Retracta Ladder[®] - Installation Manual

Included are installation instructions and drawings for the *Retracta Ladder[®]* (RL), *Extended Retracta Ladder[®]* (ERL) and *Extra* Extended Retracta Ladder[®] (EERL) as well as drawings for installation of the Retracta Ladder[®] mounted onto a Divider Beam *Kit*[™] (DBK), as manufactured by *Smart Elevator Tech, LLC*:

Safety: Follow all applicable national, state and local codes and engineering standards. Follow all safety standards and protocols per OSHA and applicable authorities. Refer to the current, "Elevator Industry Field Employees' Safety Handbook" and all other applicable safety manuals, documents, etc. Ladders must be installed only by technicians who are properly trained and have sufficient skills and expertise in elevator installation. Smart Elevator Tech, LLC is not responsible for the installation of this product, nor any liability arising from damages or injury resulting from the installation or improper use of this product. Use of this product is limited to properly trained personnel as referenced in the Limited Warranty & Product Liability Disclaimer. Installation or use of this product constitutes express acceptance of the risks inherent in the installation and use of the product.

Codes: All ladders herein are designed in compliance with ASME A17.1-2022/CSA B44:22 or later, including section 2.2.4, rules 2.26.2.38, and 2.26.4.3.1. It is the responsibility of the purchaser to verify with their authority(ies) having jurisdiction as to the acceptance of retractable pit ladders.

Preparation: Inspect the installation location and surrounding areas to ensure a clean and safe workplace. The elevator pit and hoistway must be completed and ready for the installation of a pit access ladder. If an elevator is already installed, interconnection to the elevator safety circuit - such as the pit stop switch - must be operational for immediate connection. If the elevator installation follows the ladder installation, the ladder electrical device interconnection to the elevator safety circuit must be made before a moving car is established.

Installation:

