Adams Replacement Handrails

Adams is one of the world's leading suppliers of escalator handrail.

The shape and dimensions of a handrail are critical. If the height and width are not rigidly controlled, the result is a handrail that does not pass cleanly through other working parts of the escalator.

Tension Member (Stretch Inhibitor): Provides strength along the length of handrail to withstand the pulling force of the drive mechanism; flexible enough to bend around the balustrade, yet strong enough to maintain the length of the handrail.

Feature	Benefit

– Completely encased in envelope of vulcanized rubber.
– Rubber is permanently bonded to tension member with an adhesive bond stronger than the rubber itself.
– Variety of steel and non-metallic tension members available:
  – Solid Tape: Precision-tempered, high-tensile steel strip (1 3/4" W x 0.020" gauge); tensile strength greater than 200,000 lbs. per square inch.
  – Stranded Steel Cable: Time-proven design builds great strength from synergy of numerous strands working together.
	– Permits handrail components to flex independent of each other; this eliminates the binding and chafing that can cause premature overheating and failure in ordinary handrail.
	– Eliminates tension member bond failure, thus lengthening trouble-free service life.
	– Matches performance characteristics of all escalator types.
	– Tempering provides fatigue and fracture resistance from continuous bending.
	– Thin cross-section promotes optimum flexibility.
	– Excellent combination of stretch resistance and freedom from fracture for outstanding durability
	– Reduce failure under high tension
	– Pedestrian safety is enhanced.
	– Will not lose strength or bonding due to corrosion.

Slider (Under Surface): Provides the sliding surface where the underside of the handrail contacts the balustrade handrail guide; provides traction surface for handrail drive mechanism.

Feature	Benefit
– Utilizes both natural cotton (std.) and synthetic materials. – Nylon/polyester fibers are proven performers for outdoor use – Cotton textile slider combines optimum sliding characteristics with positive driving traction for top performance indoors	– Assures high performance regardless of application or customer preference.

Carcass: Provides dimensional stability to the cross-section of the handrail; flexible layers of natural or synthetic fibers are permanently bonded with high-strength natural rubber.

Feature	Benefit
– Fully laminated thru entire cross-section with natural or synthetic fibers. – Carcass laminations are bonded with high-strength natural rubber, permanently vulcanized.	– Lamination retains shape in lip area with no compromise in flexibility. – Prevents carcass delamination and subsequent loss of shape. – Vulcanization provides maximum strength and durability.

Rubber Cover: The flexible protective covering for the carcass; it provides a comfortable non-slip surface for the pedestrian.

Feature	Benefit
– Up to 1/8" thick layer of rubber. – Standard cover material is styrene butadiene rubber with 2000 lbs. of tensile strength per square inch. – Rubber is molded and vulcanized permanently onto carcass member. – Vulcanization performed under precise time and temperature control – Polished steel molds are used for molding and vulcanizing – All rubber formulations contain premium-grade anti-degradants – DuPont Hypalon® synthetic rubber available in special colors – Other rubber compounds available	– Ensures lasting protection to vital carcass area. – Resists the rigors of unusual or heavy-duty service. – High-adhesive bond prevents premature loosening and separation. – Prevents premature softening or hardening of rubber cover. – Rubber surface is smooth and aesthetically pleasing. – Rubber is protected from ozone and oxygen, common causes of cracking – Hypalon is color-fast, non-marking, and exceptionally durable – You can match special materials to your special applications (e.g., outdoor, hot, humid, high-traffic)

How to Coil Escalator Handrails

12 steps (and a helper!) to make coiling easy

The best way to ship or store endless handrail is to roll it into a coil. Can't be done? Actually, it's easier than it sounds. Here's a tested two-person method for coiling endless handrail of any length. The numbered steps that follow correspond to the numbered photos.

Step 1. Choose a clean, flat area large enough to lay out the handrail in an elongated loop. Be sure the handrail is free of twists; place it with the rubber side down and the slider side up. Keep the sides of the handrail loop about 3 feet apart (1 meter).

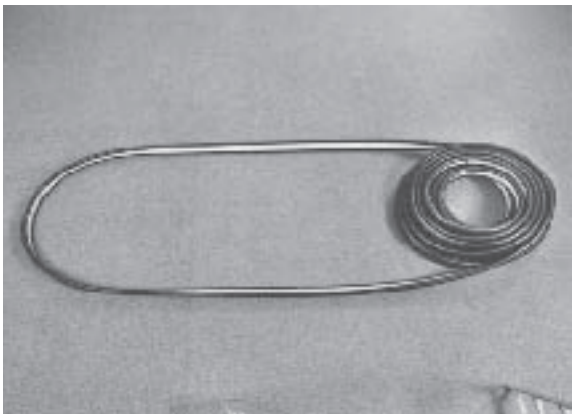
Steps 2 – 3. Grasp the handrail at one end of the loop. Roll forward to form a coil along both parallel sides of the handrail.

Step 4. Roll the coil on top of itself, being careful not to let the coils slip apart. You may have to guide the end loop as it travels around with the coil.

