

## ESCALATOR & MOVING WALKWAY

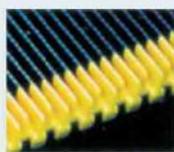
# Escalator

## Urban atmosphere, beautiful landscape

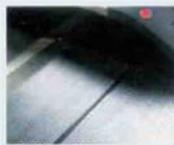
Schumacher serial escalators fully apply the unique materials and the advanced domestic and overseas technology for design and manufacture. The escalators have the consummate structure, elaborate stairway, delicate belt, attractive outline. They are widely applicable for large passenger flow areas such as the shopping centers, supermarkets, subways, airports etc. It adds a charming mobile view for very large buildings.

It has features such as smooth running, low noise, fine durability, convenient repair, fine and exquisite structure, consummate lift-way, remarkable belt-way, attractive outline model, magnificent design style with gentle modern flavor. A safe cozy and beautiful escalator can let you enjoy the pleasant and comfortable moment every day.

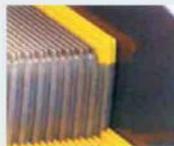
Schumacher serial escalator will exceed your expectations! It is widely applicable for the shopping center, supermarket, subway, airport etc. It adds movement and beauty to your buildings.



Apply US ANSI standard, more safety



All stainless steel design is more rugged, beautiful



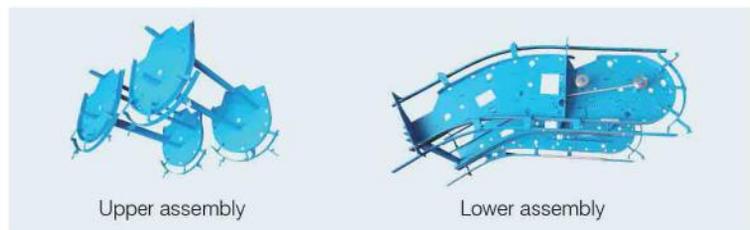
Unique 8mm safe border and yellow non-slip pattern border



Streamlined Slim handrail is more ergonomic handrail



Patented compact, concise handrails drive system



Upper assembly

Lower assembly

## Extended life

It adopts the metal beam with light weight and high tensile strength. In this way, it ensures the integral rigidity of the products. The automatic lubricating system can guarantee the prompt and automatic parts fueling which extends the useful life of the products.

## Beautiful appearance

The super-consciousness aesthetical design, technological design which conforms with the ergonomics principle. It keeps close to the latest global tide and forms a perfect harmony with the buildings and the surrounding environments.

## Very smooth

It adopts the advanced control system and decelerator. The superior drive chain and precise installation technology ensures that the product runs smoothly.

## Very safe and reliable

It strictly executes the current Chinese and European standards such as GB16899-2011 safety criteria for the production and installation of escalator and auto-walk etc. It has set all the necessary safety devices, adopted the micro-computer control technology, fulfilled non-contact control with safe and reliable running.

## Accurate open & close control

It adopts the high tensile strength metal structure which makes it appear more compact for the product outline dimension.

