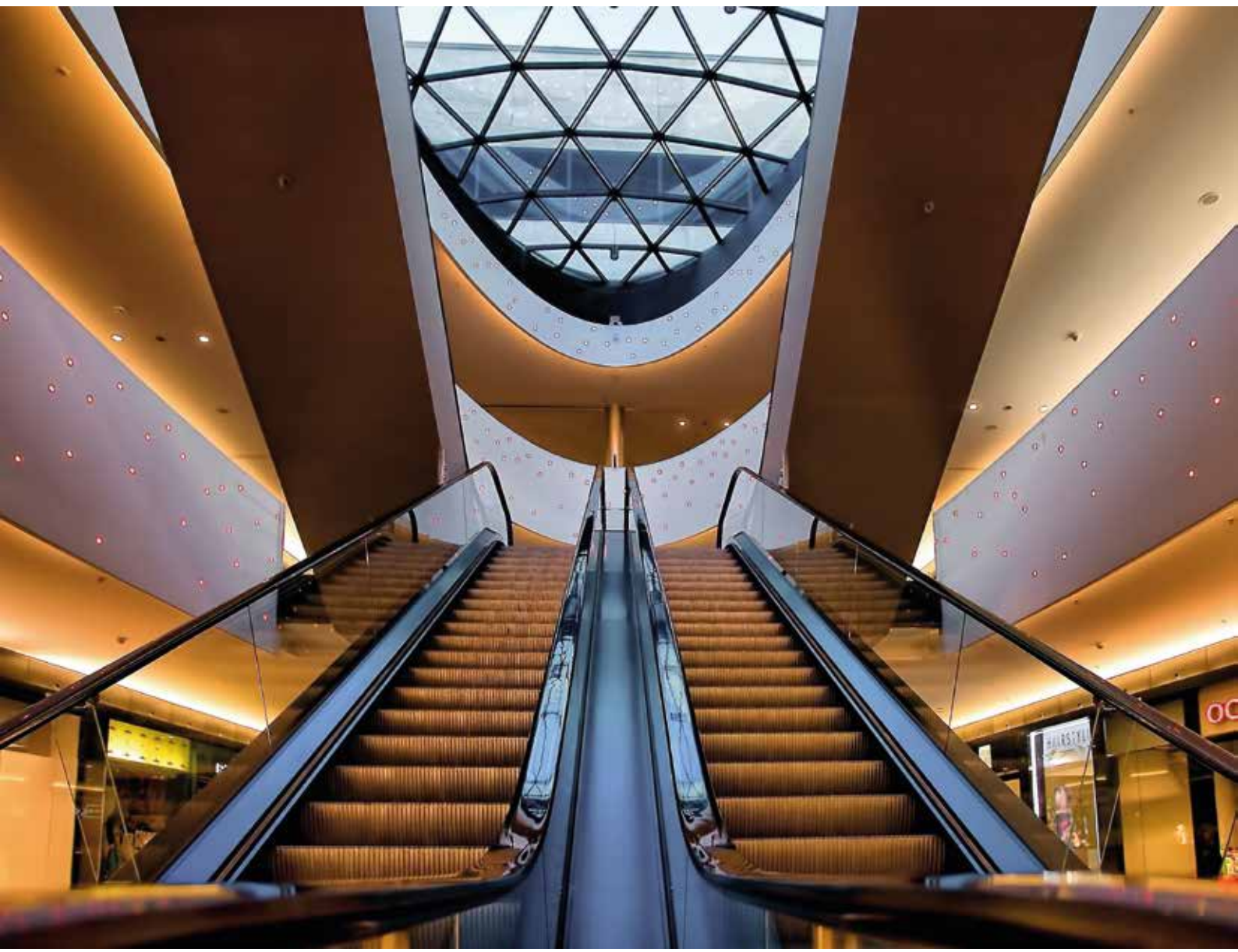
TECNOVA

Technical Catalog

Escalator



30 Years of Experience in Market at Your Service

SABA Group, one of the main leaders in the elevator & escalator industry in IRAN, was founded in 2001. The background of **SABA Group** is 3 decades of experience by its well-known founders in the market. After years of offering the best People Flow experience together with our global partners from Europe, now we create a unique solution for the modern & developing construction industry; **TECNOVA**.

TECNOVA is a modern concept in the elevator, escalator & automatic building door industry which aims to create smart choice & fulfill the architectural concepts & the mega trend of urbanization demand.

TECNOVA elevators, are designed & manufactured precisely with the latest European Norm together with a desirable harmony in visualization which any visitor admired.

MANUFACTURING
Facilities

Believed that best quality comes from the best equipment. SJEC has imported the world first classic NC facilities, at present SJEC has been updated its 6 sheet metal lines. There are 4KW laser cutting machine from MITSUBISHI, turret punching machine from WIEDMANN, cnc bending & shearing machine from KUMATSU, processing lines from AMADA, processing center from CINCINNATI, welding robot from YASKAWA & .... All these can well guarantee our manufacturing quality.

FES
Escalator

Silence & comfort. The new generation has inherited the traditional safety, reliability, high efficiency style & combined with updated market trends as well as tailored solutions. it is widely used for shopping malls, hotels, office blocks & ....

