



TOUGHMesh

- Instructions -
(Splicing & Accessories)

TM-I-01_A02

INSTALLATION INSTRUCTION

CTI-S50001_A



CT INNOVATIONS

Posi-Lok Splice TMA-PLOK-(*)

TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray and insert the Posi-Lok splice into the siderail longitudinal wire as shown. Refer to Splice Chart for UL Classified Posi-Lok splice quantity.

SPLICE CHART (UL Classified)	
TRAY SIZE H X W (in)	POSI-LOK SPLICE QTY TMA-PLOK-(*)
2X12	2
2X16	2
2X18	2
2X20	2
2X24	2
4X12	2
4X16	2
4X18	2
4X20	2
4X24	2
6X12	2
6X16	2
6X18	2
6X20	2
6X24	2

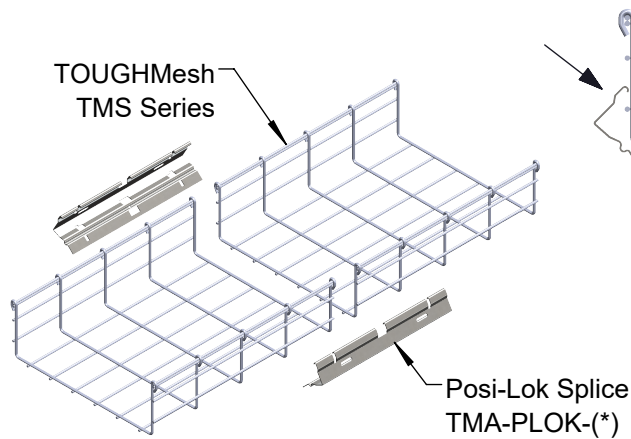


FIGURE 1

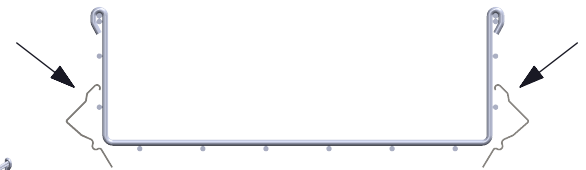


FIGURE 2

STEP 2:

Once the Posi-Lok tab is hook up into the wirebasket siderail longitudinal wire, push the bottom of the Posi-Lok as shown in Figure 3A or use a screwdriver (optional) as shown in Figure 3B then push until it will snap into the bottom longitudinal wire.

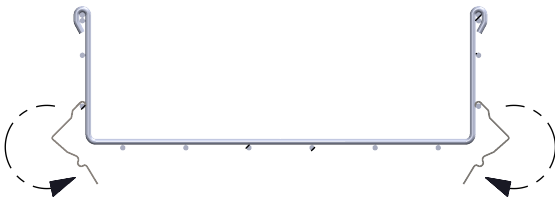


FIGURE 3A



FIGURE 4

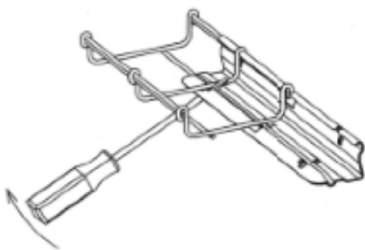


FIGURE 3B

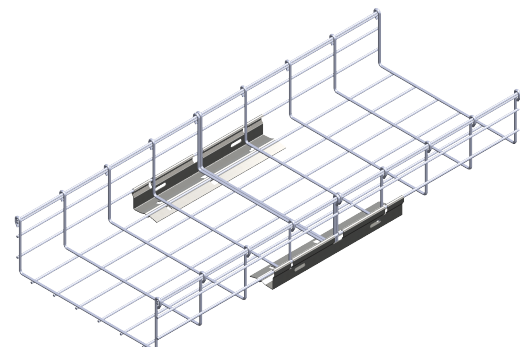


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50002_A



CT INNOVATIONS

Posi-Lok Mini Splice

TMA-PLOKM-(*)

TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray and insert the Posi-Lok Mini splice into the siderail longitudinal wire as shown below. Refer to Splice Chart for UL Classified Posi-Lok Mini splice quantity.

SPLICE CHART (UL Classified)	
TRAY SIZE H X W (in)	POSI-LOK MINI SPLICE QTY TMA-PLOKM-(*)
2X2	2
2X4	2
2X6	2
2X8	2
2X10	2
4X4	2
4X6	2
4X8	2
4X10	2
6X8	2
6X10	2

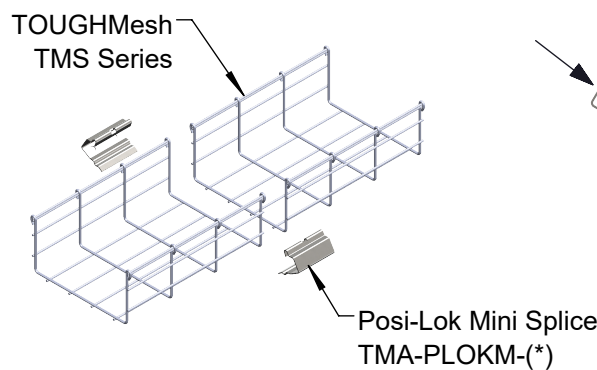


FIGURE 1

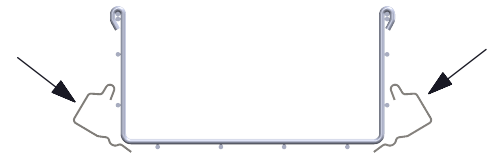


FIGURE 2

STEP 2:

Once the Posi-Lok Mini tab is hook up into the wirebasket siderail longitudinal wire, push the bottom of the Posi-Lok Mini as shown in Figure 3A or use a screwdriver (optional) as shown in Figure 3B then push until it will snap into the bottom longitudinal wire.

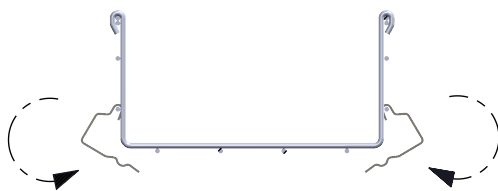


FIGURE 3A

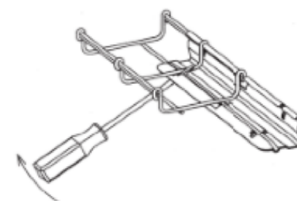


FIGURE 3B



FIGURE 4

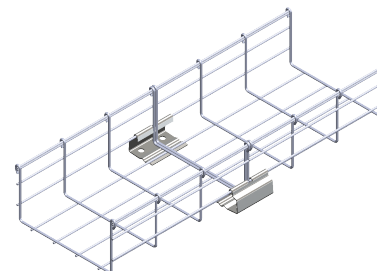


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50003_A

Washer Splice Kit

TMA-WSKIT-(*)

TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray and install the Washer Splice Kit as shown below. Refer to Splice Chart for UL Classified Washer Splice Kit quantity.

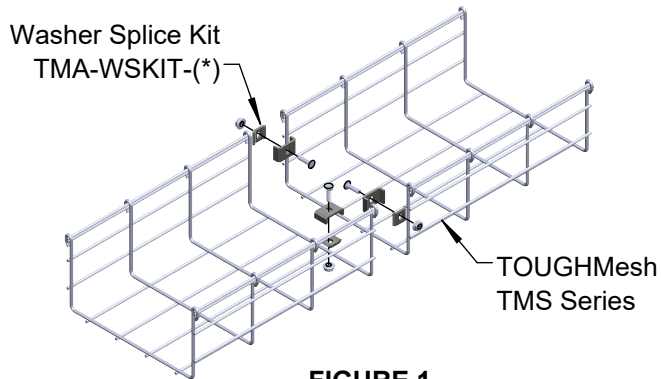


FIGURE 1

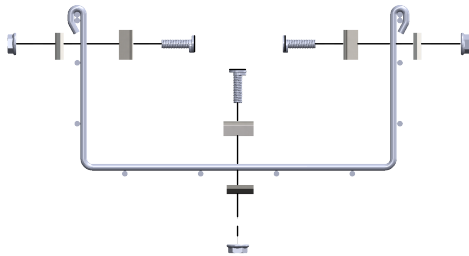


FIGURE 2

TRAY SIZE H X W (in)	WASHER SPLICE KIT QTY	
	SIDERAIL	BOTTOM
2X2	2	0
2X4	2	0
2X6	2	0
2X8	2	1
2X10	2	1
2X12	2	1
2X16	2	2
2X18	2	2
2X20	2	2
2X24	2	2
4X4	2	2
4X6	2	2
4X8	2	3
4X10	2	3
4X12	2	4
4X16	2	4
4X18	2	4
4X20	2	5
4X24	2	5
6X8	4	2
6X10	4	2
6X12	4	3
6X16	4	3
6X18	4	3
6X20	4	4
6X24	4	4

STEP 2:

Torque all Washer Splice Kit hardware to 6ft-lbs.



FIGURE 3

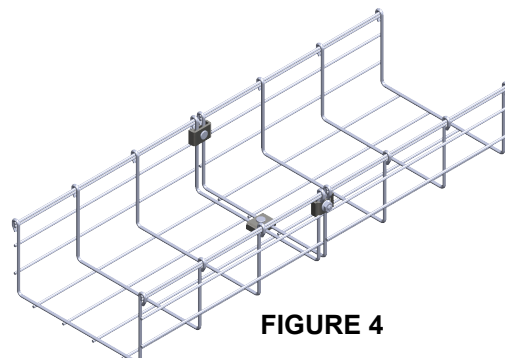


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50004_A



CT INNOVATIONS

Hold Down Kit TMA-HDKIT-(*) TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray, splice bar and install the Hold Down Kit as shown below.

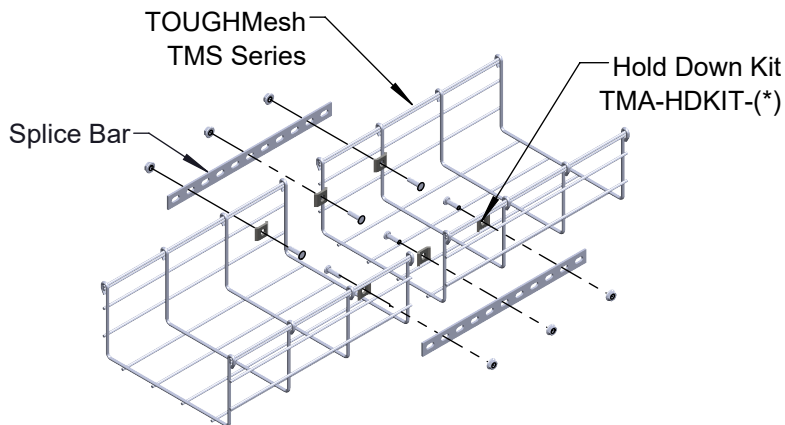


FIGURE 1

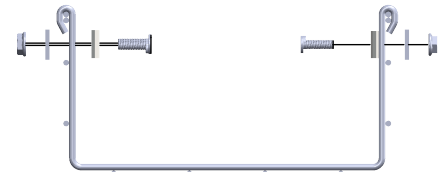


FIGURE 2

STEP 2:

Torque all Hold Down Kit hardware to 6ft-lbs. For Washer Splice Kits to be installed at the bottom of the basket tray, refer to Step 3 and 4 of Installation Instruction CTI-S50005.



FIGURE 3

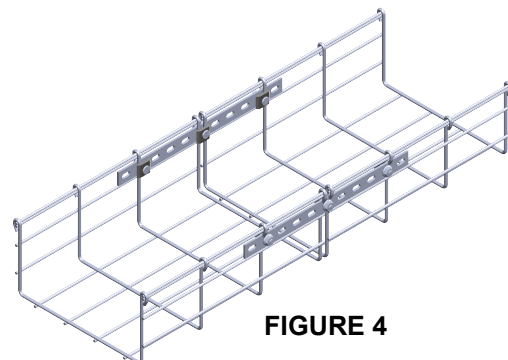


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50005_A



CT INNOVATIONS

Splice Bar Kit TMA-SBKIT-(*) TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray and install the Splice Bar Kit as shown below.

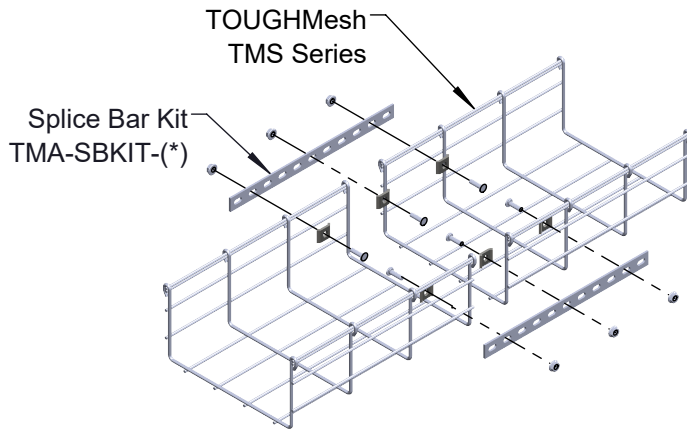


FIGURE 1

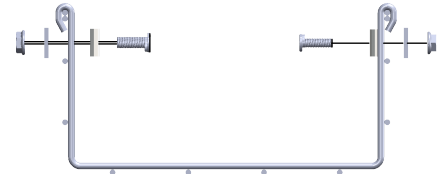


FIGURE 2

STEP 2:

Torque all Splice Bar Kit hardware to 6ft-lbs.



FIGURE 3

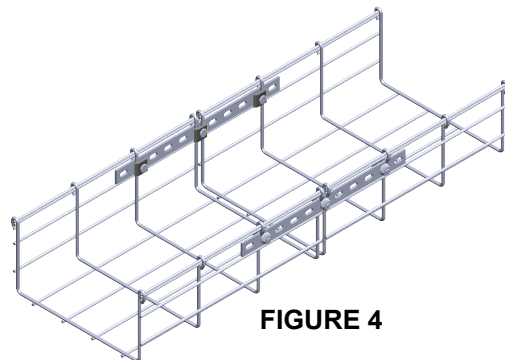


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50005_A



CT INNOVATIONS

Splice Bar Kit

TMA-SBKIT-(*)

TOUGHMesh Accessories

STEP 3:

Install additional Washer Splice Kit at the bottom of the wire basket tray as shown below. Refer to Table 1 for the required Washer Splice Kit quantity.

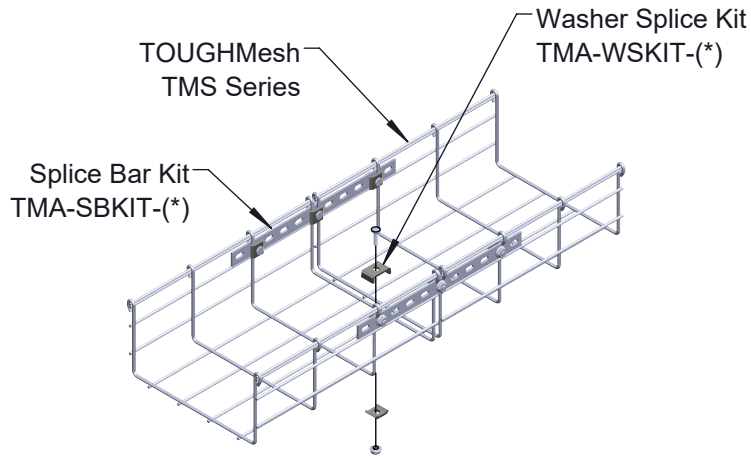


FIGURE 5

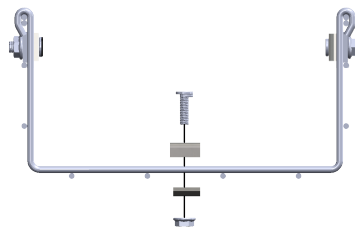


FIGURE 6

TABLE 1	
TRAY SIZE H X W (in)	WASHER SPLICE KIT QTY
2X2	0
2X4	0
2X6	0
2X8	0
2X10	1
2X12	1
2X16	1
2X18	2
2X20	2
2X24	2
4X4	0
4X6	0
4X8	0
4X10	1
4X12	1
4X16	1
4X18	2
4X20	2
4X24	2
6X8	0
6X10	1
6X12	1
6X16	1
6X18	2
6X20	2
6X24	2

STEP 4:

Torque all Washer Splice Kit hardware to 6ft-lbs.