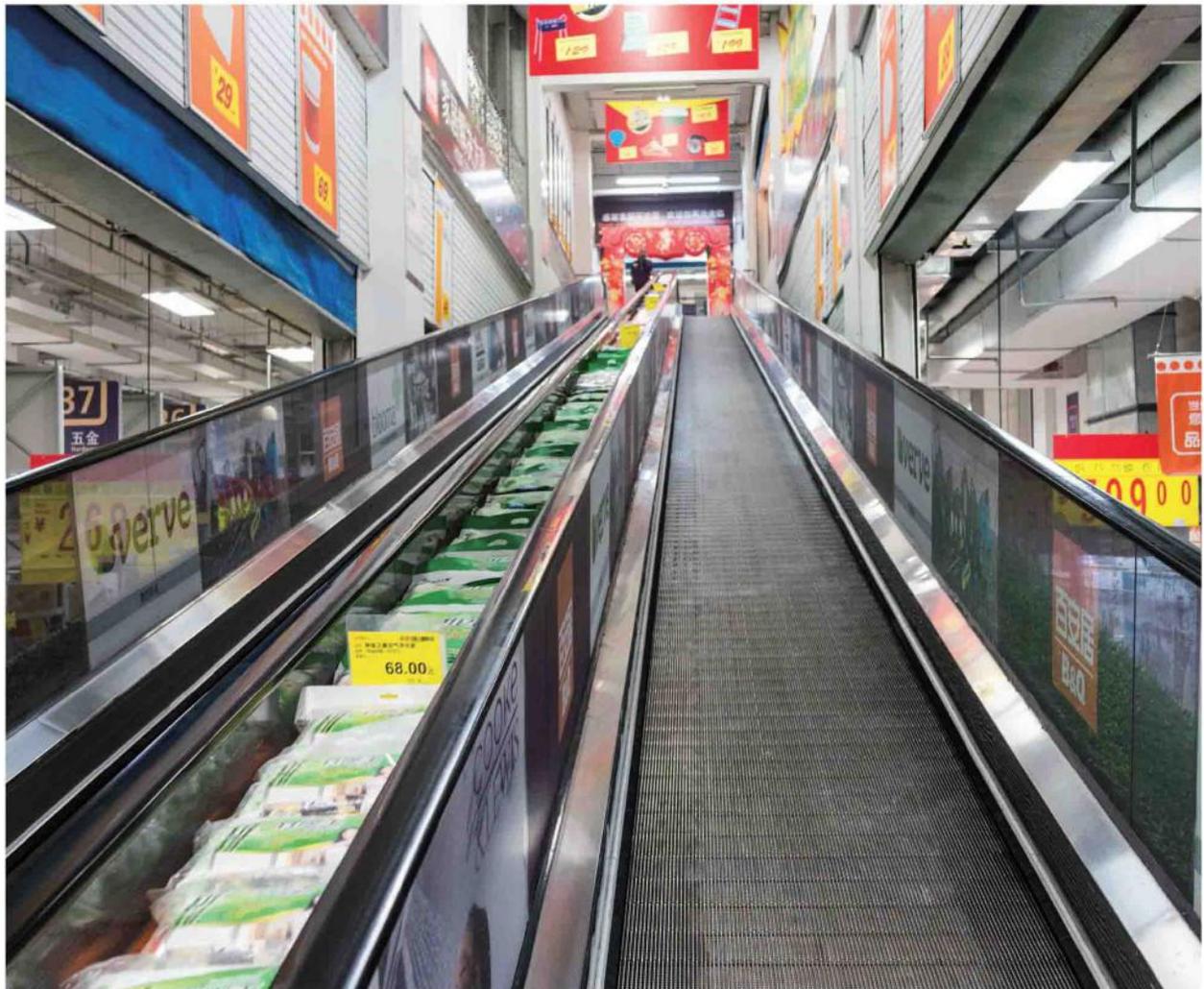
## Continuous monitoring

The super CPU main board monitors the operation in real time. If any abnormal situation occurs, it automatically brakes and records the malfunctions code.

