An Owner's Guide

Elevator and escalator mobility solutions

Schindler Service

Schindler

Contents

About this guide

Purpose

Since 1874, Schindler has held a reputation as a leader in the development and application of mobility solutions. With U.S. headquarters in Morristown, New Jersey, and Canadian headquarters in Toronto, Ontario, Schindler Elevator Corporation is the North American operating entity of the Swiss-based Schindler Group, the world's second largest elevator company and the world's leading escalator supplier. Schindler employs over 5,000 people in more than 230 locations in North America.

Schindler manufactures, installs, maintains and modernizes mobility solutions for almost every type of building requirement worldwide. The company specializes in latest-technology engineering, as well as mechanical and micro-technology products designed and rigorously tested for comfort, efficiency and reliability.

As an owner or operator of an elevator, escalator or moving walk system, you should take steps to promote the safe operation of the equipment. Regardless of the manufacturer of your equipment, we suggest that you take a few minutes to familiarize yourself with your equipment, and its safe and proper use.

This guide provides an overview of the basic information you should know about your building's equipment. It contains routine operating features and functions of the systems, as well as preventive maintenance guidelines.

Obtaining qualified support

Any operation or function not specifically covered in this guide must be performed by a qualified service technician. Additionally, certain operations or functions, even though they are discussed in this guide, should, where noted, be performed by qualified technicians only.

Do not attempt to perform maintenance or repair work in the event of an equipment malfunction. Rather, remove the equipment from service and have it inspected or repaired by a qualified service technician.

Schindler Customer Service Network (SCSN) When you do need to call for service, Schindler is available around the clock to provide prompt response to your requests through the Schindler Customer Service Network (SCSN).

Your call to SCSN (1-800-225-3123) will be answered by a trained professional who will access your building records via a computer terminal and dispatch a trained Schindler service technician to your building to resolve the problem.

If you call for service, please be prepared to provide the following information to our SCSN representative:

- Your building identification number
- The number or location of the elevator, escalator or moving walk
- A brief description of the problem
- Name of building personnel to contact.

Promoting safe operation
In addition to maintaining safe operation of the equipment, owners and operators of people-moving systems should communicate safety guidelines to passengers as part of a comprehensive safety program.

To encourage its customers' active participation in advising passengers about the proper use of elevators, escalators and moving walks, Schindler has developed UPs+DOWNs, a safety brochure to be shared with building occupants. To order printed copies, contact your local Schindler representative.

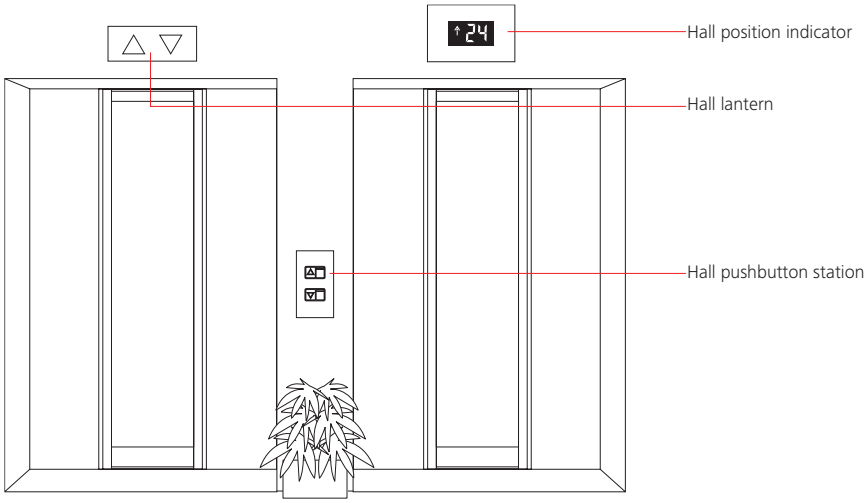
Optional features
Your equipment was designed to fit the specific requirements of your building and its traffic patterns. Several of the features discussed in this guide are optional and may be newer than your particular system. In addition, the appearance of certain function buttons may vary between systems although the functions described remain the same.

Older systems may not include all features describe in this guide. However, most features can be retrofitted to older installations. For more information, contact your local Schindler representative.

Document convention
! This symbol calls attention to important safety messages.

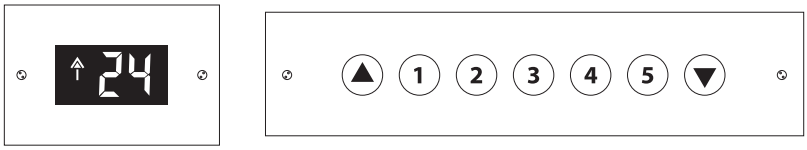
Elevators
Operating and safety features

Hall controls and displays



Typical locations of hall controls

Hall position indicator
This fixture, usually used in the main lobby of multiple elevator installations, serves to alert waiting passengers to the location and direction of travel of the elevator cars in the hoistways.



Hall position indicators

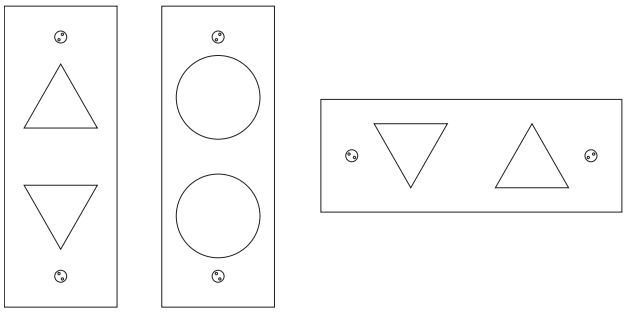
Hall position indicators are typically mounted above the elevator entrance with illuminated lenses indicating the car's floor location and direction of travel. If specified, hall position indicators may be combined with hall lanterns.

Hall lanterns or car lanterns

These fixtures indicate the direction of travel of the arriving car. The lenses illuminate to show the car's direction of travel. An audible tone announces the arrival of the car by sounding once for an up car and twice for a down car.

