TECHNICAL HANDBOOK

nVent CADDY Speed Link Manual

Cable Tray Solutions
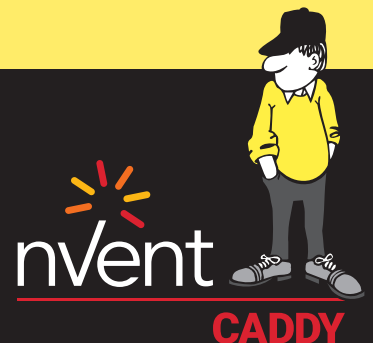
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CADDY

Contents

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.

One of the most popular applications for Speed Link is to support cable management systems such as wire basket tray, cable tray and cable ladder.

B. THE 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 different cable pathway applications, several other resources are available under the "Documents" tab on a Speed Link product page on nVent.com. 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.

1. Wire rope support overview

C. SELECTING THE RIGHT PRODUCT

The nVent CADDY catalog offers dozens of Speed Link Universal Support System products. However, in order to get the most from the product, it is important to select the correct part for each specific situation. The chart below offers a quick overview of the different products covered in this document and the specific applications that they are best suited for.

The CADDYMAN logo below denotes the applications that each product can typically be used in.

		Wire Basket Tray	Cable Tray	Cable Ladder
Ready to Use Out of the Box Solutions	Speed Link SLK with Y-Hook	✔	*	*
	Speed Link Y-Hook with Eyelet Extension	✔	*	*
	Speed Link SLK	✔	*	✔
	Speed Link SLS		✔	
Strut/Bracket Solutions	Speed Link SLS + nVent CADDY BASKET CLIP	✔		
	Speed Link SLK with Y-Hook + nVent CADDY C-Bracket	✔	✔	
	Speed Link SLS + Strut / C-Channel	✔	✔	✔

Can be used in some situations. Refer to the corresponding product section in this manual for more information.

2. Ready to use out of the box solutions

A. SPEED LINK SLK WITH Y-HOOK

The Speed Link SLK with Y-Hook is best suited for use with wire basket tray. However, in special circumstances, it can be used with all three varieties of cable pathway. If a cable tray has perforated holes on the sides and the hook end fitting can fit through it.

	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLK with Y-Hook		*	See Tip 1 (Page 6)

Installation Steps:

1. Attach the Speed Link wire rope to the structure using the keyless SLK Locking Device

2. Lift the wire basket tray or cable tray and attach the two hooks to it.

Note: *When supporting a cable ladder, the wire rope attaches to itself, not the load. See Figure 3.*

Figure 1: *Speed Link SLK with Y-Hook holding wire basket tray*

PROS	CONS
• Quick and easy to install	• Height adjustability is at the structure
• Ready to use out of the box solution	• Only compatible with some cable trays
• Simple to add extra cables after installlattion	• Only compatible with some cable ladders
• "Y" shape provides stability, even with just one single wire drop	

* Can be used in some situations.

2. Ready to use out of the box solutions

TIP 1: SUPPORTING CABLE LADDERS WITH SPEED LINK SLK WITH Y-HOOK

The product can also be used to support some Cable Ladders by looping both hooks around each of the side rails as shown on Figure 3. Make sure that the 500mm [19.6"] wire rope "Y" length YL available is long enough to do so, using the following formula:

