Contents

Brief .................................................................................................................. 01-02
Tenau intelligentized factory with internationally advanced manufacturing standard ........................................ 03-04
Certificates and Engineering Cases ................................................................. 05-06
Passenger Elevator With Machine Room ......................................................... 07
Passenger Elevator Machine Roomless ............................................................ 08
Cabin Decoration(Passenger Elevator) ............................................................... 09-14
Panoramic Elevator .......................................................................................... 15
Panoramic Elevator 180° half-round observation ............................................. 16
Panoramic Elevator 270° three-side observation ............................................. 17
Panoramic Elevator 360° 3D full-view observation ......................................... 18
Hospital Elevator .............................................................................................. 19-20
Cabin operation Panel ...................................................................................... 21-22
Optional decoration ......................................................................................... 23-24
Function Table .................................................................................................. 27-28
Machine Room Passenger Elevator Construction Parameter ...................... 29-30
Machine Roomless Passenger Elevator Construction Parameter ................ 31
Hospital Elevator Construction Parameter ..................................................... 32
Machine Room Panoramic Elevator Construction Parameter ...................... 33
Machine Roomless Panoramic Elevator Construction Parameter ................. 34
Spacious Space Taste Leisurely Life ................................................................. 34
Green And Noiseless Design Gives You Healthy Life ...................................... 36
Villa cabin decoration ....................................................................................... 37-38
Villa decoration ............................................................................................... 39-40
Function Table .................................................................................................. 41-42
Construction Parameter Villa Elevator ............................................................ 43-44
Freight Elevator ............................................................................................... 45
Car elevator ....................................................................................................... 46
Decoration Of Freight elevator & Car elevator ............................................... 47-48
Function Table .................................................................................................. 49-50
Freight Elevator Construction Parameter ..................................................... 51
Machine Roomless Freight Elevator Construction Parameter .................... 52
Car Elevator Construction Parameter ............................................................. 53
Escalator Summary ........................................................................................... 54
Moving Walk Summary ..................................................................................... 55
Heavy Duty Type Escalator .............................................................................. 56
Escalator Safety Device ................................................................................... 57
Moving Walk Safety Device ............................................................................ 58
Standard & Optional Function ......................................................................... 59-60
30° Escalator Construction Parameter ......................................................... 61
35° Escalator Construction Parameter ............................................................. 62
12° Moving walk Construction Parameter ..................................................... 63
0° Moving walk Construction Parameter ....................................................... 64
TENAU ELEVATOR (CHINA) Co., Ltd., located in Huzhou City, Zhejiang Province, is a wholly-owned investment company by SUZHOU DIAO Elevator Co., Ltd. in 2012, which is specially aimed at the overseas market. TENAU is close to Shanghai, only one hour away by car.

During the initial set-up stage, TENAU has already had professional elevator and escalator production lines, fully automatic panel production equipment - salvagnini, and employed more than 300 people.

In 2016, DIAO Group Ltd consolidated these two factories - DIAO and TENAU, which then have become two production bases, sharing the production platform. DIAO manufactures all the escalators and passenger elevators, and TENAU is responsible for manufacturing all the cargo elevators and home lift.

Brand DIAO has stayed in business for 16 years and accumulated rich experience in production, technology and product development. On this basis, TENAU can better serve overseas customers, at the same time, we can provide multiple languages service, including Russian, Spanish, English and Arabic.

TENAU has obtained energy efficiency certification of TUV for MR and MRL, besides this, our company has also obtained CE certification for MR, MRL of Passenger, ESCALATOR and MOVING WALK.

TENAU owns independent R&D team, which successfully developed and operated the 13m/s elevator on the testing tower with the height of 168 meters.

- 168-meter test tower
- 13 m/s ultra-high speed with independent R & D technology
- High-end intelligent elevator
- Industry 4.0 production system
- Export more than 70 countries in worldwide
Tenau Modern Intelligentized Factory With Internationally Advanced Manufacturing Standard

The Tenau (China) industry 4.0 production system, which was guided, planned and constructed by the German Tenau elevator group, creates new opportunities for establishment of modern intelligentized factory. Several top automatic production equipment, combined with big data and Internet of Things, can realize intelligent processing, intelligent production, intelligent detection and intelligent monitoring of industry procedures.

- **Fully-automatic panel production line-Salvagnini**
  World top automatic equipment, automatic set-up of processing thickness without the necessity to adjust time and MAC2.0 adaptive technique to guarantee quality.

- **SMT paster assembly line**
  SMT paster assembly line which is second to none in the industry can realize production of outer casing, interface board, power panel and communication panel with international standard.

- **Industrial robot**
  Realize mechanical way of working, adapt to extreme environment and realize multiple tasks, like carrying, welding, and loading and unloading.
Certificates and Engineering Cases

Certificates

Engineering Cases
Passenger Elevator
With Machine Room

Saving room volume
50%

Space efficiency

The machine rooms of the elevator only need 50% space of the traditional machine room. Therefore, it provides more possibilities for construction design.

TENAU passenger elevators with small machine room have improved its performance by reducing area of their machine rooms. With advantages in saving floor areas and construction costs, the elevators are applicable to office buildings, hotels and supermarkets.

Passenger Elevator
Machine Roomless

TENAU machine roomless passenger elevators eliminate influence of the machine room on construction from the structural aspect, providing more possibilities for construction space arrangement or construction design. Such elevators are applicable to hotels, business buildings high-rises and other buildings with higher requirements for construction.

Free up the space

The control cabinet and traction machine are installed in inner part of the hoistway, freeing up the original space spared for the machine room. Compared with traditional design, the new mode could save more than 15% of the floor area.
Cabin Decoration

Passenger Elevator

**TO-J001**
Standard
Integrated Ceiling: Painted steel, four sides down lamp
Car wall and car door: Stainless steel
Operation panel: Hairline stainless steel
Floor: PVC floor

**TO-J002**
Standard
Integrated Ceiling: Silver membrane, with LED lamp in the middle, vents on both sides
Car wall and car door/ Front wall panel: Light grey painted steel plate
Operation panel: Hairline stainless steel (Separated type)
Skirting: Stainless steel or painted steel plate
Floor: PVC floor

**TO-J003**
Optional
Car wall and car door: Mirror stainless steel in the middle, craft wooden facing on the other sides
Gatepost: Mirror stainless steel
Skirtboard: Stainless steel
Floor: PVC

**TO-J004**
Optional
Integrated Ceiling: Painted steel, down lamp
Car wall: Mirror stainless steel in the middle, hairline stainless steel for both sides
Floor: PVC floor

**TO-J005**
Optional
Car wall: Mirror stainless steel, titanium stainless steel
Car door: Mirror stainless steel
Gatepost: Titanium hairline stainless steel round tube
Skirtboard: Painted steel
Floor: PVC

**TO-J006**
Optional
Car wall and car door: Mirror stainless steel
Hairline stainless steel
Gatepost: Hairline stainless steel
Skirtboard: Stainless steel or painted steel
Floor: PVC

**TO-J007**
Optional
Car wall: Middle with mirror etching stainless steel, side of stainless steel floor with tube lamp of soft illumination design
Car side and car back: Center board is made of mirror finish, etching finish, hairline finish Auxilary board is made of hairline finish
Handrail: Stainless steel round tube
Floor: PVC

