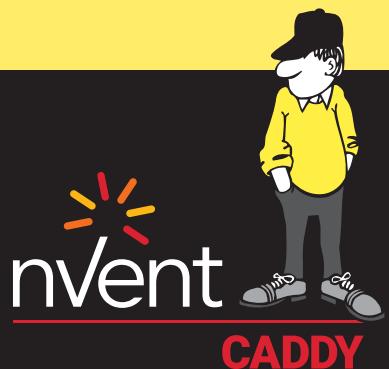


TECHNICAL HANDBOOK

nVent CADDY Speed Link Manual

SLS Locking Device



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1. Wire Rope Support Overview

A. USING WIRE ROPE

Wire rope support systems are beneficial because they are flexible, adaptable, and lightweight. The Speed Link Universal Support System offers an extensive line of products designed to be the most effective wire rope support solution on the market. However, in order to reap the unique benefits of the system, it is important to select the correct locking device and end fitting for any project.

Speed Link has two locking devices for 2 mm and 3 mm wire: the SLK and the SLS. The SLS is a single-barreled locking device that is best suited for strut, C-channel, signage, and HVAC units. The system can be attached at structure with one of four end-fittings, and connected to the load with the locking device.

B. THE NVENT CADDY SPEED LINK MANUAL

In this document, you will find the different solutions Speed Link has to offer and the best method for installation for each type of cable management system as well as a detailed breakdown of unique benefits associated with each method, images, diagrams and a basic step-by-step installation process.

This document is one part of a series of Speed Link Manuals designed around specific products and applications. Although this document focuses specifically on the Speed Link SLS System, several other resources are available under the "Documents" tab on a Speed Link product page on nVent.com/CADDY. The documents are always being updated, and new sections are continuously being released.

For more information on specific products or view the other sections of the Speed Link Manual, visit nVent.com/CADDY.

1. Wire Rope Support Overview

C. SLS FEATURES

The locking device is the piece of hardware that holds the wire loop in place. The Speed Link SLS locking device is designed to be the safest, most aesthetical, and easiest locking device on the market. The guide below shows several of the product's innovative features and the overall goal of each one.

SAFETY FEATURES

Length of stem allows the device to be installed in strut profiles without the need to insert fingers or tools into the strut

UL Listing on all 4 end-fittings for pre-cut lengths

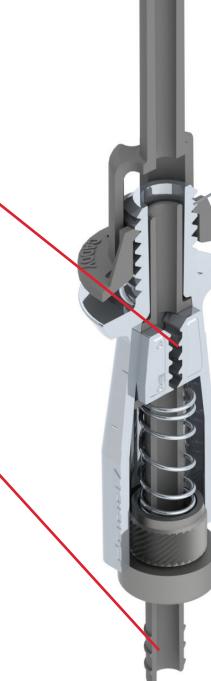
2-jaw gripping mechanism is designed for stronger grip, limiting the possibility of accidentally dropping the load

Keyless release tube is designed to allow safe and easy adjustment, even while wearing bulky gloves

The color of the line corresponds to the larger goal of each feature:

AESTHETICAL FEATURES

Low-profile locking device provides a positive aesthetic to a finished project



EASE OF USE FEATURES

Push-to-install retaining nut simplifies installation

Engineered elongated retaining nut reduces unwanted sway of the trapeze during installation and provides higher stability

The outside of the housing is threaded for easy and secure attachment to the nut

Speed Link is lighter, faster to install, easier to transport and generates less waste than alternative hanging methods

Two tool-free locking devices are available for three wire sizes

- SLS2 compatible with 1.5mm and 2mm wire
- SLS3 compatible with 3mm wire

Similar housing style creates a consistent look when used in projects alongside the Speed Link SLK System

SAFETY FEATURES

AESTHETICAL FEATURES

EASE OF USE FEATURES

1. Wire Rope Support Overview

D. SLS MECHANISM

The locking device is the piece of hardware that holds the wire loop in place. Locking devices may look or install differently based on the manufacturer. For example, some locking devices are sold with small tools called "keys" that unlock or free the cable. Other locking devices may be keyless and simply require a manual manipulation to move the cable through it. Much like the cable, locking devices have their own static load rating. The load rating can be different than that of the cable or end fitting, and installers should default on the lowest in the load path.