- 1. Unpacking Shipping Carton & Handling: Remove all protective shipping materials taking care not to damage the ladder: a. With this manual is packed the ladder electrical device (safety switch), when included in the order, Setup Blocks (ERL & EERL only) and Warning sign. To prevent damage to the the switch, it must not be installed prior to mounting the ladder to the wall.
- b. The gas spring is factory mounted at the cylinder tube end only. It will be connected to the adjoining floor bracket at a later step for ease of installation and protection from damage.
- 2. Inspect Pivot Hinge Brackets: Check all pivot hinge arms and brackets. The base floor mount brackets may be un-mounted from the ladder for shipping. All hinge points should be left un-tensioned to allow free movement but not excess side play. If necessary, adjust tension on nylon insert nuts for free movement and minimal bracket and pivot arm side play.
- 3. Trim Risers: If the pit depth is shallower than the ladder ordered, the base of 5/16" x 2" steel risers may be trimmed to suit the actual pit depth. The bottom bracket set and gas spring connection can be relocated by drilling new holes (maintain gas spring connection spacing, vertically and horizontally) if trimming interferes with these connections.
- 4. Attach Ladder Sections: To assemble the ladder, align sections with the lower section splice tabs lapping the upper section holes after removing the splice fasteners. The top and bottom sections have "FRONT" labels to ensure correct orientation.
- 5. Determine Correct Pull Pin Handle Orientation: The *Retracta Ladder*[®] is extended & retracted and locked into both positions by operating the pull pin handle, which must be within reach of the access entrance. Use the **Pull Pin Pole**[™] (PPP) reach extender (sold separately for the *Retracta Ladder[®]* and may be included with the *Extended* and *Extra Extended Retracta* Ladder[®]) for distances too far to reach. The pull pin handle & bracket are shipped on the R.H. side of the ladder, correct for installing at the R.H. side of the elevator. To install the ladder on the L.H. side of the elevator, the pull pin handle assembly must be re-installed onto the L.H. side of the ladder.
- 6. Narrow Mounting Space: For tight clearances, the pull pin handle assembly may be moved from the outside of the vertical riser bar to the inside of the bar. There are four potential locations for the pull pin assembly (R.H. & L.H., outside & inside). One or more of the wall brackets on the L.H. side of the ladder may also be relocated to the inside of the ladder riser, provided there is no interference with a rung - relocate bracket if necessary.
- 7. Mounting Preparation: The ladder must be mounted securely to the building structure using 3/8" [10mm] min. grade 5 hardware, concrete screws, wedge anchors, etc. Bracket Ø0.56" holes allow for minor adjustability, as may be needed to remove pivot arm binding. All mounting brackets must be vertically plumb, parallel and equidistant. Out-of-plumb mounting will cause the ladder to bind as torsion is introduced through the vertical risers. The top pull pin assembly bracket mounting alignment is critical to ensure the locking function in the retracted and extended positions. Variations in the vertical mounting surface alignment or out-of-plumb conditions can be corrected by shimming or other structural means. LADDER MUST BE INSTALLED WHILE IN THE RETRACTED (UP) POSITION. Locate the ladder against the mounting surface in the retracted (up) position, with the pivot arms dropping vertically and nominally aligned (3° offset) with the riser bars. RL Only: Install the base pivot arms and floor bracket and tighten the nylon insert nuts connecting the pivot arms to the ladder riser bars and pivot arms to the floor angle bracket to hold the ladder base $5\frac{1}{4}$ " above the floor (these will be loosened later).
- 8. Wall Mounting Method: Rotate each wall bracket to align angle leg with mounting surface. Verify all points of attachment are plumb - shim if required. ERL & EERL Only: The bottom wall mount brackets of the riser bars should be blocked up off the floor using the Setup Blocks provided. Brace ladder against the mounting surface, so it doesn't topple. Drill the main wall bracket connection holes directly through the holes in the ladder mounting brackets or through-bolt for a metal framework attachment. This will ensure the mounting fasteners will be in the correct and precise locations. In this position the outward legs of the wall mount bracket angles, the pivot arms and the ladder riser bars are all aligned, side by side. Use an adjustable wrench or C-clamp along the top of the bracket leg to secure the three members together, which will prevent the wall mount angles from rotating out of alignment. It is important that this angle be straight with the pivot arm to prevent binding in the pivot joint.
