

Escalators and
Moving walkways



TECNO
TECNOLOGIA NELL'ELEVAZIONE

A Global Family Company



Escalators



Escalators and Moving Walkways

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Escalators and Moving Walkways

Escalators and moving walkways represent the main reference point in nowadays' collective transport and a tool for conveying the users within buildings depending on the business and sole transport requirements while optimizing people's movement flows.

Businesses in fact enjoy the benefits of the use of escalators and moving walkways in terms of increase in the flow of customers, as these products ensure an evenly spread turnout to all floors by means of an optimum conveying of users and an uninterrupted high carrying capacity. All these benefits together mean better economic results for retail stores.

Low power consumption solutions

Tecno's products are proposed with continuous operation at stable speed, from start to stop. Alternatively, any escalator or moving walkways from Tecno can be equipped with:

- stand-by control, through VVVF dual speed control. The unit runs at standard working speed and reduces it in absence of users, allowing a lower energy consumption, with a reduction of peak consumption up to 52% compared to conventional motors and a reduction in wear of components unlike in a standard continuous operation or with an automatic start/stop motor control;
- automatic motor start/stop control, which can be regulated by platforms, photoelectric cells or integrated opto-electronic devices (radar) to detect the approaching user and starting the unit. The length of the time interval from the last user to the stopping of the unit can be customized according to the client's needs.

Outdoor installation

Escalators and moving walkways installed outdoor need special arrangements to preserve the integrity and operation over time.

While referring to the reference legislation, which recommends protection from the direct exposure to the weathering agents, Tecno ensures the best operation and durability of the units and components even under these conditions.



Light escalators - TLL

For commercial service in accordance with the EN 115-1:2010 standard.



The Tecno TLL escalator has been developed based on our experience in the field over the last three decades. It is equipped with a handrail without exposed supporting profiles and the base of the balustrade, the baseboard and the comb platforms are in stainless steel; the colourless tempered glass balustrade (10 mm thick) completes the look of the installation.

This product is offered to those who require advanced technology combined with style and design.

The TLL escalator allows customised solutions to meet the regulations in any type of configuration, and is particularly suitable for installations in:

- shopping centres;
- exhibition centres;
- department stores;
- cinemas.

Inclination

- *Inclination at 35°*
Cost-effectiveness and occupied space are optimised through this solution which is the most popular for this kind of products. However, in the case of vertical rises over 6 meters, regulations require the use of an installation with a 30° inclination.
- *Inclination at 30°*
The user experiences the maximum safety and comfort of use with this solution.





Width of the steps and carrying capacity

The carrying capacity of an escalator is calculated based on the width of the steps. The products are available with steps of width being:

- 600 mm;
- 800 mm;
- 1000 mm.

The most common choice is the 1000 mm step as it allows the user to easily exploit the product, even carrying bags or shopping bags.

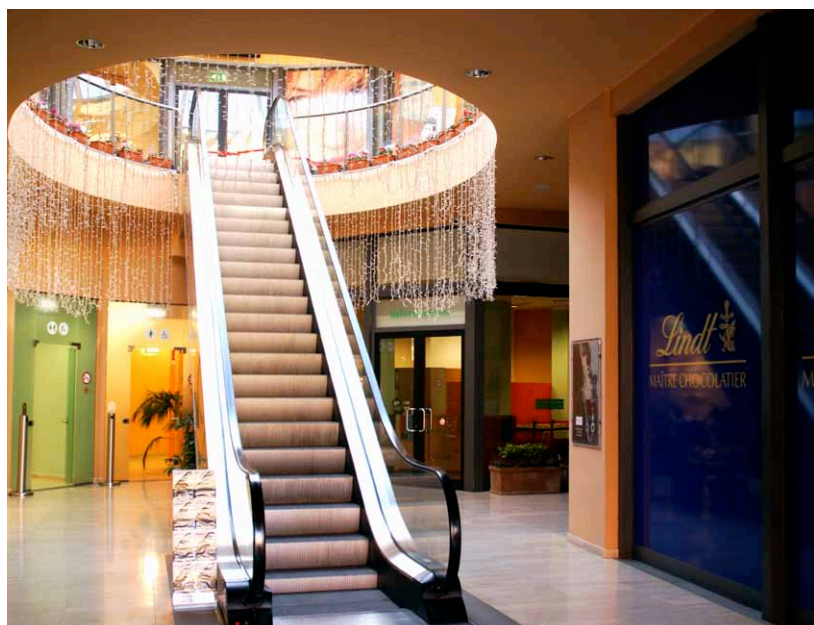
The 600 and 800 mm widths are installed mainly in places with low traffic or with space constraints.