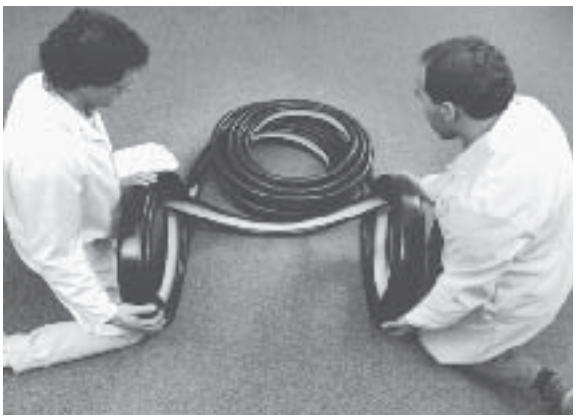
Steps 5 – 7. Continue coiling until you reach the halfway point on the handrail. Lay one coil flat on the floor; place the other coil on top of the first.

Steps 8 – 9. Repeat steps 2 – 7 from the uncoiled end of the handrail.

Step 10. When the second set of coils approaches the first set, be sure that the loop end lies against the coils already resting on the floor. This will permit the second set of coils to be laid evenly atop the first set. (If the loop end assumes a different position in relation to the first set of coils, you might want to unwind and re-coil the second end, making the coils larger or smaller so that the loop can take the proper position.)



Steps 11 – 12. Place the second two coils on top of the first two, and the job is done.



How to Measure Escalator Handrails

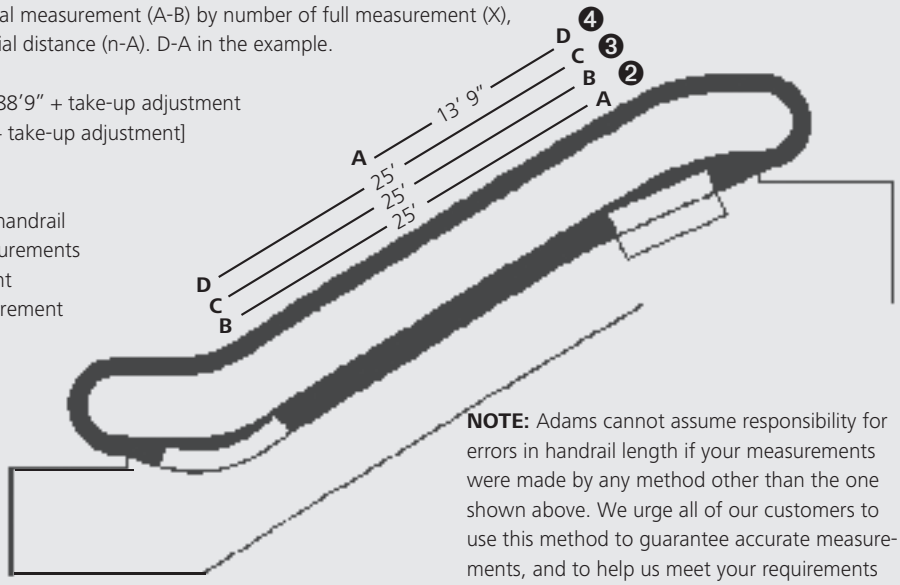
How to measure the exact length you need

Summary: Multiply initial measurement (A-B) by number of full measurement (X), then add additional partial distance (n-A). D-A in the example.

Illustration Example:
Total Handrail Length = 88'9" + take-up adjustment
[(3 x 25') + (1 x 13'9") + take-up adjustment]

L = (X) x (A-B) + (n-A)
L = measured length of handrail
X = number of full measurements
A-B = initial measurement
n-A = final partial measurement

IMPORTANT NOTE:
Be sure to include the take-up adjustment in your measurements to determine final ordered length.



NOTE: Adams cannot assume responsibility for errors in handrail length if your measurements were made by any method other than the one shown above. We urge all of our customers to use this method to guarantee accurate measurements, and to help us meet your requirements correctly the first time.

Use the instructions that follow to avoid errors that could cost you a great deal in lost material and time.

1. For best results, use a fine-tip marker or crayon to mark the handrail. Tape or other wide marking devices could cause your measurements to be inaccurate.
2. Place two marks on the straight section of handrail, one near the top and one near the bottom (see START and STOP points on illustration). Carefully measure and record the distance A-B between the two marks. (On an UP unit, the START mark will be at the top, and the measurements will be made down the handrail; for DOWN units, the START mark will be at the bottom and measurements will be made up the handrail.)
3. After you record the distance A-B, set the escalator in motion until mark "B" reaches the vicinity of point A. Stop the escalator. Measure from point B a distance along the handrail equal to the distance A-B; make a new mark "C" at the end of this distance. Distance B-C should be the same as distance A-B.
4. Repeat Step #2 until START mark "A" reappears. Measure the distance between your last new mark and START mark "A"; this is distance D-A in the illustration.
5. Add the value for D-A to the sum of your other measurements; the new sum represents the total measured length of the handrail.
6. To determine total operating length (length to order), subtract, as necessary, the length of handrail taken up by the take-up adjustment as your handrail stretched with age.

Suggestions:

- Keep your measurements accurate by measuring only on the straight section of handrail. Measurements around bends or curves are likely to be distorted, and your final determination will almost certainly be incorrect. Before ordering the replacement handrail, inspect the take-up mechanism to ensure that proper adjustment is available after handrail installation.
- Escalator shown is in the illustration in an UP unit; the START measure mark (A) is at the top. After measurement A-B is taken, and the escalator is set in motion, point A will disappear into the escalator balustrade and point B will move toward the top. Distance B-C is the second measurement, equal to A-B. On a DOWN unit, START mark A will be at the bottom and it will disappear when the escalator is set in motion.

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