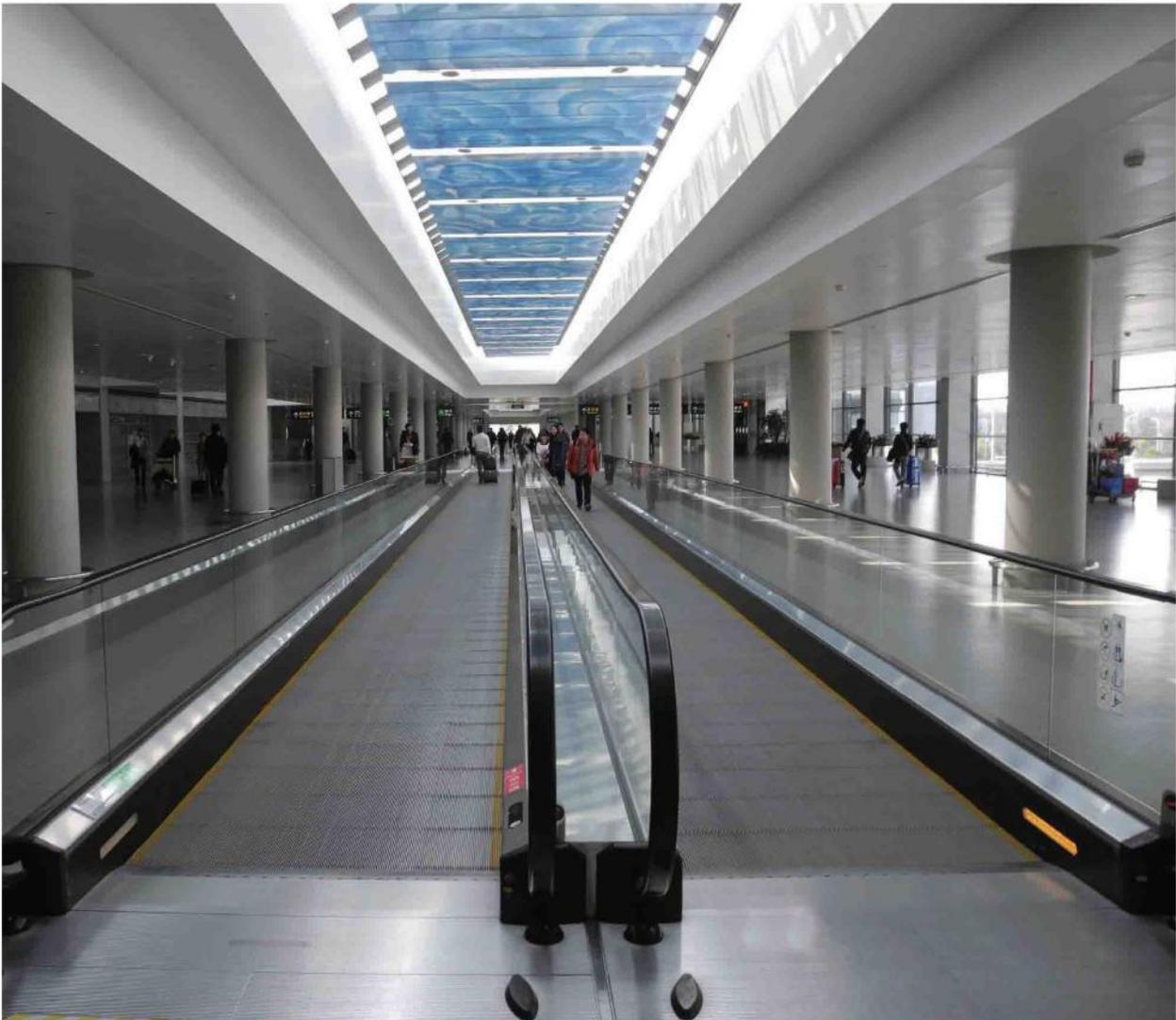
# Passenger Conveyor

As Easy As In Smooth Ground,  
The Everlasting Popular Design & Quality

In colorful modern city, supermarkets, public buildings, airports, exhibition centers and transport interchanges and other public transport situation, moving walkways due to its characteristics, not only to meet the huge flow of people's transport problems, but also to meet walking long distances and transport baggage cart, stroller, shopping cart, disabled vehicle, etc. when people take escalator to upstairs and downstairs, they will feel like the ground cover, a great convenience to people's travel and shopping. It is convenient, fast and pleasant ride demands, thereby has become first solution for supermarkets, airports, exhibition centers and transport interchanges.



## The Performances Advantage



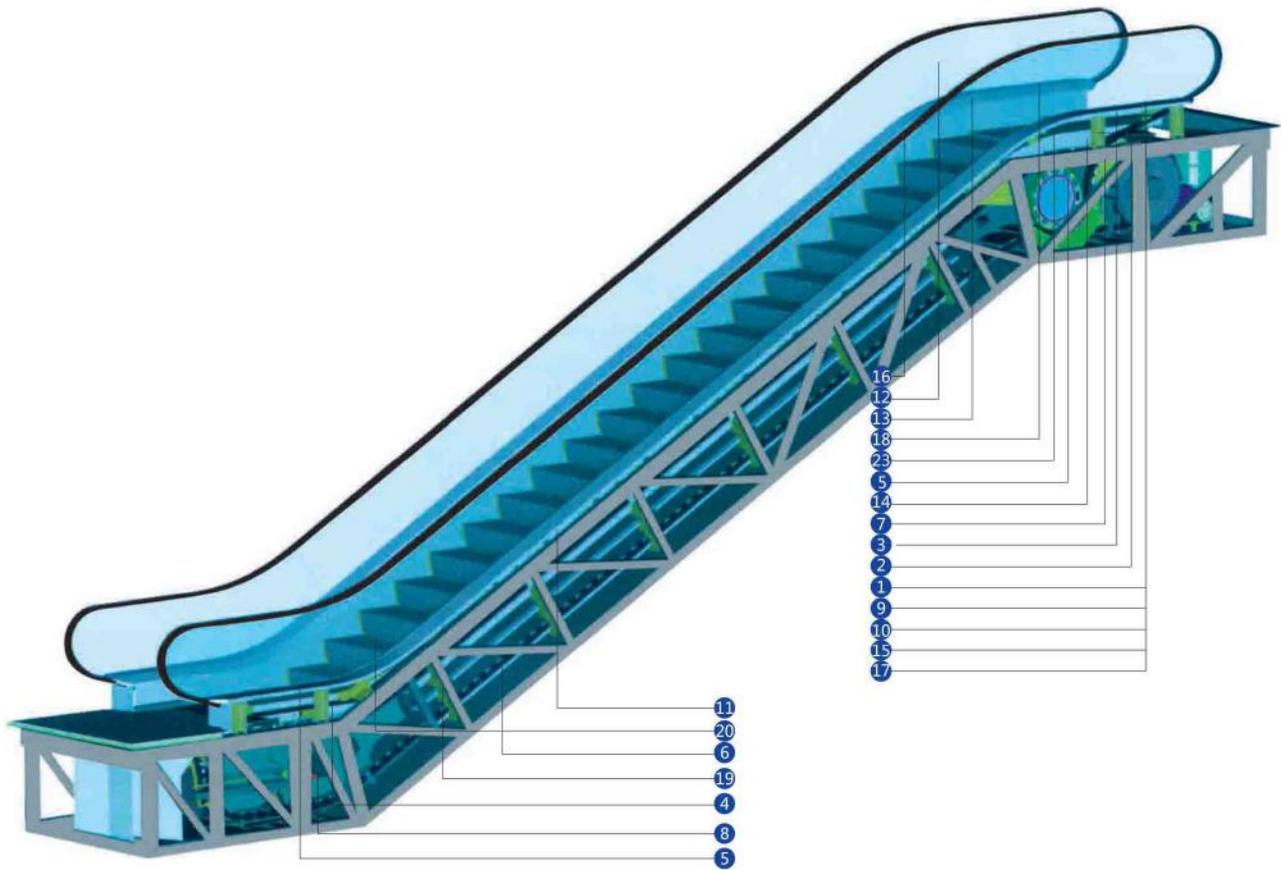
### It blends with modern design and style.

