

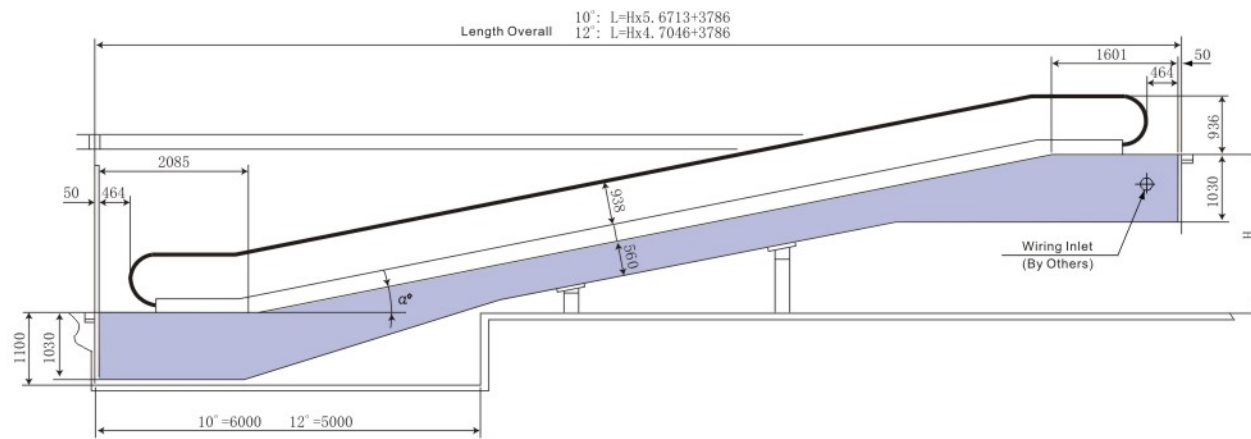


Notes 1. Black is standard. Other colors are optional and available at extra cost.
2. Finished product may vary slightly from these prints.