TYPE	FES
Inclination	30^0 or 35^0
Step Width (mm)	600/800/1000
Horizontal Step Run (mm)	800/1200
Speed (m/s)	0.5
Power Supply	AC 3 Phase.5 wire 50Hz/60Hz
Installation position	Indoor / Outdoor
Rise (m)	2~6/7.5 (Details as following)

RISE	INCLINATION	HORIZONTAL STEP QTY.
2~6	30^0 or 35	2
2~7.5	30^0	3

TYPE	STANDARD	OPTIONAL
Balustrade Design	Vertical Safety Glass (10mm safety tempered glass)	
Balustrade Profile	Q235/SS	
Handrail	Black	Other colors
Deckings	Hairline SS	
Skirting Panel	Hairline SS	
Step	Aluminum alloy Die-cast gray color	
Landing Plate	Punched SS	Etched SS/ Extrude aluminum
Operation Panel	Red emergency stop button & up/down key switch	

FEH
Escalator

TYPE	FEH
Inclination	30^0 / 35^0 / 23.2^0 / 27.3^0
Step Width (mm)	600/800/1000
Horizontal Step Run (mm)	800/1200/1600
Speed (m/s)	0.5/0.65
Power Supply	AC 3 Phase.5 wire 50Hz/60Hz
Installation position	Indoor / Outdoor
Rise (m)	2~6/8/12/15 (Details as following)

RISE	INCLINATION	HORIZONTAL STEP QTY.	UPPER RADIUS (MM)
2~6	30^0 or 35	2	1500
2~8	30^0	3	1500
2~12 (max. speed 0.65m/s)	23.2^0/27.3^0/30^0	3/4	2700
2~15 (max. speed 0.5m/s)	23.2^0/27.3^0/30^0	3/4	2700

TYPE	STANDARD	OPTIONAL
Balustrade Design	Vertical Safety Glass (10mm safety tempered glass)	Inclined SS
Balustrade Profile	Hairline SS	
Handrail	Black	Other colors
Deckings	Hairline SS	
Skirting Panel	Hairline SS	
Step	Aluminum alloy Die-cast gray color	
Landing Plate	Etched stainless steel	Extrude aluminum with surface of stainless steel/Extrude aluminum
Operation Panel	Red emergency stop button & up/down key switch	

PASSENGER
Conveyor

SPECS	PASSENGER CONVEYOR		
Type	FET	FEF	FEW
Inclination	10° / 11° / 12°	10° / 11° / 12°	0° / 6°
Pallet Width (mm)	800/1000	800/1000	1000/1200/1400
Horizontal Pallet Run (mm)	400 (Upper landing)	400/800	N/A
Speed (m/s)	0.5		
Power Supply	AC 3 phase.5 wire 50Hz/60Hz		
Installation position	Indoor/Outdoor		
Rise/Length (m)	H: 2~7.5	H: 2~7.5	L: 20~120

TYPE	STANDARD	OPTIONAL
Balustrade Design	Vertical Safety Glass (10mm safety tempered glass)	Inclined SS for FEW
Balustrade Profile	Hairline SS	
Handrail	Black	Other colors
Deckings	Hairline SS	
Skirting Panel	Hairline SS	
Pallet	Die-cast aluminum	
Landing Plate	Punched SS	Etched SS/Extrude aluminum
Operation Panel	Red emergency stop button & up/down key switch	