**TO-J008**
Optional
Car wall: Painted steel, tube lamp on white transparent board for illumination design Car side and car back: Center board is made of mirror finish, etching finish, hairline finish
Auxilary board is made of hairline finish
Handrail: Stainless steel flat handrail
Floor: PVC
Cabin Decoration
Passenger Elevator

TO-J009
Optional
Ceiling: Painted steel, downlight
Car wall: Panel with combination of wood grain and hairline
Front wall: Hairline stainless steel
Floor: PVC
Skirting: Hairline stainless steel

TO-J010
Optional
Ceiling: Mirror stainless steel, Lamp bracket, LED downlight
Car wall: Brushed stainless steel
Front wall: Art glass, brushed stainless steel
Floor: PVC parquet

TO-J011
Optional
Ceiling: Metal baking paint decoration, LED downlight
Car wall: Brushed stainless steel
Front wall: Fire-proof facing with wood grain, Brushed stainless steel
Floor: PVC

TO-J012
Optional
Ceiling: Metal baking paint decoration, LED downlight
Car wall: Brushed stainless steel
Front wall: Fire-proof facing with marble texture, Brushed stainless steel
Floor: PVC

TO-J013
Optional
Ceiling: Metal baking paint decoration, Lamp bracket, LED downlight
Car wall: Brushed stainless steel
Front wall: Brushed stainless steel, black titanium mirror surface with stainless etching, brushed stainless steel side decoration strips and foot lines
Floor: PVC
Cabin Decoration
Passenger Elevator

**TO-J014**
Optional
Ceiling: Hairline stainless steel, down lamp
Car wall: Side wall: Hairline stainless steel, mirror stainless steel
Rear wall: Hairline stainless steel, mirror etching stainless steel
Handrail: Stainless steel, wood
Floor: PVC floor

**TO-J015**
Optional
Ceiling: Hairline stainless steel, four sides down lamp
Car wall: Stainless steel mirror, wood grain laminated plate
Floor: PVC floor

**TO-J016**
Standard
Ceiling: Mirror stainless-steel modeling, light filter, LED down lamp
Car wall: Front wall: Brushed stainless steel
Rear wall: Art wallpaper, mirror stainless steel
Side wall: Fireproof composite veneer, brushed stainless steel
Floor: PVC floor

**TO-J017**
Optional
Ceiling: Mirror stainless steel, LED down lamp, white stoving varnish and tape lights
Car wall: Side wall: mirror stainless steel, fire-proof panel with marbling, brushed stainless steel capping strip, brushed stainless steel skirting line and brushed stainless steel gift
Rear wall: mirror stainless steel, art glass, brushed stainless steel capping strip, brushed stainless steel skirting line
Floor: Marble parquet

**TO-J018**
Optional
Ceiling: Mirror stainless steel, LED down lamp, white stoving varnish and tape lights
Car wall: Side wall: Black titanium mirror stainless steel, wood grain fire-proof plate, brushed stainless steel capping strip, brushed stainless steel skirting line, brushed stainless steel handrail
Rear wall: Black titanium mirror stainless steel, rose gold mirror stainless steel etching, brushed stainless steel capping strip and brushed stainless steel skirting line
Floor: Floor tiles
Panoramic Elevator

Tenau observation elevator adheres to the design principle of innovativeness and fashion. To meet various demands of hotels and supermarkets, our company provides different elevator designs according to their building styles. Delicate style designs provide passengers with different scenic perspectives and broad scenic views.

Delicate lift car
Tenau provides different decoration options for lift cars, so as to match up facades and interior decoration of various buildings.

Rich structures
Square, circular and polygon reinforced glass structures offer different scenic perspectives and bring all views to eyes of passengers.

Comfortable and stable operation
Our company aims to improve experience of passengers by applying several advanced technologies and creating dynamic and comfortable space. Passengers will feel pleasant and comfortable during stable operation of the elevator.

Transparent structures for wide views
The elevator adopts safe laminated glass which could offer wide views by its transparent nature. Streamline design and wide views provide passengers with a broad and clear world they have never experienced.

Panoramic Elevator
180° half-round observation

TO-G001
Standard
Canopy: Painted steel with decoration
Observation wall: Three pieces of laminated glass
Car Ceiling: Mirror stainless steel
Car wall: Hairline stainless steel
Handrail: Single tube with stainless steel
Car floor: PVC floor

TO-G002
Standard
Car: Cover: Paint steel, tube lamp, acrylic lamp
Observation Wall: Laminated glass three pieces
Decoration Roof: Acrylic roof lamp
Car Wall: Hairline finished 50/St
Handrail: Ø38 Stainless steel tube
Floor: PVC floor

TO-G003
Standard
Upper / lower hood: White acrylic
Observation wall: Laminated glass (B+5 three pieces)
Decoration ceiling: Steel plate plastic, tube lamp
Car wall: Hairline stainless steel
Handrail: Ø38 stainless steel tube
Floor: PVC

TO-G004
Standard
Car: Cover: Paint steel plate, decoration lamp
Observation Wall: 3Pcs of safety laminated glass
Decoration Roof: Acrylic roof lamp
Car Wall: Hairline plate, etched
Handrail: Stainless steel tube
Floor: PVC floor
Panoramic Elevator
270° three-side observation

TO - G005 Standard
- Car Cover: Painted steel, Tube Lamp
- Observation Wall: Laminated glass
- Decoration Roof: Acrylic lighting cover
- Car Wall: Hairline Finished SUSS
- Handrail: φ 25.4 Stainless steel double tube
- Floor: PVC Floor

TO - G006 Standard
- Car cover: Baking enamel, lighting decoration
- Observation wall: Laminated glass safety clamp
- Decoration ceiling: Mirror finished st/st, acrylic
- Car wall: Laminated glass
- Handrail: Stainless steel tube
- Floor: PVC

Panoramic Elevator
360° 3D full-view observation

TO - G007 Standard
- Upper/lower shades: Stepped pentagon steel plate banking finish with decoration lamp
- Ceiling: Middle with acrylic roof lamp, side with tube lamp
- Side wall and back wall: Stainless steel hairline board
- Front wall: Laminated glass safety clamp
- Handrail: Stainless steel round handrail
- Floor: PVC floor

TO - G008 Optional
- Car cover: Hairline stainless steel, stainless steel mono-tube
- Observation wall: Safety laminated glass
- Decoration roof: Mirror stainless steel, light-emitting panel, down lamp
- Car wall: Hairline stainless steel
- Handrail: Stainless steel mono-tube
- Floor: PVC

TO - G009 Optional
- Outer decoration: Mirror ST.ST.
- Ceiling: Mirror ST.ST, acrylic, LED spotlight
- Observation wall: Laminated glass, 6+6mm
- Decorative ceiling: Baking painted steel frame, light-passing board
- Car wall: hairline Stainless steel
- Handrail: Stainless steel flat handrail
- Car door: Mirror ST.ST. framed glass door
- Floor: PVC

TO - G010 Optional
- Outer decoration: Mirror ST.ST.
- Ceiling: Mirror ST.ST, acrylic, LED spotlight
- Observation wall: Laminated safety glass
- Walls: Mirror ST.ST.
- Handrail: ST.ST. tube
- Flooring: Marble
- Front wall: Laminated safety glass
- Handrail: Stainless steel flat handrail
- Car door: Mirror ST.ST. framed glass door
- Floor: PVC

TO - G011 Optional
Hospital Elevator

Tenma high-quality medical elevator is developed on the basis of deep researches on demands of medical institutions. Our company uses advanced technologies and humanized design to meet demands of doctors and patients for delivering stretchers and medical devices. The elevator is characterized by reliability, stability, accuracy, comfortable experience and energy efficiency. It can meet demands of modernized hospitals, medical centers and sanatoriums.

