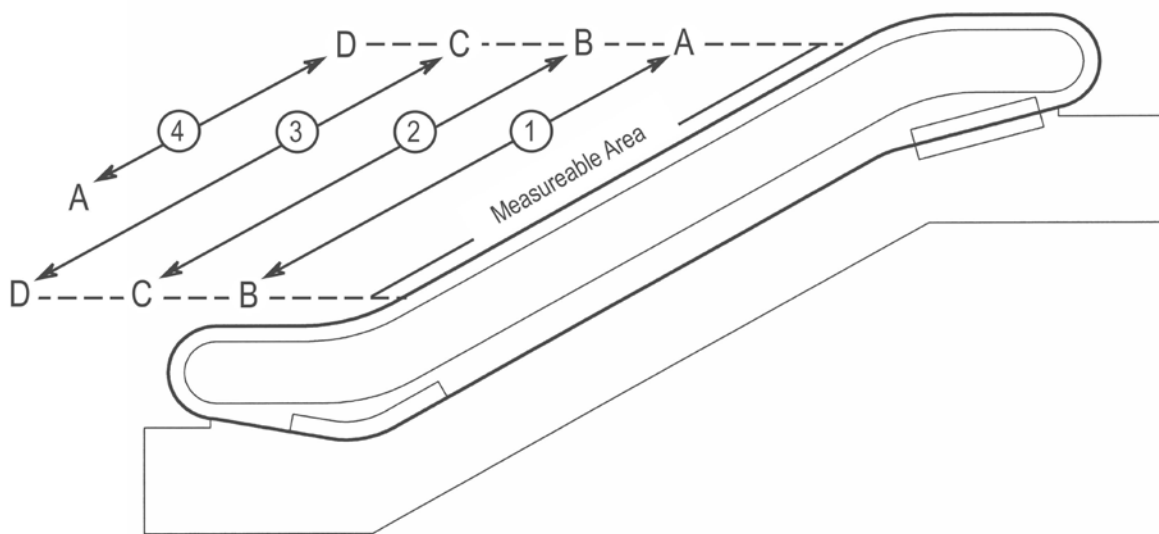


Handrail Measuring Guide

When measuring a handrail, it is critical that measurements are taken accurately. The following steps will help you when measuring an installed handrail.



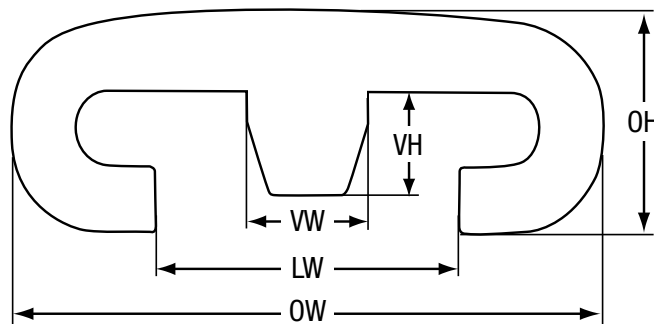
Measuring Instructions

- 1) Place your start mark on the incline of the handrail. On an up unit, the starting mark will be at the top (A) and the measurements will be at the bottom measuring up the incline.
- 2) Place your next mark at the other end of the incline (B) and measure the distance between the two marks.
- 3) Once you have recorded your first measurement, rotate the escalator so as to take another measurement down (or up) the incline.
- 4) Repeat Step 3 (usually 3 times) until the start mark reappears.
- 5) Measure the distance between your last mark and the start mark (D & A) and add to your other measurements (1, 2, & 3) to obtain the total handrail length.

Handrail Measuring

Use the diagram and size chart below as a guide in determining handrail style.