The speed of the installation also influences the carrying capacity which is distinguished in theoretical and practical depending on the crowding (or occupancy rate).

Depending on the parameters listed above, the practical carrying capacity can vary from 40 to 80% in regard to the theoretical value.

Step width	Theoretical carrying capacity	Carrying capacity * v=0,5 m/s		
		poor	medium	crowded
600 mm	4500 p/h	1800 p/h	2700 p/h	3600 p/h
800 mm	6750 p/h	2400 p/h	3600 p/h	4800 p/h
1000 mm	9000 p/h	3000 p/h	4500 p/h	6000 p/h

* It is possible to further increase the carrying capacity bringing the speed of the installations up to 0.75 m/s.



Public service escalators - THD

For public service in accordance with the EN 115-1:2010 standard.



The Tecno THD escalator was designed for applications that require particular sturdiness and safety under intense traffic conditions and thus conforming to the parameters of the standard on public service.

It has reinforced structure and components so as to withstand an intensive use up to 20 hours a day.

If required, it is possible to equip the system with balustrades made with 12 mm thick stainless steel coated sandwich panels.

In the event of particularly heavy use or with a high risk of vandalism, the installation can be equipped with inclined balustrades, made entirely of stainless steel and particularly resistant to shock.



Tecno THD is suitable for installations in:

- airports;
- railway stations;
- undergrounds;
- ski resorts;
- in the public transport in general.





Moving Walkways- TAW

For commercial service in accordance with the EN 115-1:2010 standard.

The TAW moving walkway combines all the advantages of the escalator by adding the advantage of being able to carry the shopping or luggage trolleys. Also in this case the technological quality and sturdiness of the installation are combined to a lightweight design, completed by the colourless tempered glass balustrade (10 mm thick).

The TAW moving walkway is developed in three versions:

- TAW1: inclined version;
- TAW2: double curve inclined version;
- TAW0-6°: flat version.

All models are suitable for the combined use of people and trolleys and find their ideal location in shopping centres.

Inclination

- *Inclination at 10°*

The 10° inclination ensures maximum comfort for passengers with or without a trolley and guarantees maximum safety.

- *Inclination at 12°*

The 12° inclination is indicated mainly in case of limited space available. This inclination is available in the TAW1 and TAW2 version