Hall lanterns are mounted in the corridor above the elevator entrance or adjacent to the entrance and jamb, or they're jamb-mounted. With this feature, passengers can see the direction of travel before the car arrives. Car lanterns are mounted in the entrance column of the elevator car. They allow waiting passengers to see the direction of travel once the elevator doors have opened.

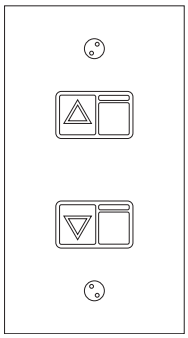
Most elevator installations contain either hall lanterns at each floor or car lanterns on each car; both fixtures usually are not used together.



Vertical and horizontal hall lanterns and car lanterns

Hall pushbutton station

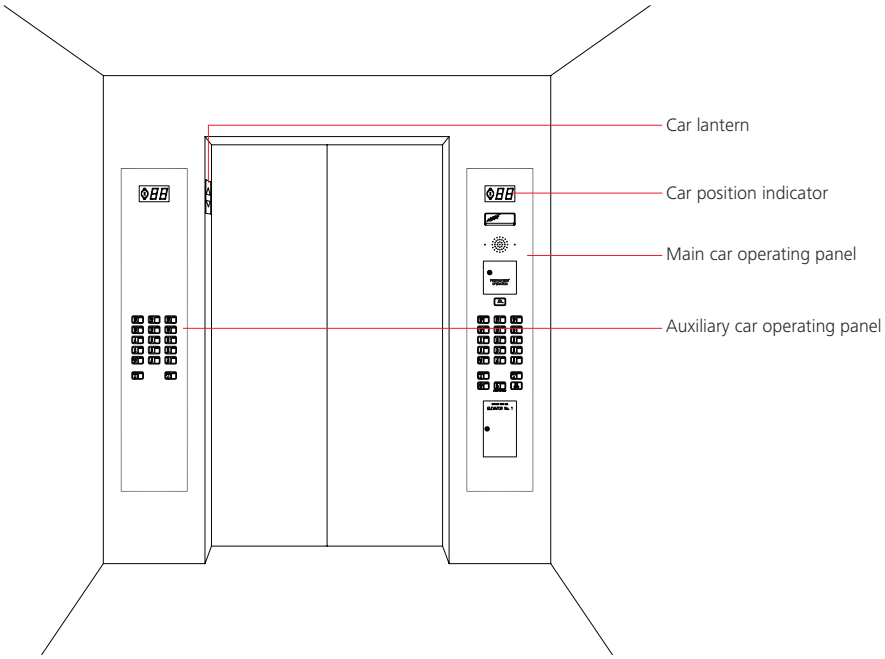
This fixture, located in the wall beside an elevator entrance, serves to call an elevator to the floor when the button indicating the desired direction of travel is pressed. At intermediate floors the fixture contains two buttons, up and down. At the top and bottom terminals, the station reflects the only direction of travel. On most fixtures, a light illuminates when the button is pressed and it remains lighted until the call is answered.



Hall pushbutton station

The up button is usually located above the down button. Press the button indicating desired direction of travel. Never press both the up and down buttons when registering a call; this may delay service for all passengers.

Car controls and displays

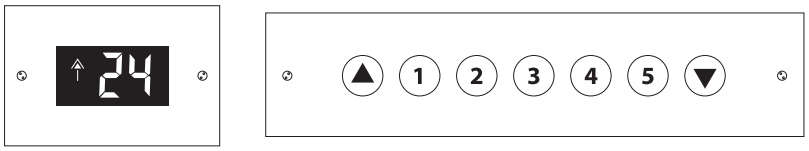


Typical locations of car controls and displays

Car position indicator

This fixture advises elevator passengers of the car's position, its direction of travel and its arrival at a selected floor.

Many car position indicators are mounted in the transom above the car door, with illuminated numbers indicating the floor location of the car. Other types of car position indicators may be located above the car operating panels.



Car position indicators

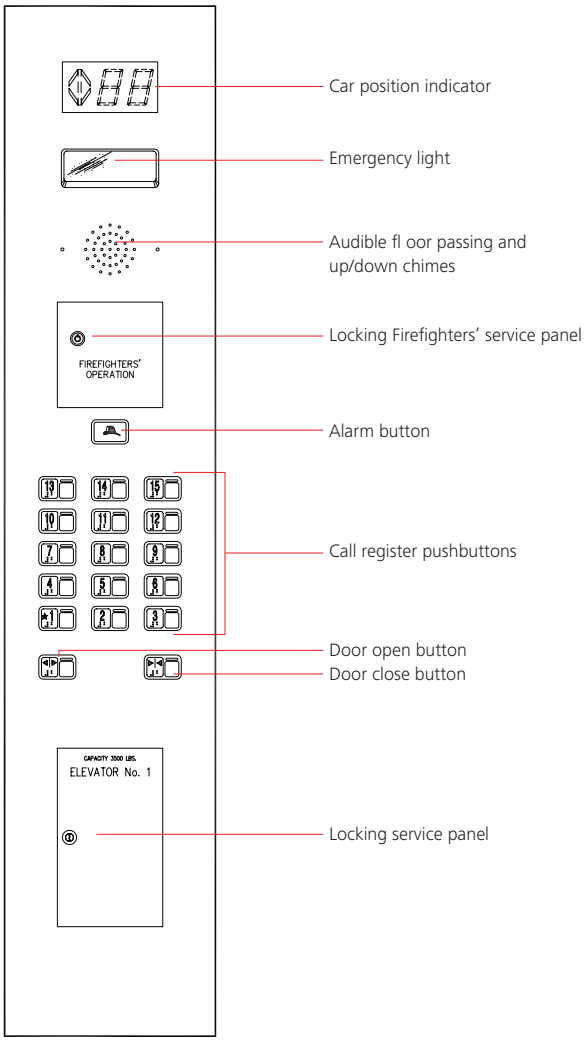
Car lantern

See hall lanterns or car lanterns on page 2.