Cross Section



LW- Lip Width
 OW- Overall Width
 OH- Overall Height
 VW- Vee Width
 VH- Vee Height

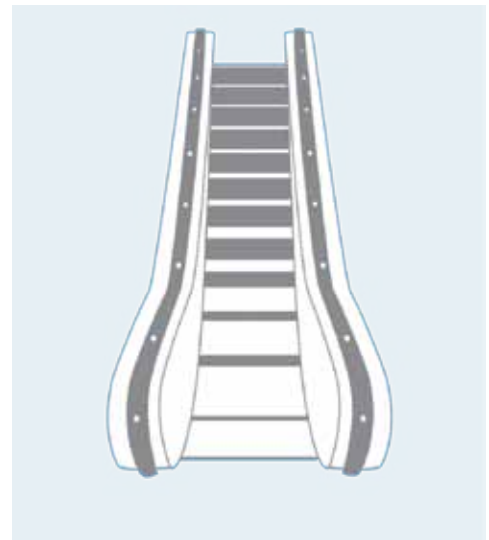
Handrail Style	Manufacturer	LW		OW		OH		VW		VH	
		Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
7500	Otis, Thyssen, Sumitomo, SJEC, CNIM	1 9/16	39	2 15/16	75	1 1/8	28				
7500V	Otis, Thyssen, Sumitomo, CNIM	1 9/16	39	2 15/16	75	1 1/8	28	5/8	15.5	1/2	13
7800	Montgomery, O&K, KONE, Hitachi, Thyssen, Mitsubishi	1 1/2	38	3 1/8	80	1 1/8	28				
7800V	Montgomery, O&K, KONE	1 1/2	38	3 1/8	80	1 1/8	28	5/8	15.5	1/2	13
8000	Westinghouse, Hyundai, Fujitec, Mitsubishi, Dong Yang, Schindler, SJEC, Otis	1 9/16	39	3 1/8	80	1 1/8	28				
8100	Fujitec, LGIS, Hitachi, SJEC	1 5/8	41	3 1/4	82	1 5/16	33				
8100S	Schindler	1 5/16	33	3 1/4	82	1 5/16	33				
8300	Otis, Mitsubishi, Hitachi, Toshiba, Dong Yang, CNIM, Fujitec	1 9/16	39	3 1/4	82	1 3/8	35				
8300V	Westinghouse, Westmount, Houghton	1 9/16	39	3 1/4	82	1 3/8	35	5/8	15.5	11/16	18
8900	Montgomery, KONE, O&K, Thyssen, Vickers	1 11/16	42	3 1/2	89	1 3/8	35				

Motion Indicators

Motion Indicators tell passengers the direction the escalator is running. To keep the motion indicators looking their best, clean your handrails weekly.

Why Motion Indicators Discolour

Once in service, the handrail is exposed to a wide variety of grime such as grease, food, sweat, airborne residue and the handrail's protective waxes, designed to naturally migrate to the surface of the rubber cover and protect it from environmental deterioration. It is the combined effect of all these factors that can result in a "gray" or "brown" discolouration throughout the handrail, consequently diminishing the contrast between the white dot and the black rubber cover. This is a common problem with black rubber products, comparable to the white walls on tires becoming discoloured without aggressive cleaning. While it is very difficult to avoid the discolouration process, it can be controlled through a strict cleaning program.



Often used as a safety feature in transportation systems, motion indicators on escalators show passengers which direction the unit is moving.

Cleaning Instructions

- Routine cleaning of handrails once a week using EHC Handrail Cleaner will increase visibility of your motion indicators.
- EHC Handrail Polish will not discolour or harm motion indicators in any way and should be used in conjunction with EHC Handrail Cleaner.
- Handrails operating in high traffic areas with increased exposure to the environmental elements may require cleaning with Ethyl Alcohol (95% alcohol, commonly known as rubbing alcohol). As excessive rubbing can damage the finish of the handrail, use moderate to light pressure.

Handrail Cleaning & Polishing

The following are recommendations for a proper handrail cleaning program. Daily or weekly cleaning maximizes the handrail's operating efficiency and service life and promotes a satisfying ride for pedestrians. The handrail underside requires extra attention as it can accumulate dust from the handrail guides.

New Rubber Handrails:

Always clean the rubber cover of all protective wax and installation grime after installation of a new EHC handrail by following the cleaning and polishing instructions above.

Cleaning Instructions:

- Apply cleaner to a damp cotton cloth or spray directly onto the handrail and wipe across handrail face, paying special attention to handrail underside. Wipe cleaner off of the handrail with a damp cloth.
- For handrails that need extra attention, use a non-abrasive nylon plastic scouring pad soaked with EHC Handrail Cleaner. Warning: aggressive scouring may damage the handrail surface.
- Rotate the handrail around the escalator or walk until entire handrail has been cleaned. Clean entire handrail before polishing.