- *Flat*

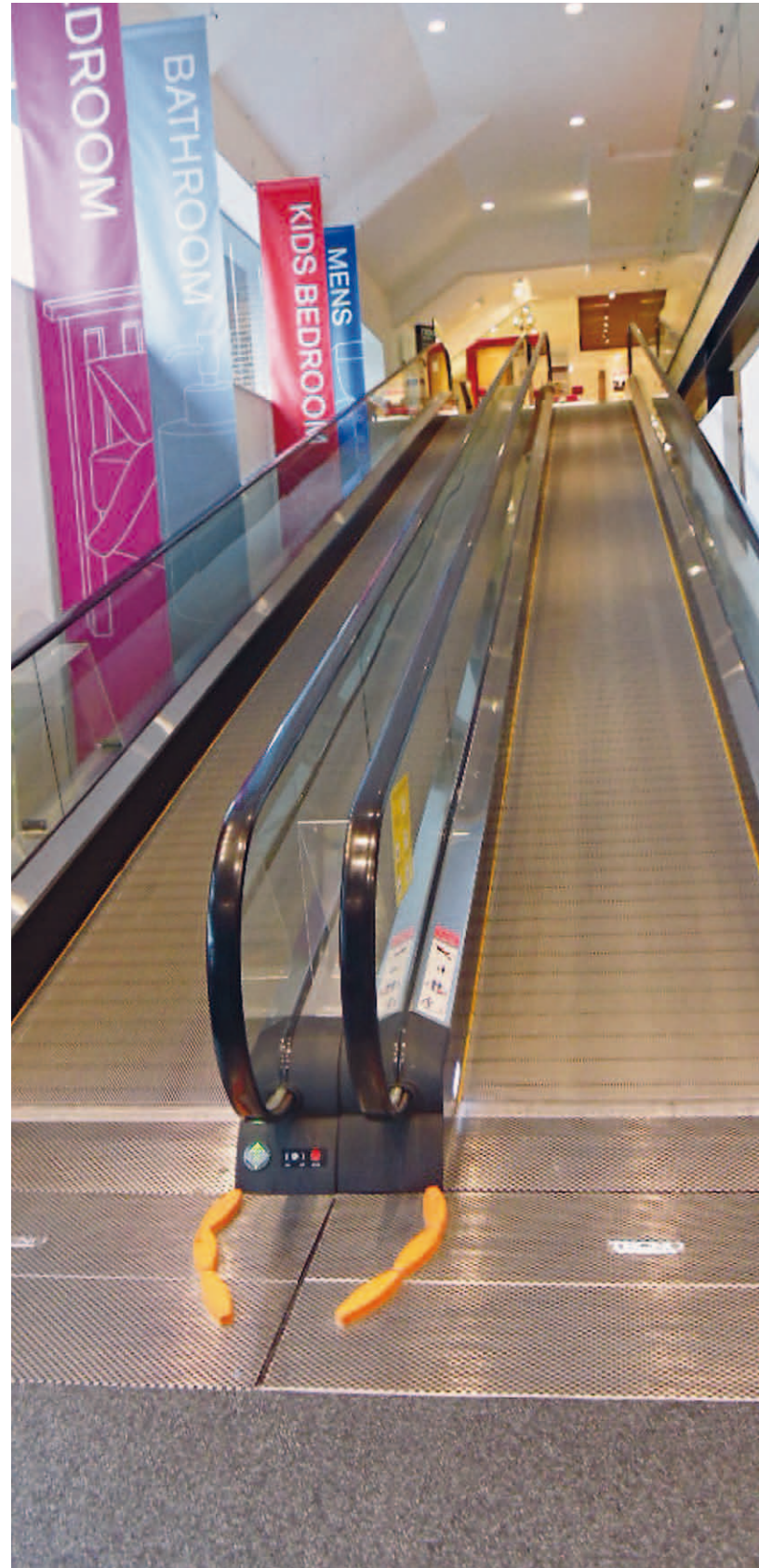
The TAW0-6° horizontal moving walkways have a possible and allowed inclination between 0° and 6°.

Width of the segments and the carrying capacity

The TAW moving walkway is available in all versions with a treading width (segment) of:

- 800 mm;
- 1000 mm.

The most frequent choice is the 1000 mm segment, also in compliance with the legislation that recommends this width due to safety issues if used with trolleys.



Public service Moving Walkways - TAWHD

For public service in accordance with the EN 115-1:2010 standard.



The Tecno TAWHD moving walkway was designed for applications that require particular sturdiness and safety under intense traffic conditions and thus conforming to the parameters of the standard on public service.

It has reinforced structure and components so as to withstand an intensive use up to 20 hours a day.

In case of need, for a particularly heavy use or with a high risk of vandalism, it is possible to provide the installation with balustrades with 12 mm thick stainless steel coated sandwich panels, particularly resistant to shock.

The TAWHD is suitable for installations in:

- airports;
- railway stations;
- undergrounds;
- in the public transport in general.





