



## XO-508

ESCALATOR



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2015 Version



The brochure is printed  
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# 160 OTIS



## 160 YEARS OTIS

160 years of rich history, the No.1 brand in the elevator industry;  
 Inventor of the world's first safety elevator;  
 Inventor of the world's first escalator;  
 Sales and Service operation located in over 200 countries and a service network covering over 1,700 locations worldwide;  
 Annual escalator and elevator sales of more than 70,000 elevators in 12 of the world's 20 highest buildings;

## OTIS in CHINA

With 15,000 employees, Otis China offers professional consultancy and installation services and world-class maintenance support, operating 6 manufacturing sites in Tianjin, Hangzhou, Guangzhou, and etc., Otis engineer team located at three sites dedicate to new product development and product quality improvement.

## OTIS CHINA FACTORY



### Hangzhou Factory

Building Area: 45,754m<sup>2</sup>  
 Capacity:



30,000 units/year



6,000 units/year

CNAS (China National Accreditation Service) Lab



### Tianjin Factory

Building Area: 66,673m<sup>2</sup>  
 Capacity:



25,000 units/year

USGBC LEED Gold Certification



### Guangzhou Factory

Building Area: 48,900m<sup>2</sup>  
 Capacity:



4,000 units/year

OTIS Escalator Quality Test Center



## OTIS CHINA INTERNATIONAL BUSINESS

**125**

Covering more than 125 Countries

**80,000**

Having provided over 80,000 units of elevator & escalator worldwide

**15**

Meeting 15 International Codes including EN, JIS, ANSI, AS1735, COP2010, SS550, KC, GB and etc.



EN81 (elevator)  
 EN115 (escalator)



KC (ele. & esc.)



GB (ele. & esc.)



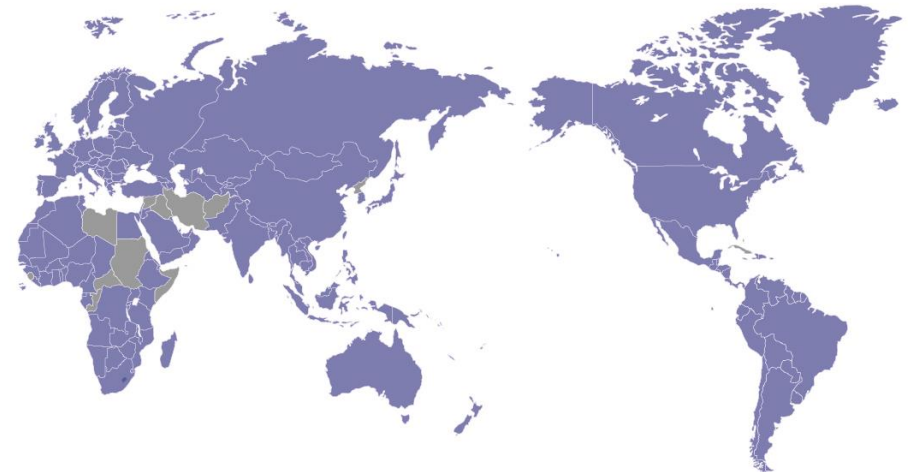
JIS (ele. & esc.)



AS1735 (elevator)



SIRIM MS2021:2020 (elevator)





## Your Smart Choice

If needing an escalator which integrated safety, mature technology, aesthetics outlook,

revolutionary green and terrific flexibility, XO-508 will be the smart choice.

## Super Marvellous ART in XO-508

### Safety First

Maximum safety is incorporated into the design of XO-508 and ensured through strict testing under on-site conditions.



### Mature Technology

As a mature escalator, XO-508 integrates classical technology and scientific development & testing process, has been widespread used all over the world.



### Aesthetics Outlook

Ever since XO-508 developed, with varied decoration choice, escalator has become new elegant scenery in your buildings.



### Revolutionary Green

Otis brings the advantages of regenerative-drive technology to XO-508. Escalator has never been so green like today.



### Terrific Flexibility

Exceptional solution to the most demanding environments. With unsurpassed reliability and availability, XO-508 can accurately answer any customer needs.



## Specification

	Configurations	XO-508
Max Rise	8M	S
Speed	0.5m/s	S
Machine	EM-W1 EC H2 EC2-7 EC2-25	S O O O
Controller	GECS ECB	S O
Inclination	30°/35°	S
Balustrade	Glass	S
Handrail Drive	Friction Wheel Drive	S
Step	Stainless Steel Aluminum	S O
Step Chain	Roller Inside	S
Step Width	600/800/1000mm	S
Deflection of Truss	≤ 1/750	S





Safety First





## Safety-oriented Design

The escalator's structure, safety devices and even all components are all designed complying with EN115 strictly. In

European Union, we could provide escalators with EN115-2008 which presents the highest level requirements on safety for

escalators. Also, we could supply XO-508 escalators for other districts as option.

### Emergency Stop



### Floor Plate Safety Contact



### Handrail Entry Safety Guard



### Operational Brake



### Auxiliary Brake (Rise > 6m)



### Step Chain Control Contact

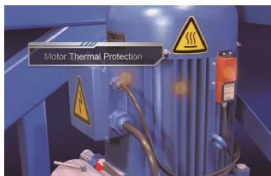


### Main Drive Chain Control Contact

Only standard when Rise > 6m or Auxiliary Brake is equipped.