Automatic ultraviolet disinfection (optional)
In case of staying in idle status, the elevator will automatically start up ultraviolet disinfection device to eliminate viruses and keep the lift car clean.

Deferred closing button (optional)
The elevator is equipped with deferred closing button to delay the closing, so as to guarantee personal safety of medical staff and patients while they enter or leave the lift car.

Safety and reliability
Complete security technology system ensures safe operation of the elevator and provides medical staff and patients with more care.

Optimized lift car structure
The lift car enables heavy load with a satisfactory depth. It could hold stretchers or even sickbeds.

EMC (electromagnetic compatibility)
The elevator can resist electromagnetic interference of medical devices to meet demands of medical systems.

TO-Y001
Standard
Ceiling: Painted steel, fluorescent lighting, tube lamp (integrated)
Car wall: Hairline stainless steel
Handrail: Double flat stainless steel
Floor: PVC

TO-Y002
Standard
Ceiling: Hairline stainless steel
Car wall: Hairline stainless steel
Handrail: Double flat stainless steel
Floor: PVC
### Cabin operation Panel

<table>
<thead>
<tr>
<th>Standard</th>
<th>Optional</th>
<th>Multimedia display</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO-C010</td>
<td>TO-C10A</td>
<td>TO-LCD01</td>
<td>TO-AN112</td>
</tr>
<tr>
<td>TO-CEC301</td>
<td>TO-LSC340</td>
<td>TO-LCD02</td>
<td>TO-AN113</td>
</tr>
<tr>
<td>TO-C500</td>
<td>TO-C500X</td>
<td>Button optional: TO-AN112</td>
<td>Button optional: TO-AN113</td>
</tr>
<tr>
<td></td>
<td>Wall-mounted control box</td>
<td>Square stainless steel, with braille</td>
<td>Square stainless steel, with braille</td>
</tr>
</tbody>
</table>

### Touch Panel

- TO-C8012
- TO-C700
- TO-C600
- TO-C410X
- TO-C8004
- TO-C8002
- TO-C8001

**Display:** Dots matrix display
**Material:** Hairline stainless steel
**Parking number:** Below 29F

**Integrated operation panel:**

- TO-C8012
- TO-C700
- TO-C600
- TO-C410X
- TO-C8004
- TO-C8002
- TO-C8001

**Display:** Dots matrix display
**Material:** Hairline stainless steel
**Parking number:** Below 29F

**Integrated operation panel:**

- TO-C8012
- TO-C700
- TO-C600
- TO-C410X
- TO-C8004
- TO-C8002
- TO-C8001

21-22
Optional decoration

Hall operation panel (optional)

- TO-C8002X
- TO-C8002X-2
- TO9001
- TO-C910X
- TO-C910X-2
- TO-DEC300
- TO-LEC300
- TO-EH1030A
- TO-EHD1030A

Buttons (Optional)

- TO-A101
- TO-A102

Direction light (optional)

- TOK212

Multimedia (Optional)

- Picture display: 7 inch, 8 inch, 10.4 inch, 12.1 inch & 15 inch
- Video display: 8 inch, 10.4 inch, 12.1 inch & 15 inch

Ceiling

- TO-D101: Painted steel plate, four side down lamp
- TO-D102: Painted steel, downlight
- TO-D103: Stainless steel, LED lighting
- TO-D106: Mirror stainless steel, LED downlight
- TO-D010: Stainless steel mirror board, energy-saving lamps
- TO-D190: Stainless steel mirror board, energy-saving lamps
- TO-D010: Stainless steel mirror board, energy-saving lamps
- TO-D140: White transparent light board, energy-saving lamps
- TO-D200: Painted steel, acrylic translucent panel
- TO-D230: White light-emitting panel, down lamps on both sides
Optional decoration

Handrail (Optional)

Landing door series

TO-M010
Landing door: Paint steel
Jamb: Paint steel

TO-M011
Landing door: Mirror, etching, hairline
Jamb: Hairline stainless steel

TO-M012
Landing door: Mirror, etching, hairline
Jamb: Hairline stainless steel

TO-M013
Landing door: Mirror, etching
Jamb: Hairline stainless steel

Color card

RAL7035 RAL7037 RAL9005
Light gray Dark gray Black

Floor

TO-B001 TO-B002 TO-B003

TO-B004 TO-B005 TO-B006
# Function Table

<table>
<thead>
<tr>
<th>Function</th>
<th>S-Standard</th>
<th>O—optional</th>
<th>Need to increase Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Travel function</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVVF drive</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVVF door operator</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent running</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic open / close</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatically adjust opening time</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reopen with half call</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Express door closing</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car stops and open</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car arrival gang</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command register cancel</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Anti-malfunction</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Open door in advance</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Direct parking</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Group control function</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Door open time extending</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td><strong>Man-machine interface</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual touch button for call and call</td>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor and direction indicator</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Voice announcement</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Car assistant operation</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Operation box for the handicapped</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Intelligent calling service</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>IC card control function</td>
<td></td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>

**Monitor function**
- Remote monitor: The lift lets distance measured and control panels be illuminated through iridescent and call button. It is convenient for the car builders and service units to timely handle the travel problems of a lift and preventively take the corresponding measures.
- Remote control: The lift can have independent travel according to the specific requirements through operable monitor screen (optional).
- Camera function in the car: The camera is installed in the car to monitor the car conditions.

**Safety function**
- Light curtain protection: When the lift opens and close door, a infrared light that covers the whole door height is used to check the door protection device of both the passengers and objects.
- Destination stop: If the lift is not open and the destination floor is not set in the car, the lift will not close and travel the next destination floor.
- Overload braking: When the car is overloaded, the brake stops and stops the lift in the same floor.
- Anti-shock timer protection: The lift stops operation due to slippery state of the main roller.
- Start protection control: If the lift does not close the door zone within the designated time after trip started, it will stop the operation.
- Inspection operation: When the lift enters into inspection operation, the car travels at a certain speed.
- Fault self-diagnosis: The controller can record 62 fault troubles so as to quickly remove the trouble and restore the lift operation.
- Repeated door closing: If the lift does not close the door zone within the designated time after trip started, it will stop the operation.
- Upward over-run and Final limit protection: The device can effectively prevent from the lift's surging to the trouble and restore the lift operation.
- Down over-speed protection device: When the lift is traveling at 1.2 times higher than the rated speed, the device will automatically cut-off control, prevent the car from over-speeding and trip the alarm.
- Speed over-speed protection device: When the lift is traveling at 1.2 times higher than rated speed, the device will automatically decelerate or brake the lift.
- Elevator cab prevents accidental egress: When the elevator is in the open state, if there is accidental movement, the elevator cab can prevent the movement.

