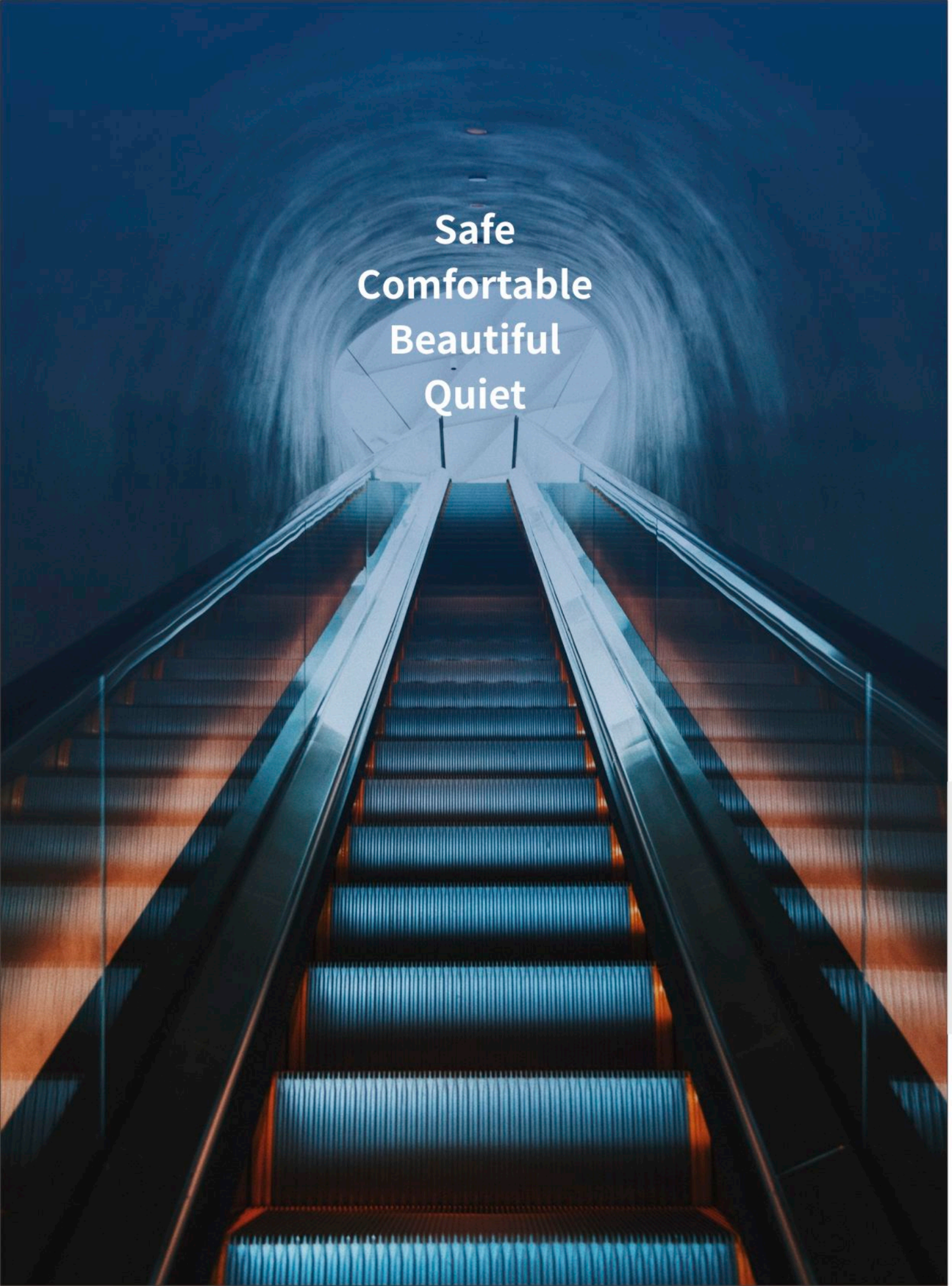
XIZI ELEVATOR GROUP(XIC)

--OEM&ODM DIVISION–

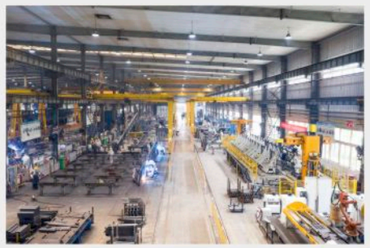


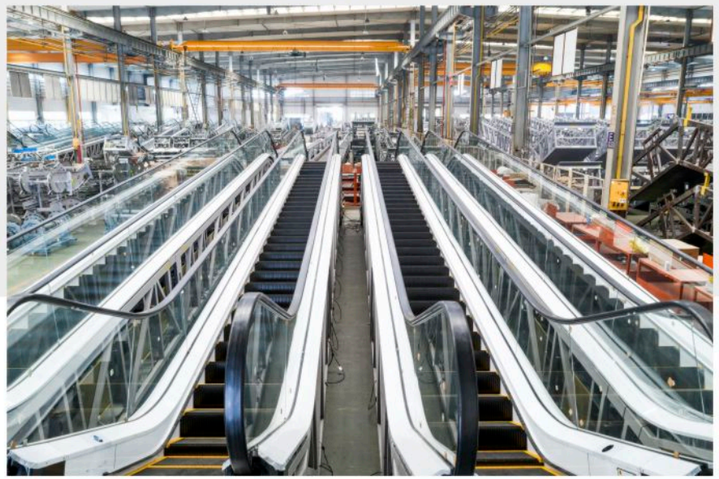





# COMMERCIAL ESCALATOR/ TRAVELATOR

- The square tube truss structure with elegant design
- Escalator/travelator drive system independently developed
- Exquisite side plate
- Lean production and reliable tooling guarantee
- Provide safe, comfortable, beautiful and quiet escalator products for supermarket, shopping mall, hotel, complex and other places





## COMMERCIAL ESCALATOR/TRAVELATOR

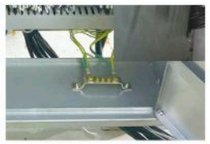
# Safe and stable internal structure

**SAFETY SYSTEM**

Escalators and travelators are sold all over the world, which meet the requirements of various technical standards of the United states, Europe, Asia and other relevant countries or regions, comply with the Chinese standard GB 16899-97(equivalent to EN115), the electrical system meets the requirements of CENELEC and IEC standards, and has a more comprehensive and rigorous safety system.

### Auxiliary Brake

The auxiliary brake is located in the upper landing, and acts through the wedge and the brake disc installed on the main shaft drive by using the friction principle.(It is used together with the main drive chain safety device, overspeed limiting device and anti non operation reversing device, and is excited by the action of the above protection device.)