### Motor Thermal Protection



### Step Broken Protection Device



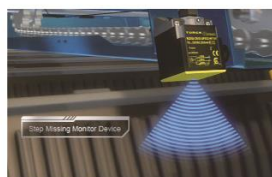
### Non-reversal Device



### Comb Plate Contact



### Missing Step Monitoring Device



## Optional Safety Device

- Auxiliary Brake (Rise ≤ 6m)
- Brake Lifting Monitoring Device (standard for EN115-2008)
- Handrail Speed Monitor Device (standard for EN115-2008)
- Loose or Broken Handrail Protection Device
- Main Drive Chain Control Contact (optional when Rise ≤ 6m or Auxiliary Brake is not equipped and only for EN115-1995)
- Mechanical over Speed Governor (not available for EC2-7) & EC2-25
- Safety Device for Brake Lining Wear
- Skirt Panel Safety Contact
- Skirt Panel Brush (standard for EN115-2008)

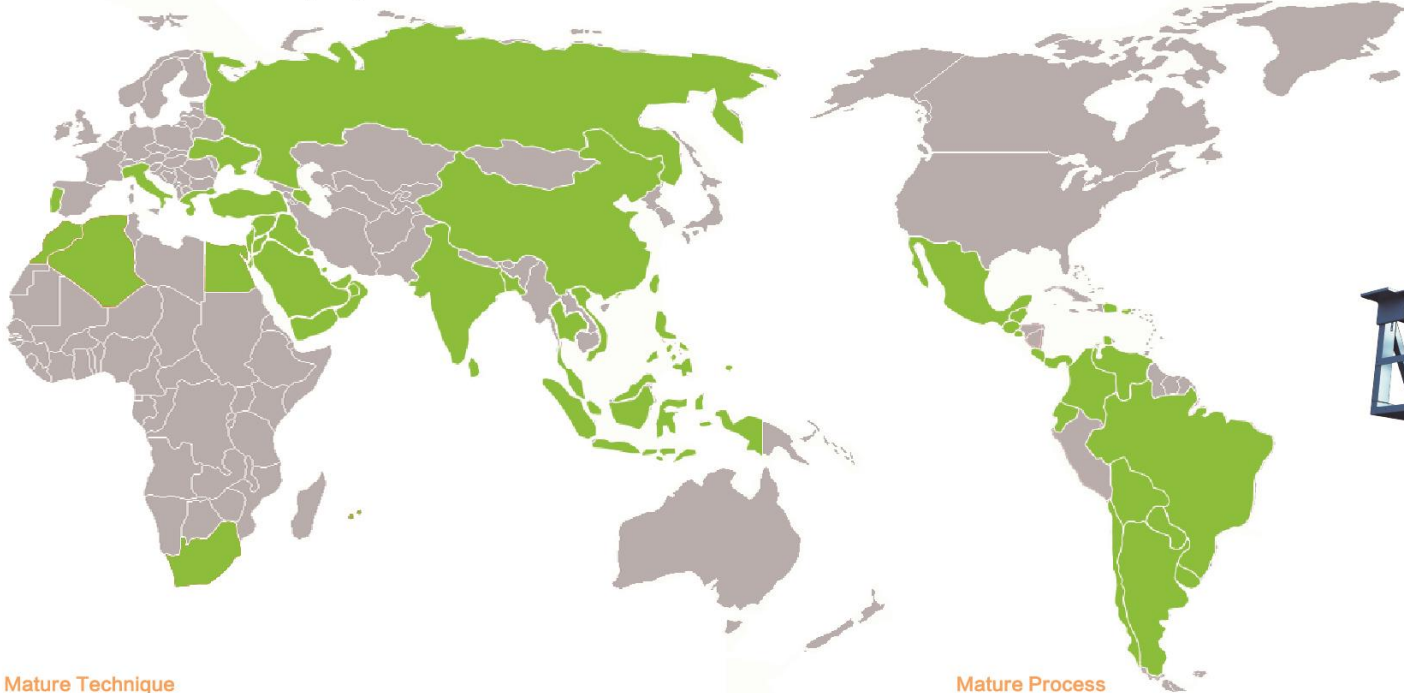




Mature technology from Otis means stable operation all over the world

#### Mature Products

With the advent of XO-508 escalator, over **12,000** units of XO-508 have been installed in more than **55** countries/areas in past 8 years.



#### TRUSS

- ◆ Tube welded truss
- ◆ Truss deflection less than 1/750 DBE and over 20 years lifetime
- ◆ Strictly analysis and calculation by Finite Element Analysis



#### Mature Technique

##### EM-W1

- ◆ High efficiency up to 86%
- ◆ Worm gear, most mature reducer in escalator industry
- ◆ Noise level less than 58 dBA



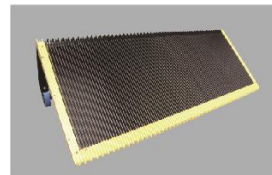
##### GECS Controller

- ◆ 32 bit microprocessor new generation controller
- ◆ Can be configured for different functional requirement
- ◆ Standard configuration for all the escalators and travelators



##### STEP

- ◆ Assembled stainless steel step as standard
- ◆ High precision one piece die-cast aluminium alloy step as option
- ◆ Surface black electrophoresis
- ◆ 3 sides yellow plastic inserts



#### Mature Process

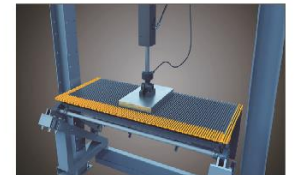
##### Passport to Quality

Every new product receives its own "Passport" to the marketplace. All major components are tested under the strict supervision of our engineers to ensure a 20-year life expectancy between overhauls.



