





XIZI OTIS

Otis holding company in China, with the fastest development, highest cost efficiency, and greatest potential, Xizi Otis has been playing as one the most excellent operation entity in the Otis family.

Xizi Otis has the largest escalator and travolator production center of the Otis family, with a production capacity of more than 5000 units. The annual production (new equipment) is more than 20,000 units.

Since founded in 1997, Xizi Otis has been successfully applied the advanced Otis technology and the most matured world-class management system. And it is all along standing as the pioneer of the energy-saving and environment-friendly innovation.

Now, Xizi Otis is recognized as one of the top largest elevator, escalator and move walkway's manufacture & service provider. Such a great growth achieved by Xizi Otis is regarded as the legend in the China elevator industry.



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XOP

Based on Otis advanced technology, the XOP travolator is designed and produced to apply for supermarket, airport, commercial mall, etc. Through the rigid quality system, it not only fully satisfied the operation practicality, but also bring passenger with humanized design.

XOP characterizes itself as high quality and reliability, safety, flexibility and energy saving.

Quality & Reliability

XOP travolator fully utilizes the Otis' advanced designing and manufacturing process-PDP process. It has been proved as the Otis' most matured worldwide moving walkways product.

Through the stringent quality control system, and company's enforcement on all along pursuing the higher quality, XOP is deemed as the most qualified and reliable product; it effectively eliminates the operation failure and shortens the maintenance time.



EM-W1

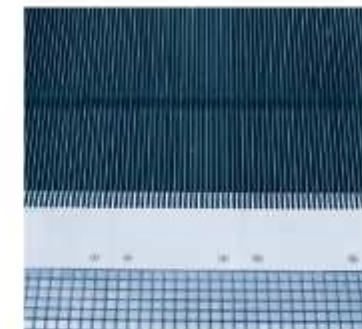
- High efficient worm gear box.
- Integrated Non Reversal Device / Motor thermal device / Motor cover control; Optional Control contact for lifted Brake / Brake lining wear /Overspeed governor.
- Compact design and small size.
- Low noise and smooth operation.
- Flender gearbox, most mature reducer in travolator industry.



Duplex-chain designed main drive wheel is with a strong broken strength. Such a compact and vigorous structure strengthens the reliability of the whole driving system, and as well promotes efficiency and riding quality.



Otis initiated tube structure truss with a robust design; it greatly improve the overall running stability and service life. The Otis blue painting renders the whole truss a protection against rustiness and corrosion.



Anti-slip grooves on the pallet surface have excellent slip-proof function to make the ride safe and comfortable. Slightly inclined combs can make the trolleys easily get on and off.



Special designed big wheel handrail drive runs in low noise and big power, which improves the running condition of the handrail, ensuring a smooth ride, prolonging its life time as well.

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Safety

Passenger Safety is always first at Otis. XOP protection devices and electrical safety requirements is strictly accordant with the European code EN115 and other countries' code of practice. Meanwhile, XOP is also comply with the Otis global jobsite safety standard WWJSS.

XOP implements several new features to minimize hazardous potential. The advanced micro processor controlling system can fully monitor the moving walk's performance and promptly eliminate running hazard and reduce maintenance time.

Main drive chain safety device:

The drive chain broken safety switch is installed on and activated by the chain tension device. Once the chain is prolonged or broken, the safety device will be triggered and make the travolator stop running.

Auxiliary brake, wedge type (Rise > 6m)

The auxiliary brake is located at the upper landing, it could stop the travolator via brake disc installed at main drive, and is the standard configuration for travolator rise above 6m. Optional configuration: Rise ≤ 6m.

Pallet Broken Protection Device

The broken pallet protection device is located at the starting section close to the upper and lower leveling. If the step or its chain breaks, the safety switch will automatically engage. The switch can be reset by using the reset protection device.

Comb Plate Contact

The comb panel protection switches are located on two sides of each comb panel. If foreign debris is lodged between the comb and pallets, the comb panel will automatically lift upwards initiating the safety switch and stopping travolator operation.

Floorplate Safety Contact

A safety switch is installed under the floorplate to ensure proper floorplate positioning. If the floorplate is not properly closed, the safety switch will initiate, stopping travolator operation until the floorplate is properly closed.

Operational Brake

Integrated within the travolator driving machine and between the motor and reduction gearbox. Travolator safety brake can be activated through electromagnetic braking.

Motor Thermic Protection

The thermal protection switch is located in the motor coil. If the motor temperature exceeds 155°C, the thermal protection sensor will automatically shut down the travolator.

Standard Safety Devices

Safety Grounding

All electrical components on the travolator are safely grounded, and directly connected to the ground via the travolator truss.

Non-reversal Device

A rotation sensor is located on the brake that monitors motor rotation speed and direction. If the motor rotates in reverse, the sensor will send a corresponding signal to the main controller to activate the travolator brake.

Missing Step Monitoring Device

Two metal acquisition sensors are located at the turning position of the upper and lower pallets. If the pallet is missing or installed incorrectly, the sensor will send a signal to the control system, to shut down the travolator.

Handrail Entry Safety Guard

The handrail entry safety guard is in the handrail entry box of the upper and lower leveling, and meets the standard requirements. If foreign debris is inserted in the handrail or rubber head, the safety switch installed behind the rubber head will automat.