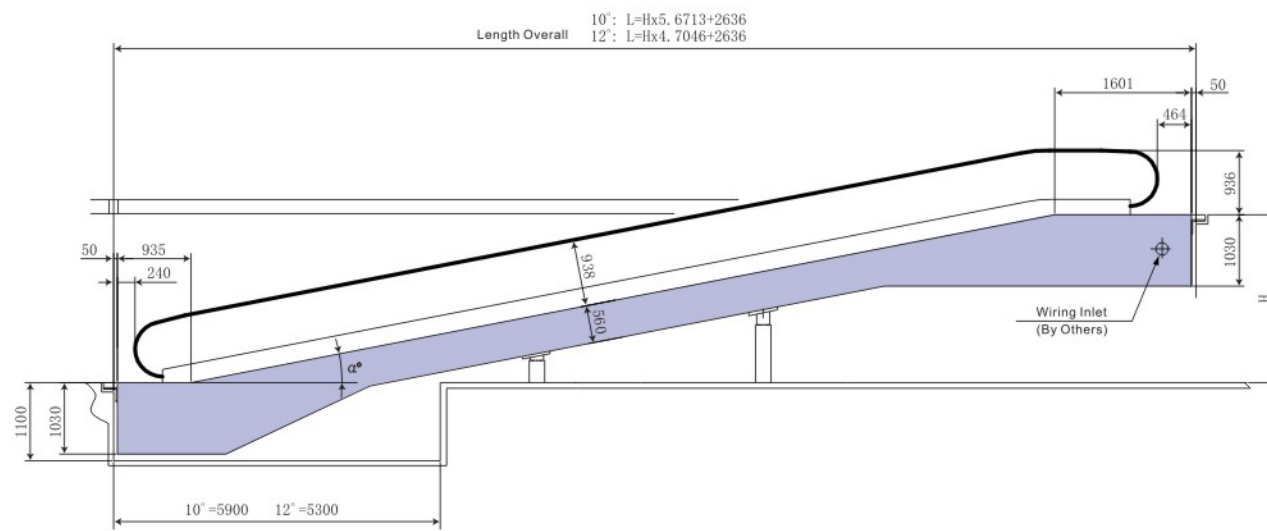
LAYOUT PLAN



Horizontal Type



Inclined Type



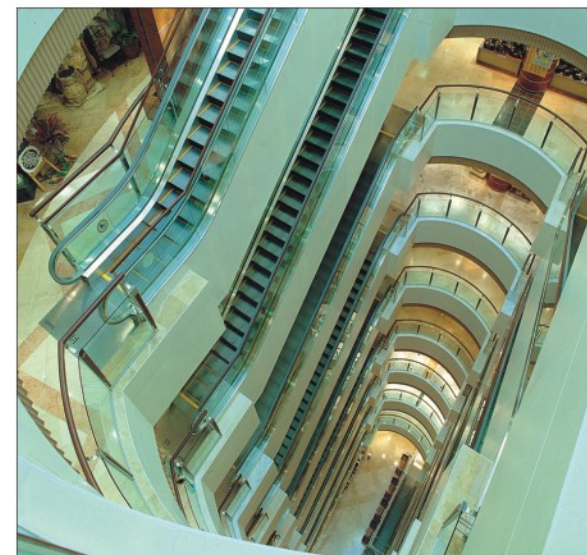
Compact Type

Notes 1. Handrail color reference page 16 our catalogue.
2. Any question about sizes detail and reaction, please contact our company.

WORLD CLASS series is especially suited for applications in low to mid-rise structures like, banks, supermarkets, office buildings, and hotels, anywhere in the world. The World-Class escalator's conventional design is a superb engineering concept, which offers a high standard of performance and a better maintenance service at very competitive price.



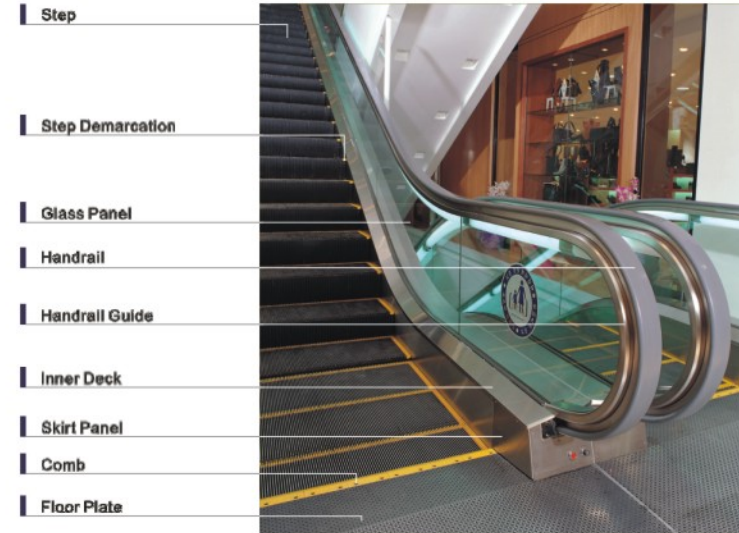
The model 35 incline is designed to be compact and space saving. It is suitable for installation in narrow areas with large flows of pedestrians. These escalators have been extensively used throughout Asia and especially China, where the need to move large groups of people safely and efficiently is significantly pronounced.



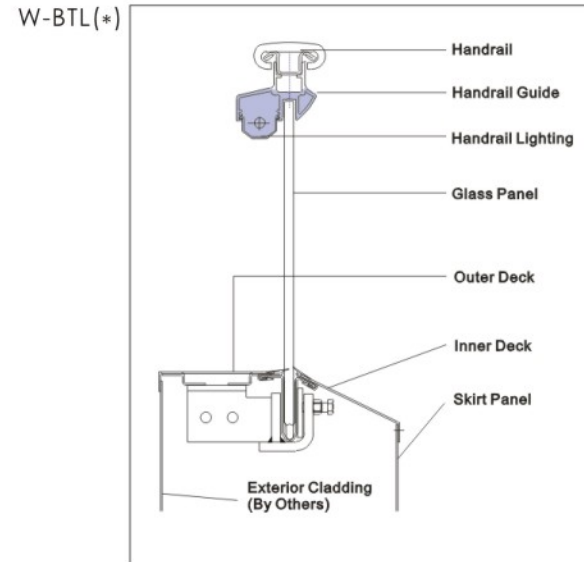
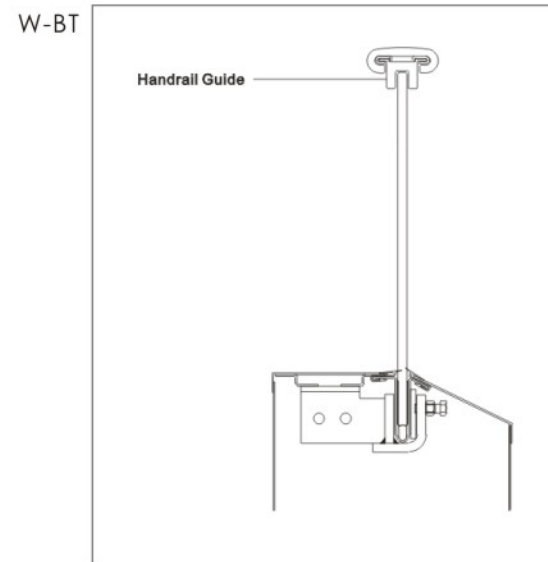
MAIN SPECIFICATIONS & BALUSTRADE DESIGNS & FINISHES