STANDARD
Features

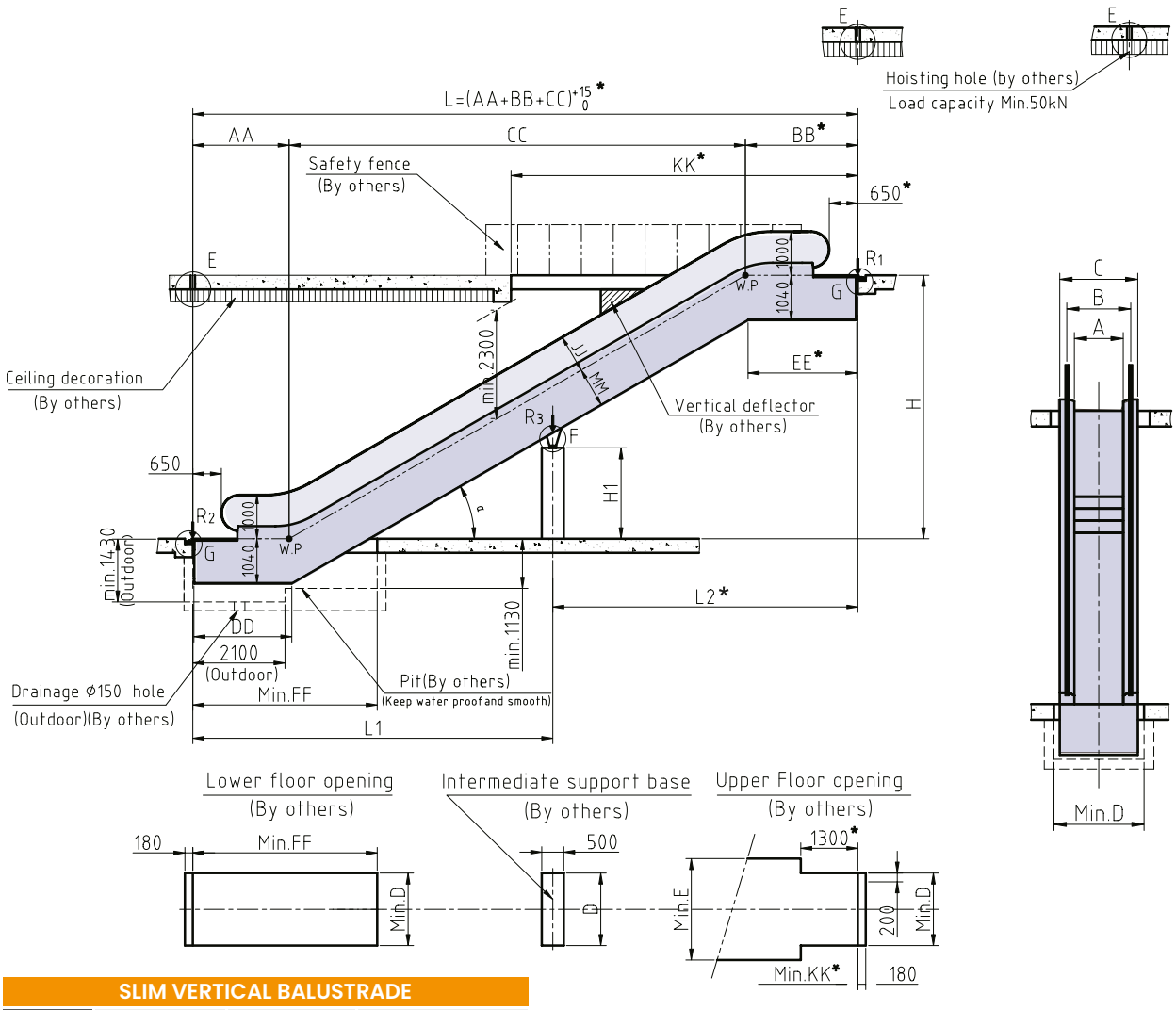
STANDARD	FES	FEH	FET/FEF/FEW
Automatic Lubrication System	●	●	●
Alarm Buzzer	●	●	●
Brake Distance Monitor	●	●	●
Comb Contacts	●	●	●
Emergency Stop Buttons	●	●	●
Fire Interface	●	●	●
Fault & Status Display	●	●	●
Handrail Anti-Static Roller	●	●	●
Handrail Entry Contacts	●	●	●
Handrail Speed Monitor	●	●	●
Landing Plate Contact	●	●	●
Motor Overheat	●	●	●
Maintenance Interlock Protection	●	●	●
Phase Monitor	●	●	●
Safety Brake on Main Shaft		●	
Speed Monitor with Electrical Reverse Detection	●	●	●
Step/Pallet Anti-Static Brush	●	●	●
Step/Pallet Chains Contacts	●	●	●
Step/Pallet Missing Monitor	●	●	●
Step/Pallet Reverse Fences	●	●	●
Step/Pallet Sag Contacts	●	●	●
Soft Stop	●	●	●
Service Brake Release Contact	●	●	●

OPTIONAL
Features

STANDARD	FES	FEH	FET/FEF/FEW
Auto-Start	●	●	●
Cable Connector for Intersection	●	●	●
Comb Heating System	●	●	●
Comb Light	●	●	●
Drive-Chain Contact	●	●	●
Dry Contact for Remote Monitoring System	●	●	●
Float Contact	●	●	●
Handrail Broken Contact	●	●	●
Handrail Color	●	●	●
Outside Cladding	●	●	●
Skirting Brush	●	●	●
Safety Brake on Main Shaft	●		●
Skirting Contact	●	●	●
Step Gap Illumination	●		
Skirting Lighting (LED Dot Light)	●	●	●
Step/Pallet Color	●	●	
Step Safety Demarcation	●	●	
Step Upthrust Contact	●		
Truss Heating System	●	●	●
Traffic Light	●	●	●
VVVF Control	●	●	●

FES LAYOUT

for Commercial Escalator



SLIM VERTICAL BALUSTRADE			
A	600	800	1000
B	837	1037	1237
C	1145	1345	1545
D	1200	1400	1600
E	1720	1920	2120

A	REACTION FORCE (KN)	
	W/O Intermediate Support	With One Intermediate Support
600	R1 = 3.35 X L + 15.5	R1 = 3.35 X L2 + 11.5
	R2 = 3.35 X L + 10	R2 = 3.35 X L1 + 4.5
		R3 = 3.35 X L + 3.5
800	R1 = 3.7 X L + 17	R1 = 3.7 X L2 + 12
	R2 = 3.7 X L + 11	R2 = 3.7 X L1 + 4.7
		R3 = 3.7 X L + 4
1000	R1 = 4.15 X L + 18.5	R1 = 4.15 X L2 + 12.5
	R2 = 4.15 X L + 11.5	R2 = 4.15 X L1 + 4.9
		R3 = 4.15 X L + 4.5

Note: 1- L , L1 & L2 is in meter.

Note:

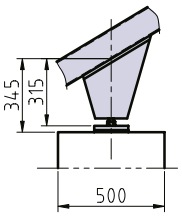
1- Height about sea level
Height above sea level of the placed escalators shall be no greater than 1000m. in case of particular, Please contact SJEC.

2- If one of the following situations is met, the dimensions with mark * shall be extended 500mm.
(1) 600mm step.
(2) Double drive.
(3) VVVF & power exceeds 11KW.
(4) Main power 200V grade & motor power more than 7.5KW.