$$YL \geq 0.707a + 2x \ (h+w)$$

Figure 2: *Cable ladder cross-section with basic dimensions*

Figure 3: *Speed Link SLK with Y-Hook supporting a cable ladder*

2. Ready to use out of the box solutions

TIP 2: INSTALLING SPEED LINK SLK WITH Y-HOOK AT A 45 DEGREE ANGLE

The SLK with Y-Hook can also be installed at 45 degree angle, as shown below, to provide support and prevent unwanted sway from the wire basket tray or cable tray. The benefit of this setup is that it serves as as sway control for the cable pathway.
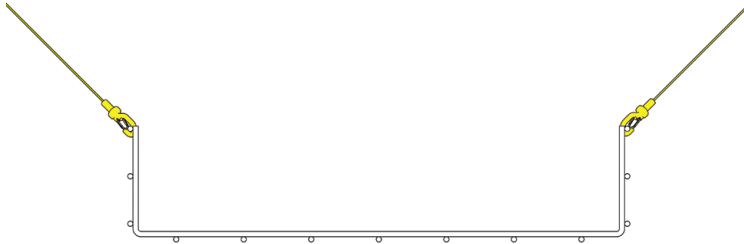
Figure 4 *(above): Speed Link SLK with Y-Hook used as a sway control solution for wire basket tray (front view)*
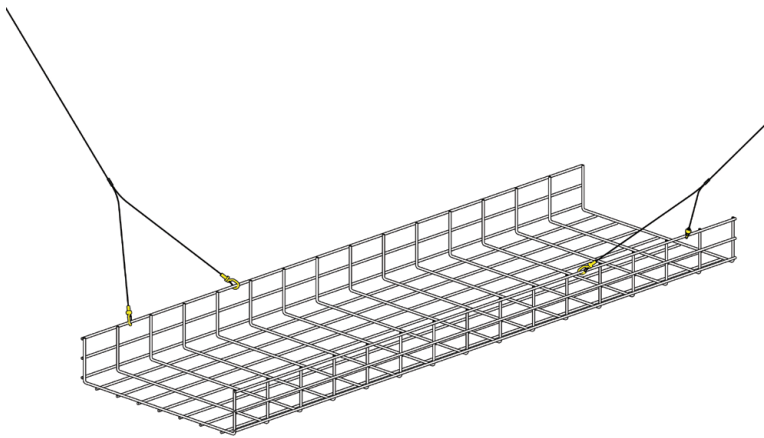
Figure 5 *(right): Speed Link SLK with Y-Hook used as a sway control solution for wire basket tray (top view)*

Figure 6 *(below): Speed Link SLK with Y-Hook used as a sway control solution for Wire Basket Tray (isometric view)*
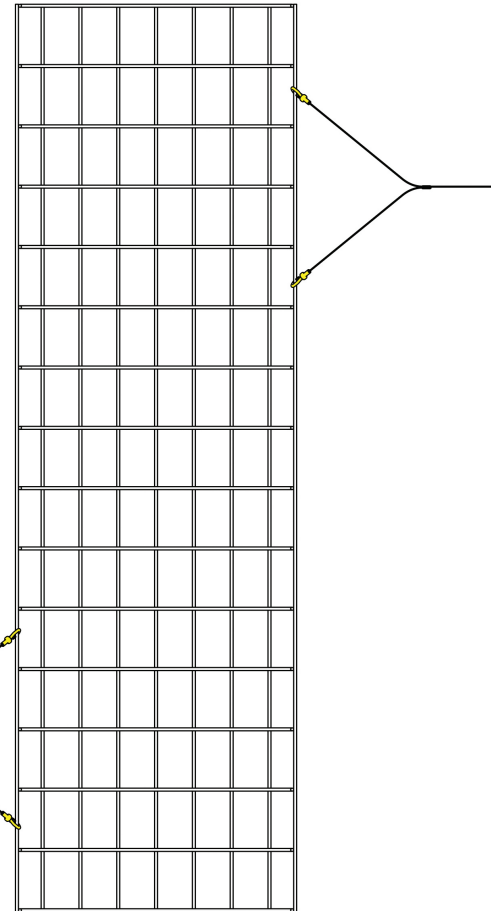
2. Ready to use out of the box solutions

B. SPEED LINK Y-HOOK WITH EYELET EXTENSION

Similar to the Speed Link with Y-Hook, the Speed Link SLK with Y-Hook is best suited for use with wire basket tray. However, in special circumstances, it can be used with all three varieties of cable pathway.