Car operating panel

All elevators are equipped with a main car operating panel. As with other elevator fixtures, car operating panels vary in appearance and design depending on the system furnished, but most contain these basic features:

- Call register pushbuttons
- Door open button
- Alarm button
- Communication system intercom or telephone
- Restricted access switches.

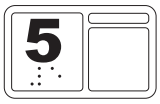


Main car operating panel

When specified, elevator cars are equipped with an auxiliary car operating panel to enhance passenger convenience and to speed the registering of calls. The auxiliary car operating panel contains only the buttons required for passenger use and can be mounted on the front of the return panel opposite the main car operating panel or adjacent to a rear door.

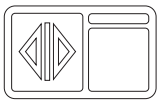
Call register pushbuttons

The call register pushbuttons are used to select a floor destination. They illuminate when pushed to indicate that a call has been registered for that floor. As required by code, raised numerals and Braille markings indicating the number of each floor are installed adjacent to the pushbuttons to aid people with disabilities.



Door open button

When there is a need to keep the car doors open longer than the normal programmed time, such as during passenger loading, pressing the door open button extends normal door-opening time or re-opens a closing door.

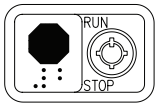


Alarm button

When pressed, this button activates an audible signal to notify building personnel of a possible emergency situation in an elevator. The signal is audible both inside the car and outside the hoistway.

Emergency stop switch

When activated, this switch stops the elevator and sounds its emergency signal. This switch may be replaced with a key switch in most jurisdictions to prevent nuisance use and prevent unnecessary stops. To restore normal operation after activating the stop switch, return the switch to its normal position. The switch may be located in the car operating panel or the locking service panel depending on local codes.



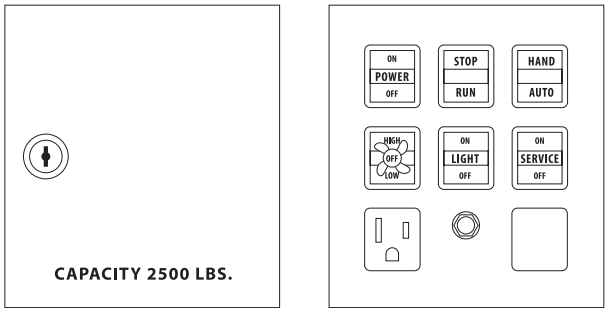
Communication from the car

A telephone (provided by owner and located in a telephone compartment) is used for emergency communication from inside an elevator. In some cases, an intercom speaker is provided to allow communication between building personnel and elevator passengers.

Telephone call button

Locking service panel

Your system may include controls which are either key operated or located in a locked compartment. These switches are not for passenger use and should be used by authorized personnel only.



Restricted access panel door and inside switches

- Power or MG (Motor Generator) switch – Normally left on to permit constant use of the elevator. When turned off the elevator is not operable.
- Stop switch – When activated, this switch stops the elevator and sounds its emergency signal. To restore normal operation after activating the stop switch, return the switch to its normal position. In some jurisdictions this switch is located where it is accessible to passengers.
- Hand switch – When on, this switch removes a car from normal operation to allow servicing by a qualified service technician. This switch should be used by trained elevator service technicians only.
- Fan switch – Controls the operation of the ventilation fan and should be on when the car is in use.
- Light switch – Controls car lighting and must be on whenever the car is in use.
- Service switch – This switch is marked HE or Service. When on, this switch cancels all previously registered car calls and corridor calls assigned to that car and reassigns the calls to other cars. Pressing a car button after the switch is in the on position will send the car to the requested floor where it will remain with its doors open until another car button is pressed. The switch must be turned off to restore routine use of the car.

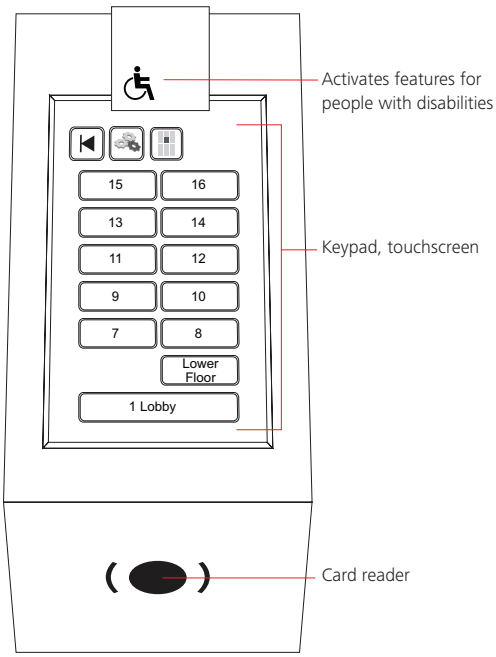
Your elevator system may be equipped with other switches to provide special functions tailored to your building. Your local Schindler representative can provide instructions for their use.

Destination-dispatch systems

Hall terminal

Destination-dispatch systems are based on one very simple, but highly effective idea. You register your destination on a keypad, touchscreen or card reader before you enter the elevator. The hall terminals are conveniently located in the elevator lobbies of each floor.

1. Choose your destination on the keypad, touchscreen, or swipe your RFID card. Each terminal features a keypad or touchscreen that you use to register your floor number. Some have a card reader option. To call an elevator car, press the keypad, touchscreen or swipe a preprogrammed RFID card to choose your desired floor.
2. Read your elevator car assignment. As soon as you press the keys to call an elevator, the display will indicate a letter and symbol. The letter identifies which elevator has been designated to take you to your destination, and the symbol tells you the direction to walk to your elevator.
3. Enter the assigned elevator and enjoy the ride. As soon as the display screen tells you which elevator you've been assigned, approach that elevator and wait for the doors to open. A car designation sign generally located above the elevator door will identify your assigned car. Enter the car and enjoy the ride. In addition to the car designation sign, you can confirm that you're at the correct elevator using the stop indicator in the car entrance.