Emergency Stop

Located on the upper and lower leveling and close to the skirt panel of the handrail entrance. The safety stop can be manually activated by pressing a red emergency stop button in case of emergency.

Broken pallet protection device

The safety switch is located on the tensioning frame of the lower leveling. If the pallet chain breaks or stretches abnormally, the safety switch will initiate stopping the travolator.

Optional Safety Devices

| Option | Description |
|--|---|
| 5 Dry Contact | 5 Dry Contact, provide contact for up/down/emergency stop/fault/running signal to monitor system. |
| Control Contact For Brake Lining Wear | When the brake linings are worn, the controlling switch is activated ,and it prevents the machine from starting. If this happens, a maintenance job is necessarily carried out for the brake, and the brake lining must be replaced immediately. |
| The Brake Lifting Monitor | The operational brake control switches prevent starting the machine in case the operational brake is closed. |
| REM-X | The REM-X, a remote, internet-based monitoring system, uses the most advanced technology to allow travolators within its network to be monitored from a master control center. |
| Loose Or Broken Handrail Protection Device | If the handrail stretches or breaks, the safety switch will initiate, stopping the travolator. |
| Handrail Speed Monitoring Device | When the handrail running speed becomes abnormally (too fast or too slow), the sensor for monitoring handrail speed will send a signal to the control system to stop the travolator. |
| Skirt Panel Safety Protect Device | The safety switches located at upper and lower landing. If an object is blocked between the skirt panel and pallets at the position where safety switch located, and causing skirt panel deflection exceed the limit, then the skirt panel safety switch will initiate stopping travolator. |
| Skirt Panel Brush | Located on both sides of the skirt panel, the skirt panel brush protects passenger's clothing from getting snagged between the skirt panel and side plate. |
| Sprinkler System (Non-Standard) | Installed within the travolator body. In case of fire, the sprinkler system automatically initiates within the travolator or building. |

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Flexibility

XOP can be operated at temperature +4°C ~ +40°C, and with humidity <85%. It has a great flexibility to cater for different occasions.

The Microcomputer Control System, robust machine, a unique rectangular steel tube frame and the use of automatic refueling system, that makes XOP more suitable for real way station, supermarkets, airports and tourism channel, etc.



Supermarket



Marketplace



Airport



Emporium



Famous scenic spot

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Standard Specification

| | |
|--------------|------------------------------|
| Inclination | 10°/ 11°/ 12° |
| Rise | 1.5-10m |
| Pallet Width | 800/1000mm |
| Speed | 0.5m/s |
| Arrangement | Single/Side by side/Scissors |

Max Transport Capacity

| Rating Speed (m/s) | Persons Per Pallet | Pallet Width (mm) | Capacity Person/Hour |
|--------------------|--------------------|-------------------|----------------------|
| 0.5 | 3.75 | 800 | 6750 |
| | 5 | 1000 | 9000 |

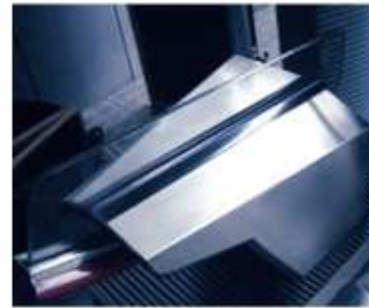
Stylish Design



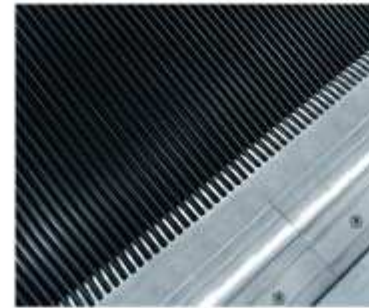
To satisfy the customization from different users, XOP is offering many options to choose. With these stylish designs, while satisfying customer's requirement, it can reach a perfect harmonious combination with the building environment in vicinity. Thus besides bringing passenger a safe and quiet riding, it renders a graceful aesthetical appreciation as well.



Painted steel handrail entry box as standard.



Stainless steel handrail entry box as an option.



Stainless steel is the standard material for pallet.



The delicate traffic flow light with a distinctive instruction.



Various handrail colors meet different environment.



Die-cast aluminum is the optional material for pallet.

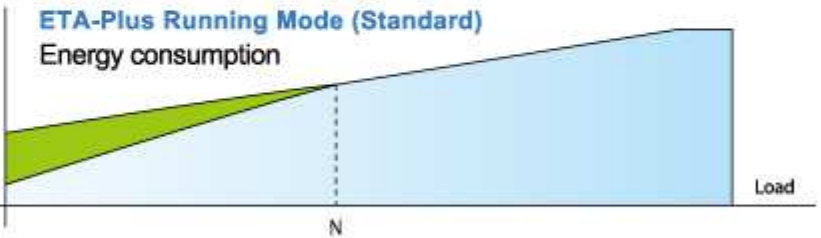
Energy Saving

The XOP is fitted with highly efficient gear systems and machines that are designed to reduce energy consumption, and operational running costs.

The ETA-PLUS energy saving mode uses a Y connection on the motor to dramatically reduce motor heat consumption, and thus could save energy up to 10%, depending on passenger load, which is suitable for most of the application.