	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLK Y-Hook with Eyelet Extension		*	See Tip 3 (Page 9)

Installation Steps:

1. Attach the Speed Link Wire rope to the structure using any of the eleven end-fittings available (see Section 4.A)

2. Loop Speed Link Wire rope through the eyelet of the Speed Link Y-Hook with Eyelet Extension

3. Lift the wire basket tray or cable tray and attach the two hooks to it

Note: *When supporting a cable ladder, the wire rope attaches to itself, not the load. See Figure 9.*
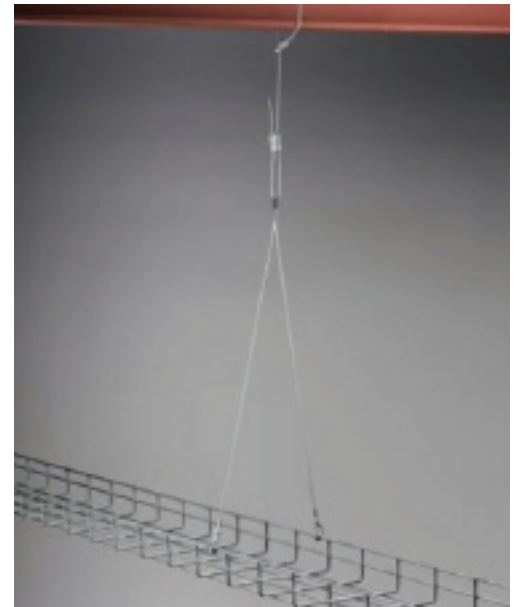
Figure 7: *Speed Link Y-Hook with Eyelet Extension supporting a wire basket tray*

PROS	CONS
• Quick and easy to install	• Requires four Speed Link parts (two part numbers)
• Simple to add extra cables after installattion	• Only compatible with some cable trays
• Height adjustability at the load	• Only compatible with some cable ladders

* Can be used in some situations.

2. Ready to use out of the box solutions

TIP 3: SUPPORTING CABLE LADDERS WITH SPEED LINK SLK WITH Y-HOOK WITH EYELET EXTENSION

The product can also be used to support some cable ladders by looping both hooks around each of the side rails as shown on Figure 9.

Select the correct length of the wire rope "Y" length YL using the following formula:

$$YL \geq 0.707a + 2x\ (h+w)$$

Figure 8: *Cable ladder cross-section with basic dimensions*

Wire rope "Y" lengths YL available for both 2 and 3mm wire rope are: 500mm [19.6"] & 800mm [31.4"].

Figure 9: *Speed Link Y-Hook with Eyelet Extension supporting a Cable Ladder*

2. Ready to use out of the box solutions

C. SPEED LINK SLK

The versitility of the double-barreled Speed Link SLK locking device makes it ideal for the installation of basket tray, cable tray or cable ladder.

	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLK		*	

Installation Steps:

1. Attach two Speed Link wire ropes to the structure using any of the eleven end-fittings available (see Section 4.A) or a Speed Link Spool Kit

2. Lift the wire basket tray, cable tray or cable Ladder and loop each Speed Link wire rope around opposite sides of the cable pathway and connect the wire

Figure 10: *Speed Link SLK supporting a wire basket tray (left) and a cable ladder (right) This could also be completed using the infinite loop application where the wire is looped around the structure and the load and attached to itself in one location.*

PROS	CONS
• Quick and easy to install	• Requires two Speed Link parts
• Ready to use out of the box solution	
• Simple to add extra cables after installattion	
• Height adjustability at the load	

* Can be used in some situations.