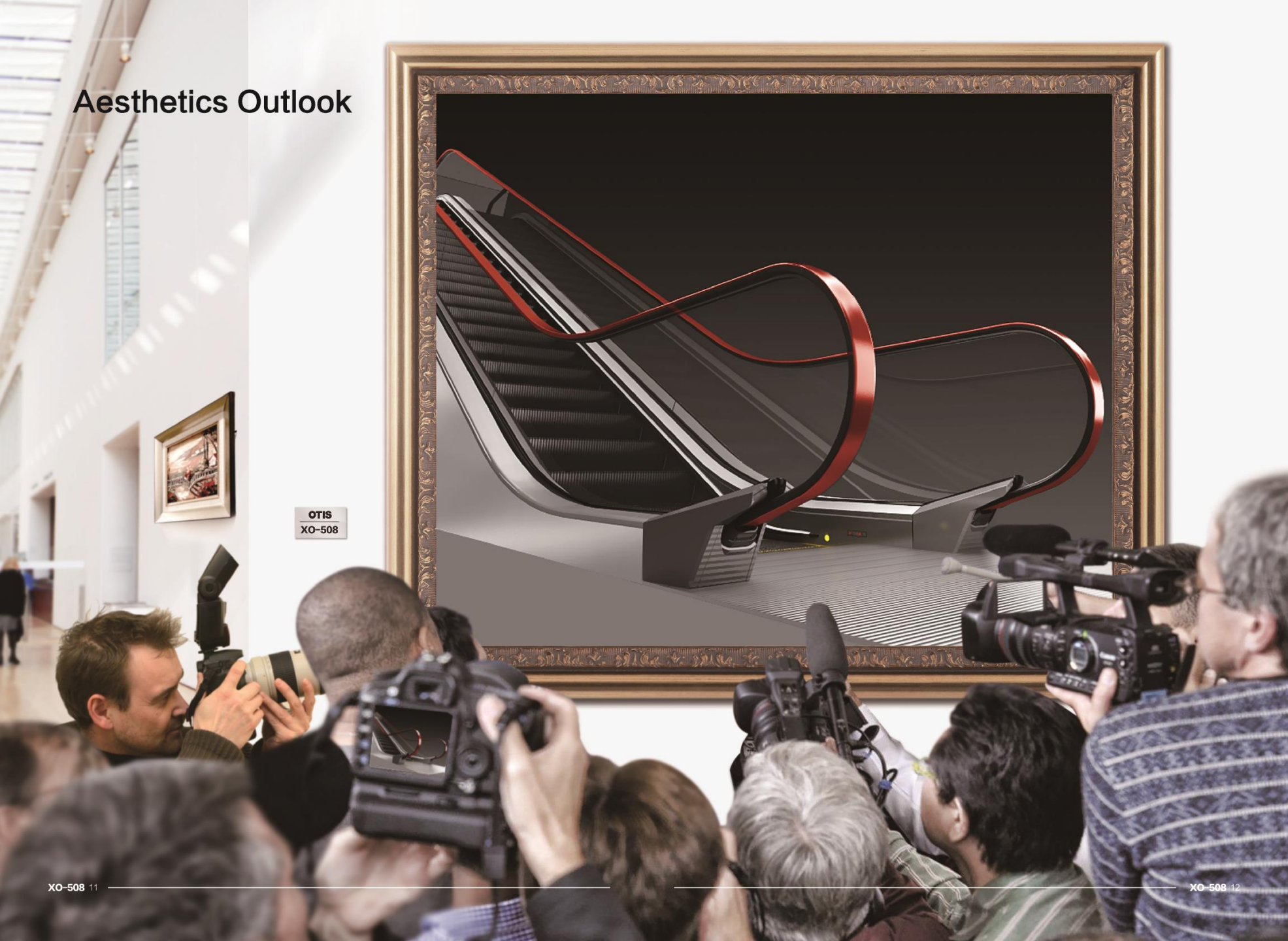
##### Testing to Quality

Rigorous OTIS Test Procedure for Escalator (OTPE) 20 million dynamic test cycles, far exceeding the code requirement.





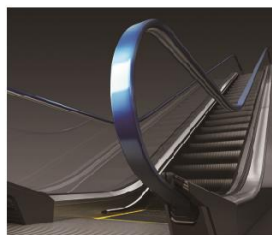
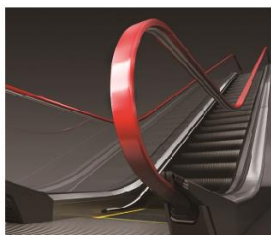
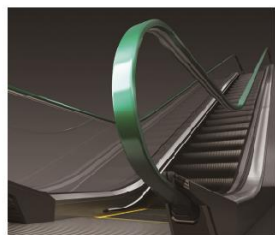
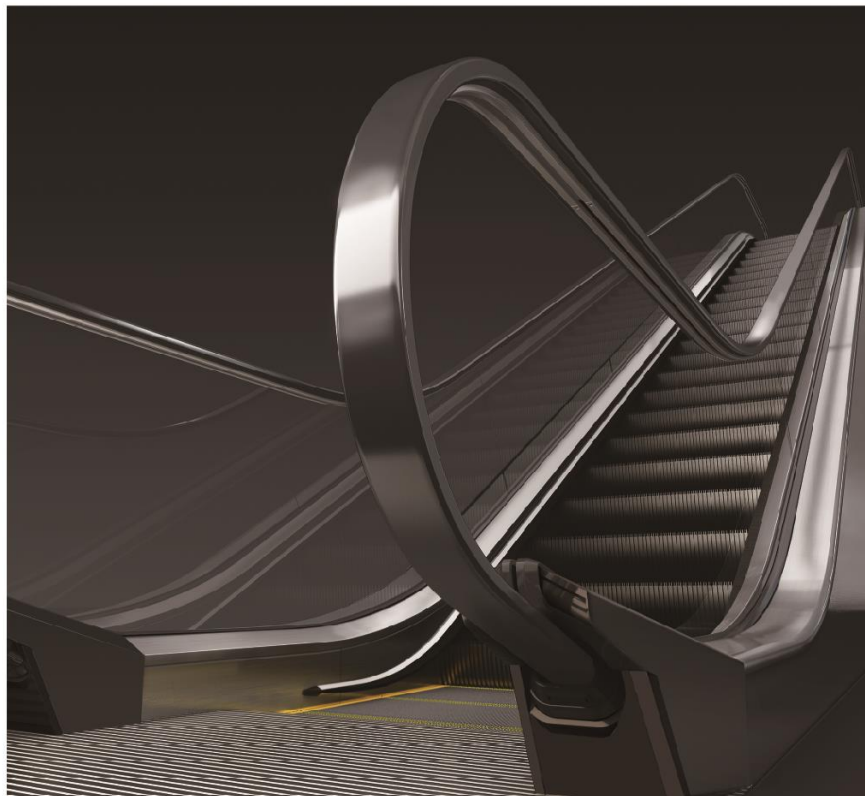
## Aesthetics Outlook



