

# Escalator and Passenger Conveyor Solutions







#### **Contents**

The KÖHLER Profile	6
KÖHLER Escalator and Passenger Conveyor	9
Comfortable	10
Energy Saving	12
High Efficiency	14
- unction	16
Scheming Guide	20
KÖHLER ULTRA High Glossy Handrail	28

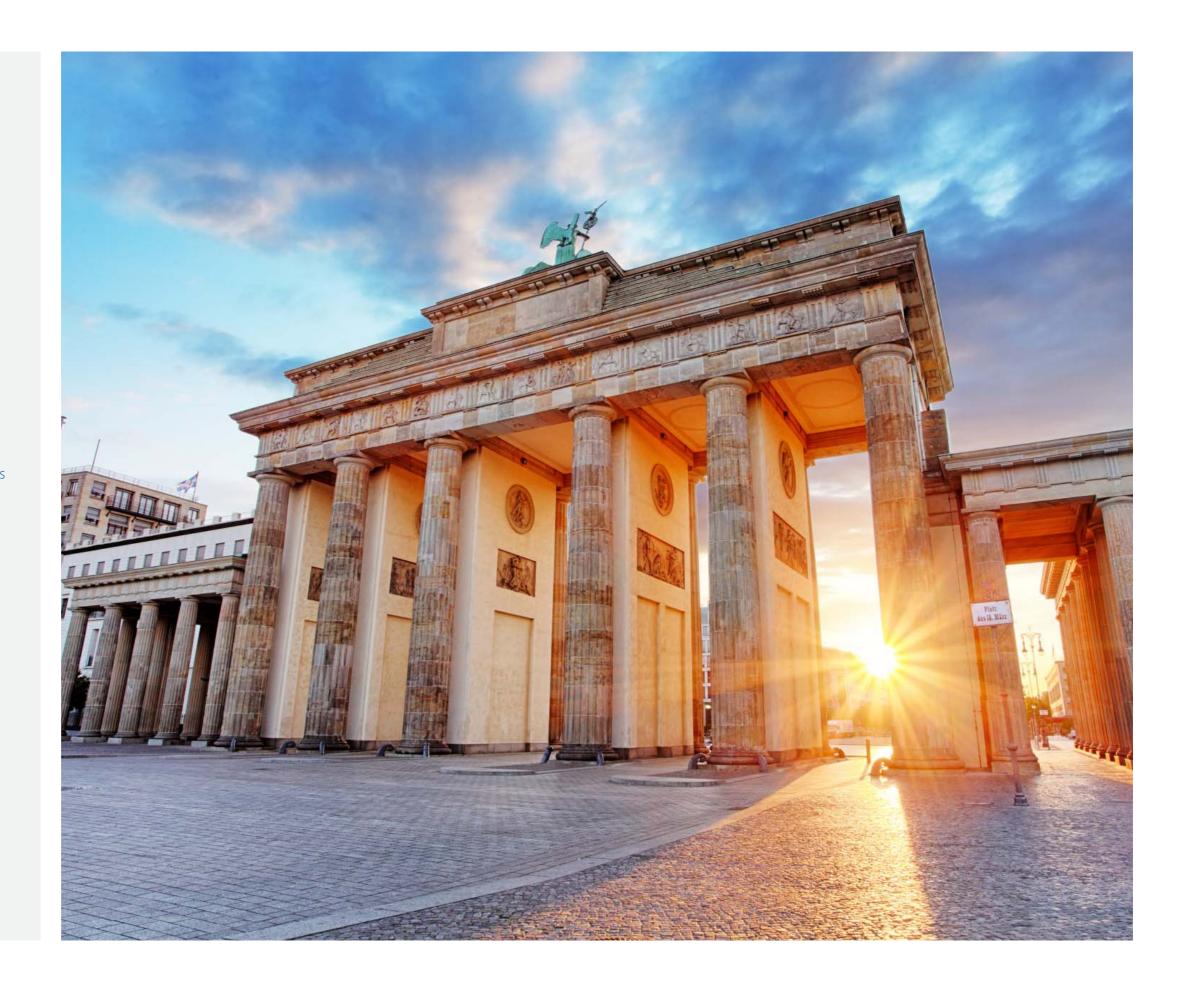
# KÖHLER Profile

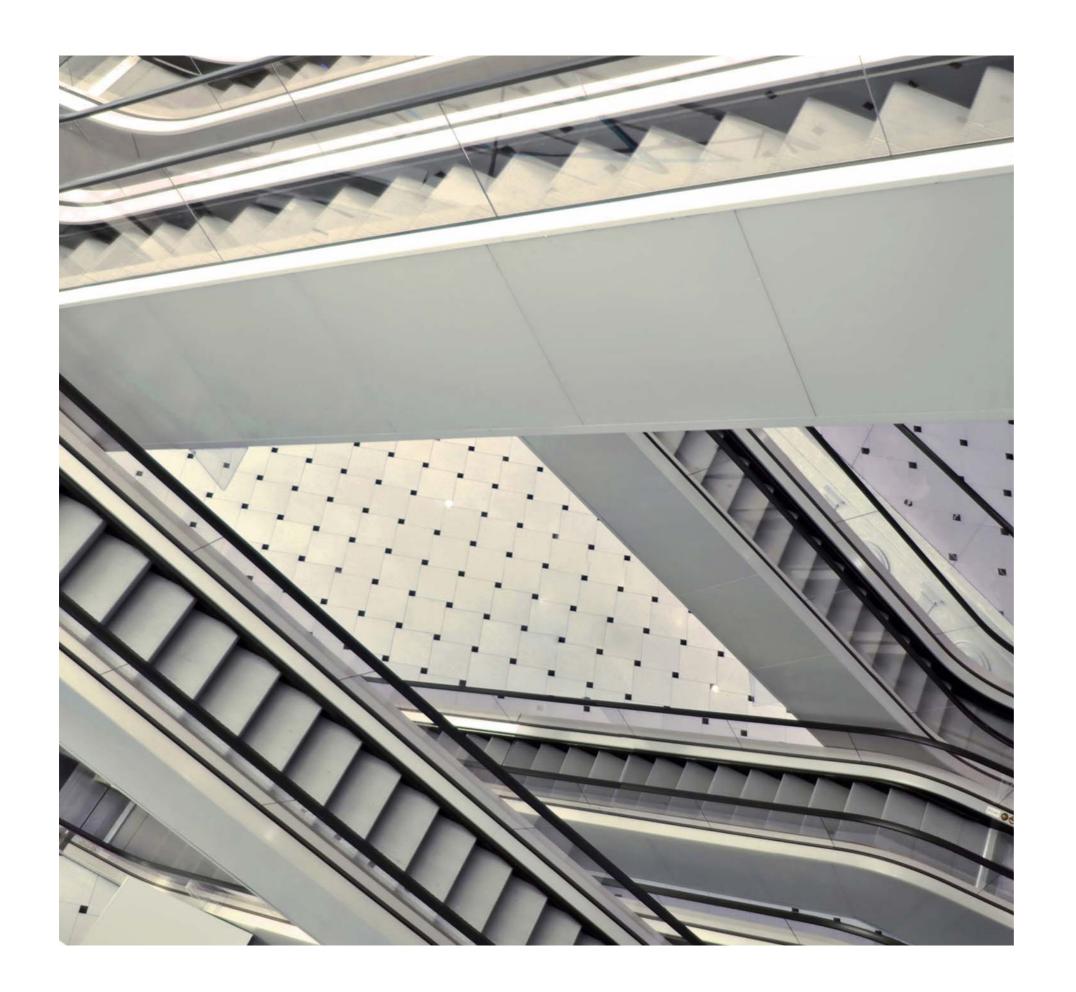
Driven by a market need for customtailored escalator units, KÖHLER escalator solutions provides flexible designs that will fit into a wide range of hoistways — whether for commercial buildings or public transportation usage, KÖHLER provides the optimal solution for any new construction or modernization project. KÖHLER provides you with many design options. Drawing on the unique capabilities of our German design centers, we take full advantage of precise engineering coupled with efficient manufacturing expertise. Proven engineering strength, global sourcing, and field-tested quality, along with our willingness to accept challenging requirements, set us apart from the competition.

groundwork for today's product offerings by combining the global leadership of our diverse operating companies. KÖHLER takes pride in being the leading open architecture provider in the elevator industry. Equipment, installation, and service choices are made by building owners and their representatives. sfaction and the knowledge of a job well

done over decades of service.

Over the past decades, KÖHLER laid the





# KÖHLER Escalator and Passenger Conveyor

KÖHLER provides complete solution for Escalator and Passenger conveyor. we have gathered highest quality and long lasting components for our escalator and passenger conveyor, we provide commercial and public transportation usage Escalator and Passenger conveyor.

#### **Public transportation**

KÖHLER has gathered the most high-tech, top quality and long lasting equipments and components for public transportation faculties that brings highest performance and efficiency all day long (247/). also it is produced with the matching and required IP ratings.