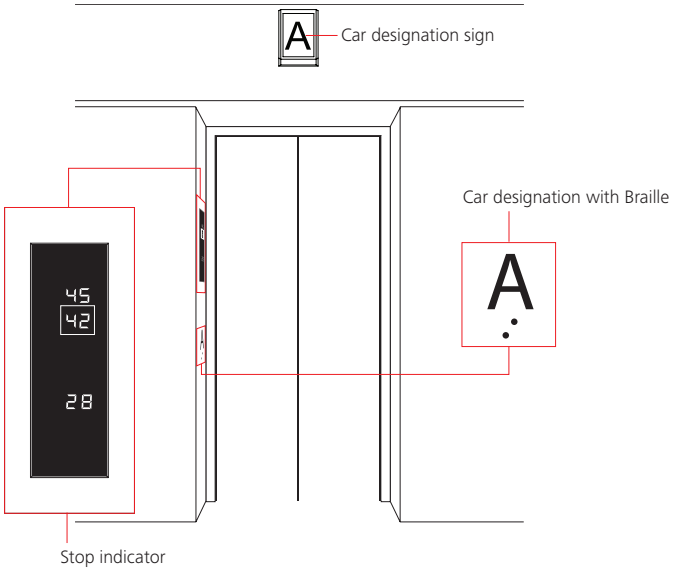


Intelligent access control

Access control can be a fully integrated component of the keypad of your destination dispatching system. When a passenger scans a preprogrammed RFID card at the terminal, the system can verify that passenger's credentials and automatically call an elevator to transport that person to an authorized floor. Destination-dispatch technology helps your elevators play a significant role in controlling access within your building while performing at peak efficiency.

Car designation sign

The car designation sign (letter above car) replaces the conventional hall lantern. It can be located above the entrance or to the side of each elevator opening. The fixture clearly identifies the letter designation for each elevator. For people with special needs, the car's door jamb will have a plate with raised and Braille markings indicating the car designation.

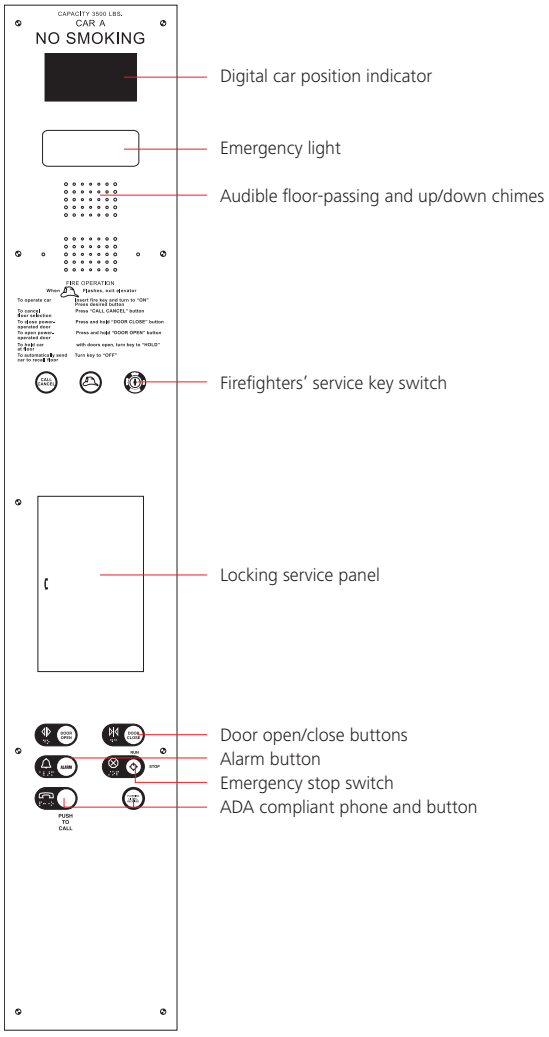


Stop indicator

The stop indicator in the car's entrance confirms the car will stop at the floor you have chosen and remains illuminated while you travel.

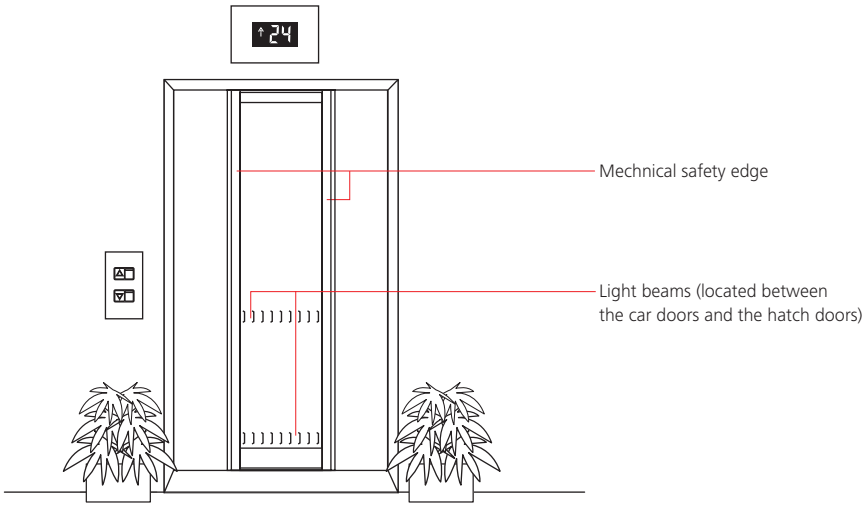
Car operating panel

The car operating panel is much like a conventional one, except since passengers have already told the system what floor they wish to go to, there is no longer the need for floor buttons inside the car. A passenger simply looks to the stop indicator mounted on the side of the car entrance jamb for verification of where the car they are entering is going to stop. The stop indicator is a red digital display that clearly shows each destination.



Elevator doors

Elevator doors open automatically when the car arrives at a floor. The “door open” interval may be adjusted by trained elevator technicians to increase the door open interval or to reduce the door speed. The following safety features are included in your door system for the protection of elevator passengers.