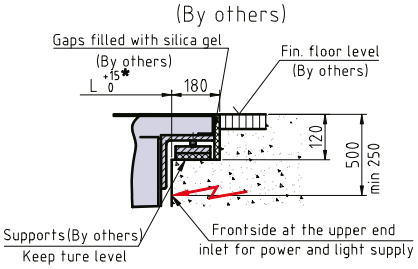
3- Client shall provide the intermediate support base which can be made by the reinforced concrete or metallic structure in right position in case of horizontal distance L over 15m.

4- The requirements of escalators & building interfaces in figure 1 ~ figure 5 accord with the national standards.
(EN115 - 1: 2008+A1:2010). If doubt, please contact SJEC.

Detail F



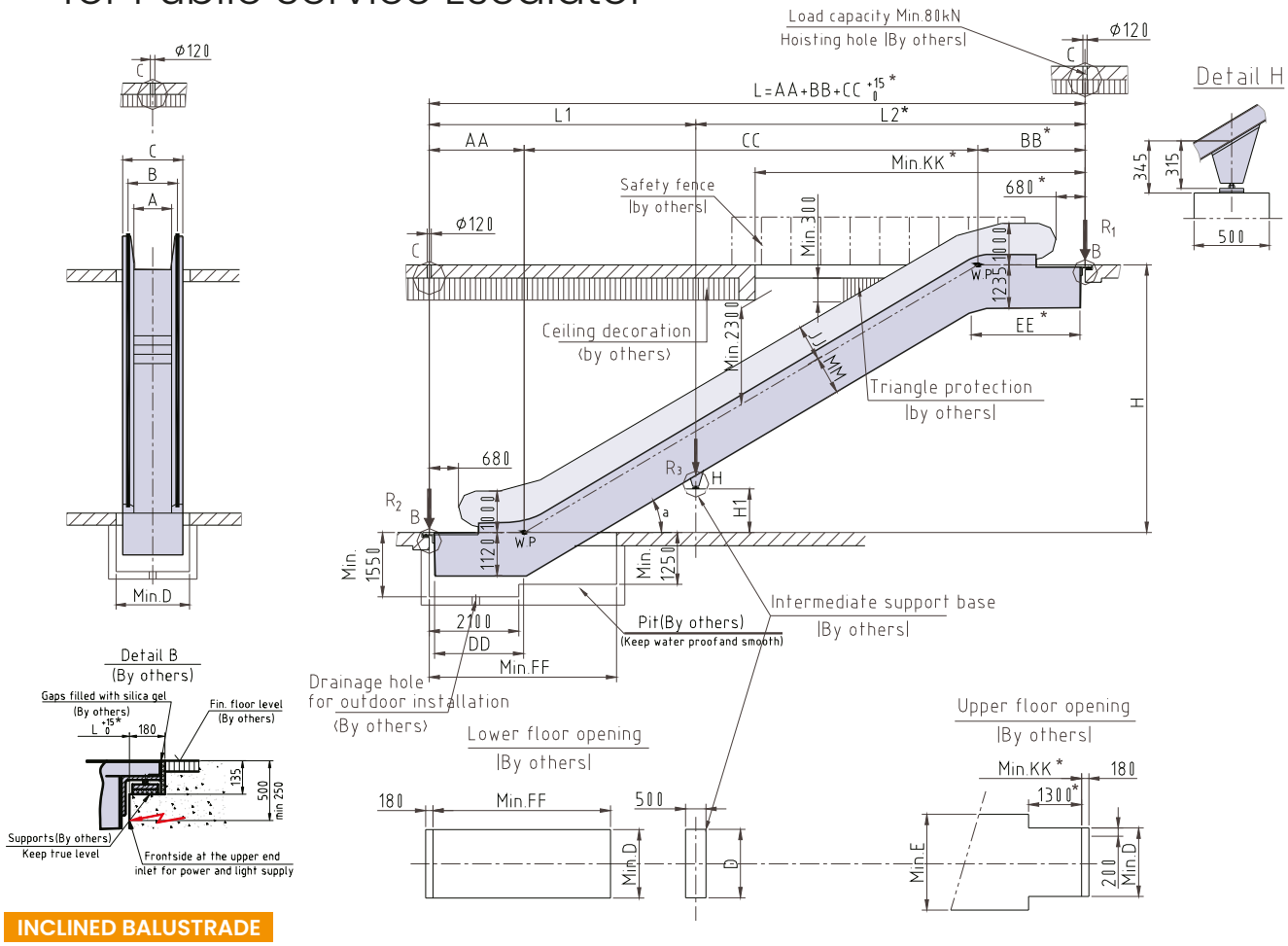
Detail G
(By others)



TYPE	A	AA	BB	CC	DD	EE	FF	JJ	KK	MM
FES302	30°	2195	2449	H X 1.732	2230	2355	4200	870	7800	960
FES352	35°	2229	2510	H X 1.428	2385	2312	4000	850	7000	980
FES303	30°	2595	2964	H X 1.732	2630	2870	4600	870	8300	960