The optional variable frequency (VF) drive system enables the travolator to run at different speeds depending on traffic flow.

The VF drive system combines with a sensor that can automatically Detect when a passenger alights the travolator. At the time of detecting traffic the travolator will gradually accelerate to run at normal speed. This feature conserves energy and Reduces running cost significantly.



The ETA-PLUS Running Mode is standard mode of operation used under normal circumstances, which is suitable for most of the application.

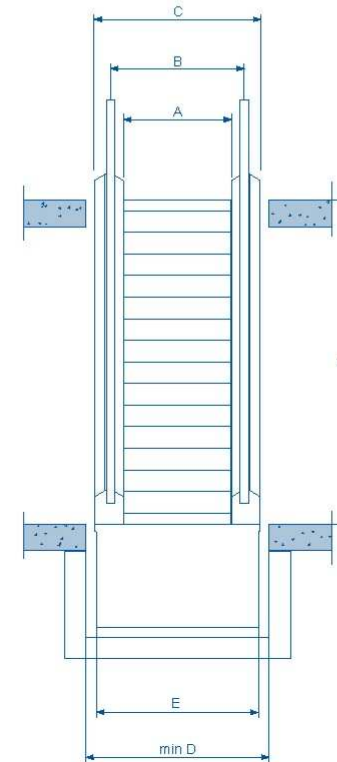
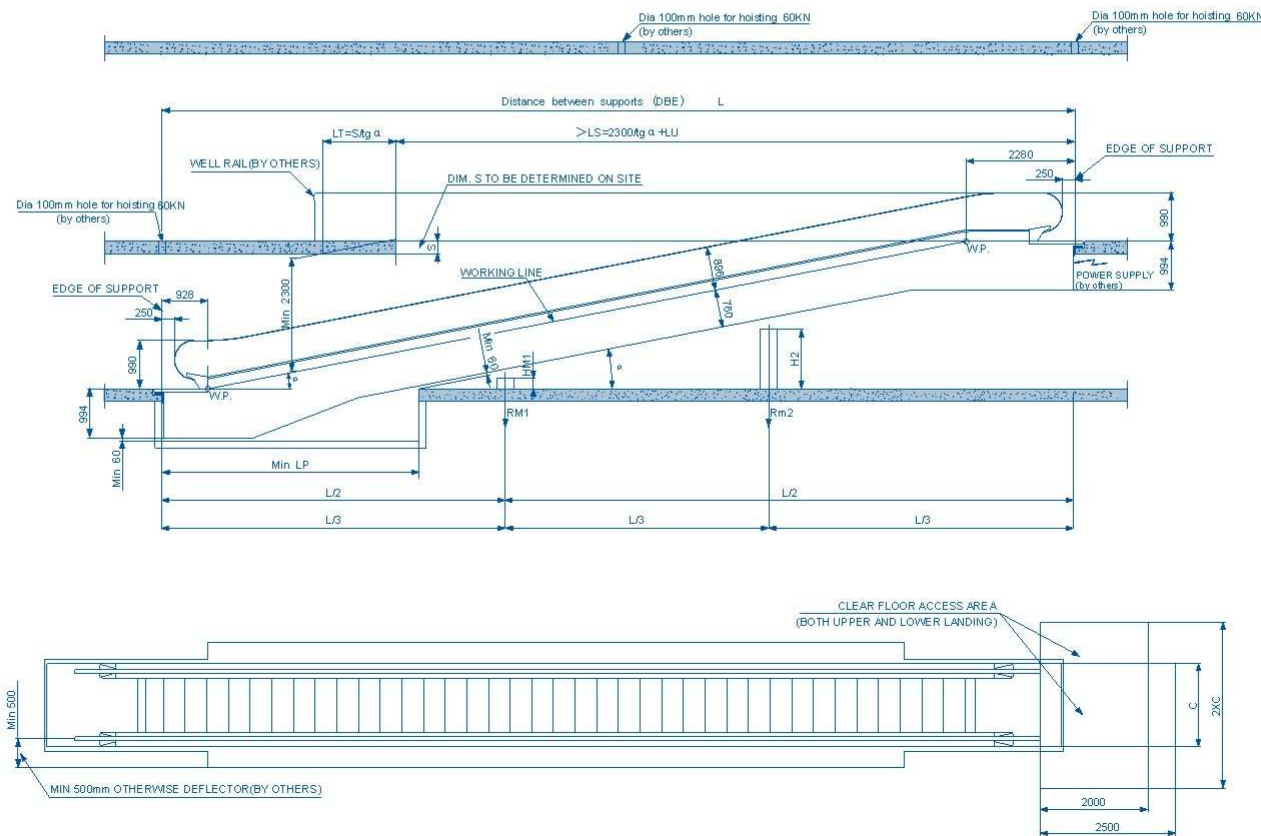


The VF Running Mode is generally applicable for low traffic flow locations such as hotels and office buildings. VF mode cuts down on noise levels and can save up to 50% depending on passenger flow.



The Intermittent Running Mode is designed for unique circumstances such as underground passageways where daily passenger flow is inconsistent, with long periods of little or no traffic.