FIGURE 7

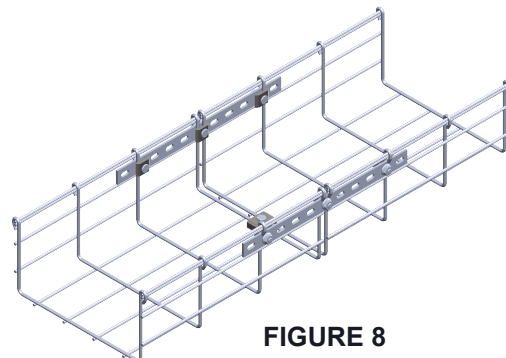


FIGURE 8

INSTALLATION INSTRUCTION

CTI-S50006_B



CT INNOVATIONS

Expansion Splice Kit

TMA-EXSBKIT-(*)

TOUGHMesh Accessories

STEP 1:

Identify the maximum spacing between expansion joints that provide for 1" (25mm) movement and the required gap settings between cable tray. Refer to Technical Data Sheet document no. CTI-S65001 for the step by step procedure.

STEP 2:

Once the maximum spacing between expansion joints and gap setting are identified, position the wirebasket tray based on the gap setting and install the Expansion Splice Kit as shown below.



FIGURE 1

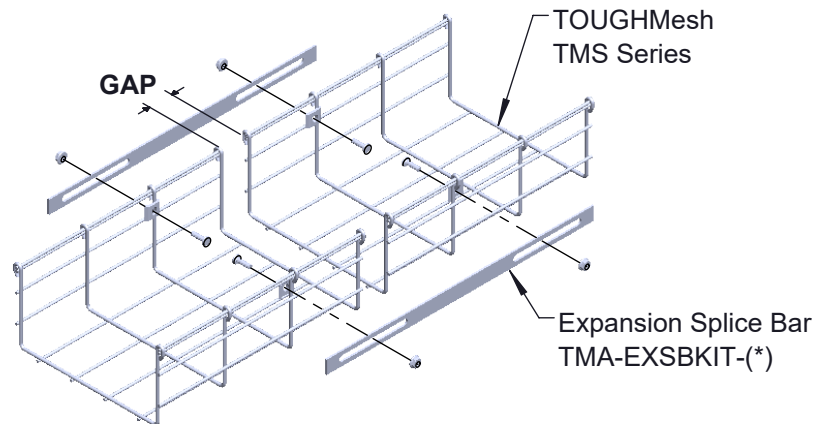


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50006_B



CT INNOVATIONS

Expansion Splice Kit

TMA-EXSBKIT-(*)

TOUGHMesh Accessories

STEP 3:

Torque all Hold Down Kit hardware to 5ft-lbs.



FIGURE 3

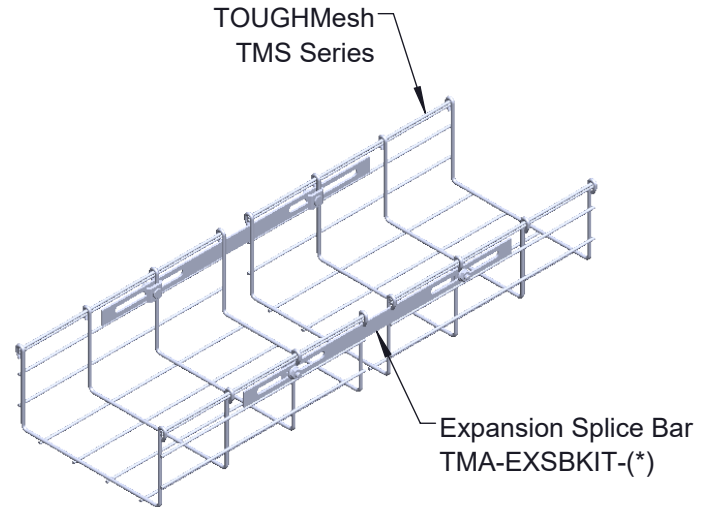


FIGURE 4

Provide support within 2ft on each side of the expansion splice plates and install grounding to maintain electrical continuity. Refer to Document No. CTI-S50010 for ground bolt installation instructions.

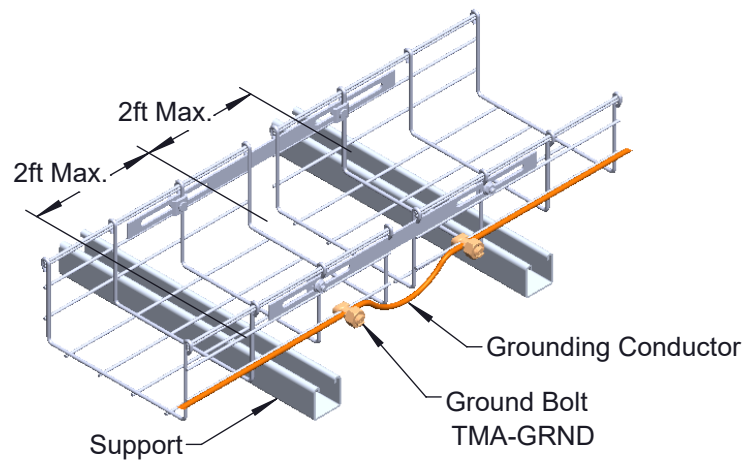


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50007_A



CT INNOVATIONS

Standard Splice Bar

TMA-STSB-(*)

TOUGHMesh Accessories

STEP 1:

Align the wirebasket tray, Standard Splice Bar and install the Hold Down Kit as shown below.

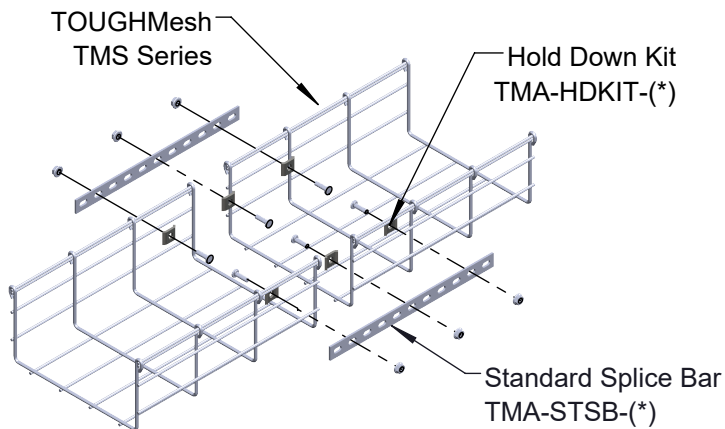


FIGURE 1

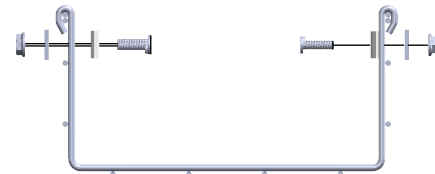


FIGURE 2

STEP 2:

Torque all Hold Down Kit hardware to 6ft-lbs. For Washer Splice Kits to be installed at the bottom of the basket tray, refer to Step 3 and 4 of Installation Instruction CTI-S50005.



FIGURE 3

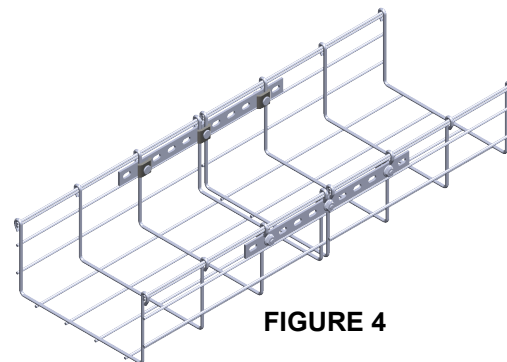


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50009_B



CT INNOVATIONS

FLAT CROSS WASHER

TMA-FLXW-(*)

TOUGHMesh Accessories

STEP 1:

Determine the required length of the TOUGHStrut channel support (See Table 1) based on the width of the cable tray to be supported. Once identified, align the Flat Cross Washer with wirebasket tray bottom wire and install the hardware as shown.

TABLE 1				
TOUGHMesh P/N	TOUGHMesh WIDTH (in)	TOUGHStrut P/N	TOUGHStrut LENGTH (in)	FLAT CROSS WASHER QTY TMA-FLXW-(*)
TMS-(H)X02X10-(*)	2	TC2158-08-(*)	8	1
TMS-(H)X04X10-(*)	4	TC2158-10-(*)	10	1
TMS-(H)X06X10-(*)	6	TC2158-12-(*)	12	1
TMS-(H)X08X10-(*)	8	TC2158-14-(*)	14	2
TMS-(H)X10X10-(*)	10	TC2158-16-(*)	16	2
TMS-(H)X12X10-(*)	12	TC2158-18-(*)	18	2
TMS-(H)X16X10-(*)	16	TC2158-22-(*)	22	2
TMS-(H)X18X10-(*)	18	TC2158-24-(*)	24	2
TMS-(H)X20X10-(*)	20	TC2158-26-(*)	26	2
TMS-(H)X24X10-(*)	24	TC2158-28-(*)	28	2

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

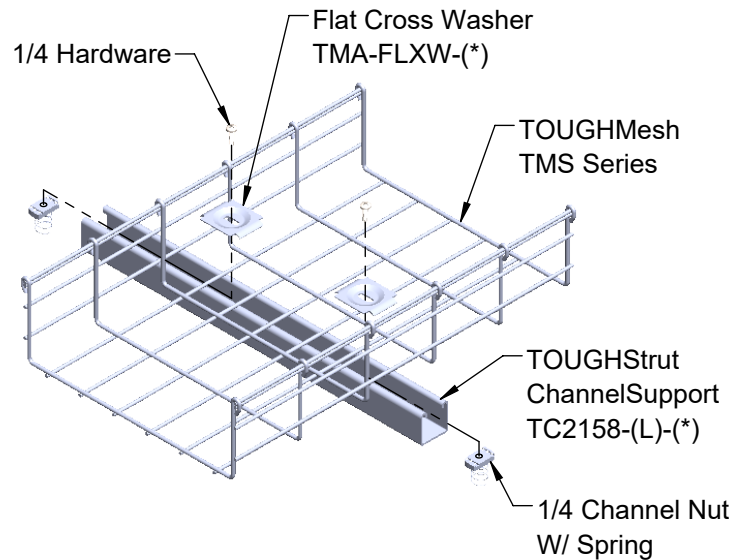


FIGURE 1

STEP 2:

Hold down clamp installation: Torque the hardware to 6ft-lbs.

Hold down expansion guide installation: Torque the hardware to 5ft-lbs.

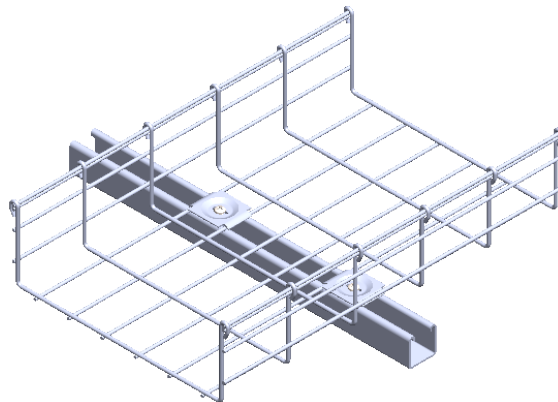


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50010_A



CT INNOVATIONS

Ground Bolt TMA-GRND

TOUGHMesh Accessories

Metal cable trays that support electrical conductors shall be grounded as required in accordance with NEC Article 250, Section 250.96 Part IV to ensure electrical continuity and the capacity to conduct safely any fault current likely to be imposed on it. Any nonconductive paint or similar coating shall be removed at threads, contact points, and contact surfaces. Metal cable trays containing only non-power conductors shall be electrically continuous through approved connections or the use of bonding jumpers.

For metal cable tray system, bonding jumpers are typically required in certain locations such as expansion joints, horizontal adjustable splice plates, vertical adjustable splice plates and other discontinuities to maintain the electrical continuity unless the splice plates meet the electrical continuity requirements of NEMA VE-1 Section 4.7.

Refer to the following process for typical TOUGHMesh Ground Bolt and grounding conductor installation:

STEP 1:

Identify all locations that require bonding jumpers such as expansion joints, non-classified splice plates and other discontinuities. Then determine the appropriate size of the bonding jumper according to NEC Articles 250 and 392.

STEP 2:

Install the ground bolt and grounding conduction as shown in Figure 1.

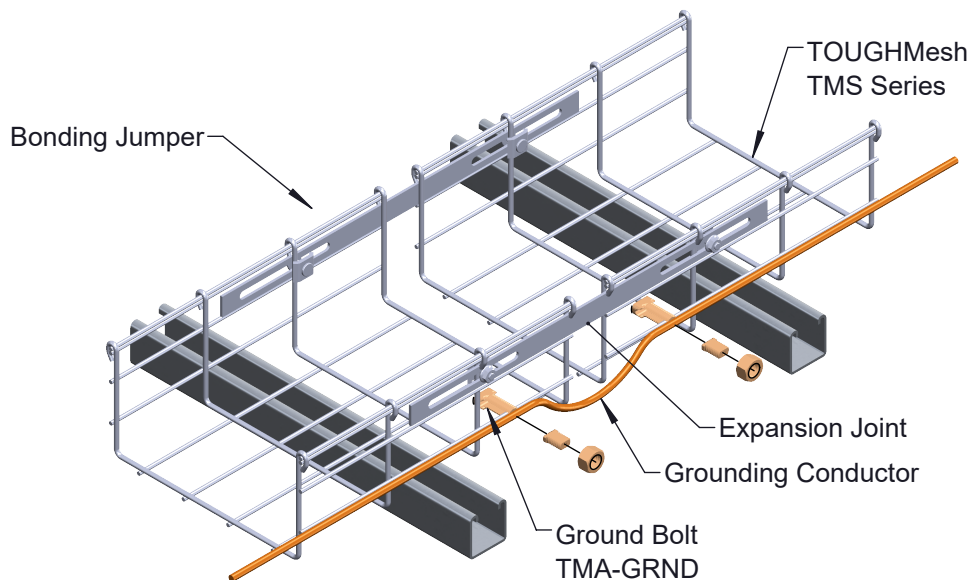


FIGURE 1

INSTALLATION INSTRUCTION

CTI-S50010_A



CT INNOVATIONS

Ground Bolt TMA-GRND

TOUGHMesh Accessories

STEP 3:

Torque all ground bolt to 19 ft-lbs.

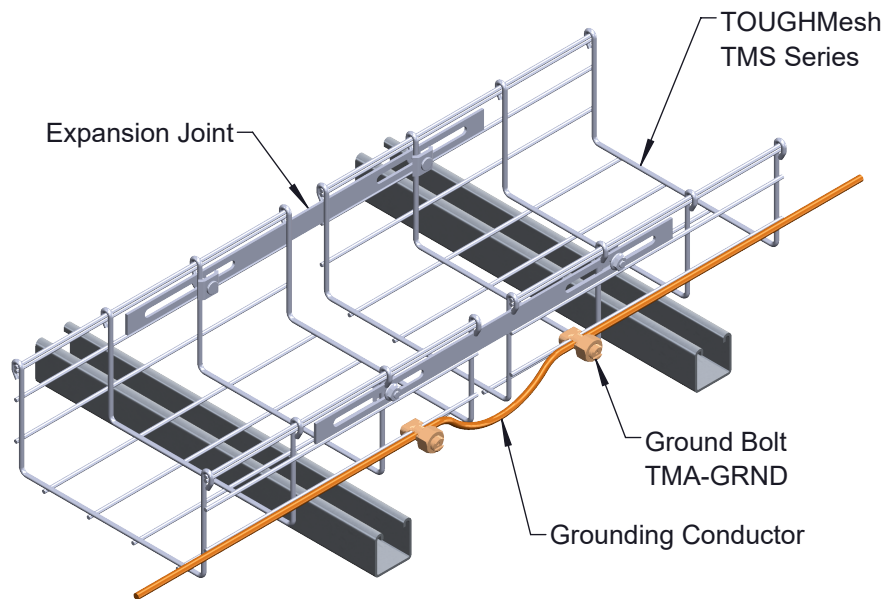


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50013_A



CT INNOVATIONS

RAPID HANGER (UNIVERSAL)

TMA-URH-(W)-(*)

TOUGHMesh Accessories

STEP 1:

Align the Rapid Hanger, Hex Nut, and Threaded Rod as shown. Once the Assembly is set to the required elevation, torque the hex nut to 19ft-lbs.