Main Specifications

Type	W800	W1000	W1200
Step Width	612mm	813mm	1014mm
Capacity	4500 Persons/h	6750 Persons/h	9000 Persons/h
Vertical Rise	1750mm-10500mm/30° 1750mm-6000mm/35°		
Speed of Step	30m/min		
Incline	30°, 35°		
Power Source	340V---415V, 3PH 50Hz/60Hz 340V---415V, 3PH 50Hz/60Hz		
Operation	Key Switch Reversible Operation		



Balustrade Designs & Finishes



	W-BT	W-BTL(*)		W-BT	W-BTL(*)
Balustrade			Handrail Guide		
Clear glass	■	■	Hairlined stainless steel	■	■
Green-tinted glass(+)	■	■	Handrail Color		
Handrail Lighting			Choose of 6 colors	■	■
Fluorescent(+)		■	Demarcation		
Deck and Skirt			Yellow molded safety inserts on 3 sides	■	■
Hairlined stainless steel	■	■	Flat Steps		
			2 top & bottom	■	■

Note: Optional features shown by (*) marks are available to extra costs.

MAIN SPECIFICATIONS

The world class moving walks are available in horizontal, inclined design within 12 degree or in combined design and are widely applicable to various buildings and facilities such as supermarkets, subway and railroad stations, sports stadiums, department stores, and so on. They offer a new dimension of convenience, satisfaction and excitement for the customers and passengers.

Main Specifications

Type	1000	1200
Balustrade Width(mm)	994	1197
Pallet Width(mm)	800	1000
Carrying Capacity(Person/h)	7500	9000
Speed of Pallet	30m/min	
Incline	Max. 12°	
Power Source	AC 3PH 208~460V 50/60Hz	
Operation System	Key Switch Reversible Operation	



Finishes

Name of Part	Type	PM-BT	PM-BTL
Glass Panel		Transparent Tempered Glass	
Skirt panel		Hairline Finished Stainless Steel (STS)	
Handrail Guide		Aluminium	
Handrail		To be selected (Basic:Black)	
Handrail Lighting		Nil	Provided (*)
Pallet		Extruded Aluminium	Yellow Line
Exterior Cladding		By others	

Note: Optional features shown by (*) marks are available to extra costs.

HYUNDAI MOVING WALKS

Hyundai Currently manufactures and supplies pallet type world class moving walks offering various advantages as the followings:

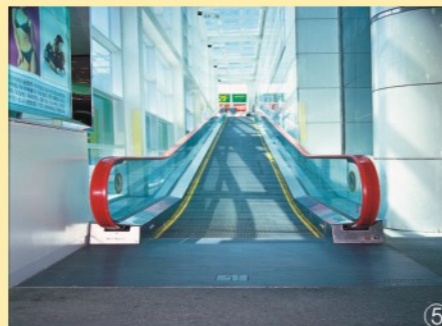
ADVANTAGES

- Convenient and comfortable
- Less energy consumption
- Easy maintenance
- Low maintenance costs
- Easier installation in existing buildings
- Availability of diverse pallet width