Mechanical safety edge and light beams

Mechanical safety edge
This sensitive, mechanically operated switch extends the full height of the door to automatically re-open a closing door when it comes into contact with an obstruction.

Light beam
The light beam sensing device controls the door closing to conform to the traffic movement across the threshold. If the photo-electric light beams across the door are broken by a passenger or an object, this device causes doors to remain open or to re-open if they have started to close.

Electronic door protection
In lieu of the light curtain and light beam, many newer elevators are equipped with electronic door sensors using infrared technology. They are also available as an upgrade to older systems. These devices cause doors to remain open or to re-open if the sensor detects a passenger or object with its path.

Nudging
If doors are prevented from closing after an extended period of time, nudging takes place unless prohibited by law. During nudging, the doors start to close at a reduced speed, and the door warning buzzer sounds until the doors are fully closed. If the light curtain is held during nudging, the doors will start but will not re-open.

Emergency exits
Emergency exits are not for passenger use.

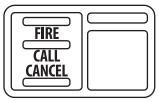
Warning: These exits, located at the top or on the side of a car, must remain locked at all times unless under the direct supervision of trained elevator technicians or emergency personnel. Passengers should not attempt to use emergency car exits except under the direct supervision of trained elevator technicians or emergency personnel. Failure to heed this warning can result in severe personal injury or death.

Emergency control systems

Firefighters' service and emergency operation feature
Every building's disaster or fire drill procedure should include information regarding the proper operation of the firefighters' service feature.

Firefighters' service is an elevator control system designed to protect passengers and aid firefighters in combating fires. The system is activated by a key switch or by the building's smoke detectors on each floor. The switch may be located in the elevator monitoring center or it may be located separately at a designated floor.

Hall fire service switch



Car fire call cancel button

Car fire service switch

Firefighters' service provides for the automatic and immediate return of all elevator cars to a designated floor where they will park with doors open, and will not go to others floors. All the call buttons, emergency stop switch and signal lights, except the car position indicator, will be inoperative. In some systems, if the sensor is activated at the designated floor, elevators will be recalled to an alternative emergency exit floor.

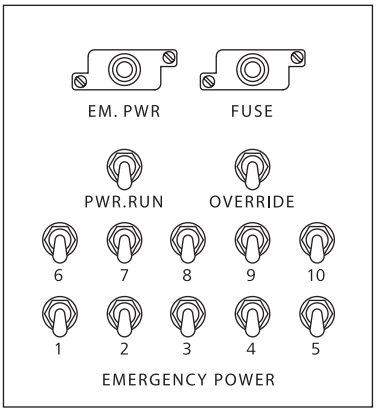
During a fire or emergency, the elevator can be operated only from the car using the in-car key-operated emergency switch. Only trained emergency service personnel should operate elevators with this key-operated switch.

The keys to this switch should be kept where they are immediately accessible to authorized personnel but where they are not available to the public or any unauthorized personnel.

Warning: In case of fire do not use elevators; use stairs or other emergency exits. Use of elevators during a fire can impede fire fighting efforts and can result in severe personal injury or death. To reset operation initiated from fire alarm system, the fire alarm signal must be reset, then the Phase I switch must be cycled to "RESET" momentarily then to "OFF."

Emergency power control

Many buildings have an emergency (standby) power generator system or other emergency power source. If your building does, your elevators may be capable of operating under emergency power. In the event of a power outage, the emergency power system controls power distribution to the elevators. The emergency power control panel may be located in the elevator monitoring center or in a separate locked station.



Emergency power control panel switches

The emergency power system varies among elevator systems. However, all accomplish the basic functions of allowing operation of each car to permit passengers to exit, establishing reduced service for the duration of the emergency and returning the elevator system to normal service when building power has been restored. In most emergency power systems, building personnel can communicate with passengers by telephone or intercom.

- System activation — In most systems the changeover from regular power to emergency power will occur automatically. In some systems the changeover must be activated manually, usually by means of a keyed or controlled-access switch.
- Car selection — For multiple elevator high-rise buildings, the most common system provides automatic selection. In the event of a loss of normal power, all elevators in motion make an emergency stop. When standby power becomes available, a signal is sent to the controller which automatically starts returning the cars (one at a time) to the designated (usually main) floor, opens their doors and takes them out of service. This is done in a predetermined sequence. When all cars have returned to the designated floor, the system automatically places one or more preselected cars in service for normal operation on standby power. If the preselected car is not in operating condition, a second choice is made.

  In some automatic systems, an override feature permits manual selection of the car to be put into normal service. This is done by activating two switches in the emergency power control panel: the override switch plus the switch for the car selected to run.

  Some systems required manual selection of cars operated under emergency power. When there is a loss of normal power, all elevator cars in motion make an emergency stop. When standby power is available, an indicator light at the control station signals that the cars can be operated. Qualified building personnel at the station can then return the cars one at a time to the main floor and take them out of service. This is done by manual operation of individual car switches on the emergency power control panel. Typically, all cars are returned to the main floor and a car is manually placed in service to operate under emergency power.

– Restoring normal power — For those systems where emergency power operation is activated automatically, the restoration of normal building power will cause a signal from the ATS (automatic transfer switch) to notify the elevator system that a transfer from emergency to normal power is impending. This signal directs the elevator to stop at the next available floor until the transfer to normal power occurs. This avoids the possibility of the car making an emergency stop during the transfer sequence. Individual car override switches should be returned to off position when normal building power has been restored.

  For systems which require manual transfer between normal and emergency power, care should be exercised to assure that any cars in use are stopped at a floor before transferring back to normal power. Otherwise, an emergency stop may occur during the transfer, which may be unsettling to the passengers.

Emergency lighting
In the event of a power loss, a battery-powered light will automatically provide low-level illumination sufficient to view the car operating panels in each elevator.