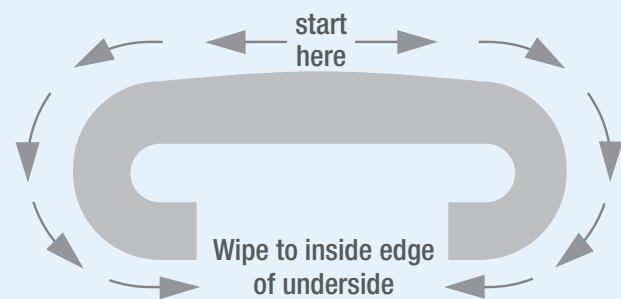
Polishing Instructions:

- Spray EHC Handrail Polish liberally onto a dry soft cotton cloth. Wipe generously across the surface of handrail rubber cover and allow to sit for 1-2 minutes.
- Using a fresh cotton cloth, remove excess polish using a light circular motion until handrail no longer feels "greasy".
- NOTE: Thermoplastic (NT) handrails do not require polishing.

Cleaning Schedule:

New Handrails: Clean immediately following installation

Existing Handrails: Daily or weekly is recommended



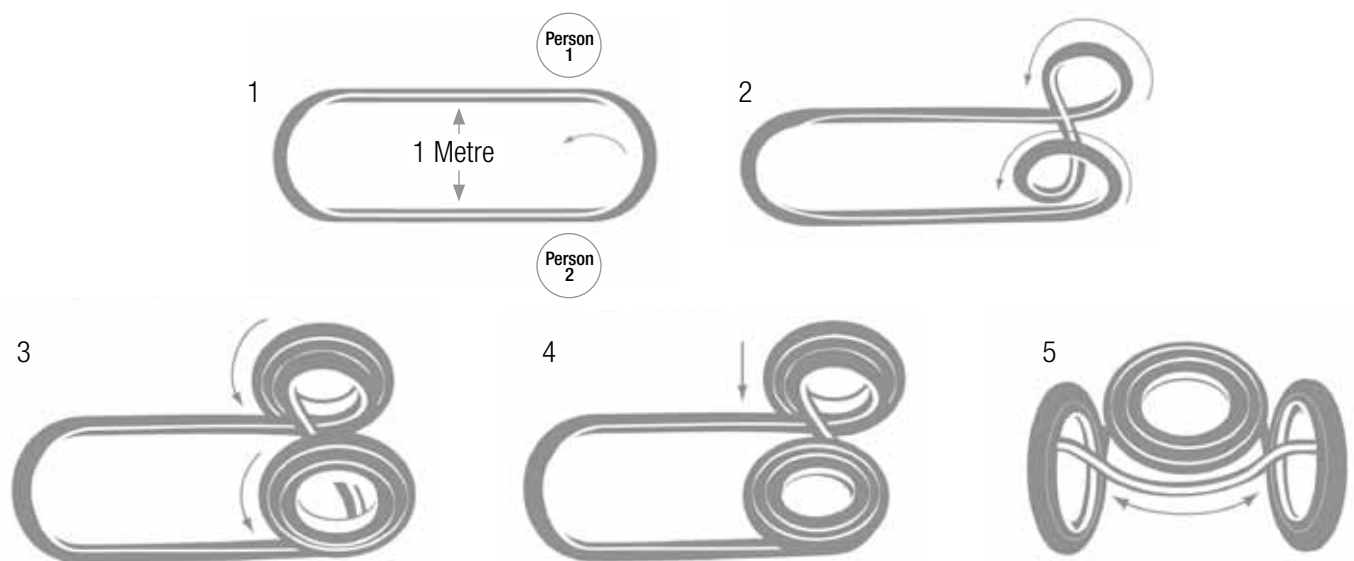
Start from centre and wipe outwards including underside.

Warning:

Do not use abrasive cleaners or ammonia since they will damage the handrail's surface finish. Do not use wax and other lubricants to improve the sliding ability of the handrail. If the lubricants come into contact with the drive sheave, the handrail will begin to slip.