- 9. Divider Beam Mounting: The Retracta Ladder[®] (but not the Extended or Extra Extended Retracta Ladder[®]) can be mounted at a divider beam with the optional *Divider Beam Kit*[™] (DBK) for pit depth to 6' and *Deep Pit Divider Beam Kit*[™] (DDBK) for pit depth to 10'. The kit includes all hardware to support one (1) ladder or two (2) ladders back-to-back. Divider beams may be HSS or I-beam, 4" to 6" wide and up to 10" high, TOS from 6" above to 12" below entrance sill. Ladder must be mounted in the fully retracted (up) position, as shown. Ladders are typically shipped with the intermediate bracket set pre-mounted 4.25" below the entrance sill. If the divider beam top of steel (TOS) is 7" or more below the entrance sill, this bracket set can remain in this original location. If the divider beam TOS is less than 7" below the sill, this bracket set must be relocated to the available holes on the ladder riser bars at 9" above the entrance sill. See separate installation drawing on this sheet.
- 10.Pull Pin Mounting: Pull pin assembly bracket must be fastened to the structure separately do not install at this time. Install the fasteners or anchors in the main wall brackets and tighten, installing shims if necessary. Loosen the nylon insert nuts on the base floor mount brackets for the RL or remove the blocking on the ERL/EERL and extend (lower) the ladder so that the bottoms of the vertical riser bars rest on the floor. To mount the top pull pin assembly bracket to the structure or framework, lock the pull pin so its wall bracket aligns with the structural mounting surface (wall or framework). Move the bracket up until it stops and mark the top of the bracket, then move the ladder down and mark the bottom of the bracket. Locate the bracket at the center of the two marks and drill the structural mounting surface or locate the insert nut. Install the fastener or anchor, shim if necessary.
- **11.Install Gas Spring(s):** After the ladder is securely fastened to the wall the gas spring(s) should be installed. It is critical that the cylinder tube is mounted up and plunger rod end mounted pointing down, to maintain the internal lubrication of the rod and seal. If the gas spring is mounted inverted, with the rod up, the unit will fail prematurely, voiding the warranty. Earlier model gas springs use a retaining clip (spring wire) in the steel end fitting, which must be removed to install and replaced to lock. Later gas springs have plastic snap-on plastic end fittings. To remove, use a small, flat-blade screwdriver to pry back the spring clip.
- **12.Install Ladder Electrical Device:** An IP67 rated ladder electrical device (switch) is supplied, containing a minimum of one (1) Positive-Break, forced-contact, normally closed (N.C.) contact, to prevent movement of the elevator when the ladder is in the extended position. The switch must be field piped and wired, per code, into the elevator safety circuit, either by interconnecting with the pit stop switch or a direct connection with the elevator controller. For NEMA 4 compliance, a suitable watertight connection is required. Two of the main wall mount brackets on the ladder are equipped to allow the ladder electrical device to be mounted on either side of the ladder, using the two 8-32 screws provided.
- **13. Warning Sign:** With this installation manual is an ANSI Z535.2, ANSI Z535.4, and ISO 3864-2 compliant adhesive-backed vinyl WARNING sign. This sign must be mounted to the hoistway wall or divider screen, visible and legible from the pit access.
- **14. Reach Extender:** The optional *Pull Pin Pole*[™], model #ERL-PPP enables the operator to retract and extend the ladder from distances up to 30". The *Pull Pin Pole*[™] should be installed near the pit access, readily accessible. Use the self-drilling screw to attach the loose end of the cable lanyard below the entrance landing sill (typically to the steel fascia), within easy reach of the pit entry. IMPORTANT: So that pole and lanyard do not interfere with elevator operation, ensure lanyard rests tight against the fascia and the pole lays flat on pit floor when not in use. A "PIT LADDER OUT OF REACH" sign is included, to be mounted with the WARNING sign, visible from the access door.
- **15.Test Operation:** Test the operation of the *Retracta Ladder*[®] from the access door. Verify the ladder can be extended and retracted from the pull pin T-handle and that the pull pin properly locks in both the extended and retracted positions. Test the function of the ladder electrical device by operating the elevator on hoistway access operation (only when safe to do so). The elevator must operate (move) when the ladder is in the retracted (up against the wall) position. The elevator must NOT operate (move) when the ladder is in the extended (down with the base of the vertical riser bars resting on the pit floor) position. Verify that there is adequate code prescribed running clearance between the retracted ladder and all points of the moving car adjacent to the ladder. The authority having jurisdiction may require full inspection of the *Retracta Ladder*[®], including the operation of the ladder electrical device / elevator safety circuit interface and the running clearance.