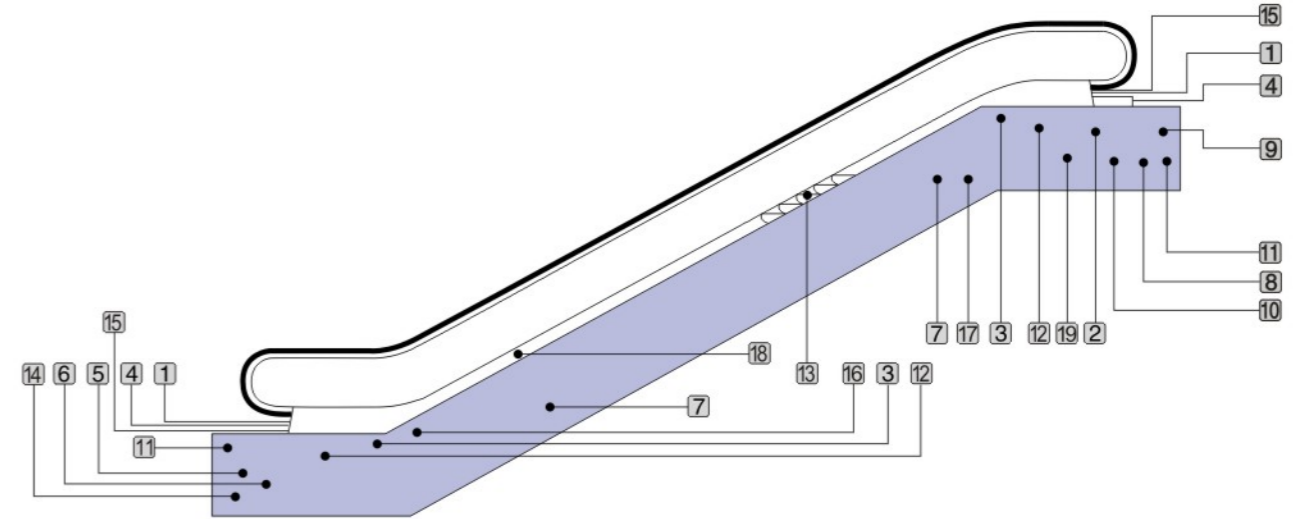
APPLICATIONS

- 1 Zio Place, Pusan, Korea
- 2 Lotte Magnet, Cheongju, Korea
- 3 Incheon International Airport, Incheon, Korea
- 4 Subway line 7, Seoul, Korea
- 5 Shinsewha Mart, Pusan, Korea
- 6 Bundang Express Bus Terminal, Seongnam, Korea



SAFETY FEATURES

Safety Features



Safety Features	World Class	Safety Features	World Class
Handrail Guard Switches	○	Control Station	○
Broken Drive Chain Switch	○	Understep Lighting	○
Skirt Switches	○	Step Demarcation Lines	○
Starting Switch & Emergency Stop Button	○	Floorplate Switches	○
Pit Disconnect Switch	○	Combplate Switches	○
Broken Step Chain (Link) Switches	○	Step Upthrust Switch	○
Broken Step/Step Level Switches	○	Direction Reversal Device	*
Magnetic Brake	○	Handrail Speed-monitoring Device	*
Over/Under Speed Device	○	Auxiliary Brake	*
Over Load Relay	○	Fire Proof Safety Sensor	*

Note Optional features shown by (*) marks are available to extra costs.

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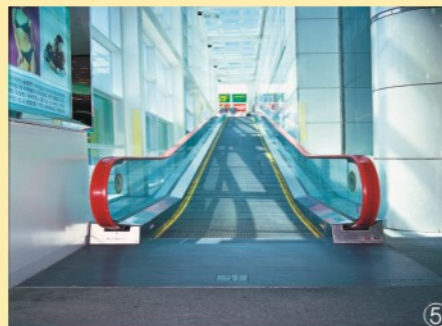
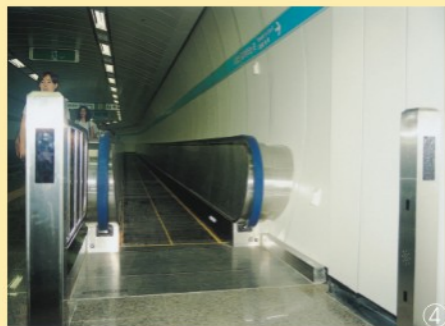
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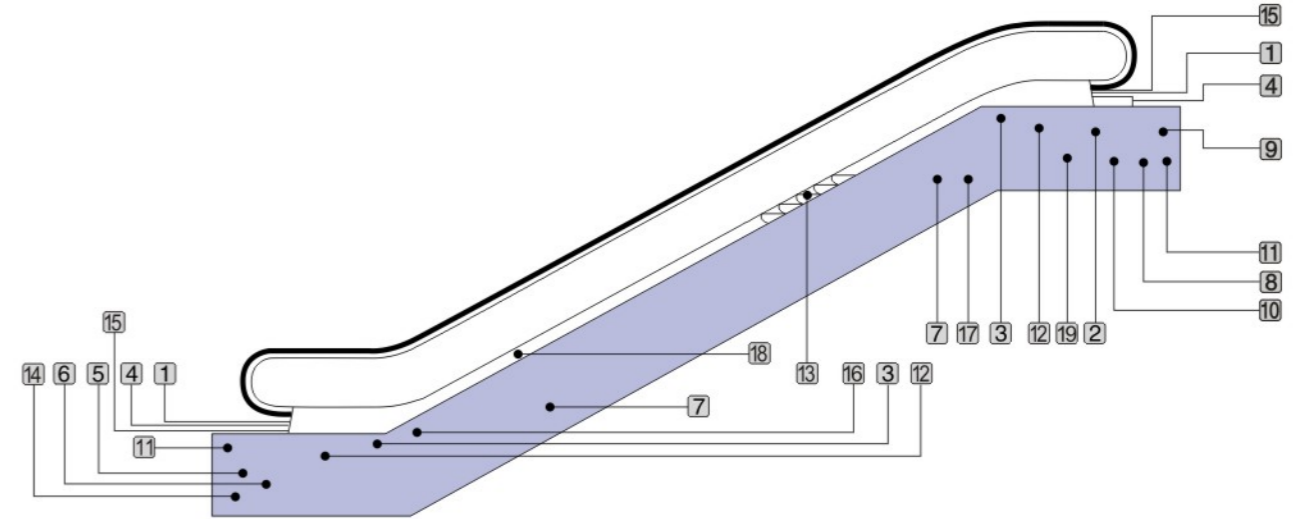
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SAFETY FEATURES

