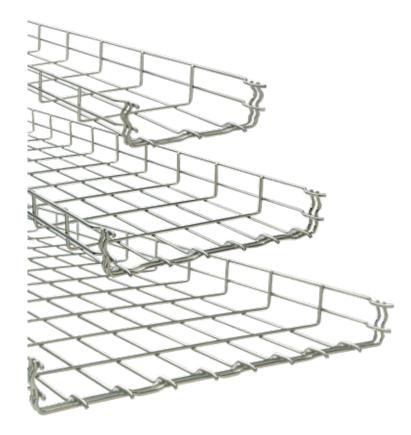
С

ExpressTray®

Steel wire basket tray



ExpressTray Steel wire basket tray

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QuickLok tray profile

Since its introduction, the ExpressTray system has been successfully installed in a range of commercial and industrial environments across Canada. With every new project comes new challenges and valuable input from end-users and facility managers. The products in this section are a result of this experience. Two major time saving solutions can be found in this section.

— 01 Insert — 02 Push down — 03 Locked



QuikLok tray – Connections at record speed

In any project, installation time is key. Our patented QuikLok tray profile connects straight lengths of tray at record speed. The name says it all. No connection components or tools required.

Lengths of tray lock together in a matter of seconds with no connection components or tools and with no loss of stability or load-bearing capacity. Load tests show that QuikLok is absolutely equal to systems with traditional bolted hardware.

For complete ordering information, see pp. B6–B9.

TabLok system

--01 Slide --02 Push tabs down* --03 Locked



01



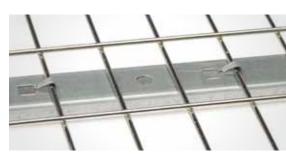
TabLok bracket support system

Attaching ExpressTray tray lengths to brackets has never been easier or faster. The TabLok profile eliminates the need for hardware, reducing installation time and cost. Only a screwdriver is required.

The TabLok profile is available in straight bracket lengths, center-hung assemblies, "L" style and "J" style brackets.

See pages C18-C20 for complete ordering information

*Tabs are designed to be bent from above or below.



2 in. deep U-profile



Fast connection system, low profile for confined spaces. The 2 in. deep U-profile is ideally suited for light- to medium-duty commercial and industrial applications where space is at a premium. Choose the QuikLok fast connection profile for installations requiring long runs of straight cable tray lengths.

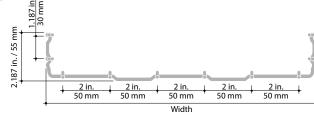
Description

- Welded, wire-mesh cable management system made of high strength steel wire
- Standard tray length is 10 feet nominal (3 meters actual)
- Mesh measurement of 2 in. x 4 in. (50 x 102 mm) is standard for all widths of tray
- Nine (9) tray widths available ranging from 2 in. to 24 in. (50 to 610 mm)
- Electro-galvanized, hot-dipped galvanized, stainless steel (304 and 316) finishes available
- Temperature range -45 °C (-49 °F) to 150 °C (302 °F)

For loading data, refer to the tables on pages C56–C57.

							anized – ications	
Wire count	Width in.	Width mm	Cat no.	Wire ø in.			Weight kg/m	
	2	50	ETQ 2002SE10 ¹	0.15	3.9	0.45	0.67	
Ļ	4	100	ETQ 2004SE10 ¹	0.15	3.9	0.48	0.72	
l,	6	150	ETQ 2006SE10 ¹	0.15	3.9	0.58	0.86	
l	8	200	ETQ 2008SE10	0.15	3.9	0.67	1.00	
l	12	300	ETQ 2012SE10	0.19	4.8	1.31	1.95	
	16	400	ETQ 2016SE10	0.19	4.8	1.60	2.38	
1	18	450	ETQ 2018SE10	0.19	4.8	1.60	2.38	
1	20	500	ETQ 2020SE10	0.19	4.8	1.87	2.79	
1	24	600	ETQ 2024SE10	0.19	4.8	2.16	3.21	





2 in. deep U-profile

Features

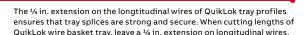
- QuikLok connection Locks lengths of tray together in seconds with no hardware or tools required
- Low profile Provides flexibility in confined spaces
- User-friendly Installs in less time than conventional tray with no complex layouts, a minimum of tools and less wasted material
- Wide range of tray widths 4 in. to 24 in. widths accommodate as many or as few cables as required
- 2 in. x 4 in. (50 x 102 mm) mesh size Allows cables to be routed in or out without cutting wires
- Open design Continuous airflow prevents overheating and the build-up of dust and contaminants
- Chamfered side edge Minimizes risk of injury for installer and damage to cables during installation

Applications

Long, straight runs requiring connection of many tray lengths. Network cabling, wiring closets, fiber-to-desktop applications and more, the 2 in. profile is often used in suspended ceiling plenum areas and under computer room flooring.



corrosior	protec	pplication, ou	ipped galv ons requir tdoor app osion acce	ing more lications	Indoor and the	outdoo	or applie	steel (typ cations re osion pro	quiring	Indoor and the	loutdo	or appli	steel (typ cations re rosion pre	equiring
Cat n	Wi o.øi		e Weight n lb/ft.	Weight kg/m	Cat no.	Wire ø in.	Wire ø mm	Weight lb/ft.	Weight kg/m	Cat no.	Wire ø in.	Wire ø mm	Weight lb/ft.	Weight kg/m
ETQ 2002SH1	0 ¹ 0.1	15 3.	9 0.47	0.70	ETQ 2002SS101	0.15	3.9	0.45	0.67	ETQ 2002S610 ¹	0.15	3.9	0.45	0.67
ETQ 2004SH1	0 ¹ 0.1	15 3.	9 0.48	0.71	*ETQ 2004SS101	0.15	3.9	0.49	0.73	ETQ 2004S610 ¹	0.15	3.9	0.49	0.73
ETQ 2006SH1	0 ¹ 0.1	15 3.	9 0.60	0.90	*ETQ 2006SS101	0.15	3.9	0.59	0.88	ETQ 2006S610 ¹	0.15	3.9	0.59	0.88
ETQ 2008SH1	0 ¹ 0.1	15 3.	9 0.70	1.04	*ETQ 2008SS101	0.15	3.9	0.65	0.97	ETQ 2008S610 ¹	0.15	3.9	0.65	0.97
ETQ 2012SH:	10 0.1	19 4.	8 1.35	2.00	*ETQ 2012SS101	0.19	4.8	1.28	1.91	ETQ 2012S610 ¹	0.19	4.8	1.28	1.91
ETQ 2016SH	10 0.1	19 4.	8 1.64	2.44	*ETQ 2016SS101	0.19	4.8	1.63	2.43	*ETQ 2016S610 ¹	0.19	4.8	1.63	2.43
ETQ 2018SH:	10 0.1	19 4.	8 1.64	2.44	*ETQ 2018SS101	0.19	4.8	1.59	2.37	*ETQ 2018S6101	0.19	4.8	1.59	2.37
ETQ 2020SH	10 0.1	19 4.	8 1.94	2.88	*ETQ 2020SS101	0.19	4.8	1.93	2.87	*ETQ 2020S610 ¹	0.19	4.8	1.93	2.87
ETQ 2024SH:	10 0.1	19 4.	8 2.23	3.32	*ETQ 2024SS101	0.19	4.8	2.22	3.31	*ETQ 2024S610 ¹	0.19	4.8	2.22	3.31



Note: To ensure electrical continuity, the Blackburn® GPT-2 grounding connnector or the ETG24-LL214 lay-in ground lug (see pages C32–C33) and a ground wire must be used in all QuikLok series tray applications.

* Minimum order quantities may apply. Please contact your inside sales representatives for further details.

¹ Not UL Listed

4 in. deep U-profile



Fast connection system, high profile for heavier loads. The 4 in. deep U-profile is ideally suited for light- to medium-duty commercial and industrial applications where more load capacity is required. The higher profile securely contains bulky cables, reducing the risk of cables falling out of heavily loaded trays. Choose the QuikLok fast connection profile for installations requiring long runs of straight cable tray lengths.

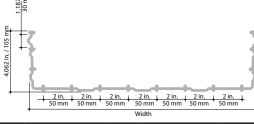
Description

- Welded, wire-mesh cable management system made of high strength steel wire
- Standard tray length is 10 feet nominal (3 meters actual)
- Mesh measurement of 2 in. x 4 in. (50 x 102 mm) is standard for all widths of tray
- Eight (8) tray widths available ranging from 4 in. to 24 in. (102 to 610 mm)
- Electro-galvanized, hot-dipped galvanized, stainless steel (304 and 316) finishes available
- Temperature range -45 °C (-49 °F) to 150 °C (302 °F)

For loading data, refer to the tables on pages C56–C57.

						ctro-galv door appl		
Wire count	Width in.	Width mm	Cat no.	Wire ø in.	Wire ø mm	Weight lb/ft.	Weight kg/m	
	4	100	ETQ 4004SE10 ¹	0.15	3.9	0.67	1.00	
	6	150	ETQ 4006SE10 ¹	0.15	3.9	0.75	1.11	
	8	200	ETQ 4008SE10	0.19	4.8	1.30	1.94	
l	12	300	ETQ 4012SE10	0.19	4.8	1.59	2.37	
1	16	400	ETQ 4016SE10	0.19	4.8	1.87	2.78	
łł	18	450	ETQ 4018SE10	0.19	4.8	2.02	3.00	
l	20	500	ETQ 4020SE10	0.19	4.8	2.14	3.19	
l	24	600	ETQ 4024SE10	0.19	4.8	2.41	3.63	





4 in. deep U-profile

Features

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• •

- QuikLok connection Locks lengths of tray together in seconds with no hardware or tools required
- Higher profile Enhances loading capacity, increases strength for more demanding applications and prevents cable fallout
- User-friendly Installs in less time than conventional tray with no complex layouts, a minimum of tools and less wasted material
- Wide range of tray widths 4 in. to 24 in. widths accommodate as many or as few cables as required
- 2 in. x 4 in. (50 x 102 mm) mesh size Allows cables to be routed in or out without cutting wires
- Open design Continuous airflow prevents overheating and the build-up of dust and contaminants
- Chamfered side edge Minimizes risk of injury for installer and damage to cables during installation

Applications

Long, straight runs requiring connection of many tray lengths.Network cabling, wiring closets, fiber-to-desktop applications and more, this tray profile can be installed in suspended ceiling plenum areas and under computer room flooring. It is often used to route cables on main runs in combination with the 2 in. U-profile for branch runs.