Schindler Ahead remote monitoring

With Schindler Ahead, your elevators are monitored around the clock, 365 days a year. When a change in equipment performance is detected, remote monitoring automatically reports the issue to the Schindler contact center so a technician can be dispatched. The system also sends the technician intelligence and diagnostics to help return your equipment to service faster than traditional troubleshooting.

The Schindler Ahead digital closed-loop system can significantly improve your equipment uptime, and provide you with deeper insights, superior convenience, and greater cost control. Schindler Ahead remote monitoring capability is also available as part of a modernization or as a stand-alone upgrade. To learn more about the availability of Schindler Ahead on your equipment, please contact your Schindler representative.

Elevators
Preventive maintenance

Preserving the smooth and safe operation of your elevator equipment requires regular preventive maintenance performed by a qualified service organization. Schindler services elevators, escalators and moving walks from all manufacturers.

Owner's responsibilities
As an owner or operator of an elevator system, you should take certain steps to promote the safe operation of the equipment. Follow the guidelines listed below as part of a conscientious accident prevention program. Failure to adhere to these guidelines could risk serious injury or death.

Operating guidelines

- Report any unusual equipment operation to trained maintenance personnel. Shut down equipment if dangerous conditions exist.
- Adopt a rigid preventive maintenance program in accordance with manufacturer's recommendations. Do not allow untrained or unskilled individuals to perform any maintenance or repairs on the equipment.
- Do not use elevators during fires, blackouts or power shortages except under the special conditions outlined under firefighters' service and emergency power sections of this guide (see pages 10 and 11). Under no circumstances should passengers or untrained individuals be permitted or encouraged to use elevators during such emergency situations.
- In certain unusual circumstances, elevator cars may level slightly too high or too low at a floor. Always verify proper leveling before entering or leaving the car. If misleveling occurs, shut down the car and summon trained maintenance personnel.
- ASME A17.1/CSA B44 requires a building owner to perform a firefighters' service operation test on a periodic basis. Please consult your local jurisdiction to determine the exact requirements and frequency required to conform to your building. Some jurisdictions may require that certain tests be performed by licensed technicians, so please check with your local Schindler office.
- Immediately report all accidents to the maintenance company and your insurance carrier.

Maintaining the environment

- Keep elevator interiors clean.
- Clean door sill area in both car and corridor.
- Assure proper lighting in corridors and in the elevator car.
- Secure handrails, ceiling panels and ceiling light panels to prevent their falling upon passengers.
- Elevator code prohibits the storage of all non-elevator related material in machine room or elevator closets. The elevator machine room houses the machinery which powers the elevators, electronic panels which control the operation of the elevators, plus peripheral devices designed to provide safe and dependable operation. High voltages and rotating equipment are present which pose severe danger to those not experienced with elevator operations. Special care must be taken to keep all

flammable material away from this area. Access to the machine room should be limited to trained elevator technicians.
- Avoid using any cleaning solution containing chemical content when wiping down your electronic door protection.
- The machine room for hydraulic elevators should be maintained near normal room temperature. Failure to do so can result in elevator malfunction.
- For elevator control systems, manufacturers have normally requested that a machine room have properly regulated humidity and a temperature range of 55 to 90 degrees fahrenheit. This type of environment will serve to promote reliability and to increase the effective life of the elevator motors, coils and other electrical devices.
- When a hydraulic elevator has not run for a number of hours (such as overnight), it may be necessary for designated personnel to operate the cars for a few trips. This circulates warm oil into the jack and minimizes leveling difficulties that may be encountered during normal passenger use after initial start-up. Note: No one is more qualified to service your equipment than a trained Schindler employee.

! Enforcing proper use
- Do not permit overloading of passengers or freight.
- Do not permit individuals to ride or to play on top of the elevator cars.
- Do not move furniture or other materials above or beneath elevator cars or allow material moved to extend through the car top emergency exit.
- Do not permit unauthorized people to have access to emergency door keys, so as to enable them to open hoistway doors when the car is not present. Such keys may be used only by trained elevator or emergency service personnel.
- Only qualified elevator technicians or trained emergency personnel should attempt to remove passengers from stalled elevators. Unauthorized or untrained personnel attempting to rescue trapped passengers may place themselves and the passengers in danger. If safe to do so, establish verbal contact with entrapped passengers and advise them to remain in the cab.
- Do not attempt to use emergency car top exits. These exits are provided for use by trained elevator technicians or emergency personnel only.
- Advise passengers on the proper use of the elevator system. Schindler offers a safety brochure to assist you in communicating ridership guidelines to your passengers. See page ii.

Care and cleaning

Elevator surfaces

Most surfaces of an elevator, such as walls and floors, can be maintained using normal cleaning materials and procedures. Avoid using abrasive or corrosive type cleaners on or around the fixtures. Do not use ammonia-based cleaners on lacquer finishes as they may strip the finish off of metals and woods. Stainless steel and bronze fixtures require special care, as explained below.