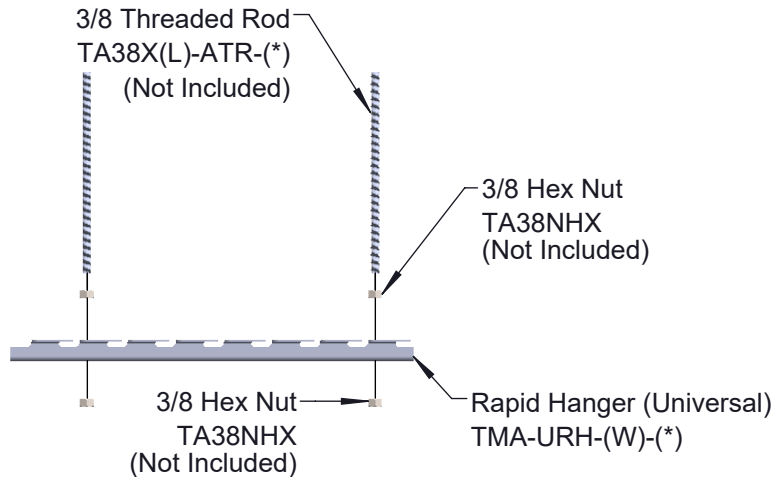


FIGURE 1

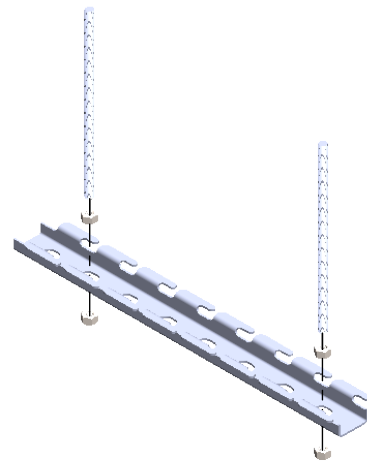


FIGURE 2

STEP 2:

Insert the basket tray bottom longitudinal wire into the Rapid Hanger tab until it will snap/lock shown below.

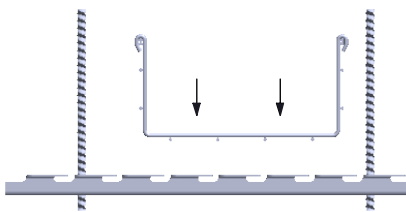


FIGURE 3

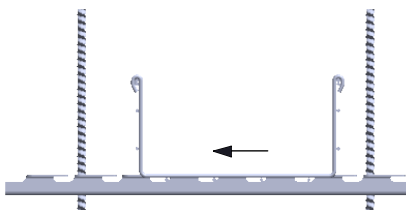


FIGURE 4

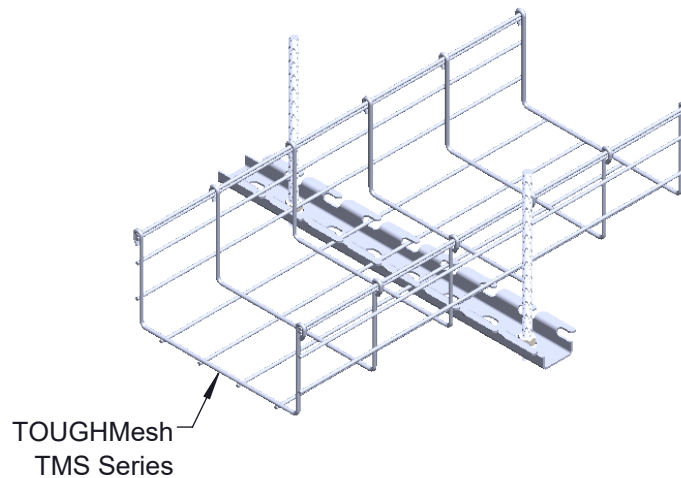


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50014_B



CT INNOVATIONS

HD CEILING BRACKET

TMA-HDCB-(*)

TOUGHMesh Accessories

STEP 1:

Align the HD Ceiling bracket, Hex Nut, and Threaded Rod as shown.

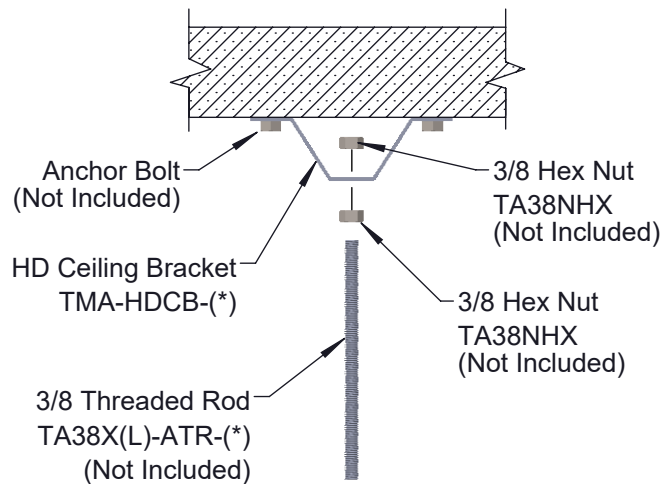


FIGURE 1

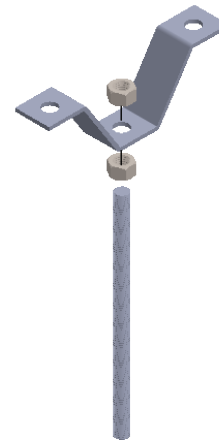


FIGURE 2

STEP 2:

Once the assembly is set to the required elevation, torque the hex nut to 19ft-lbs.

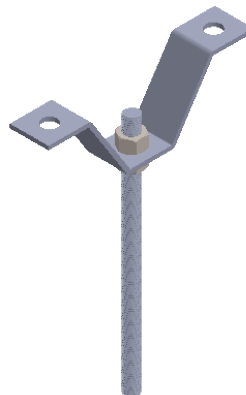


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50015_B



CT INNOVATIONS

SUSPENSION CLIP (UNIVERSAL)

TMA-USC-(*)

TOUGHMesh Accessories

STEP 1:

Align the Suspension Clip, Hex Nut, and Threaded Rod as shown. Once the Suspension Clip is set to the required elevation, torque the hex nut to 6ft-lbs.

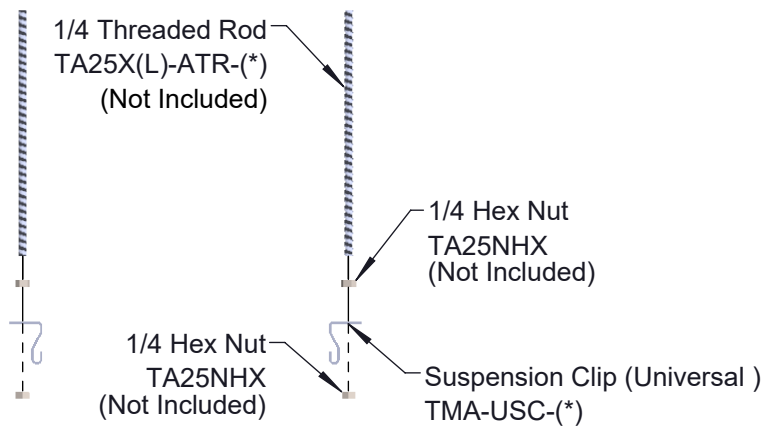


FIGURE 1

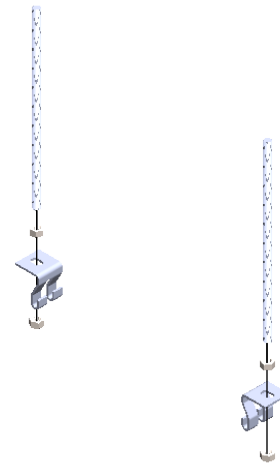


FIGURE 2

STEP 2:

Position the wirebasket siderail to hook up into the Suspension Clip as shown below.

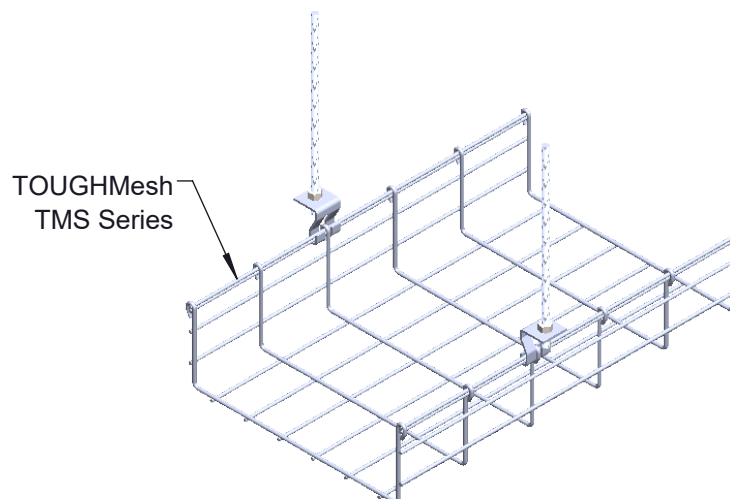


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50016_B



CT INNOVATIONS

LAY-IN CABLE HANGER

TMA-LICH-(*)

TOUGHMesh Accessories

STEP 1:

Align the Lay-in Cable Hanger, Hex Nut, and Threaded Rod as shown. Once the Lay-in Cable Hanger is set to the required elevation, torque the hex nut to 6ft-lbs.

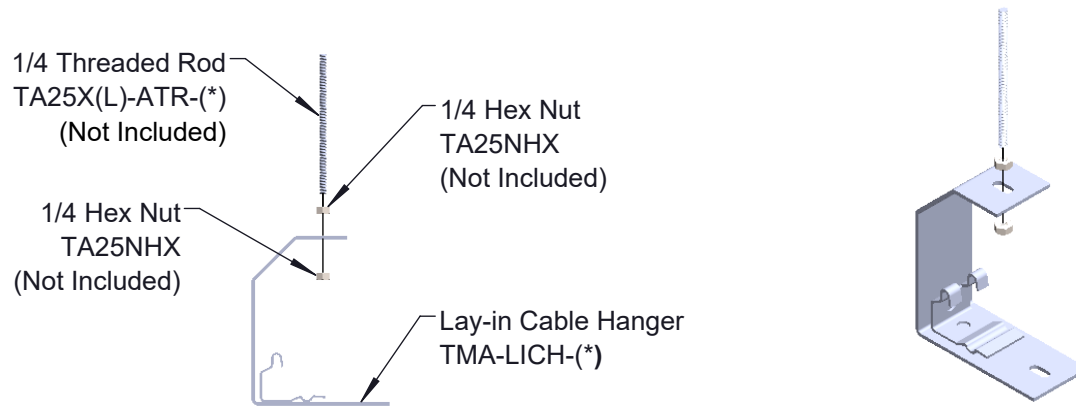


FIGURE 1

FIGURE 2

STEP 2:

Position the wirebasket siderail to hook up into the Lay-in Cable Hanger as shown below.

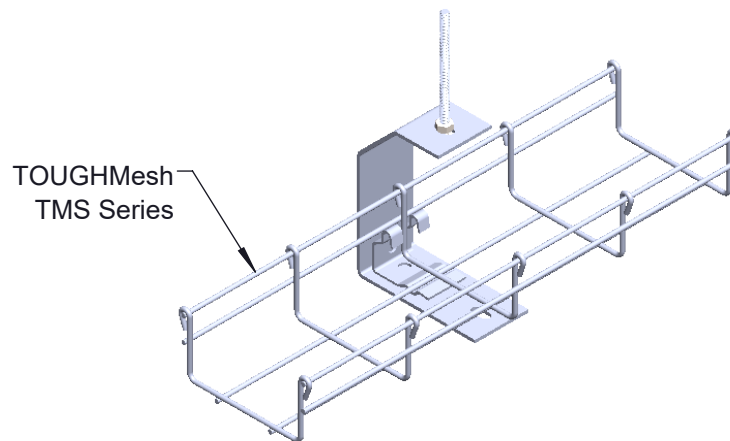


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50017_B



CT INNOVATIONS

4" SUSPENSION CLIP

TMA-4SC-(*)

TOUGHMesh Accessories

STEP 1:

Align the Suspension Clip, Hex Nuts, and Threaded Rod as shown. Once the Suspension clip is set to the required elevation, torque the hex nut to 6 ft-lbs:

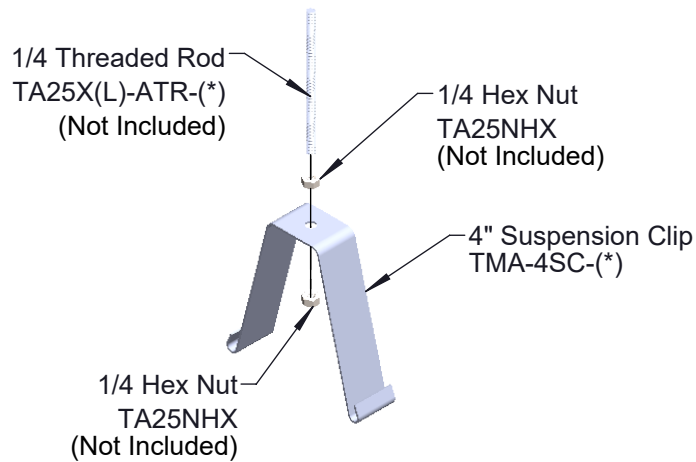


FIGURE 1

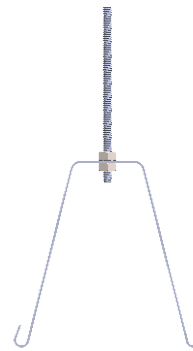


FIGURE 2

STEP 2:

Position the wirebasket siderail to hook up into the Suspension Clip as shown below.

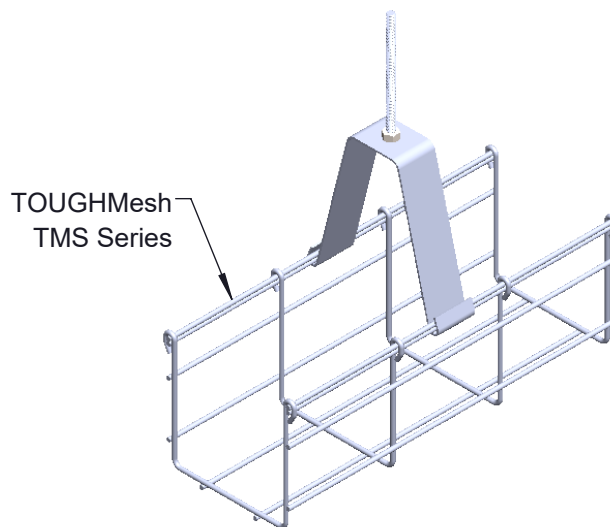


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50018_B



CT INNOVATIONS

2" SUSPENSION CLIP

TMA-2SC-(*)

TOUGHMesh Accessories

STEP 1:

Align the Suspension Clip, Hex Nut, and Threaded Rod as shown. Once the Suspension Clip is set to the required elevation, torque the hex nut to 6ft-lbs.

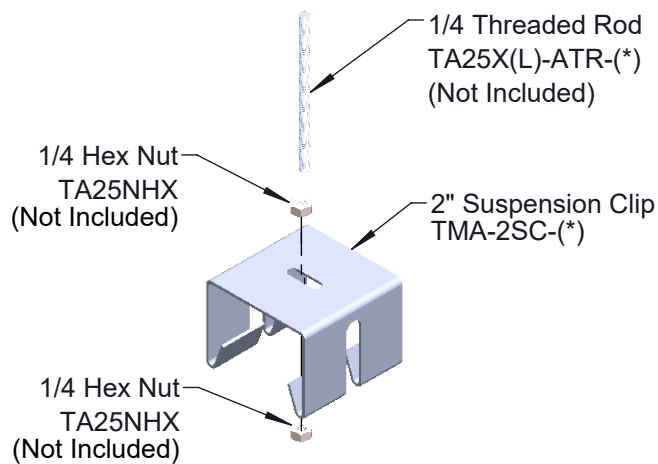


FIGURE 1

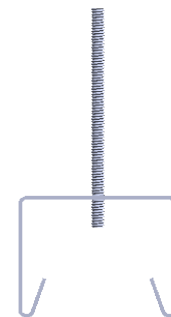


FIGURE 2

STEP 2:

Position the wirebasket siderail to hook up into the Suspension Clip as shown below.