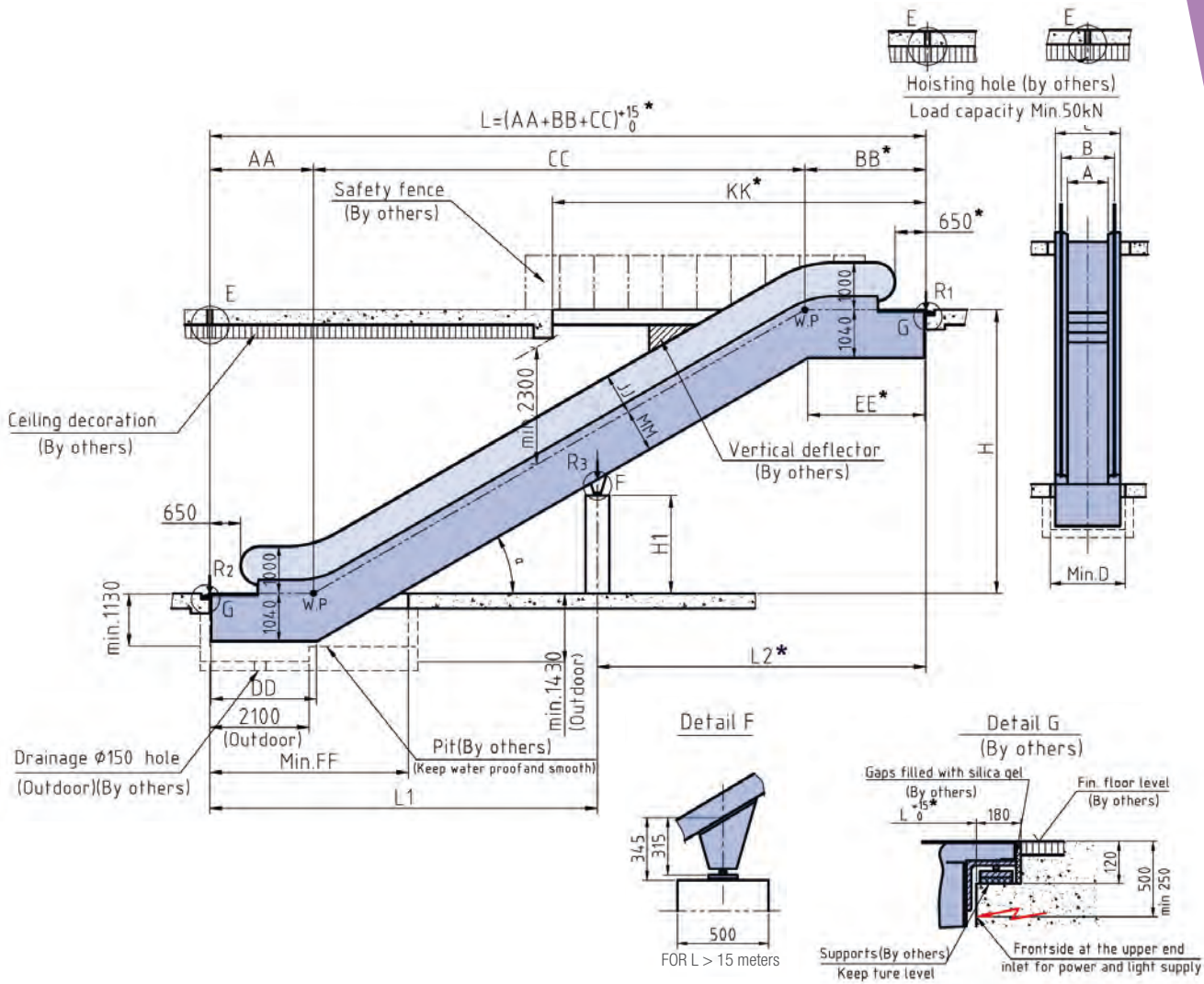
Escalators main technical data

	TECNO TLL		TECNO THD			
Rise in meters	2 - 6	6 - 7.5	2 - 6	2 - 8	8 - 12	12 - 15
Inclination	30° - 35°	30°	35°	30°		
Step width - mm	600 - 800 - 1000		600 - 800 - 1000			
Horizontal steps	2 - 3	3	2	2 - 3	3 - 4	
Speed - m/s	0.5		0.5 - 0.65			0.50



Features	Standard supply for TECNO TLL & TECNO THD
Installation type	Indoor - Outdoor (optional)
Movement	Continuous
Power supply	AC 3 phase - 50 / 60 Hz
Starting operation	Star Delta - VVVF (optional)
Balustrade design	Vertical safety glass (10 mm safety tempered glass)
Handrail profile	Hairline Stainless Steel
Handrail	Black rubber with internal canvas and rayon
Deckings	Hairline Stainless Steel
Skirting panel	Hairline Stainless Steel
Steps	Aluminum alloy die-cast - Gray color
Landing plate	Etched SS - Extrude Alumimum with Stainless Steel surface (optional)
Operation panel	Red Emergency stop button and up/down key switch

TLL Layout for Commercial Service Escalator



Dimensions

Model	a	HS	AA	BB	CC	DD	EE	FF	JJ	KK	MM
TLL	30°	2	2195	2449	H x 1.732	2230	2355	4200	870	7800	960
	35°	2	2229	2510	H x 1,428	2385	2312	4000	850	7000	980
	30°	3	2595	2964	H x 1.732	2630	2870	4600	870	8300	960