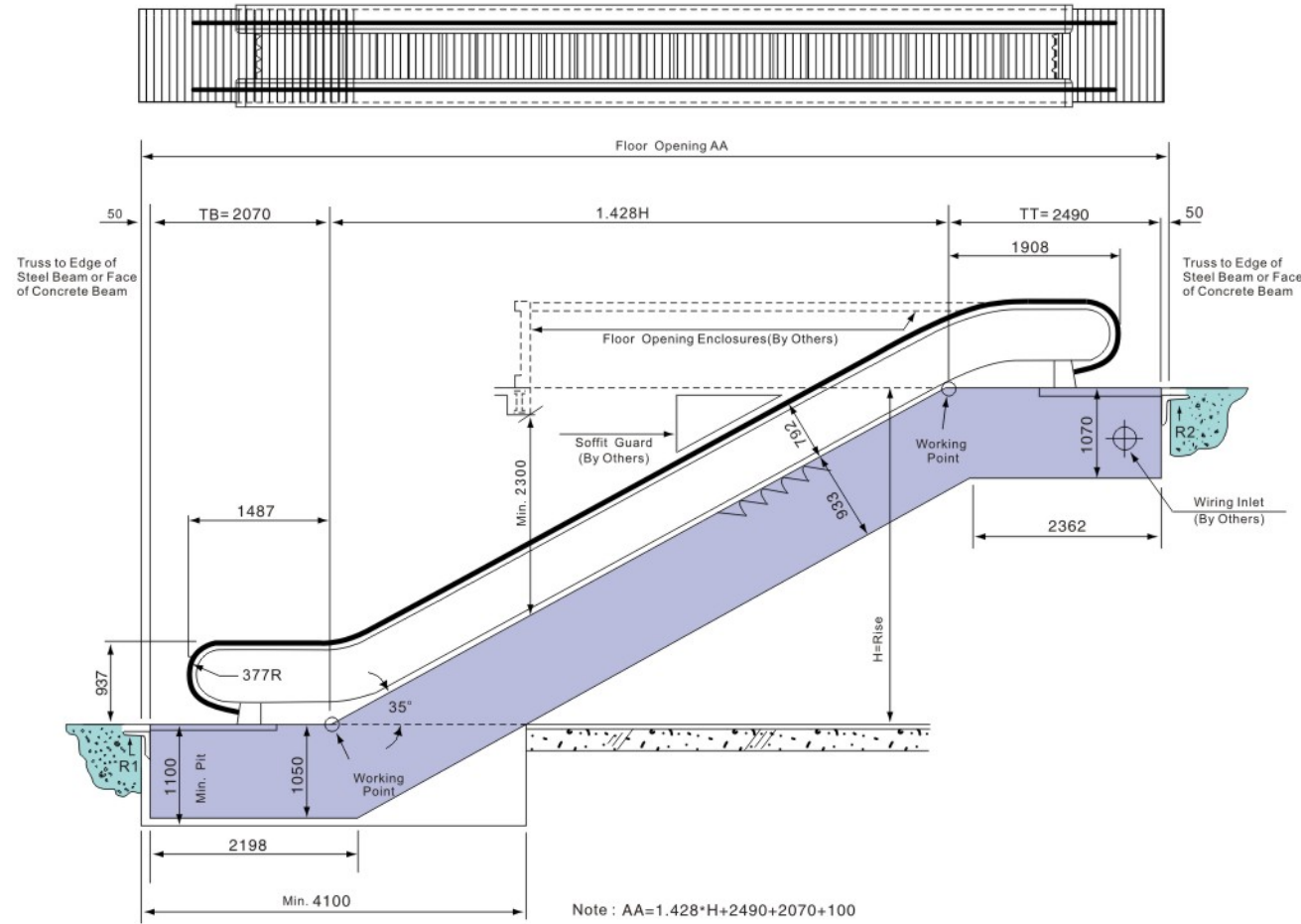
Safety Features



Safety Features	World Class	Safety Features	World Class
1. Handrail Guard Switches	○	11. Control Station	○
2. Broken Drive Chain Switch	○	12. Understep Lighting	○
3. Skirt Switches	○	13. Step Demarcation Lines	○
4. Starting Switch & Emergency Stop Button	○	14. Floorplate Switches	○
5. Pit Disconnect Switch	○	15. Combplate Switches	○
6. Broken Step Chain (Link) Switches	○	16. Step Upthrust Switch	○
7. Broken Step/Step Level Switches	○	17. Direction Reversal Device	*
8. Magnetic Brake	○	18. Handrail Speed-monitoring Device	*
9. Over/Under Speed Device	○	19. Auxillary Brake	*
10. Over Load Relay	○	20. Fire Proof Safety Sensor	*

Note Optional features shown by (*) marks are available to extra costs.

35° LAY OUT PLAN



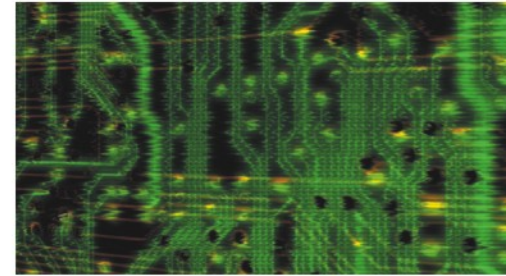
Floor Opening

	Unit: mm
Vertical Rise(H)	1750 to 6000
Top Truss(TT)	2490
Horizontal Length (W.P. to W.P.)	1.428 * H
Bottom Truss(TB)	2070
Floor Opening(AA)	1.428 * H + TT + TB + 100

Notes

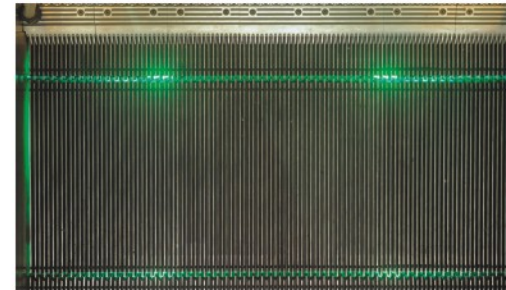
- 1.If floor opening AA exceeds 1.428*H+TT+TB+100, the truss extensions are required at top or bottom. Floor opening AA cannot exceed the maximum floor opening shown. Truss extensions are optional and available at extra cost. The maximum allowable truss extension is 2348mm.