### Safety Grounding Protection (此处对应图5：安全接地保护)

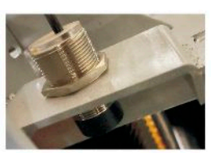
All electrical components on the escalator are safety grounded and directly connected to the earth through the truss frame

### Non Operational Reversal Safety Device

The brake of the machine equipped with a sensor to monitor the speed of the motor. When the escalator is reversed, the sensor will monitor the corresponding input signal and send the signal to the main control board for the safety braking of machine.

### Step chain loose and broken protection device

The safety switch is installed on both sides of the lower leveling tension frame. If the step chain breaks into abnormal elongation, the safety switch will act and escalator will stop.



### Step Missing Detection

Two metal detection sensors are installed at the K-down turning position of the escalator. When the step is missing, the sensor will detect and transmit it to the control board. The escalator will stop and can’ t start.

### Handrail Entry Protection

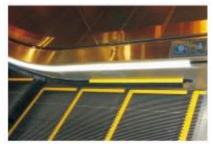
The safety brush at the entrance of the handrail is installed at the entrance of upper an bottom. If there is matter stuck between the handrail and entrance, the safety switch behind the entrance brush will act to stop the escalator. At the same time, the brush protection can effectively prevent children’ s fingers from getting into the entrance of handrail.

### Thermal Protection Device

When the temperature of the machine exceeds the set temperature, the escalator will stop due to the overheating of the machine. The overheat protection switch is located in the motor coil.

### Anti Static Wheel of Handrail

pecial anti-static treatment is adopted for anti deflection wheel of handrail to ensure effective absorption of static electricity generated by passengers.

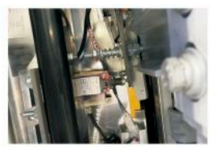


### Skirt Panel Brush

An anti pinch brush is installed on the surface of the skirt panel and above the steps, which can effectively prevent passengers’ clothes from being clipped into the skirt panel and the side gap of the steps, so as to protect the safety of the passengers, at the same time, the inclined aluminum alloy brush base is adopted to prevent children from standing on the base and effectively prevent children from climbing.

### Safety Protection Device for Step Collapse or Roller Breakage

The device is located in the inclined section close to the upper and bottom landing. If there is a step collapse or roller damage, the safety switch will act and the escalator will stop. When the escalator is running again, it need to be reset manually.

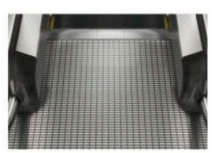


### Comb Safety Device

The front end of the comb plate is mounted on the spring. If there is object clipped between the moving step and the comb plate, the comb plate will move in the vertical or backward direction, trigger the safety switch on both sides of the comb plate, and the escalator will stop automatically.

### Emergency Stop Button and Fault Display

The escalator is located on the skirt panel near the entrance of the handrail on the upper and down landing. In case of emergency, the escalator can stop by pressing the red emergency stop button to protect the safety of passengers. Emergency stop button and key switch are provided, In case of failure, the failure code is displayed.



### Front Panel Open Monitoring

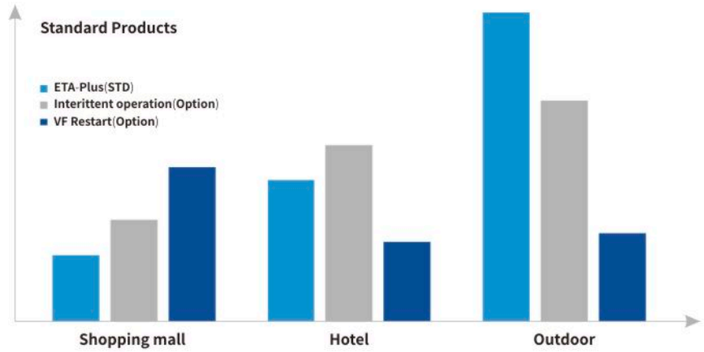
When the escalator is normal operation, the floor panel is not allowed to be opened, The monitoring switch is installed under the front panel of upper and bottom machine room of the escalator. If the front panel is not completely reset and covered, the escalator can not be started normally.

COMMERCIAL ESCALATOR/TRAVELATOR

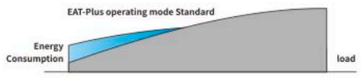
# Energy Saving



**Energy saving comparison chart of escalator in different places under the same working condition**

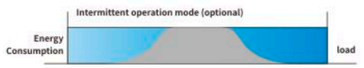



Escalator and travelator can provide different kinds of energy-saving mode




## ETA-PLUS Operation Mode

The escalator is started in star connection mode. When the set number of people load is not reached, the machine is driven to operate in star connection mode. Under this mode, the operating efficiency of the machine can be improved to the maximum. When the set load is reached, the control system will automatically detect and switch to the triangle connection mode. In this mode, sufficient output power can be ensured the stable operation of the system.

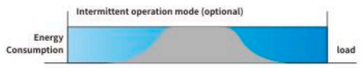



## Intermittent Operation Mode (Standard Auto Restart)

After the escalator is started, when there is no load running for the set time, the escalator will stop automatically after running for a period of time. When passengers are detected, the escalator will start running automatically

## Intermittent Operation Mode (Photoelectricity VF low speed)

The escalator starts smoothly in frequency conversion mode, and stops automatically when there is no load running within the set time; when passengers are detected, the escalator will automatically accelerate to the rated speed, and the escalator will automatically slow down to low speed and low energy consumption after the passengers leave for a certain time.




## VF Restart Mode

The escalator starts smoothly in VF Restart mode, and automatically decelerates to a complete stop when there is no load running within the set time; when passengers are detected, the escalator automatically accelerates to the rated speed, and the escalator automatically decelerates to stop after the passengers leave for a certain time, so as to realize energy saving and prolong service life.

## COMMERCIAL ESCALATOR/TRAVELATOR

# Reliable

### Special Drive System

Compare with the traditional drive system, the special drive system has technical improvement, which makes the escalator and travelator more powerful and stable in driving force, more timely and reliable braking, and more comprehensive protection function.

### Arm Brake

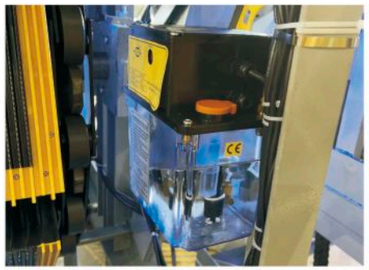
The reliable and easily adjustable arm type brake is placed between the motor and the gearbox to ensure smooth braking performance and braking distance.

### Overspeed Governor Device

When the motor exceeds 20% of the rated speed, the overspeed governor will automatically cut off the power supply in the machine, and the anti reverse device will prevent the motor from non operational reversal. The thermal protection of the motor in the machine can ensure the safety operation of the motor.