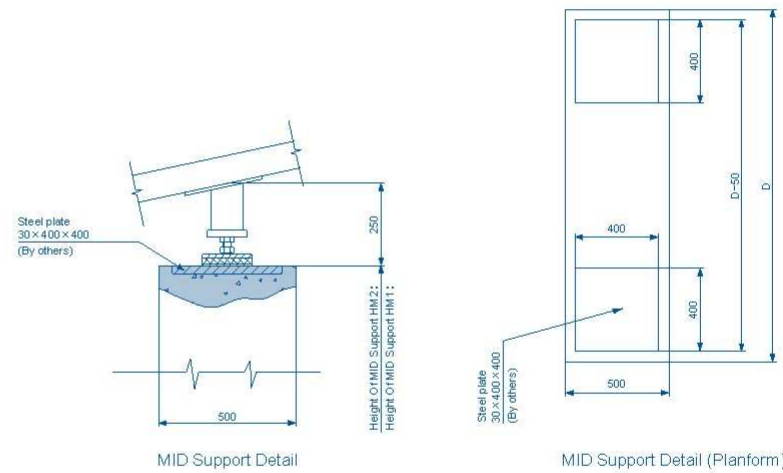
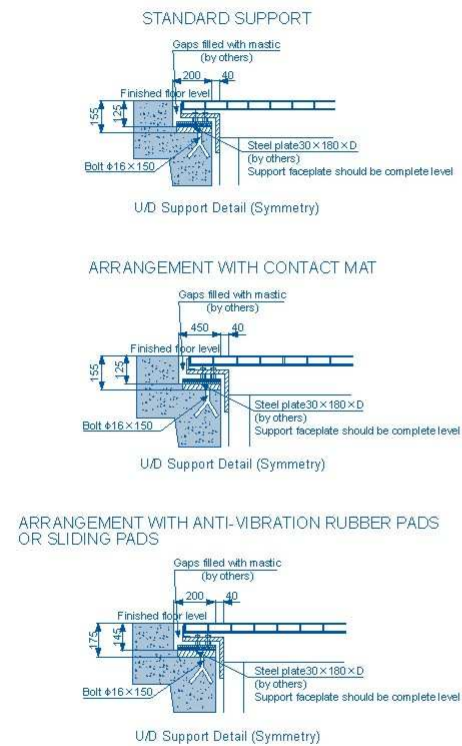
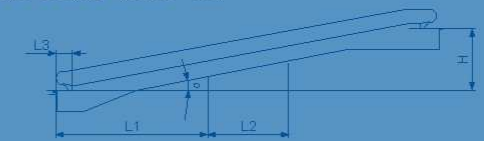
■ Energy-saving



Done by the Owner & Builder

1. This drawing is fit for the escalator which rise H: 1.5m~6m, the permitted tolerance is -15mm~+15mm; permitted tolerance of span L is 0~+15mm.
2. When horizontal span L>15000, add 1 intermediate support, the position is in middle of span.
3. When horizontal span L>30000, add 2 intermediate supports, being positioned proportionally.
4. Safety protection barrier with enough strength which is not less than 1.2m in height should be placed around all the holes of escalator before installation.
5. The pit should be impervious to infiltration of water. And the drainage hole should be in the corner of the pit.
6. According to the requirement of the technical parameter sheet, the power supply should be placed in the machine room with protection switch and locked off. The fluctuation of the power supply should be less than ±7%. The neutral conductor and the protection conductor should always be separate, and the ground resistance should be no more than 4 Ω.
7. 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.
8. Adopt 10mm² soft wire cable as the power supply cab. (by others)
9. The corresponding parameter of machine should refer to SEB.
10. The drawing is only for EC-SW, EM-W1 or EC-H2.
11. The drawing is only for NC type.
12. Any special requirement, please contact XOEC before signing contract.

MEMO: MID support beam by local formula: (mm)
 $HM1=(L1+L3) \times \tan \alpha - (760/\cos \alpha + 250)$
 $HM2=(L1+L2+L3) \times \tan \alpha - (760/\cos \alpha + 250)$