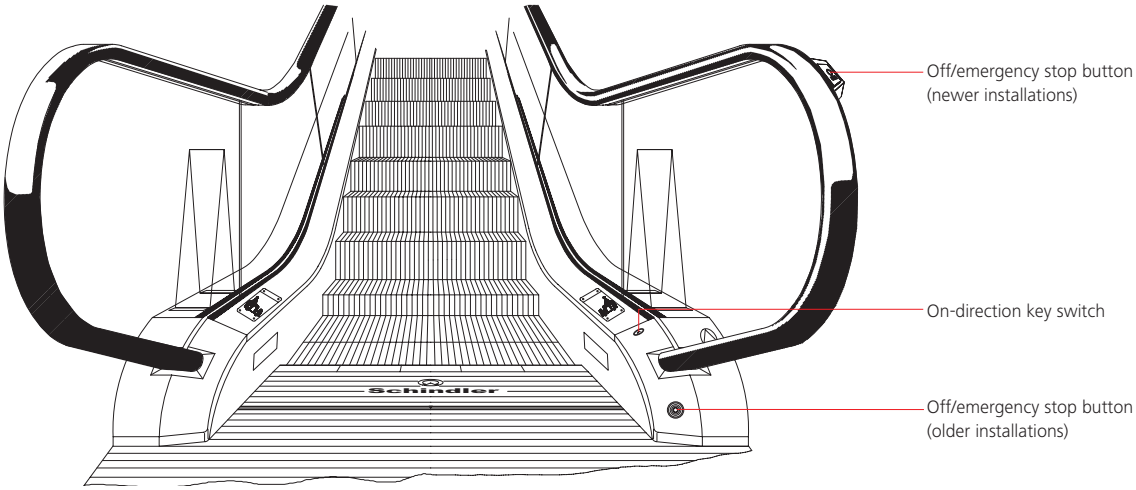
Stainless steel and bronze fixtures

We recommend you use a quality product such as a stainless steel cleaner and polish on brushed stainless steel surfaces and a quality bronze polish on bronze fixtures. Apply a light coat of cleaner and polish with a soft cloth. Do not spray any cleaners directly onto pushbuttons or any other elevator fixture to avoid damaging the pushbuttons and causing them to look unsightly.

Escalators/Moving Walks
Operating and safety features

Operating controls

For the owner or operator, the only controls for the operation of the escalator or moving walk involve starting and stopping it. Authorized building personnel should be trained in the starting and stopping of escalator and moving walks in order to be prepared in the event of an emergency.



Escalator operating controls

On-direction key switch
The on-direction switch is key operated and conveniently located at the bottom of the escalator. A top key switch is optional on newer installations. Exact location may vary depending on model. Direction is controlled by the on-direction switch. The switch is marked to indicate a clockwise turn for up operation and a counter-clockwise turn for down operation. Turn the key to initiate travel in the desired direction. Function and location are similar with moving walks. If you choose to change the direction of travel in which your escalator has been operating for a significant period of time, contact your service technician for guidance.

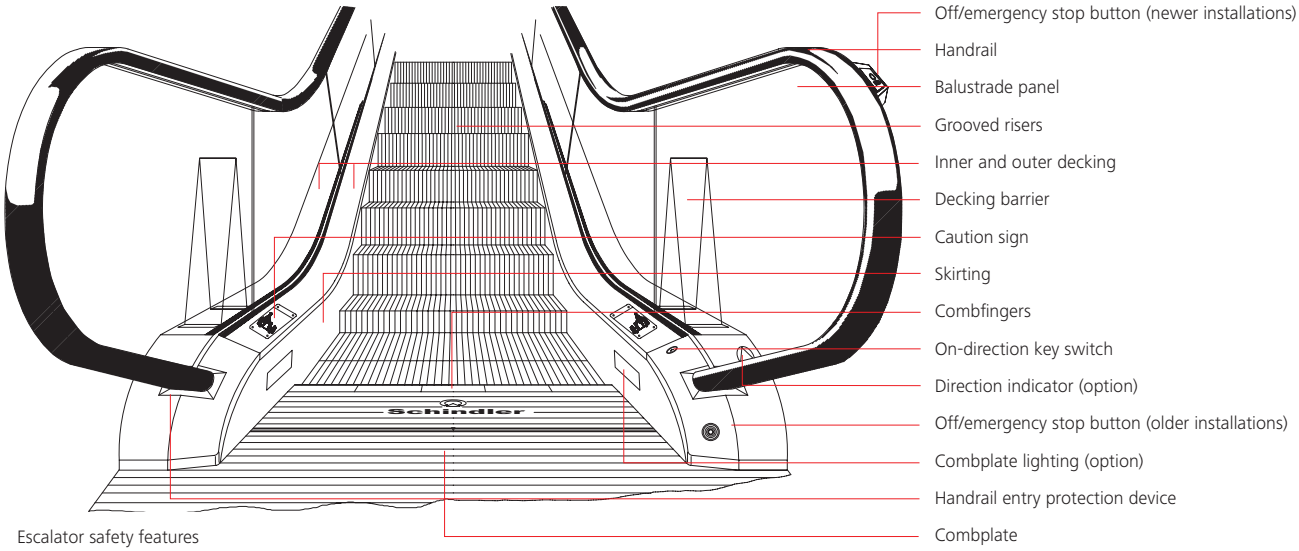
Warning: Be sure no one is on the escalator or moving walk when it is started.

Off/emergency stop button
The stop button is a red pushbutton located on the top and bottom newels for convenient accessibility in the event of an emergency. The newel is located at both ends of the escalator. (Many older models have this feature next to the on-direction switch under the newel. Please check your escalator immediately and inform all building personnel as to location of this button.) The pushbutton functions both as a normal stop and emergency stop button.

Warning: Never stop the escalator or moving walk when passengers are riding except in an emergency. Doing so may cause injury to passengers who may not be prepared for the stop. If an emergency stop is necessary when riders are present, alert the riders before pushing the emergency stop button. Re-start the escalator or moving walk only after the emergency condition is resolved.

Safety features

Escalators and moving walks are equipped with numerous safety features to minimize the chance of accidents or injuries. The following describes some of these safety features which may be furnished with your escalator or moving walk, depending on model. Familiarize yourself with your particular equipment and the safety features included. Contact your Schindler representative with any questions.



Escalator safety features

The features described below apply to escalators and moving walks except where indicated.

Hold Handrail sign
The sign was designed to promote safety and comfort, and to help educate the public in the proper ridership of escalators. The sign, which meets ASME A17.1/CSA B44 standards for color and format in effect at the time of installation, is affixed to the balustrade at both sides and ends of the escalator.

Handrail entry protection device
This device helps prevent hand injuries by using a safety switch which automatically stops the escalator should an object become wedged between the handrail and balustrade.

Narrow pitch step treads
Step treads are made of die-cast aluminum and feature narrow grooves for passenger comfort and safety. The narrow pitch treads help prevent objects from being entangled at the combplate, and provide a more stable platform on which to stand.

Combplate and combfingers
Combplates are an extruded aluminum assembly located at each escalator entrance and exit. They provide a stable entrance and exit platform.