### Automatic Lubrication System

The automatic lubrication system controlled by microcomputer ensure the low noise and vibration of the chain roller in operation, and prolongs the service life of the chain roller. The oil pump controlled by microcomputer can add quantitative lubricating oil to each important part of the whole equipment.



### Track System

The use of galvanized guide rail, high-strength wear-resistant polyurethane roller and high-strength plate chain make the product have corrosion resistance and prolong service life.

### Double guiding mechanism

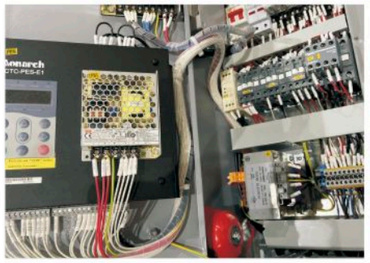
The step double guiding ring closed loop mechanism has strong rigidity and high stability which ensures the stability and safety of the step operation.

## COMMERCIAL ESCALATOR/TRAVELATOR

# Reliable

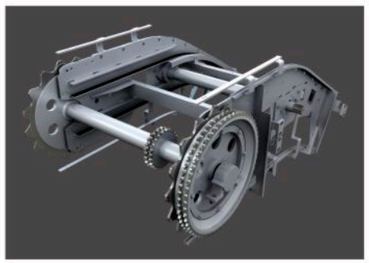
### Control System

The controller is located at the upper end of the escalator. It can fully monitor the operation status of the escalator, eliminate the hidden dangers in time, and reduce the maintenance time. The whole controller adopts flexible design ideas with complete functions, large capacity and fast response speed. It can meet the different requirements of customers and support the realization of various safety functions.



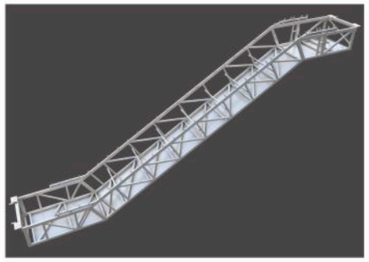
### Compact Track System

Special guide rail support track system is designed. The guide rail bracket is cut by laser with high precision, which can fix the guide rail accurately. After positioning, press riveting is used to fix it to prevent the guide rail displacement caused by transportation or vibration. The surface of the guide rail profile is galvanized, and the guide rail in the middle section is supported by the guide rail bracket to ensure the smooth and stable operation of the steps/pallets.



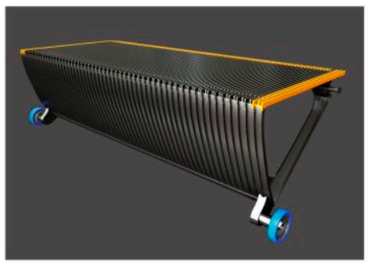
### Truss

The truss is welded with rectangular square tube material. Through scientific finite element strength and stiffness analysis and calculation, the firm stability and bearing capacity can be ensured, and the service life of escalator can be effectively extended.



### High Strength Step

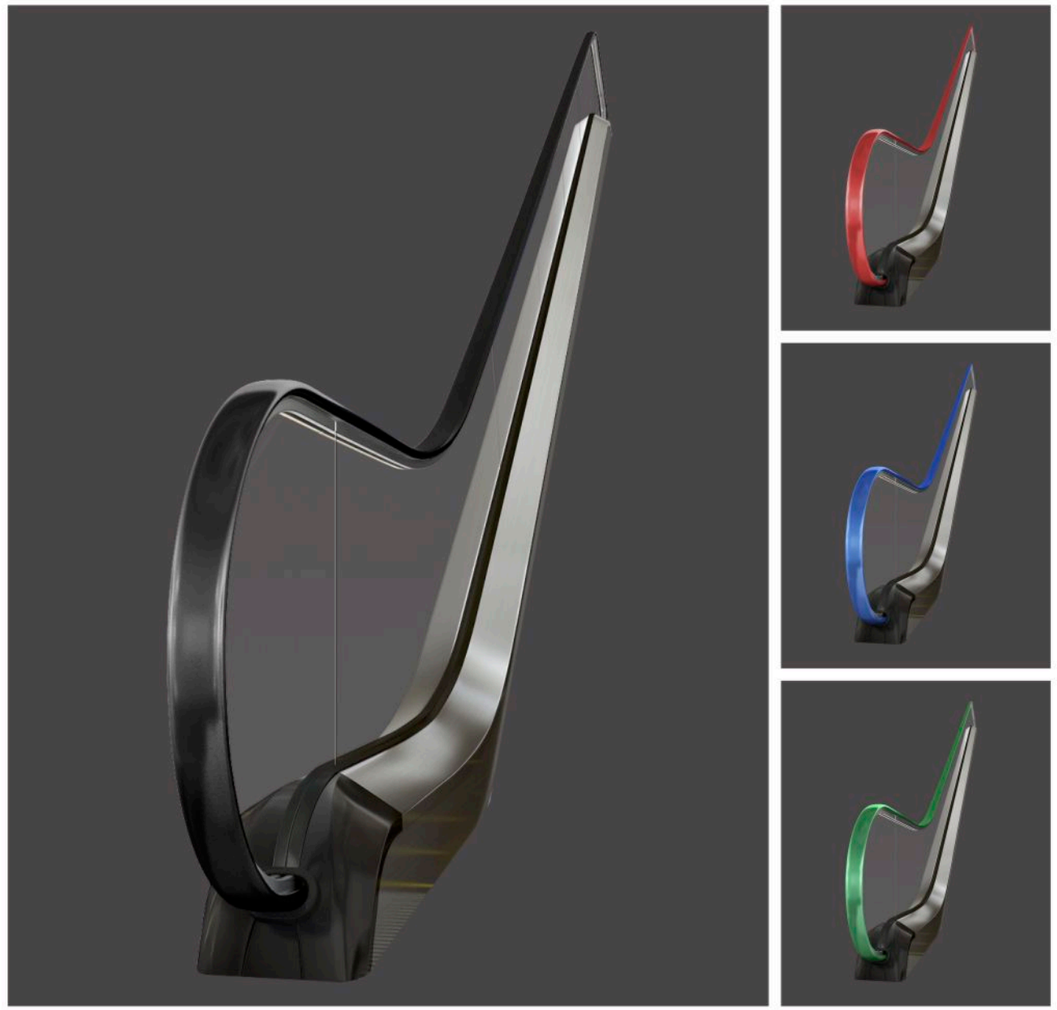
Anti-skidding treatment, high strength stainless steel step. National standard or higher level of fire prevention step frame. Step past dynamic load test of 20 million times, far more than national standard.