Inside the locking device, the wire is typically gripped with one or two spring loaded cams or jaws that hold the wire in place. A single-cam device holds the wire by pressing it into the inside wall of the housing. A double-jaw device holds the wire by clamping it between two spring loaded jaws. Double-jaw devices are designed to have a stronger grip on the wire than single-cam devices.

Speed Link locking device combines all the best options:

- Double-jaw design for better performance
- Keyless release allows easy adjustments
- Keyless release tubes are easy to operate while wearing bulky protective gloves
- Release tubes cannot be disengaged by mistake as opposed to other release mechanisms
- Low-profile locking device minimizes visual impact
- Cable can be installed at up to 45°, allowing for more flexibility for the end-user

Material: Steel; Polypropylene; Zinc Alloy



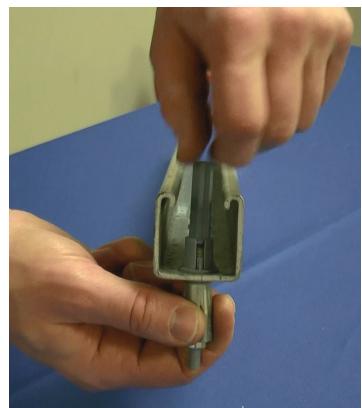
2. Typical Speed Link SLS Installation

A. INSTALLATION PROCEDURE

Installation of the Speed Link SLS System is quick and easy.

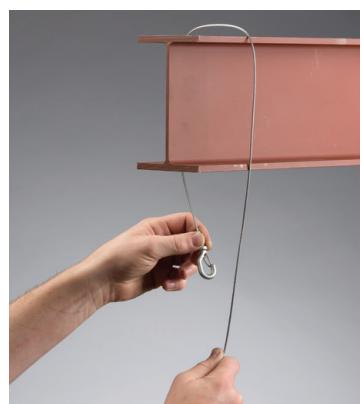
STEP 1: ASSEMBLE THE PIECES THAT ARE TO BE SUPPORTED

First, the piece that is going to be installed is assembled in the shop or on the floor of the jobsite. For example, rectangular duct may need to be screwed together and runs of pipe need to be attached to strut. Once the assemblies are attached to the strut, the SLS Locking Device can be installed to the slots or holes in the strut, C-channel or perforated basket tray without any tools. The plastic retaining nut can be quickly pushed onto the threads of the device and quarter-turned to lock it in place.



STEP 2: ATTACH WIRE TO STRUCTURE ALONG THE PATH OF THE SERVICE

At the same time, installers go through the jobsite attaching the Speed Link cable to the structure along the path that the assembly is going to follow. They attach the end fittings of the cable to the structure and leave the wire rope hanging down. Wire ropes should be spaced at a distance appropriate to the specific application being supported.



STEP 3: LIFT THE ASSEMBLY INTO PLACE AND ATTACH THE WIRE TO THE LOAD

Finally, the installation crew walks through the jobsite, lifts the assembly in place, and pull the wire through the locking device. Once a piece is secure, they can simply move on to the next one and quickly complete the entire project.



Based on the specific installation, contractors may need to modify this process, but following these three basic steps can ensure that a contractor sees all of the time-related benefits of using Speed Link SLS Strut Locking Device.

2. The Speed Link Advantage

B. COMPATIBLE CHANNELS

The Speed Link SLS System is specifically designed for channel-based applications. Not all of the products are compatible with the same channels.

I. SLS2 COMPATIBLE CHANNELS

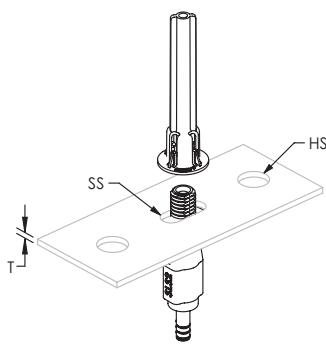
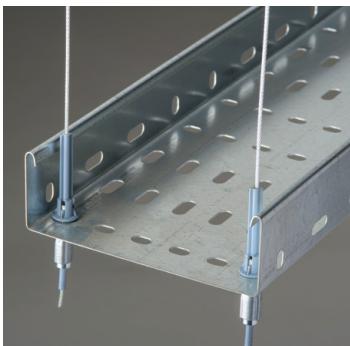
The SLS2 works with c-channel types E0 and E0L. It is also compatible with some types of perforated basket trays. See the diagram below for the required hole sizes.