**Emergency function**
- Emergency car lighting: Emergency car lighting automatically activated once power failure.
- Limiting running: When the lift enters into emergency electric operation, the car travels at a speed limiting running.
- Fire way intercom: Communication among car top, lift machine room, well pit and rescue duty more through multi-task.
- Bell: In emergency conditions, if hall button above car operation panel is continuously pressed, electric bell rings on top of the car.
- Fire emergency return: If the emergency button is pressed, all the car doors will be cancelled. The lift directly and immediately drives to the designated rescue landing and automatically opens the door.
- Latching when power failure: In normal power failure, the rechargeable battery supplies the lift power. The lift drives to the nearest landing.

**Energy-saving function**
- Car operation, lift automatic shut-off: If there is no call or command signal within the stipulated time, the car and lighting will be automatically closed in order to save the energy.
- Remote shut-off: The lift can be called to mode landing before finishing the service through the key switch and automatically exits the service.
## Machine Room Passenger Elevator Construction Parameter

### Back machine room passenger elevator parameters

<table>
<thead>
<tr>
<th>Load(kg)</th>
<th>Speed (m/s)</th>
<th>Car dimension(mm)</th>
<th>Door-opening size(mm)</th>
<th>Hoistway size(mm)</th>
<th>Overhead height (in.)</th>
<th>Pit depth (PP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Inner size AXB</td>
<td>Net door-opening</td>
<td>Width x depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>630</td>
<td>1.0</td>
<td>1400X1100</td>
<td>800</td>
<td>1950X1750</td>
<td>4000</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>1.75</td>
<td>1400X1350</td>
<td>800</td>
<td>1950X2000</td>
<td>4000</td>
<td>1400</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>1.75</td>
<td>1600X1500</td>
<td>900</td>
<td>2150X2150</td>
<td>4000</td>
<td>1600</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1250</td>
<td>1.75</td>
<td>1600X1550</td>
<td>1100</td>
<td>2350X2200</td>
<td>4000</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1350</td>
<td>1.75</td>
<td>1900X1600</td>
<td>1100</td>
<td>2450X2300</td>
<td>4000</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>1.75</td>
<td>1950X1700</td>
<td>1100</td>
<td>2550X2400</td>
<td>4000</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Side machine room passenger elevator parameters

<table>
<thead>
<tr>
<th>Load(kg)</th>
<th>Speed (m/s)</th>
<th>Car dimension(mm)</th>
<th>Door-opening size(mm)</th>
<th>Hoistway size(mm)</th>
<th>Overhead height (in.)</th>
<th>Pit depth (PP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Inner size AXB</td>
<td>Net door-opening</td>
<td>Width x depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>630</td>
<td>1.0</td>
<td>1400X1100</td>
<td>800</td>
<td>2200X1700</td>
<td>3600</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>1.75</td>
<td>1400X1350</td>
<td>800</td>
<td>2200X1800</td>
<td>3600</td>
<td>1400</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>1.75</td>
<td>1600X1500</td>
<td>900</td>
<td>2400X1950</td>
<td>3600</td>
<td>1600</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>1.75</td>
<td>1000X2100</td>
<td>900</td>
<td>2100X2500</td>
<td>3600</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1250</td>
<td>1.75</td>
<td>1600X1550</td>
<td>1100</td>
<td>2600X2050</td>
<td>3600</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1350</td>
<td>1.75</td>
<td>1900X1600</td>
<td>1100</td>
<td>2700X2100</td>
<td>3600</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>1.75</td>
<td>1950X1700</td>
<td>1100</td>
<td>2800X2200</td>
<td>3600</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The above construction parameter is for reference. Civil construction is subject to the format, civil construction diagrams.*
Machine Roomless Passenger Elevator Construction Parameter

<table>
<thead>
<tr>
<th>Load(kg)</th>
<th>Speed (m/s)</th>
<th>Car dimensions (mm)</th>
<th>Door-opening (mm)</th>
<th>Hoistway dimensions</th>
<th>Overhead height (mm)</th>
<th>Pit depth (PP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>1.0</td>
<td>1400x1500</td>
<td>800</td>
<td>2250x1750</td>
<td>3800</td>
<td>1000</td>
</tr>
<tr>
<td>1000</td>
<td>1.0</td>
<td>1600x1500</td>
<td>900</td>
<td>2450x1800</td>
<td>3800</td>
<td>1000</td>
</tr>
<tr>
<td>1250</td>
<td>1.0</td>
<td>1800x1500</td>
<td>1100</td>
<td>2700x2000</td>
<td>4100</td>
<td>1200</td>
</tr>
<tr>
<td>1500</td>
<td>1.0</td>
<td>1900x1600</td>
<td>1100</td>
<td>2850x2100</td>
<td>4100</td>
<td>1200</td>
</tr>
<tr>
<td>1600</td>
<td>1.0</td>
<td>1900x1700</td>
<td>1100</td>
<td>2850x2200</td>
<td>4100</td>
<td>1200</td>
</tr>
<tr>
<td>1600 (Hospital elevator)</td>
<td>1.0</td>
<td>1400x2400</td>
<td>1100</td>
<td>2850x2600</td>
<td>4400</td>
<td>1500</td>
</tr>
</tbody>
</table>

Hospital Elevator Construction Parameter

<table>
<thead>
<tr>
<th>Load(kg)</th>
<th>Speed (m/s)</th>
<th>Car dimensions (mm)</th>
<th>Door-opening (mm)</th>
<th>Hoistway dimensions</th>
<th>Overhead height (mm)</th>
<th>Pit depth (PP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>1.0</td>
<td>1400x2400</td>
<td>1100</td>
<td>2500x2600</td>
<td>4000</td>
<td>1200</td>
</tr>
<tr>
<td>1600</td>
<td>1.0</td>
<td>2500x2600</td>
<td>4000</td>
<td>1200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>1.0</td>
<td>2600x2600</td>
<td>4000</td>
<td>1200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>1.0</td>
<td>1400x2700</td>
<td>1300</td>
<td>2600x2800</td>
<td>4000</td>
<td>1200</td>
</tr>
<tr>
<td>2000</td>
<td>1.0</td>
<td>2600x2800</td>
<td>4000</td>
<td>1200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above civil construction parameter is for reference. Civil construction is subject to the formal civil construction diagrams.
Spacious Space
Taste Leisurely Life

Open space for your luxury villa
To highlight your identity, even the lift car of elevator is no exception.

With compact design adopted for Tenau villa elevator, it saves the using area of well by 15%-20% and could provide larger size of lift car in the same well.
The maximum net height of lift car can reach 2200mm (roof height: 3m), which can bring you open space experience and make you go in and out more easily.

Green And Noiseless Design Gives You Healthy Life

Equivalent to that released by a big tree with the height of 5m
Filters PM2.5 to make lift car filled with exceptional fresh air

8 million negative oxygen ion fan (optional)
The anion it releases is equivalent to that released by a big tree with the height of 5m. In the meantime, it can sterilize, absorb methanol, removes peculiar smell & second-hand smoke and filters PM2.5 to make lift car filled with exceptional fresh air.