The stairway guide rail design with armrest fixes the whole stairway running in guide rail, It controls the stairway movement, avoids friction between the steps, skirting and comb teeth, It is convenient for installation, adjustment, repair and maintenance, It greatly increases the running effects.

### High efficiency & energy-saving

Customer can choose VVVF control to control running speed, the energy saving performance is obvious, It can prolong product life and reduce the operation cost.

# Escalator Safety Device



## Standard safety device

### 1. Lack of phase, error phase protection

If lack phase or error phase has been checked out, the escalator (auto-walk) will automatically stop the operation.

### 2. Motor over-load protection

When the current exceeds 15% of the current rating, the escalator will automatically stop the operation.

### 3. Electrical appliance loop protection

It offers the automatic circuit disconnecting device to protect the circuit and main components of the escalator (auto-walk).

### 4. Handrail inlet protection

When some foreign substance has been clipped in the handrail inlet, the escalator (auto-walk) will automatically stop the operation.

### 5. Comb plate safety device

When some foreign substance has been clipped in or between the combs, the escalator (auto-walk) will automatically stop the operation.

### 6. Step sagging protection device

When there is abnormal step bending, the escalator (auto-walk) will stop the operation before the step entering into the comb plate.

### 7. Broken drive-chain safety device

When the drive-chain has been over-stretched or it is broken, the escalator (auto-walk) will automatically stop the operation.

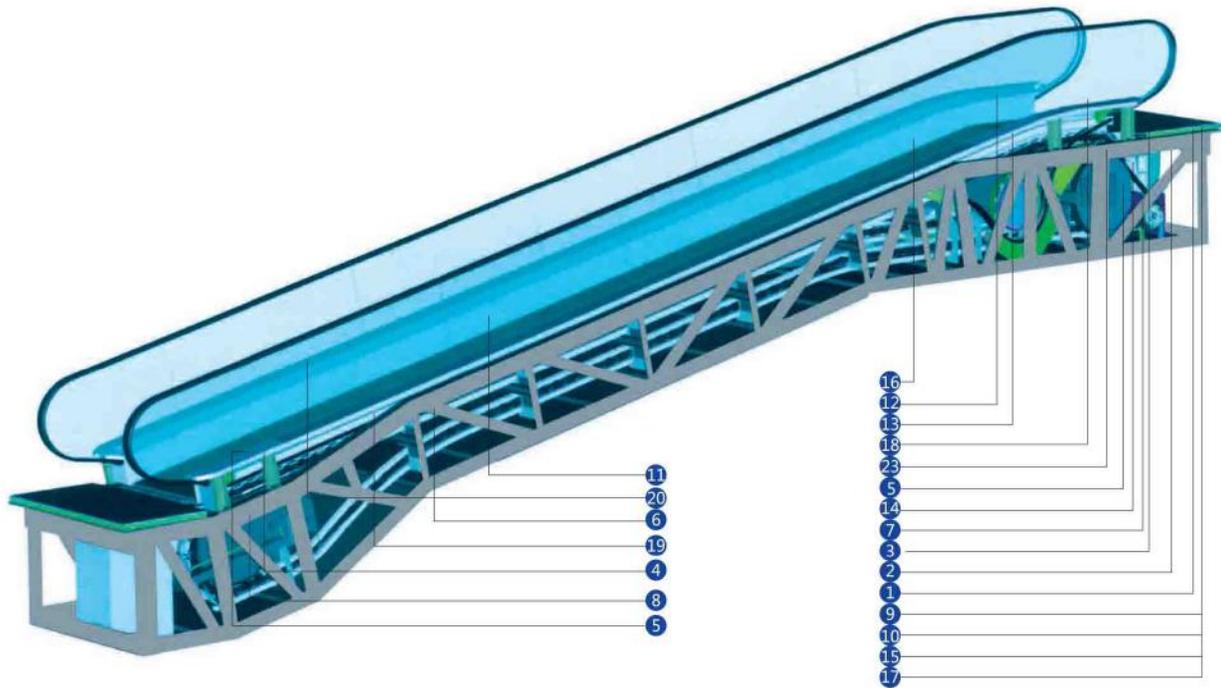
### 8. Broken step chain protection

When the step (pallet) chain has been over-stretched or it is broken, the escalator (auto-walk) will automatically stop the operation.

### 9. Over-speed protection

When there is over-speed to the escalator (auto-walk), it will automatically stop the operation.

# Passenger Conveyor Safety Device



## 10. Direction reversal protection

When it comes the unintentional reversal of the direction of travel, the escalator (auto-walk), will automatically stop the operation.

## 11. Security line

The yellow synthetic resin security line is located in the front position and two sides of the escalator tread so that the passengers will not tread in-between the edge of the adjacent step and the lift group lengthened skirt panel, The security line on both sides of the step is higher than tread surface, (The auto-walk offers the selective yellow spray-painted security line.)

## 12. Emergency button

When the button has been pressed down, the escalator (auto-walk), will stop the operation.