COMMERCIAL ESCALATOR/TRAVELATOR

# Optional

## HANDRAIL BELT



## OUTER CLADDING

COMMERCIAL ESCALATOR/TRAVELATOR

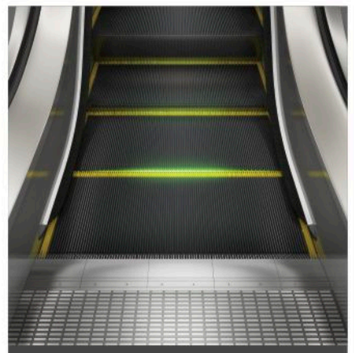
# Lighting System

## HANDRAIL LIGHTING

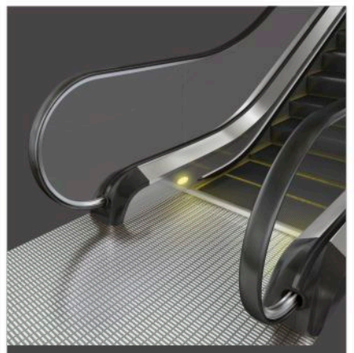




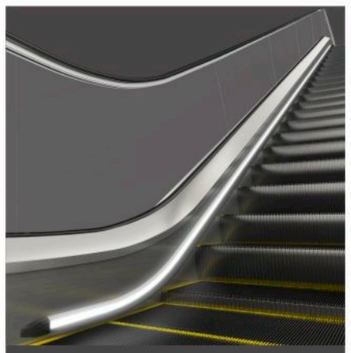




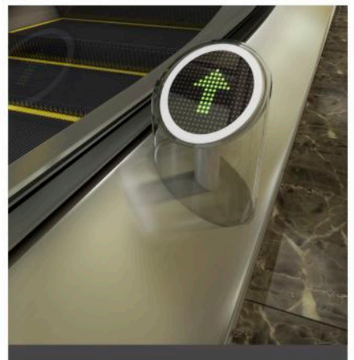
STEP LIGHTING



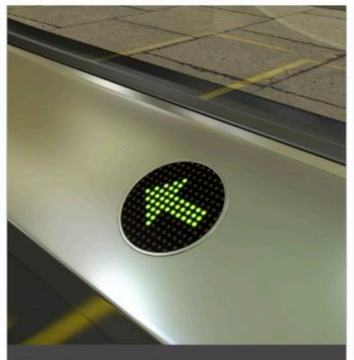
COMB LIGHTING



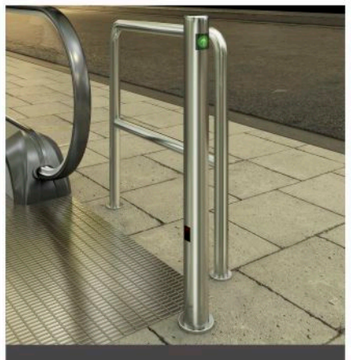
SKIRT PANEL LIGHTING



TRAFFIC FLOWLIGHT - O TYPE



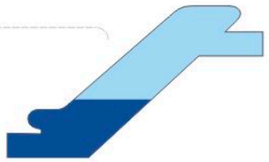
TRAFFIC FLOWLIGHT - I TYPE



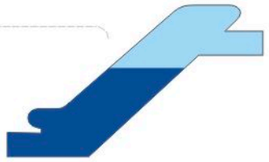
MULTI- FUNCTION PILLAR

# ESCALATOR PRE INSTALLATION

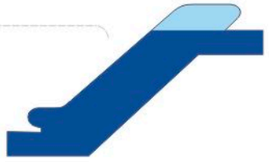
**PACKAGE A**: **30% of materials completed**
**Truss system/Track system/Drive system**

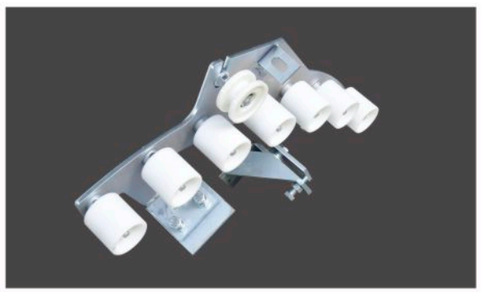


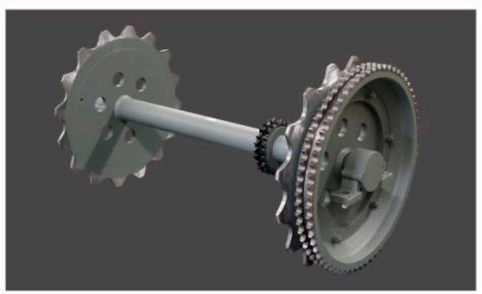
**PACKAGE B**: 60% of materials completed
Package A/Machine/ Handrail/Balustrade/Electrical/Lubrication