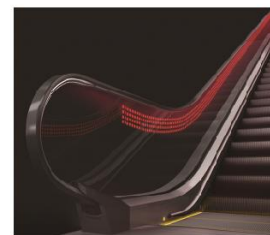
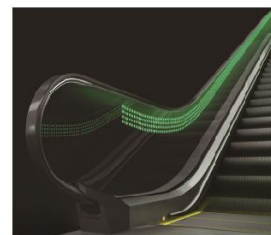
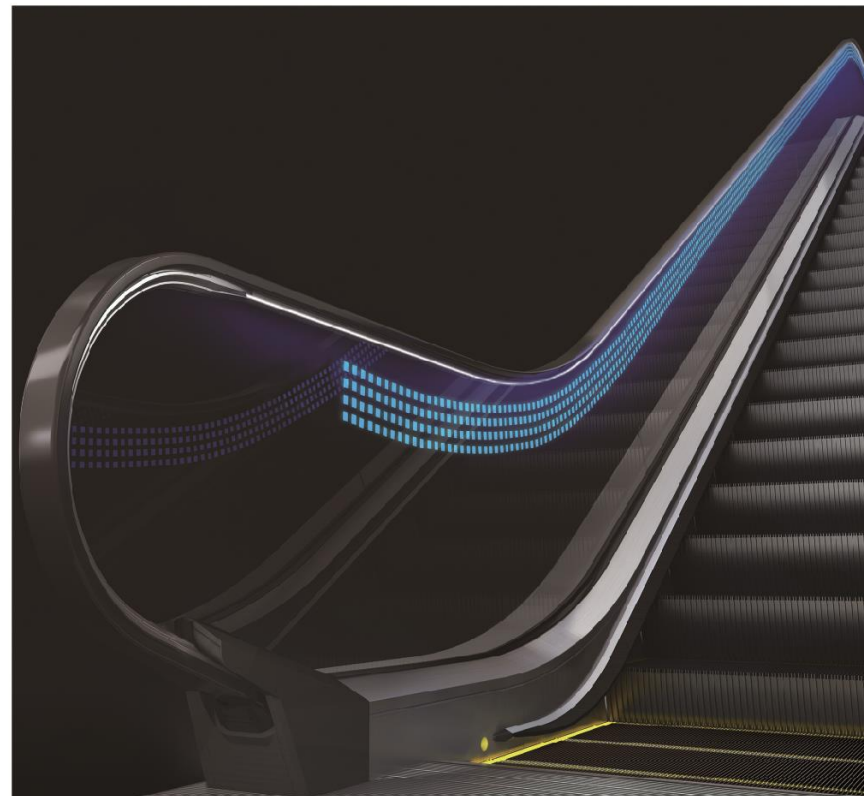
OTIS  
XO-508



**Colourful Handrail** / An elegantly designed handrail with attractive sheen are available in a choice of long lasting colour.



**LED Balustrade Lighting** / Combination of fashion and technology of LED, stretched out as far as you could see.



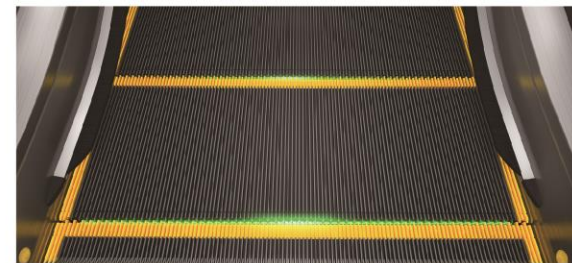


**LED Skirt Panel Lighting** / Perfect confluence of elegance and dynamic would bring a great visual effect to your buildings.



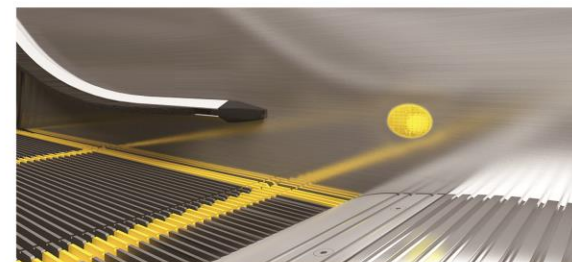
### LED Step Lighting

Careless shining between steps and show you safety caution.



### LED Comb Lighting

Classic circular design makes comb being clear at a glance for you.



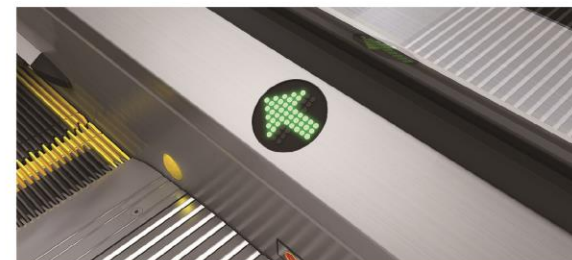
### LED Bottom Lighting

LED bottom lighting could make special design according to customer requirements to build up distinctive atmosphere.