## 13. Skirt panel protection

When some foreign substance has been clipped in between the skirt panel and the step, the escalator (auto-walk) will automatically stop the operation.

## 14. Brake protection

When the electric force falls short of supply or it acts any of the safety device, the brake function goes into effect by the safety device through the spring resilience action, In this way, the escalator (auto-walk) stops the operation.

## 15. Safety inspection switch

It is a safety device to prevent from the escalator starting during the inspection and maintenance.

## 16. Warning lights

Illumination exists in the upper and lower ends of the escalator, in the lower part of the step in order to remind the passengers of the security matters.

## 17. Alarm bell starting device

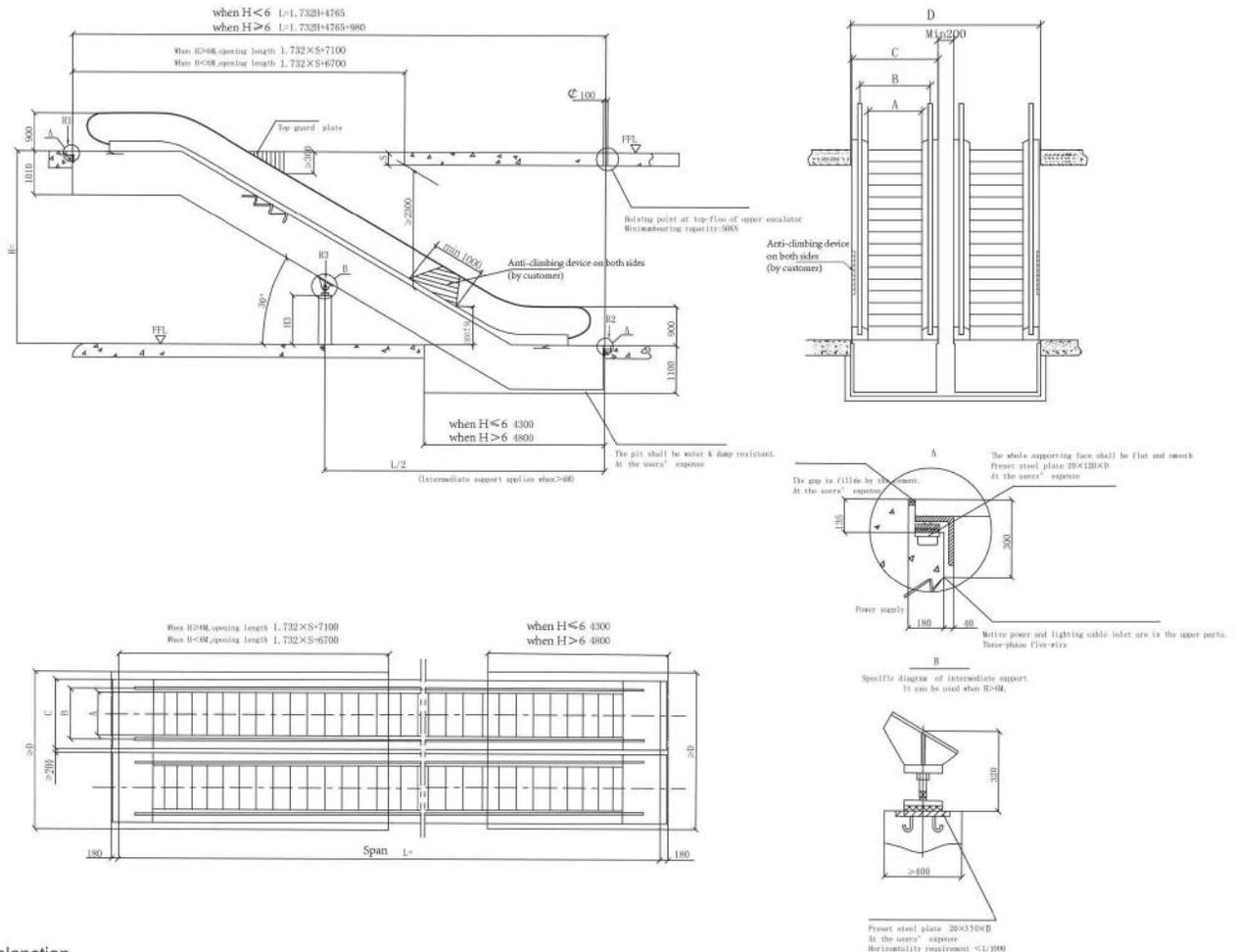
The alarm bell rings when it starts the escalator in order to remind the passengers of the security matters.

## 18. Control device for handrail breakage

When the handrail is broken, the escalator will automatically stop the operation.

# Construction Parameters

## 30°VF-escalator



### Explanation

- When the escalator is installed up to second floor, cancel pit, civil substructure and the upper symmetrical, pit should be waterproof by customer.
- The upper and lower escalator entrance should have sufficient flow area, depth dimension from the front end to the steering handrail obstacle should be not less than 2500mm.
- users to provide a ground resistance which is less than 4Ω. Current power wiring should be three-phase five-wire system by customer.
- Truss decoration on three sides by customers, decorated weight should less then 30Kg / m<sup>2</sup>.
- All dimensions in mm, subject to change without notice.
- The figure "S" represents floor beam thickness.

