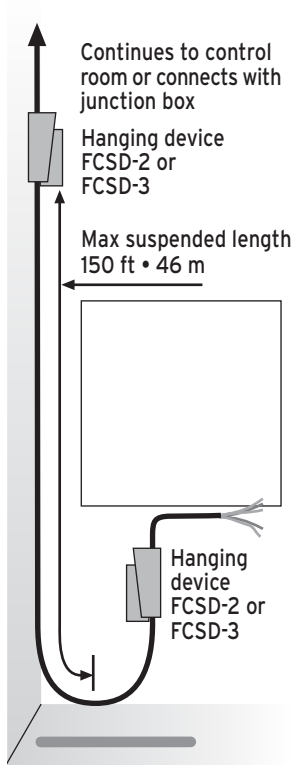


Unsupported flat cable

Upper machine room installation

Unsupported cable is attached with hanging devices at the hoistway midpoint and at the bottom of the car. Another hanging device may be needed at the top of the hoistway (see page 8).

The maximum hanging length is 46 m / 150 ft.

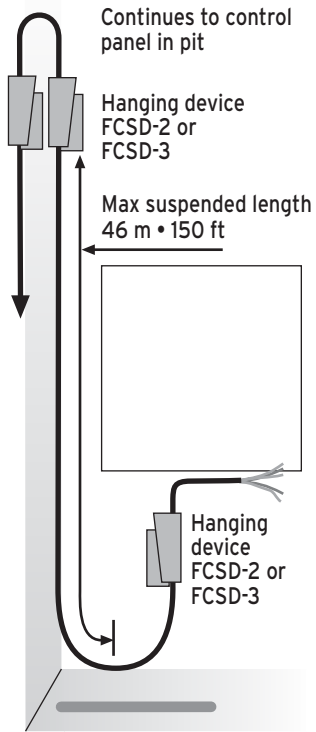


Unsupported flat cable

Lower machine room installation

In some cases, the controller is located at the first landing. A third hanging device is needed to direct the cable downward.

The maximum hanging length is 46 m / 150 ft.



Initial inspection

Look for obvious damage

Inspect the cable immediately upon arrival. Store the cable in a protected area away from possible damage.

A cut or gash in the jacket could mean an unsafe cable. Damaged reels or boxes are a sign of rough handling in transit and may indicate cable damage.



Do not install potentially damaged cable.

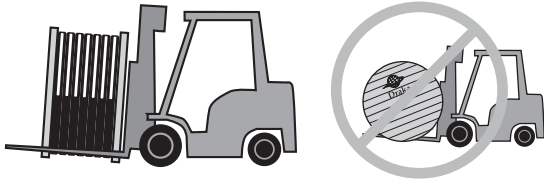
Call Draka Elevator Products if you have any questions regarding damaged cable.

Moving reels

Move and store cable safely

Flat cable may be moved by forklift.

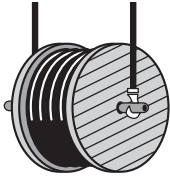
Lift the reel by the wood, not by the cable.



The reel may be rolled on a firm surface.



If a hoist is being used, place a strong rod through the reel and lift it by that.

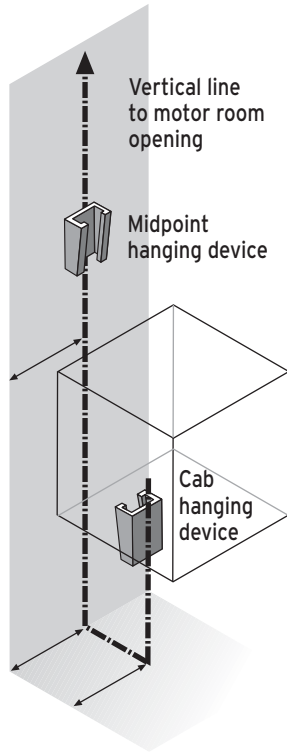


Store the cable reel upright, on the reel flanges, in a clean, dry area. **DO NOT** stack reels of cable.

Planning the installation

Determine hanger placement

Flat cable connects the cab to the controller at either the top or bottom of the hoistway. In both cases, the cable must travel in a straight plane and the cable must be supported at the midpoint of the hoistway and at the car by a hanging device.

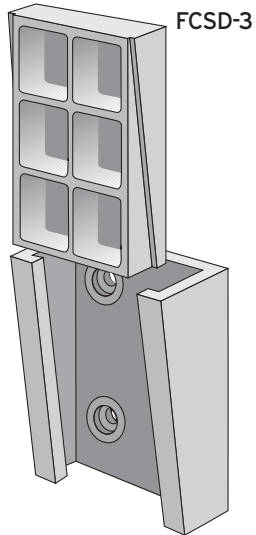
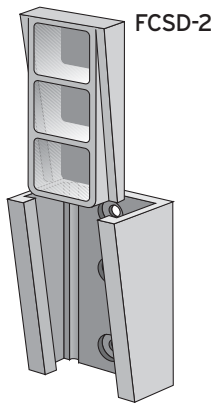


Selecting a hanging device

Choose the correct size

The FCSD-2 will hold up to two cables, one up to 52 mm / 2.05 in wide, and a second no less than 70% of the width of the wider one. Total thickness of the installed cables is 12 mm / 0.47 inches max.