- 2.Maximum rise:6000mm.
- 3.Maximum cladding weight of 25kgs/m² (10 lbs/ft²) over the entire length. No additional factors are included.
- 4.In case of applying EN code, the size of the standing area shall be at least 0.5m long.

Over/Under Speed Device



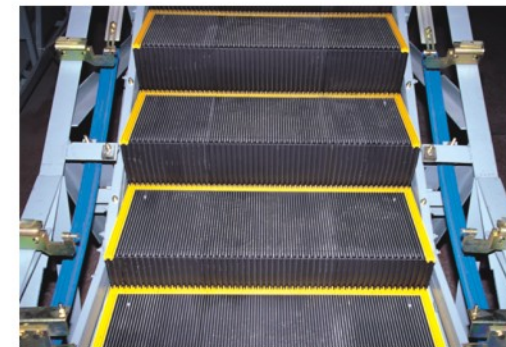
A solid-state overspeed/underspeed control device is incorporated in the escalator. It maintains the speed of the escalator within predetermined limits. Should the escalator slow down or overspeed more than 20% of the rated speed, power will be cut off and the brake will set.

Understep Lighting



Two green or blue fluorescent lights are located at top and bottom ends of the escalator beneath the steps to emit light between steps for passengers safe riding and landing.

Step Demarcation Lines



Molded yellow synthetic resin inserts are provided at 3 sides of each step treadboard for passengers to distinguish the separation between adjacent steps.

Combplate Switches

A switch is provided at the top and bottom of escalator, which stops the escalator if a foreign object is wedged between step and combfingers or if the combplate is lifted.

Step Upthrust Switch



The switch is located on the bottom end of the escalator. This switch is activated by the attempted lifting of a step above its normal position.