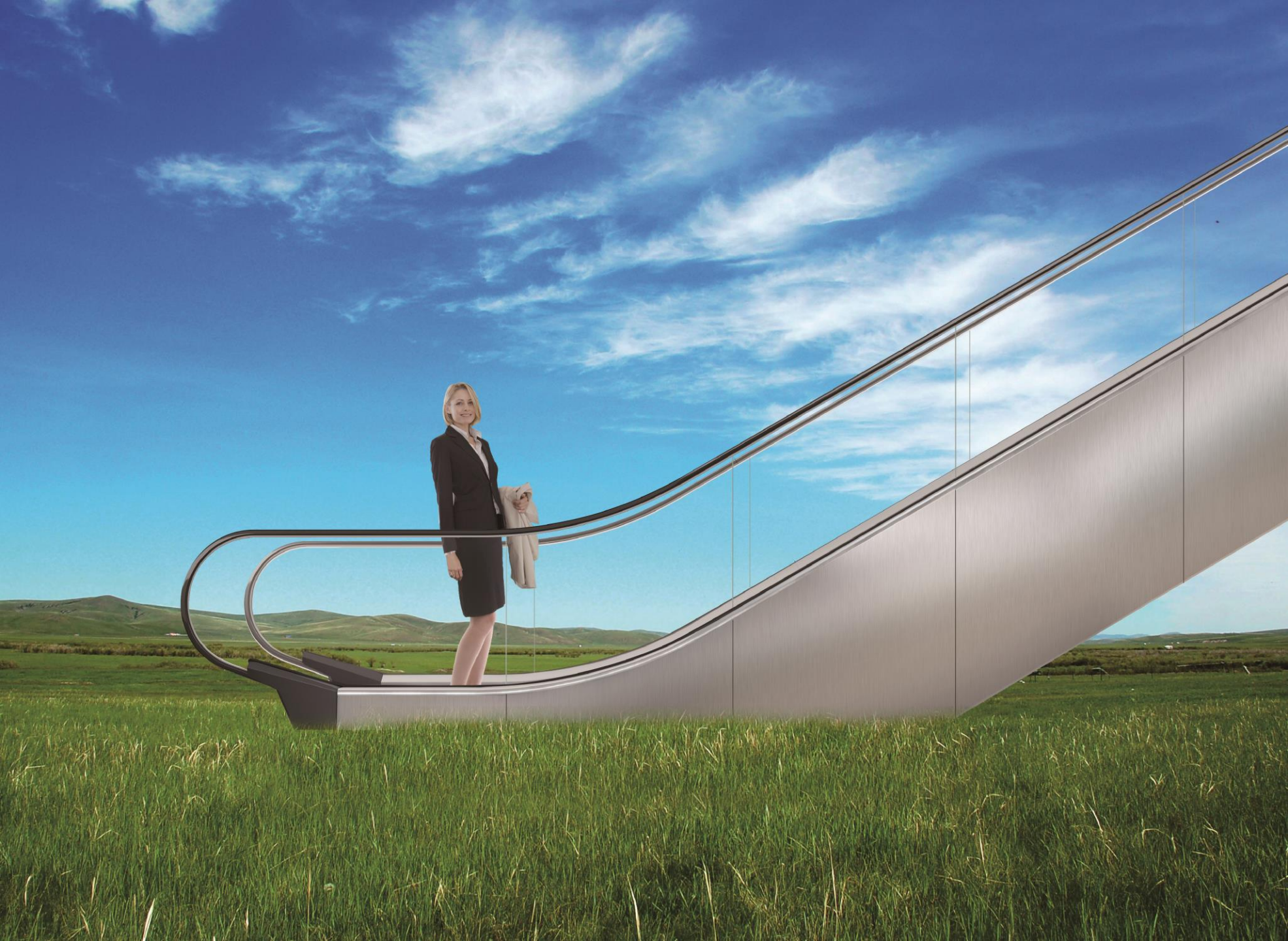


### Direction Lighting

Located on the upper/lower entrance, direction lighting could help customer to right direction.









## Running Mode– Classical Green Technology

Don't save on the system. Let the system save for you. The various kinds of running mode's high reliability

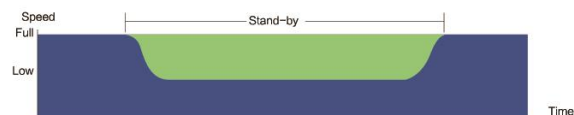
and integrated energy saving performance are economic factors that pay dividends.

## ETA-Plus Running Mode

The ETA-Plus Running Mode is standard mode of operation used under normal circumstances, which is suitable for most of the application. In ETA-Plus Running Mode, machine operates in the Star connection when

there is no passenger or small number of passengers on escalator. When the number of passenger exceeds the scope of Star connection, machine will switch to Delta connection automatically.

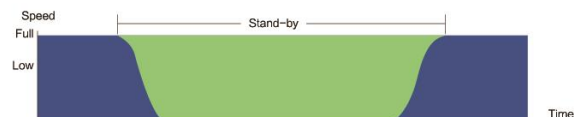
**VF running mode (slow to full)**  
The VF running mode (Continuous) is generally applicable for low traffic flow locations. In "Continuous" Mode, the escalator will slow down while no passenger on it.



**VF running mode (stop to start)**  
In "Auto-start" mode, once the escalator sense that there is no passenger on it, it will slow down. And moments later, the escalator will stop. VF Mode cuts down on noise levels and can save considerable energy depending on passenger flow.



**Intermittent running mode**  
In the "intermittent running mode", the escalator will slow down and stop while there is no passenger on it.