The FCSD-3 will hold up to three cables, one up to 75 mm / 2.95 in wide, and the second/third no less than 70% of the width of the wider one. Total thickness of the installed cables is 15 mm / 0.60 inches max.



Mount the hoistway hanging device

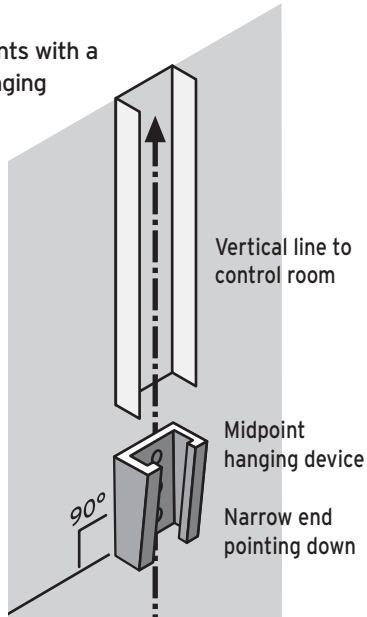
The hanging device should be secured where it will interfere with the moving car.

Locate the hanging position just above the midpoint of the hoistway. Keep the position of the hanging device in line with the motor room opening.

Make sure that the edges of the hanging device are parallel with the walls of the shaft, and that the narrow end of the wedge is oriented toward the bottom of the shaft.

Mark the drilling points with a pencil. Move the hanging device and drill the holes.

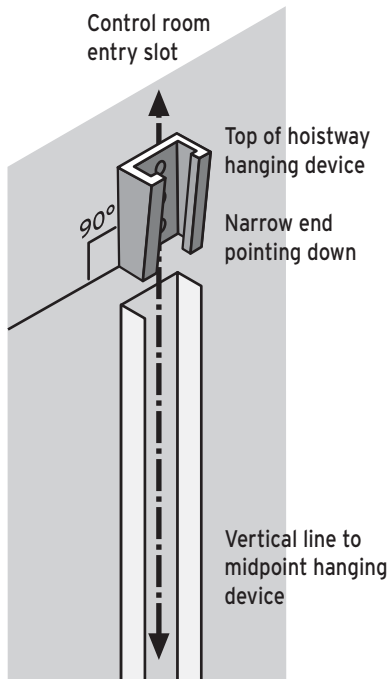
Bolt the hanging device into position using fasteners appropriate for the mounting surface (wall anchors, etc.)



Mounting a second hoistway hanging device (controller at *top* of hoistway)

For installations of 10 or more floors, a second hanging device for supporting the cable may be needed within a few feet of the top of the hoistway. It must be in line with the midpoint hanging device.

It is helpful to have the raceway already in place to protect the stationary portion of cable.

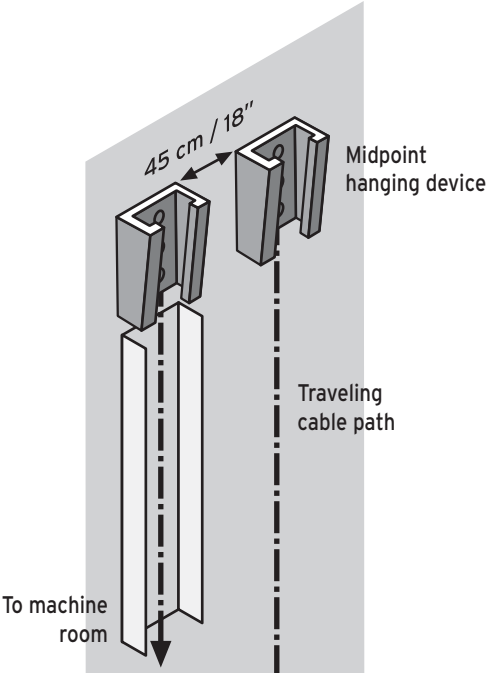


Mounting a second hoistway hanging device

(controller at *bottom* of hoistway)

For installations with a first floor machine room (such as a hydraulic), a second hanging device should be installed about 45 cm / 18 inches to the side of the midpoint hanging device.