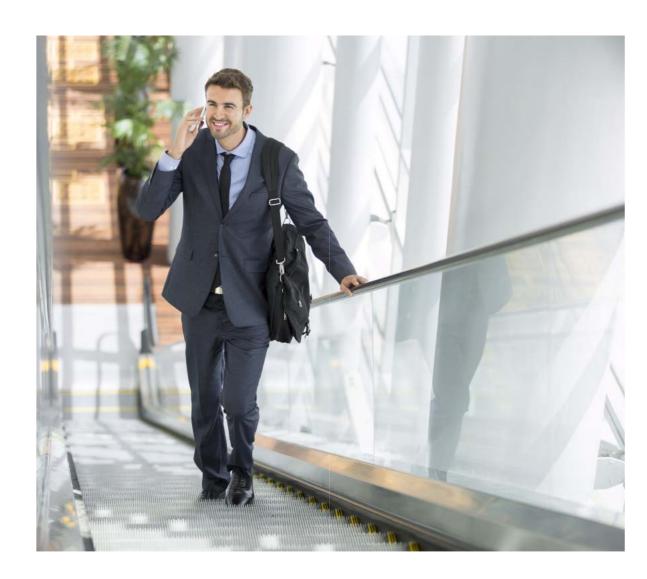
#### Commercial

flexible to interchange in the markets. Therefore, it is convenient for technicians to repair and maintain; Moreover, it significantly reduces repair and maintenance cost.

# Comfortable

# Human Oriented Enabling you to live freely

By integrating the concept of human-oriented design, we put our efforts into manufacturing flawless products in details and design. Through numerous tests and experiments, we have finally reached the peak of safety, performance and stability in our escalators, and our products make you feel very comfortable, thus providing you an enjoyable experience in your daily life.





#### High-performance control system

KÖHLER escalators redefines control concept in the industry. By applying modular designs, our control system is more compact and integrated runs more steadily than any similar system. Outstanding digital processing capacity and operation efficiency improves energy-saving effects of our escalators to the greatest extent.

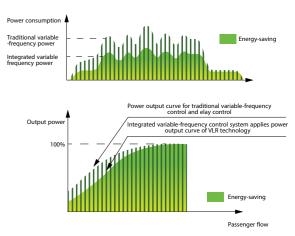
A complete lightning protection design is built in the escalator control system, with CPU+OSP redundant technology applied in its controller, the system reliability is fully guaranteed. The control system completely complies with EMC (electromagnetic compatibility) standard.

# **Energy-saving and energy** regeneration technology

By detecting passenger flow and automatically adjusting the speed curve, KÖHLER escalators can achieve effective energy-saving in the whole process of its operation. By detecting DC busbar voltage of the driver and automatically feeding regenerated energy of the system back to the power grid, KÖHLER escalators greatly improve their energy-saving effects.



Saving energy in the entire traveling process: VLR technology realizes effective energy saving



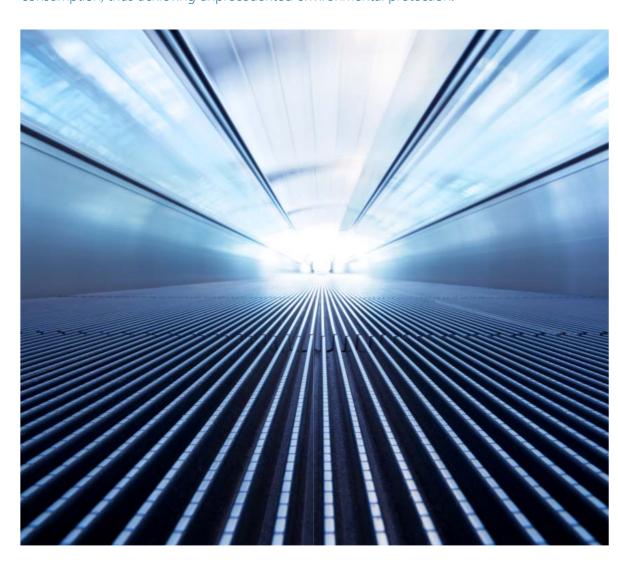
#### Convenient remote monitoring system

The system can be connected with customers monitoring system via RS485 port, in order to carry out real-time monitoring of escalator operation messages, which is very convenient for the escalator maintenance and right approach to demands of modern intelligent building control system for escalators.