8 million negative oxygen ion fan

The application of a series of intelligent technologies to Tenau villa not only brings you comfort but also health.
Villa cabin decoration

TO-V001
Warm and Elegant
Optional
Ceiling: wooden modelling, gold foil, lamp belt and LED tube lamp
Side wall: craft wooden facing, wallpaper and craft glass
Rear wall: craft wooden facing, car edge mirror and wallpaper
Handrail: craft handrail
Floor: marble pattern

TO-V002
Warm and Elegant
Optional
Ceiling: rose gold mirror stainless steel, gold foil and LED tube lamp
Side wall: craft wooden facing and rose gold mirror stainless steel etching
Rear wall: craft wooden facing and rose gold mirror stainless steel etching
Handrail: craft handrail
Floor: marble pattern

TO-V003
Simple
Optional
Ceiling: metal stoving varnish modeling, LED tube lamp
Side wall: color grain steel plate, white stoving varnish steel plate and brushed stainless steel trim strip
Rear wall: color grain steel plate
Floor: PVC pattern

TO-V004
Simple
Optional
Ceiling: metal stoving varnish modelling, mirror stainless steel and LED tube lamp
Side wall: color grain steel plate
Rear wall: marble pad pasting, black titanium mirror stainless steel
Floor: PVC pattern

TO-V040
Enjoyable
Optional
Ceiling: painted steel frame, middle mirror stainless steel, surrounded by downlight lighting
Side wall: rosewood veneer
Rear wall: both sides of the rosewood, the middle mirror titanium etching stainless steel
Floor: marble pattern

TO-V019
Golden Age
Optional
Ceiling: titanium mirror, cross-flow fan, LED floodlight
Side wall: titanium mirror etching, marble
Rear wall: titanium mirror, marble
Floor: marble pattern

TO-V043
Minimalist Style
Optional
Ceiling: hairline stainless steel, acrylic light decoration, down light
Car wall: hairline stainless steel, mirror stainless steel
Handrail: stainless steel tube
Floor: PVC pattern

TO-V010
Modern Style
Optional
Ceiling: mirror stainless steel, LED downlight
Car wall: wood veneer, mirror stainless steel
Floor: PVC
Villa decoration

Car operation panel

- Display screen (optional)
  - True color display 7 inch

- TO-VC04
  - Car operation panel (Full height)

- TO-VC08
- TO-C8002
  - Car operation panel (Half high)

Handrail

- TO-VF01
- TO-VF02
- TO-VF03
- TO-VF04

Ceiling

- TO-VD01
- TO-VD02
- TO-VD03
- TO-VD04
- TO-VD05

Landing door series

- TO-VM01
- TO-VM02
- TO-VM03

Hoistway frame

- Aluminum alloy
- White
- Titanium
- Wood-Embe

Floor

- TO-VB01
- TO-VB02
- TO-VB03
- TO-VB04
- TO-VB05
- TO-VB06
### Function Table

<table>
<thead>
<tr>
<th>Standard Function</th>
<th>Optional Function</th>
</tr>
</thead>
</table>

#### General Protection
- Closing time protection
- Emergency lighting in the car
- Overload warning (Caution light and buzzer)
- The screen door protection device
- Garment and control cabinet emergency electric operation
- Fault automatic diagnosis
- Alarm bell
- Hitting the bottom buffer device
- Outside door zone without opening door
- Wave detection of grid voltage
- Contactor feedback detection
- Relay position protection
- Speed feedback detection
- Fault low-speed self-rescue
- HS button embedded self-diagnosis
- Protection against reverse travel
- Prevent slippage protection
- Safety circuit protection
- Limit protection
- Upper and lower limit protection device
- Door interlock protection
- Operation contactor protection
- Brake detection and protection
- Manual brake release rescue
- Machine room door switch
- Driven equipment overheating protection (OHIT)
- Electric brake
- Automatic rescue device
- Emergency power supply device operation

#### Information Display
- Hall and car digital position indicator
- Hall and car call/rider
- Hall and car running direction display
- Running number display
- Floor display character arbitrary setting

#### Steady Running
- Return to base station without call
- Full collective control
- Independent service
- Full-load direct running (LMS)
- Automatic door switch
- Pre-torque output
- Upon elevator floor setting
- Holdway self-learning
- End stops for speed and floor number correction
- Parking

#### Passenger Comfortability
- Hall and car door setting time
- Open and close button
- Automatic ventilation and lighting of automatic control in car
- Hb calls door opening
- Repeated closing door
- Bypassed stop setting
- Input port evaluation
- Manually selected floor
- Cancelation of wrong landing
- Voice announcement
- Liquid display

#### Security Monitoring
- CCTV camera (From car to machine room)
- Elevator remote control
- Card reader
- BA interface (Dry contact)
- Community monitoring panel
- Community computer monitoring
Construction Parameter
Villa Elevator

Villa elevator construction

<table>
<thead>
<tr>
<th>Load</th>
<th>Car width</th>
<th>Car depth</th>
<th>Door opening width</th>
<th>Hoistway width</th>
<th>Hoistway depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>kg</td>
<td>CW</td>
<td>CD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>800</td>
<td>1000</td>
<td>700</td>
<td>1300</td>
<td>1350</td>
</tr>
<tr>
<td>320</td>
<td>1000</td>
<td>1000</td>
<td>700</td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>400</td>
<td>1200</td>
<td>1200</td>
<td>800</td>
<td>1500</td>
<td>1500</td>
</tr>
</tbody>
</table>

Note: The dimension for door opening width only includes 600, 750, and 900 at the present. When calculating with formula, the result is in the four dimensions, please refer to the designated dimension.

Model/TE10200

<table>
<thead>
<tr>
<th>Type</th>
<th>Data</th>
<th>Car width</th>
<th>Car depth</th>
<th>Door opening width</th>
<th>Hoistway width</th>
<th>Hoistway depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1HD</td>
<td>Min value</td>
<td>700</td>
<td>800</td>
<td>650</td>
<td>1150</td>
<td>950</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=150</td>
<td>Hw=500</td>
<td>CW=450</td>
<td>CD+150</td>
</tr>
<tr>
<td>2CO</td>
<td>Min value</td>
<td>950</td>
<td>800</td>
<td>650</td>
<td>1400</td>
<td>1100</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=300</td>
<td>Hw=250</td>
<td>CW=450</td>
<td>CD+300</td>
</tr>
<tr>
<td>2RO</td>
<td>Min value</td>
<td>750</td>
<td>800</td>
<td>650</td>
<td>1200</td>
<td>1120</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=320</td>
<td>(Hw=200)*1.5</td>
<td>CW=450</td>
<td>CD+320</td>
</tr>
</tbody>
</table>

Note 1: The dimension for door opening width only includes 600, 750, and 900 at the present. When calculating with formula, the result is in the four dimensions, please refer to the designated dimension.

Model/TE13200

<table>
<thead>
<tr>
<th>Type</th>
<th>Data</th>
<th>Car width</th>
<th>Car depth</th>
<th>Door opening width</th>
<th>Hoistway width</th>
<th>Hoistway depth</th>
<th>External width of frame</th>
<th>External depth of frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>1HD</td>
<td>Min value</td>
<td>700</td>
<td>800</td>
<td>650</td>
<td>1150</td>
<td>950</td>
<td>1210</td>
<td>1110</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=150</td>
<td>Hw=500</td>
<td>CW=450</td>
<td>CD+150</td>
<td>Hw+150</td>
<td>HD+160</td>
</tr>
<tr>
<td>2CO</td>
<td>Min value</td>
<td>950</td>
<td>800</td>
<td>650</td>
<td>1400</td>
<td>1100</td>
<td>1500</td>
<td>1210</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=250</td>
<td>Hw=250</td>
<td>CW=450</td>
<td>CD+250</td>
<td>Hw+150</td>
<td>HD+160</td>
</tr>
<tr>
<td>2RO</td>
<td>Min value</td>
<td>750</td>
<td>800</td>
<td>650</td>
<td>1200</td>
<td>1120</td>
<td>1360</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>Calculation formula</td>
<td>Hw=450</td>
<td>HD=300</td>
<td>(Hw=200)*1.5</td>
<td>CW=450</td>
<td>CD+320</td>
<td>Hw+150</td>
<td>HD+160</td>
</tr>
</tbody>
</table>

Note: The dimension for door opening width only includes 600, 750, and 900 at the present. When calculating with formula, the result is in the four dimensions, please refer to the designated dimension.