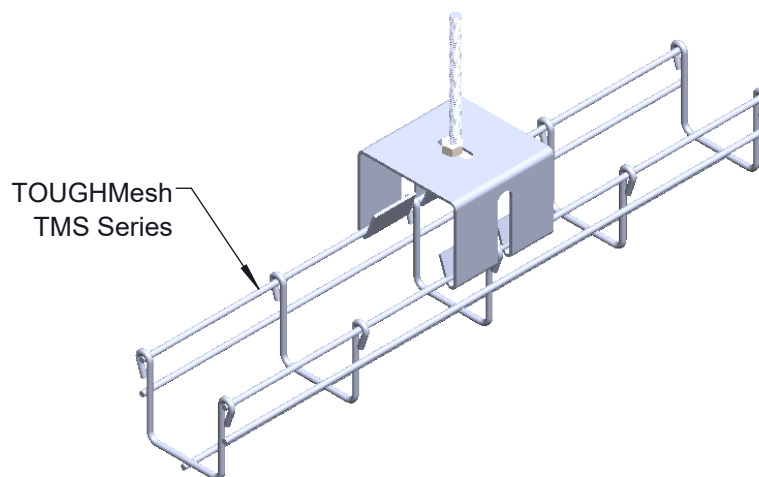


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50019_A



CT INNOVATIONS

L BRACKET TMA-LBRKT-(W)-(*) TOUGHMesh Accessories

STEP 1:

Align the hold down kit with the bottom longitudinal wire of the TOUGHMesh and L bracket slot holes, then install the hardware as shown below. Refer to Table 1 for the required hold down kit quantity and L bracket part number based on the size of the TOUGHMesh tray.

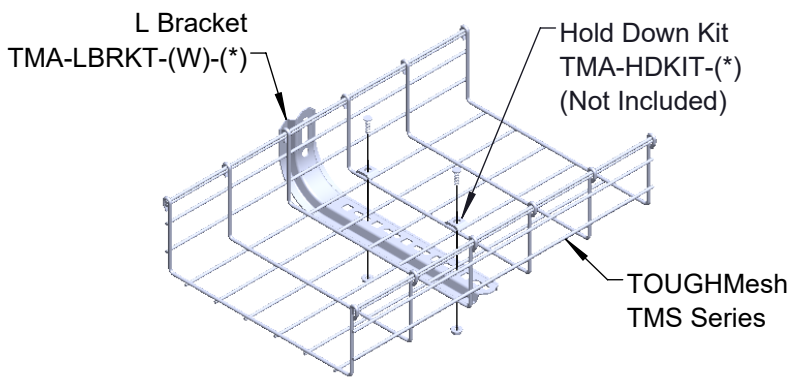


FIGURE 1

TABLE 1			
L BRACKET P/N	TOUGHMesh P/N	TOUGHMesh WIDTH (in)	HOLD DOWN KIT QTY TMA-HDKIT-(*)
TMA-LBRKT-04-(*)	TMS-(H)X04X10-(*)	4	1
TMA-LBRKT-06-(*)	TMS-(H)X06X10-(*)	6	2
TMA-LBRKT-08-(*)	TMS-(H)X08X10-(*)	8	2
TMA-LBRKT-10-(*)	TMS-(H)X10X10-(*)	10	2
TMA-LBRKT-12-(*)	TMS-(H)X12X10-(*)	12	2
TMA-LBRKT-16-(*)	TMS-(H)X16X10-(*)	16	2
TMA-LBRKT-18-(*)	TMS-(H)X18X10-(*)	18	2
TMA-LBRKT-20-(*)	TMS-(H)X20X10-(*)	20	2
TMA-LBRKT-24-(*)	TMS-(H)X24X10-(*)	24	2

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

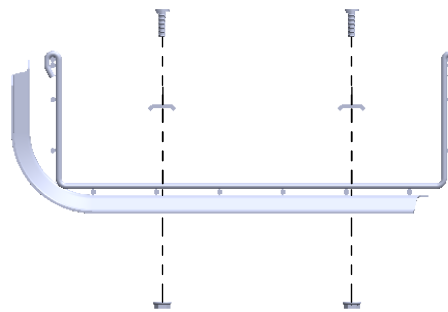


FIGURE 2

STEP 2:

Torque all Hold Down Kit hardware to 6ft-lbs.



FIGURE 3

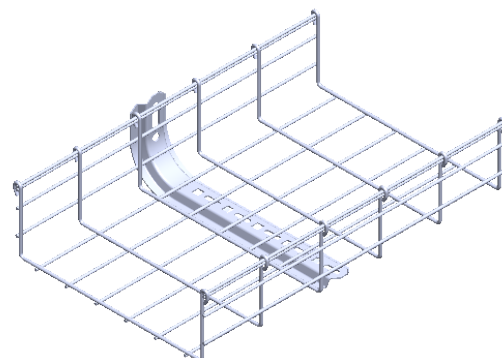


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50020_A01



CT INNOVATIONS

C BRACKET TMA-CBRKT-(W)-(*) TOUGHMesh Accessories

STEP 1:

Align the hold down kit with the bottom longitudinal wire of the TOUGHMesh and C bracket slot holes, then install the hardware as shown below. Refer to Table 1 for the required hold down kit quantity and C bracket part number based on the size of the TOUGHMesh tray.

TABLE 1			
L BRACKET P/N	TOUGHMesh P/N	TOUGHMesh WIDTH (in)	HOLD DOWN KIT QTY TMA-HDKIT-(*)
TMA-CBRKT-04-(*)	TMS-(H)X4X10-(*)	4	1
TMA-CBRKT-06-(*)	TMS-(H)X6X10-(*)	6	2
TMA-CBRKT-08-(*)	TMS-(H)X8X10-(*)	8	2
TMA-CBRKT-10-(*)	TMS-(H)X10X10-(*)	10	2

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

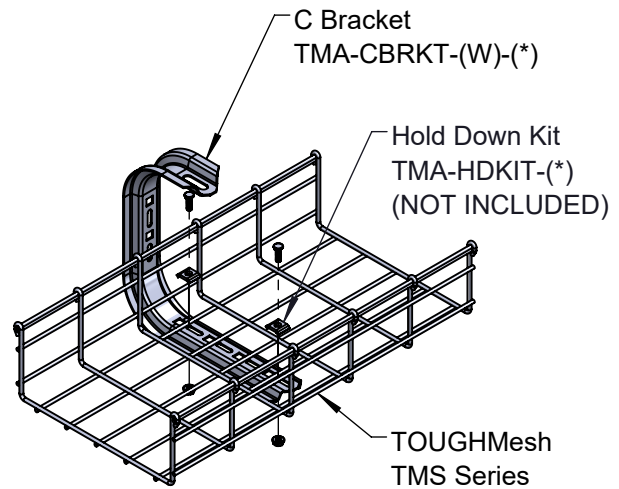


FIGURE 2

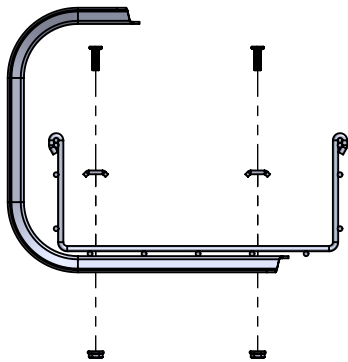


FIGURE 1

STEP 2:

Torque all Hold Down Kit hardware to 6ft-lbs.

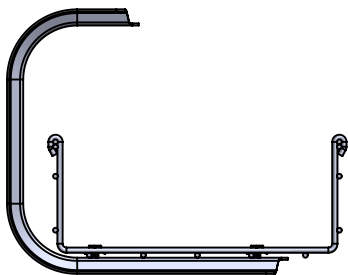


FIGURE 3

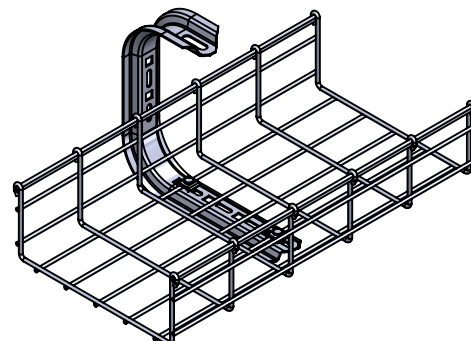


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50021_B



CT INNOVATIONS

VERTICAL WALL STANDARD

TMA-VWS-(*)

TOUGHMesh Accessories

STEP 1:

Fix the Vertical Wall Support Bracket into the wall first before installing the Lateral Riser Support Bracket.

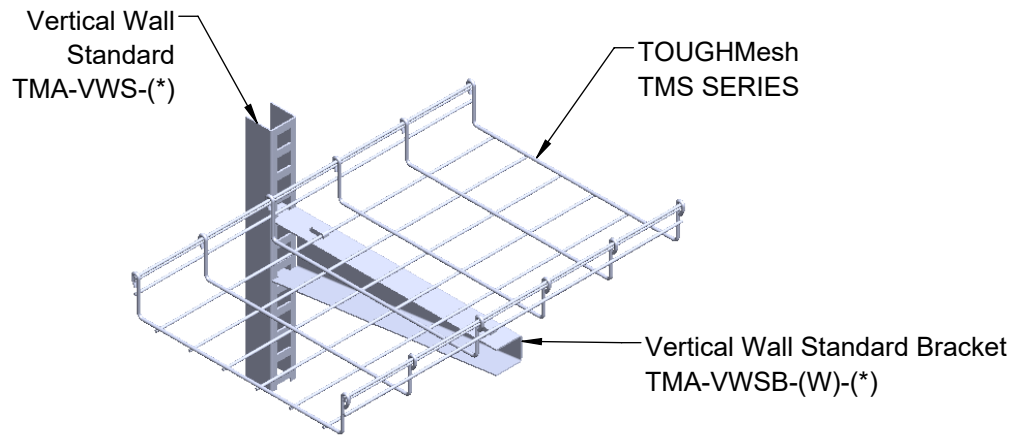


FIGURE 1

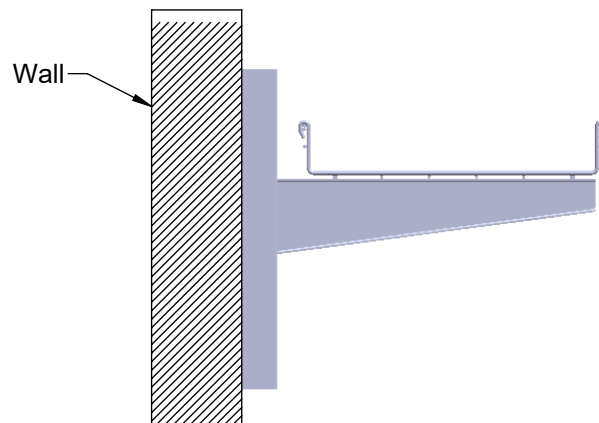


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50022_B



CT INNOVATIONS

VERTICAL WALL STANDARD BRACKET

TMA-VWSB-(W)-(*)

TOUGHMesh Accessories

STEP 1:

Rotate the Lateral Riser Support Bracket 45° and insert the upper tab into the vertical wall support bracket square hole then rotate back 45° and insert the bottom tab until it will lock in.

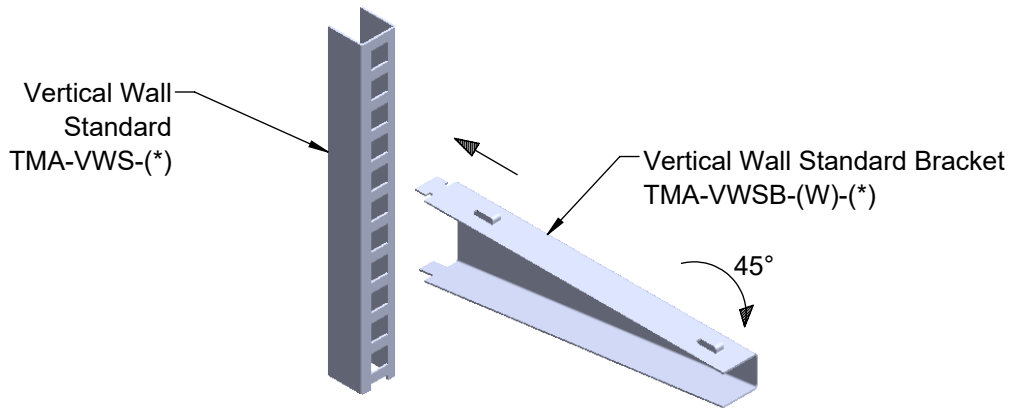


FIGURE 1

STEP 2:

Place wire basket tray until it will lock into the Lateral Riser Support Bracket as shown below.

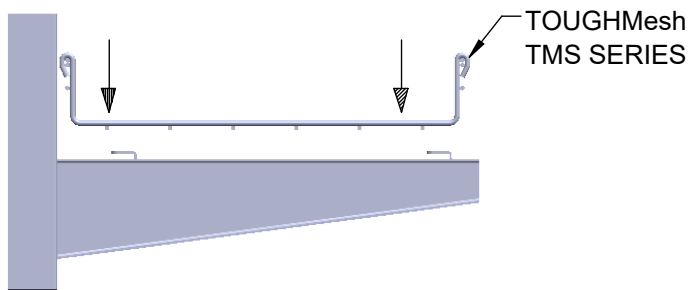


FIGURE 2

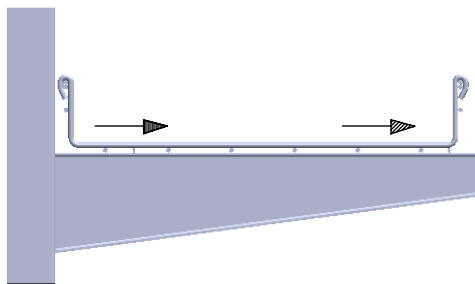


FIGURE 3

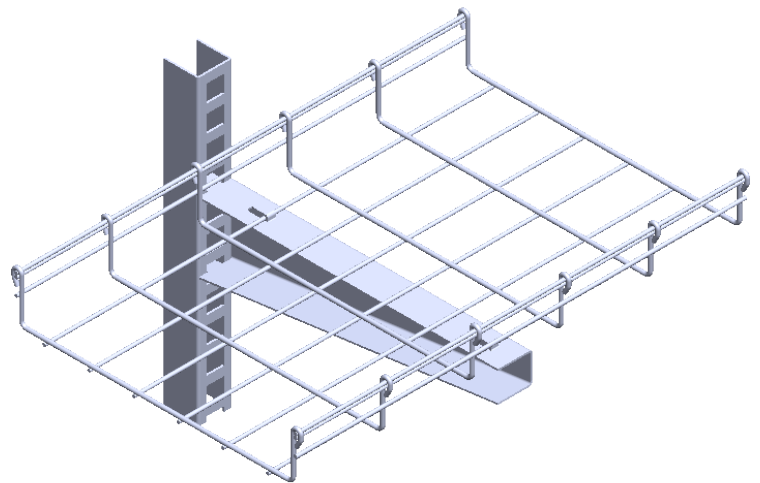


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50023_B



CT INNOVATIONS

WALL SUPPORT KIT

TMA-WLKIT-(*)

TOUGHMesh Accessories

OPTION 1 : TOUGHMesh TRAY INSTALLED PARALLEL TO THE WALL

STEP 1:

Identify the required length of the strut channel based on the width of the cable tray to be supported (See Table 1).

Align the Flat Cross Washer with wire basket tray bottom wire and install the hardware as shown in Figure 1.

Hold down clamp installation: Locate the flat cross washer right next to the transverse wire, see Detail A.

Hold down expansion guide installation: Locate the flat cross washer in between the transverse wires, see Detail B.

TABLE 1				
TOUGHMesh P/N	TOUGHMesh WIDTH (in)	TOUGHStrut P/N	TOUGHStrut LENGTH (in)	WALL SUPPORT KIT QTY TMA-WLKIT-(*)
TMS-(H)X2X10-(*)	2	TC2058S-08-(*)	8	1
TMS-(H)X4X10-(*)	4	TC2058S-10-(*)	10	1
TMS-(H)X6X10-(*)	6	TC2058S-12-(*)	12	1
TMS-(H)X8X10-(*)	8	TC2058S-14-(*)	14	1
TMS-(H)X10X10-(*)	10	TC2058S-16-(*)	16	1
TMS-(H)X12X10-(*)	12	TC2058S-18-(*)	18	1
TMS-(H)X16X10-(*)	16	TC2058S-22-(*)	22	1
TMS-(H)X18X10-(*)	18	TC2058S-24-(*)	24	1
TMS-(H)X20X10-(*)	20	TC2058S-26-(*)	26	1
TMS-(H)X24X10-(*)	24	TC2058S-28-(*)	28	1

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

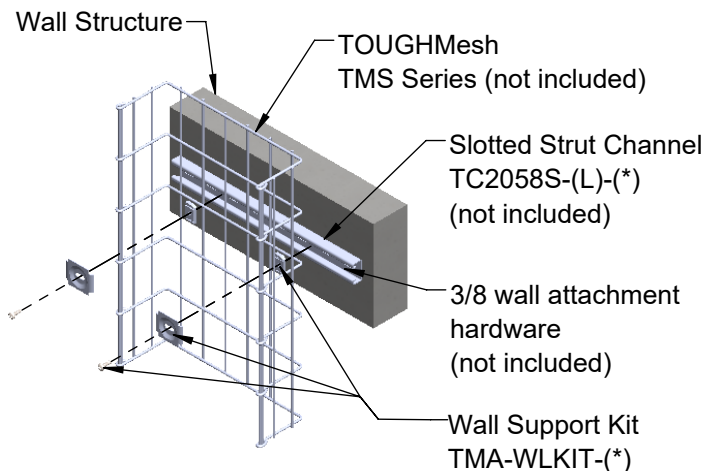


FIGURE 1

Includes:
 2 pc TMA-FLXW-(*)
 2 pc TA25NC-(*)
 2 pc TA25PHM075-(*)

STEP 2:

Hold down clamp installation: Torque the hardware to 6ft-lbs.