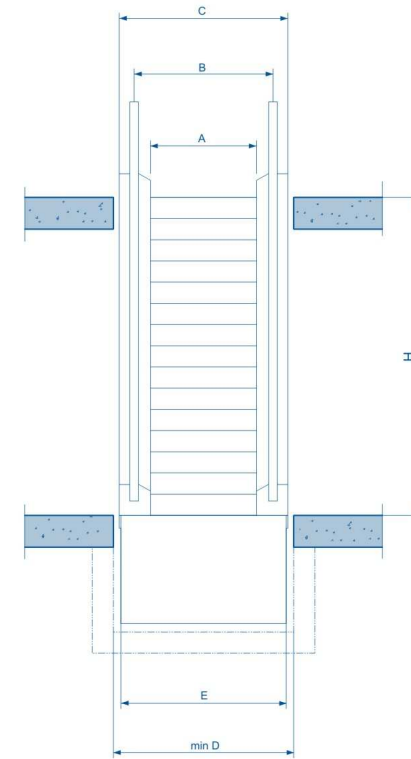
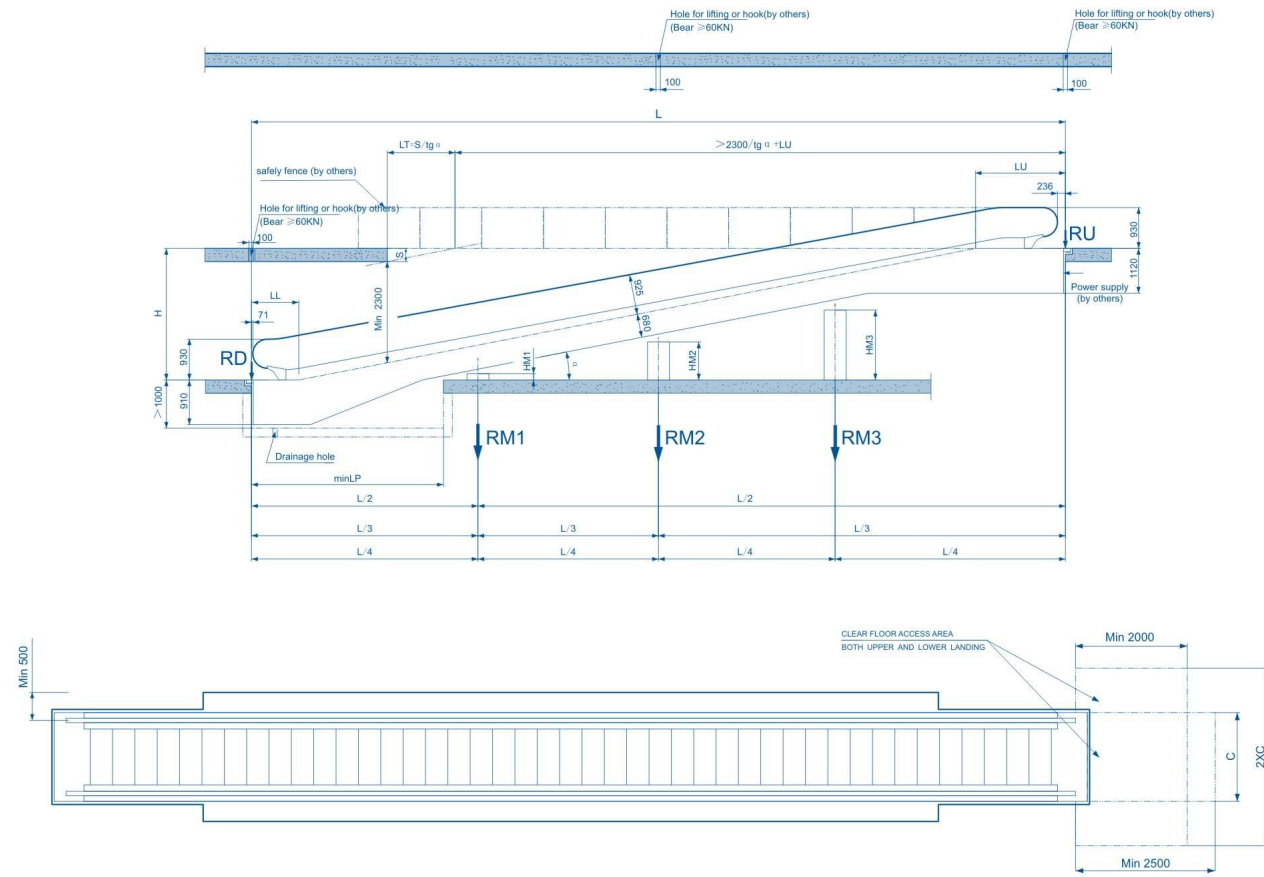
| Angle α | SPEED (m/s) | Step width A(mm) | SPAN L(mm) | min LP | LS | B | C | min D | E |
|---------|-------------|------------------|--------------|--------|---------------|------|------|-------|------|
| 10° | 0.5 | 1000 | 5 6713H+3446 | 5744 | 2300tg α + LU | 1237 | 1530 | 1630 | 1500 |
| | | 800 | | | | 1037 | 1330 | 1430 | 1300 |
| 1000 | | 5 1446H+3136 | 5225 | 1237 | | 1530 | 1630 | 1500 | |
| 800 | | | | 1037 | | 1330 | 1430 | 1300 | |
| 12° | | 1000 | 4 7046H+2878 | 4797 | | 1237 | 1530 | 1630 | 1500 |
| | | 800 | | | | 1037 | 1330 | 1430 | 1300 |

Reaction to support in KN (L in m) (1KN=100kg)

| Step width (mm) | 1000 | | | | 800 | | | |
|-----------------|----------|---------|----------|-----------|-----------|----------|----------|---------|
| | RD | RU | RM1 | RM2 | RD | RU | RM1 | RM2 |
| 2 | 4.9L+6.2 | 4.9L+14 | -- | -- | 4.25L+8.2 | 4.25L+18 | -- | -- |
| 3 | 2.2L+5 | 2.2L+14 | 6.1L+4.2 | -- | 1.9L+8 | 1.9L+17 | 5.2L+8.2 | -- |
| 4 | 1.5L+6 | 1.5L+15 | 3.45L+5 | 3.45L+5.2 | 1.3L+9 | 1.3L+17 | 3.1L+9.2 | 3.1L+10 |

NOTE: DO NOT SCALE THIS DRAWING, UNLESS OTHERWISE STATED.