The above table and diagram are for reference. Civil construction is subject to the formal civil engineering village.
Freight Elevator

This elevator is specifically designed for the transportation of cargoes, with many wide door opening modes and spacious yet sturdy car, suitable for the transportation of large cargoes and ensuring the safety when passengers and cargoes both present in the car. Technically, advanced CPU control is applied, realizing contact free control to elevate the performance of the elevator, making it the best choice for cargo transportation in factories, warehouses and malls, etc.

Proven safety
Based upon standardized safety device, the slippery resistance as well as the door machine’s safety configuration is improved, which ensures the precise leveling for cargo transportation.

The multiple door opening modes
In order to satisfy different entry / exit requirements from vast users, TENAU freight elevator offers four door opening modes of side opening, central opening double-leafed door, one-way door opening, opposite door opening. It can flexibly match with the factory, warehouse, department store, shopping center, housing property management center etc.

Consider practicality
Considering the size of the cargoes, the designing for the door of the car adopts multiple methods to open, so as to ensure the width of the door opening is the same as that of the car, making cargoes move freely in and out.

Subtle processing
WWF technology ensures constant torque and, with a sturdy car, the elevator can keep constant operation under all circumstances and precise floor leveling.

Car elevator

In the modern city, there are more and more cars. To solve the difficulty of parking, TENAU uses its mature elevator technology to make for cars a hindrance-free transportation, vertically through a design, that considers the performance and size of various cars.

Large load capacity
Large area of the car elevator ensures a normal load capacity of over 3 tons, capable of handling various cars.

Convenient door opening design
Front and rear door opening are available, making it easy for cars to move in and out.

Rated Load
> 3t

Save construction area
80%

Reliable safety device
Safety device is mounted on the car ground of the elevator, which alerts the drivers on real time basis to ensure safe operation.
Decoration Of Freight elevator & Car elevator

**TO-J21H**  
Standard  
- Ceiling: Painted steel (optional color)  
- Car wall: Painted steel (optional color)  
- Car door: Painted steel (optional color)  
- Skirtboard: Fluorescent lamp  
- Floor: Riffled plate

**TO-J22H**  
Optional  
- Ceiling: Hairline stainless steel  
- Car wall: Hairline stainless steel  
- Car door: Hairline stainless steel  
- Skirtboard: Fluorescent lamp  
- Floor: Riffled plate

**Ceiling**  
- TO-D100  
- TO-D110  
- TO-D120

**Car operation panel**  
- Panel: Hairline stainless steel  
- Display board: Plastic board (dark blue)  
- Mode of display: Digital LED matrix display  
- Ceiling button: Micro-buttons/framed mirrors, sanded stainless steel for the panel  
- Responding light: LED

**Landing door series**  
- TO-M070  
  - Standard

**Optional color cards**  
- RAL7035  
  - Light gray  
- RAL1015  
  - Cream colored  
- RAL6007  
  - Light green  
- RAL4019  
  - India Green

- TO-M080  
  - Standard
## Function Table

<table>
<thead>
<tr>
<th>Control function</th>
<th>Information function</th>
<th>Safety function</th>
<th>Comfortable function</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Well and floor distance self-tuning</td>
<td>S Full collective control</td>
<td>S Light curtain protection</td>
<td>S Emergency car lighting</td>
</tr>
<tr>
<td>S Power on re-leveling</td>
<td>S Full-load bypass</td>
<td>S Overload holding stop</td>
<td>S Car ventilation light automatically shut off</td>
</tr>
<tr>
<td>S Micro-touch button for car</td>
<td>S Main floor shut off</td>
<td>S Terminal forced slow-down protection</td>
<td>S Repeated door closing</td>
</tr>
<tr>
<td>S Start protection control</td>
<td>S Self diagnosis of breakdown</td>
<td>S Up/down over run and final limit protection</td>
<td>S Reopen with hall call</td>
</tr>
<tr>
<td>O Car arrival chime</td>
<td>S Five-way communication</td>
<td>S Down over speed protection</td>
<td>S Express door closing</td>
</tr>
<tr>
<td>S VWF drive</td>
<td>S Car’s Bell</td>
<td>S Up over speed protection</td>
<td>S Car stop and door open</td>
</tr>
<tr>
<td>S VWF drive for door operator</td>
<td>S Floor and direction indicator in the car</td>
<td>S Safety stop</td>
<td>S Door opening time extending</td>
</tr>
<tr>
<td>O The second car operation panel</td>
<td>S Floor and direction indicator at hall</td>
<td>S Inching operation</td>
<td>S Door close delay</td>
</tr>
<tr>
<td>S Automatic adjustment of door open holding time</td>
<td>S Voice announcement</td>
<td>S Inspection operation</td>
<td></td>
</tr>
<tr>
<td>S Car call cancel</td>
<td>S Traffic dispatch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S Automatic running</td>
<td>S IC card control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S Attendant running</td>
<td>S Traction machine monitor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S Duplex control function</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S Double door control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O IC card control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Please refer to TONBU technical documents and contact our TONBU sales person for details.

49-50
Car Elevator Construction Parameter

Escalator Summary

Urban flavor, charm scene
TENAU serial escalators fully apply the novel materials and the advanced domestic and overseas technology for design and manufacture. The escalators have the consummate structure, elaborate stairway, delicate belt, attractive outline. They are widely applicable for large passenger flow areas such as the shopping centers, supermarkets, subways, airports etc. It adds a charming mobile view for vast constructions.

Proper and stable running, deluxe and popular design
The overall design is concise and smooth and compatible.

The advanced international craftsmanship ensures the accuracy of steps.

The human-oriented handrail entrance is secured by brush.

Etched stainless steel front panels are available with various varieties.

The super CPU main board monitors the operation in real time. If any abnormal situation occurs, it automatically brakes and records the malfunctions code.

The super CPU main board monitors the operation in real time. If any abnormal situation occurs, it automatically brakes and records the malfunctions code.

Customer can choose VVF control to control running speed, the energy-saving performance is obvious. It can prolong product life and reduce the operation cost.

Little noise High-efficiency & energy-saving More secure Elegant and attractive
Moving Walk Summary

Colorful decoration: Various styled handrail can meet personal demand in different environments. Beautiful stainless steel floor plate has a three-dimension effect. Inner and outer deck adopts stainless steel.

Compact structure, ease strain: Short pallets can greatly reduce space span, which can flexibly fits the building structure and saves the construction space for the customer. It comprises H version (horizontal), I version (incline) and C version (compact) can let the customer have a free choice on his original layout.