2. Ready to use out of the box solutions

TIP 4: INSTALLING SPEED LINK SLK AT A 45 DEGREE ANGLE

The Speed Link SLK System can also be installed at 45 degree angle, as shown below, to provide support and prevent unwanted sway from the load. The benefit of this setup is that it serves as as sway control for the cable pathway.
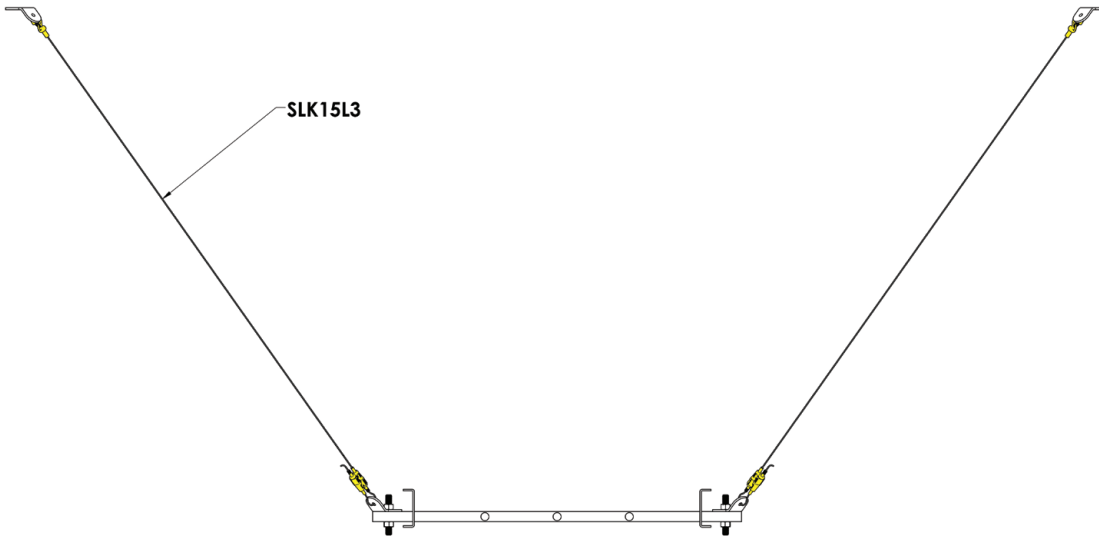
Figure 11: *Speed Link SLK with Hook end-fitting used as a support and sway control solution for cable ladder (front view)*
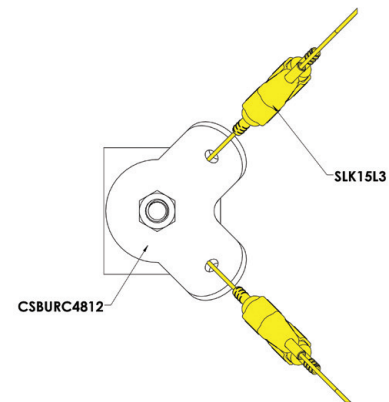
Figure 12 (above, below): *Speed Link SLK with Hook end-fitting used as a support and sway control solution for cable ladder (top view)*
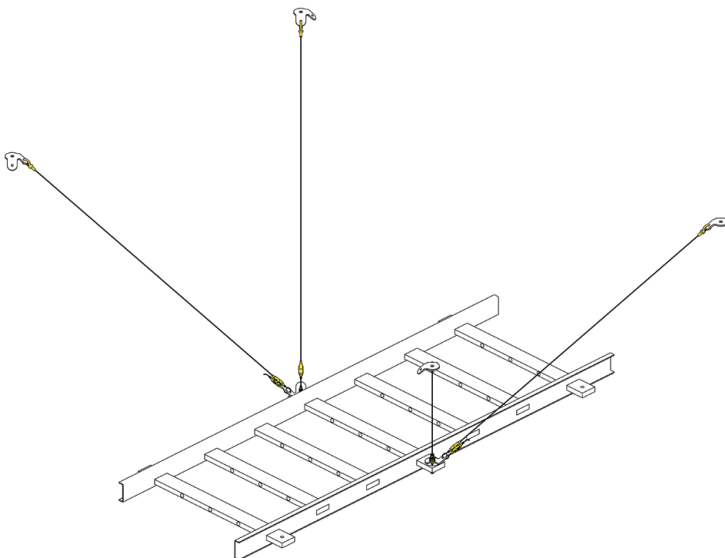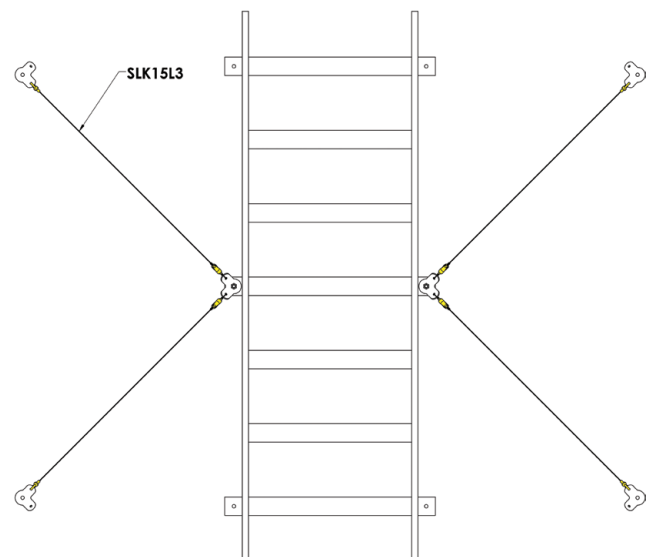
Figure 13: *Speed Link SLK with Hook end-fitting used as a support and sway control solution for cable ladder (isometric view)*