PACKAGE **C**: 90% of materials completed
Package B/Step chain/Step/Skirt panel

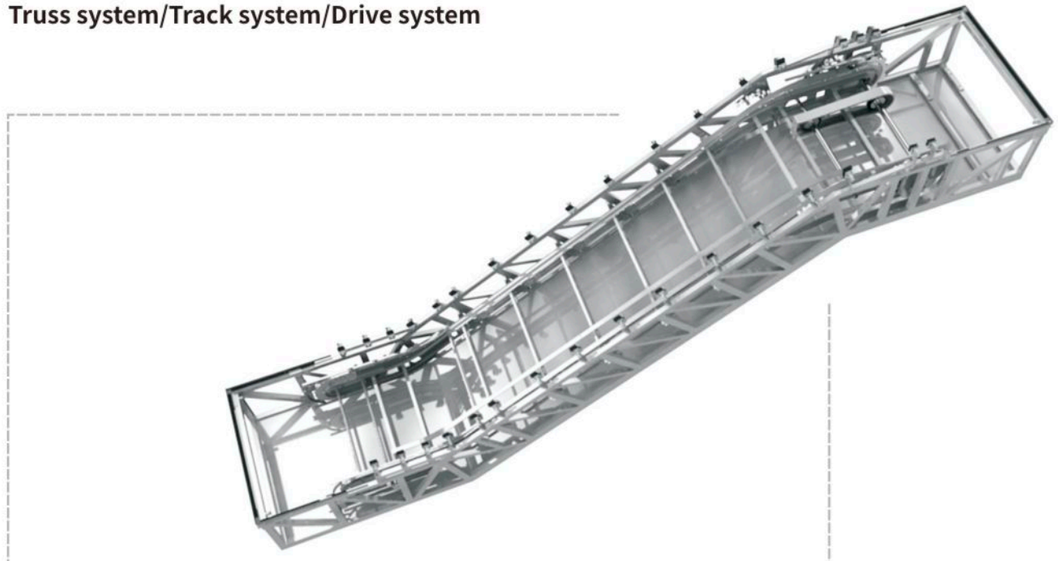






## ESCALATOR PRE INSTALLATION
# Package A

**PACKAGE A: 30% of materials completed**
**Truss system/Track system/Drive system**



**Advantage**

¤ No need to invest the Gantry tooling

¤ Reduce assembly time, improve productivity and efficiency

¤ Reduce material management and improve supply chain quality and structure

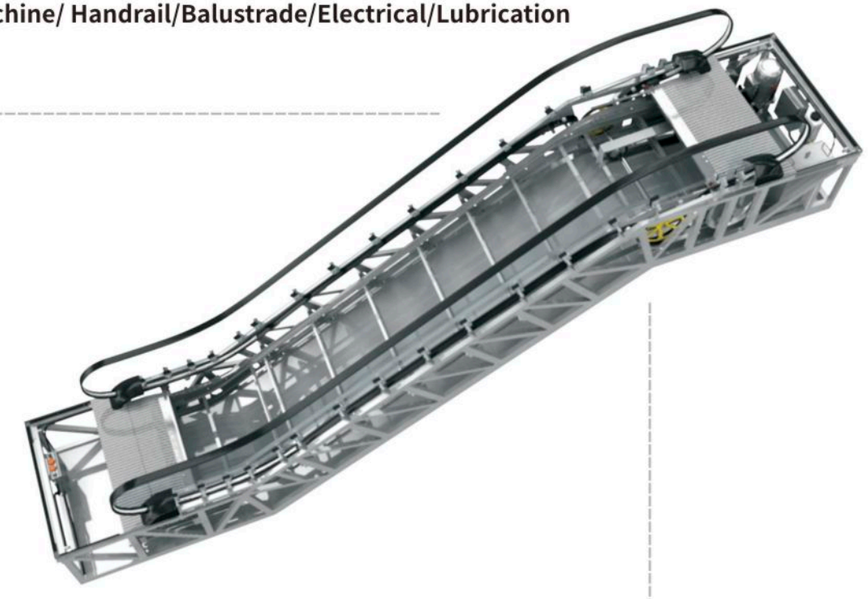
Package A integrates truss system, track system and drive system, providing you with a complete set of about 30% configuration. Parts preassembly and truss integrated transportation, effectively for you to save the time and cost of the whole escalator assembly; The track system uses tooling for precise positioning, which can reduce the input of fixed asset cost for you, and also solve the problems of insufficient workshop space and capacity bottleneck for you.

ESCALATOR PRE INSTALLATION

# Package B

**PACKAGE B：60% of materials completed**

**Package A/Machine/ Handrail/Balustrade/Electrical/Lubrication**



**Advantage**

- Solve two moving system(Track/handrail)
- Reduce human resources investment, reduce employment risks and costs
- Reduce the difficulty of assembly, optimize the workshop space and improve the production capacity

Package B is based on Package A, adding the machine, electrical system, lubrication system, handrail system, handrail entrance and balustrade system, providing you with about 60% of the complete set of configurations. Package B focuses on the machine electrical system, track and handrail movement system, reduce your material management costs, optimize the quality and structure of your supply chain, reduce your human resources investment and risk, further release workshop space, greatly improve productivity efficiency.

ESCALATOR PRE INSTALLATION

# Package C

**PACKAGE C： 90% of materials completed**

**Package B/Step chain/Step/Skirt pane**

**Advantage**

- Solve technical/manufacturing/process bottlenecks and inputs
- Show manufacturing strength
- Provide an optimized cost structure

On the basis of Package B, Package C adds step chain, step, front plate and skirt plate, reaching about 90% of the whole set of configuration. Package C provide you with the optimal cost structure, efficient solution to technology research and development, assembly manufacturing and production process bottlenecks, reduce investment, to fully support you to create a show of enterprise strength and brand image of the workshop.

## COMMERCIAL ESCALATOR/TRAVELATOR
# Function Table

### STANDARD FUNCTION

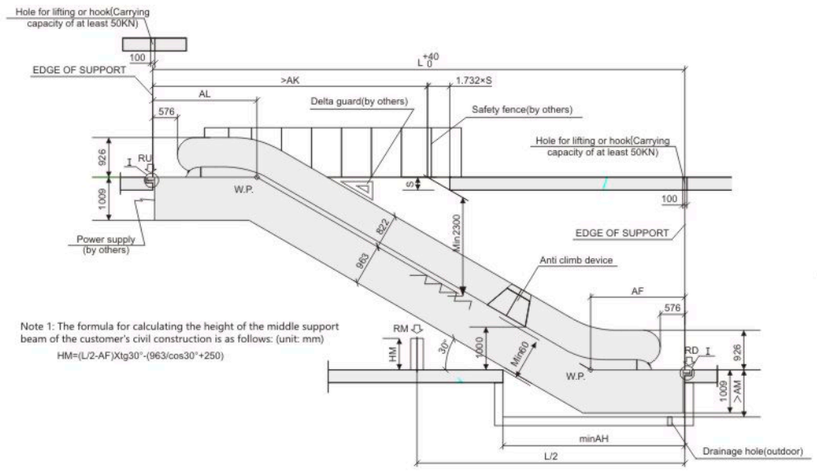
| NO | FUNCTION | DESCRIPTION |
|---|---|---|
| S1 | Handrail entry protection | When a matter enters the entrance of the escalator with the handrail belt, the protective switch at the handrail entrance shall disconnect the safety circuit and stop the escalator immediately. |
| S2 | Comb plate protection | When the steps are deformed or foreign bodies enter the comb teeth, the comb plate will beat up, and the comb tooth protection switch will act to disconnect the safety circuit and make the escalator stop running immediately. |
| S3 | Step chain loosen protection | Test the loosen or breakage of step chains. |
| S4 | Safety Protection Device for Step Collapse or Roller Breakage | Detect the steps for collapse or deformation. |
| S5 | Overspeed protection | When the escalator speed is 110% over the rated speed, the working brake acts to stop the escalator; when the escalator speed is 120% over the rated speed, the system simultaneously acts with the working brake and auxiliary brake to stop the escalator; and prevents the escalator from starting again before manual reset fault. |
| S6 | Non Operational Reversal Safety Device | When the escalator speed is less than 15% of the rated speed, the fault shall be reported, and the working brake will stop the escalator urgently. When the upside is reversed, the auxiliary brake will be triggered, and the escalator will be restarted before the manual reset fault. |
| S7 | Handrail speed detection | When the actual speed of the handrail belt deviates from the step, pedal or tape is greater than-15% and the duration is greater than 15S, the working brake acts to stop escalator urgently. |
| S8 | Grounding system | When the safety circuit is grounded, use the control circuit to power off. |
| S9 | Phase fault protection | Protect the power supply for phase absence and misphase. |
| S10 | Handrail Antistatic Brush | The static electricity caused by the friction of the running handrail belt is eliminated by electrostatic brush. |
| S11 | Step Antistatic Brush | The static electricity caused by the friction during the operation is eliminated by the electrostatic brush. |
| S12 | Step Anti-rebound Device | Press the step to avoid rebounding for some reason. |
| S13 | Machine room guard | A protective plate is installed at the place where the steps turn over in the upper and bottom machine room to prevent damage caused by maintenance personnel touching the steps in operation. |
| S14 | Motor Overload and Overhead protective Device | When the motor overload is detected, the system will disconnect the output and brake; when the motor is abnormally hot, the output and brake power supply through the detection switch. |
| S15 | Emergency stop | Through the control cabinet emergency stop, the safety circuit can be disconnected, disconnected motor power and brake power. |
| S16 | Main circuit breaker | When the main circuit is overloaded or short circuit, the circuit breaker on the main circuit will be disconnected to protect the equipment. |
| S17 | Missing Step Detect Device | In the running state of the escalator, when the steps are found missing, the system will operate the working brake to stop the operation of the escalator in an emergency and prevent the escalator from starting again before manually resetting the fault. |
| S18 | Brake Release Protection Device | Detect the brake switch on real-time. |
| S19 | Hand Winding Protection | When the escalator needs to be winding, the winding switch will disconnect the safety circuit to prevent personal injury or equipment damage caused by the sudden start of the escalator during the winding. |
| S20 | Inspection Running | Pull out the maintenance plug, insert the maintenance box, and perform the up-down maintenance operation. |
| S21 | Floor Plate lifting detection | The floor plate is opened, the safety switch action, the escalator stops running, and the escalator can only run in the maintenance condition. |
| S22 | Automatic lubrication system | Automatic lubrication when the escalator is running. The refueling time, refueling times, refueling interval time and refueling stop time can be set through the parameters. |
| S23 | Start Alarm | During normal or maintenance operation, the alarm rings to remind attention of safety. |
| S24 | Skirt panel brush | Located on both sides above the steps (or pedals) to prevent damage from the cracks between the steps (or pedals) and the skirt panel. |
| S25 | Brake Stopping Distance Detect Device | When the escalator stops running, if the stop distance exceeds 1.2 times of the allowable value, the fault is reported; If the stop distance exceeds 1.4 times of the allowable value, act the additional brake; and prevent the escalator from starting again before the manual reset fault. |