The combfingers are sometimes of a contrasting high-visibility yellow color. The contrast may assist the passenger in distinguishing between the stationary combplate and the moving step. Combfingers protrude into the step tread and help prevent objects from being caught under the combplate.

Grooved risers
Grooved risers allow a combing action between the back of a step and the adjacent riser of the next step. This helps prevent objects from being caught between the steps. (Escalators only.)

Understep lighting
For newer units (2007 code and later), understep lighting is optional. LED lights mounted below the steps at entrances and exits clearly outline the separation between adjacent steps. This feature may help the passengers avoid stepping on the separation when stepping onto and off of the escalator. (Escalators only.)

Soffit guards
Soffit guards may be installed between the inclined deck of the escalator and the building's ceiling soffit to prevent objects from being wedged at the junction. (Escalators only.)

Safety switches
There are a number of safety switches designed to detect unusual or unsafe conditions. Most will stop the escalator automatically when activated. Prior to re-starting your escalator, contact trained escalator maintenance personnel for an equipment check. The particular features of your system should be discussed with your service representative.

Schindler Ahead remote monitoring

With Schindler Ahead, your escalators and moving walks are monitored around the clock, 365 days a year. When a change in equipment performance is detected, remote monitoring automatically reports the issue to the Schindler contact center so a technician can be dispatched. The system also sends the technician intelligence and diagnostics to help return your equipment to service faster than traditional troubleshooting.

The Schindler Ahead digital closed-loop system can significantly improve your equipment uptime, and provide you with deeper insights, superior convenience, and greater cost control. Schindler Ahead remote monitoring capability is also available as part of a modernization or as a stand-alone upgrade. To learn more about the availability of Schindler Ahead on your equipment, please contact your Schindler representative.

Escalators/Moving Walks
Preventive maintenance

Preserving the smooth and safe operation of your escalator and moving walk equipment requires regular preventive maintenance performed by a qualified service organization. Schindler services elevators, escalators and moving walks from all manufacturers.

Owner's responsibilities
As an owner or operator of an escalator or moving walk system, you should take certain steps to promote the safe operation of the equipment. As part of your responsibilities as owner or operator of the premises and of the escalators, you retain responsibility for appropriate crowd control measures so as to prevent dangerous overcrowding of those escalators that could overload the escalator brakes beyond the limits of the applicable code and result in possible serious injury to the riders. In addition, Schindler recommends that you follow the guidelines listed below as part of a conscientious accident prevention safety program. Failure to adhere to these guidelines could create a risk of serious injury to the users of the equipment.

! Operating guidelines

- Report any unusual equipment operation to trained maintenance personnel. Shut down equipment if dangerous conditions exist.
- Adopt a rigid preventive maintenance program in accordance with manufacturer's recommendations. Do not allow untrained or unskilled individuals to perform any maintenance or repairs on equipment.
- Your escalator maintenance company should periodically apply a silicone friction reducer on skirt panels as part of general procedures. Do not remove the silicone during your routine building maintenance procedures.
- If understep lighting is burned out or inoperable, notify your maintenance company.
- Report any unusual noises or vibrations to your maintenance company.
- Stop escalator or moving walk and remove any debris accumulated on steps or combplates.
- Monitor for broken combteeth and see that repairs/replacements are undertaken immediately by qualified technicians.
- Always remove the start-up key from the on-direction switch.
- Be sure all safety features are in place and operable.
- If an escalator or moving walk makes an automatic emergency stop, contact trained maintenance personnel for an equipment check before returning it to operation.
- Report all accidents immediately to the maintenance company and your insurance carrier.

! Enforcing proper use

- Instruct employees and qualified personnel as to the location and use of emergency stop buttons.
- Instruct all employees and passengers to avoid hitting escalator balustrades (side panels) with objects.
- Do not permit use of an inoperative escalator as a stairway.
- Maintain crowd control.
- Provide alternative vertical transportation for people with disabilities, the elderly, children in strollers or persons carrying parcels or freight.
- Advise passengers regarding proper use. Schindler offers a safety brochure to assist you in communicating ridership guidelines to your passengers. See page ii.

Care and cleaning

The balustrades of an escalator or moving walk come in various finishes. The following outlines how to care for components of the system.

Glass

Glass should be cleaned with a quality glass cleaner. Do not lean over the handrails to clean outside glass surfaces while standing on the escalator or moving walk as a loss of balance may occur.

Stainless steel and bronze areas

We recommend you treat stainless steel portions of the balustrades with a quality stainless steel cleaner and polish and treat bronze surfaces with a quality bronze polish. Apply a light spray coating and polish with a soft cloth. Avoid spraying this product on the emergency stop buttons, keyed switches or over traffic areas.

Skirts

Skirts, the vertical panels adjacent to the moving steps, should be carefully treated with a friction-reducing material by your escalator maintenance company. Do not apply cleaner or polish to the skirt area as they remove the friction-reducing material.

Aluminum steps

Brush the aluminum steps with a stiff broom to dislodge most dirt or debris. Do not attempt to use liquids to clean the steps without first consulting a trained technician. Liquids could enter the area below the steps and result in an unsafe condition. Do not polish the steps.

Synthetic yellow step inserts

Use a mild detergent and soap solution. Do not use any other cleaners, including steam jet blowers. Avoid contact with oil or other lubricants.

Handrails

Handrails should be cleaned periodically with a mixture of light detergent and water.

Warning: All cleaning of escalators and moving walks should be performed when the system is not in operation and passengers are not present.

Schindler Service
Reliability from the ground level

For further information, including location of the Schindler office nearest you, please contact:

U.S. Headquarters. Morristown, New Jersey
Toll-Free 877.696.8382
www.us.schindler.com

Canada Headquarters. Toronto, Ontario
Tel. 416.332.8280
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Schindler has received renewal to ISO 14001:2004 and ISO 9001:2008 certificates.

Schindler is a member organization of the U.S. Green Building Council.

Schindler prints with vegetable-based ink on paper containing post-consumer waste fiber.

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