# **Energy Saving**

#### Creating new era of energy saving

We always put environmental protection as one of our utmost important Concerns when designing and developing our products. In this regard we implement a new type of control system integrating converter and microcomputer-based control board. In this complex the drive system upgrades driving efficiency of the escalator significantly and guarantees low energy consumption, thus achieving unprecedented environmental protection.



#### Multiple safety protection

Safety devices are provided at each component of the escalator. The control system has powerful device-testing and fault-diagnosis capabilities and improves safety performance of the escalators in a passive yet effective manner.

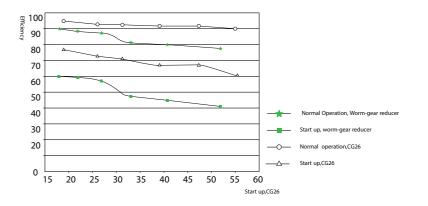
#### Comfortable ride feeling

By applying variable-frequency drive technology specially designed for the escalator and using new generation of AC vector controller-voltage regulator-speed governor technology, the escalators can achieve smooth and stable transition during automatic acceleration and deceleration adjustment and at the same time they travel more stable, resulting in comfortable and smooth ride experience.

#### **High-performance traction machine**

KÖHLER escalator reducer adopts ZC drive and has the features of high torque, small size, low noise, low vibration and steady operation. Its noise level is lower than 57dB and its drive efficiency during normal operation is higher than 88%. The motor used has a variable-frequency drive, which provides stable start-up and applies braking and stopping force in a smooth yet effective manner to escalator. With power consumption of S.S-1SkW,

CG26 worm-gear-helical-gear reducer has the advantages of both worm- gear-worm-drive and helical gear drive. The high-speed end is provided with worm-gear-worm-drive and has the characteristics of low noise, low vibration and high safety coefficient. The low-speed end is provided with helical-gear drive. This configuration guarantees high driving efficiency and energy saving characteristics of the entire traction machine. Driving efficiency of the traction machine is as high as 92% and power range is 1137-kW.



12 KÖHLER 13 KÖHLER 13

# **High Efficiency**

Scientific integrated structure installation and commissioning is easier and more convenient

We believe that functions of an escalator are not necessarily proportional to the operation complexity. Therefore, our escalators are designed to apply an integrated structure, so that the equipments are run more precise and more efficient and, which in turn allows easier and more convenient commissioning.



### Standard configuration and optional configuration of parts

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Parts	Standard Configuration	Optional Configuration
Landing Board	Aluminu	
Step	Aluminum Series	Black Aluminum Series
Handrail Color	Black Red Yello	ow Green Blue
Traction Machine	Gea	red



Thermoplastic urethane handrails provide diverse solutions for all of our custom requirements.

- Smooth tracking ensures longer operational life of all handrail & drive components.
- Easy to clean no harsh solvents required.
- Superior vandalism resistance.
- Recyclable.

#### POLYURETHANE ROLLERS

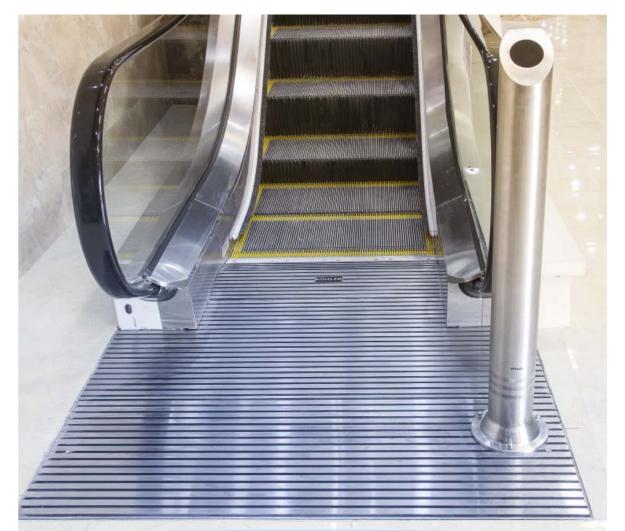
Our rollers are manufactured using high-grade materials and are made of polyurethane tread material to provide optimum balance between performance and durability

#### Advantage of KÖHLER Escalator & Passenger Conveyor

- Advanced Electrical and mechanical technology

- Integrated structure design
  Safety, reliability, energy saving, riding comfort
  Environmental features and variety configuration
- Flexible in matching the appearance of the buildings