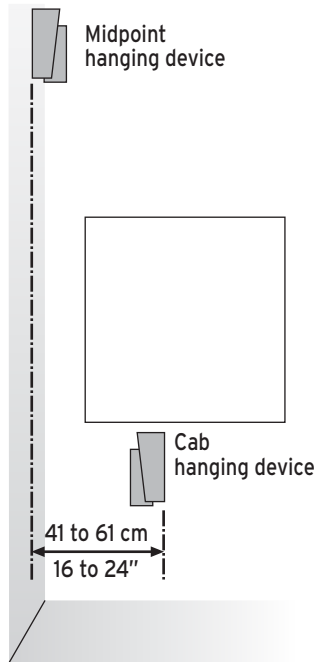
Raceway should be installed for cable placement. The downward path should be vertical.



Mounting the car hanging device

Determine placement

It is critical that the hoistway hanging device and the cab hanging device are aligned on the same plane. Failure to do so will result in poor tracking.

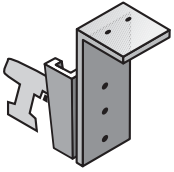
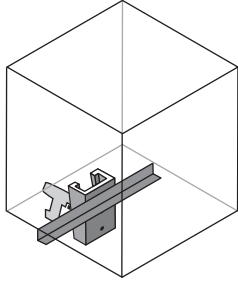


Locate a place on the cab frame on the same plane as the hoistway hanging device. The horizontal distance between the hoistway hanging device and the car hanging device should be 41 to 61 cm / 16 to 24 inches.

Mounting the car hanging device

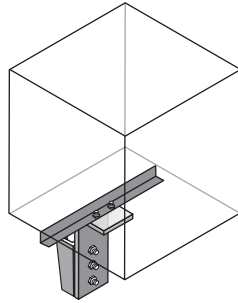
Attach the hanging device

Locate a vertical surface under the car directly in line with the hoistway hanger to locate car cable hanger. Be sure to allow 10 cm / 6 inches minimum overhead clearance for the wedge and cable.



If no suitable location exists, mount the hanger to an appropriately-sized steel plate and secure the plate to the underside of the car.

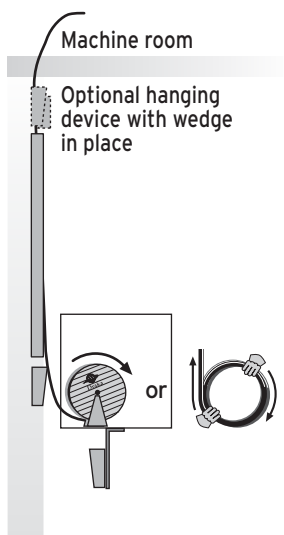
A 90 degree angle bracket can be used to secure the hanger to a horizontal surface beneath the car.



Placing the cable

Preferred method

Prior to paying of the cable, be sure that any hoistway obstructions be removed or, at the minimum, padded to avoid abrasion damage.



Place the reel (or reels) on reel rollers or jack-stands in the car and proceed to the top floor. Feed enough cable into the machine room to connect with the controller. The cable should pay off from the bottom of the reel so that the cable bend direction is consistent between the reel and the loop. If the flat cable is provided on coils, uncoil it as if it were on a reel, rotating it with your hands

Temporarily secure the cable end. Or, if you are using a top-of-hoistway hanging device, attach the cable there before lowering the cab. Secure the cable as shown on page 14.

Slowly lower the car while carefully placing the cable into the raceway until the midpoint is reached.

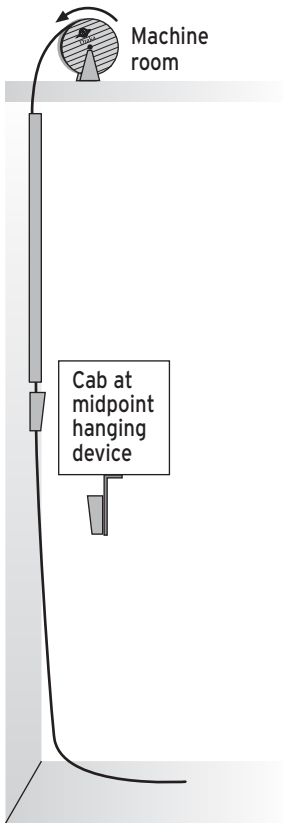
Alternate method for placing the cable

Can be used for shorter runs

Place the reel on reel rollers or jackstands in the machine room. Pay the cable off the top of the reel.

Make sure the reel can rotate freely.

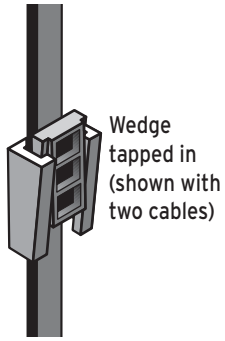
Slowly lower the cable down the hoistway, until enough is available for undercar attachment, and then secure the cable in the hoistway hanger.