II. SLS3 COMPATIBLE CHANNELS

The SLS3 works with c-channel types E1, E2, E2L, E3, E4, E5, slotted strut channel type C, slotted strut channel type A, perforated strut channel type AS, slotted strut channel type CC, slotted strut channel type AA. See the diagram below for the required hole sizes.

III. SLS DIRECT ATTACHMENTS

The SLS locking device is designed primarily for channel-based applications, but it can also be used to support parts with holes and slots meeting the following dimensions. This is ideal for hanging cable tray or ceiling fan units.



Acceptable Hole Sizes for Each Locking Device

	L	D	H	T	
SLS2	Min	0.31"	8 mm	0.25"	6.5 mm
	Max	-	-	0.38"	10 mm
SLK3	Min	0.5"	12 mm	0.39"	10 mm
	Max	-	-	0.56"	14 mm

Acceptable Hole Sizes for Each Locking Device

Diagram illustrating acceptable hole sizes for each locking device:

- For SLS2:
 - Min L: 0.31" (8 mm)
 - Max L: -
 - Min D: 0.25" (6.5 mm)
 - Max D: 0.38" (10 mm)
 - Min H: 6.5 mm
 - Max H: 10 mm
 - Min T: -
 - Max T: 0.15" (4 mm)
- For SLK3:
 - Min L: 0.5" (12 mm)
 - Max L: -
 - Min D: 0.39" (10 mm)
 - Max D: 0.56" (14 mm)
 - Min H: 10 mm
 - Max H: 14 mm
 - Min T: -
 - Max T: 0.25" (6 mm)

3. The Speed Link Advantage

A. CADDY SPEED LINK SLS END-FITTINGS

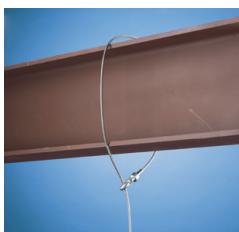
Four end-fittings are available with Speed Link SLS System. Each one is designed for attaching to a particular type of structure.

Speed Link SLS with Decking Hook



Speed Link SLS with Hook

Available for SLS2 and SLS3



Speed Link SLS with Threaded Stud End



Speed Link SLS with Wedge Anchor



All end fittings are available with the SLS2 locking device and 2 mm wire. The Hook end fitting is also available with the SLS3 locking device and 3 mm wire.

SLS locking devices are available for sale in bulk, allowing the end-user to combine them with:

- Precut lengths to make a multi-tier trapeze*
- Spools of Speed Link Wire for even more flexibility

Device	Cable	Working Loads	
SLS2	1.5 mm	40 lbs	180 N
	2 mm	60 lbs	265 N
SLK3	2 mm	60 lbs	265 N
	3 mm	150 lbs	670 N

Working load based on a safety factor of 5:1

*Total load per wire on a multi-tier trapeze must not exceed static load.

3. The Speed Link Advantage

B. INSTALLATION ANGLE

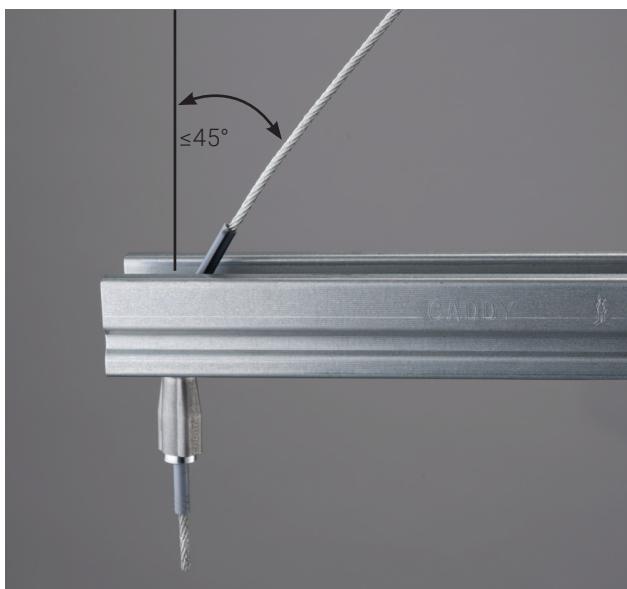
The Speed Link system is uniquely designed to be as adaptable to the installer as possible. The Speed Link SLS locking device allows installers to adapt to their environment.