Rise (mm)	<b>Escalator:</b> 2500 ~ 27000 <b>Passenger Conveyor:</b> 2500 ~ 12000
Speed m/s	0.5 - 0.75
Inclination Angle	<b>Escalator:</b> 30° - 35° <b>Passenger Conveyor:</b> 0° - 10° - 11° - 12°
Steep Width (mm)	<b>Escalator:</b> 600 - 800 - 1000 <b>Passenger Conveyor:</b> 800 - 1000 - 1200
Installation Position	In door - Out door







# **Scheming Guide**

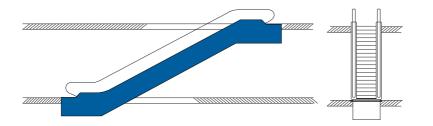
### **Logical Positioning Systematic Layout**

Factors influencing escalator arrangement:
Building structure Installation site and direction of traffic flow
Traffic volume intensity Area of application(commercial sector pubic transport)
The customers special requirements

#### The following arrangements are possible:

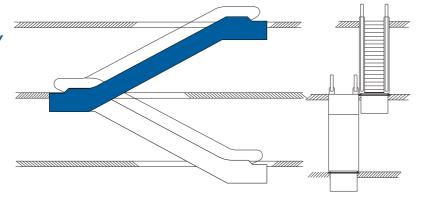
#### Single unit

The single unit is used to link two levels. it is suitable for buildings with passenger traffic flowing mainly in one direction. Flexible adjustment to traffic flow (e.g.,up in the morning and down in the evening) is possible.



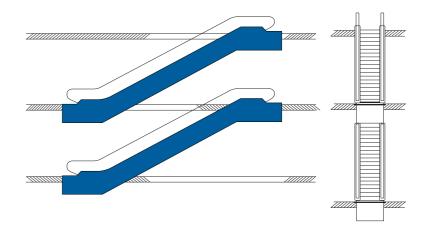
# Continuous arrangement (one-way traffic)

This arrangement is used mainly in smaller department stores to link three sales leves. It requires more space than the interrupted arrangement.



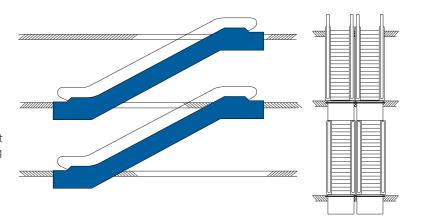
# Interrupted arrangement (one-way traffic)

This arrangement is somewhat inconvenient for users, but advantageous for department store owners, since the short detour to the next unit and the spatial separation between up and down travel is ideal for leading customers past strategically placed advertising displays.



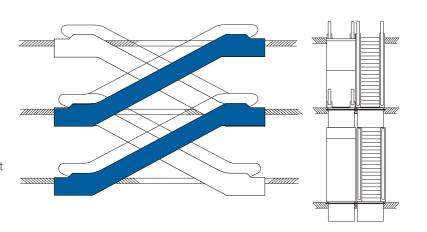
# Parallel,interrupted arrangement (two-way traffic)

This arrangement is used mainly in department stores and pubic transport buildings with a heavy traffic volume. when there are three or more escalators, it should be possible to reverse the traveling direction according to the traffic flow, this arrangement is economical, sine no inner lateral claddings are required.



# Crisscross, continuous arrangement (two-way traffic)

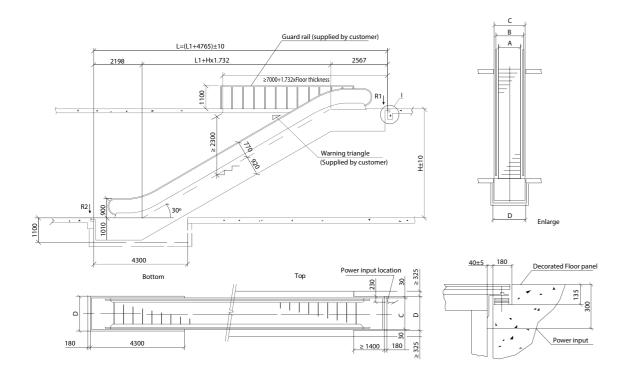
This arrangement is used mainly in major department stores, public buildings and public transport buildings where transport times between several levels should be kept to a minimum.



