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Series C

C Series Moving Walk

Leading the Future with Wisdom

Smart Devices are Efficient and Reliable

- Focusing on intelligent experience of the whole life cycle, the moving walk is safer, more comfortable and more energy-saving
- Pay attention to intelligent safety functions of various hazard sources in the use of moving walks
- Taking intelligence as the means, improve the efficiency and pertinence of management and maintenance work

Safe and Reliable

Safety Components Provide Multiple Protection

- Each moving walk is commissioned at the factory, with attention paid to every detail to ensure the quality of the product
- More than twenty safety protection functions are provided as standard to ensure passenger safety in all round
- One-to-one fault detection of safety devices improves inspection efficiency and shortens the shutdown time
- The anti-slip grade of the pallet reaches R11

Comfortable and Energy-saving

Comfortable, Energy-saving, Stable and Smooth

- Adopt bypass variable frequency drive mode (energy saving and environment friendly) and phase-locked switching technology (smooth and comfortable)
- Comprehensive application of LED lighting system, thus realizing energy saving and environmental protection
- Voice announcement adapting to ambient volume is environment friendly
- Intelligent passenger sensing device prevents starting by mistake when passing by the moving walk, thus saving energy deeply

Flexible Response

More Flexible Civil Construction Layout

- Horizontal type: the middle pit depth is reduced by 30%*, and the length of the upper and lower pit is reduced by 21%*
- Horizontal type: the max. effective length can reach 100m
- Inclined type: the lower pit length is reduced by 22%*, and the travel rise can reach 9.5m
- Optional handrail balustrade height: 910/1000 mm
- Optional pallet width: 1.40/1.20/1.00m (horizontal type), or 1.00/0.80 m (inclined type)

* The above data are compared with the products of previous generation

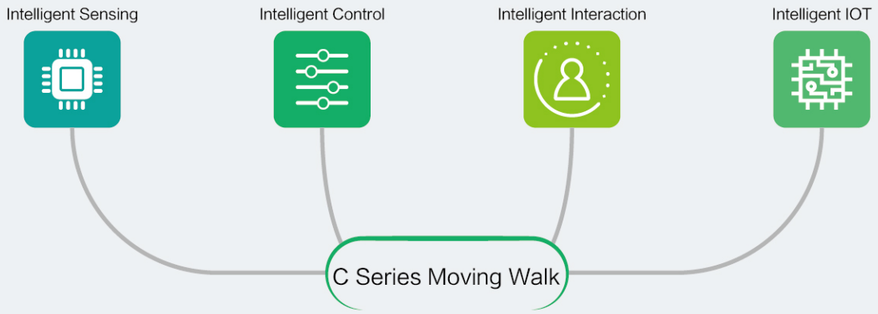
Series C

C Series Moving Walk

Smart Devices are Efficient and Reliable

Series C

Based on the traditional moving walks, the C series moving walk is incorporated with intelligent sensing technology, intelligent control technology, intelligent interaction technology and intelligent IOT technology, so that the moving walk can make timely decisions and adjust adaptively for the changes of external environment and passenger behaviors during operation; optional external Chinese and English display operation panel improves the efficiency and reliability of moving walk management. The moving walk is made safer, smarter and more energy-saving, and improves the use experience of passengers and owners in all round.



智能终端

Product intelligence

○ Recognition and warning of passengers' dangerous behaviors

- Take the moving walk with a baby stroller *
  Identify whether there is any behavior of taking the moving walk with a baby stroller through the intelligent terminal installed at the entrance of the moving walk, and give an audible and visual warning.
- Children playing in the handrail entrance area *
  Detect the behavior of playing in the inlet area of the handrail and provide an audible and visual warning.

○ Real-time environmental perception and accurate control of equipment

- Lighting control adapting to ambient light illumination *
  The decoration lighting is automatically controlled according to the ambient light illumination and the environment where the moving walk is located.
- Voice announcement adapting to ambient volume *
  The voice announcement volume is automatically adjusted according to the ambient volume, which improves the overall comfort of users.
- Handrail belt ultraviolet sterilization and disinfection device
  The effective killing rate of Escherichia coli and Staphylococcus aureus is up to 99.99%

Remark:* It is necessary to configure intelligent terminal

Service intelligence

○ Automatic start/stop at preset time *1

According to the user's preset operation start and end time, it provides safe automatic start/stop service under the condition of ensuring no passengers, thus eliminating the trouble of manual operation one by one, and saving time and effort.

○ Moving walk and passenger status monitoring and active intervention *2

Using artificial intelligence technology, the monitoring system is upgraded from “passive tracing” to “active intervention”, which can actively identify the abnormal situation or behavior of passengers on the moving walk, alarm the local moving walk and the monitoring room in time, remind personnel to take the initiative to intervene, and speed up the emergency response.

○ Passenger spectrum and passenger flow analysis service *3

Statistics and analysis of the load on the moving walk provide reference for the dynamic adjustment of the maintenance plan.

○ Intelligent operation and maintenance report service *3

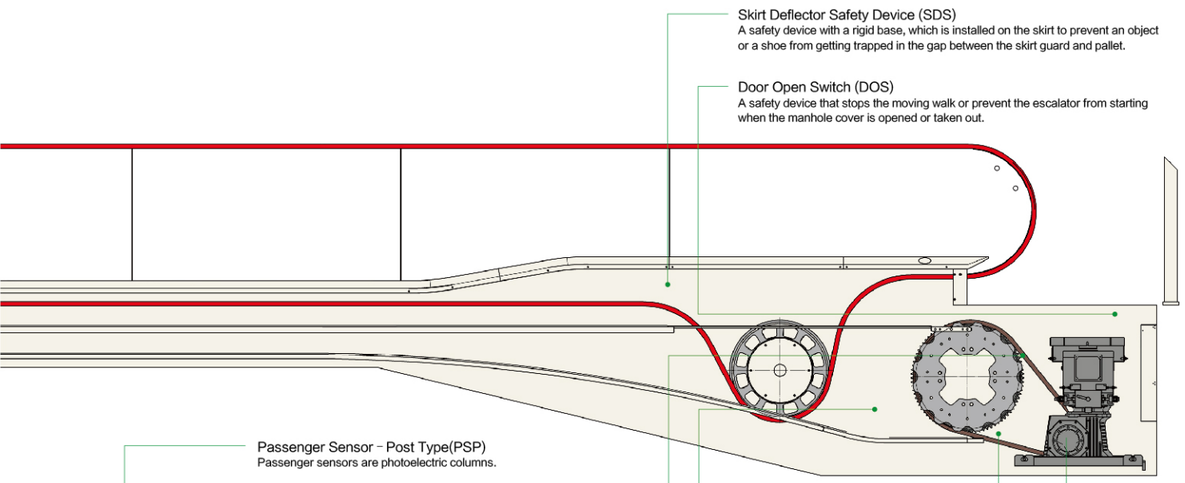
Collect moving walk operation data in real time, and provide users with operation status reports on the moving walk bank regularly to help users understand the moving walk situation more comprehensively.