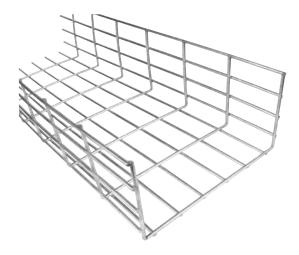
quiring	Stainless steel (type 3 Indoor and outdoor applications requ the maximum corrosion protec				quiring	iteel (typ ations re osion pro	r applic	outdoo	Indoor and the	ng more ications	ped galva s requirir oor appli sion accel	lication on, outd	or app otectic	corrosion pr
Weight kg/m	Weight lb/ft.	Wire ø mm	Wire ø in.	Cat no.	Weight kg/m	Weight lb/ft.	Wire ø mm	Wire ø in.	Cat no.	Weight kg/m	Weight lb/ft.	Wire ø mm	Wire ø in.	Cat no.
0.99	0.66	3.9	0.15	ETQ 4004S610 ¹	0.99	0.66	3.9	0.15	ETQ 4004SS10 ¹	1.04	0.70	3.9	0.15	ETQ 4004SH10 ¹
1.10	0.74	3.9	0.15	ETQ 4006S6101	1.10	0.74	3.9	0.15	ETQ 4006SS101	1.16	0.78	3.9	0.15	ETQ 4006SH10 ¹
1.93	1.30	4.8	0.19	ETQ 4008S6101	1.93	1.30	4.8	0.19	ETQ 4008SS101	2.01	1.35	4.8	0.19	ETQ 4008SH10
2.35	1.58	4.8	0.19	ETQ 4012S6101	2.35	1.58	4.8	0.19	ETQ 4012SS101	2.44	1.64	4.8	0.19	ETQ 4012SH10
2.77	1.86	4.8	0.19	ETQ 4016S6101	2.77	1.86	4.8	0.19	ETQ 4016SS10 ¹	2.88	1.94	4.8	0.19	ETQ 4016SH10
_	_	_	—	ETQ 4018S610°	_	_	_	_	ETQ 4018SS10*	3.10	2.08	4.8	0.19	ETQ 4018SH10
3.19	2.14	4.8	0.19	ETQ 4020S6101	3.19	2.14	4.8	0.19	ETQ 4020SS101	3.33	2.24	4.8	0.19	ETQ 4020SH10
3.61	2.43	4.8	0.19	ETQ 4024S610 ¹	3.61	2.43	4.8	0.19	ETQ 4024SS10 ¹	3.75	2.52	4.8	0.19	ETQ 4024SH10



The ¼ in. extension on the longtitudinal wires of QuikLok tray profiles ensures that tray splices are strong and secure. When cutting lengths of QuikLok wire basket tray, leave a ¼ in. extension on longitudinal wires.

Note: To ensure electrical continuity, the Blackburn GPT-2 grounding connnector or the ETG24-LL214 lay-in ground lug (see page C33) and a ground wire must be used in all QuikLok series tray applications.

6 in. deep U-profile



High profile for heavier loads. The 6 in. deep U-profile ExpressTray is ideally suited for light- to medium-duty applications where more load capacity is required. The higher profile securely contains bulky cables, reducing the risk of cables falling out of heavily loaded trays.

Description

- Welded wire-mesh, cable management system made of high mechanical strength steel wire
- Standard tray length is 10 feet nominal (3 meters actual)
- Mesh measurement of 2 in. x 4 in. (50 x 102 mm) is standard for all widths of tray
- Four (4) tray widths available ranging from 12 in., 18 in., 20 in. and 24 in. (305, 457, 508 and 610 mm)
- Electro-galvanized, hot-dipped galvanized
- Temperature range -45 °C (-49 °F) to 150 °C (302 °F)
- Meets CSA class "C" loading at 3 m support spans (see page 58–59)

For loading data, refer to the tables on pages C58-C59.

Applications

Network cabling, wiring closets, fiber-to-desktop applications and more, this tray profile can be installed in suspended ceiling plenum areas and under computer room flooring and is often used to route cables on main runs in combination with the 2 in. and 4 in. U-profile for branch runs.

Features

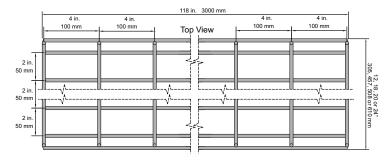
- Higher profile Enhances loading capacity, increases strength for more demanding applications and prevents cable fallout
- User-friendly Installs in less time than conventional tray with no complex layouts, a minimum of tools and less wasted material
- Wide range of tray widths 12 in., 18 in., 20 in. and 24 in. (305, 457, 508 and 610 mm) widths accommodate as many or as few cables as required
- 2 in. x 4 in. (50 x 102 mm) mesh size Allows cables to be routed in or out without cutting wires
- Open design Continuous airflow prevents overheating and the build-up of dust and contaminants
- Chamfered side edge Minimizes risk of injury for installer and damage to cables during installation

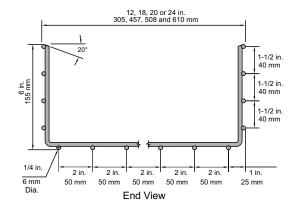
6 in. deep U-profile

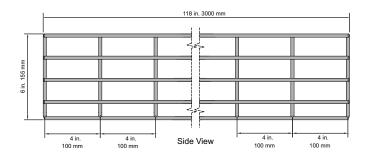


					Electro-galvanized – Indoor applications		
Wire count	Width in.	Width mm	Cat no.	Wire ø in.		Weight lb/ft.	Weight kg/m
l	12	300	ETU 6012SE10	0.24	6.0	2.88	4.28
l	18	450	ETU 6018SE10	0.24	6.0	3.43	5.10
1	20	500	ETU 6020SE10	0.24	6.0	3.75	5.58
l	24	600	ETU 6024SE10	0.24	6.0	4.23	6.30

Diagrams







Note:

Splices: Universal splices (page C16) and adjustable splices (page C17) will function on the 6 in. deep U-profile.

Brackets: Due to the extreme wire size and load ratings of the 6 in. deep U-profile, TabLok system brackets will not function on the 6 in. deep U-profile.

The suggested method to support this profile is Superstrut metal framing channel (page C28).

Clamps and clips: For horizontal applications, the 6 in. deep U-profile tray can be clipped to strut using the "Bat" clip (page C33) or the universal clamp (page C27).

For vertical applications, the universal clamp (page C27) should be used to attach the 6 in. deep U-profile to the strut (using a bolt and spring-nut).

21/2 in. deep C-profile



High strength for demanding applications The 2¹/₂ in. C-profile is ideally suited for more demanding applications that require high strength and cable protection in a lower profile. The additional rigidity offered by the C-profile makes possible dual-purpose installations such as installing power and communications cabling in one main run.

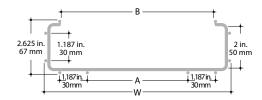
Description

- Welded wire-mesh, cable management system made of high mechanical strength steel wire
- Standard tray length is 10 feet nominal (3 meters actual)
- Mesh measurement varies according to tray width (refer to dimensions below)
- Five (5) tray widths available ranging from 2 in. to 16 in. (50 to 406 mm)
- Available in hot-dipped galvanized steel and stainless steel (304)
- Temperature range -45 °C (-49 °F) to 150 °C (302 °F)

For loading data, refer to the tables on pages C58-C59.

Wire count	Width (W) in.	Width (W) mm	Width (A) in.	Width (A) mm	Width (B) in.	Width (B) mm	Width (C) in.	Width (C) mm
	2	50	1.187	30	1	25	_	_
	4	100	3.125	80	3	75	_	_
	8	200	4.75	120	6.875	175	_	_
	12	300	4.75	120	10.75	275	2	50
(<u> </u>	16	400	4.75	120	14.75	375	4	100

Diagrams



21/₂ in. deep C-profile

Features

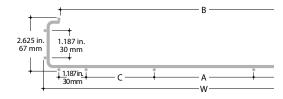
- Flanged sides Increase tray rigidity and strength while providing protection and containment for cables
- C-profile Offers increased load capacity in a lower profile
- High rigidity and loading capabilities Increase potential for multi-use applications and maximize use of space
- User-friendly Installs in less time than conventional tray with no complex layouts, a minimum of tools and less wasted material
- Wide range of tray widths 2 in. to 16 in. (50 to 406 mm) widths accommodate as many or as few cables as required
- Open design Allows cables to be routed in or out without cutting wires and provides continuous airflow, preventing overheating and the build-up of dust and contaminants
- Chamfered side edge Minimizes risk of injury for installer and damage to cables during installation

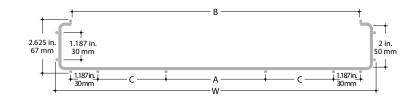
Applications

Structured cabling for voice, power and data applications in commercial buildings, industrial facilities, manufacturing plants and outdoor installations.