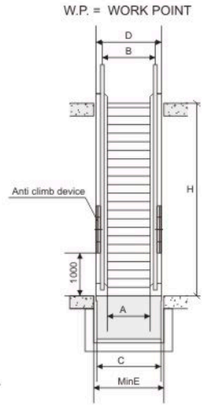
### OPTIONAL FUNCTION

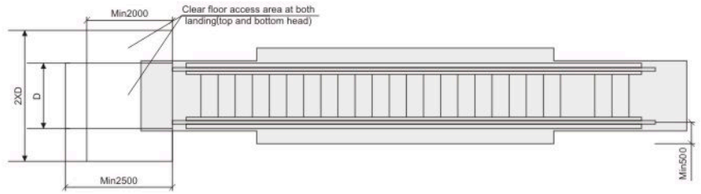
| NO | FUNCTION | DESCRIPTION |
|---|---|---|
| S1 | **Main Drive Chain Breakage Protection** | **Check whether there is breakage or loose of main drive chain.** |
| S2 | **Handrail broken device** | **Check whether there is breakage or loose of handrail.** |
| S3 | **Handrail lighting** | **Located on two sides of balustrade, for lighting and decoration.** |
| S4 | **Skirt panel protection device** | **When a foreign body enters the crack between the step (or pedal) and the skirt panel, the skirt panel protection switch acts to disconnect the safety circuit, so that the escalator stops running immediately.** |
| S5 | **Skirt panel lighting** | **Located on two sides of skirt panels, for lighting and decoration.** |
| S6 | **Step lighting** | **Remind passengers of step leveling.** |
| S7 | **Brake Abrasion Detect Device** | **Check the abrasion of brake during normal running.** |
| S8 | **Traffic flow light (STD. for auto start)** | **Located on the upper and lower end of the escalator, remind the passengers to pay attention to the direction of the escalator.** |

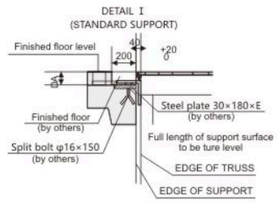
# CIVIL ENGINEERING DRAWING OF COMMERCIAL ESCALATOR

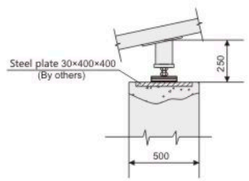
## 30 - Single Escalator



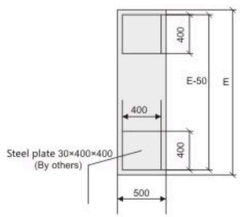




MID Support Detail




MID Support Detail

| A | B | C | D | E | H | Number of flat steps | Step width | AF | AL | AH | AK | L | AM | DA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 600 | 837 | 1100 | 1130 | 1240 | 6000<H≤8000 | 3 | 600 | 2602 | 2963 | 4640 | 6950 | 1.732H+5565 | For Indoor,Outdoor package A =1103 | Without Anti-Vibration pad=108 |
| 800 | 1037 | 1300 | 1330 | 1440 | 1500<H≤6000 | 2 | 1000/800 | 2202 | 2433 | 4240 | 6420 | 1.732H+4635 | For Outdoor package B=1353 with Oil separator | With Anti-Vibration pad=140 |
| 1000 | 1237 | 1500 | 1530 | 1640 | | | 1000/800 | 2202 | 2933 | 4240 | 6920 | 1.732H+5135 | | |

Note: The above parameters are for reference only. The final size is subject to the civil engineering confirmation drawing.

### ⚠ THE WORK THAT CUSTOMER AND CONTRACTOR HAVE TO DO

- This drawing is fit for the products which rise 1.5m≤H≤8m,the permitted height tolerance is -15mm～+15mm.
- There need an intermediate support when L>15.2m.The position is basically centered.
- Before installed, all holes have to be enveloped with the safety guard which height is not less than 1.2m and guarantee the strength is enough.
- There should be anti water inside pit. Outdoor equipment needs a drainage hole (at the basement).
- According to the requirement of the technology data, the power supply with the safety switch is setting at the machine room.The fluctuation of voltage can not over than ±7%. The N wire and earth wire should be separated and the ground resistance is not more than 4 Ω.
- When the distance between the centerline of the handrail and any obstacle is less than 0.5m, a vertical obstruction of not less than 0.3m in height, not presenting any sharp cutting edges should be placed above the balustrade decking.
- If the customer have any special request, should contract after being agreed by the company technology.