FEH LAYOUT

for Public Service Escalator



INCLINED BALUSTRADE

A	600	800	1000
B	910	1100	1310
C	1195	1395	1595
D	1270	1470	1670
E	1790	1990	2190

SLIM VERTICAL BALUSTRADE

A	600	800	1000
B	837	1037	1237
C	1195	1395	1595
D	1270	1470	1670
E	1790	1990	2190

A	Reaction Force (KN)	
	W/O Intermediate Support	With One Intermediate Support
600	R1 = 4.05 X L + 16.3	R1 = 4.05 X L2 + 14
	R2 = 4.05 X L + 8.5	R2 = 4.05 X L1 + 7
		R3 = 4.2 X L + 10
800	R1 = 4.45 X L + 17	R1 = 4.45 X L2 + 16
	R2 = 4.45 X L + 9.5	R2 = 4.45 X L1 + 7.5
		R3 = 4.7 X L + 11
1000	R1 = 4.95 X L + 19.5	R1 = 4.95 X L2 + 17.2
	R2 = 4.95 X L + 10.5	R2 = 4.95 X L1 + 8.3
		R3 = 5.2 X L + 11.3

Note: 1- L , L1 & L2 is in meter.
2- L1 & L2 do not exceed 15m.

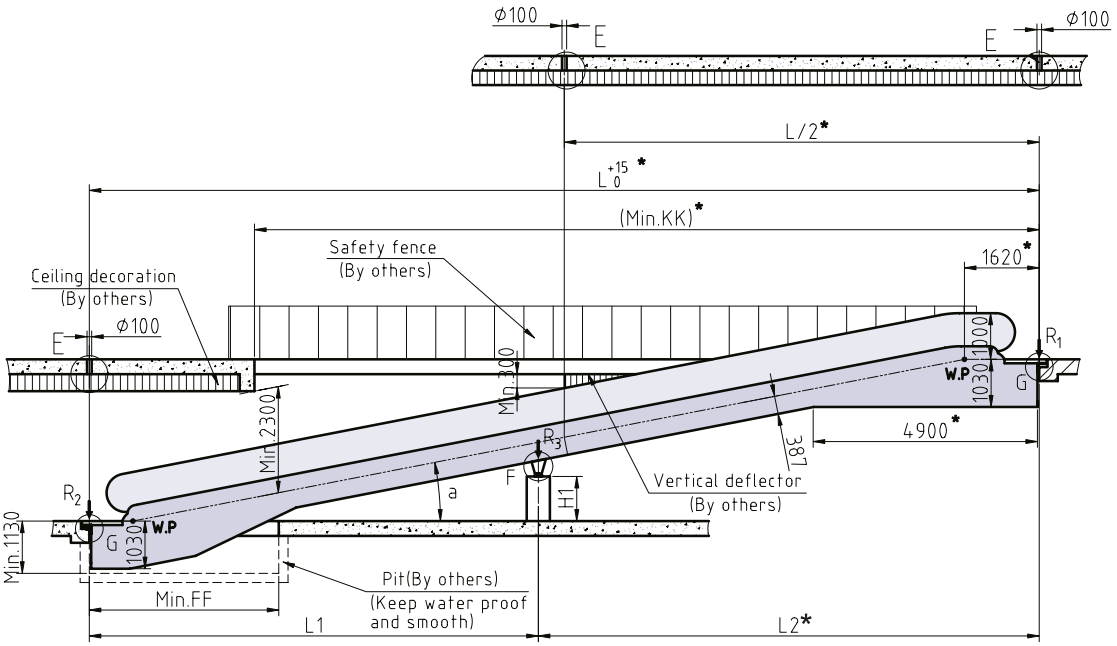
Note:
1- Height about sea level
Height above sea level of the placed escalators shall be no greater than 1000m. in case of particular, Please contact SJEC.
2- If one of the following situations is met, the dimensions with mark * shall be extended 500mm.
(1) 600mm step.
(2) Double drive.
(3) VVVF.
(4) Main power 200V grade & motor power more than 7.5KW.
3- Client shall provide the intermediate base which can be made by the reinforced concrete or metallic structure in right position in case of horizontal distance L over 15m.
4- The requirements of escalators & building interfaces in figure 1 ~ figure 5 accord with the national standards. (EN115 - 1: 2008+A1:2010). If doubt, please contact SJEC.
5- V: Inclined Balustrade
T: Vertical Balustrade