The device comes pre-attached to one of four end fittings and can be attached to a variety of loads, but one of the main differentiators is the fact that the device can be bent up to 45° when attached to the wire. The plastic nut is important for holding the device in place, but it is not structurally essential to the device, it can be bent without damaging the locking mechanism.

This means that the locking device can be used in even more situations than rigid competitor locking devices on the market.

The 45° bend gives installers the opportunity to attach the structural attachment without changing the intended path of the service being installed or disturbing existing features above.

Additionally, the ability to install at more angles gives the load more lateral stability when compared to wires installed at a right angle.



The image above shows the flexibility of the SLS locking device.
The device can be installed with a maximum angle of 45°.

Working Load per Device For Angled Installation								
Angle	0	15	30	45				
Load %	100%	97%	87%	71%				
SLS2	1.5 mm	40 lbs	180 N	38 lbs	174 N	34 lbs	156 N	28 lbs
	2 mm	60 lbs	265 N	58 lbs	257 N	52 lbs	230 N	42 lbs
SLK3	2 mm	60 lbs	265 N	58 lbs	257 N	52 lbs	230 N	42 lbs
	3 mm	150 lbs	670 N	145 lbs	649 N	130 lbs	582 N	106 lbs

3. The Speed Link Advantage

C. COMMON APPLICATIONS

The Speed Link SLS Locking Device is best suited to be used in a variety of specific applications. The only requirement is that the hole where the device is secured to the load is of the appropriate diameter, and that the load is not over the load limit for the device. There are many possibilities, but the most common applications are:

I. STRUT CHANNEL/C-CHANNEL

The primary use of the product is for supporting light-duty trapezes. As long as the load is below the limit for the product, the Speed Link SLS can be attached to strut channel (SLS3) or C-Channel (SLS2) to support any needed service.

II. BASKET TRAY

In some cases, the device can be inserted directly into the holes of perforated basket tray. For more information about the different ways that the Speed Link SLS Locking Device can be configured to hang cable tray, consult *CADDY Speed Link Manual: Cable Tray Solutions* on nVent.com/CADDY.



III. CADDY TELESCOPING STRUT REPLACEMENT, NO NUT

In addition to standard channels, the SLS3 Locking Device can also be used with the nVent CADDY Telescoping Strut Replacement, No Nut (TSR1220N). The TSR1220N is similar to strut, because it mimics the profile of standard strut. However, it is different because it can telescope to any distance between approximately 12" [30 cm] and 20" [50 cm]. Each TSR1220N has two holes pre-cut into each end that can accommodate the SLS3 locking device. Combining these 2 Products creates a telescoping trapeze solution with the flexibility of the wire rope system. It is the ideal solution for light and medium duty applications such as: conduit, small copper pipes, duct and cable tray.

When calculating static load of the TSR1220N and SLS3, use the load limits of the TSR1220N. Visit nVent.com/CADDY for more information.



IV. CEILING FAN UNIT

The SLS can also be used to support ceiling fans or other HVAC units.

4. Speed Link Certificates & Listings

Speed Link is listed with UL for Cable and Conduit Supports and for Luminaires.



5. Additional Warnings and Safety Instructions

When using Speed Link, the following must be observed:

- Load ratings must be followed
- Load must be static and stable
- All the Speed Link components must be free of oil or any other sort of grease and lubricants
- All the Speed Link components must be free of any paint, varnish or any other coating
- Product should be installed in an indoor, non-corrosive environment

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WARNING: nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at nVent.com/CADDY and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and/or death, and void your warranty.

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