○ Intelligent equipment monitoring

Intelligently analyze and process the data collected by the sensors at the measuring points of such key components of the moving walk as the host and the pallet, extract the corresponding characteristic information, and give early warning information when any component is abnormal, so as to intervene in time before the failure of the key components of the moving walk and nip in the bud.

Remarks:
*1：It is recommended to separately order an SmartEye monitoring system, which can set the time uniformly for all moving walks in the monitoring room, thus improving management efficiency.
*2：It is necessary to separately order an SmartEye monitoring system, which can realize identification and warning of more passenger abnormal behaviors such as falling, reverse movement and congestion.
*3：If it is necessary to configure, please consult the relevant sales / service outlet of Shanghai Mitsubishi Elevator Co., Ltd.

Safety Components Provide Multiple Protection



Skirt Deflector Safety Device (SDS)
A safety device with a rigid base, which is installed on the skirt to prevent an object or a shoe from getting trapped in the gap between the skirt guard and pallet.

Door Open Switch (DOS)
A safety device that stops the moving walk or prevent the escalator from starting when the manhole cover is opened or taken out.

Passenger Sensor – Post Type(PSP)
Passenger sensors are photoelectric columns.

Flood Level Alarm (FLS)
A safety device that stops the moving walk if there is too much water in the lower truss.

Step Chain Safety Device (PCS)
A safety device that stops the moving walk if the pallet chain breaks or stretches beyond an allowable limit.

Handrail Guard Safety Device (HGS)
A safety device that stops the moving walk when an object is trapped at the inlet of handrails.

Main sprocket speed measurement device

Operational brake action detection
Auxiliary brake action detection

Missing Palley Device (PMS)
A safety device that stops the moving walk if it detects a missing part of pallet.

Drive Chain Safety Device (DCS)
A safety device that stops the moving walk if the drive chain breaks or stretches beyond an allowable limit.

Emergency Stop Button (E-STOP)
A safety device that stops the moving walk in case of an emergency.

Comb-Step Safety Switch (CSS)
A safety device that stops the moving walk if an object is trapped in the gap between the pallet tread and comb plate.

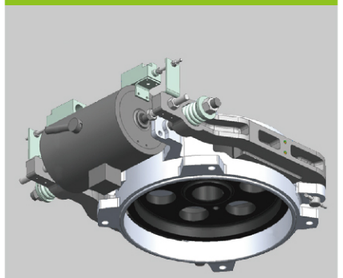
Handrail Speed Safety Device (HSS)
Stop the moving walk if the speed of moving handrails is lower than the set value and this situation lasts for a certain period of time.

Pallet Roller Safety Switch (PRS)
When any part of the pallet sinks and it is impossible to ensure engagement with the comb plate any longer, stop the moving walk from running.

Skirt Guard Safety Device (SSS)
A safety device to stop the moving walk if an object is trapped in the gap between the pallet and skirt guard.

Handrail Breakage Safety Device (HBS)
A safety device that stops the moving walk if the handrails break or stretch beyond an allowable limit.

Operational Brake Action Detection



If the operational brake fails to release normally, the switch does not operate. By monitoring the contacts of the switch, it can be ensured that when the operational brake is not fully released after being electrified, the moving walk cannot be started or continue to run.

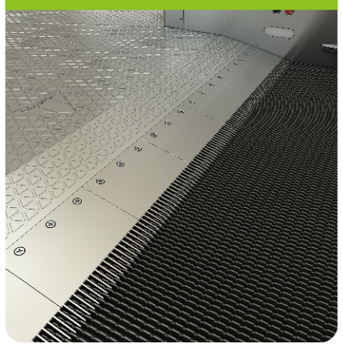
One-to-one Fault Detection of Safety Devices

Each safety device corresponds to one error code, thus improving the speed of troubleshooting and the efficiency of maintenance and repair. Without opening the floor slab/access deck and affecting the normal operation of the moving walk, the operation and fault information of the moving walk can be checked using a special mobile phone applet.

Multifunction Panel

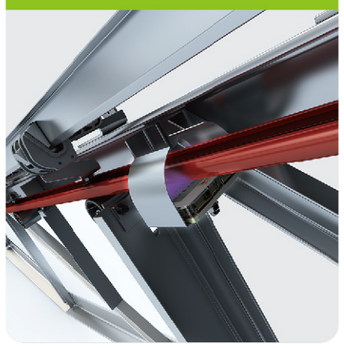
The entrance can be optionally equipped with an operation panel that supports display in Chinese and English, which can be used for function setting, fault viewing, and comprehensively improving the management efficiency.

Comb Safety Switch



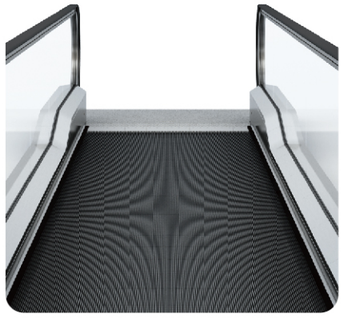
Under the action of large external force, comb plate can move horizontally or vertically in a certain range. The comb plate is driven to move and then trigger the safety switch after reaching a certain degree to stop the moving walk from running.

Handrail Belt intelligent Ultraviolet Sterilization and Disinfection



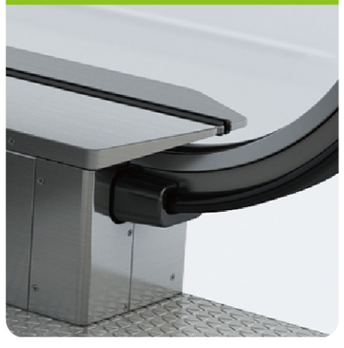
Hidden design prevents ultraviolet leakage, thus ensuring the safety of passengers; intelligent control function can intelligently assign sterilization and disinfection operations according to the operation status of the moving walk; non-contact design avoids secondary pollution and provides more comprehensive sterilization and disinfection.