2. Ready to use out of the box solutions

D. SPEED LINK SLS

The Speed Link SLS can attach directly to the perforated holes in most cable trays. It can support the other types of cable pathway, but not as an "out of the box solution." For more information about using the Speed Link SLS with a bracket see page xx.

	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLS			

Installation Steps:

1. Attach two Speed Link wire ropes to the structure using any of the four end fittings available with Speed Link SLS System (see Section 4.B)

2. Pre-install two Speed Link SLS2 Locking Devices directly into the pre-cut holes in the cable tray

3. Lift the cable tray and feed the Speed Link wire rope through the keyless Speed Link SLS2 Locking Device

Figure 14: *Speed Link SLS2 installed directly into cable tray*

PROS	CONS
• Quick and easy to install	• Requires two Speed Link parts
• Ready to use out of the box solution	• Not compatible with wire basket tray or cable ladder
• Simple to add extra cables after installattion	• Limited to narrow cable tray
• Height adjustability at the load	• Limited to light duty applications (1.5 or 2 mm wire)
• Allows for quick multi-tier applications*	
• Long plastic retaining nut prevents any contact between the cables and the wire rope	

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

2. Ready to use out of the box solutions

TIP 5: "2-1-2" SLS LOCKING DEVICE CONFIGURATION

Speed Link SLS Locking Devices can be installed in the "2-1-2" configuration shown below for narrow cable trays. For very light-duty applications, installers can alternate two Speed Link SLS2 Locking Device support [providing stability to the assembly] and single Speed Link SLS2 Locking Device in the center of the Cable Tray. This is a more efficient installation method if the extra load capacity is not needed. In the locations where the two Speed Link SLS2 Locking Device are installed, they should be separated as much as possible laterally to ensure stability.

Figure 15: *Speed Link SLS2 supporting a narrow cable tray in the "2-1-2" configuration (for very light-duty application only)*

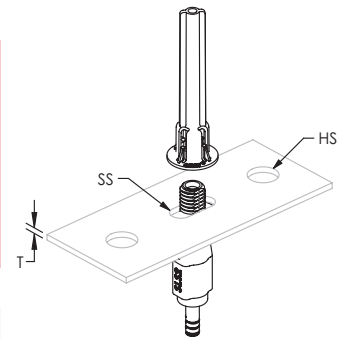|		L		D		H		T	
SLS2	Min	0.31"	8 mm	0.25"	6.5 mm	0.31"	8 mm	-	-
	Max	-	-	0.38"	10 mm	0.38"	10 mm	0.15"	4 mm

Figure 16: *The SLS2 locking device can attach directly to cable tray as long as the holes or slots fulfill the size requirements outlined above.*