Handrail Coiling

The most effective way to package, store, and ship handrails is to coil them. Extra long handrail should be stored on a reel. A properly coiled handrail can be packaged and stored to extended periods of time with minimal handrail distortion. An improperly coiled handrail can be very difficult to package, will not store well, and can often be damaged beyond repair because of permanent distortion. The following 5 steps describe a simple method for properly coiling an endless handrail.



Coiling Instructions:

- 1) Choose a clean, flat area large enough to accommodate the entire handrail. Lay the handrail in an oblong shape making sure it is free of twists, with the slider side up (rubber side down). Straighten the handrail lengthwise so that the side of the oval shape are parallel and approximately one metre (or one yard) apart.
- 2) With one person on either side of the handrail, begin at one end by lifting the handrail edge and turning it towards the floor.
- 3) The handrail can now be “rolled” along, creating two separate coils. With each rotation, be sure that the handrail is wound neatly on top of itself.
- 4) When the handrail is wound, place one of the two coils inward on the floor then place the other coil on top of the first.
- 5) If the handrail is longer than 25 metres (82 feet), stop coiling the handrail when you reach half the handrail’s length and repeat the same procedure from the other end. This will result in four individual coils placed on top of each other. It is important that the loop of the second end is large enough to fit around the base of the previously coiled end. This will prevent any kinks or dents in that section of the handrail. Place these last two coils over the previously coiled handrail.

To uncoil the handrail, repeat these steps in reverse order.

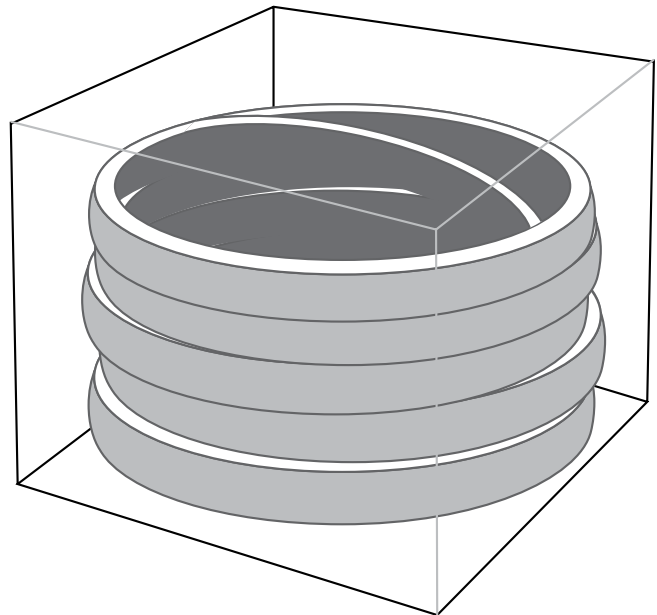
Handrail Storage

As a general rule handrails do not store well over extended periods of time.

Even under ideal conditions, handrails will continue to age during storage, with sunlight, heat, and humidity accelerating the process. During storage, rubber handrails will often develop a waxy, protective haze. This is normal and by design, as the migration of the protective wax to the surface guards the handrail throughout its lifetime. Simply give the handrails a good cleaning after installation.

Storage Recommendations:

- Store in a dark, cool, and dry environment, with a low relative humidity.
- New handrails are best stored in their original packaging.
- Used handrails should be coiled up according to EHC Handrail Coiling procedures, avoiding excessively tight coils or kinks in the handrails. Once properly coiled, the handrails should be placed in a protective bag or box.
- Handrail containers should be stored flat and not be subjected to added weight or stress imposed by other materials being stacked or stored on top of the handrails.
- Avoid storing in penthouses or elevator pits, as both locations leave the handrail susceptible to high temperatures as well as oil and moisture contamination.
- A handrail can remain in storage for approximately 3-4 years. Handrail stored for this length of time, however, may not perform for a full service life compared to a new handrail from the factory.
- The surface of a stored handrail will require cleaning before installation. (See EHC Cleaning & Polishing procedures).



Important Reminder

After storage, uncoil handrail and let it “relax” in that state for at least 24 hours before installing on the escalator.