Pallet Roller Safety Switch



If any pallet is damaged, resulting in deformation and subsidence, the damaged pallet makes the cam act and rotate, and the coaxially installed cam mechanism drives the safety switch to act, so that the moving walk stops running.

Handrail Inlet Design

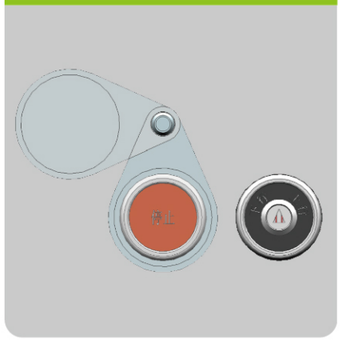


Continuing SMEC's consistent hidden design of handrail inlet, it greatly reduces the risk of being caught; it better matches with the long and soft inlet guard, reflecting the design idea of multiple protection.

Skirt Deflector

It prevents passengers from standing too close to the edge of the pallet, and avoid getting their feet caught in the gap between the moving walk and the skirt.

E-STOP Button



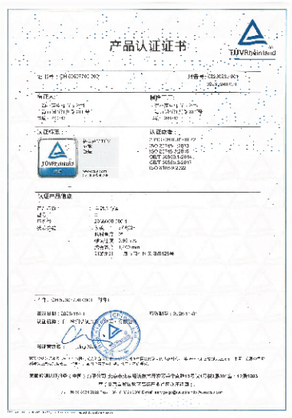
In case of emergency, people nearby or passengers on the moving walk can press the E-STOP button to stop the moving walk manually.

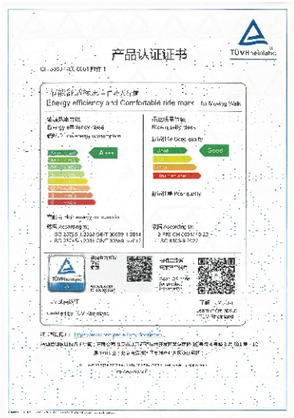
Comfortable, Energy-saving, Stable and Smooth

Stable and Smooth Ride Experience

Safe, Comfortable and Energy-saving

√ Ride quality reaches TÜV ***Good*** level, energy efficiency reaches ***A+++*** (the highest level)





√ Adopt bypass variable frequency drive mode (energy saving and environment friendly) and phase-locked switching technology (smooth and comfortable)

√ Comprehensive application of LED lighting system realizes energy saving and environmental protection

√ Voice announcement adapting to ambient volume is environment friendly

√ Intelligent passenger sensing device prevents passengers from starting by mistake when passing by the moving walk, thus saving energy deeply

√ It has passed the functional safety certification of the national special equipment authoritative testing agency

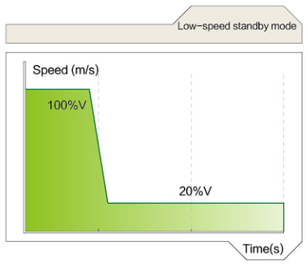
√ 20+ safety functions are provided as standard

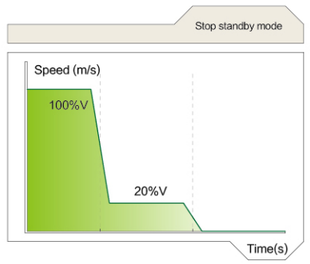
Bypass Variable Frequency Technology

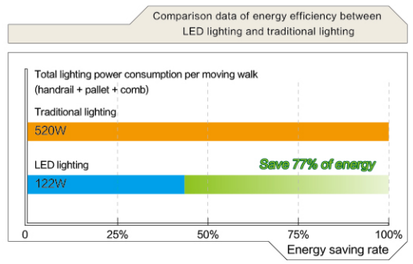
The inverter is automatically cut off at nominal speed, and the power frequency network is adopted for power supply operation, which greatly improves the life of the inverter; when an irreversible failure occurs in the inverter, it can be manually switched to the backup operation mode without affecting the operation of the moving walk; when no one is taking the moving walk, it automatically switches to low-speed or stop standby mode, and the regenerated energy is directly fed back to the grid when it runs down with load, which is more energy-saving and environmentally friendly.

LED Lighting System

Full LED lighting system, including handrail lighting, skirt lighting, comb lighting and pallet bottom lighting, is adopted so as to comprehensively improve the environmental quality, protect the environment and save energy, and be safe and reliable.