	••	requiring mo	Hot-dipped ga ore corrosion p o corrosion ac	orotection,		Indoo	or and outdo	ainless steel (or application um corrosion	s requiring
Cat no.	Wire ø in.	Wire ø mm	Weight lb/ft.	Weight kg/m	Cat no.	Wire ø in.	Wire ø mm	Weight lb/ft.	Weight kg/m
ETC 2502SH10 ¹	0.18	4.5	0.87	1.32	ETC 2502SS10 ¹	0.18	4.5	0.84	1.25
ETC 2504SH10 ¹	0.18	4.5	0.94	1.40	ETC 2504SS10 ¹	0.18	4.5	0.84	1.34
ETC 2508SH10	0.18	4.5	1.21	1.80	ETC 2508SS10 ¹	0.18	4.5	1.22	1.81
ETC 2512SH10	0.18	4.5	1.41	2.10	_	_	_	_	_
ETC 2516SH10	0.18	4.5	1.61	2.40	_	_	_	_	_





¹ Not UL Listed

This profile is not available in electro-galvanized steel.

21⁄₂ in. deep L-profile



The L-profile ExpressTray uses existing structures, such as columns and beams, to route cables by creating an enclosed space between the tray and structural steel profiles.

Description

- Welded wire-mesh, cable management system made of high mechanical strength steel wire
- Standard tray length is 6 feet nominal (2 meters actual)
- Hot-dipped galvanized finish
- Temperature range -45 °C (-49 °F) to 150 °C (302 °F)

Applications

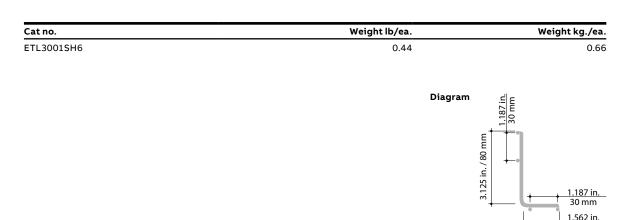
Structured cabling for voice, power and data applications in commercial buildings, industrial plants, manufacturing facilities and outdoor installations.

Drilling holes and welding directly onto I-beams is prohibited by building codes. Use beam clamps shown on page C34.

Features

- Angled design Makes use of existing structures for drops and runs, simplifying installation
- User-friendly Installs in less time than conventional tray with no complex layouts, a minimum of tools and less wasted material
- Open design Allows cables to be routed in or out without cutting wires and provides continuous airflow, preventing overheating and the build-up of dust and contaminants
- Chamfered side edge Minimizes risk of injury for installer and damage to cablesduring installation

40 mm



Angular offset wire cutters and nuts drivers



The ExpressTray cable management system is designed to adapt quickly and easily to changing specifications and project requirements. All tray is cut to measure on the job site using these top quality, angular offset wire cutters, bent to the correct radius and then installed using the nut driver and the appropriate ExpressTray hardware and supports.

For the best results, always use ExpressTray wire cutters. With blades made of hardened steel alloy, these wire cutters are easy to use and produce a quick, clean cut. Refer to Figure 1 for correct tool positioning and Figure 2 for wire cutting order. Place all ExpressTray bottom-side up before cutting for optimum results.

			Weight	C	Overall length
Cat no.	Description	lb/ea.	kg/ea.	in.	cm
ET-DRIVER	10 mm Nut driver	0.22	0.10	6.5	16.5
ET-SOCKET	10 mm Nut socket	0.07	0.03	2.5	6.4

01

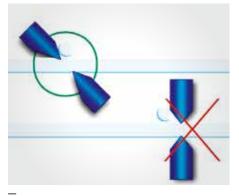
Figure 1 correct positioning – Position the blades on the cross wire and cut away from the new end

02

Figure 2 cutting order – Place tray bottom-side up and cut wires in the order indicated

Wear safety glasses and gloves when cutting tray.

Warning: Wire cutters often leave sharp projections on the cut wire. For optimum safety, ABB strongly recommends that all sharp ends be removed with an electric grinder or file.





02

01

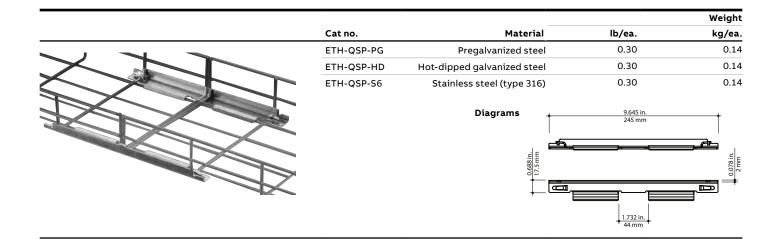
C15

Splices

Quick splice

Connect straight lengths up to 24 in. wide using only two quick splices – no other components required. Simply bend tabs down and lock into position using pliers. Compatible with all profiles, the quick splice is available in pregalvanized steel, hot-dipped galvanized steel and stainless steel (type 316).

Express tip: refer to page C39 for application example. Tool required: pliers



Universal splice

The most widely used connection method for non-radiused bends or joints, the universal splice is compatible with all profiles.

Available in electro-galvanized and hot-dipped galvanized steel as well as stainless steel (types 304 and 316).

Express tip: Refer to pages C39, C40, C43, C44 and C46 for application examples. Tool required: $10\ mm$ nut driver

				Weight
	Cat no.	Material	lb/ea.	kg/ea.
	ETH-SP-EG	Electro-galvanized steel	0.13	0.06
02	ETH-SP-HD	Hot-dipped galvanized steel	0.13	0.06
l'a	ETH-SP-SS	Stainless steel (type 304)	0.13	0.06
	ETH-SP-S6	Stainless steel (type 316)	0.13	0.06
		Diagrams	uigeri uigeri Botto	

Splices

Adjustable splice

Used to construct angles or bends with a radius, the adjustable splice is designed for ease of installation when field-producing bends. Installed on the inside radius, this splice adjusts up to ½ in. and is ideally suited for any application where adjustment may be necessary.

Compatible with all tray profiles, the adjustable splice is available in electro-galvanized, pregalvanized, hot-dipped galvanized and stainless steel (types 304 and 316).

Express tip: Refer to pages C41, C43 and C44 for application examples. Tool required: 10 mm nut driver

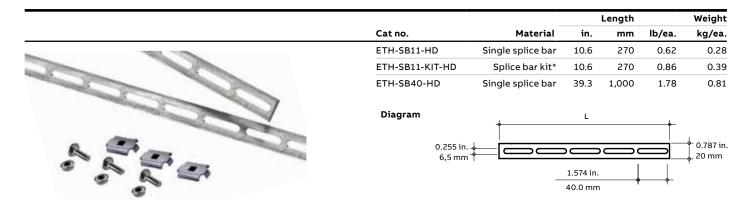
				Weight
	Cat no.	Material	lb/ea.	kg/ea.
	ETH-ADJSP-EG	Electro-galvanized steel	0.13	0.06
	ETH-ADJSP-PG	Pregalvanized steel	0.13	0.06
	ETH-ADJSP-HD	Hot-dipped galvanized steel	0.13	0.06
12 1	ETH-ADJSP-SS	Stainless steel (type 304)	0.13	0.06
4	ETH-ADJSP-S6	Stainless steel (type 316)	0.13	0.06
000		Diagran		53 - 2.125 po mm - 54 mm
			0.305 po	

Reinforcing splice bar

Used to reinforce connections of two straight sections of tray, the splice bar can also be cut to length using a bolt cutter and bent for use in tee or cross formations. Available in hot-dipped galvanized steel in two lengths.

Splice bars can be ordered individually or as a kit that includes one (1) splice bar and three (3) bracket clamps (hot-dipped galvanized).

Express tip: Refer to page C39 for application example. Tool required: 10 mm nut drive



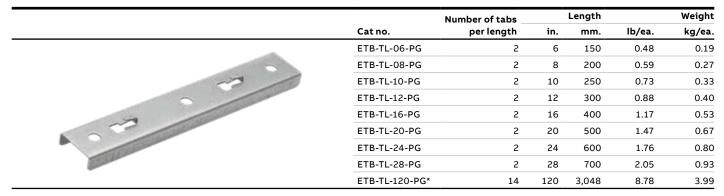
TabLok system brackets

Tablok profile

- Reduces installation time
- · Locks tray into position no hardware required

Drastically reduce installation time with the TabLok profile. Used to mount tray on walls, floors and cabinets, the TabLok profile locks the basket tray into position, eliminating the need for any additional hardware. Compatible with all ExpressTray tray, the TabLok profile has a pregalvanized steel finish and is available in 9 lengths for use with tray widths ranging from 2 in. to 24 in. wide. For field cuts, a 120 in. (3048 mm) length is also available. The TabLok profile can also be used for trapeze-hung and center-hung installations.

