TOSHIBA ESCALATOR
<TE-S1 Series Escalator>
Kindmover-Ⅱ
The concept of **Kindmover-II**
Kindly designed for everyone
The escalator “Kindmover-II” incorporates numerous universal design features. Based on the concepts of “Kind to passengers and Kind to maintenance”, the newly designed escalator enables to be used and maintained easily for everyone.

SOLUTIONS from TOSHIBA ESCALATORS

COMPANY SOLUTIONS
Toshiba Elevator and Building Systems Corporation has built a framework which encompasses all aspects from system development to production, sales to marketing, installation, adjustment and maintenance services in order to provide clients with the highest quality products and services.
Utilizing the comprehensive technological infrastructure developed by Toshiba Group in more than 140 years since its foundation, we aim to enhance the leading edge technology and quality that we used to develop the ultra high speed elevator, harnessing Toshiba’s technological innovations to their fullest extent. To meet clients’ expectations and requirements for safe and pleasant elevators as well as constantly pursuing further innovation and improvement. Furthermore, we are aiming to strengthen system development, production, enhancing sales channel and sales partnership to expand in the global market.
**TOSHIBA ESCALATOR safety devices**

- Electric-circuit protective device
- Inlet brush / Handrail inlet safety device
- Emergency stop button
- Comb safety device
- Skirt guard safety device
- Reversal protection safety device
- Step sag safety device
- Step up thrust safety device
- Handrail speed monitoring device
- Missing step detection
- Broken drive chain safety device
- Electromagnetic brake

*Note: Above safety devices comply with GB16899-2011 standards*

**TOSHIBA ORIGINAL SAFETY DEVICES**

**Inlet brush**
By installing a brush type guard at the entrance of the handrail belt, it prevents children's hands getting trapped.

**Skirt guard safety device**
At the entrance and exit area of the escalator, this safety device stops the escalator by detecting passenger's feet getting caught in the gap between step and skirt guard.

**Broken drive chain safety device**
In the unlikely event which the drive chain is disconnected, since the escalator can not be stopped with a normal electromagnetic brake, this safety device will mechanically lock the moving mechanism of the step to stop the escalator.

**Step up thrust safety device**
At the entrance and exit area of the escalator, it detects that foot is caught in the gap between steps and stops escalator.

**Information about the activation of safety device**
This device will indicate which safety device has activated and stopped the operation.

*If the floor height exceeds 6000mm, “Auxiliary brake” will be employed instead of “Broken drive chain safety device”.

**SOFT FRONT EDGE STEP for all users**

In order to use escalator safely, we have employed shock absorbing material at the front edge of step.

We chose the optimum material considering the balance between "softness" to obtain cushioning effect and "hardness" to prevent getting caught due to deformation.

**By adopting shock absorbing material at the tip of the step, the probability of mild head injury occurring compared with conventional steps is reduced by approximately 50%**

Assuming the case where the head of the user collided with the tip of the step, actually measure the standard value HIC of head injury by our proprietary method. Results using injury risk curve

HIC : Head Injury Criterion is calculated from crash acceleration, it is a standard value showing the extent of head injury. It is possible to calculate by drop test of the test subject simulating the head. It is mainly used in the automobile industry.

Injury Risk Curve : A curve relating HIC to the probability of injury

*Note: There may be differences in collision effect due to temperature, collision angle, falling distance and aging etc.*
SOLUTIONS FOR EVERYONE

ENERGY SAVING

Contribute to energy and CO₂ reduction

Application of LED lightings

LED lightings enables longer life span and more energy saving compared to the fluorescent lightings. Furthermore, it is environmentally friendly because there is no use of mercury.

20% Energy reduction
Low-speed standby operation (optional)
If the passenger is not using the escalator, it slows down at the speed of 10m/min, and when the sensor detects the passenger, it accelerates to the normal operating speed of 30m/min.

25% Energy reduction
Low-speed / stop standby operation (optional)
If there is no passenger, low-speed standby operation is activated and after a certain time of period, the escalator stops completely. When the sensor senses the passenger, it accelerates to normal operation speed again at the speed of 30m/min.