Shop Drawings: Model specific shop drawings, based on pit depth, ladder width and selected options, are available upon request. Patent #8944211 & IP: Please note that the *Retracta Ladder*[®] has been awarded the USPTO Patent #8944211 B2 and shall not be copied or duplicated. All intellectual property is retained by Smart Elevator Tech, LLC.

Questions & Comments: If you have questions or comments about the installation of the Retracta Ladder®, feel free to contact Smart Elevator Tech, LLC. (415) 819-5744, sales@smartelevatortech.com.

RL Installation Manual, Parts List & Warranty © Smart Elevator Tech, LLC, RL-IM-07.dwg - 04/2024

Retracta Ladder[®] (RL-FM) Floor Mount Installation Steps



Retracta Ladder[®] Installation w/ Divider Beam Kit™ (#DBK)

1. The Divider Beam Kit (#DBK) can accommodate divider beams 4" to 6" wide and up to 10" high 2. Divider beams may be HSS (tube steel) or I-beam (standard or wide flange) - HSS6x4

- shown
- 4. The #DBK can support one (1) ladder or two (2) ladders back-to-back.



Side View

Detail 1 of 2

- Retracta Ladder® Installation Steps Assemble ladder sections using $\frac{5}{16}$ -18 fasteners provided. Ensure straight alignment of all sections with "FRONT" stickers toward elevator
- Attach base pivot arms and rotate downward until the roll pin strikes the ladder riser bar, offset 3° from vertical both sides.
- Tighten the nylon insert nuts connecting the pivot arms to the riser bars to hold the ladder base $5\frac{1}{4}$ " above the floor. Tighten the nylon insert nuts connecting the pivot arms to the floor angle brackets, with mounting leg flat on the floor.
- Rotate each wall bracket to align angle leg with mounting surface. Verify all points of attachment are plumb - shim if eauired.
- Anchor brackets to wall with 3/ concrete screws, wedge anchors or other appropriate fasteners. Add shims if required to provide a straight, plumb plane (shims not incl.)
- Connect gas spring piston rod cup to ball connector, replace wire clip if included. Note, piston rod must be
- pointed downward Mount "Warning - Retractable Ladder' sign to wall, visible from entrance with ladder in retracted position. Provide mounting surface if required

-- continued on Detail 2 --



pit floor

3. Divider beam top of steel (TOS) may be from 6" above to 12" below the elevator sill.

Detail 1 of 2

- *Retracta Ladder*[®] #DBK Installation Steps Mount Unistrut stanchions onto divider beam with the tall stanchion nearest the elevator entrance. Center stanchions on the divider beam.
- 2 Fasten M16 threaded rods & clamp plate tight to beam. Torque nuts to 185 ft/lbs [250 Nm] dry, 146 ft/lbs [198 Nm] lubricated
- (3) If a multi-section ladder, bolt together using provided $\frac{5}{16}$ -16 fasteners. Align sections with "FRONT" stickers toward
- $^{\prime}$ strikes the ladder riser bar, offset 3° from vertical, both
- the riser bars to hold the ladder base $5\frac{1}{4}$ " above the floor. Tighten the nylon insert nuts connecting the pivot arms to the floor angle brackets, with mounting leg flat on the floor.
- set pre-mounted 4.25" below the entrance sill. If the divider beam top of steel (TOS) is 7" or more below the entrance sill this bracket set can remain in this original location. If the divider beam TOS is less than 7" below the sill, this bracket set must be relocated to the available holes on the ladder
- $\overbrace{7}$ With upper pivot arms rotated downward, offset 3° from vertical, insert Unistrut spring nuts into Unistrut stanchion channels aligned with ladder bracket mounting holes. Add M12x80 threaded studs into nuts leaving sufficient exposed stud for spacers (below), bracket, washer, lock washer &
- washer and up to four (4) flat square washer spacers based on divider beam width and ladder clearance to the car.
- (9) Verify all points of attachment are plumb add additional shims if required (shims not incl.). Rotate upper wall brackets to align angle leg with Unistrut & spacers, insert brackets onto threaded studs. Add washers, lock washers &
- (12) Mount "Warning Retractable Ladder" sign, visible from entrance with ladder in retracted position. Provide mounting







Side View

Front View





-- continued from Detail 1 --

Loosen the nylon insert nuts connecting the pivot arms to the riser bars and the nylon insert nuts connecting the pivot arms to the floor angle brackets, to allow free movement of the ladder pivot points. Rotate ladder so that ladder riser bases rest onto the

Verify hand (R.H. shown) of top pull pin bracket assy. Must be on side closest to entrance. Reverse if required.

Attach pull pin bracket assy. to ladder riser into bottom inside hole of 3-hole pattern with 3/8-16 thin nylon insert nut. Do not tighten - leave sufficiently loose for proper pivot arm movement.