Express tip: Refer to pages C47, C48, C50 and C51 for application examples. Tool required: screwdriver



For trapeze-hung installations, specify TabLok profile 4 in longer than width tray. Example: For ETU2012SE10 (12 in. wide), use ETB-TL-16-PG (16 in. wide) * Not pictured here

Center-hung assembly

This center-hung assembly offers all of the timesaving benefits of the TabLok system with the added convenience of pre-assembly. Available in six (6) sizes, the center-hung assembly is compatible with the complete range of ExpressTray profiles and can be used with tray widths from 6 in. to 24 in. For use with $\frac{1}{2}$ in. (max.) threaded rod.

Express tip: Refer to page C48 for an application example. Tool required: screwdriver

		Number of tabs		Length		Weight
	Cat no.	per length	in.	mm.	lb/ea.	kg/ea.
1	ETB-CHATL-06-PG	2	6*	150	0.48	0.19
	ETB-CHATL-08-PG	2	8	200	0.59	0.27
	ETB-CHATL-12-PG	2	12	300	0.88	0.40
	ETB-CHATL-16-PG	2	16	400	1.17	0.53
	ETB-CHATL-20-PG	2	20	500	1.47	0.67
190	ETB-CHATL-24-PG	2	24	600	1.76	0.80

* Center hanger has offset suspension tube to avoid center wire.

TabLok system brackets

Stand-off bracket

For use in the attachment of U- and C-profile tray to floors or walls, the stand-off bracket raises the tray away from the mounting surface.

Available in 4 in., 6 in., 8 in. and 12 in. widths.

Express tip: Refer to page C49 for an application example.

		W	/idth (W)	Material th	nickness		Weight
	Cat no.	in.	mm	in.	mm	lb/ea.	kg/ea.
	ETB-2004TL-PG	4	100	0.125	3	0.35	0.14
5-	ETB-2006TL-PG	6	150	0.125	3	0.43	0.17
6	ETB-2008TL-PG	8	200	0.125	3	0.50	0.21
	ETB-2012TL-PG	12	300	0.156	4	0.84	0.37
	Diagrams Uigro		30	0.354 in./9 mm 7	x 0.590 in./15 mm		

"J" style bracket

The "J" bracket with TabLok profile provides a secure attachment surface requiring no additional hardware for mounting ExpressTray to ceilings.

This bracket is available in 6 in., 8 in., 10 in. and 14 in. lengths to accommodate wire basket profiles up to 12 in. wide and 4 in. high. Available in pregalvanized steel.

Express tip: Refer to page C50 for an application example. Tool required: screwdriver

			Le	ength (L)	Maxim	ium load		Weight
	Cat no.	No. of tabs	in.	mm	lb	kg	lb/ea.	kg/ea.
	ETB-JTL-06-PG	2	6	145	264	120	1.16	0.53
-	ETB-JTL-08-PG	2	8	195	175	80	1.30	0.59
a state	ETB-JTL-10-PG	2	10	245	137	62	1.50	0.68
	ETB-JTL-14-PG	2	14	345	100	45	1.79	0.81
		Diagrams					4.72 in. 120 mm	
and and		2.36 in.	7			1.06 in. 27 mm		6.88 in. 175 mm

TabLok system brackets

"L" style bracket

The "L" bracket with TabLok profile provides a secure attachment surface requiring no additional hardware for mounting ExpressTray on ceilings, walls and floors.

Available in 6 in., 8 in., 10 in. and 14 in. lengths to accommodate "U" and "C" profiles up to 12 in. wide and 4 in. high. Available in pregalvanized steel.

Express tip: Refer to pages C50–C51 for application examples. Tool required: screwdriver

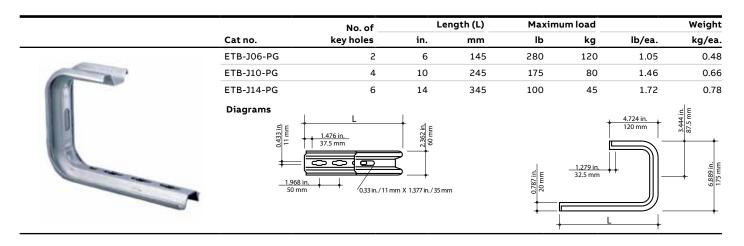
			Le	ength (L)	Len	gth (D)	Maximu	m load		Weight
	Cat no.	No. of tabs	in.	mm	in.	mm	lb	kg	lb/ea.	kg/ea.
	ETB-LS-06-PG	2	6	145	1.97	50	264	120	0.73	0.33
	ETB-LS-08-PG	2	8	195	3.94	100	175	80	0.90	0.41
11 10	ETB-LS-10-PG	2	10	245	5.91	150	137	62	1.06	0.48
	ETB-LS-14-PG	2	14	345	9.84	250	100	45	1.34	0.61
A.C.	Diagrams	1.061* 27 mm	D - 		4. 120	75" mm		0.43" [11mm] x 1.		1.27° 32.5 mm
							D	5_	2.36" 60 mm	

Brackets

Standard "J" bracket

The "J" bracket provides an attachment surface for mounting ExpressTray to ceilings. This bracket is available in 6 in., 10 in. and 14 in. lengths to accommodate U- and C-profiles of up to 12 in. wide and 4 in. high. Available in pregalvanized steel. Use in conjunction with bracket clamp on page C35.

Express tip: Refer to page C50 for an application example.



Brackets

Standard "L" bracket

The "L" bracket provides an attachment surface for ExpressTray on ceilings, walls and floors and is available in three sizes for use with the full range of U- and C-profiles.

Available in pregalvanized steel. Use in conjunction with bracket clamp on page C35.

Express tip: Refer to pages C50–C51 for application examples.

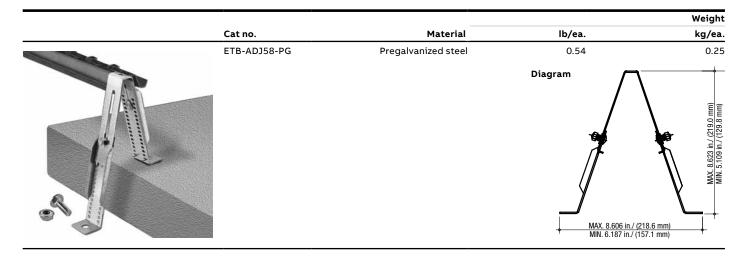
		No. of	Le	ength (L)	Maxim	um load		Weight
	Cat no.	key holes	in.	mm	lb	kg	lb/ea.	kg/ea
-	ETB-L06-PG	1	6	145	280	120	0.78	0.32
ALC: NO DE LA CONTRACTA DE LA C	ETB-L10-PG	3	10	245	175	80	0.99	0.4
	ETB-L14-PG	5	14	345	100	45	1.30	0.59
Contraction of the second seco	Diagrams	1.377 in. 35 mm ↓ 0.433 in. ↓ 11 mm 0.433 in. ↓ 1.968 in. 50 mm L	0.275 in./ X 0.590 in./		4.724 in. 120 mm 0.787 in. 20 mm		2.36	7 in./35 mm

Adustable A-frame bracket

The adjustable A-frame bracket can be used in conjunction with TabLok profile to create support stands or wall brackets for use on uneven surfaces.

Bracket is fully adjustable – height varies from 5 to 8 in. – and is available in pregalvanized steel.

Express tip: Refer to page C53 for an application example. Tool required: 10 mm nut driver



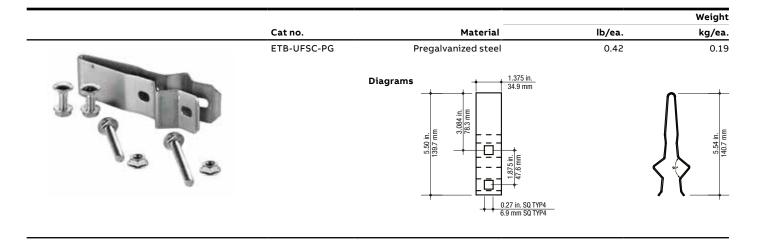
Brackets

Under-floor support clamp

The under-floor support clamp attaches to round and square floor posts and is used to support TabLok profiles in under-floor applications.

Available in pregalvanized steel, the under-floor clamp is supplied with all necessary hardware.

Express tip: Refer to page C53 for an application example. Tool required: 10 mm nut driver

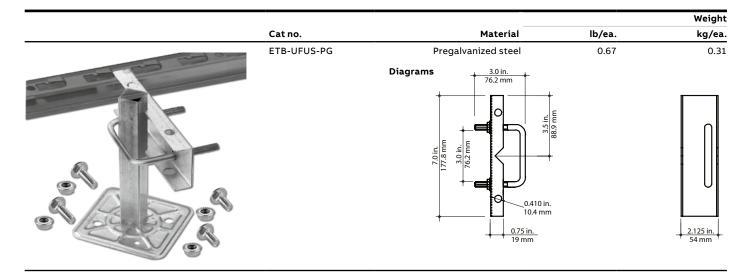


Under-floor U-bolt support

The under-floor U-bolt support is used to attach TabLok or standard "L" brackets to round or square floor posts.

Available in pregalvanized steel, the U-bolt support is supplied complete with hardware.

Express tip: Refer to page C54 for an application example. Tool required: 10 mm nut driver



Signal reference – grid connectors



Conductor

Compress #8 AWG through 4/0 AWG cable.