## **Escalator/Shaft Plan**

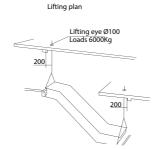
#### Series 1200–30–2

Commercial Escalator



Model			
Basic dimensions	HD-1200-30-60	HD-1200-30-80	HD1200-30-100
A Step Width	600	800	1000
B Central distance of handrail	838	1038	1238
C Exterior width of the passenger conveyor	1200	1400	1600
D Min, width of pit	1260	1460	1660

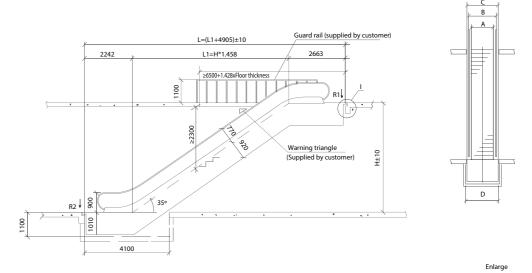
D Mill, Width of pit			1200	,	1400	10	000
Rated spee		Angle o	f inclinati	on (a=30°)			
	N	let weight	Support	ing load	Motor	Shipping di	imensions
Model	Rise (mm)		peri	untit	power		
		(kg)	R1 (kN)	R2 (kN)	(kW)	1	h
	3000	5700	46	41	5.5	10900	2750
	3500	6000	49	44	5.5	11800	2780
HD-1200-30-60	4000	6400	52	47	5.5	12800	2810
	4500	6800	56	50	5.5	13870	2830
(4500p/h)	5000	7100	59	53	5.5	14860	2840
	5500	7500	62	56	5.5	15860	2860
	6000	7900	65	59	5.5	16850	2870
	3000	5900	52	47	5.5	10900	2750
	3500	6300	56	50	5.5	11800	2780
HD-1200-30-80	4000	6700	62	54	5.5	12800	2810
	4500	7100	64	57	5.5	13870	2830
(6750p/h)	5000	7400	68	60	7.5	14860	2840
	5500	8200	74	66	7.5	15860	2860
	6000	8600	78	69	11	16850	2870
	3000	6300	59	53	5.5	10900	2750
	3500	6700	64	57	5.5	11800	2780
HD-1200-30-100	4000	7100	68	61	7.5	12800	2810
	4500	7500	73	65	7.5	13870	2830
(9000p/h)	5000	8300	79	71	7.5	14860	2840
	5500	7800	84	75	11	15860	2860
	6000	9200	88	79	11	16850	2870

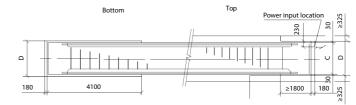


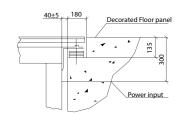
1. When the step width is 600mm, the up horiontal section of the escalator will be increased by 500
2. The maximum designed height of the escalator is 6 meters

### Series 1200–35–2



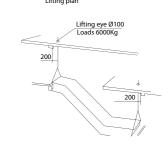






Model			
Basic dimensions	HD-1200-30-60	HD-1200-30-80	HD1200-30-100
A Step Width	600	800	1000
B Central distance of handrail	838	1038	1238
C Exterior width of the passenger conveyor	1200	1400	1600
D Min, width of pit	1260	1460	1660

Rated s	Angle of inclination (a=30°)						
Model	Rise	Net weight		Supporting load peruntit		Shipping d	limensions
Wodel	(mm)	(kg)	R1 (kN)	R2 (kN)	power (kW)	1	h
	3000	5400	43	39	5.5	10180	2850
	3500	5700	46	41	5.5	11030	2890
HD-1200-35-60	4000	6000	49	44	5.5	11890	2920
	4500	6400	52	46	5.5	12750	2940
(4500p/h)	5000	6700	54	49	5.5	13610	2970
	5500	7000	57	51	5.5	14470	2980
	6000	7300	60	54	5.5	15330	3000
	3000	5600	49	44	5.5	10180	2850
	3500	6000	52	47	5.5	11030	2890
HD-1200-35-80	4000	6300	56	50	5.5	11890	2920
(6750p/h)	4500	6600	59	53	5.5	12750	2940
	5000	7000	62	56	7.5	13610	2970
	5500	7300	65	59	7.5	14470	2980
	6000	7500	69	61	11	15330	3000
	3000	6000	56	50	5.5	10180	2850
	3500	6400	60	53	5.5	11030	2890
HD-1200-30-100	4000	6700	67	57	7.5	11890	2920
	4500	7100	67	60	7.5	12750	2940
(9000p/h)	5000	7400	77	64	7.5	13610	2970
	5500	8200	77	69	11	14470	2980
	6000	8500	81	72	11	15330	3000



- Remarks:

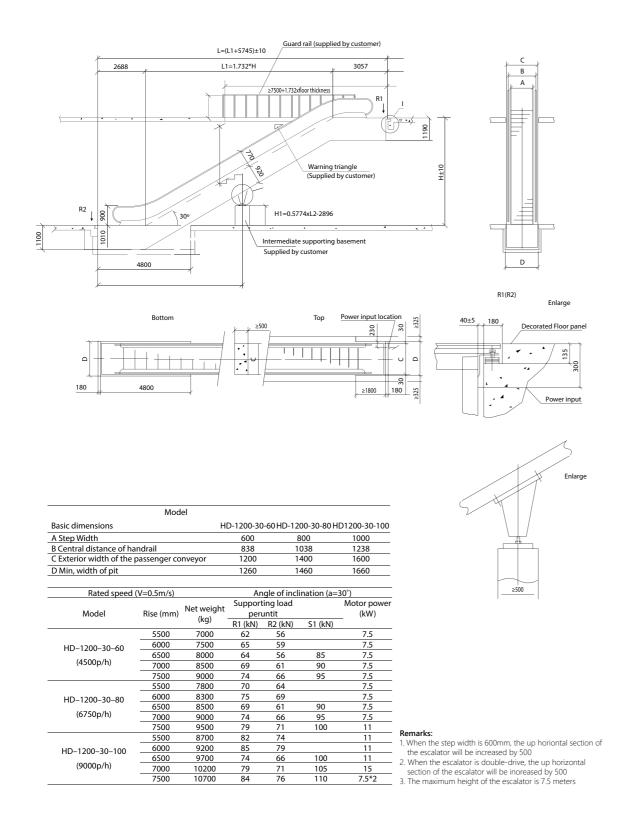
  1. When the step width is 600mm, the up horiontal section of the escalator will be increased by 500

  2.The maximum designed height of the escalator is
- \_\_\_ 6 meters

### **Escalator/Shaft Plan**

#### Series 1200-30-3

Commercial Escalator



## Series 1200–30

9500

10000

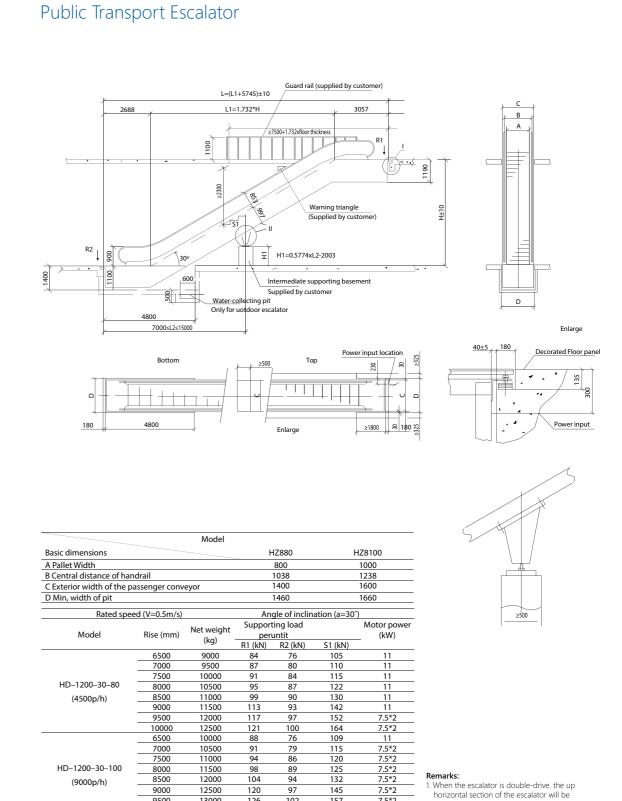
13000

102

7.5\*2

increased by 500

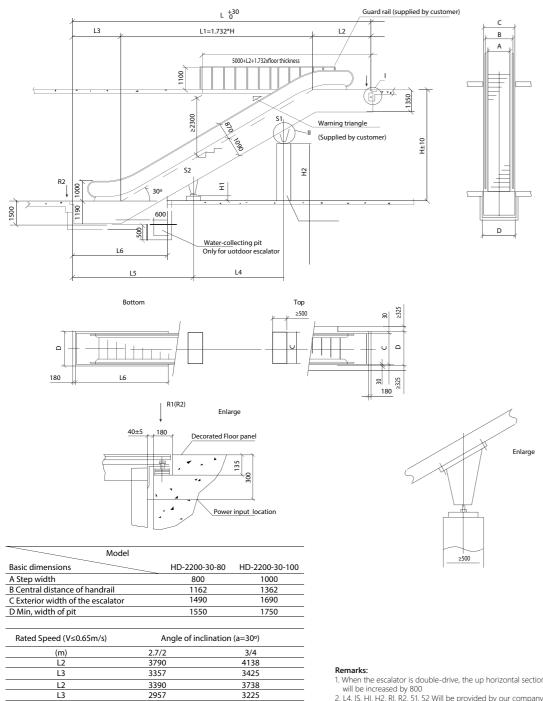
2. The maximum height of the escalator is 12 meters