## Regen Benefits

- ◆ Increase the Geared Permanent Magnet Machine efficiency by 6%
- ◆ Save energy about 40% in average

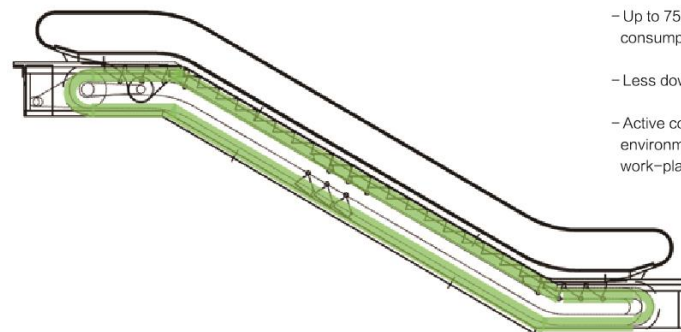


## Green Lubrication System



This oil lubrication system is electronically controlled. It is a complete system with consistent pressure; it reliably supplies exact amounts of oil to lubrication points. Each lubrication point can be supplied with a different amount of oil.

- Better protection against corrosion and contamination with less wear
- Up to 75% reduction of oil consumption
- Less down-time
- Active contribution to environmental protection and work-place safety



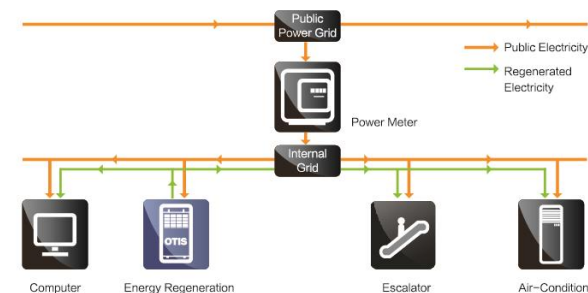
## Regen Function– Revolutionary Technology

### Regen Technology

XO-508 escalator introduces OTIS energy regenerative technology as option. OTIS Regen technology could convert the reduced system potential

energy to electricity energy. Regen technology can also filter the regenerated electricity energy and make it clean enough to be re-used.

Energy Regeneration could feed the regenerative power back into the building's internal grid and requires no additional cables.





## Wide Application

A range of options to choose from that can be customized to individual specification. A maximum rise of 8m (standard) makes the XO-508 adaptable to a wide range of customer applications, from retail and office to heavy traffic locations such as airport, exhibition and so on.



Exhibition Centre



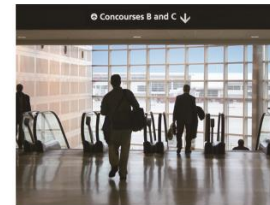
Restaurant



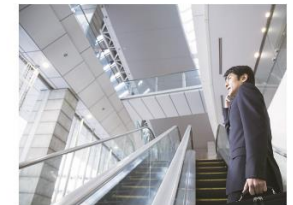
Hotel



Shopping Mall



Airport



Business Centre



# Outdoor

## Outdoor Package

Package	Location	Ambient Temperature	Humidity
A1	With Canopy and side cladding	2℃~40℃	< 80%
A2	With Canopy but no side cladding	2℃~40℃	< 80%
B	Part or whole directly expose to the open air	2℃~40℃	< 80%
C	Part or whole directly expose to the open air	-10℃~40℃	< 80%

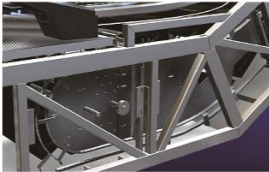
### Note:

Package A1: Be close to indoor escalator, with canopy and side cladding, only humidity caused by shoes or umbrellas.  
 Package A2: Approximate outdoor, with canopy but no side cladding, rains can wave to escalator from two sides.  
 Package B: Outdoor escalator, directly expose to environment at ambient temperature above +2℃.  
 Package C: Outdoor escalator, usually installed in cold regions, directly expose to environment at ambient temperature above -10℃.

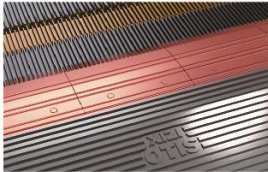


# Care for You Rain or Shine

## Treatment & Devices for Outdoor



Hot Dip Galvanization Truss(A1 and above package)



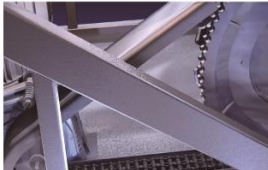
Comb Heating(only for C package)



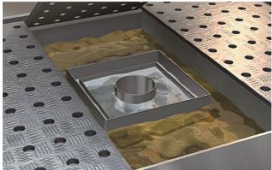
Truss Heating(only for C package)



Chain Cover(B and above package)