HS = horizontal steps

measurements are in mm

Dimensions with vertical balustrade

A	600	800	1000
B	837	1037	1237
C	1145	1345	1545
D	1200	1400	1600

A = step width

A mm	Reaction Force (KN) without intermediate support
600	R1 = 3.35 x L + 15.5
	R2 = 3.35 x L + 10
800	R1 = 3.7 x L + 17
	R2 = 3.7 x L + 11
1000	R1 = 4.15 x L + 18.5
	R2 = 4.15 x L + 11.5

Note : - L is in meters

A mm	Reaction Force (KN) with intermediate support
600	R1 = 3.35 x L2 + 11.5
	R2 = 3.35 x L1 + 4.5
	R3 = 3.35 x L + 3.5
800	R1 = 3.7 x L2 + 12
	R2 = 3.7 x L1 + 4.7
	R3 = 3.7 x L + 4
1000	R1 = 4.15 x L2 + 12.5
	R2 = 4.15 x L1 + 4.9
	R3 = 4.15 x L + 4.5

Note : - L - L1 - L2 are in meters

STANDARD & OPTIONS

Tecno Escalators



Standard supply TECNO ESCALATORS	
Alarm buzzer	Maintenance Interlock protection
Automatic Lubrification System	Motor overheat thermistors
Brake Distance Monitor	Phase monitor
Comb contacts	Service Brake release contact
Emergency stop buttons	Soft Stop
Fault & Status Display	Speed Monitor with Reverse Detection
Fire interface	Step anti static brush
Handrail anti-static roller	Step chains contact
Handrail entry contacts	Step missing monitor
Handrail speed monitor	Step reversing fences
Landing plate contact	Step sag contacts

Optional features TECNO ESCALATORS	
Auto start	Side and bottom cladding
Cable connector for intersection	Step colour
Coloured handrail	Step Upthrust contact
Comb heating system - outdoor installation	Skirting brush
Comb light	Skirting contacts
Drive chain contact	Skirting lighting - LED spots
Dry contact for remote monitoring system	Skirting lighting - LED strips
Float contact	Step safety demarcation
Handrail broken contact	Traffic light
Handrail lighting	Truss heating system - outdoor installation
Safety Brake on main shaft	VVVF control





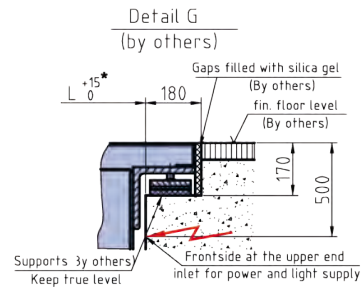
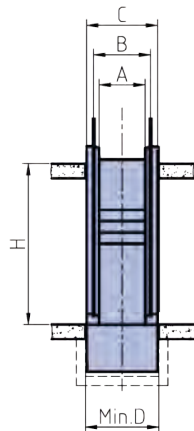
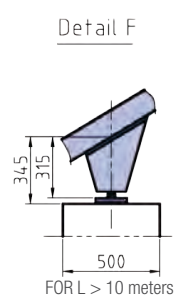
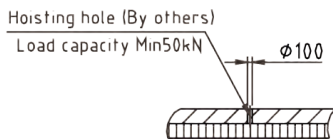
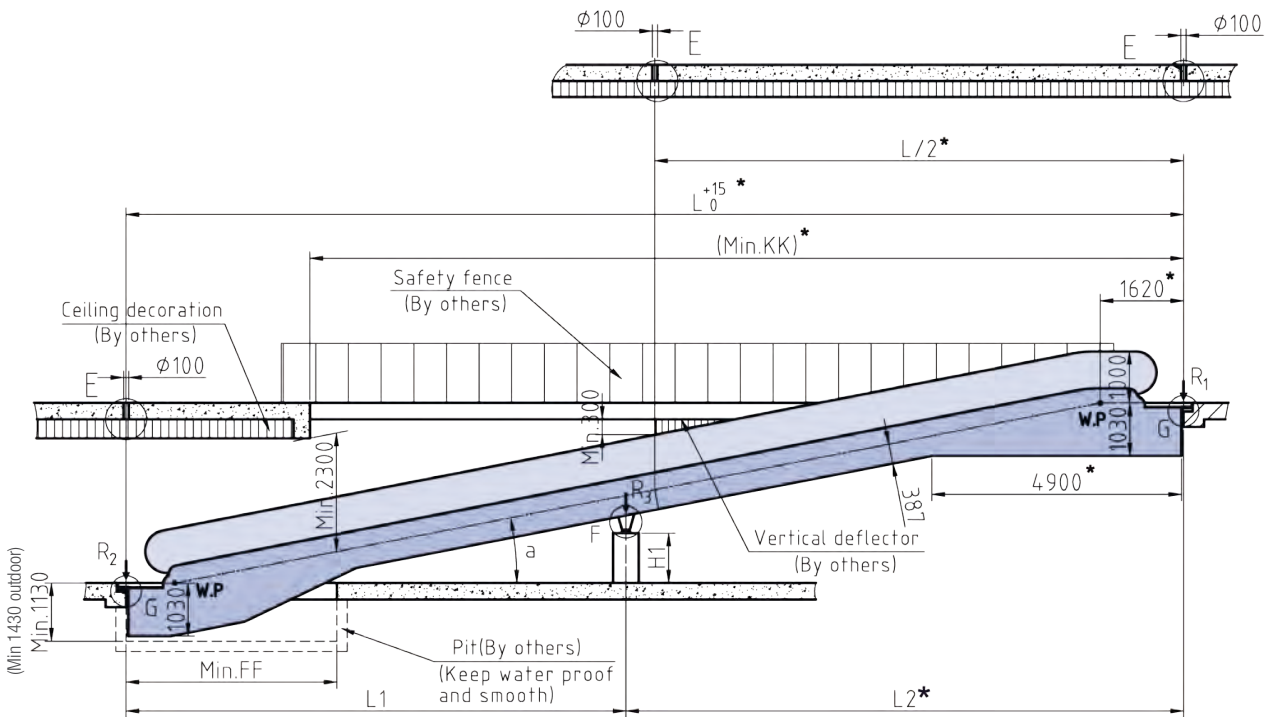
Moving Walkways - main technical data