30% Energy reduction
Stop standby operation (optional)
If the passenger is not using the escalator, it stops completely. When the sensor senses the passenger, it accelerates to the normal operating speed again at the speed of 30m/min.

Method of comparing power consumption
Comparison between escalator without inverter drive control and the escalator with the following function (standard escalator S1000 type, 30deg, floor height of 4.3m (no lightings), driving time of 12hours per one day.)
- Low-speed standby operation
- Low-speed / stop standby operation
- Stop standby operation

Balustrade lightings with LED (optional)
Skirt guard (line-type) lighting with LED (optional)
Skirt guard (circle-type) lightings with LED (optional)
Comb lightings with LED (optional)
Step demarcation lightings with LED (optional)
Please select your best choice

**<Interior Panel>**

- **Vertical flat tempered glass**
  - *Optimal*: ESNAVI
  - Red color handrail
  - Black painted landing plate

- **Stainless steel plate with hairline finish**
  - *Optimal*: ESNAVI
  - Comb lightings with LED
  - Black painted landing plate

**<Lighting>**

- **Balustrade with LED lightings**
  - Optional

**Handrail (Seven color variations)**

Selected the most suitable color from seven available color variations to match the building use and design concepts.

- *Black color*: Standard
- *Other six colors*: Optional

Colors: Black, Gray, Brown, Blue, Red, Orange, Green

*Seven colors*
## Specifications

### Basic Specifications
- **Type**: SK600 / SK800 / SK1000
- **Speed**: 0.5 m/s
- **Inclination**: 30° ± 35°
- **Power supply**:
  - **Main**: AC 3-phase 380V±5%/60Hz, 400/415V±5%
  - **Lighting**: AC single-phase 110V/220V-60Hz, 220V/230V±5%

*The maximum floor height for 35 deg. escalator is 6000mm.

### Exterior Specifications
- **Interior panel**: Vertical flat tempered glass
- **Deck board**: Stainless steel plate with hairline finish
- **Skirt guard panel**: Sheet steel with fluororesin coating (black)
- **Handrail**: Synthetic rubber (black)
- **Front skirt**: Sheet steel with fluororesin coating (black)
- **Number of horizontal steps**: 2 steps
- **Tread**: Stainless steel (black)
- **Riser**: Stainless steel (black)
- **Demarcation line**: Synthetic resin molding (yellow)
- **Landing**: Aluminum
- **Landing plate**: Stainless steel

*If the floor height exceeds 6000mm, number of horizontal steps will be 3 steps.

### Optional Specifications
- **Skirt guard panel**: Stainless steel plate with hairline finish
- **Comb**: Synthetic resin molding (yellow)
- **Interior panel**: Vertical flat tempered glass with hairline finish
- **Lighting**: Balustrade lightings with LED
- **Guard lightings**: with LED (line / circle)
- **Step demarcation lightings**: with LED
- **Comb lightings**: with LED
- **Safety device**: Step up / thru safety device
- **Function**: Low-speed standby operation, Low-speed / stop standby operation, Stop standby operation

Note: Above specification charts comply with GB16899-2011 standards.

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### Environmental issues

#### Energy Saving
- **Stop standby operation**: 30% less energy consumption compared to conventional model

*Comparison between escalator without inverter drive control and the escalator with the following function (standard escalator SK1000 type, 30°deg, floor height of 4.5m (no lightings), driving time of 12 hours per one day), stop standby operation: stop standby: six hours.

#### Reducing hazardous materials
- **Lead-free design**: Reduction of lead use by employing lead free control board.
- **Employing LED lightings**: By employing LED light, various materials used for light become mercury free.

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### Other options

#### Step (optional)
- **Aluminum step**
- **Soft front edge type**

#### Escalator Operation Monitor for Passenger-Friendly Guidance (optional)

“Arrow signs” and “No entry symbols” displayed on the operation monitor indicate the escalator’s operating direction to the passengers and provide passenger-friendly guidance. Furthermore, when the safety device activates to stop escalators operation, the location of the activated safety device is shown on the operation monitor so that the maintenance staff can find the problem as quickly as possible.

- **Combs (optional)**
- **Synthetic resin molding (yellow)**
- **Landing plate (optional)**
- **Black painted**