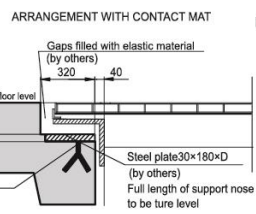
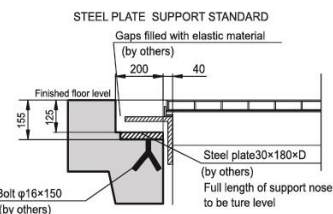
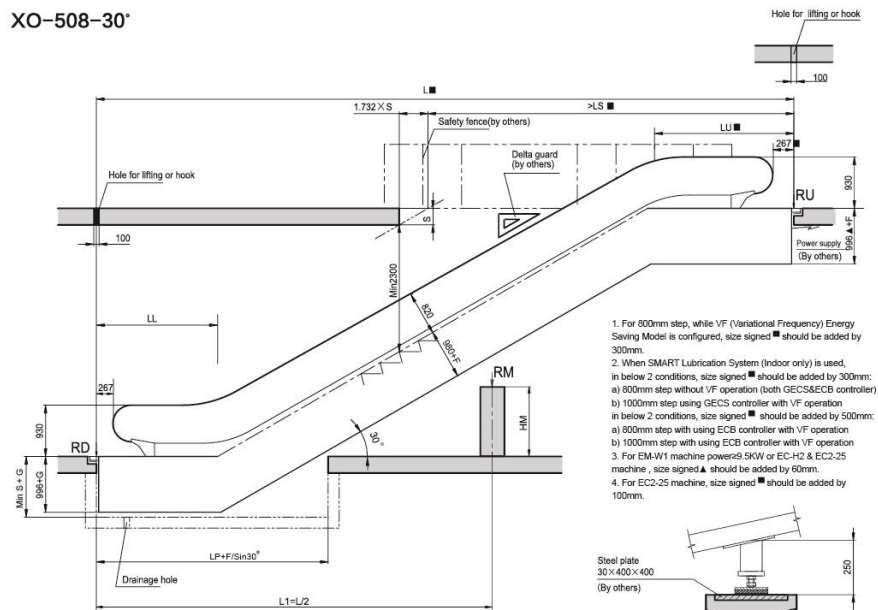
Main Chain Cover(B and above package)



Water-oil Separator(B and above package)



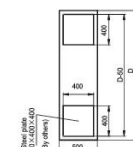
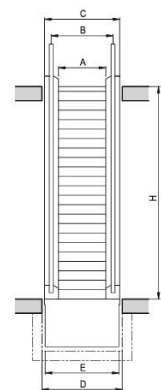
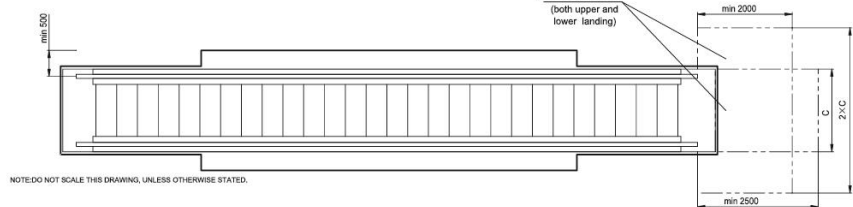
XO-508-30°



Intermediate Support Detail

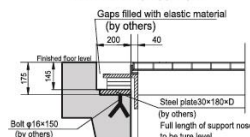
UID SUPPORT DETAIL (Symmetry)

U/D SUPPORT DETAIL (Symmetry)



Intermediate Support Detail

ANTI VIBRATION SUPPORT



UID SUPPORT DETAIL (Symmetry)

	INDOOR & OUTDOOR PACKET A	OUTDOOR PACKET B & C & D
S	1056	1256
F	90	90
G	90	90

F & G: Extra cladding. If this cladding by local and its thickness is more than 90mm, please contact CLC.

Angle	Speed (m/s)	Rise H(mm)	Step width A(mm)	Span L(mm)	Other dimensions(mm)								Support force(KN)			
					min LP	LU	LL	LS	B	C	min D	E	RU	RD	RM	
30°	0.5	H≤6000	1000	1.732H+4698+R	4350	2449	2249	6433+R	1208	1550	1630	1500	4.97L+7	4.96L+2.3	--	
			800													
			600	1.732H+5198+R		2949		6933+R	802	1144	1230	1094	3.66L+7	3.66L+2.3	--	
		6000<H≤8000	1000	1.732H+5498+R	4750	2849	2649	6833+R	1208	1550	1630	1500	2.03L+5.7	2.03L+2.3	6.46L+1.4	
			800	1.732H+5498+R												
			600	1.732H+5998+R		3349		7333+R	802	1144	1230	1094	1.53L+4.8	1.53L+2.2	5.02L+1.3	

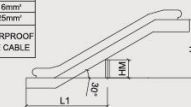
\* R: Total length for truss extensions.

## Done by the Owner & Builder (XO-508)

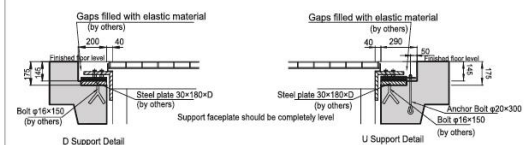
- The layout is only for H=8m. The permitted tolerance is -15mm~15mm
- When H≤6m, Flat Step No. is 2; when H>6m, Flat Step No. is 3
- When L>15.24m, please add a support, the position is in middle of span.
- Safety protection barrier with enough strength which is not less than 1.2m in height should be placed around all the holes of escalator before installation.
- The pit should be impervious to infiltration of water. And the drainage hole should be in the corner of the pit. For outdoor escalator, connect the escalator's drainage with the building's drainage system, by others.
- 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
- All loads noted in the drawing is the reaction only for single escalator
- 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.
- The corresponding parameter of machine should refer to SEB.
- Any special requirement, please contact XOE before signing contract.