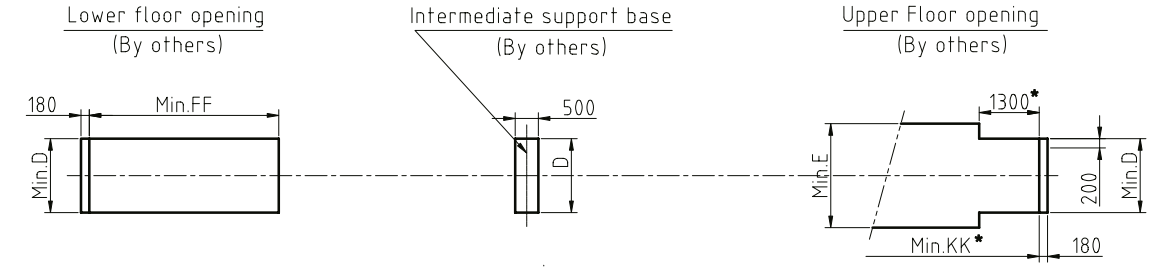
TYPE	A	UPPER RADIUS	AA	BB	CC	DD	EE	FF	JJ (FOR INCLINED BALUSTRADE)	JJ (FOR VERTICAL BALUSTRADE)	KK	MM
FEH302	30°	1500	2231	2598	H X 1.732	2370	2815	4530	870	870	1060	8000
FEH303	30°	1500	2631	2998	H X 1.732	2770	3215	4930	870	870	1060	8400
FEH352	35°	1500	2266	2682	H X 1.428	2505	2780	4420	850	850	1080	7200
FEH233	23.2°	2700	2898	3220	H X 2.333	2885	3730	5700	901	919	1040	10200
FEH234	23.2°	2700	3298	3620	H X 2.333	3285	4130	6100	901	919	1040	10600
FEH273	27.3°	2700	2945	3350	H X 1.938	3047	3613	5450	882	900	1060	9800
FEH274	27.3°	2700	3345	3750	H X 1.938	3447	4013	5850	882	900	1060	10200
FEH303	30°	2700	2863	3283	H X 1.732	3000	3500	5160	870	870	1060	8800
FEH304	30°	2700	3263	3683	H X 1.732	3400	3900	5560	870	870	1060	9220

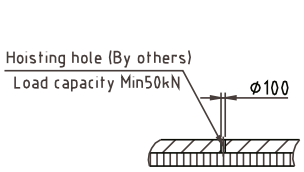
We reserve the right to alter some of specifications & descriptions given here in without prior notices.

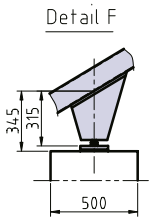
FET LAYOUT

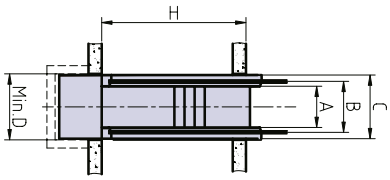
for Passenger Conveyor











A	800	1000
B	1037	1237
C	1345	1545
D	1400	1600
E	1920	2120

A	Reaction Force (KN)
800	R1 = 3.45 X L2 + 12.5
	R2 = 3.45 X L1 + 4
1000	R3 = 4 X L + 14.5
	R1 = 3.85 X L2 + 14
	R2 = 3.85 X L1 + 4.5
	R3 = 4.5 X L + 15.5

Note: 1- L, L1 & L2 is in meter.
2- L1 & L2 do not exceed 10m
3- Applicable in case of one intermediate support or else, contact us.

Note:

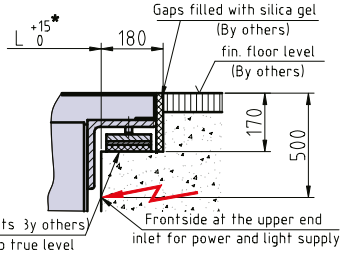
1- Height about sea level.
Height above sea level of the placed moving walks shall be no greater than 1000m. in case of particular, Please contact SJEC.

2- If one of the following situations is met, the dimensions with mark * shall be extended 500mm.
(1) Double drive.
(2) VVVF.
(3) Main power 200V grade & motor power more than 7.5KW.

3- Client shall provide the intermediate support base which can be made by the reinforced concrete or metallic structure in right position in case of horizontal distance L over 10m.

4- The requirements of moving walks & building interfaces in figure 1 ~ figure 5 accord with the national standards.
(EN115 - 1: 2008+A1:2010). If doubt, please contact SJEC.