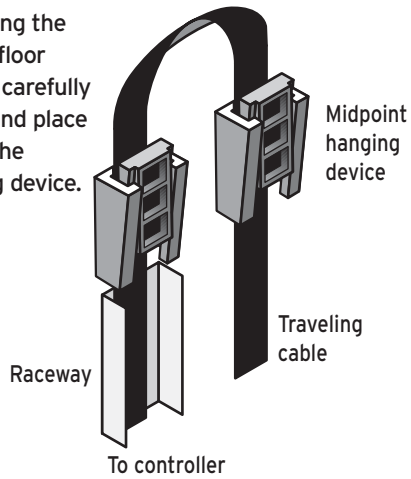
Install the cable in the hanging device

Place the cable in the hanging device. If placing two cables, put the smaller one on top of the larger one.

Slide the clamping wedge in and temporarily secure it with a few hammer taps. The cable should be firmly held but the wedge should be easily removed with a few hammer taps.

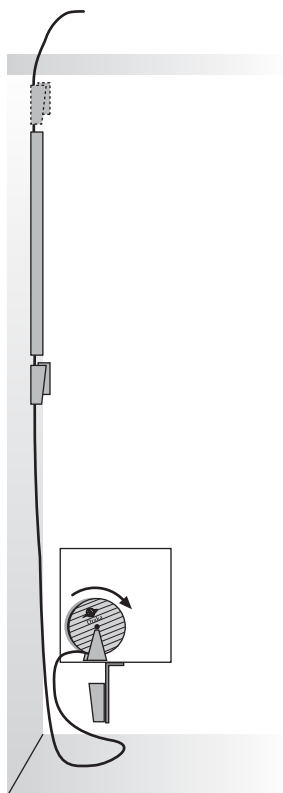


If you are running the cable to a first floor machine room, carefully fold the cable and place it as shown in the second hanging device.



Attach the cable to the car

Once the cable is temporarily secured at the midpoint, continue descending to the bottom of the hoistway.



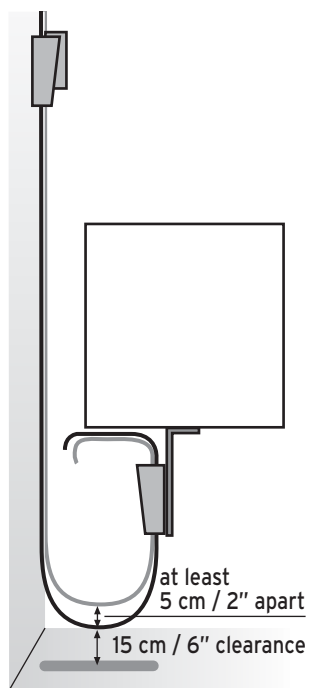
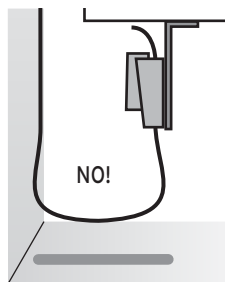
Pay out enough cable to reach the hanging device on the bottom of the car. There should be sufficient cable to set a proper loop with 15 cm / 6 inches or more clearance from the pit floor PLUS enough to reach its termination in the cab.

Cut the cable with tin snips or a wire cutter.

Setting the proper loop

Place the cable into the car hanger. Have a helper hold the cable in place while setting the loop.

The loop should not touch the cab's bottom edges and should not 'bell out.' The cable should hang vertically so that both legs of the loop are parallel.



If installing two or more cables, make sure there are 5 to 10 cm / 2 to 4 inches between the loops.

Once the loops are set, temporarily secure the cable in the hanging device by lightly tapping the wedge into place.

Adjusting the tracking

If the cables are running off-plane, the cable tracking can be adjusted by VERY slightly angling the cable in the hanging devices. Angling the cable by as little as 3 mm / 1/8 inch off vertical will move a cable as much as 60 cm / 2 feet in a ten story building.

Once proper tracking has been confirmed or established, firmly tap in the wedges at all hanging devices.

The cable should be tightly held but not crushed or deformed in the hanging devices.

Stripping

The 36-135-M1 Flat Cable Stripper is the recommended tool for jacket removal.

Starting from the printed jacket surface, place the point of the guard between the conductor and jacket. Pull the stripper smoothly for about 45 cm / 18 inches using a slight upward motion to avoid nicking the conductors.



Stripping will expose the rip-cords in the cable. If more jacket needs to be removed, use needle-nose pliers to grip the ripcord, twisting it around the jaws of the pliers for more grip. Electrical tape can be used to organize bundles of exposed conductors.

NOTE: A ROUTINE INSPECTION PROGRAM SHOULD BE IMPLEMENTED TO MAXIMIZE PRODUCT PERFORMANCE AND SAFETY.

Notes

Notes