Fasten this connection to structure with pull pin locked in lower outside hole of 3-hole pattern. Move bracket up & mark, then down & mark and then fasten to Unistrut at middle between

Anchor pull pin bracket assy. to wall or support, with shims if required (not included). For drywall applications, add structural blocking in wall or surface mount Unistrut columns to pit floor maximum 200 lbs vertical load.

Mount roller-plunger switch to middle height bracket on either side of ladder, as suited for wiring to pit stop switch or to elevator controller. Use provided 8-32 screws & washers. Pipe & wire N.C. switch contacts in series with pit switch or dedicated run to controller i provided.

Test operation of ladder and switch. Verify opening of the elevator safety circuit (removal of power from motor & brake) with ladder in the extended position. Switch & safety circuit remain open until ladder is retracted upon exiting pit. Verify ladder fully locks via pull pin in both retracted and extended positions

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Detail 2 of 2

16 Flat Washer	8
P1010M12 Channel Spring Nut	6
12-1.75 x 80 Threaded Stud	6
12-1.75 Nut	6
12 Lock Washer	6
12 Flat Washer	6
P2864 Sq. Washer - No Rotate	6
P1064 Sq. Washer	24

-- continued from Detail 1 --

 $\overbrace{(13)}$ Loosen the nylon insert nuts connecting the pivot arms to the riser bars and the nylon insert nuts connecting the pivot arms to the floor angle brackets, to allow free movement of the ladder pivot points. Rotate ladder so that ladder riser bases rest onto the pit floor.

(14) Verify hand (R.H. shown) of top pull pin bracket assy. Must be on side closest to entrance. Reverse if required.

 $\overbrace{15}^{15}$ Attach pull pin bracket assy. to ladder riser into bottom inside hole of 3-hole pattern with $\frac{3}{8}$ -16 thin nylon insert nut. Do not tighten - leave sufficiently loose for proper pivot arm

(16) Fasten this connection to Unistrut with pull pin locked in lower outside hole of 3-hole pattern. Move bracket up & mark, then down & mark and then fasten to Unistrut at middle between

 $\widehat{(17)}$ Anchor pull pin bracket assy. to tall Unistrut stanchion with a set of Unistrut nuts threaded studs, square washer spacers, washers, lock washers & nuts (see steps 6 & 7).

 $\widehat{(18)}$ Mount roller-plunger switch to middle height bracket on either side of ladder, as suited for wiring to pit stop switch or to elevator controller Use provided 8-32 screws & washers. Pipe & wire N.C. switch contacts in series with pit switch or dedicated run to controller, if

 $\overbrace{19}$ Test operation of ladder and switch. Verify opening of the elevator safety circuit (removal of power from motor & brake) with ladder in the extended position. Switch & safety circuit remain open until ladder is retracted upon exiting pit. Verify ladder fully locks via pull pin in both retracted and extended positions.

Note: Detail shown good to 6' pit depth. For pit depth to 10', use the **Deep Pit Divider Beam** *Kit*[™] (DDBK), which has two (2) long stanchions extending below the divider beam in lieu of the bottom clamp bars, to support the ladder's middle section brackets. Additional attachment fasteners are provided



Extra Extended Retracta Ladder® (EERL) Installation Steps



Extended Retracta Ladder® (ERL) Installation Steps

Detail 1 of 2

- Assemble ladder sections using $\frac{5}{16}$ -18 fasteners provided. Ensure straight alignment of all sections with "FRONT" stickers toward elevator.
- Set ladder in position against mounting surface. Set ladder bases onto provided 161/4" high Setup Blocks, one parallel to wall and one perpendicular to wall for greater stability. Independently brace / support ladder in
- place
- Rotate each wall bracket to align angle leg with mounting surface. Verify all points of attachment are plumb - shim if
- Anchor brackets to wall with $\frac{3}{8}$ " concrete screws, wedge anchors or other appropriate fasteners. Add shims if required to provide a straight, plumb plane (shims not incl.).
- Connect gas spring piston rod cups to [/] ball connectors, replace wire clip. Note, piston rod must be pointed downward. Mount "Warning - Retractable Ladder" & optional "Pit Ladder Out of Reach"
- signs to wall, visible from entrance with ladder in retracted position. Provide mounting surface if required. -- continued on Detail 2 --