- Clamp onto pedestal posts up to 1 in. diameter square and 1¼ in. round
- Can be used as "X" or "T" configuration cable to post
- High-conductivity wroughtcopper construction



Installing tools and die codes TBM14M and TBM15I

Conductor			
range	Die cat no.	Die code	Colour code
#8	15527 SS	29	Grey
#6-#4	15528 SS	33	Brown
#2-#1	15508 SS	42	Pink
1/0-2/0	15530 SS	50	Orange
3/0-4/0	15511SS	54	Purple
	range #8 #6-#4 #2-#1 1/0-2/0	range Die cat no. #8 1552755 #6-#4 1552855 #2-#1 1550855 1/0-2/0 1553055	range Die cat no. Die code #8 15527SS 29 #6-#4 15528SS 33 #2-#1 15508SS 42 1/0-2/0 15530SS 50





Secure signal reference grid wires to raised-floor support posts.

- Range-taking design accepts #4 to #8 AWG grid wire and fits ¾ in. square to 1 in. round
- Lay-in feature means no kinks or bends
- Quick, easy installation
- Only one screw to tighten
- Enable grid wire to make direct, low-resistance contact with support posts
- Stamped-steel construction, zinc plated



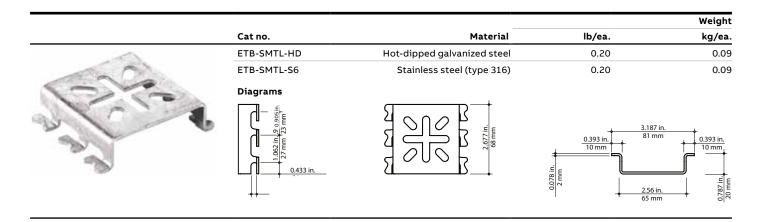
Cat no.	Description	Wire range
3900 (Unit)	¾ in. square to 1 in. round	#8-#4
3900BP (Bulk Pack)	¾ in. square to 1 in. round	#8-#4

Brackets

Small mounting base

These versatile mounting bases can be used as a wall-mount attachment, as a support for electrical outlet boxes and as an under-floor attachment. Quick and easy to install, tray mounts securely to the base using fold-over tab attachments. No additional hardware is required. The small mounting base is available in hot-dipped galvanized steel and stainless steel (type 316) and can be used for tray widths from 4 in. to 24 in.

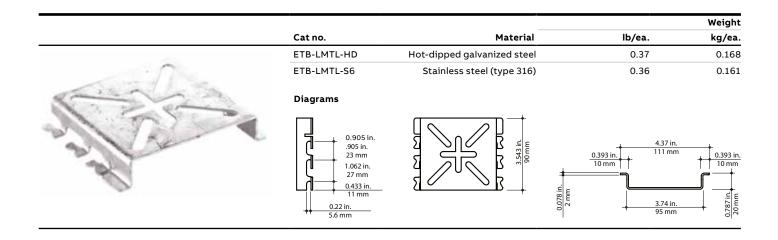
Express tip: Refer to page C52 for an application example. Tool required: pliers



Large mounting base

These versatile mounting bases can be used as a wall-mount attachment, as a support for electrical outlet boxes and as an under-floor attachment. Quick and easy to install, tray mounts securely to the base using fold-over tab attachments. No additional hardware is required. The large mounting base is available in hot-dipped galvanized steel and stainless steel (type 316) and can be used for tray widths from 4 in. to 24 in.

Express tip: Refer to page C52 for an application example. Tool required: pliers

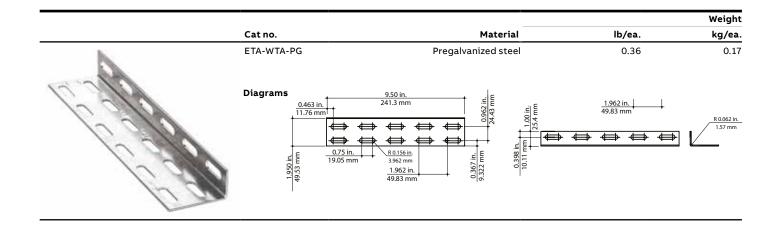


Wall termination / universal blind end

Support and terminate runs of cable tray with this wall termination angle. Can be used as a wall support, floor-to-ceiling support or to safely terminate any tray run. Adapts to any configuration and any width.

Available in pregalvanized steel. Mounting hardware sold separately.

Express tip: Refer to page C52 for an application example. Tool required: 10 mm nut driver

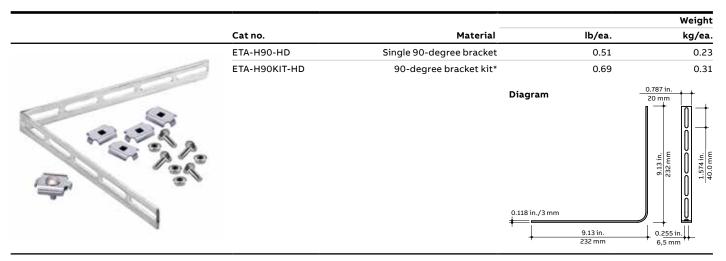


90-degree bracket

Create high strength tee, cross and other 90-degree configurations with this 90-degree bracket. Available in hot-dipped galvanized steel either as a single bracket or a kit.

Kit includes one (1) bracket, four (4) bracket clamps and one (1) hot-dipped galvanized universal splice.

Express tip: Refer to page C44 for an application example. Tool required: 10 mm nut driver



* Kit includes — (1) 90° bracket (ETA-H90-HD), 4 bracket clamps (ETH-WBC-HD) and 1 universal splice (ETH-SP-HD)

Cable drop-out

This 2 in. radius cable drop-out protects cables when exiting or entering tray by reducing the strain on the cables. The drop-out attaches to tray with built-in tabs. No hardware is required. Three different widths available in pregalvanized steel. This drop-out is suitable for use with all tray widths and heights.

Express tip: Refer to page C45 for an application example.

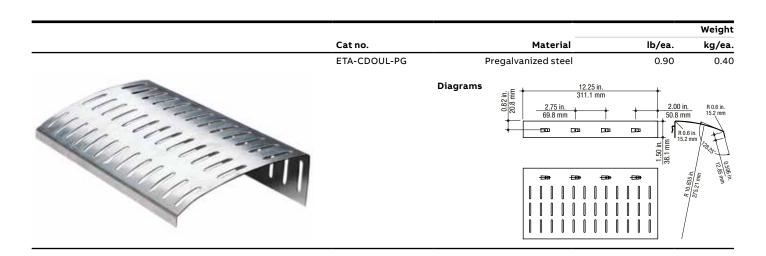
			v	/idth (W)		Weight
	Cat no.	Material	in.	mm	lb/ea.	kg/ea.
	ETA-CDOU17-PG	Pregalvanized steel	1.75	45	0.16	0.07
	ETA-CDOU35-PG		3.50	90	0.31	0.14
	ETA-CDOU52-PG		5.25	135	0.49	0.22
	Diagrams		0.12	5 in. X 1.125 in. /	1.00 in. 25.4 mm	1.50 in. 38.1 mm
111		4.125 in. 104.8 mm R.2.00 in. 50.8mm	3.2 0.750 in	mm X 28.6 mm	863 in. / □ □ □ 1.9 mm ↓ 0.250 in. / 6	.3 mm
	Diagram shows a 3.5 in	. drop-out.		⁺ ↓	6.375 in. 161.9 mm	1.50 in. 38.1 mm

Large cable drop-out

For larger cable tray widths and heavier cable loading, use the 7 in. radius large cable drop-out to protect cable exiting or entering tray runs. Available in pregalvanized steel, the large cable drop-out has a versatile slotted design that enables the use of Ty-Rap® cable ties to attach the cable bundles to the drop-out.

Use built-in tabs to attach to siderails or universal clamp (see page C27) to attach to the end of cable runs.

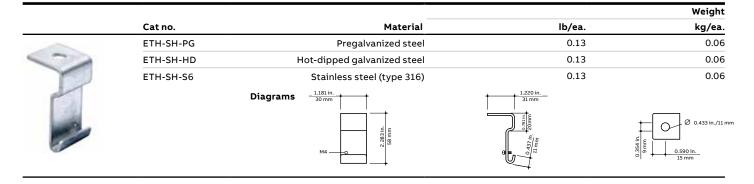
Express tip: Refer to page C45 for an application example.



Side hanger clamp

The side hanger clamp is used to construct trapeze supports using threaded rods. The offset support hole allows for trouble-free access to support nuts for height adjustment, and the rod can continue downward to allow for multi-level (tiered) trapeze installations. A set screw holds tray firmly in position once installation is complete. Available in pregalvanized steel. For use with $\frac{3}{6}$ in. threaded rod.

Express tip: Refer to page C49 for an application example.



Universal clamp

The universal clamp is used to secure large cable drop-outs to the end of a cable run as well as attaching bottom inserts to lengths of ExpressTray. Express tip: Refer to pages C45–C46 for application examples.

Note: To hold down 2 in. x 2 in. wire basket tray, use 1 ETH-UNIVC-XX with bottom half of ETH-SP-XX. See page C16.