More Flexible Civil Construction Layout

Requirement for Smaller Civil Size

Reduce the Impact on Building

Horizontal type

Middle pit depth is reduced by ***30%***

The length of upper and lower pit is reduced by ***21%***

The max. effective length can reach ***100m***

Inclined type

The length of lower pit is reduced by ***22%***

Travel rise reaches ***9.5m***

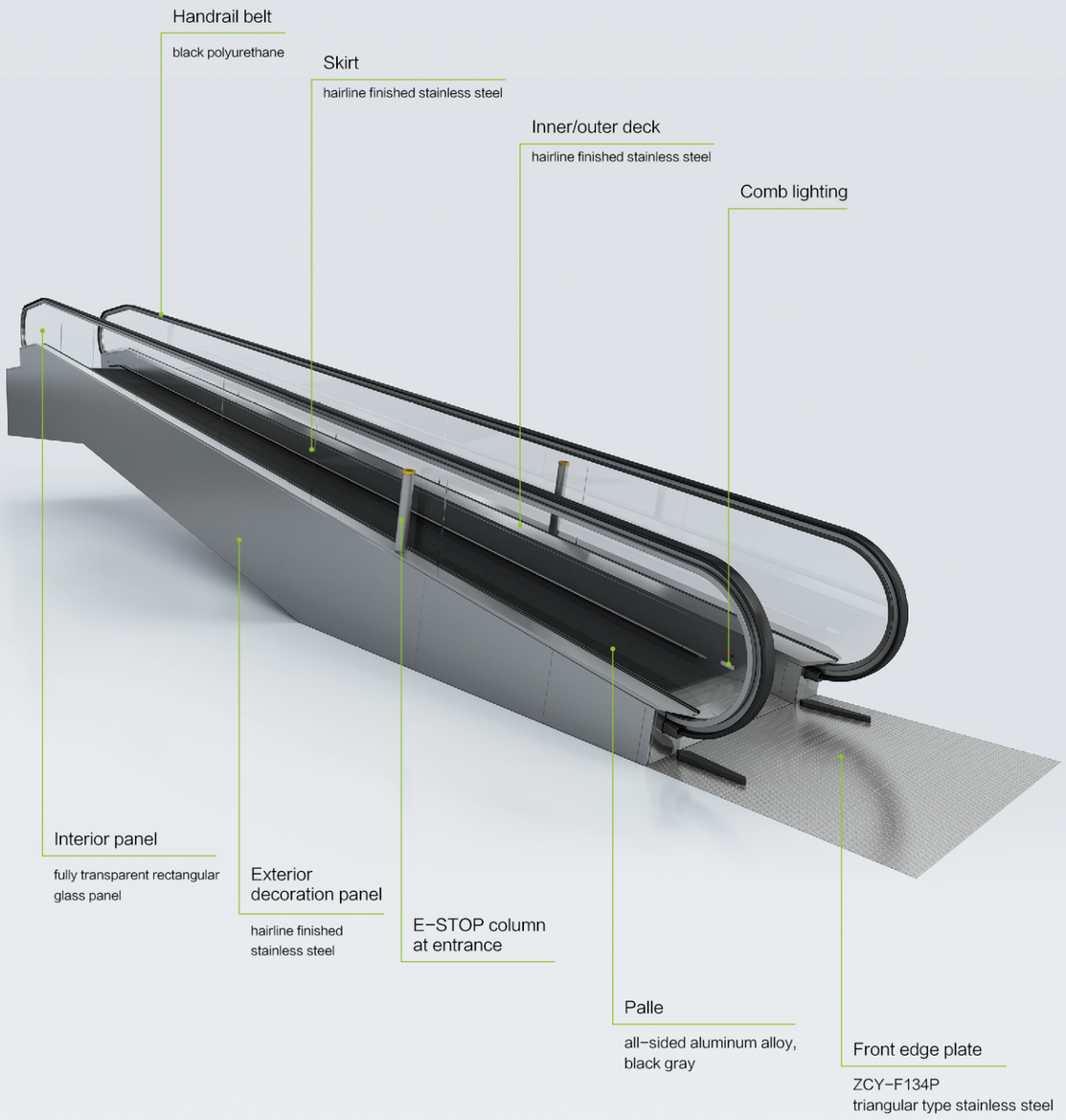
* The above data are compared with the products of previous generation

Basic Specifications

Series C

Item	Specification Content					Description
Form	Horizontal type			Inclined type		
Handrail nominal width(mm)	1200	1400	1600	1000	1200	
Pallet nominal width(mm)	1000	1200	1400	800	1000	
Angle	0° ~ 6°			10° ~12°		
Travel rise(m)	—			2~9.5		
Max. effective length(m)	100			—		
Nominal speed(m/s)	0.5			0.5		Standard
	0.65			0.65		Optional
Upper horizontal distance(mm)	—			405 / 810		
Lower horizontal distance(mm)	—			0 / 405 / 810		
Place of use	Public transportation			Ordinary		It complies with the requirements of GB16899-2011 for public transport moving walk; if there are special requirements for the load, special confirmation is required
Series model	CS-SB / CS-SBF					Glass interior panel, without handrail lighting, slim handrail guide rail
	CS-B / CS-BF					Glass interior panel, without handrail lighting, ordinary handrail guide rail
	CS-LB / CS-LBF					Glass interior panel, with handrail lighting, ordinary handrail guide rail
	CP-B / CP-BF					Stainless steel interior panel (non-standard response)
Operating environment	Indoor, semi-outdoor					Semi-outdoor: with canopy, non-standard confirmation is required
Reducer	Worm					
Handrail driving mode	Friction wheel drive					
Drive system	Direct drive system					
	VVVF drive system					Bypass variable frequency by default / full variable frequency, which requires non-standard confirmation
Driving power supply	380V/400V/415V 50Hz/60Hz three-phase five-wire system					Special confirmation is required for other specifications
Lighting power supply	100V~240V 50Hz / 60Hz single phase					
Handrail height(mm)	910					Standard
	1000					Optional
Applicable standard	GB16899-2011 / EN115-1:2017					non-standard confirmation is required for other standards

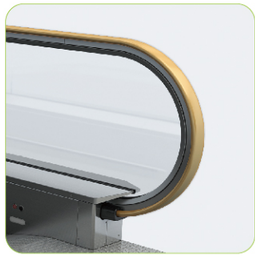
Personalized Configuration of Decorative Components



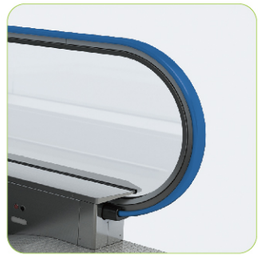
Handrail

NT-Black
(Standard)

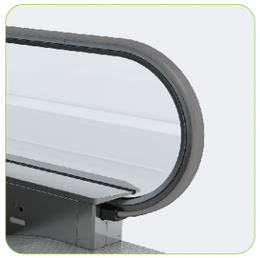
NT-Red
(Optional)



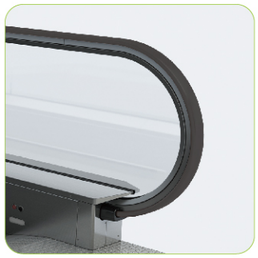
NT-Beige
(Optional)



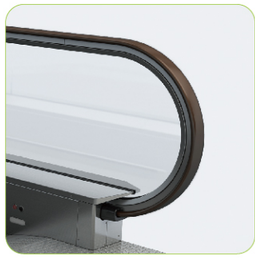
NT-Blue
(Optional)



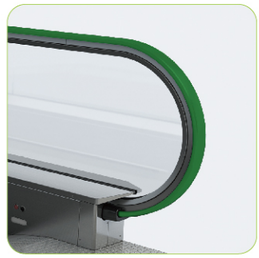
NT-Gray
(Optional)



NT-Charcoal
(Optional)



NT-Brown
(Optional)

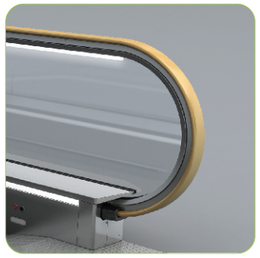


NT-Green
(Optional)

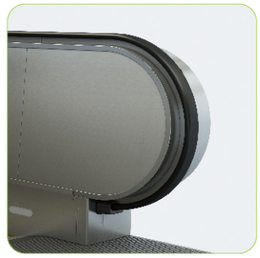
Balustrade

CS-SB/CS-SBF
Vertical handrail, hidden handrail profile rail, without handrail lighting