MAIN POWER SUPPLY CABLE TYPE	MACHINE POWER		VOLTAGE	
	PS11.7KW	PS11.7KW	<380V	>380V
HEATER POWER SUPPLY CABLE TYPE ONLY WHEN HEATER IS AVAILABLE	11.7KW	15KW	16mm²	10mm²
	15KW	20KW	25mm²	16mm²
	20KW	30KW	35mm²	25mm²
	30KW	40KW	50mm²	35mm²

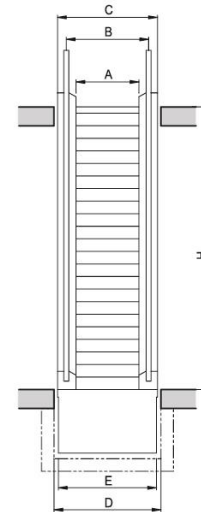
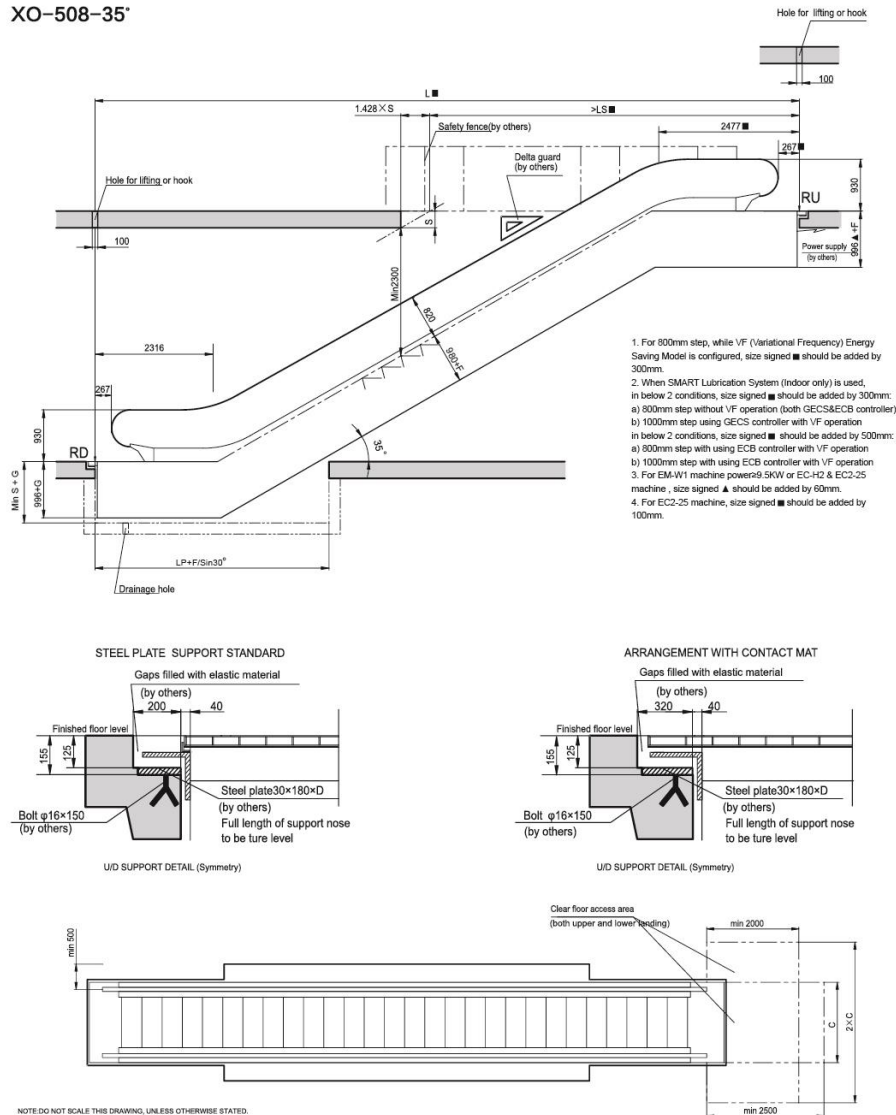
MEMO: MID support beam by local, formula: (mm)  
 6m<H≤8m HM= (L1-2649) × tg30° - (980 / cos30° + 250)  
 H≤6m HM= (L1-2249) × tg30° - (980 / cos30° + 250)



ANTI VIBRATION SUPPORT, FIXED UPPER LANDING AND SLIDE LOWER LANDING



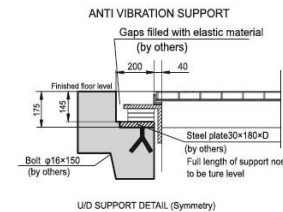




### ⚠ Done by the Owner & Builder (XO-508)

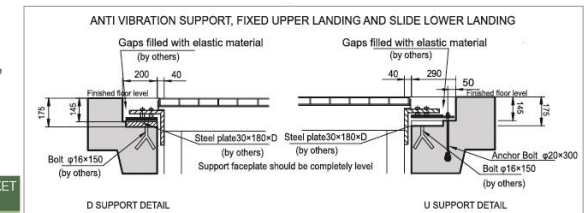
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- The corresponding parameter of machine should refer to SEB.
- Any special requirement, please contact XOEC before signing contract.

MAIN POWER SUPPLY CABLE TYPE	MACHINE POWER		VOLTAGE	
	PSH17KW	10mm²	<380V	330V
HEATER POWER SUPPLY CABLE TYPE ONLY WHEN HEATER IS AVAILABLE	11~15P=15KW	16mm²	10mm²	
	20P=20KW	25mm²	16mm²	
	30P=30KW	35mm²	25mm²	
	30P=30KW	35mm²	25mm²	
			10mm² WATERPROOF SOFT WIRE CABLE	



	INDOOR & OUTDOOR PACKET A	OUTDOOR PACKET B & C & D
S	1056	1256
F	90	90
G	90	90

F & G: Extra cladding. If this cladding by local and its thickness is more than 90mm, please contact CLC.



Angle	Speed (m/s)	Rise H(mm)	Step width A(mm)	Span L(mm)	Other dimensions(mm)						Support force(KN)	
					min LP	LS	B	C	min D	E	RU	RD
35°	0.5	H≤6000	1000	1.428H+4793+R	4200	5761+R	1208	1550	1630	1500	5.11L+7	5.11L+2.3
			800	1.428H+5293+R			1005	1347	1430	1297	4.41L+7	4.41L+2.3
			600	1.428H+5293+R			802	1144	1230	1094	3.76L+7	3.76L+2.3

\* R: Total length for truss extensions.