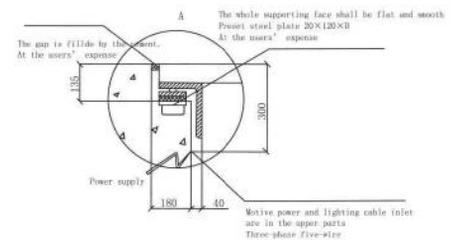
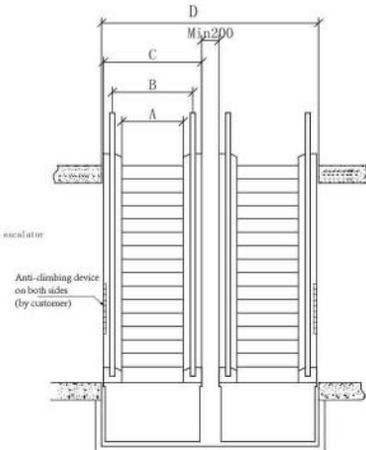
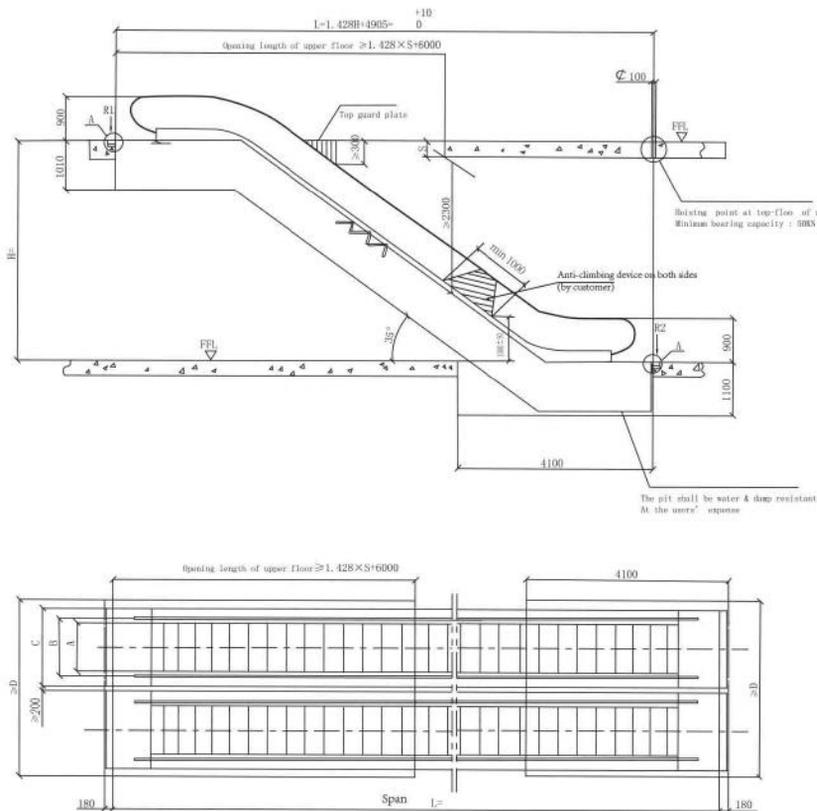
	1000	1000	1238	1660	3500
	800	800	1038	1460	3100
Step width mm	A	B	C	D	
Center support $H \geq (L_1 - 2600) \times \tan 30^\circ - 897 / \cos 30^\circ + 300$					

Type Model	Travelling height mm	Net weight (w o set) KN	Support (w o set)		Motor power KW	Cab Dimensions	
			R1 KN	R2 KN		h	l
Fm t-302 (800) (4800persons.h) speed 0.5m /s	3000	118	104	94	5.5	2080	10900
	3500	126	112	100		2110	11890
	4000	134	120	108		2140	12880
	4500	142	128	114	8	2160	13870
	5000	148	136	120		2170	14860
	5500	164	148	132		2190	15860
Fm t-302 (1000) (6000persons.h) speed 0.5m /s	6000	172	156	138	11	2200	16850
	3000	126	118	106	5.5	2080	10900
	3500	134	128	114		2110	11890
	4000	142	136	122		2140	12880
	4500	150	146	130	8	2160	13870
	5000	166	158	142		2170	14860
5500	174	168	150	2190		15860	
6000	184	176	158	11	2200	16850	