Detail 1 of 2

Extra Extended Retracta Ladder® (EERL) Installation Steps

- $1 Assemble ladder sections using \frac{5}{16}-18 fasteners provided. Ensure straight$ alignment of all sections with "FRONT" stickers toward elevator.
- Set ladder in position against mounting surface. Set ladder bases onto provided 221/4" high Setup Blocks, one parallel to wall and one perpendicular to wall for greater stability
- Independently brace / support ladder in place. Point each pivot arm downward offset [/] 1.5° from vertical.
- Rotate each wall bracket to align angle leg with mounting surface. Verify all
- points of attachment are plumb shim if required. Anchor brackets to wall with $\frac{3}{8}$ "
- concrete screws, wedge anchors or other appropriate fasteners. Add shims if required to provide a straight, plumb plane (shims not incl.).
- Connect gas spring piston rod cups to ball connectors, replace wire clip. Note, piston rod must be pointed downward. Mount "Warning - Retractable Ladder"
- & "Pit Ladder Out of Reach" signs to wall, visible from entrance with ladder in retracted position. Provide mounting surface if required. -- continued on Detail 2 --





(14)

(13)

Detail 2 of 2

-- continued from Detail 1 -

- Remove Setup Blocks so that ladder bases rest onto the pit floor
- Verify hand (R.H. shown) of top pull pin bracket assy. Must be on side closest to entrance. Reverse if required.
- (10) Attach pull pin bracket assy. to ladder riser into bottom inside hole of 3-hole pattern with $\frac{3}{8}$ -16 thin nylon insert nut. Do not tighten - leave sufficiently loose for proper pivot arm movement.
- Fasten this connection to structure with pull pin locked in lower outside hole of (11)3-hole pattern. Move bracket up & mark, then down & mark and then fasten to structure at midway between

marks

- Anchor pull pin bracket assy. to wall or support, with shims if required (not included). For drywall applications, add structural blocking in wall or surface mount Unistrut columns to pit floor maximum 200 lbs vertical load
- Mount roller-plunger switch to middle height bracket on either side of ladder, as suited for wiring to pit stop switch or to elevator controller. Use provided 8-32 screws & washers. Pipe & wire N.C. switch contacts in series with pit switch or dedicated run to controller, if provided.
- Optional *Pull Pin Pole*™ is available when the pull pin out of reach. Fasten Pull Pin Pole[™] cable tether, with self-drilling screw provided, to sheet metal fascia just below entrance sill. Test Pull Pin Pole[™] operation to retract and extend ladder as shown on the sign, "PIT LADDER OUT OF REACH."
- Test operation of ladder and switch. Verify opening of the elevator safety circuit (removal of power from motor & brake) with ladder in the extended position. Switch & safety circuit remain open until ladder is retracted upon exiting pit. Verify ladder fully locks via pull pin in both retracted and extended positions

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Detail 2 of 2

-- continued from Detail 1 --

- Remove Setup Blocks so that ladder (8) bases rest onto the pit floor.
- Verify hand (R.H. shown) of top pull pin (9)[/] bracket assy. Must be on side closest to entrance. Reverse if required.
- Attach pull pin bracket assy. to ladder riser into bottom inside hole of 3-hole pattern with $\frac{3}{8}$ -16 thin nylon insert nut. Do not tighten - leave sufficiently loose for proper pivot arm movement.
- Fasten this connection to structure with pull pin locked in lower outside hole of 3-hole pattern. Move bracket up & mark. then down & mark and then fasten to structure at midway between marks. Anchor pull pin bracket assy. to wall or