CS-B/CS-BF
Vertical handrail, large handrail profile rail, without handrail lighting

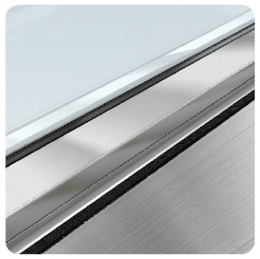


CS-LB/CS-LBF
Vertical handrail, large handrail profile rail, with handrail lighting



CP-B/CP-BF
Inclined handrail, with interior panel made of stainless steel plate

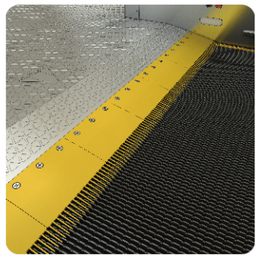
Skirt



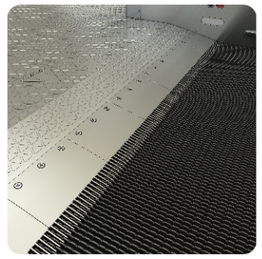
Hairline-finish SUS

Fluoridized SUS (black)

Comb



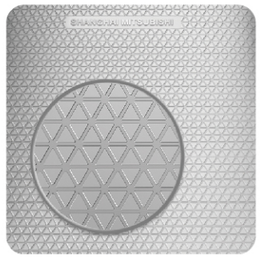
Yellow aluminium alloy



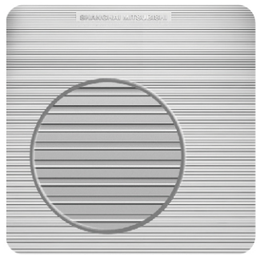
Silver aluminum alloy

Personalized Configuration of Decorative Components

Floor Plate



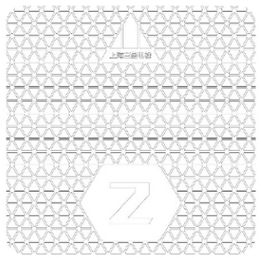
ZCY-F134P
Triangular type
Stainless steel



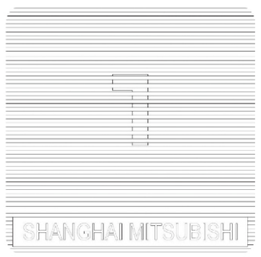
ZCY-F21P
Stripe type
Aluminum

ZCY-F12P
Staggered slot type
Stainless steel

ZCY-F02P
Staggered slot type
(with the groove coated)
Stainless steel



ZCY-F134 Floor number

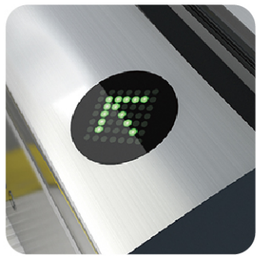


ZCY-F21 Floor number

ZCY-F02/ ZCY-F12 Floor number

Operation Indicator

ZIN-01
Outer deck arch RUN indicator, for indoor models only,
suitable for glass interior panels

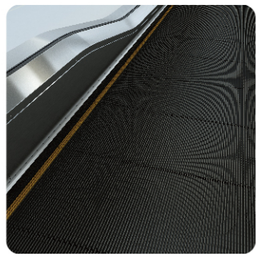


ZIN-02
Inner deck embedded RUN indicator,
suitable for glass interior panels

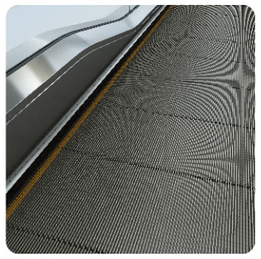
ZIN-03
Outer deck slope RUN indicator,
suitable for glass interior panels

ZIN-05
Intelligent terminal operation indicator
Applicable when intelligent terminals are available

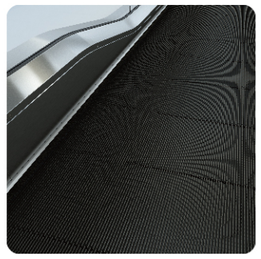
Pallet



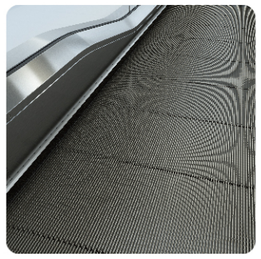
Aluminum alloy pallet
Yellow resin strips at three sides
Black gray coating (Optional)
(Small pedal without yellow strip)



Aluminum alloy pallet
Yellow resin strips at three sides
Silver gray coating (Optional)
(Small pedal without yellow strip)