2. Ready to use out of the box solutions

TIP 6: LATERAL SPACING OF SLS LOCKING DEVICES IN CABLE TRAY

Speed Link SLS Locking Devices can be installed through intermediate slots (see white arrows on Figure 12) to allow for extra cables to be easily added after the installation is complete. The setup must always be symmetrical compared to the center of the cable tray (see doted blue line on Figure 12) and the spacing between the two Speed Link SLS2 Locking Devices must be at least 2/3 of cable tray width ($2a \geq 2b/3$) for stability purpose.
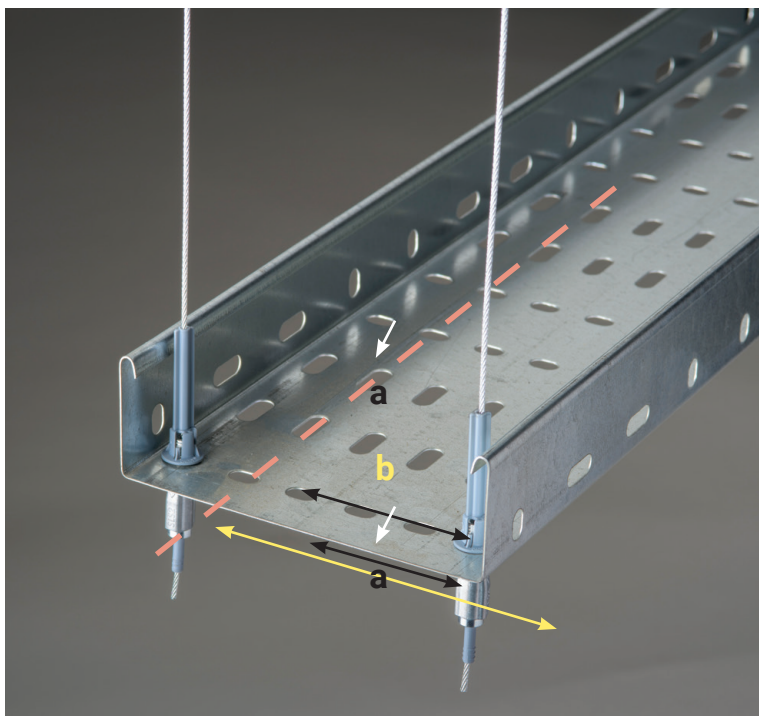
$2a \geq 2b/3$

Figure 17: *Speed Link SLS2 supporting a cable tray*

3. Strut/Bracket solutions

A. SPEED LINK SLS AND NVENT CADDY BASKET CLIP

The Speed Link SLS and Basket Clip can typically be used with basket tray. This is because the Basket Clips are designed to be used with most types of basket tray.

	Wire Basket Tray	**Cable Tray**	**Cable Ladder**

Speed Link SLS and Basket Clip

Installation Steps:

1. Attach two Speed Link wire ropes to the structure using any of the four end-fittings available with the Speed Link SLS System (see section 4.B)

2. Snap two Side Basket Clips onto the wire basket tray

3. Pre-install two Speed Link SLS Locking Devices onto the two Wire Side Basket Clips

4. Lift the wire basket tray and feed the Speed Link Wire ropes through the keyless Speed Link SLS Locking Devices

Figure 18: *Speed Link SLS and Wire Basket Clip with a basket tray*

PROS	CONS
• Quick and easy to install	• Requires four parts (two part numbers)
• Simple to add extra cables after installattion	• Not compatible with perforated cable tray or cable ladder
• Height adjustability at the load	• Limited to light duty applications
• Allows for quick multi-tier applications**	• Not compatible with cable tray, cable ladder
• The long plastic retaining nut prevents any contact between the cables and the wire rope	• Limited to light duty applications

3. Strut/Bracket solutions

B. SPEED LINK SLK WITH Y-HOOK AND NVENT CADDY C-BRACKET

The versitility of the double-barreled Speed Link SLK locking device makes it ideal for the installation of basket tray, cable tray or cable ladder.