(12)

(11)

B

Side View

- support, with shims if required (not included). For drywall applications, add structural blocking in wall or surface mount Unistrut columns to pit floor maximum 200 lbs vertical load.
- Mount roller-plunger switch to middle height bracket on either side of ladder, as suited for wiring to pit stop switch or to elevator controller. Use provided 8-32 screws & washers. Pipe & wire N.C. switch contacts in series with pit switch or dedicated run to controller, if provided
- Optional *Pull Pin Pole*™ is available (14) when the pull pin out of reach. Fasten Pull Pin Pole[™] cable tether, with self-drilling screw provided, to sheet metal fascia just below entrance sill. Test Pull Pin Pole™ operation to retract and extend ladder as shown on the sign, "PIT LADDER OUT OF REACH."
- Test operation of ladder and switch. Verify opening of the elevator safety circuit (removal of power from motor & brake) with ladder in the extended position. Switch & safety circuit remain open until ladder is retracted upon exiting pit. Verify ladder fully locks via pull pin in both retracted and extended

positions.

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Retracta Ladder® - Parts List

The *Retracta Ladder*[®] is a completed assembly comprised of common steel members shop fabricated, fasteners, proprietary non-slip rungs, and a few replaceable parts. See below information on the replaceable parts:

Manufacturer/Vendor

Safety Limit Switch ladder electrical device, roller plunger, Omron UL Labeled, NEMA 4X (IP67), Positive-Break N.C. Giovenzana Pizzato Gas Spring - the last two digits reflect the load Suspa rating, e.g. "40#" references 40 lbf. Check rating and part number of installed spring Weld-In Pull Pin w/ T-Handle McMaster-Carr McMaster-Carr T-Handle only, black Warning Signs Smart Elevator Tech, LLC Smart Elevator Tech, LLC (optional) Optional: Pull Pin Pole[™] with Smart Elevator Tech, LLC Lanyard Cable McMaster-Carr Global Industrial Rubber Bumpers (2)

Extended Retracta Ladder® - Parts List

Pizzato

Suspa

McMaster-Carr

McMaster-Carr

McMaster-Carr

Global Industrial

Smart Elevator Tech, LLC

Smart Elevator Tech, LLC

Smart Elevator Tech, LLC

The *Extended Retracta Ladder*[®] is a completed assembly comprised of common steel members shop fabricated, fasteners, non-slip rungs, and a few replaceable parts. See below information on the replaceable parts:

Manufacturer/Vendor Description Safety Limit Switch ladder electrical device, roller plunger, Omron UL Labeled, NEMA 4X (IP67), Positive-Break N.C. Giovenzana

Gas Springs - last two digits reflect load rating, e.g. "25#" references 25 lbf. Check rating and part number of installed springs.

Weld-In Pull Pin w/ T-Handle T-Handle only, black

Warning Signs

Description

(optional)

Optional: Pull Pin Pole™ with Lanyard Cable Rubber Bumpers (2)

Extra Extended Retracta Ladder® - Parts List

The Extra Extended Retracta Ladder® is a completed assembly comprised of common steel members shop fabricated, fasteners, non-slip rungs, and a few replaceable parts. See below information on the replaceable parts:

Description

Safety Limit Switch ladder electrical device, roller plunger, UL Labeled, NEMA 4X (IP67), Positive-Break N.C.

Gas Spring - last two digits reflect load rating, e.g. "25#" references 25 lbf. Check rating and part number of installed springs.

Weld-In Pull Pin w/ T-Handle T-Handle only, black

Warning Signs

Optional: Pull Pin Pole[™] with Lanyard Cable Rubber Bumpers (2)

Manufacturer/Vendor Omron Giovenzana Pizzato Suspa

McMaster-Carr McMaster-Carr

Smart Elevator Tech, LLC Smart Elevator Tech, LLC

Smart Elevator Tech, LLC McMaster-Carr Global Industrial

Limited Warranty & Product Liability Disclaimer

Smart Elevator Tech, LLC (SET) warrants to the original purchaser that this product, the *Retracta Ladder[®] Extended Retracta Ladder[®]* and *Extra Extended Retracta Ladder[®]* (RL) will be free from defects in material or workmanship. This warranty is limited to twelve (12) months from the delivery date of the product.