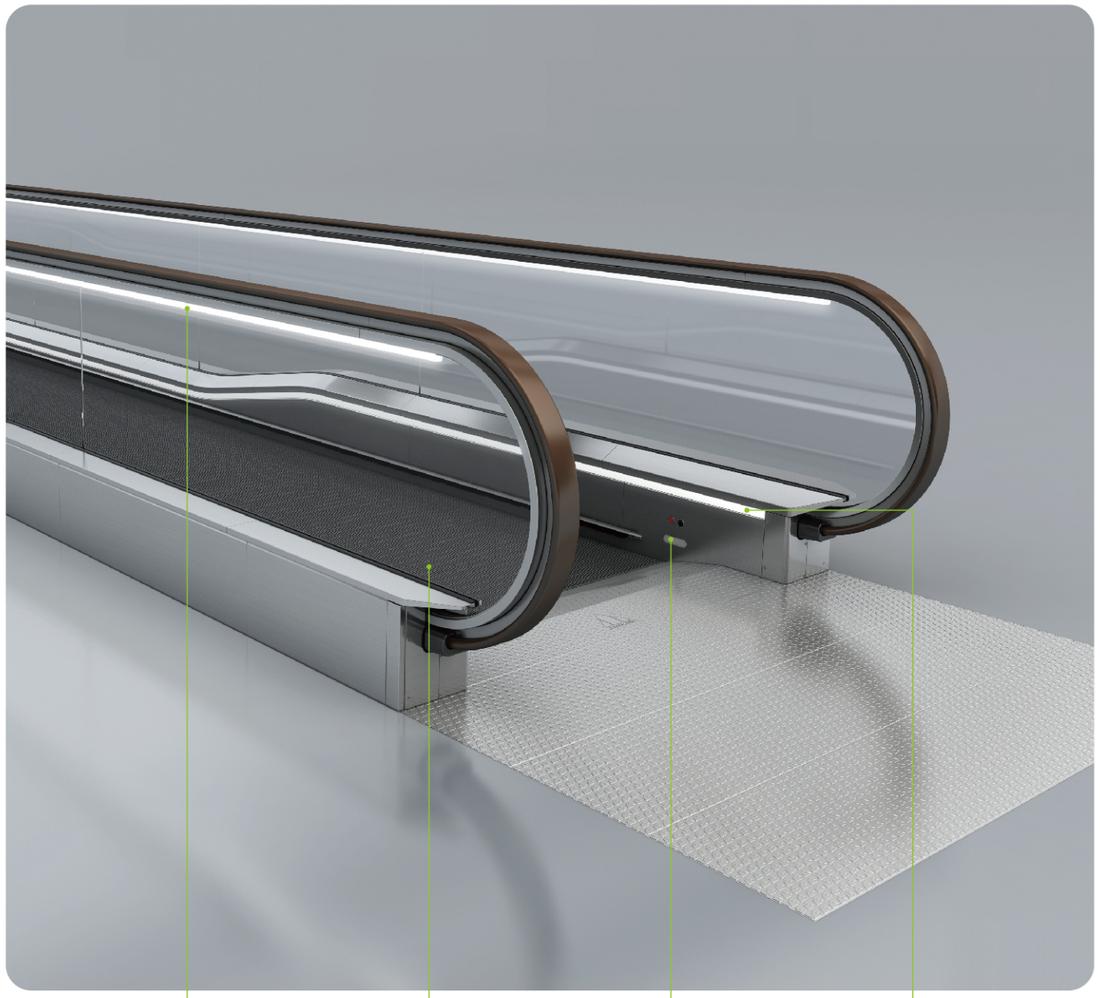


All aluminum alloy pallet
Black gray coating



All aluminum alloy pallet
Silver gray coating

All LED Lighting System



Handrail Lighting
Colors can be selected
applicable to CS-LB/CS-LBF only

Under-pallet Lighting
Green

Comb Lighting
Colors can be selected

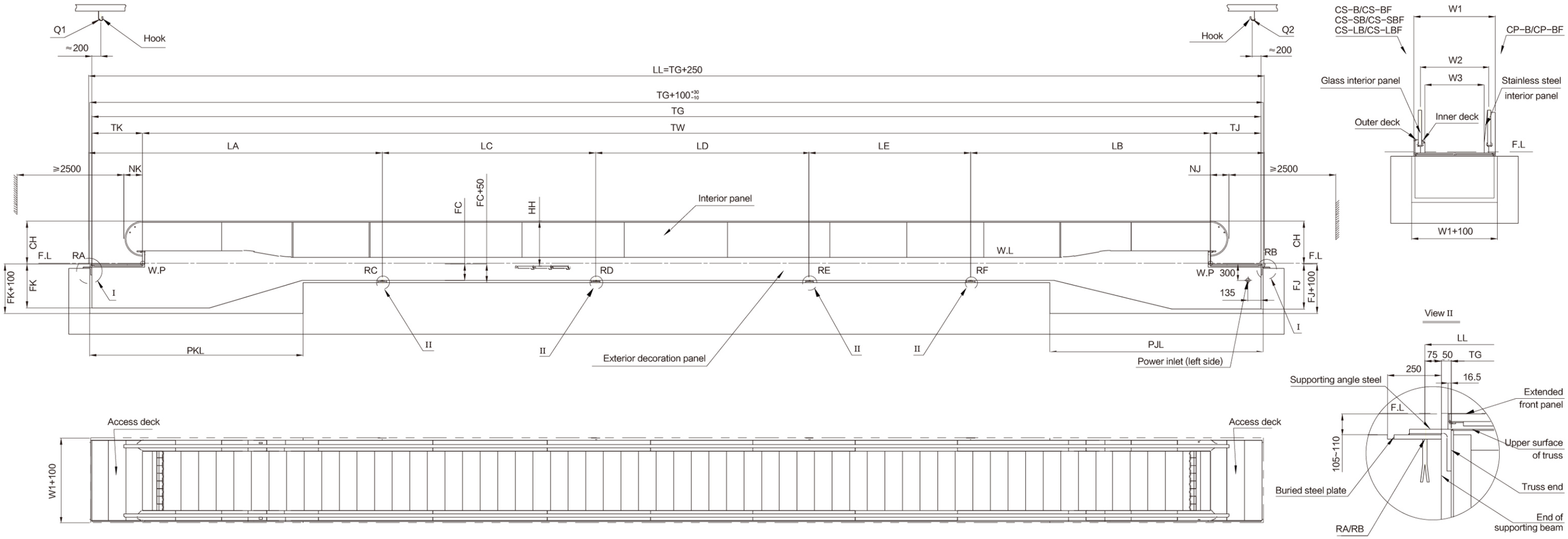
Continuous Skirt Lighting
Colors can be selected

Optional Lighting Colors

Optional		Non-standard (contact SMEC)				
White	Light blue	Warm white	Blue	Green	Red	Orange

Note:
1. The lighting system is optional.
2. Comb lighting/under-pallet lighting uses linkage control (which is switched on/off with the moving walk); handrail lighting/skirt lighting uses manual control (which is switched on/off with the key switch of the moving walk or manually through the multi-functional operating panel).
3. Handrail lighting/skirt lighting is controlled manually (with the key switch or multifunctional operation panel on the escalator equipment)