	TECNO TAW 1	TECNO TAW 2	TECNO TAW 0° - 6°
Rise / Length - m	H 2 - 7.5	H 2 - 7.5	L 20 - 120
Inclination	10° - 12°	10° - 12°	0° - 6°
Pallet width	800 - 1000	800 - 1000	1000 - 1200 - 1400
Horizontal run - mm	400 upper landing	400 - 800	N / A
Speed - m/s	0.5		



Features	Standard supply for TECNO TAW 1 - TAW 2 - TAW 0° - 6°
Installation type	Indoor - Outdoor (optional)
Movement	Continuous
Power supply	AC 3 phase - 50 / 60 Hz
Starting operation	Star Delta - VVVF (optional)
Balustrade design	Vertical safety glass (10 mm safety tempered glass)
Handrail profile	Hairline Stainless Steel
Handrail	Black rubber with internal canvas and rayon
Deckings	Hairline Stainless Steel
Skirting panel	Hairline Stainless Steel
Pallets	Aluminum alloy die-cast - Gray color
Landing plate	Etched SS - Extrude Alumimum with Stainless Steel surface (optional)
Operation panel	Red Emergency stop button and up/down key switch

TAW1 Layout for Moving Walkways



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

A = pallet width

Dimensions

A mm	Reaction Force (KN without intermediate support)
800	$R1 = 3.45 \times L2 + 12.5$
	$R2 = 3.45 \times L1 + 4$
	$R3 = 4 \times L + 14.5$
1000	$R1 = 3.85 \times L2 + 14$
	$R2 = 3.85 \times L1 + 4.5$
	$R3 = 4.5 \times L + 15.5$

Model	a	L	FF	KK
TAW 1	10°	$H \times 5.671 + 2650$	4250	17700
	12°	$H \times 4.705 + 2475$	4000	15800