### Technical parameter

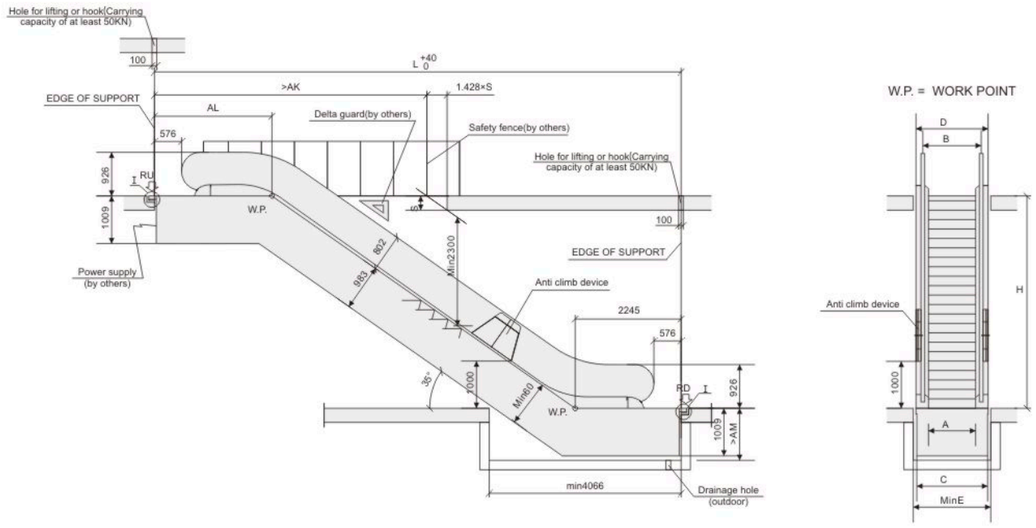
| | |
|---|---|
| APPLICATION | COMMERICAL |
| CODE | HEC |
| STEP WIDTH | A=()mm |
| FLAT STEPS | 2 level ladder/3 level ladder |
| SPEED | 0.5m/s |
| ANGLE | 30° |
| RISE | H=()mm |
| SPAN | L=()mm |
| POWER SUPPLY | 380V three-phase five-wire system 50HZ |
| LIGHTING SUPPLY | 220V 50HZ |
| REACTIONS(Single) | RU=()KN |
| REACTIONS(Single) | RD=()KN |
| REACTIONS(Single) | RM=()KN |

### Support reaction（KN）

| Step width | 2 support points (L:The unit is m) | | 3 support points (L:The unit is m) | | |
|---|---|---|---|---|---|
| | RU | RD | RU | RD | RM |
| 1000 | 4.96L+17 | 4.96L+10 | 2.3L+13.6 | 2.3L+7.1 | 7.16L+4.6 |
| 800 | 4.31L+18 | 4.31L+10 | 2.02L+13.2 | 2.02L+6.8 | 6.33L+4.8 |
| 600 | 3.66L+27 | 3.66L+22 | | | |

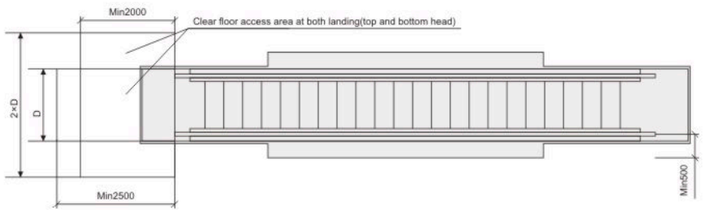
# CIVIL ENGINEERING DRAWING OF COMMERCIAL ESCALATOR

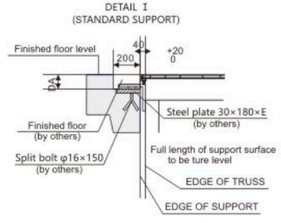
## 35 - Single Escalator










| Step width | AL | AK | L | A | B | C | D | E | AM | DA |
|---|---|---|---|---|---|---|---|---|---|---|
| 600 | 2433 | 6280 | 1.428H+5235 | 600 | 837 | 1100 | 1130 | 1240 | For Indoor,Outdoor package A =1103 | Without Anti-Vibration pad=108 |
| 1000/800 | 2490 | 5780 | 1.428H+4735 | 800 | 1037 | 1300 | 1330 | 1440 | For Outdoor package B =1353 with Oil separator | With Anti-Vibration pad=140 |
| | | | | 1000 | 1237 | 1500 | 1530 | 1640 | | |

Note: The above parameters are for reference only. The final size is subject to the civil engineering confirmation drawing.

### ⚠ THE WORK THAT CUSTOMER AND CONTRACTOR HAVE TO DO

- This drawing is fit for the products which rise 1.77m≤H≤6m,the permitted height tolerance is -15mm~+15mm.
- There need an intermediate support when L>15.2m.The position is basically centered.
- Before installed, all holes have to be enveloped with the safety guard which height is not less than 1.2m and guarantee the strength is enough.
- There should be anti water inside pit. Outdoor equipment needs a drainage hole (at the basement).
- According to the requirement of the technology data, the power supply with the safety switch is setting at the machine room.The fluctuation of voltage can not over than ±7%. The N wire and earth wire should be separated and the ground resistance is not more than 4 **Ω**.
- When the distance between the centerline of the handrail and any obstacle is less than 0.5m, a vertical obstruction of not less than 0.3m in height, not presenting any sharp cutting edges should be placed above the balustrade decking.
- If the customer have any special request, should contract after being agreed by the company technology.

### Technical parameter

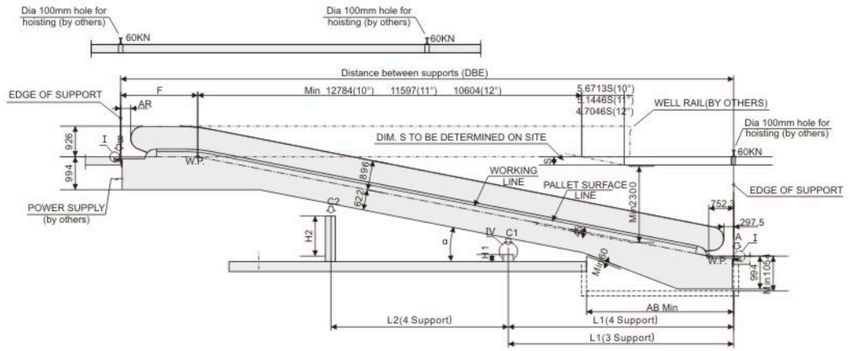
| | |
|---|---|
| APPLICATION | COMMERICAL |
| CODE | HEC |
| STEP WIDTH | A=()mm |
| FLAT STEPS | 2 level ladder |
| SPEED | 0.5m/s |
| ANGLE | 35° |
| RISE | H=()mm |
| SPAN | L=()mm |
| POWER SUPPLY | 380V three-phase five-wire system 50HZ |
| LIGHTING SUPPLY | 220V 50HZ |
| REACTIONS(Single) | RU=()KN |
| REACTIONS(Single) | RD=()KN |