Limitations and Exclusions

SET obligations under this warranty and the sole remedy for its breach are limited to repair, at its manufacturing facility, of any part or parts of the RL which prove to be defective; or, in its sole discretion, replacement of such products. All returns of defective parts or products must be made through an authorized SET distributor or arranged through SET Customer Service. Authorized returns must be shipped prepaid. Repaired or replacement parts will be shipped by SET or its distributor F.O.B. shipping point.

- 1. The warranty provided herein does not cover charges for labor or other costs incurred in the troubleshooting, repair, removal, installation, service or handling of parts or complete products.
- 2. All claims under the warranty provided herein must be made within ninety (90) days from the date of discovery of the defect. Failure to notify SET of a warranted defect within ninety (90) days of its discovery voids SET obligations hereunder.
- 3. The warranty provided herein shall be void and of no effect in the event that: (a) the product has been operated outside its designed capacity; (b) the product has been subjected to misuse, neglect, accident, improper or inadequate maintenance, corrosive environments, environments containing high humidity or flooding; (c) unauthorized modifications are made to the product; (d) the product is not installed or operated in compliance with the manufacturer's printed instructions; or (e) the product is not installed and operated in compliance with applicable codes.
- 4. The warranty provided herein is for repair or replacement only. SET shall not be liable for any loss, cost, damage, or expense of any kind arising out of a breach of the warranty. Further, SET shall not be liable for any incidental, consequential, exemplary, special, or punitive damages, nor for any loss of revenue, profit or use, arising out of a breach of this warranty or in connection with the sale, maintenance, use, operation or repair of any SET product. In no event will SET be liable for any amount greater than the purchase price of a defective product. The disclaimers of liability included in this paragraph 4 shall remain in effect and shall continue to be enforceable in the event that any remedy herein shall fail of its essential purpose.
- 5. Use of this product is by its nature and necessarily due to the location of its installation being access restricted limited only to the Sophisticated User. Such users, operators, installers, etc. of the RL shall be limited to properly trained and licensed (if applicable) professionals, such as but not limited to elevator mechanics, technicians, service men/women, inspectors, consultants, and others in the elevator industry, etc. Should other tradesmen/women require access to such restricted areas through the use of the RL, such personnel shall also be considered as Sophisticated Users and shall be under the direct supervision of an aforementioned elevator professional.
- 6. THIS WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY FOR SMART ELEVATOR TECH, LLC PRODUCTS, AND IS IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES. SMART ELEVATOR TECH, LLC SPECIFICALLY DISCLAIMS ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. No person or entity is authorized to bind SET to any other warranty, obligation or liability for any SET product.
- 7. Installation, operation or use of the SET product for which this warranty is issued shall constitute acceptance of the terms hereof.

Part Number D4N-2132 FTN134-Z11N FR-515-M3

C16-24179-40# C16-24180-50# C16-24181-60#

90222A112 6477K72

Warning Retractable Ladder Out of Reach

ERL-PPP 30645T866 to 68 T97AB3

Part Number D4N-2132 FTN134-Z11N FR-515-M3

C16-18868-25# C16-15952-40# C16-18869-50# C16-26256-60#

90222A112 6477K72

Warning Retractable Ladder Out of Reach

ERL-PPP 30645T866 to 68 T97AB3

Part Number D4N-2132 FTN134-Z11N FR-515-M3

C16-18868-25# C16-15952-40# C16-18869-50# C16-26256-60#

90222A112 6477K72

Warning Retractable Ladder Out of Reach

ERL-PPP 30645T866 to 68 T97AB3