### **Escalator/Shaft Plan**

Series 2200

Public Transport Heavy Duty

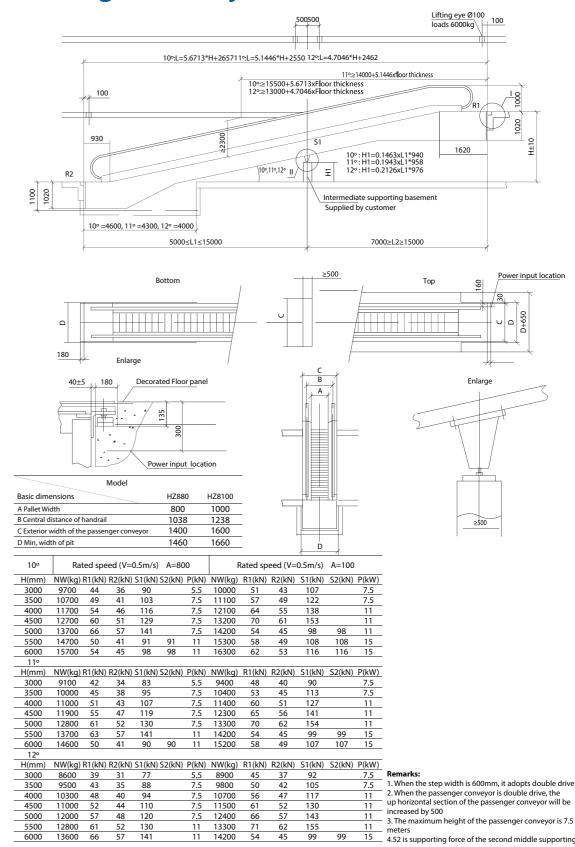


5800

5400

- 1. When the escalator is double-drive, the up horizontal section
- will be increased by 800 2. L4, IS. HI. H2. RI. R2. 51. 52 Will be provided by our company
- 3. The power of escalator will be provided by our company 4. The maximum designed height of the escalator is 22 meters

### Passenger conveyor Shaft Plan



# **Function**

### Standard Function

Item	Function	
1	Driving chain safety device	Stop escalator if the driving chain is broken or excessively elongated
2	Over speed detecting device	Detecting device of running speed, the escalator will stop when the running speedexceeds normal speed
3	Brake monitoring device	Detect if the brabe acts normally
4	Skirt panel safety device	Stop escalator if objects are caught detween step and skirt panel
5	Step roller safety device	Stop escalator if the step rollers are deformed or jacked
6	Step roller safety device	Stop escalator when the steps are broken
7	Comb plate safety device	Stop escalator if object are caught between comb plate and step
8	Handrail entry and exit safety device	Stop escalator when object are caught in the entry and exit of handrail
9	Step chain safety device	Stop escalator if the step chain is broken or elongated
10	Non-reversing safety device	stop escalator is its direction of travel is reversed
11	handrail antistatic devicce	Prevent static electricity which is generated by handrail
12	Motor overheat protection device	stop escalator if motor temperature is over the limit
13	Step missing detecting device	Stop escalator if the step is missing
14	Emergency stop switch	The swich is used when the emergenly stop is needed to the escalator
15	Green Cation light	Take care of the passengers for riding safety
16	Over load detection (Standard function)	Stop escalator if current is over in MCCB
17	Over flow sensor device (Outdoor standard function)	stop escalator if seeper is over default height in lower maintenance room

## Optional Function

Item	Function	
1	Handrail broken safety device	Stop escalator if handrail breaks
2	Handrail speed detector	Stop escalator if handrail's speed is abnormal (optional function for indoor escalator, standard function for outdoor escalator)
3	safety brush of skirt panel	Prevent little matter drop into the clearance between skirt panel and step
4	Auto start	Realize the function of auto running and auto stop
5	Auxillary brake	Stop escalator when the running direction is chenged suddenly
6	Heating device for truss	When environment temperature is below, heating should be supplied for whole escalator truss
7	Heating device for comb plate (outdoor standard function)	When environment temperature is below, heating should be supplied for comb plates





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