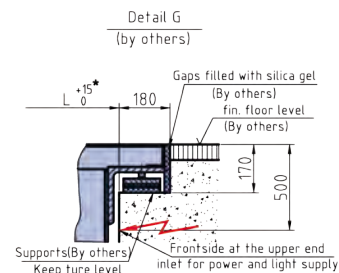
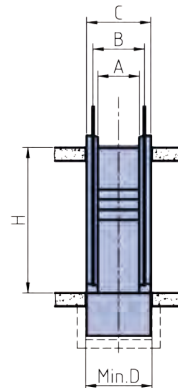
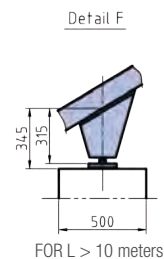
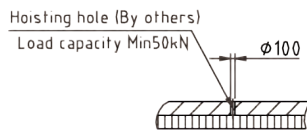
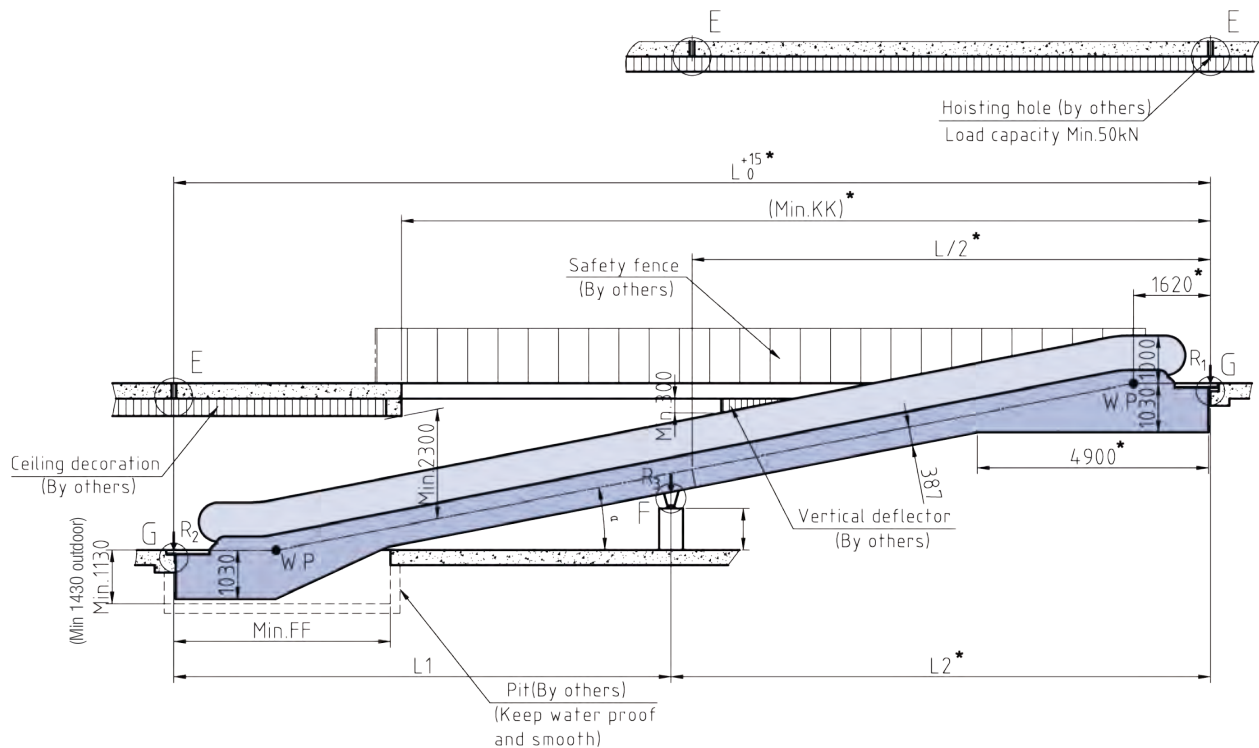
HS = horizontal steps

measures in mm

L, L1, L2 are in meters / L1 & L2 should not exceed 10 m



TAW2 Layout for Moving Walkways



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

A = pallet width

A mm	Reaction Force (KN) without intermediate support
800	$R1 = 3.45 \times L2 + 12.5$
	$R2 = 3.45 \times L1 + 4$
	$R3 = 4 \times L + 14.5$
1000	$R1 = 3.85 \times L2 + 14$
	$R2 = 3.85 \times L1 + 4.5$
	$R3 = 4.5 \times L + 15.5$