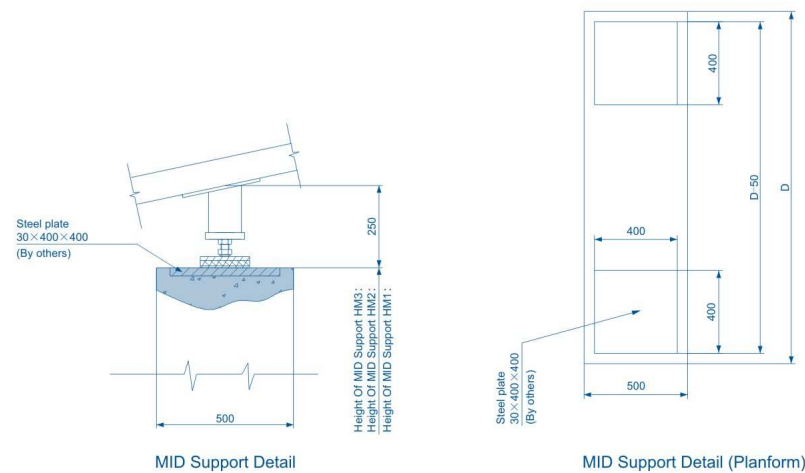
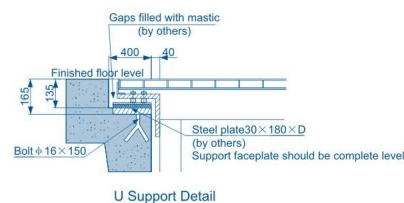
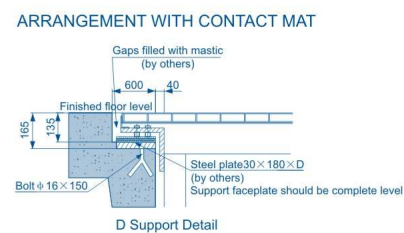
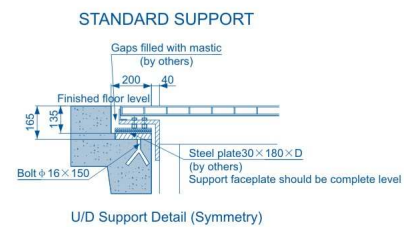
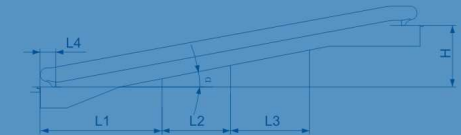
TRAVALATOR XOP-NC H ≤ 6000mm LAYOUT



Done by the Owner & Builder

1. This drawing is fit for the escalator which rise H:6m~10m, the permitted tolerance is -15mm~+15mm; permitted tolerance of span L is 0 ~ +15mm.
2. When horizontal span L>K1, add 1 intermediate support the position is in middle of span.
3. When horizontal span L>K2, add 2 intermediate supports, being positioned proportionally.
4. When horizontal span L>K3, add 3 intermediate supports, being positioned proportionally.
5. Safety protection barrier with enough strength which is not less than 1.2m in height should be placed around all the holes of escalator before installation.
6. The pit should be impervious to infiltration of water. And the drainage hole should be in the corner of the pit.
7. According to the requirement of the technical parameter sheet, the power supply should be placed in the machine room with protection switch and locked off. The fluctuation of the power supply should be less than ±7%. The neutral conductor and the protection conductor should always be separate, and the ground resistance should be no more than 4Ω.
8. 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.
9. The corresponding parameter of machine should refer to SEB.
10. The drawing is only for EC-SW, EM-W1 or EC-H2.
11. The drawing is only for NPC type.
12. Any special requirement, please contact XOEC before signing contract.