Note: when lifting height > 6m, civil dimensions please consult our company

# Construction Parameters

## 35°VF-escalator



### Explanation

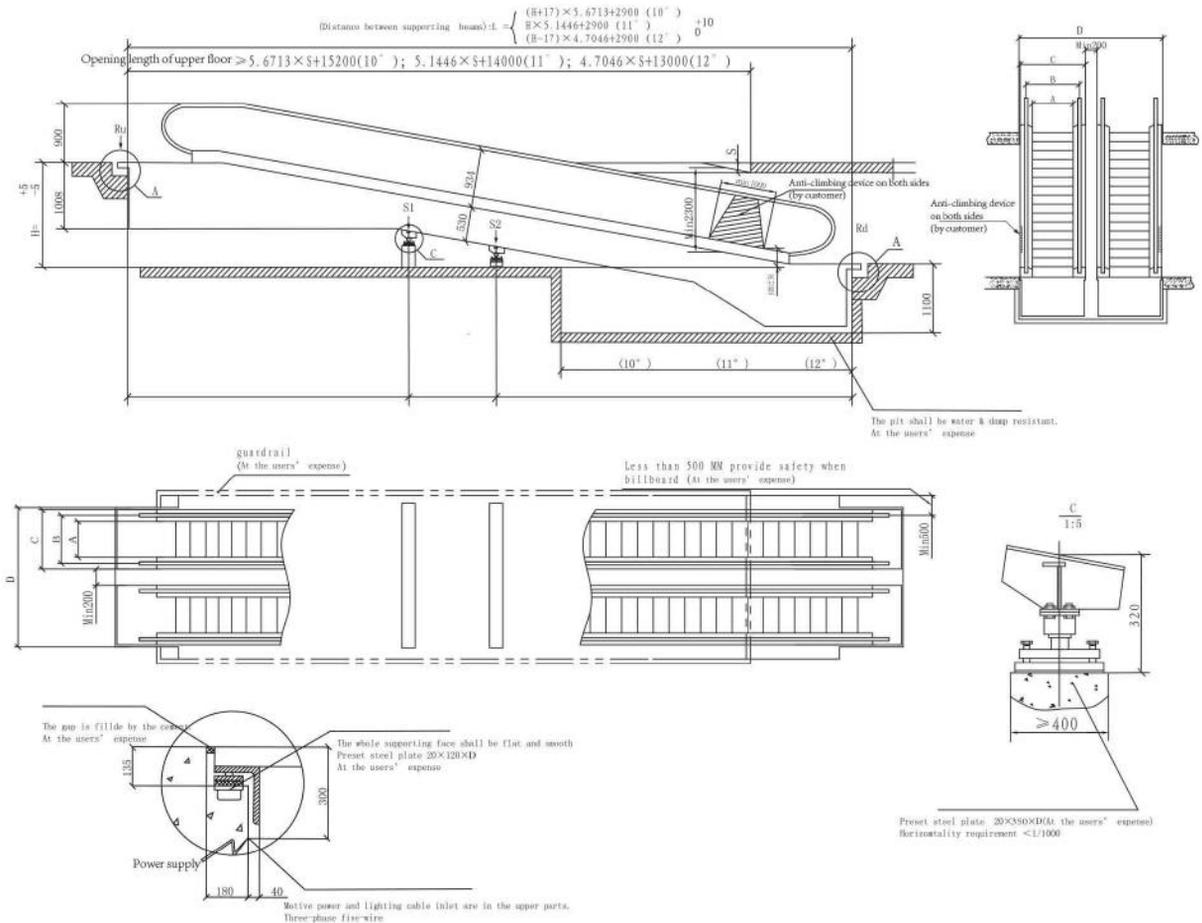
- When the escalator is installed up to second floor, cancel pit, civil substructure and the upper symmetrical, pit should be waterproof by customer.
- The upper and lower escalator entrance should have sufficient flow area, depth dimension from the front end to the steering handrail obstacle should be not less than 2500mm.
- users to provide a ground resistance which is less than  $4\Omega$ . Current power wiring should be three-phase five-wire system by customer.
- Truss decoration on three sides by customers, decorated weight should less then  $30\text{Kg} / \text{m}^2$ .
- All dimensions in mm, subject to change without notice.
- The figure "S" represents floor beam thickness.

Type Model	Traveling height mm	Net weight (w/o set) KN	Support (w/o set)		Motor power KW	Cab Dimensions	
			R1 KN	R2 KN		h	l
Fm T-302(800) (800persons/h) speed 0.5m/s	3000	112	98	88	5.5	2180	10180
	3500	120	104	94		2220	11030
	4000	126	112	100		2250	11890
	4500	132	118	106	8	2270	12750
	5000	140	124	112		2300	13610
	5500	146	130	118		2310	14470
Fm T-302(1000) (1000persons/h) speed 0.5m/s	6000	152	138	122	11	2330	15330
	3000	120	112	100	5.5	2180	10180
	3500	128	120	106		2220	11030
	4000	134	128	114		2250	11890
	4500	142	134	120	8	2270	12750
	5000	148	142	128		2300	13610
5500	158	154	138	2310		14470	
6000	166	162	144	11	2330	15330	

1000	1000	1238	1660	3500
800	800	1038	1460	3100
Step width mm	A	B	C	D
Center support H $3(L/2 - 2600) \times \tan 30^\circ - (897/\cos 30^\circ + 300)$				

# Construction Parameters

VF-moving walk



**Explanation**

- When the moving walkway is installed up to second floor, cancel pit, civil substructure and the upper symmetrical, pit should be waterproof by customer.
- Moving walkway entrance should have sufficient flow area, depth dimension from the front end to the steering handrail obstacle should be not less than 2500mm.
- users to provide a ground resistance which is less than 4Ω. Current power wiring should be three-phase five-wire system by customer.
- Truss decoration on three sides by customers, decorated weight should less then 30Kg / m<sup>2</sup>.
- All dimensions in mm, subject to change without notice.
- When step is aluminum material, please ask for civil size from us
- The figure "S" represents floor beam thickness.
- Supporting force is approximate; all dimensions in millimeters (mm); all loads

Units are KN; Will be without notice if change.