L, L1, L2 are in meters / L1 & L2 should not exceed 10 m

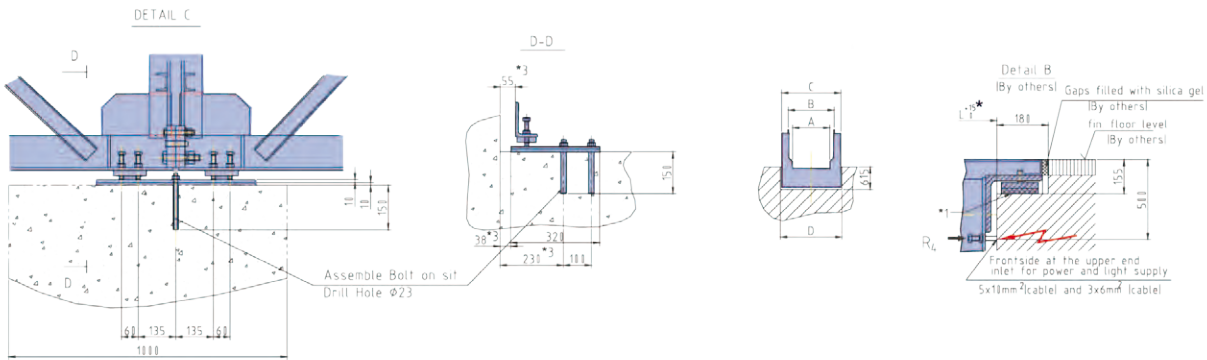
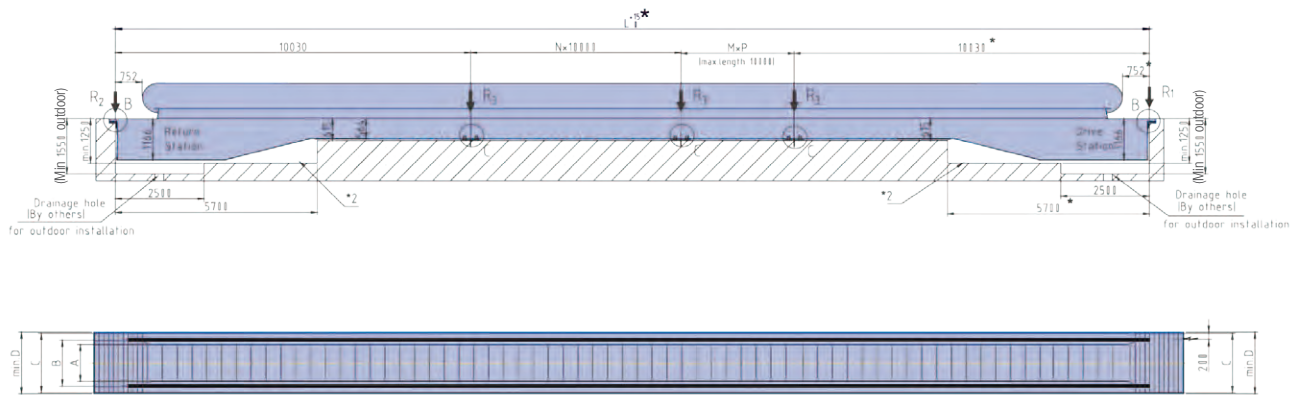
Dimensions

Model	a	L	FF	KK
TAW 2	10°	$H \times 5.671 + 3945$	4750	17700
	12°	$H \times 4.705 + 3595$	4500	15800

HS = horizontal steps

measures in mm

TAW0 Layout for Moving Walkways



Dimensions with vertical balustrade

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

A = pallet width

Dimensions with Inclined balustrade

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

A = pallet width

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





STANDARD & OPTIONS

Tecno Moving Walkways

Standard supply TECNO MOVING WALKWAYS	
Alarm buzzer	Maintenance Interlock protection
Automatic Lubrification System	Motor overheat thermistors
Brake Distance Monitor	Phase monitor
Comb contacts	Service Brake release contact
Emergency stop buttons	Soft Stop
Fault & Status Display	Speed Monitor with Reverse Detection
Fire interface	Pallet anti static brush
Handrail anti-static roller	Pallet chains contact
Handrail entry contacts	Pallet missing monitor
Handrail speed monitor	Pallet reversing fences
Landing plate contact	Pallet sag contacts

Optional features TECNO MOVING WALKWAYS	
Auto start	Side and bottom cladding
Cable connector for intersection	Pallet colour
Coloured handrail	Pallet Upthrust contact
Comb heating system - outdoor installation	Skirting brush
Comb light	Skirting contacts
Drive chain contact	Skirting lighting - LED spots
Dry contact for remote monitoring system	Skirting lighting - LED strips
Float contact	Pallet safety demarcation
Handrail broken contact	Traffic light
Handrail lighting	Truss heating system - outdoor installation
Safety Brake on main shaft	VVVF control





Moving Walkways

TECNO[®]

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