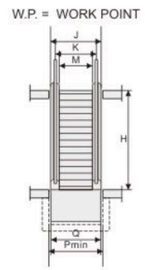
### Support reaction（KN）

| Step width | 2 support points (L:The unit is m) | |
|---|---|---|
| | RU | RD |
| 1000 | 5.11L+13 | 5.11L+5 |
| 800 | 4.41L+15 | 4.41L+9 |
| 600 | 3.76L+18 | 3.76L+12 |

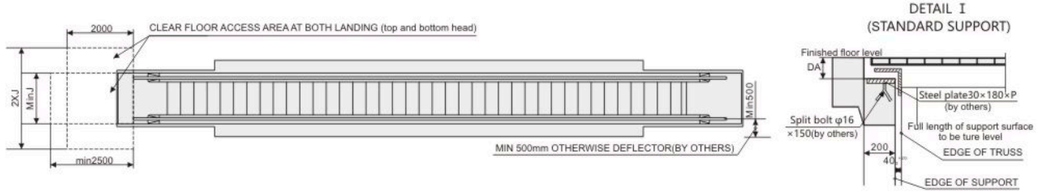
# CIVIL ENGINEERING DRAWING OF COMMERCIAL TRAVELATOR

## Single Escalator




DETAIL I
(STANDARD SUPPORT)







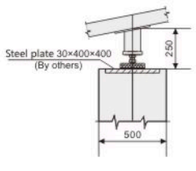
Note 1: THE TRUSS DON'T NEED EXTENSION IN PRINCIPLE, BUT, IF THE CUSTOMER NEED IT REALLY, PLEASE DRAWING THE LAYOUT ACCORDING TO SCALE.

Note 2: FOR SPECIAL CONDITIONS SUCH AS EXTENDED FREE SPAN.EXTERIOR CLADDING EXCEEDING 200 N/m .WIND LOADS OR EARTHQUAKE LOADS PLEASE CONTACT OTIS ESCALATOR HANGZHOU.

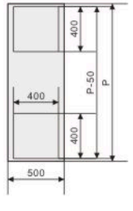
Note 3: ALL GAPS BETWEEN TRAVOLATOR AND BUILDING MUST BE CLOSED WITH ELASTIC MATERIAL.(BY OTHERS)

Note 4: ADOPT 10mm SOFT WIRE CABLE AS THE POWER SUPPLY CABLE.(BY OTHERS)

DETAIL IV




Intermediate Support Detail
(Top view)




| D | DA | AR | AB | F | Q | Pmin | M | K | J | type | Angle of dip |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (4.7046H+3112.8)+40 0 | Without Anti-Vibration pad=108 | 307.3 | 4240 | 2360.8 | 1300 | 1430 | 805 | 1037 | 1330 | 800 | 12° |
| | | | | | 1500 | 1630 | 1007 | 1237 | 1530 | 1000 | |
| (5.1446H+3076.8)+40 0 | With Anti-Vibration pad=140 | 303.3 | 4430 | 2324.8 | 1300 | 1430 | 805 | 1037 | 1330 | 800 | 11° |
| | | | | | 1500 | 1630 | 1007 | 1237 | 1530 | 1000 | |
| (5.6713H+3040.8)+40 0 | | 399.3 | 4730 | 2288.8 | 1300 | 1430 | 805 | 1037 | 1330 | 800 | 10° |
| | | | | | 1500 | 1630 | 1007 | 1237 | 1530 | 1000 | |

## ⚠ THE WORK THAT CUSTOMER AND CONTRACTOR HAVE TO DO

- This drawing is fit for the products which rise 1.5m≤H S6m,thepermitted height tolerance is -15mm-+15mm.
- There need an intermediate support when D>15.0m.The position isbasically centered.There need two intermediate supports whenD>30m.The position is basically average.
- Before installed, all holes have to be enveloped with the safetyguard which height is not less than 1.2m and guarantee the sthenghis enough.
- There should be anti water inside pit.
- According to the requirement of the technology data, the powersupply with the safety switch is setting at the machine room.Thefluctuation of voltage can not over than ±7..The N wire and earthwire should be separated and the ground resistance is not morethan 4 Q.
- When the distance between the handrail centerline and anyobstacle is less than 500mm, the user needs to set up a verticalanti collision baffle at the top of the outer cover, and the heightshould not be less than 300mm.
- If the customer have any special requiest, should cotract afterbeing agreed by the comany technolegy.

## Technical parameter

| | |
|---|---|
| APPLICATION | Automatic walkway |
| CODE | HET-N |
| STEP WIDTH | A=()mm |
| SPEED | 0.5m/s |
| RISE | H=()mm |
| SPAN | L=()mm |
| POWER SUPPLY | 380V three-phase five-wire system 50HZ |
| LIGHTING SUPPLY | 220V 50HZ |
| REACTIONS(Single) | A=()KN |
| REACTIONS(Single) | B=()KN |
| REACTIONS(Single) | C1=()KN |
| REACTIONS(Single) | C2=()KN |

## Support reaction（KN）

1KN=100kg

| 800 | | | | 1000 | | | | Pedal width |
|---|---|---|---|---|---|---|---|---|
| C2 | C1 | B | A | C2 | C1 | B | A | Support quantity |
| 3.1D+10 | 3.1D+9.2 | 1.3D+17 | 1.3D+9 | 3.45D+5.2 | 3.45D+5 | 1.5D+15 | 1.5D+6 | 4 |
| | 5.2D+8.2 | 1.9D+17 | 1.9D+8 | | 6.1D+4.2 | 2.2D+14 | 2.2D+5 | 3 |
| | | 4.25D+18 | 4.25D+8.2 | | | 4.9D+14 | 4.9D+6.2 | 2 |

## Middle support beam height

| 4 Support | | 3 Support |
|---|---|---|
| H2 | H1 | H1 |
| (L1+L2-752.3)x0.2126-888 | (L1-752.3)x0.2126-888 | (L1-752.3)x0.2126-888 |
| (L1+L2-752.3)x0.1944-885 | (L1-752.3)x0.1944-885 | (L1-752.3)x0.1944-885 |
| (L1+L2-752.3)x0.1763-882 | (L1-752.3)x0.1763-882 | (L1-752.3)x0.1763-882 |