Hold down expansion guide installation: Torque the hardware to 5ft-lbs.

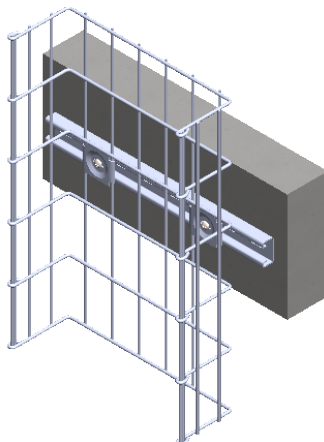
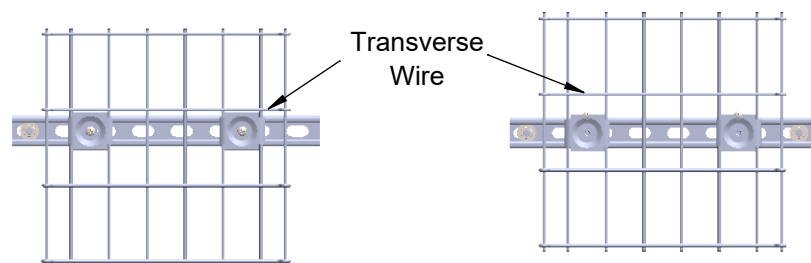


FIGURE 2



DETAIL A
(Hold Down Clamp)

DETAIL B
(Hold Down Expansion Guide)

INSTALLATION INSTRUCTION

CTI-S50023_B



CT INNOVATIONS

WALL SUPPORT KIT

TMA-WLKIT-(*)

TOUGHMesh Accessories

OPTION 2 : TOUGHMesh TRAY INSTALLED PERPENDICULAR TO THE WALL

STEP 1:

Identify the required length of the strut channel based on the width of the cable tray to be supported (See Table 2) and install as shown below using 1/2 anchor (to be ordered separately).

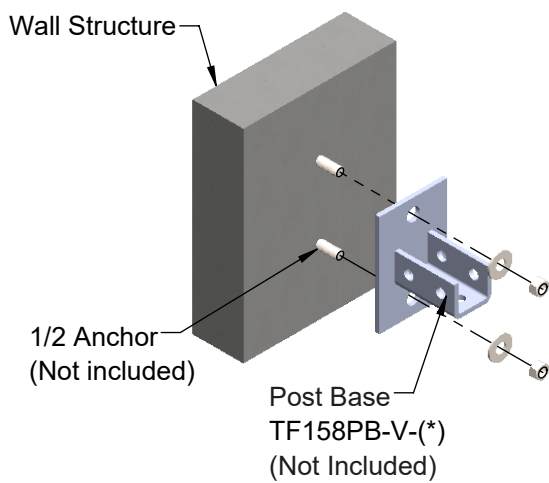


FIGURE 1

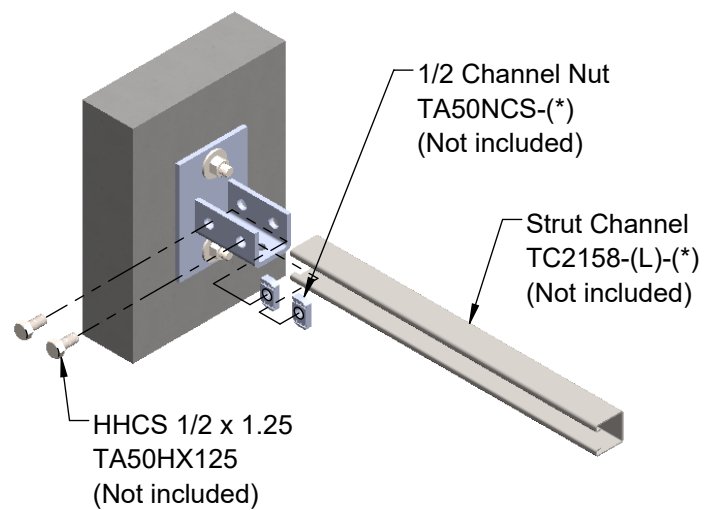


FIGURE 2

STEP 2:

Torque 1/2 HHCS to 50ft-lbs.

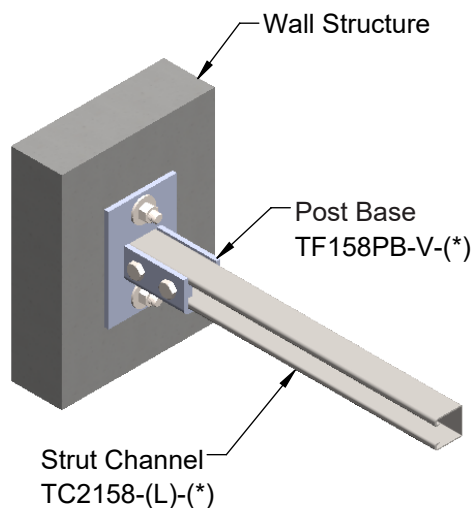


FIGURE 3

50023

TABLE 1

TOUGHMesh P/N	TOUGHMesh WIDTH (in)	TOUGHStrut P/N	TOUGHStrut LENGTH (in)	WALL SUPPORT KIT QTY TMA-WLKIT-(*)
TMS-(H)X2X10-(*)	2	TC2158S-08-(*)	8	1
TMS-(H)X4X10-(*)	4	TC2158S-10-(*)	10	1
TMS-(H)X6X10-(*)	6	TC2158S-12-(*)	12	1
TMS-(H)X8X10-(*)	8	TC2158S-14-(*)	14	1
TMS-(H)X10X10-(*)	10	TC2158S-16-(*)	16	1
TMS-(H)X12X10-(*)	12	TC2158S-18-(*)	18	1
TMS-(H)X16X10-(*)	16	TC2158S-22-(*)	22	1
TMS-(H)X18X10-(*)	18	TC2158S-24-(*)	24	1
TMS-(H)X20X10-(*)	20	TC2158S-26-(*)	26	1
TMS-(H)X24X10-(*)	24	TC2158S-28-(*)	28	1

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

INSTALLATION INSTRUCTION

CTI-S50023_B



CT INNOVATIONS

WALL SUPPORT KIT

TMA-WLKIT-(*)

TOUGHMesh Accessories

STEP 3:

Align the Flat Cross Washer with wire basket tray bottom wire and install the hardware as shown in Figure 4.

Hold down clamp installation: Locate the flat cross washer right next to the transverse wire, see Detail A.

Hold down expansion guide installation: Locate the flat cross washer in between the transverse wires, see Detail B.

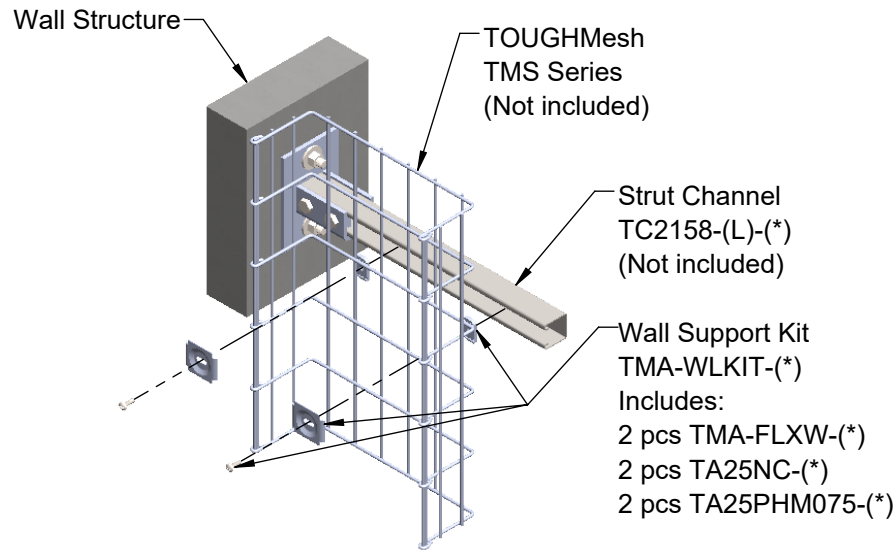


FIGURE 4

STEP 4:

Hold down clamp installation: Torque the hardware to 6ft-lbs.

Hold down expansion guide installation: Torque the hardware to 5ft-lbs.

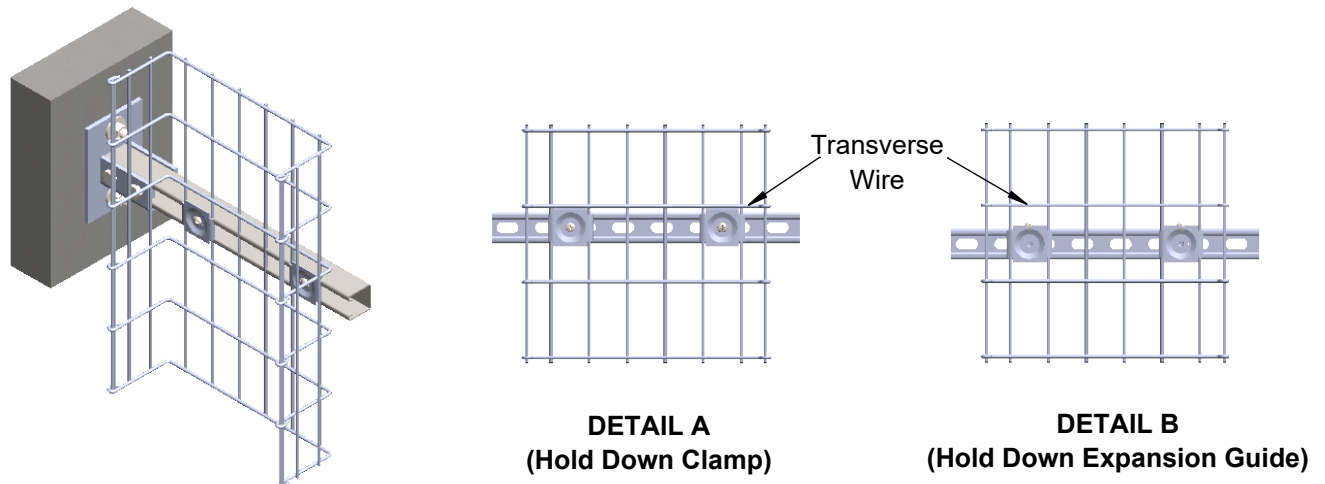


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50024_A



CT INNOVATIONS

STRUT WALL BRACKET

TMA-SWB-(#)-(*)

TOUGHMesh Accessories

STEP 1:

Determine the required size of the strut wall bracket based on the width of the cable tray to be supported and install as shown below using 3/8 anchor (to be ordered separately).

TABLE 1		
STRUT WALL BRACKET P/N	TOUGHMesh P/N	TOUGHMesh WIDTH (in)
TMA-SWB-04-(*)	TMS-(H)X2X10-(*)	2
TMA-SWB-04-(*)	TMS-(H)X4X10-(*)	4
TMA-SWB-06-(*)	TMS-(H)X6X10-(*)	6
TMA-SWB-08-(*)	TMS-(H)X8X10-(*)	8
TMA-SWB-10-(*)	TMS-(H)X10X10-(*)	10
TMA-SWB-12-(*)	TMS-(H)X12X10-(*)	12
TMA-SWB-16-(*)	TMS-(H)X16X10-(*)	16
TMA-SWB-18-(*)	TMS-(H)X18X10-(*)	18
TMA-SWB-20-(*)	TMS-(H)X20X10-(*)	20
TMA-SWB-24-(*)	TMS-(H)X24X10-(*)	24

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

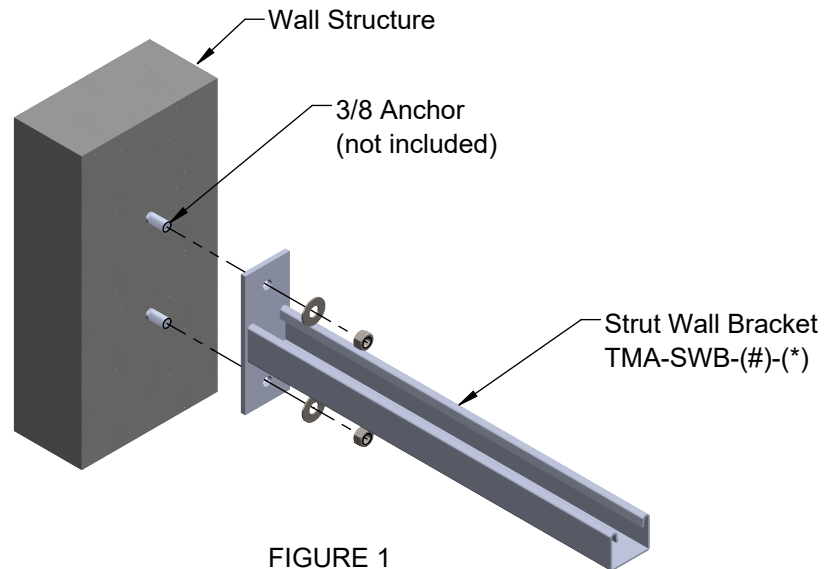


FIGURE 1

STEP 2:

Torque 3/8 anchor nuts to 19ft-lbs.

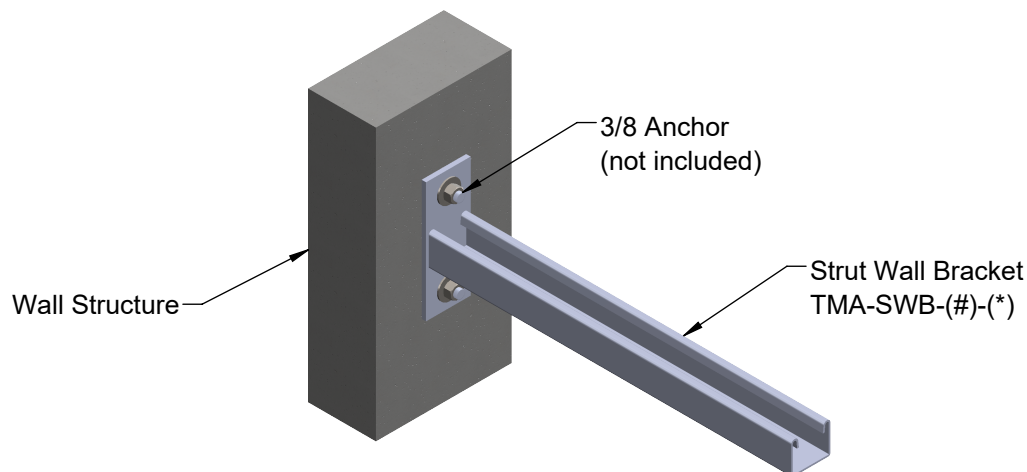


FIGURE 2



STRUT WALL BRACKET

TMA-SWB-(#)-(*)

TOUGHMesh Accessories

STEP 3:

Install the TOUGHMesh tray and secure it with flat cross washer and install the hardware as shown below.