As easy as in smooth ground, the everlasting popular design & quality

TENAU moving walk elevates the shopping to a newly concise and comfortable realm. It not only satisfies the conveying problem of large passenger flow, but also meets the requirements of long-distance walk, carrying luggage, cart, baby's cart, shopping cart, the vehicle for the handicapped etc. It is very convenient for people's outing and shopping.

It merges with modern flavor design and style.

The stairway guardrail design with armrest likes the whole stairway running in guardrail. It controls the stairway movement, avoids friction amid the step, skirting and comb teeth. It is convenient for installation, adjustment, repair and maintenance. It remarkably increases the running effects.

Incomparable economical: The moving walk fully utilizes advanced manufacturing process, greatly improves product performance and service life, the most direct result is that the operation cost of the customer is reduced. The optimal VF drive technology yields great energy-saving, reducing the running cost to the maximum.

Stable and reliable investment: The pallet directly connecting with the chain which makes the running more smoothly and quietly, thus the service life is extended and its maintenance can be easily conducted. Special designed big wheel handrail drive runs in low noise and big power, which improves the running condition of handrail, its life is hence prolonged. Unique tube structure has a big load capacity, which greatly improves the overall stability and service life.

Heavy Duty Type Escalator

When we ascend the crest of our objective, the others appear so small.

TENAU SMH10 public traffic type escalator is a significant achievement in the innovative steps of TENAU Elevator. The glorious 25m lifting height starts a new highlight in the domestic indoor public traffic type escalator field. It extends the product application to a broader range.

V-shaped handrail

It strengthens tensile breaking strength, prolongs service life of the handrail, strengthens contact area of handrail rotary end, enlarges handrail friction and effectively drives the handrail movements.

The roller is outside the step chain

The roller is outside the chain. ø108mm is diameter of master and slave wheel. It reduces the compressed load of main wheel and prolongs the roller's service life. The chain applies reinforced materials and structural design with enlarged tensile strength. The roller can be renewed independently so as to save the repair and maintenance period.

It increases the driving force and turning space

Regarding the turning radius, it largely increases the driving force and turning space of the whole transmission. In addition, it thickens the drive spindle diameter and enables the better bearing capacity.

Auxiliary brake

Auxiliary brake is in the upper part of the machine room. It uses frictional principle and the auxiliary brake operates through wedge and brake disc that is installed in spindle drive.

Emergency stop switch

On the basis of setting emergency stop switch in the original upper / lower entry / exit, emergency stop switch also sets every 5 meters of outer cover plate. It is used for sudden events. It can quickly stop the escalator in order to ensure the passengers' safety too.

4 horizontal steps

It applies 4 horizontal steps to enlarge the buffer distance in the travel, therefore the passengers are safer in using the escalators.

Technical specification of escalator installed in the escalator test tower

<table>
<thead>
<tr>
<th>Type</th>
<th>Outdoor type</th>
<th>Heavy duty type public transportation type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity of flat steps</td>
<td>4</td>
<td>150000</td>
</tr>
<tr>
<td>Traction machine power</td>
<td>7000N</td>
<td>7000N</td>
</tr>
<tr>
<td>Inverter power</td>
<td>1000W</td>
<td>1000W</td>
</tr>
<tr>
<td>Diameter of step main roller</td>
<td>ø150</td>
<td>ø150</td>
</tr>
<tr>
<td>Diameter of step secondary roller</td>
<td>ø120</td>
<td>ø120</td>
</tr>
<tr>
<td>Handrail drive mode</td>
<td>Screwed drive</td>
<td>Screwed drive</td>
</tr>
<tr>
<td>Rated speed</td>
<td>3.0kph</td>
<td>3.0kph</td>
</tr>
</tbody>
</table>
Escalator Safety Device

Moving Walk Safety Device

<table>
<thead>
<tr>
<th>Standard function</th>
<th>Description of functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of phase or error phase protection</td>
<td>If the lack of phase or error phase has been detected, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>2. Motor over-speed protection</td>
<td>When the current exceeds 150% of the rated current, the escalator will automatically stop the operation.</td>
</tr>
<tr>
<td>3. Electrical appliance lock protection</td>
<td>It allows the automatic circuit disconnection device to protect the circuit and main components of the escalator (passenger conveyer).</td>
</tr>
<tr>
<td>4. Handrail side protection</td>
<td>When a foreign substance has been dropped in the handrail area, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>5. Cord plate safety device</td>
<td>When a foreign substance has been dropped in or between the cord, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>6. Step singling protection device</td>
<td>When there is abnormal step lifting, the escalator (passenger conveyer) will stop the operation before the step entering into the step plate.</td>
</tr>
<tr>
<td>7. Broken drive chain safety device</td>
<td>When the drive chain has been broken or is broken, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>8. Broken step chain protection</td>
<td>When the step chain has been broken or is broken, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>9. Over-speed protection</td>
<td>When the speed in excess of the speed for the passenger conveyer, it will automatically stop the operation.</td>
</tr>
<tr>
<td>10. Direction reversal protection</td>
<td>When the direction of the passenger conveyer is reversed, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>11. Security line</td>
<td>The flexible safety rope is located in the tread plate, and any side of the escalator tread that the passenger may be caught in between the side of the adjacent step and the baffle plate. The security line on both sides of the step is higher than the tread surface. (The passenger conveyer offers the selection flexible safety rope as security line.)</td>
</tr>
<tr>
<td>12. Emergency stop button</td>
<td>When the button has been pressed down, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>13. Step panel protection</td>
<td>When a foreign substance has been dropped in between the step panel and the step, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option functions</th>
<th>Description of functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Brake protection</td>
<td>When the electric force falls short of supply or it act any of the safety device, the brake force is given effect by the safety device through the spring resistance action. In this way, the escalator (passenger conveyer) stops the operation.</td>
</tr>
<tr>
<td>15. Safety inspection switch</td>
<td>It is a safety device to prevent the escalator starting during the inspection and maintenance.</td>
</tr>
<tr>
<td>16. Step Illumination</td>
<td>Illumination exists in the upper and lower ends of the escalator. In the lower part of the steps, it is better to remind the passengers of the security matters.</td>
</tr>
<tr>
<td>17. Alarm bell starting device</td>
<td>The alarm bell rings when it starts the escalator in order to remind the passengers of the security matters.</td>
</tr>
<tr>
<td>18. Control device for handrail breakage</td>
<td>When the handrail is broken, the escalator (passenger conveyer) will automatically stop the operation.</td>
</tr>
<tr>
<td>19. Slip-persistence brake</td>
<td>The brake that has been installed between the step panel and the step will prevent the passengers from touching the slip-persistence brake. It is not energy restricted to the escalator.</td>
</tr>
</tbody>
</table>

25. WVF variable-frequency energy-saving system | When choosing the frequency converter, it can effectively reduce the energy consumption. |
26. Comb illumination | The illumination has been installed in the side panel near the comb plate. It is more convenient for the passengers to see and down the escalator. |
27. Handrail illumination | The handrail illumination has been installed in the handrail frame. The gentle light adds charm to the running escalator. |
28. Automatic start / stop | The handrail and sensor which is rear the floor plate are activated to the passenger that enter into the floor plate. Then it will automatically start the operation. After all the passengers leave, it will automatically stop the operation again in order to save the energy loss. Scanning greater and traditional guide rail are available for your choice. |
29. Fail-safe brakes | When the drive belts break or the steps and handrail stop, regardless of the specified direction, the assistant brake will cease the operation. When the height of the escalator is over 4 meters, or over the pavement, it is necessary to be equipped with this device. |
Standard & Optional Function

TENAU escalator / moving walk utilize multiple cutting-edge technologies to offer rich and varied functions for users to choose based on their needs. They fully satisfy the needs for new life in the future.