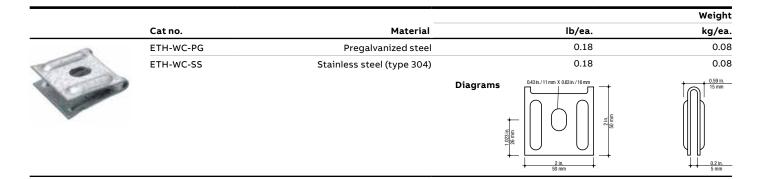
				Weight
	Cat no.	Material	lb/ea.	kg/ea.
0 0	ETH-UNIVC-PG	Pregalvanized steel	0.09	0.04
	ETH-UNIVC-HD	Hot-dipped galvanized steel	0.09	0.04
	ETH-UNIVC-S6	Stainless steel (type 316)	0.09	0.04
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Diagram 💦	~
			40 mm	Ø 0.433 in./11 m

#### Wall clamp

This wall clamp attaches the flange of U- and C-profile ExpressTray, up to a maximum of 8 in. wide, to the wall surface.

#### Available in pregalvanized steel and stainless steel.

Express tip: Refer to page C52 for application examples.



#### Threaded rod clamp

This clamp is used for center-hung applications to secure tray sections to threaded rod for ceiling mounting and can be used with U-profile tray in 4 in., 8 in. and 12 in. widths. This clamp is not designed for use with C-profile tray. Available in pregalvanized steel, hot-dipped galvanized steel and stainless steel (type 316). For use with  $\frac{3}{8}$  in. threaded rod.

Express tip: Refer to page C48 for an application example.

				Weight
	Cat no.	Material	lb/ea.	kg/ea.
	ETH-CHC-PG	Pregalvanized steel	0.18	0.08
6	ETH-CHC-HD	Hot-dipped galvanized steel	0.18	0.08
	Di	agrams	40 mm	Ø 0.433 in./11 mm

#### Superstrut® threaded rod

Used for overhead mounting of ExpressTray with threaded rod clamp, side hanger clamps or strut.

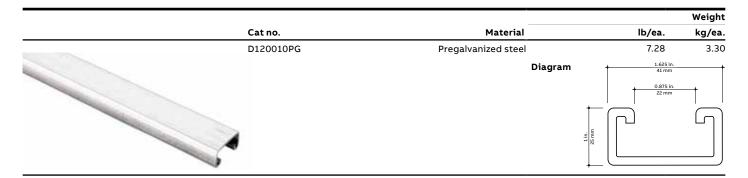
## Available in ¹/₄ in. and ³/₈ in. diameters, threaded rods are made of electro-galvanized steel.

Express tip: Refer to pages C47–C49 for application examples. Order nut and washer separately. (See page C34).

					Weight
	Cat no.	Thread per in.	Size (D) (in.)	lb/ea.	kg/ea.
Nillian I.	H104-1/4X10EGC	20	1/4	2.7	1.22
	H104-3/8X10EGC	16	3/8	2.9	1.32
			Diagram	10 ft 305 cm	
0	e A				

#### Superstrut metal framing channel

Superstrut metal framing channel is sold in 10-foot lengths and the standard finish is pregalvanized steel. Various finishes and configurations are available, contact your regional sales office for further information.



#### **Barrier strip**

Used to separate bundles of power, communication and data cables. Barrier strips are sold in standard 10-foot lengths and are available in 1³/₄ in. and 3³/₈ in. heights. Available in pregalvanized steel, hot-dipped galvanized and stainless steel (types 304 and 316). For use with barrier strip connector and barrier strip clamp, both sold separately on pages C29 and 30. Each 10 foot barrier strip should be secured by three barrier strip clamps one on each end and one in the middle.

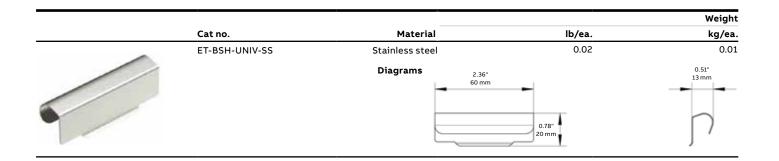
Express tip: Refer to page C55 for an application example.

				H	eight (H)		Weight
	Cat no.		Material	in.	mm	lb/ea.	kg/ea
	ET-BS175-PG		Pregalvanized steel	1.750	45	3.15	1.40
and the second se	ET-BS175-HD	Hot-d	ipped galvanized steel	1.750	45	3.30	1.40
A A A A A A A A A A A A A A A A A A A	ET-BS175-SS	Sta	inless steel (type 304)	1.750	45	1.03	0.468
The second s	ET-BS175-S6	Sta	inless steel (type 316)	1.750	45	1.03	0.468
Contraction of the local division of the loc	ET-BS338-PG		Pregalvanized steel	3.375	85	3.15	2.1
	ET-BS338-HD	Hot-d	ipped galvanized steel	3.375	85	3.15	2.1
	ET-BS338-SS	Sta	inless steel (type 304)	3.375	85	3.15	2.1
		Diagrams	0.472 in. 12 mm	e	0.23	75 in./7 mm X 0.78	

#### Barrier strip connector

This connector is used to connect lengths of barrier strips.

Available in two sizes for use with 13/4 in. and 33/8 in. barrier strips.



#### Barrier strip clamp

The barrier strip clamp is used to mount barrier strips to ExpressTray profiles.

Available in electro-galvanized steel, hot-dipped galvanized steel and stainless steel (types 304 and 316).

Express tip: Refer to page C55 for an application example.

				Weight
	Cat no.	Material	lb/ea.	kg/ea
10100	ETH-BSC-EG	Electro-galvanized steel	0.04	0.02
	ETH-BSC-HD	Hot-dipped galvanized steel	0.04	0.02
0	ETH-BSC-SS	Stainless steel (Type 304)	0.04	0.02
	ETH-BSC-S6	Stainless steel (Type 316)	0.04	0.02
		Diagram	24 mm	0.266 in
			1.562 in. 38 mm	

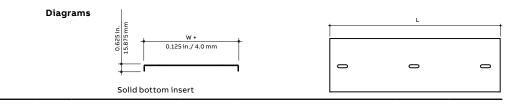
#### Cover and bottom insert

ExpressTray covers and bottom inserts protect cables from dust build-up and provide a physical barrier in environments where cables must be protected from machinery or vandalism. Attach bottoms to tray using universal clamps (see page C27) and secure covers using cover clips (see page C32). Available in pregalvanized steel in widths from 2 in. to 24 in. Available in lengths of 120 in. or 40 in. Available in solid or vented design.

Express tip: Refer to page C46 for an application example.

#### Cover and bottom insert

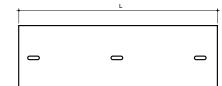
	Widt	h (W)			Weight			Weight
	in.	mm	Cat no. covers	lb/ea.	kg/ea.	Cat no. bottoms	lb/ea.	kg/ea.
ETACOVS**PG-120	Solid	covers an	d bottoms 120 in. (3 m) le	ngth (L)				
	2	50	ETACOVS02PG-120	1.59	0.72	ETABIS02PG-120	1.51	0.68
	4	100	ETACOVS04PG-120	2.03	0.92	ETABIS04PG-120	1.93	0.87
	6	150	ETACOVS06PG-120	2.45	1.11	ETABIS06PG-120	2.33	1.05
Contraction of the second s	8	200	ETACOVS08PG-120	4.19	1.90	ETABIS08PG-120	3.98	1.81
and have the second	12	300	ETACOVS12PG-120	5.91	2.68	ETABIS12PG-120	5.61	2.55
A CONTRACT OF	16	400	ETACOVS16PG-120	7.65	3.47	ETABIS16PG-120	7.27	3.30
	18	450	ETACOVS18PG-120	8.42	3.82	ETABIS18PG-120	8.00	3.63
and the second s	20	500	ETACOVS20PG-120	9.39	4.26	ETABIS20PG-120	8.92	4.05
1	24	600	ETACOVS24PG-120	11.11	5.04	ETABIS24PG-120	10.55	4.79