	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLK with Y-Hook and C-Bracket	🧍	🧍	

Installation Steps:

1. Attach the Speed Link Wire rope with Y-Hook end fitting to the structure using the keyless SLK Locking Device

2. If supporting two wire basket trays or cable trays, pre-assemble two C-Brackets together (see right picture on Figure 19)

3. Install the wire basket tray or cable tray onto C-Bracket

4. If installing wire basket tray, secure it to C-Bracket using the tool-free KBT Clip. If installing cable tray, secure it to C-Bracket using standard accessories

5. Lift the C-Bracket with wire basket tray or cable tray pre-installed onto it, and hang the assembly using the Y-Hook end-fitting (see Figure 19)

Figure 19: *Speed Link SLK with Y-Hook and C-Bracket supporting wire basket tray*

PROS	CONS
• Quick and easy to install	• Height adjustability at the structure
• Simple to add extra cables after installattion, no need to pull cables	• Requires two nVent CADDY parts (two part numbers)
• Compatible with KBT Clips for wire basket trays	• Not compatible with cable ladders
• C-Bracket is modular	• Limited to narrow cable trays
	• Limited to light duty applications (1.5, 2mm wire)

3. Strut/Bracket solutions

C. SPEED LINK SLS WITH STRUT/C-CHANNEL

The Speed Link SLS Locking Device can be inserted into a piece of strut or C-channel to support any of the three types of cable pathway.
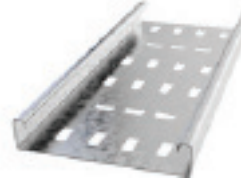
	Wire Basket Tray	Cable Tray	Cable Ladder
Speed Link SLK			

Installation Steps:

1. Attach two Speed Link wire ropes to the structure using any of the four end-fittings available with Speed Link SLS System (see Section 4.B)

2. Cut C-channel or strut channel to desired length

3. Pre-install two Speed Link SLS2 or SLS3 Locking Devices onto the C-channel or strut channel*

4. Lift the trapeze tier and feed the Speed Link wire ropes through the keyless Speed Link SLS Locking Devices. Repeat for other trapeze tiers.

5. Install the wire basket tray, cable tray or cable ladder onto the different trapeze tiers

6. (Optional) Secure the wire basket tray, cable tray or cable ladder using C-channel or strut channel accessories

* The 2 mm locking device is compatible with C-Channel types E0 and E0L.
The 3 mm locking device is compatible with C-channel types E1, E2, E2L, E3, E4, E5, strut channel type C, slotted, strut channel type A, slotted, strut channel type AS, perforated, strut channel type CC, slotted, strut channel type AA, slotted.
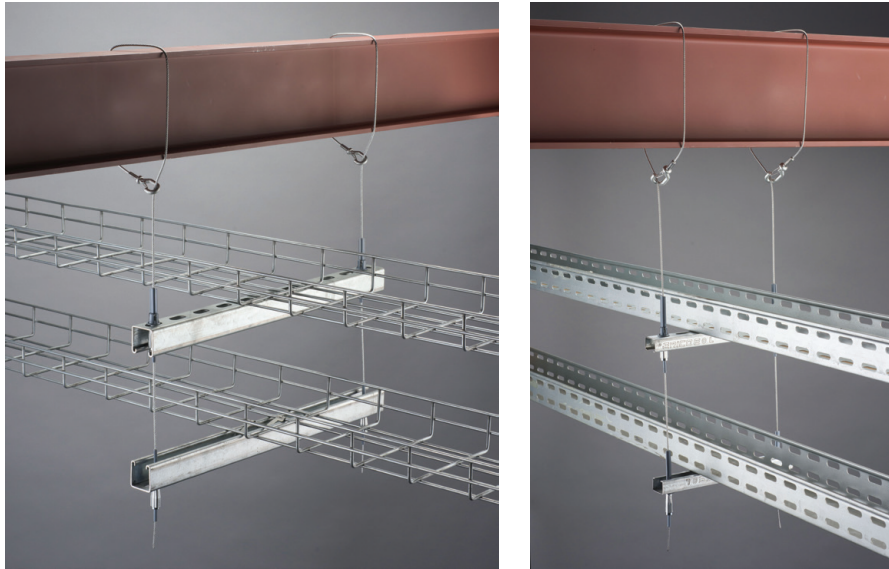
3. Strut/Bracket solutions