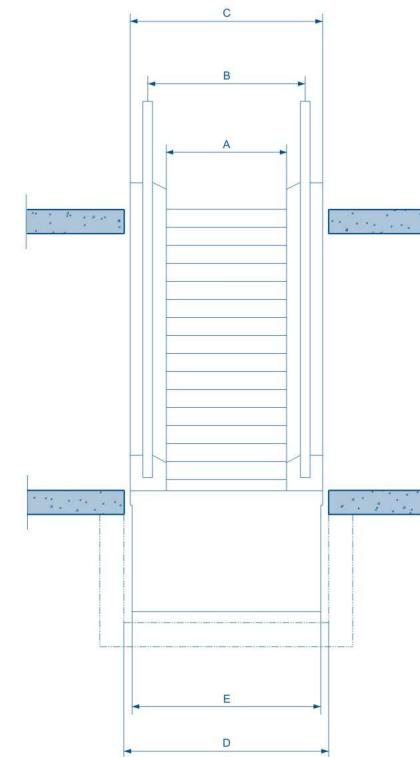
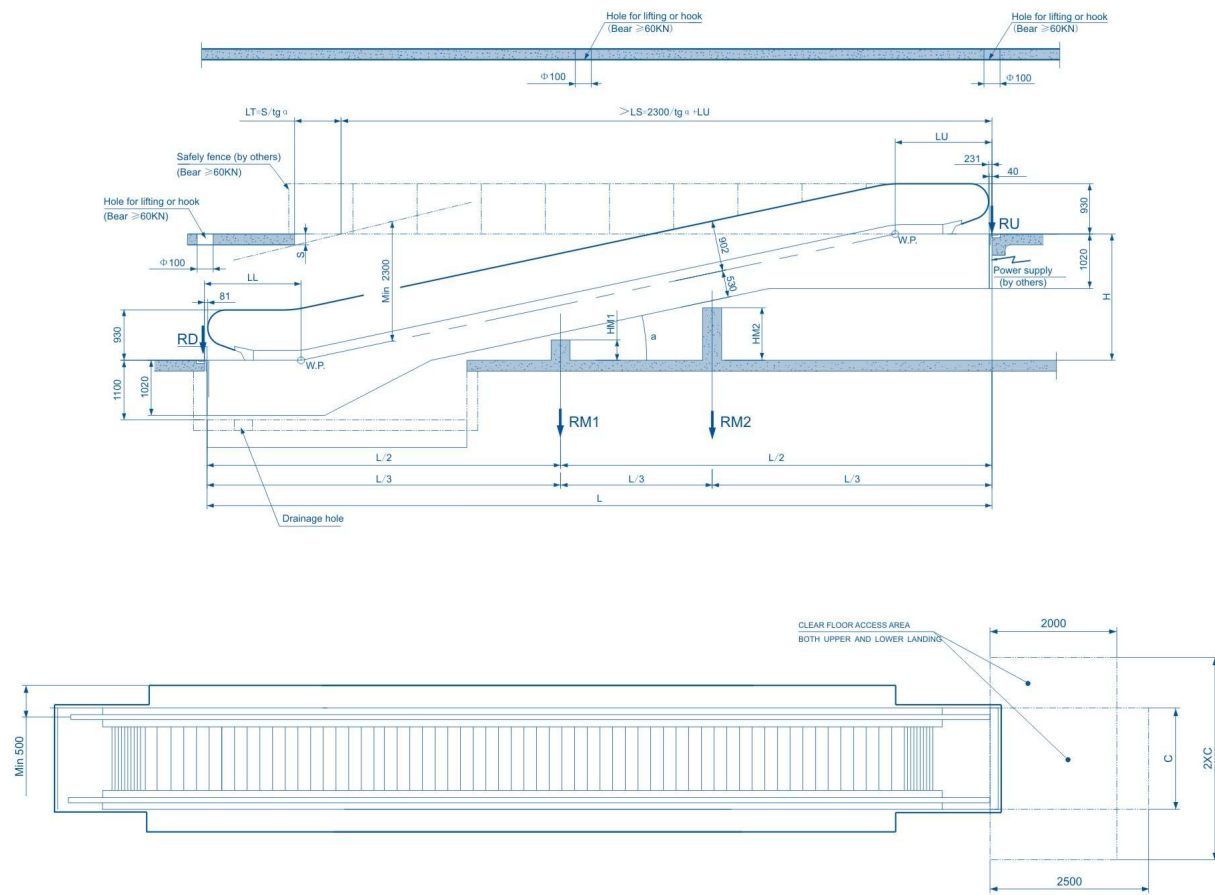
MEMO: MID support beam by local formula: (mm)
 $HM1=(L1-L4) \times tg \alpha - (680/\cos \alpha + 250)$
 $HM2=(L1+L2-L4) \times tg \alpha - (680/\cos \alpha + 250)$
 $HM3=(L1+L2+L3-L4) \times tg \alpha - (680/\cos \alpha + 250)$



| Angle α | SPEED (m/s) | Step width A(mm) | SPAN L(mm) | min LP | LU | LL | LS | B | C | min D | E | K1 | K2 | K3 |
|---------|-------------|------------------|--------------|--------|------|------|----------------|------|------|-------|-------|-------|-------|-------|
| 10° | 0.5 | 1000 | 5.6713H+3097 | 5290 | 2022 | 1075 | 2300/tg α + LU | 1237 | 1590 | 1700 | 1560 | 15000 | 30000 | 45000 |
| | | 800 | | | | 1037 | | 1390 | 1500 | 1360 | 16300 | 32600 | 48900 | |
| 1000 | | 5.1446H+3155 | 4950 | 2080 | 1075 | 1237 | | 1590 | 1700 | 1560 | 15000 | 30000 | 45000 | |
| 800 | | | | | 1037 | 1390 | | 1500 | 1360 | 16300 | 32600 | 48900 | | |
| 12° | 0.5 | 1000 | 4.7046H+3210 | 4650 | 2135 | 1075 | | 1237 | 1590 | 1700 | 1560 | 15000 | 30000 | 45000 |
| | | 800 | | | | 1037 | 1390 | 1500 | 1360 | 16300 | 32600 | 48900 | | |

| Reaction to support in KN (L in m) (1KN=100kg) | | | | | | | | | | |
|--|----------|---------|-----------|-----------|----------|----------|-----------|----------|----------|----------|
| Step width (mm) | 1000 | | | | | 800 | | | | |
| Number of Supports | RD | RU | RM1 | RM2 | RM3 | RD | RU | RM1 | RM2 | RM3 |
| 3 | -- | -- | -- | -- | -- | 2.0L+3.5 | 2.0L+11.5 | 5.3L+2.7 | -- | -- |
| 4 | 1.6L+3.5 | 1.6L+11 | 3.55L+3.2 | 3.55L+3.5 | -- | 1.4L+3.5 | 1.4L+11 | 3.1L+3.2 | 3.1L+3.5 | -- |
| 5 | 1.1L+3.5 | 1.1L+11 | 2.8L+2 | 2.8L+3.2 | 2.8L+4.2 | 1.0L+3.5 | 1.0L+11 | 2.6L+2 | 2.6L+3.2 | 2.6L+4.4 |