Civil construction drawing of horizontal moving walk

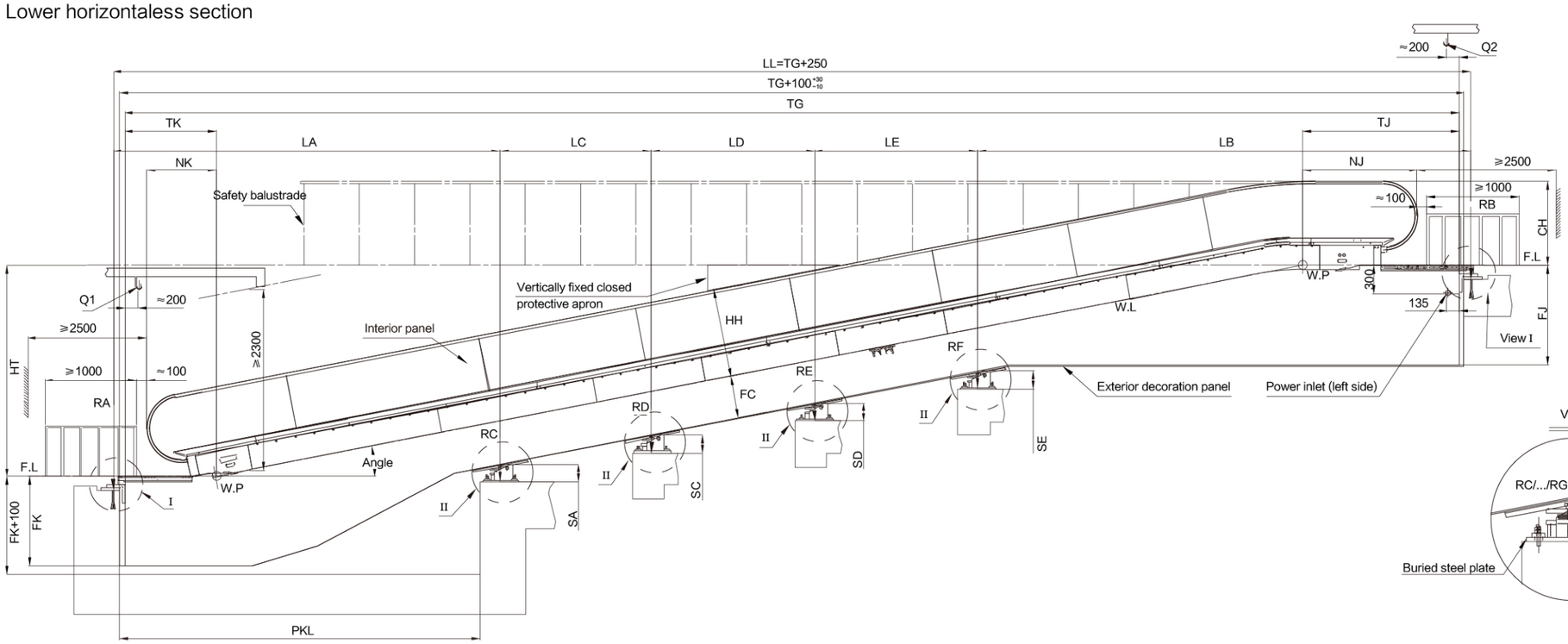


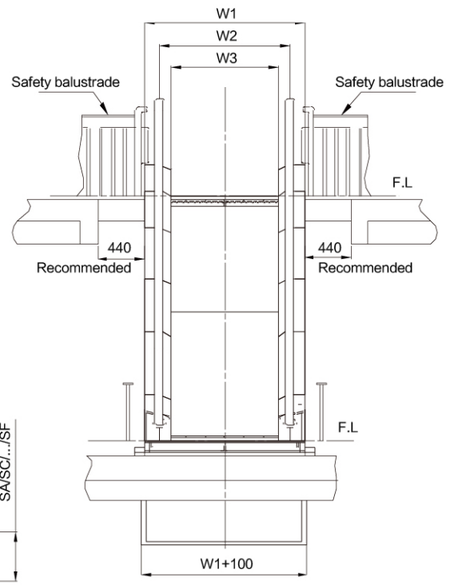
Dimension category	Dimension range (mm)	Criteria
Top truss length-TJ	1186, 1486	
Bottom truss length-TK	1186	
Top truss depth-FJ	1060, 1170, 1270	
Bottom truss depth-FK	1020	
Center truss depth-FC	540	Standard truss
	400	Center shallow truss
Middle handrail height-HH	959	Standard CH=910mm
	1049	Optional CH=1000mm
Upper balustrade length-NJ	391	CH=910mm
	436	CH=1000mm
Lower balustrade length-NK	391	CH=910mm
	436	CH=1000mm

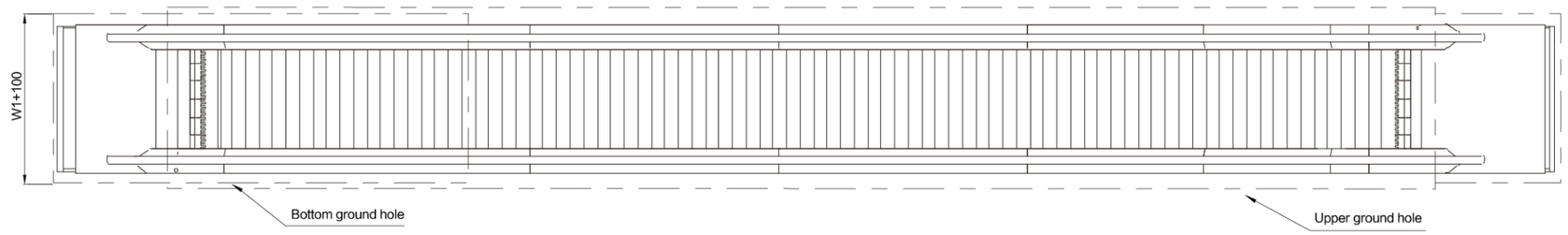
Dimension category	Dimension range (mm)			Criteria
	1200	1400	1600	
Moving walk width-W1	1491	1689	1887	
Pit width	1591	1789	1987	
Lower pit length-PKL	5000			
Upper pit length-PJL	5000			TJ=1186
	5300			TJ=1486
Intermediate support distance-LA	5200~9000			
	6450			Recommended value
Intermediate support distance-LB	5200~9000			
	6200			Recommended value, TJ=1186
	6500			Recommended value, TJ=1486
Intermediate support distance-LD/LE/LF...	5000~11000			
	10800			Recommended value, FC=540
Intermediate support distance-LC	5000~11000			This support is determined finally

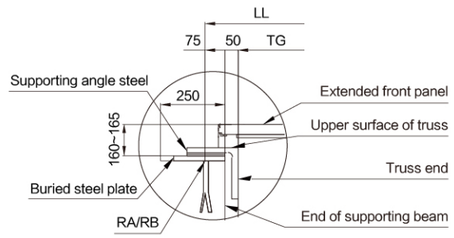
Civil construction drawing of inclined moving walk