Handrail Speed-monitoring Device

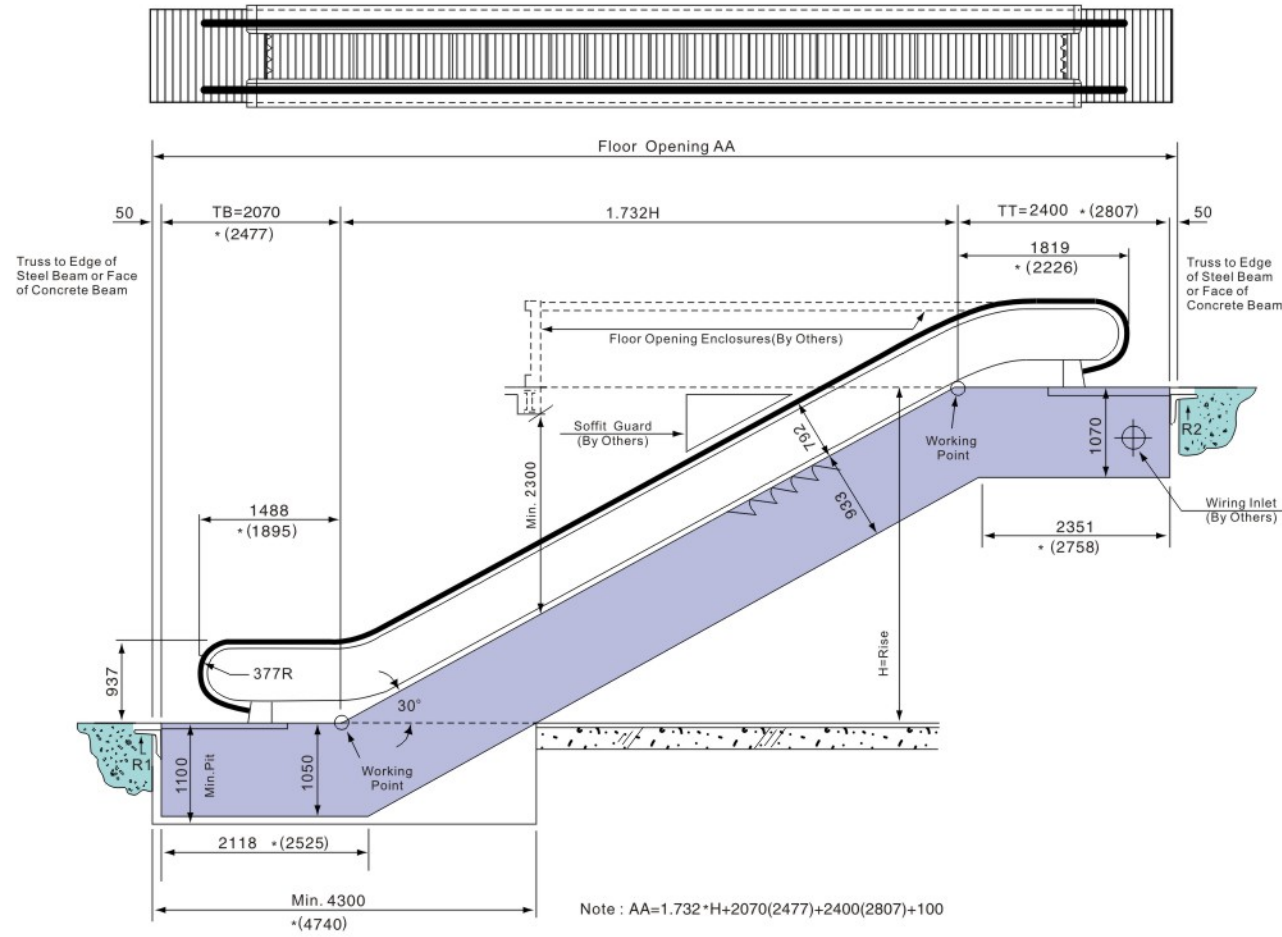
When abnormal handrail speed is sensed or the handrail breaks the device will stop the escalator within a predetermined time.

Hold Handrail Signs (Ridership Signs)



A caution sign is provided at the top and bottom landing of each escalator readily visible to boarding passengers. The signs include the following wording; Caution, Passengers Only, Attend Children, Avoid Sides.