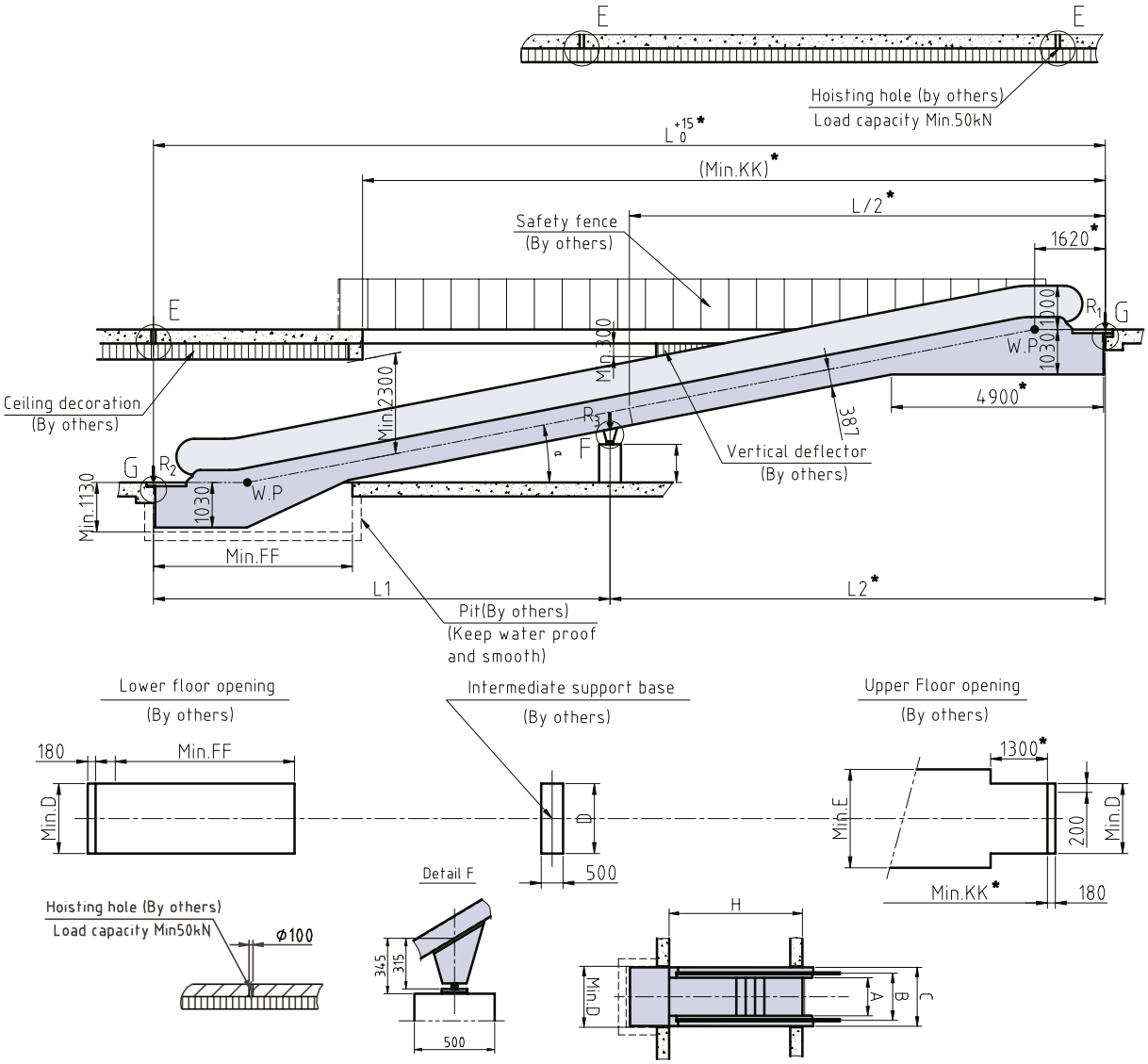
Detail G
(by others)



TYPE	A	L	KK	FF
FEF10	10°	H X 5.671 + 2650	17700	4250
FEF11	11°	H X 5.145 + 2555	16700	4150
FEF12	12°	H X 4.705 + 2475	15800	4000

FEF LAYOUT

for Passenger Conveyor



A	800	1000
B	1037	1237
C	1345	1545
D	1400	1600
E	1920	2120

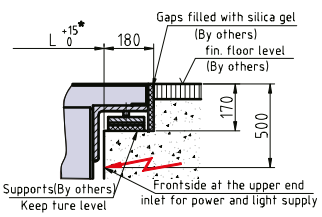
TYPE	A	L	KK	FF
FEF10	10°	H X 5.671 + 3945	17700	4750
FEF11	11°	H X 5.145 + 3755	16700	4550
FEF12	12°	H X 4.705 + 3595	15800	4500

A	Reaction Force (KN)
800	R1 = 3.45 X L2 + 12.5
	R2 = 3.45 X L1 + 4
1000	R3 = 4 X L + 14.5
	R1 = 3.85 X L2 + 14
	R2 = 3.85 X L1 + 4.5
	R3 = 4.5 X L + 15.5

Note: 1- L, L1 & L2 is in meter.
2- L1 & L2 do not exceed 10m
3- Applicable in case of one intermediate support or else, contact us.

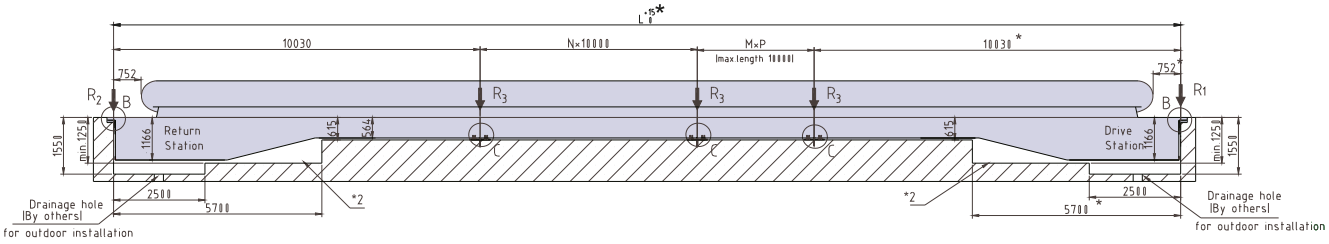
Note:
1- Height about sea level.
Height above sea level of the placed moving walks shall be no greater than 1000m. in case of particular, Please contact SJEC.
2- If one of the following situations is met, the dimensions with mark * shall be extended 500mm.
(1) Double drive.
(2) VVVF.
(3) Main power 200V grade & motor power more than 7.5KW.
3- Client shall provide the intermediate support base which can be made by the reinforced concrete or metallic structure in right position in case of horizontal distance L over 10m.
4- The requirements of moving walks & building interfaces in figure 1 ~ figure 5 accord with the national standards. (EN115 - 1: 2008+A1:2010). If doubt, please contact SJEC.