#### Cover and bottom insert – continued

	Widtl	h (W)			Weight			Weight
	in.	mm	Cat no. covers	lb/ea.	kg/ea.	Cat no. bottoms	lb/ea.	kg/ea
	Solid	covers and	d bottoms 40 in. (1 m) leng	th (L)				
	2	50	ETACOVS02PG-40	0.53	0.24	ETABIS02PG-40	0.50	0.23
	4	100	ETACOVS04PG-40	0.68	0.31	ETABIS04PG-40	0.64	0.29
Contraction of the second seco	6	150	ETACOVS06PG-40	0.82	0.37	ETABIS06PG-40	0.78	0.35
State State	8	200	ETACOVS08PG-40	1.40	0.63	ETABIS08PG-40	1.33	0.60
State State States	12	300	ETACOVS12PG-40	1.97	0.89	ETABIS12PG-40	1.87	0.85
AL PROPERTY	16	400	ETACOVS16PG-40	2.55	1.16	ETABIS16PG-40	2.42	1.10
and the second sec	18	450	ETACOVS18PG-40	2.81	1.27	ETABIS18PG-40	2.67	1.21
1	20	500	ETACOVS20PG-40	3.13	1.42	ETABIS20PG-40	2.97	1.35
	24	600	ETACOVS24PG-40	3.70	1.68	ETABIS24PG-40	3.52	1.6
	Vente	ed covers a	nd bottoms 120 in. (3 m) le	ength (L)				
	2	50	ETACOVV02PG-120	1.54	0.70	ETABIV02PG-120	1.47	0.6
	4	100	ETACOVV04PG-120	1.97	0.89	ETABIV04PG-120	1.87	0.8
	6	150	ETACOVV06PG-120	2.38	1.08	ETABIV06PG-120	2.26	1.0
	8	200	ETACOVV08PG-120	4.06	1.84	ETABIV08PG-120	3.86	1.7
	12	300	ETACOVV12PG-120	5.73	2.60	ETABIV12PG-120	5.45	2.4
	16	400	ETACOVV16PG-120	7.42	3.37	ETABIV16PG-120	7.05	3.2
	18	450	ETACOVV18PG-120	8.17	3.71	ETABIV18PG-120	7.76	3.5
	20	500	ETACOVV20PG-120	9.11	4.13	ETABIV20PG-120	8.65	3.9
	24	600	ETACOVV24PG-120	10.78	4.89	ETABIV24PG-120	10.24	4.6
	Vente	ed covers a	nd bottoms 40 in. (1 m) lei	ngth (L)				
	2	50	ETACOVV02PG-40	0.51	0.23	ETABIV02PG-40	0.49	0.22
	4	100	ETACOVV04PG-40	0.66	0.30	ETABIV04PG-40	0.62	0.28
	6	150	ETACOVV06PG-40	0.79	0.36	ETABIV06PG-40	0.75	0.34
	8	200	ETACOVV08PG-40	1.35	0.61	ETABIV08PG-40	1.29	0.58
	12	300	ETACOVV12PG-40	1.91	0.87	ETABIV12PG-40	1.82	0.82
	16	400	ETACOVV16PG-40	2.47	1.12	ETABIV16PG-40	2.35	1.0
	18	450	ETACOVV18PG-40	2.72	1.24	ETABIV18PG-40	2.59	1.1
	20	500	ETACOVV20PG-40	3.04	1.38	ETABIV20PG-40	2.88	1.31
	24	600	ETACOVV24PG-40	3.59	1.63	ETABIV24PG-40	3.41	1.5
	Diagr							

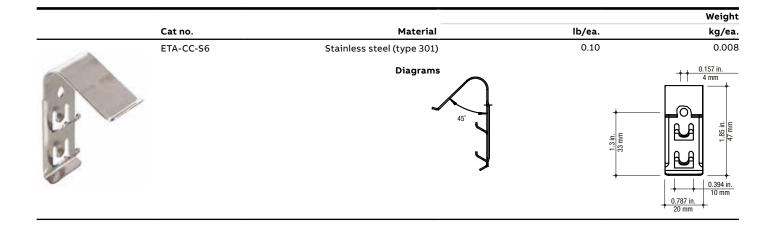




#### Cover clip

Secure covers to tray quickly with this cover clip. Available in stainless steel (type 301), the cover clip uses built-in tabs to secure the cover and to facilitate removal of the cover when required. No tools required.

Express tip: Refer to page C46 for an application example.

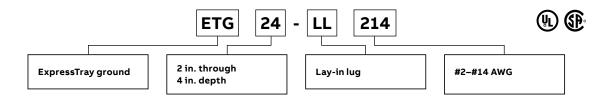


#### Blackburn grounding connector

Note: To ensure electrical continuity, the Blackburn GPT-2 grounding connector and ground wire MUST be used in all Quiklok series tray applications. The GPT-2 grounding connector is used for bonding applications not exceeding 300 A (as per Table 16 of CEC) and is ideal for conductors #14 to #4 AWG. For applications requiring larger conductors, contact your regional sales office for further information.

				(h) (h
	Cat no.		lb/ea.	Weight kg/ea.
(PACES)	GPT-2	Conductor range (AWG) #14-#4	0.06	0.03
<b>N</b>			Diagram	1.39 in. 35.3 mm







#### Superstrut "BAT" clip

Attaches ExpressTray to strut

- One-piece construction
- No installation tools required
- Reduces installation time to the minimum
- For horizontal applications

			Weight
Cat no.	Material	lb/ea.	kg/ea.
SSF-CK535	Spring steel with zinc phosphate finish (black)	1.20	0.55

Note: "BAT" clip shoud be used for horizontal tray/strut applications.

For vertical tray/strut applications, the universal clamp (page C27) should be used to clamp ExpressTray to strut using a bolt and spring nut (page C35).

01 Position "BAT" clip on outer wires of tray and opposing sides of the strut flanges. — 02 To install, just hook one wing under the strut flange and push down the other wing with your thumb to slip it

under the strut flange.







#### Beam clamp

This clamp is used primarily to attach L-profile ExpressTray to steel beams. It can also be used to attach U- and C-profiles onto structural steel. Available in ³/₄ in. and 1¹/₈ in. sizes in hot-dipped galvanized steel.

Express tip: Refer to page C55 for an application example.

		Height (H)		Weight
 Cat no.	in.	mm	lb/ea.	kg/ea.
ETH-IBC3/4-HD	0.787	20	0.48	0.22
ETH-IBC1-HD	1.181	30	0.53 Diagram	



#### End caps

Protective cap for attachment to cut wire ends of mesh cable tray.

				Weight
Cat no.	Cable tray application	Material	lb/ea.	kg/ea.
ETA-EPC-6	ETU6*	Polyethylene	0.08	0.36
ETA-EPC-4	ETQ4*	Polyethylene	0.66	0.29



#### Superstrut hexagonal nut

For use with Superstrut threaded rod.

Available in two sizes, ¼ in. and ¾ in., in electro-galvanized steel.

			Weight	
Cat no.	Size (in.)	lb/ea.	kg/ea.	
E145-1/4EGC	1/4	0.01	0.004	
E145-3/8EGC	3/8	0.01	0.004	



#### Superstrut flat washer

For use with Superstrut threaded rod and hex nut.

Available in ¼ in. and ¾ in. sizes., in electro-galvanized steel.

			Weight	
Cat no.	Size (in.)	lb/ea.	kg/ea.	
E147-1/4EGC	1/4	0.01	0.004	
E147-3/8EGC	3/8	0.01	0.004	



#### Superstrut short spring nut

For use with D-series metal framing channel.

Spring nuts are offered in 1/4 in. and 3/8 in. sizes in electro-galvanized steel.

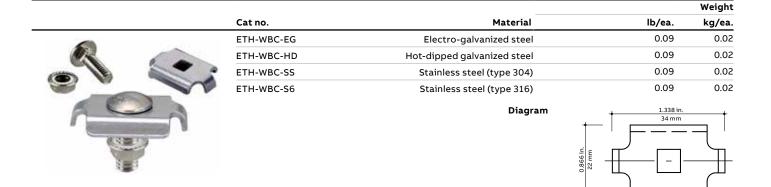
			Weight
Cat no.	Size (in.)	lb/ea.	kg/ea.
B100-1/4EGC	1/4	0.01	0.004
B100-3/8EGC	3/8		

#### Bracket clamp

The bracket clamp is used for mounting tray to wall brackets or suspended support brackets and is compatible with all tray profiles.

#### Available in electro-galvanized steel, pregalvanized steel, hot-dipped galvanized steel and stainless steel (types 304 or 316).

Express tip: Refer to pages C50, C51 and C53 for application examples. Tool required: 10 mm nut driver



#### Standard bolting kit

The standard bolting kit consists of an M6 x 12 mm carriage bolt and capture nut.

Available in electro-galvanized steel, hot-dipped galvanized steel and stainless steel (types 304 and 316).

#### Tool required: 10 mm nut driver

			· · ·	Weight
	Cat no.	Material	lb/ea.	kg/ea.
	ETH-KITO-EG	Electro-galvanized steel	0.02	0.01
aler-	ETH-KITO-HD	Hot-dipped galvanized steel	0.02	0.01
1 Marco	ETH-KITO-SS	Stainless steel (type 304)	0.02	0.01
	ETH-KITO-S6	Stainless steel (type 316)	0.02	0.01



#### Nested "J" or "L" bracket bolting kit

For use with "J" and "L" brackets, this bracket bolting kit consists of an M10 x 25 mm carriage bolt and capture nut.

#### Available in hot-dipped galvanized steel.

Express tip: Refer to page C51 for an application example. Tool required: 17 mm nut driver

			Weight
Cat no.	Material	lb/ea.	kg/ea.
ETH-KIT1-HD	Hot-dipped galvanized steel	0.09	0.04



#### Back-to-back bracket bolting kit

For use in back-to-back bracket configurations or for use with "L" brackets, this bracket bolting kit consists of an hexagonal M10 x 60 mm bolt, a flat washer, a lock washer and a nut.

#### Available in hot-dipped galvanized steel.

Express tip: Refer to page C51 for an application example. Tool required: 17 mm nut driver

			Weight
Cat no.	Material	lb/ea.	kg/ea.
ETH-KIT2-HD	Hot-dipped galvanized steel	0.13	0.06



#### Spacers

The spacer is used to prevent spreading of the bracket profile during installation. Spacers can be used with both "L" and "J" brackets in both single and back-to-back configurations.

## Available in pregalvanized and hot-dipped galvanized steel.

Express tip: Refer to pages C50–C51 for application examples.