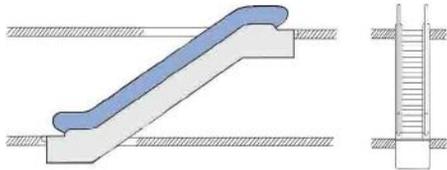
Supported by force	q	M	N
RM L800	0.0039	9.5	4.5
RM L1000	0.0045	11	5

RM L800	800	1038	1460	3260
RM L1000	1000	1238	1660	3660
step width mm	A	B	C	D

W	Support		
	Without center support support (KN)	Single center support (KN)	Double centersupport (KN)
Ru=L*q+M	Ru=L*q+M	Ru=L*q+M	
Rd=L*q+N	Rd=L*q+N	Rd=L*q+N	
	S1= (L+a+Lb)*q*1.3	S1= (L+a+Lb)*q*1.3	
		S2= (L+a+Lb)*q*1.3	

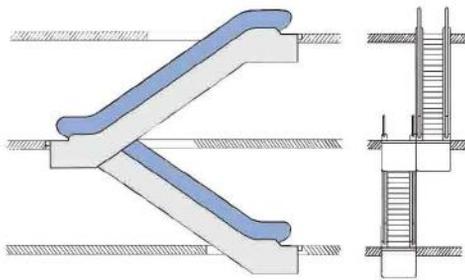
Tilt angle	Rise		Intermediate support		La	Lb	Lc
	from	to	S1	S2			
10°	1273	2154	-	-	-	-	-
	2155	3388	1	-	7000	L-7000	-
	3389	4799	1	-	L-15000	15000	-
	4800	6000	1	1	7000	15000	L-22000
11°	1423	2394	-	-	-	-	-
	2395	3754	1	-	7000	L-7000	-
	3755	5309	1	-	L-15000	15000	-
	5310	6000	1	1	7000	15000	L-22000
12°	1572	2634	-	-	-	-	-
	2635	4122	1	-	7000	L-7000	-
	4123	5822	1	-	L-15000	15000	-
	5823	6000	1	1	7000	15000	L-22000

# Escalator Arrangements Planning



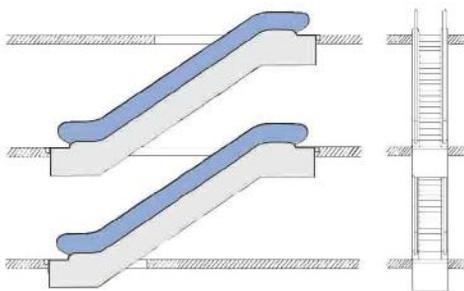
## Single unit arrangement

particularly suitable for transporting passengers between two floor levels, where passenger flow is in one direction, although on-demand starting can be utilized to allow travel in both two directions, (e.g, up in the morning and down in the evening).



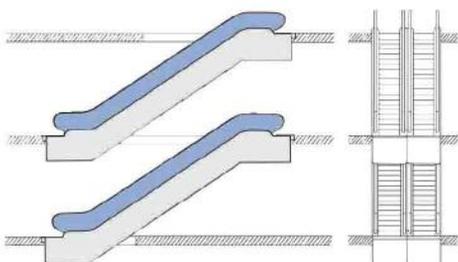
## Continuous arrangement (one travel direction)

Mainly suitable for small department stores, between three sales floor levels, More space required than the interrupted arrangement.



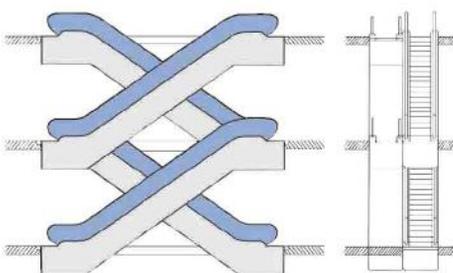
## Interrupted arrangement (one travel direction)

Passengers have to make a short detour to the next escalator, strategically placed displays alongside the route of this detour can help to increase sales by encouraging impulse buying.



## Multi-level parallel arrangement (interrupted traffic, two travel directions)

Mainly used in department stores and public buildings with a heavy traffic flow, When there are three or more escalators, the possibility to reverse the direction of travel of both escalators depending on the usage or traffic flow, this arrangement is economical, since no decorative truss cladding is required.



## Multi-level criss -cross arrangement (continuous traffic flow, two travel directions)

Mainly used in major department stores, public buildings and public transport buildings, reduce congestion at the landing area by separating upwards and downwards travelling passengers.