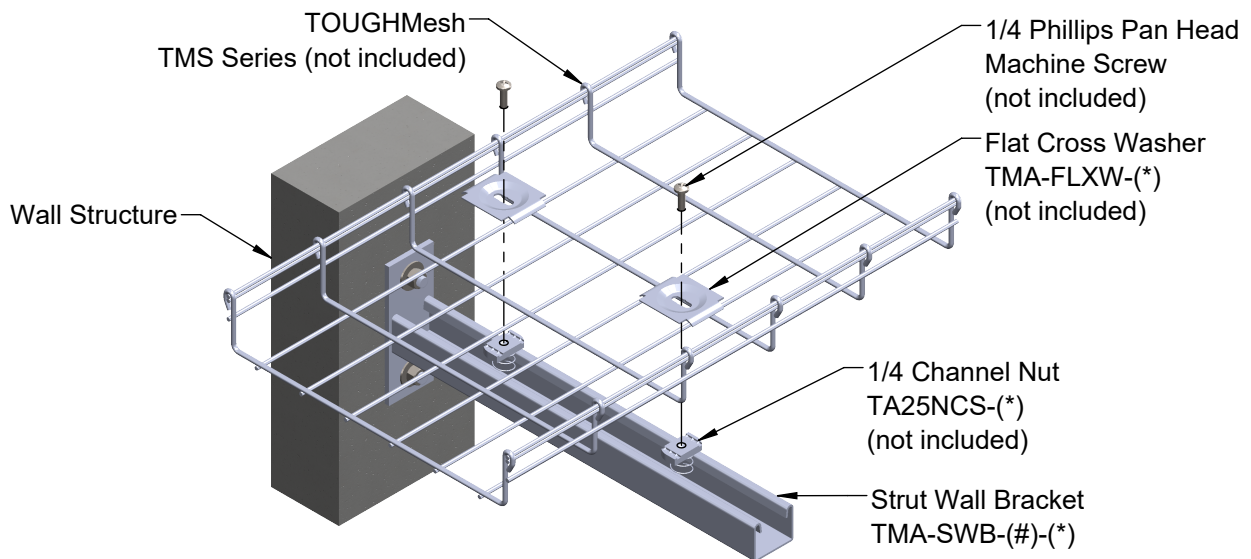


FIGURE 3

STEP 4:

Hold down clamp installation: Torque the hardware to 6ft-lbs.

Hold down expansion guide installation: Torque the hardware to 5ft-lbs.

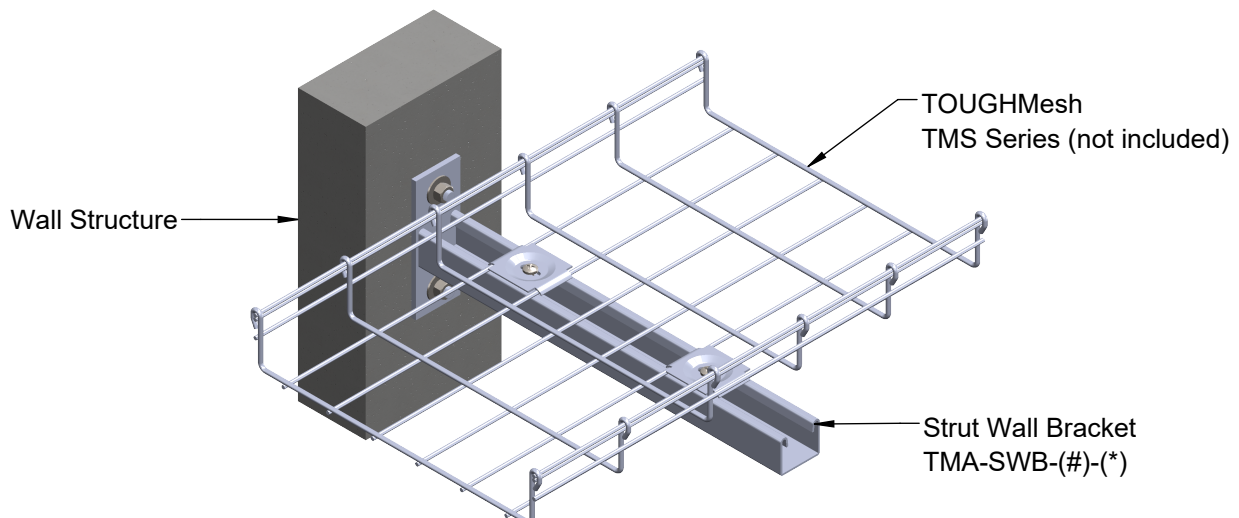


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50025_A



CT INNOVATIONS

CABLE BARRIER

TMA-CBAR-(H)-(*)

TOUGHMesh Accessories

STEP 1:

Position the Cable Barrier to the required location/partition and secure to the bottom of the wire basket tray using the Hold Down Kit as shown below. Three (3) pieces hold down kit is required and to be ordered separately.

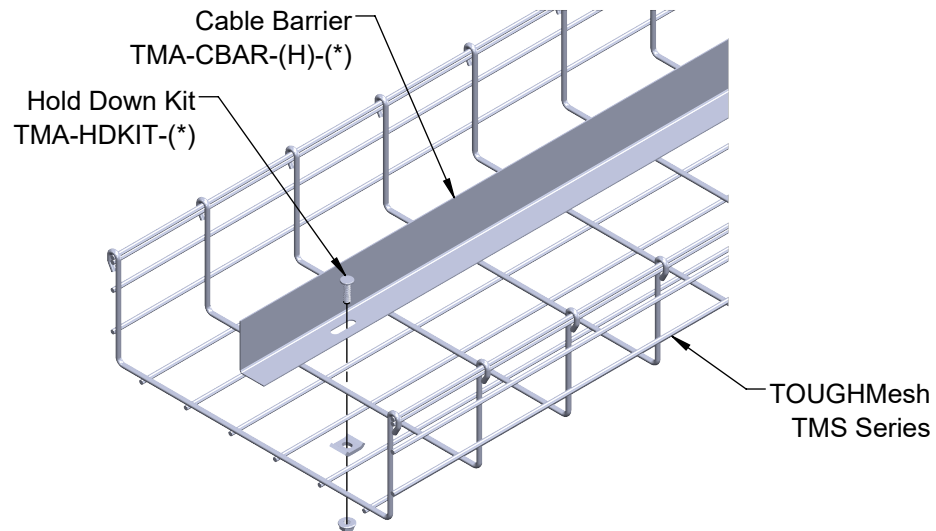


FIGURE 1

STEP 2:

Torque all hardware to 6ft-lbs (3 locations).

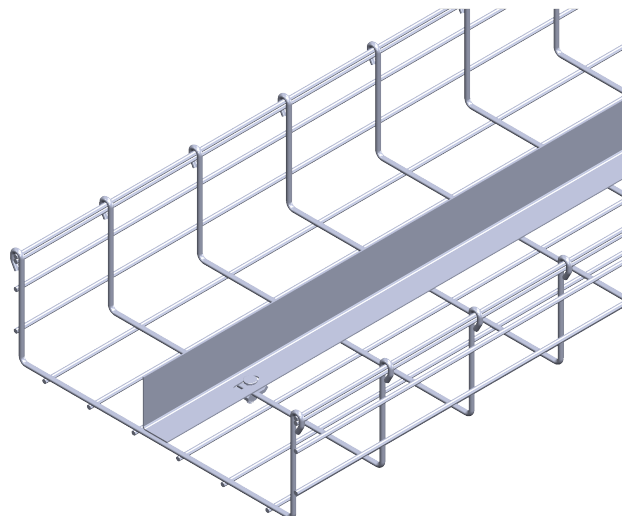


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50026_A



CT INNOVATIONS

CABLE BRIDGE PART NO. TMA-CBRG-(*) TOUGHMesh Accessories

STEP 1:

Prepare the Cable Bridge and align with the wirebasket tray. Install the hardware as shown below.

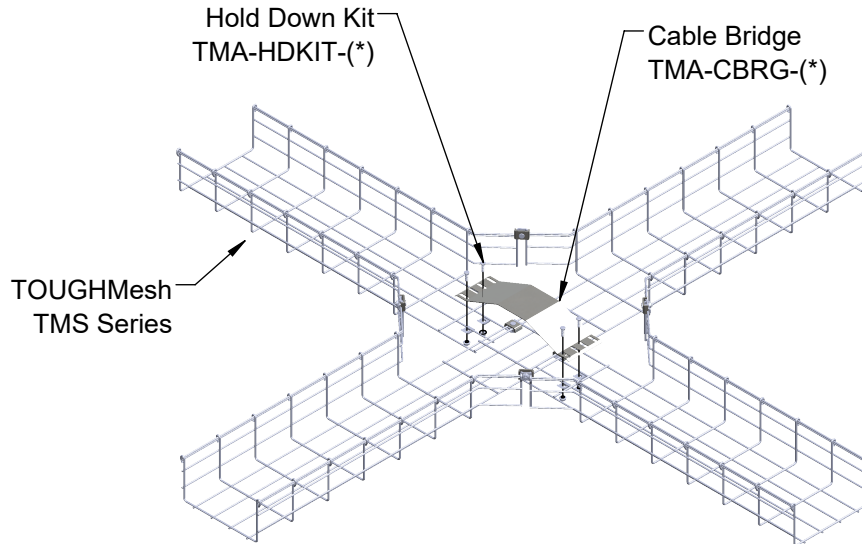


FIGURE 1

STEP 2:

Torque all hardware until snug.

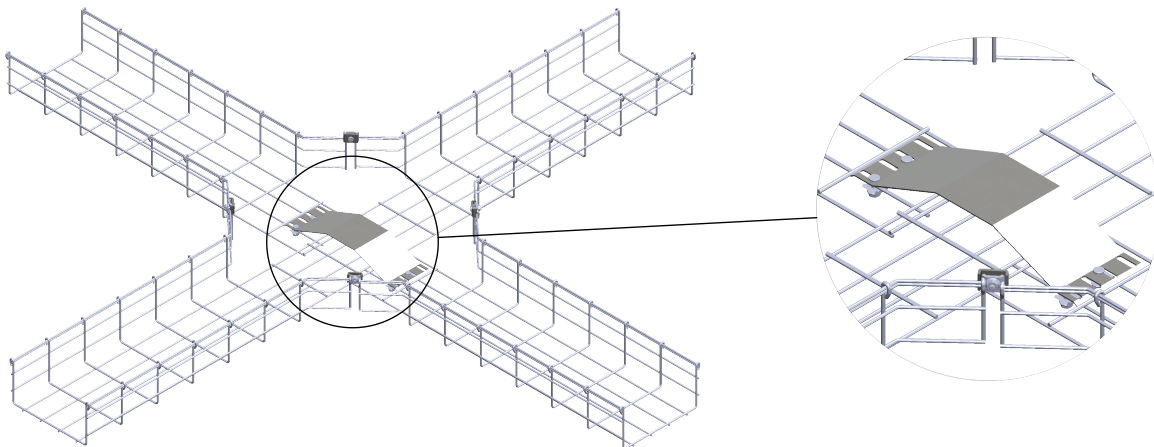


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50027_A



CT INNOVATIONS

CABLE DROP OUT TMA-CBLD-(*) TOUGHMesh Accessories

STEP 1:

Position the Cable Drop Out into the wirebasket tray in between the transverse wire as shown below.

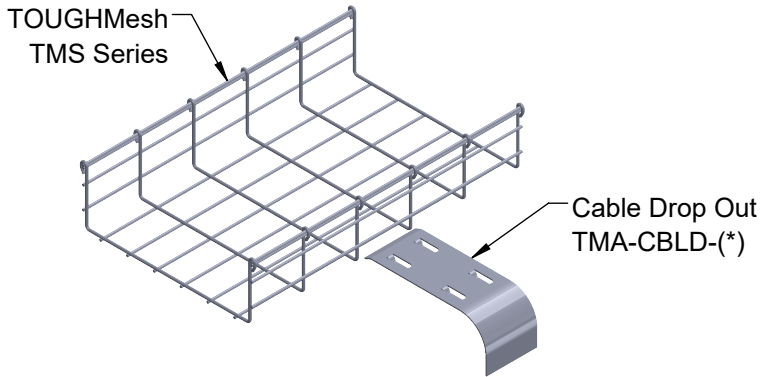


FIGURE 1

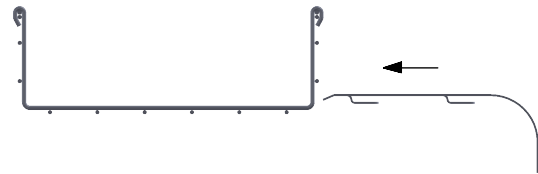


FIGURE 2

STEP 2:

Slide the Cable Drop Out into the wirebasket tray as shown in Figure 3, 4, 5 & 6 until it will fit and lock to the bottom longitudinal wires.

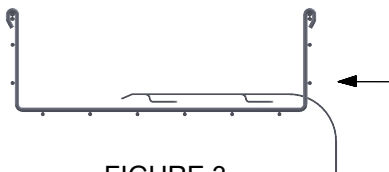


FIGURE 3

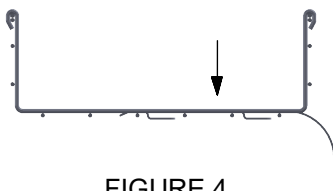


FIGURE 4

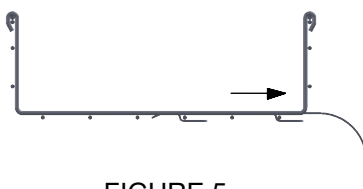


FIGURE 5

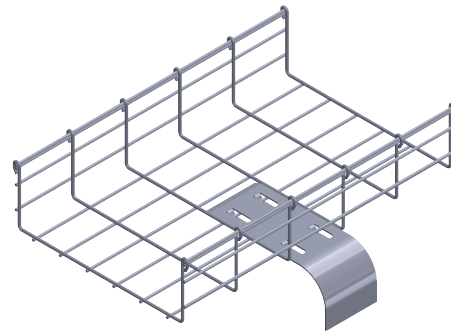


FIGURE 6

INSTALLATION INSTRUCTION

CTI-S50028_A



CT INNOVATIONS

ACCESSORY MOUNTING CLIP

TMA-AMC-(*)

TOUGHMesh Accessories

STEP 1:

Insert the Mounting Clip into the siderail bottom longitudinal wire as shown below.

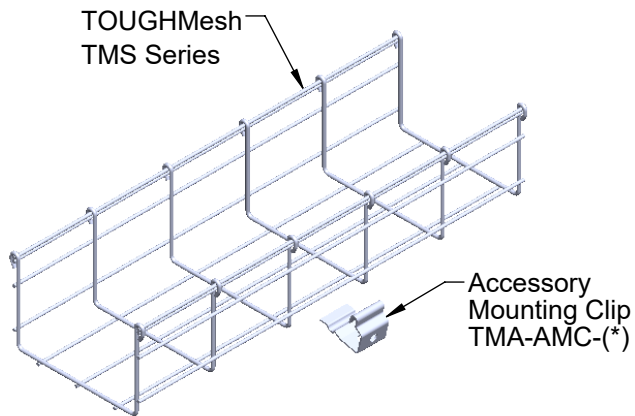


FIGURE 1

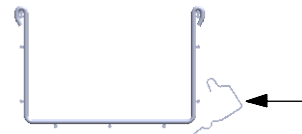


FIGURE 2

STEP 2:

Once the Mounting Clip is hook up into the wirebasket siderail bottom longitudinal wire, push the bottom of the Accessory Mounting Clip until it will snap into the bottom longitudinal wire as shown below.

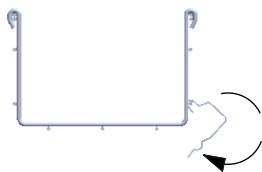


FIGURE 3

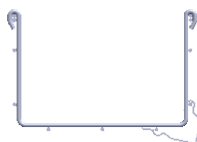


FIGURE 4

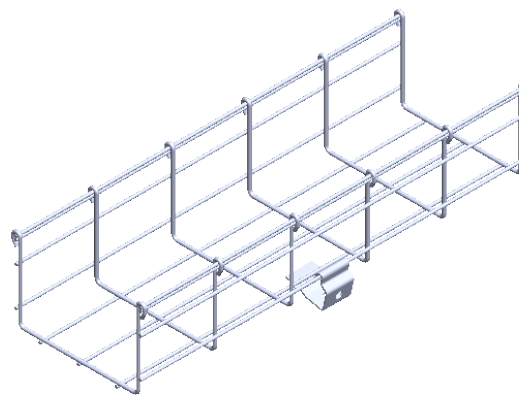


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50029_A



CT INNOVATIONS

STRUT RETENTION CLIP

TMA-SRC-(*)

TOUGHMesh Accessories

STEP 1:

Position the Strut Retention Clip into the bottom longitudinal wire of the wirebasket tray as shown below.