1. **Step chain-roller inbuilt (standard)**
   The roller has been internally installed in the specially-designed roller step chain. It can effectively fulfill the reduction of the noise during the driving process and bring about a more smooth and quiet operation.

2. **Handrail inlet (standard)**
   Novel, trendy and attractive design for the entrance and exit of the handrail belt makes the escalators more live and amicable.

3. **Illumination for the passengers (standard)**
   Green light softly beams out from the space between the engaged teeth of the two neighboring steps to remind the passengers to be aware of the level sections both at the entrance and exit, resulting in increased security for the passengers.

4. **Moving directions and failure display (standard)**
   By means of observing the digital readings on the displaying plates mounted on both sides of the skirts board at the entrance and exit of the escalator (or moving walk), the maintenance work can be made promptly and easily.

5. **Emergency brake device (optional)**
   The skirt board illumination arranged along side the steps’ arc moving contour makes the passengers feel more comfortable and safe.

6. **Variable frequency driving-VWF (optional)**
   When there’s no load, the escalator (or moving walk) moves at low speed and when the approach of a passenger is detected, it restores to the normal speed. This shows conspicuous energy saving effects, saving up to 40% of power.

7. **Heating device (optional)**
   Each escalator usually installs three heating devices. One is beside the host in the upper machine room. It mainly heats the host. The second is installed in the mid escalator. And the third is in the lower part. It mainly heats the whole escalator.

8. **Electric automatic lubrication (optional)**
   Controlled by PC, the lubricating signals are emitted after a preset period when the hydraulic pump is automatically activated to conduct the lubrication.

9. **Running direction indication (optional)**
   The running direction and forbidden display mark have been placed in the inlet and outlet of the handrail. The obvious running or forbidden instruction ensures the safe riding of the passengers with great ease.
### 30° Escalator Construction Parameter

<table>
<thead>
<tr>
<th>Model</th>
<th>Travelling length (m)</th>
<th>Net weight (kN)</th>
<th>Supporting pin (kN)</th>
<th>Motor power (kW)</th>
<th>Transport size</th>
<th>Gap usage due to walking at user's charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM11605.25</td>
<td>3000</td>
<td>57</td>
<td>45</td>
<td>44</td>
<td>2750</td>
<td>10900</td>
</tr>
<tr>
<td></td>
<td>3500</td>
<td>60</td>
<td>49</td>
<td>44</td>
<td>2790</td>
<td>11090</td>
</tr>
<tr>
<td></td>
<td>4000</td>
<td>64</td>
<td>52</td>
<td>47</td>
<td>2810</td>
<td>12090</td>
</tr>
<tr>
<td></td>
<td>4500</td>
<td>68</td>
<td>56</td>
<td>50</td>
<td>2830</td>
<td>13090</td>
</tr>
<tr>
<td></td>
<td>5000</td>
<td>71</td>
<td>59</td>
<td>53</td>
<td>2880</td>
<td>15090</td>
</tr>
<tr>
<td></td>
<td>5500</td>
<td>75</td>
<td>62</td>
<td>56</td>
<td>2960</td>
<td>15900</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>79</td>
<td>65</td>
<td>59</td>
<td>3050</td>
<td>16900</td>
</tr>
<tr>
<td></td>
<td>6500</td>
<td>82</td>
<td>68</td>
<td>62</td>
<td>3150</td>
<td>17900</td>
</tr>
<tr>
<td></td>
<td>7000</td>
<td>87</td>
<td>71</td>
<td>65</td>
<td>3250</td>
<td>19900</td>
</tr>
</tbody>
</table>

#### Description
- The supporting face should be level upright and smooth.
- The supporting face should be in the upper part for the walking force and illuminating lines.

### 35° Escalator Construction Parameter

<table>
<thead>
<tr>
<th>Model</th>
<th>Travelling length (m)</th>
<th>Net weight (kN)</th>
<th>Supporting pin (kN)</th>
<th>Motor power (kW)</th>
<th>Transport size</th>
<th>Gap usage due to walking at user's charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM11605.25</td>
<td>3000</td>
<td>54</td>
<td>43</td>
<td>38</td>
<td>2650</td>
<td>10100</td>
</tr>
<tr>
<td></td>
<td>3500</td>
<td>57</td>
<td>46</td>
<td>41</td>
<td>2690</td>
<td>11100</td>
</tr>
<tr>
<td></td>
<td>4000</td>
<td>60</td>
<td>50</td>
<td>44</td>
<td>2730</td>
<td>12100</td>
</tr>
<tr>
<td></td>
<td>4500</td>
<td>64</td>
<td>54</td>
<td>48</td>
<td>2800</td>
<td>13100</td>
</tr>
<tr>
<td></td>
<td>5000</td>
<td>67</td>
<td>58</td>
<td>48</td>
<td>2870</td>
<td>15100</td>
</tr>
<tr>
<td></td>
<td>5500</td>
<td>70</td>
<td>62</td>
<td>51</td>
<td>2970</td>
<td>15900</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>73</td>
<td>65</td>
<td>54</td>
<td>3020</td>
<td>16900</td>
</tr>
<tr>
<td></td>
<td>6500</td>
<td>76</td>
<td>68</td>
<td>57</td>
<td>3120</td>
<td>17900</td>
</tr>
<tr>
<td></td>
<td>7000</td>
<td>79</td>
<td>71</td>
<td>60</td>
<td>3220</td>
<td>19900</td>
</tr>
<tr>
<td></td>
<td>7500</td>
<td>82</td>
<td>74</td>
<td>63</td>
<td>3320</td>
<td>21900</td>
</tr>
</tbody>
</table>

#### Description
- The supporting face should be level upright and smooth.
- The supporting face should be in the upper part for the walking force and illuminating lines.

---

**Note:** All dimensions and specifications are approximate and subject to change without notice. Refer to the latest product manuals for detailed information.
12° Moving walk Construction Parameter

The supporting beam to supporting distance

It supplies the dynamic force and lighting cable to the upper part.

Supporting beam to supporting distance

L = 1.67(L + 0.7) = 1.76(L + 0.7)

It should fit in or cover the gap between the machine and the construction. The user should take care of the standard which is applicable for the wall width.

It should fit in or cover the gap between the machine and the construction. The user should take care of the standard which is applicable for the wall width.

The whole supporting face should be clean, bright and smooth.

160 x 20 x 4 at user’s choice

It should be 20 x 4 at user’s choice.

0° Moving walk Construction Parameter

Model | Traveling height (m) | Rated speed (m/min) | Rated load capacity (kg) | Inclination (°) | Motor power (kW) | L (mm) | B (mm) | C (mm) | D (mm)

SMEH (800/0°) | 80000 | 0.5 | 6750 | 0 | 5.5 | 800 | 1038 | 1400 | ≥1460

SMEH (1000/0°) | 100000 | 0.5 | 9000 | 0 | 5.5 | 8000 | 1238 | 1600 | ≥1660