30° LAY OUT PLAN

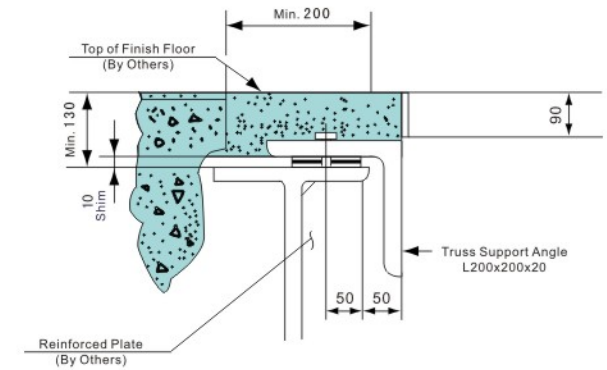
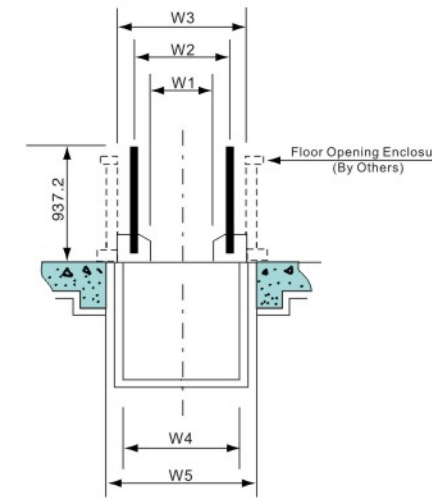


Floor Opening

	Unit:mm	
Vertical Rise(H)	1750 to 6000 (2Flat Steps)	6000 to 10500(3Flat Steps)
Top Truss(TT)	2400(W-BB:2527)	2807(W-BB:2934)
Horizontal Length (W.P.to W.P.)	$1.732 * H$	
Bottom Truss(TB)	2070	2477
Floor Opening(AA)	$1.732 * H+TT+TB+100$	

Notes

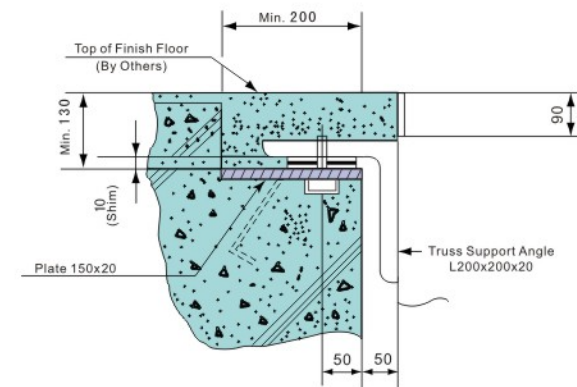
- If floor opening AA exceeds $1.732 * H+TT+TB+100$, the truss extensions are required at top or bottom. Floor opening AA cannot exceed the maximum floor opening shown. Truss extensions are optional and available at extra cost. The maximum allowable truss extension is 2311mm.
- When maximum floor opening exceeds 14962mm or the vertical rise ranges over 6100mm to 10500mm an intermediate support is required. Consult Hyundai for the intermediate support data.
- Maximum rise : 10500mm.
- Maximum cladding weight of 25kgs/m² (10 lbs/ft²) over the entire length. No additional factors are included.
- In case of applying EN code, the size of the standing area shall be at least 0.5ml long.
- In case of VVVF system, top truss extension(300mm add.) should be required for installing inverter device.
- The sizes shown by * () marks are applied to horizontal drive unit & 3 flat steps.



Typical Steel Support

Section Dimensions

Type	W800	W1000	W1200
W1	612	813	1014
W2	855	1056	1257
W3	1150	1350	1550
W4	1100	1300	1500
W5	1250	1450	1650



Typical Concrete Support

Motor Application

Type	Vertical Rise H(mm)			
W800	H ≤ 7600	H ≤ 9000	H ≤ 10500	-
W1000	H ≤ 5000	H ≤ 7600	H ≤ 9000	H ≤ 10500
W1200	H ≤ 4200	H ≤ 6000	H ≤ 7600	H ≤ 10500
Motor(Kw)	5.5	7.5	11	15

Reactions

Vertical Rise H(mm)		Unit :kg															
W800	R1	3600	3725	3850	3975	4100	4225	4350	4475	4600	4725	4850	4975	5100	5225	5300	5475
	R2	4200	4335	4470	4605	4740	4875	5010	5145	5280	5415	5500	5685	5820	5955	6090	6225
W1000	R1	4100	4200	4300	4450	4600	4750	4900	5050	5200	5350	5500	5650	5800	5900	6050	6200
	R2	4700	4850	5000	5150	5300	5450	5600	5750	5900	6050	6200	6350	6500	6650	6800	6950
W1200	R1	4500	4660	4820	4980	5140	5300	5460	5620	5780	5940	6100	6260	6420	6580	6740	6900
	R2	5150	5315	5480	5645	5810	5975	6140	6305	6470	6635	6800	6965	7130	7295	7460	7625

Note: when rise is over 6000mm, consult hyundai for reactions data