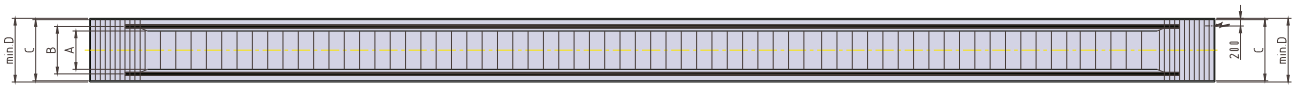
Detail G
(by others)

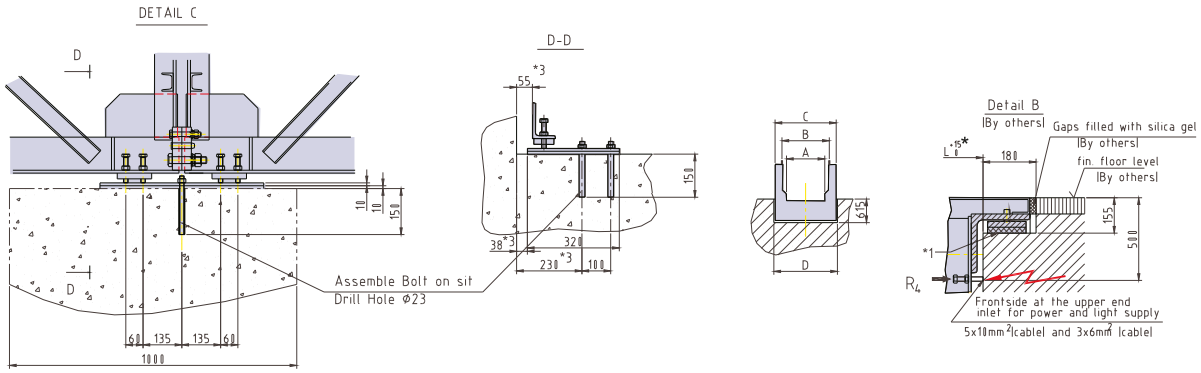


FEW LAYOUT

for Passenger Conveyor







INCLINED BALUSTRADE			
A	1000	1200	1400
B	1310	1510	1710
C	1595	1795	1995
D	1670	1870	2070

VERTICAL BALUSTRADE			
A	1000	1200	1400
B	1237	1437	1637
C	1595	1795	1995
D	1670	1870	2070

A	1000	1200	1400
	Reaction Force (kN)		
R1	55	64	73
R2	53	61	69
R3	90	110	125
R4	5	5	5

Note:

1- Mark:
- Mark*1: Suppors need to be in true level.
- Mark*2: If there is pit, pit need to be water proof & smooth.
- Mark*3: If dimension D is changed, the dimension marked should be adjusted.

2- According to EN115, the entrance of bothing landing must have enough area to facilitate the traffic flow.

3- If one of the following situations is met, the dimensions with mark * shall be extended 500mm.
(1) Double Drive
(2) VVVF
(3) Main power 200Vgrade & motor power more than 7.5W.

4- All dimensions refer to finished dimension are in mm.

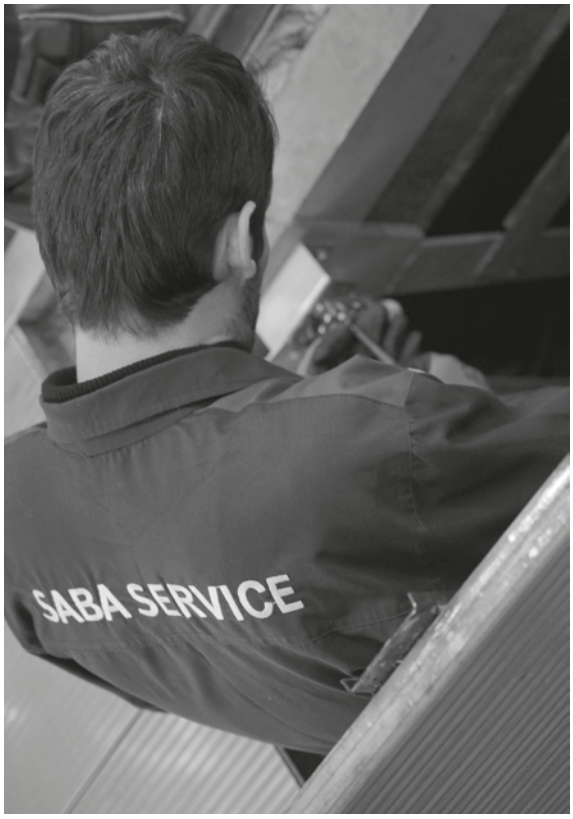
OUR
Commitment

• Excellence in Service & Maintenance

Service & maintenance of TECNOVA products is presented by the only one service company in our industry in IRAN that has the largest service network & 24/7 method in addition to experienced staff & storage centers to bring better customer care & support. We are using modern methods for maintenance of Elevators, Escalators & Automatic Building Doors which brings significant increase in life span of products.

• Reliable installation

TECNOVA products are installed by experienced & educated SABA installation team which has already installed more than 4000 units of Elevators, Escalators & Automatic Building Doors.
Engineering, Installation, Quality Control & Project Control are different cores of TECNOVA team that all guarantee reliable process & operation. Installation teams are equipped with modern & precious tools which follow the latest safety standards. Continuous training system & multi-level quality control assures the quality of installation & provides the maximum customer satisfaction.



Creative Difference

TECNOVA
Creating Solutions

SABA
Companies Group

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