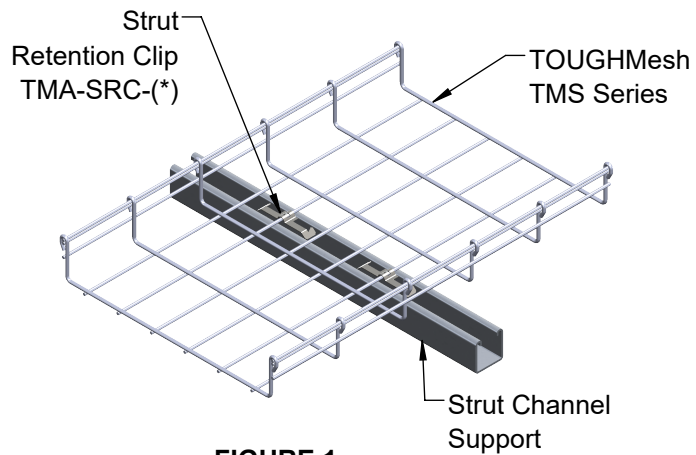


FIGURE 1

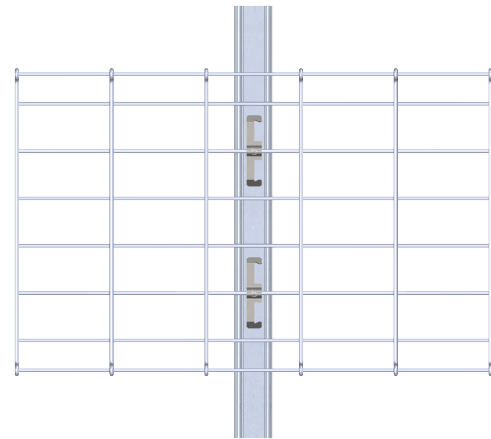


FIGURE 2

STEP 2:

Press the two sides of the a Strut Retention Clip as shown in Figure 3 then slide until it will snap into the strut channel lip as shown in Figure 4 and 5.

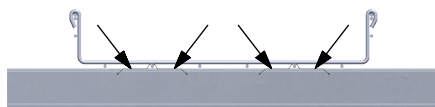


FIGURE 3

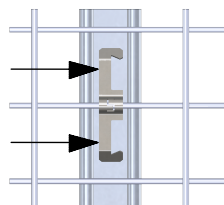


FIGURE 4

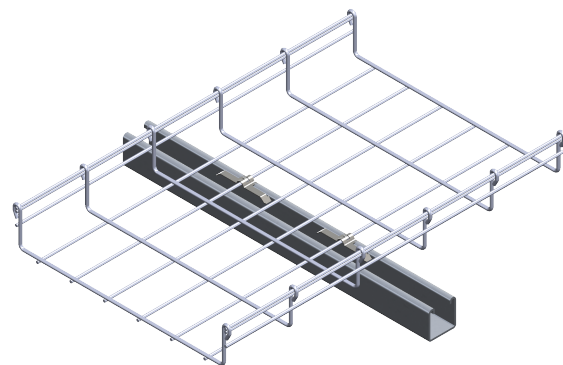


FIGURE 5

INSTALLATION INSTRUCTION

CTI-S50030_B



CT INNOVATIONS

ADJUSTABLE FLOOR STAND

TMA-ADJS-(*)

TOUGHMesh Accessories

STEP 1:

Determine the required length of the TOUGHStrut channel based on the width of the cable tray to be supported (See Table 1) and install the hardware as shown in Figure 1. Torque the hardware to 6ft-lbs.

TOUGHMesh P/N	TOUGHMesh WIDTH (in)	TOUGHStrut P/N	TOUGHStrut LENGTH (in)	FLAT CROSS WASHER QTY TMA-FLXW-(*)
TMS-(H)X2X10-(*)	2	TC2158-08-(*)	8	1
TMS-(H)X4X10-(*)	4	TC2158-10-(*)	10	1
TMS-(H)X6X10-(*)	6	TC2158-12-(*)	12	1
TMS-(H)X8X10-(*)	8	TC2158-14-(*)	14	2
TMS-(H)X10X10-(*)	10	TC2158-16-(*)	16	2
TMS-(H)X12X10-(*)	12	TC2158-18-(*)	18	2
TMS-(H)X16X10-(*)	16	TC2158-22-(*)	22	2
TMS-(H)X18X10-(*)	18	TC2158-24-(*)	24	2
TMS-(H)X20X10-(*)	20	TC2158-26-(*)	26	2
TMS-(H)X24X10-(*)	24	TC2158-28-(*)	28	2

(H) - Insert TOUGHMesh Tray Height (2, 4, 6 H)

(*) - Insert Material/Finish

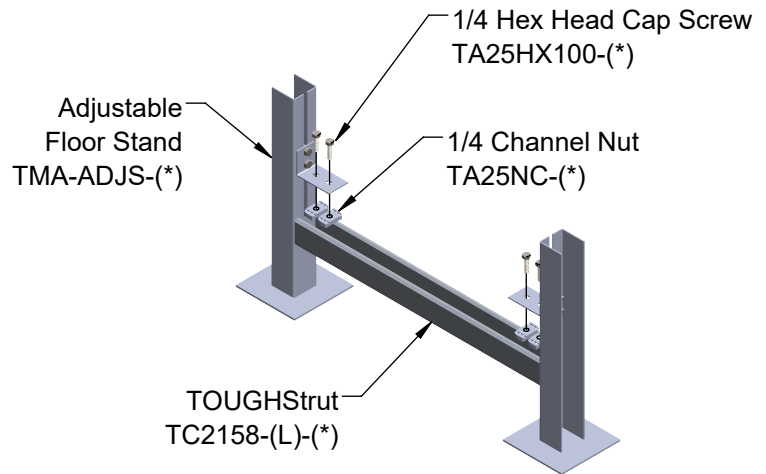


FIGURE 1

STEP 2:

Once the horizontal TOUGHStrut channel is installed on the adjustable floor stand bracket, slide up or down to set the support to the required elevation and torque the side attachment hardware to 6ft-lbs.

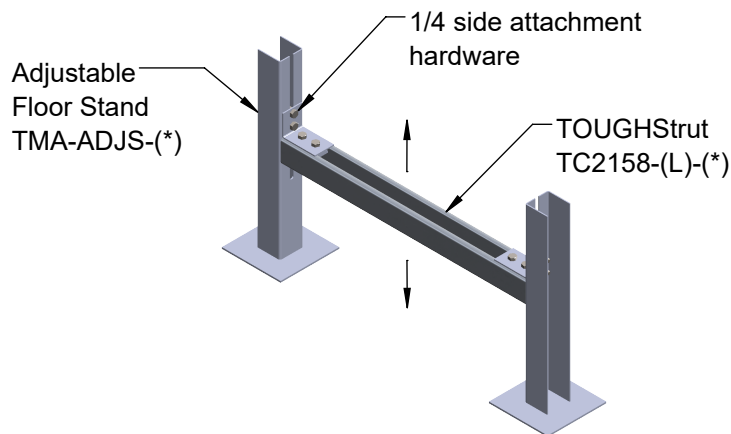


FIGURE 2

INSTALLATION INSTRUCTION

CTI-S50030_B



CT INNOVATIONS

ADJUSTABLE FLOOR STAND

TMA-ADJS-(*)

TOUGHMesh Accessories

STEP 3:

Install the TOUGHMesh tray and align the Flat Cross Washer with the tray bottom wire and install the hardware as shown.

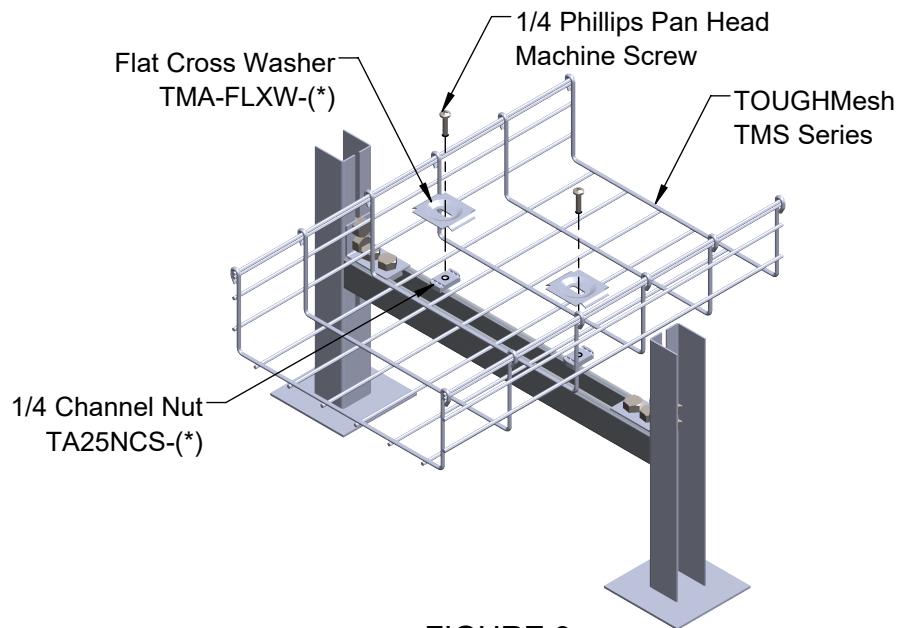


FIGURE 3

STEP 4:

Hold down clamp installation: Torque the hardware to 6ft-lbs.

Hold down expansion guide installation: Torque the hardware to 5ft-lbs.

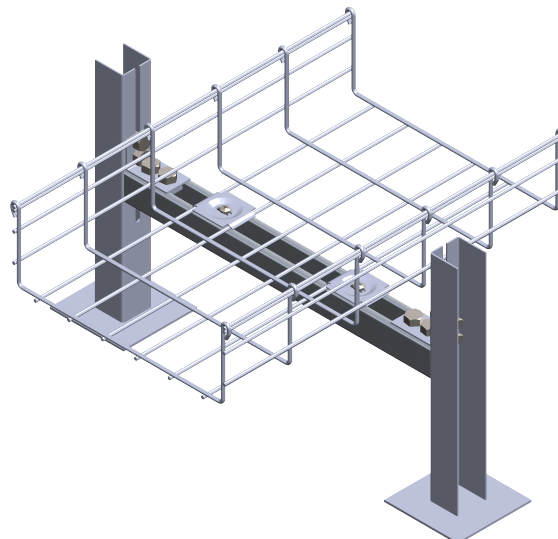


FIGURE 4

INSTALLATION INSTRUCTION

CTI-S50032_A01



CT INNOVATIONS

ISOLATOR PAD

TMA-XXXX

TOUGHMesh Accessories

OPTION 1: STRUT CHANNEL SUPPORT

STEP 1:

Align the Isolator pad with wirebasket tray bottom wire and install the hardware as shown.

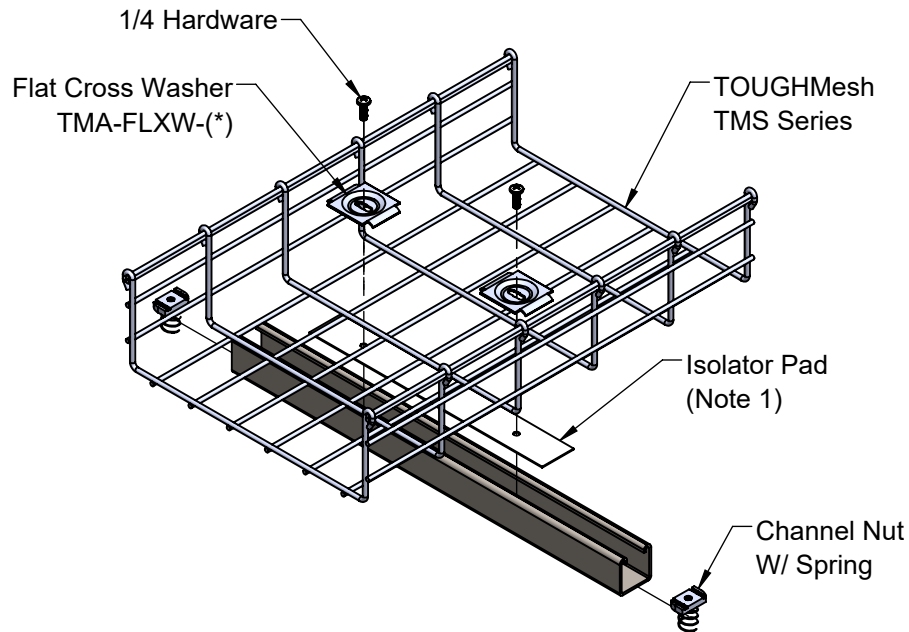


FIGURE 1

STEP 2:

Torque the hardware to 6ft-lbs.

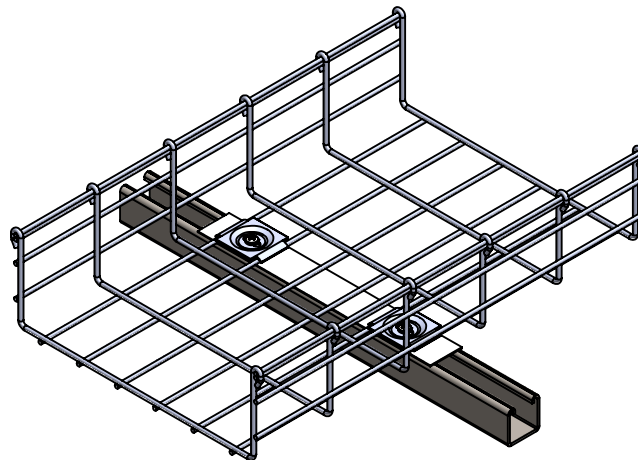


FIGURE 2

Note:

1. Refer to document no. CTI-S65002 Table 1 for isolation requirement between dissimilar cable tray and support materials.

INSTALLATION INSTRUCTION

CTI-S50032_A01



CT INNOVATIONS

ISOLATOR PAD

TMA-XXXX

TOUGHMesh Accessories

OPTION 2: STRUCTURAL STEEL SUPPORT

STEP 1:

Align the Isolator pad with wirebasket tray bottom wire and install the hardware as shown.

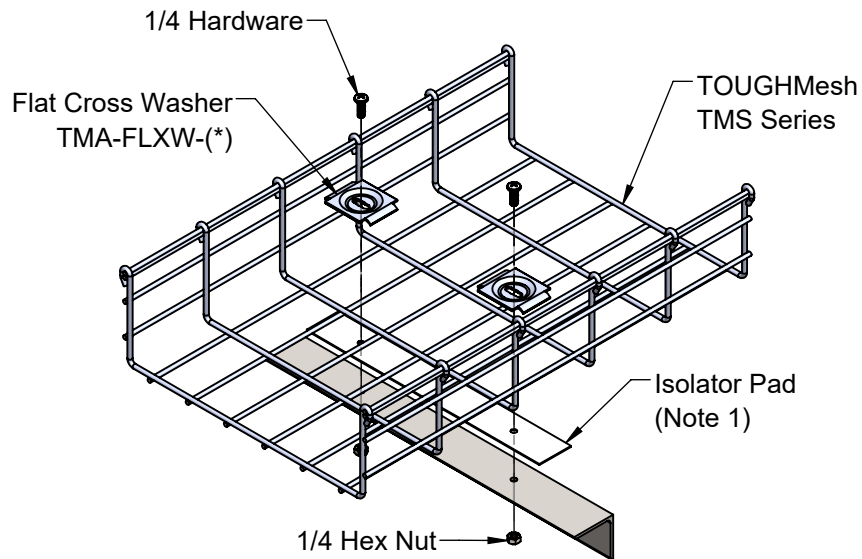


FIGURE 1

STEP 2:

Torque the hardware to 6ft-lbs.

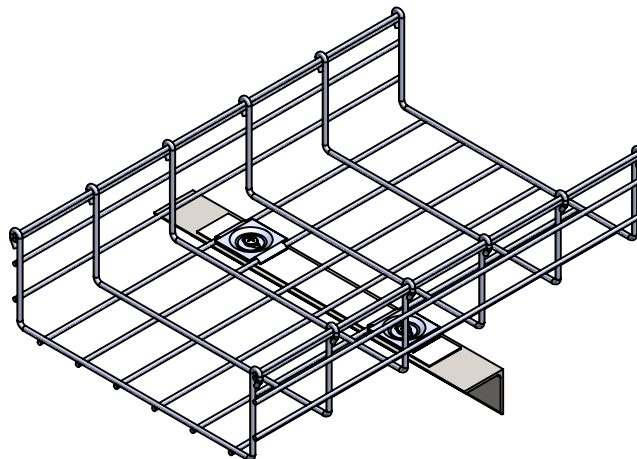


FIGURE 2

Note:

1. Refer to document no. CTI-S65002 Table 1 for isolation requirement between dissimilar cable tray and support materials.

INSTALLATION INSTRUCTION

CTI-S50033_A



CT INNOVATIONS

Expansion Joint Installation

(Mechanically Discontinuous)

STEP 1:

Identify the maximum spacing between expansion joints that provide for 1" (25mm) movement and the required gap settings between cable tray. Refer to Technical Data Sheet document no. CTI-S65001 for the step by step procedure.

STEP 2:

Once the maximum spacing between expansion joints and gap settings are identified, install the wirebasket tray based on these settings. Provide support within 2ft on each side of the expansion joints as shown in Figure 1.