Lower horizontaless section







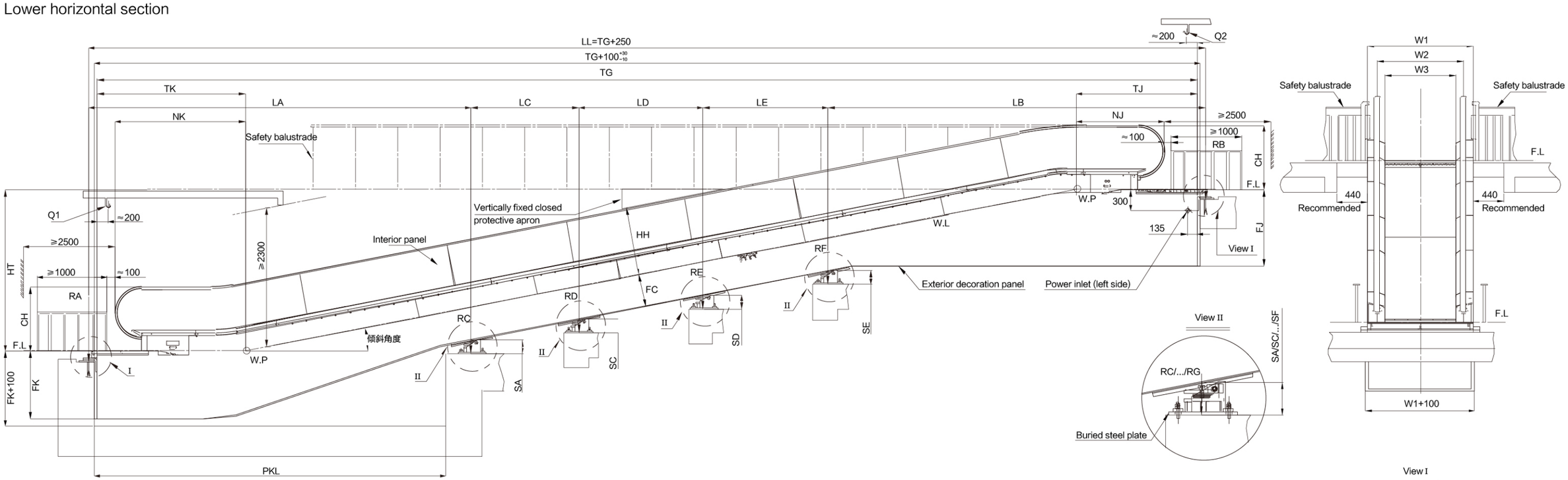


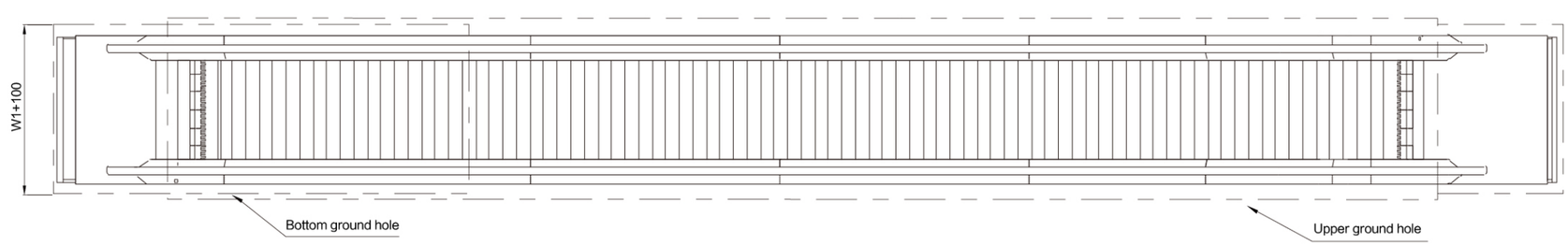
Dimension category	Dimension range (mm)	Criteria
Top truss length–TJ	1708, 2008	
Bottom truss length–TK	990	
Top truss depth–FJ	1080, 1290	
Bottom truss depth–FK	960	
Center truss depth–FC	452	
Middle handrail height–HH	959	Standard CH=910mm
	1049	Optional CH=1000mm
Lower pit length–PKL	3900	Angle=12°
	4100	Angle=11°
	4300	Angle=10°
Pit width	1591	1200
	1393	1000

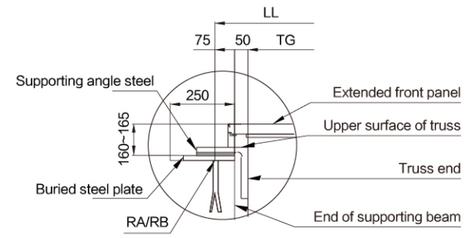
Dimension category	Dimension range (mm)	Criteria
Moving walk width–W1	1491	1200
	1293	1000
Upper balustrade length–NJ	1246	CH=910mm
	1291	CH=1000mm
Lower balustrade length–NK	738	CH=910mm
	792	CH=1000mm
Intermediate support distance–LA	(TK+3500)~15000	
Intermediate support distance–LB	(TJ+3500)~15000	
Intermediate support distance–LC/LD/LE...	500~15000	
Supporting beam span–TG+100	(HT–19.3)×4.7046+TJ+TK+100	Angle=12°
	(HT)×5.1446+TJ+TK+100	Angle=11°
	(HT+19.3)×5.6713+TJ+TK+100	Angle=10°

Civil construction drawing of inclined moving walk

Lower horizontal section







Dimension category	Dimension range (mm)		Criteria
	Distance from horizontal entrance is 405mm	Distance from horizontal entrance is 810mm	
Top truss length-TJ	1708, 2008	2113, 2413	
Bottom truss length-TK	2288	2693	
Upper balustrade length-NJ	1246	1651	CH=910mm
	1291	1696	CH=1000mm
Lower balustrade length-NK	1826	2231	CH=910mm
	1871	2276	CH=1000mm
Lower pit length-PKL	5000	5400	Angle=12°
	5200	5600	Angle=11°
	5700	6100	Angle=10°
Supporting beam span-TG+100	(HT-39.7)×4.7046+TJ+TK+100	(HT-53.8)×4.7046+TJ+TK+100	Angle=12°
	(HT)×5.1446+TJ+TK+100	(HT)×5.1446+TJ+TK+100	Angle=11°
	(HT+39.7)×5.6713+TJ+TK+100	(HT+53.8)×5.6713+TJ+TK+100	Angle=10°

Dimension category	Dimension range (mm)	Criteria
Top truss depth-FJ	1080, 1290	
Bottom truss depth-FK	960	
Center truss depth-FC	452	
Middle handrail height-HH	959	Standard CH=910mm
	1049	Optional CH=1000mm
Moving walk width-W1	1491	1200
	1293	1000
Pit width	1591	1200
	1393	1000
Intermediate support distance-LA	(TK+3500)~15000	
Intermediate support distance-LB	(TJ+3500)~15000	
Intermediate support distance -LC/LD/LE...	500~15000	