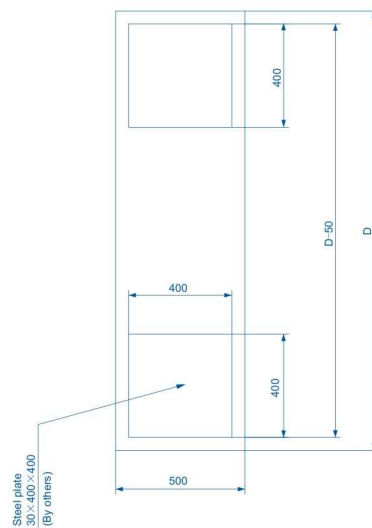
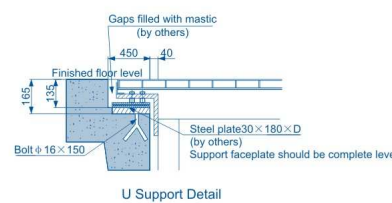
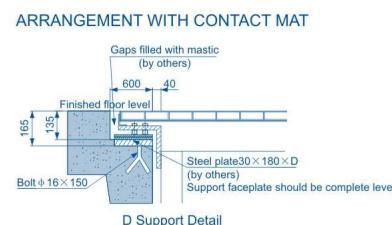
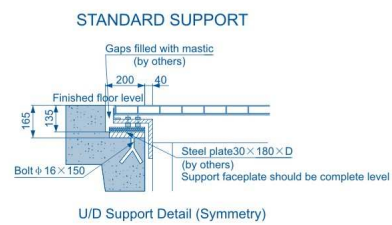
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Done by the Owner & Builder

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3. When horizontal span L > K2, add 2 intermediate supports, being positioned proportionally.
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6. According to the requirement of the technical parameter sheet, the power supply should be placed in the machine room with protection switch and locked off. The fluctuation of the power supply should be less than ±7%. The neutral conductor and the protection conductor should always be separate, and the ground resistance should be no more than 4Ω.
7. 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.
8. The corresponding parameter of machine should refer to SEB.
9. The drawing is only for EC-SW, EM-W1 or EC-H2.
10. The drawing is only for NI type.
11. Any special requirement, please contact XOEC before signing contract.

MEMO: MID support beam by local formula: (mm)
 $HM1 = (L1 - L3) \times \text{tg } \alpha - (530 / \cos \alpha + 250)$
 $HM2 = (L1 + L2 - L3) \times \text{tg } \alpha - (530 / \cos \alpha + 250)$



MID Support Detail (Planform)

| Angle α | SPEED (m/s) | Step width A(mm) | SPAN L(mm) | min LP | LU | LL | LS | B | C | min D | E | K1 | K2 | | |
|---------|-------------|------------------|---------------|--------|------|------|----------------|------|------|-------|------|-------|-------|-------|-------|
| 10° | 0.5 | 1000 | 5.6713XH+4315 | 5990 | 1999 | 2316 | 2300/tg α + LU | 1237 | 1590 | 1700 | 1560 | 15000 | 30000 | | |
| | | 800 | | | | | | 1037 | 1390 | 1500 | 1360 | 16300 | 32600 | | |
| 1000 | | 5.1446XH+4375 | 5660 | | | | | 2046 | 2329 | 1237 | 1590 | 1700 | 1560 | 15000 | 30000 |
| 800 | | | | | | | | | | 1037 | 1390 | 1500 | 1360 | 16300 | 32600 |
| 12° | 0.5 | 1000 | 4.7046XH+4440 | 5375 | 2095 | 2345 | 2300/tg α + LU | 1237 | 1590 | 1700 | 1560 | 15000 | 30000 | | |
| | | 800 | | | | | | 1037 | 1390 | 1500 | 1360 | 16300 | 32600 | | |

| Reaction to support in KN (L in m) (1KN=100kg) | | | | | | | | |
|--|----------|---------|-----------|---------|-----------|----------|----------|---------|
| Step width (mm) | 1000 | | | | 800 | | | |
| Number of Supports | RD | RU | RM1 | RM2 | RD | RU | RM1 | RM2 |
| 2 | 4.9L+6.2 | 4.9L+14 | -- | -- | 4.25L+8.2 | 4.25L+18 | -- | -- |
| 3 | 2.2L+5 | 2.2L+14 | 6.1L+4.2 | -- | 1.9L+8 | 1.9L+17 | 5.2L+8.2 | -- |
| 4 | 1.5L+6 | 1.5L+15 | 3.45L+5.2 | 3.45L+5 | 1.3L+9 | 1.3L+17 | 3.1L+9.2 | 3.1L+10 |

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TRAVALATOR XOP-NI H ≤ 6000mm LAYOUT