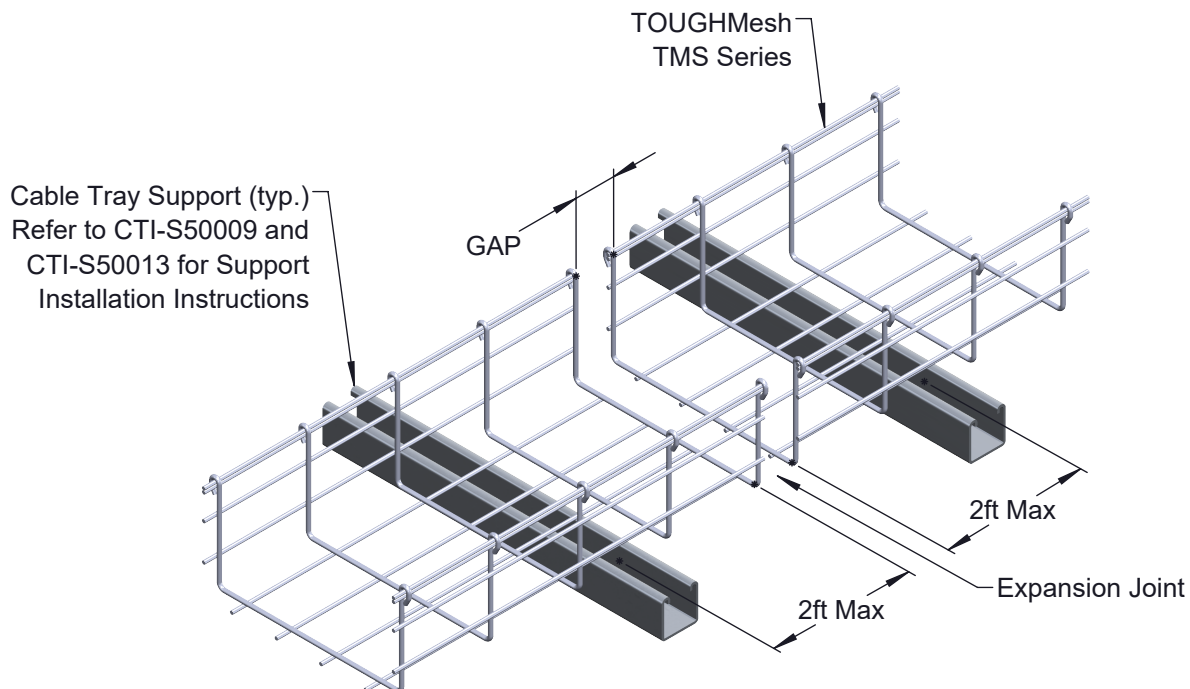


FIGURE 1



Expansion Joint Installation

(Mechanically Discontinuous)

STEP 3:

Determine the appropriate size of the grounding conductor according to NEC Articles 250 and 392 then install the ground bolt and grounding conductor as shown in Figure 2.

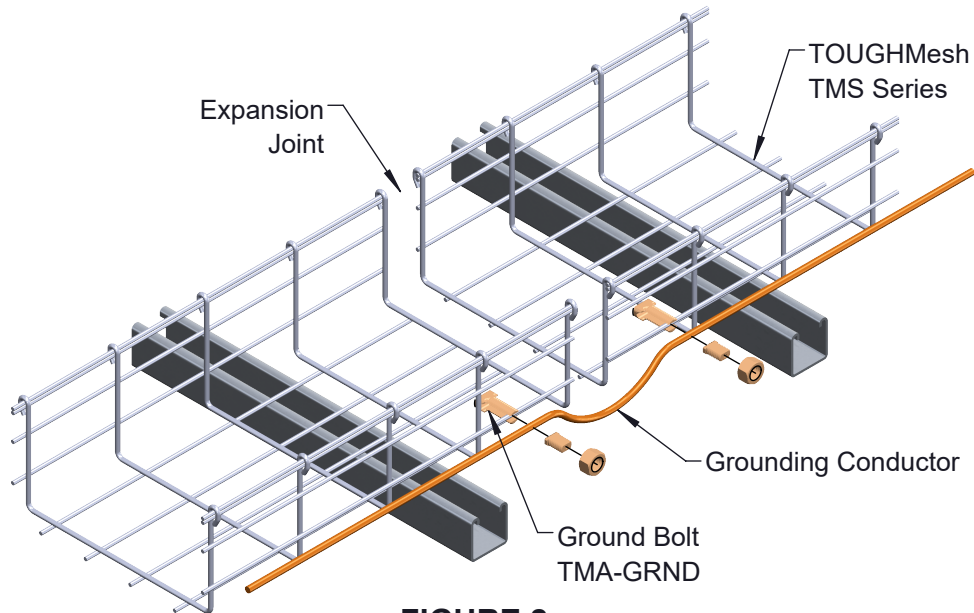


FIGURE 2

STEP 4:

Torque all ground bolt to 19 ft-lbs.

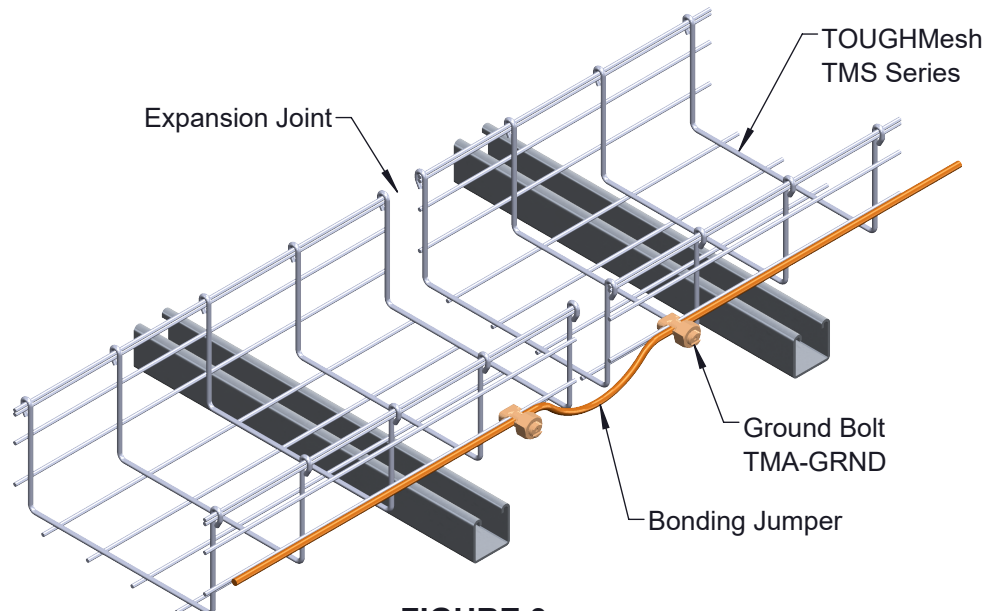


FIGURE 3

INSTALLATION INSTRUCTION

CTI-S50034_A



CT INNOVATIONS

Horizontal Tee From Sraight Sections Installation

TOUGHMesh Fitting

STEP 1:

Prepare the first tray and smoothly cut the threads of one wire side section as shown in Figure 1, cut the required segments "P" as indicated in the table. Force must be applied to make an approximately 45deg bend on the "B" segment.

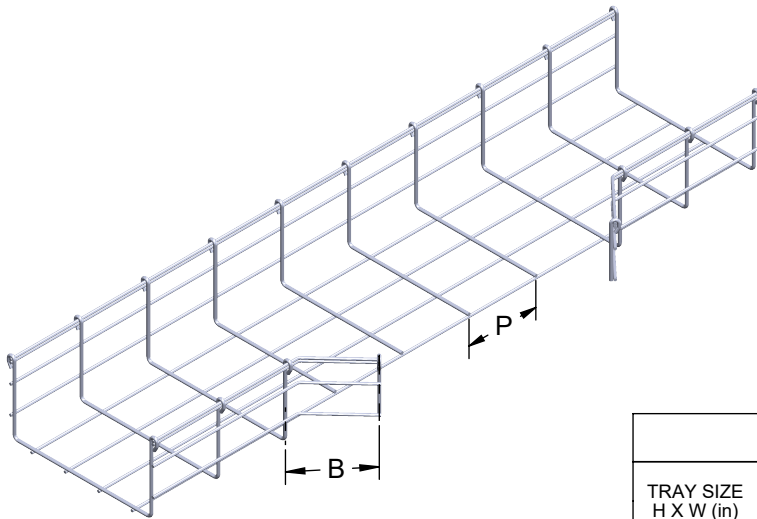


FIGURE 1

STEP 2:

Prepare the second tray and smoothly cut the threads of both wire side section as shown in Figure 2, cut the required segments "Q" as indicated in the table. Force must be applied to make an approximately 45deg bend on the "B" segment.

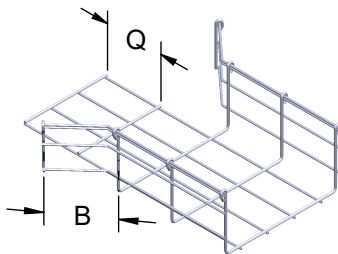


FIGURE 2

TRAY SIZE H X W (in)	SPLICE CHART			NO. OF SEGMENTS TO BE REMOVED	
	WASHER SPLICE KIT QTY		HOLD DOWN KIT	P	Q
	SIDERAIL	BOTTOM			
2X2	2	1	-	1	1
2X4	2	1	-	2	1
2X6	2	1	4	3	1
2X8	2	1	-	3	1
2X10	2	1	4	4	1
2X12	2	1	-	4	1
2X16	2	2	-	5	1
2X18	2	2	4	6	1
2X20	2	2	-	6	1
2X24	2	2	-	7	1
4X4	2	2	-	2	1
4X6	2	2	4	3	1
4X8	2	3	-	3	1
4X10	2	3	4	4	1
4X12	2	4	-	4	1
4X16	2	4	-	5	1
4X18	2	4	4	6	1
4X20	2	5	-	6	1
4X24	2	5	-	7	1
6X8	4	2	-	3	1
6X10	4	2	4	4	1
6X12	4	3	-	4	1
6X16	4	3	-	5	1
6X18	4	3	4	6	1
6X20	4	4	-	6	1
6X24	4	4	-	7	1



Horizontal Tee From Straight Sections Installation

TOUGHMesh Fitting

STEP 3:

Position the two straight sections as shown in Figure 3, use the washer splice kits to fix the bottom wire sections and details A & B to fix the wire side section.

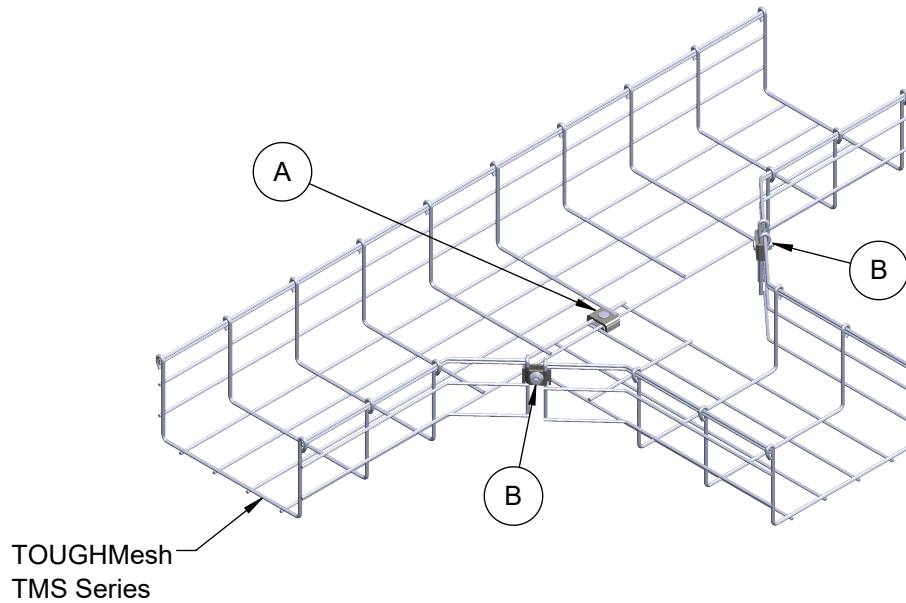
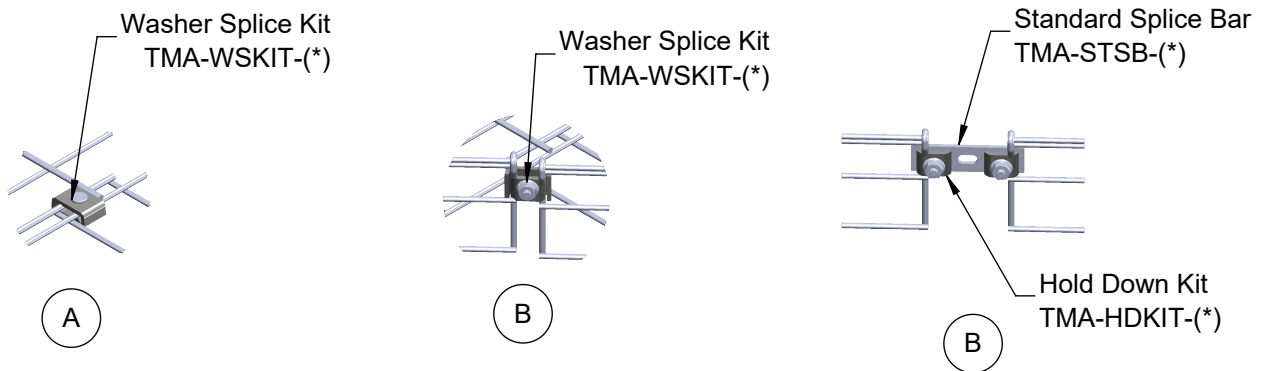


FIGURE 3



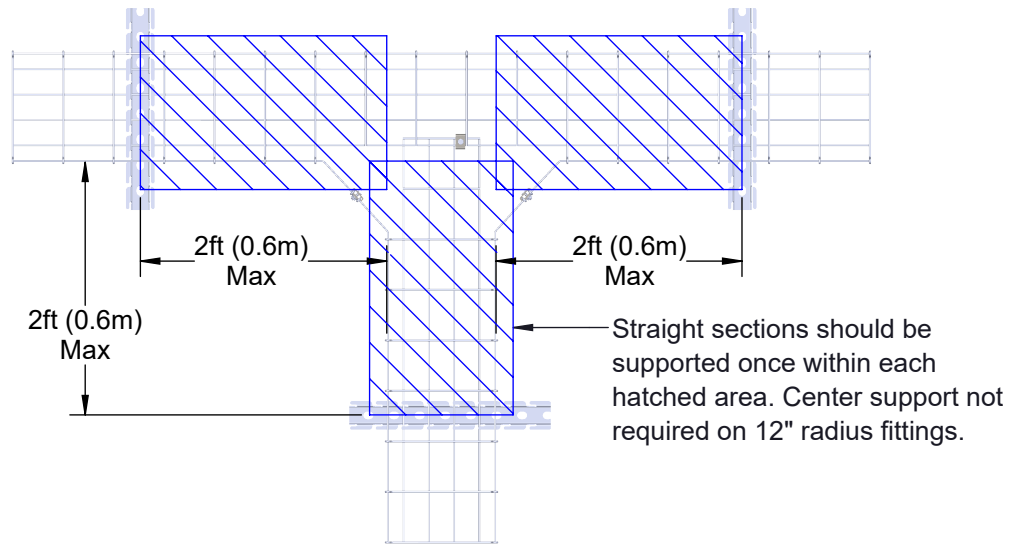


Horizontal Tee From Straight Sections Installation

TOUGHMesh Fitting

STEP 4:

Provide support on each side within 2ft from the splice location per NEMA VE-2.



PLAN VIEW

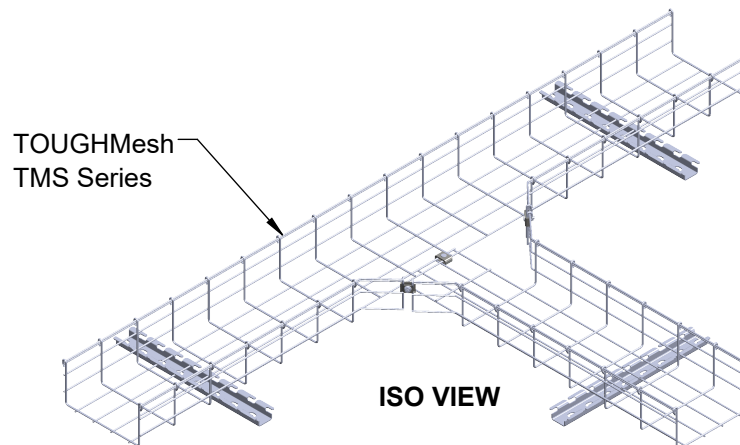


FIGURE 4