Figure 20: *Speed Link SLS3 and A-type strut channel supporting two wire basket trays (left). Speed Link SLS2 and E0L C-channel supporting two cable trays (right).*

| PROS	CONS
• Compatible with a wide range of applications (heavy-duty, wide wire basket tray, cable tray or cable ladder)	• Requires three nVent CADDY parts (two part numbers)
• Height adjustability at the load	• Requires cutting C-channel or strut channel (unless used with the TSR1220N)
• Allows for quick multi-tier applications	
• Compatible with KBT clip for wire basket tray and other strut hardware	
• The long plastic retaining nut prevents any contact between the cables and the wire rope	
• SLS3 locking device can be used with the nVent CADDY TSR1220N (see Figure 21), eliminating the need to cut strut to length	

4. Appendix

A. AVAILABLE END FITTINGS FOR SLK LOCKING DEVICES

Eleven end-fittings are available with Speed Link SLK System. For product information including part numbers, consult nVent.com/CADDY
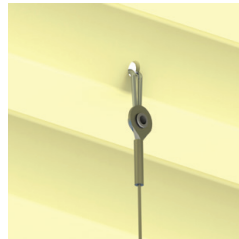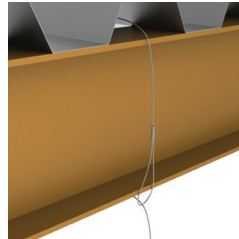
**Speed Link SLK
with Angle Bracket**
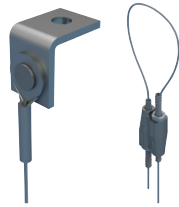
**Speed Link SLK
with Shot-Fire Bracket**
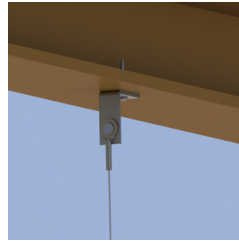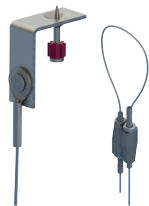
**Speed Link SLK
with Decking Hook**

**Speed Link SLK
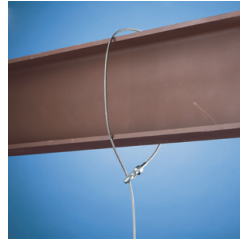with Loop**

**Speed Link SLK
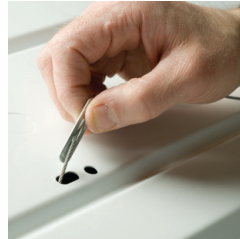with Threaded Stud End**

**Speed Link SLK
with Y-Hook**

4. Appendix

**Speed Link SLK
with Hook**

**Speed Link SLK
with Toggle**

**Speed Link SLK
with Hammer-On Flange Clip**

**Speed Link SLK
with Y-Toggle**

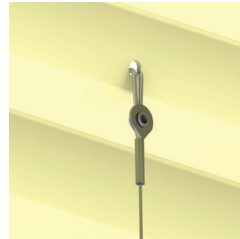**Speed Link SLK
with Wedge Anchor**

For more information about the Speed Link SLK System, consult the SLK Locking Device section of the Speed Link Manual available on nVent.com/CADDY.

4. Appendix

B. AVAILABLE END FITTINGS FOR SLS LOCKING DEVICES

Four end-fittings are available with Speed Link SLS System. For product information including part numbers, consult nVent.com/CADDY.

**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**

For more information about the Speed Link SLS System, consult the SLS Locking Device section of the Speed Link Manual available on nVent.com/CADDY.

4. Appendix

C. TELESCOPING STRUT REPLACEMENT, NO NUT (TSR1220N)

Figure 21: *Telescopic Strut Replacement, No Nut (TSR1220N) supported by two Speed Link SLS3*

For more information on any products listed in this handbook, visit nVent.com/CADDY.

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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