Cat no.		Weight		
	Material	lb/ea.	kg/ea.	
ETH-S-PG	Pregalvanized steel	0.09	0.04	
ETH-S-HD	Hot-dipped galvanized steel	0.09	0.04	

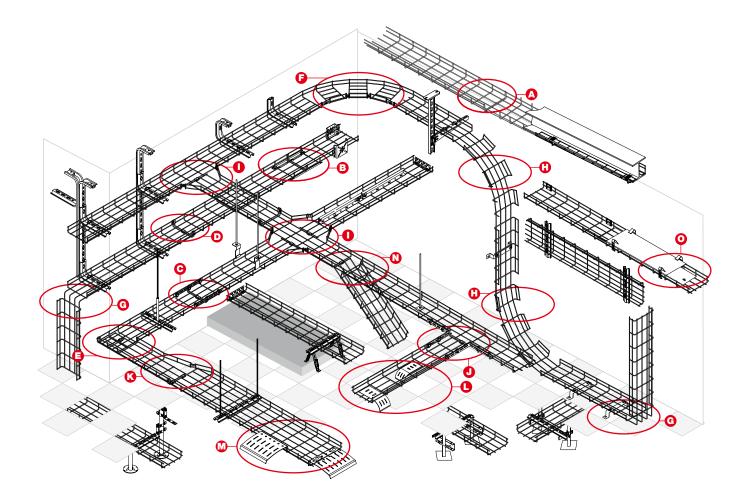
Quick reference

Complicated cable routing layouts become simpler with ExpressTray. Once familiar with the basic configuration and support methods, the possibilities are unlimited.

Α	Quiklok	C39
В	Connection of straight sections quick splice	C39
С	Reinforcement of straight section connections	C39
D	Connection of straight sections universal splice	C40
Е	Horizontal bend without a radius (90°)	C40
F	Horizontal bend with a radius	C41
G	Vertical bend without a radius (90°)	C42
н	Vertical bend with a radius	C42

Use the following pages as a guide to ExpressTray basics and as an inspiration for future projects.

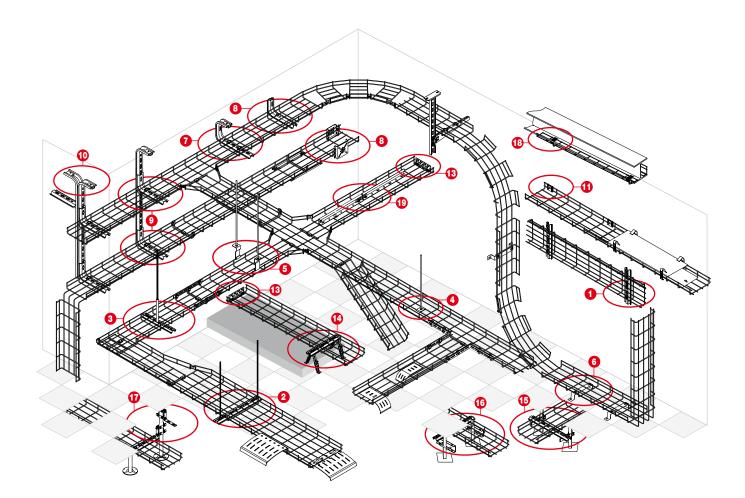
I.	Horizontal tee or cross with a radius	C43
J	Horizontal tee or cross without a radius	C44
κ	Reduction/expansion	C44
L	Cable drop-out	C45
м	Large cable drop-out	C45
Ν	Vertical drop	C46
ο	Covers and bottoms	C46



Quick reference

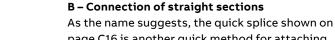
1	TabLok profile	C47
2	TabLok trapeze	C47
3	TabLok center-hung	C48
4	Center-hung clamp	C48
5	Side hanger	C49
6	Stand-off brackets	C49
7	"J" brackets	C50
8	Wall-mounted "L" brackets	C50
9	Tiered "L" brackets	C51
10	Back-to-back brackets	C51

11	Wall clamp attachment	C52
12	Mounting bases	C52
13	Wall termination	C52
14	Adjustable A-frame bracket	C53
15	Under-floor support clamp	C53
16	Under-floor U-bolt support	C54
17	Under-floor brackets	C54
18	Beam clamp	C55
19	Barrier strip and grounding connector	C55



#### **A – Quiklok tray – Connections at record speed** In any project, installation time is key. Our patented QuikLok tray profile connects straight lengths of tray at record speed. The name says it all.

Lengths of tray lock together in a matter of seconds with no connection components or tools and with no loss of stability or load-bearing capacity. Load tests show that QuikLok is absolutely equal to systems with traditional bolted hardware. No connection components or tools required.



page C16 is another quick method for attaching straight sections of ExpressTray together.

Simply align the two lengths of tray, position quick splice on bottom side rail, bend tabs down and lock splice into position using a screwdriver. Only two splices are required to securely connect tray widths of up to 24 in. wide.

#### C - Reinforcement of straight section connections

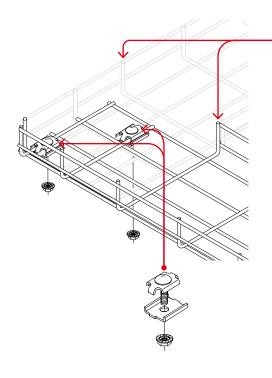
Use two reinforcing splice bars (see page C17) to reinforce the connection of any two straight lengths of wire basket tray. To install, center the splice bar over the tray connection on one side of tray and attach to tray side rail using bracket clamps (see page C35). Repeat process to secure to opposite side of tray.

#### D - Connection of straight sections

The universal splice shown on page C16 can also be used to attach straight sections of ExpressTray together. Align the two lengths of tray and attach using universal splices on top siderail wires and tray bottoms.

The number and positioning of splices will vary according to the tray width selected. Refer to the table below for exact quantities.

Quantity of	Tray width					
splices required	mm	in.				
2	50	2				
2	100	4				
3	150	6				
3	200	8				
3	300	12				
4	400	16				
5	450	18				
5	500	20				
5	600	24				

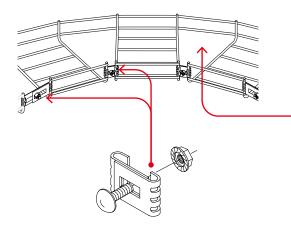


E – Horizontal bend without a radius (90°)

• To form a 90° bend or an angled bend without a radius, use two straight sections of tray. Cut and remove side wires (cut back to first complete grid). The number of wires to cut will vary according to the tray width.

Assemble trays, one perpendicular to the other, and secure using the universal splice found on page C16.

The number of universal splices required will vary according to the tray width selected.



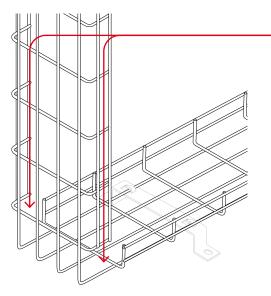
#### F – Horizontal bend with a radius

ExpressTray allows you to redirect cabling routing simply and easily. To form a horizontal bend with a radius, no additional corner or elbow components are required.

• Simply cut the bottom and internal side wires, bend to the desired angle and secure the inside bend with the adjustable splice found on page C17.

The number of splices required will vary according to the bend and radius configuration. See tables below for exact quantities.

Tray width		Quantity of
in.	mm	splices required
90° horizontal bend	ds	
2	50	2
4	100	3
6	150	2
8	200	4
12	300	e
16	400	7
18	450	٤
20	500	ç
24	600	11
45° horizontal bend	ds	
2	50	2
4	100	ĩ
6	150	ĩ
8	200	ĩ
12	300	2
16	400	2
18	450	2
20	500	2
24	600	2
30° horizontal bend	ds	
2	50	2
4	100	ĩ
6	150	2
8	200	ĩ
12	300	3
16	400	3
18	450	3
20	500	3
24	600	3



#### G – Vertical bend without a radius (90°)

• To create a 90° vertical bend, remove one section of side wires on each side of the tray at the point where the angle is required and bend into position.

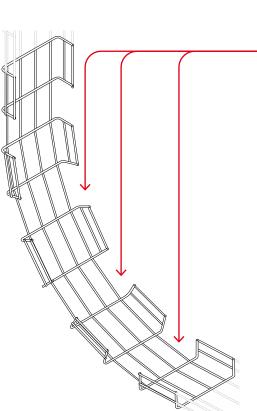
No additional hardware is required.

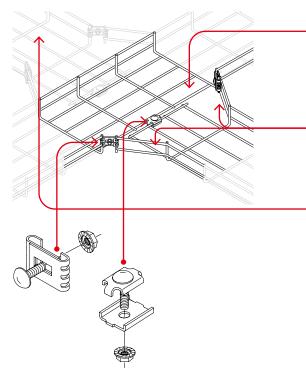
#### H – Vertical bend with a radius

 Changing levels using vertical inside and outside bends is easy with ExpressTray. Simply cut and remove side wires and form to desired bend radius — it's that easy.

No additional hardware is required.

The number of side wires removed will depend on the angle and radius required. For sharper descents refer to 90° bend (G).





- I Horizontal tee or cross with a radius
  To create a horizontal tee junction from two straight ExpressTray sections, cut and remove side wires at desired junction point. The number of wires to cut and remove will vary in accordance with the widths of tray forming the tee.
- Bend side wires on both sides of the tray and reassemble using adjustable clamps to attach side rail edge and universal splices to attach tray bottoms.
- To form a horizontal cross, proceed in the same way as for a tee repeating the process on the other side of the main run.

For  $90^{\circ}$  tee connections, cut side rails and attach at junction point using universal splice connectors shown on page C16.

Tray width		Quantity of
in.	mm	splices required
Horizontal tees		
2	50	2*
4	100	2*
6	150	2*
8	200	2**
12	300	2**
16	400	2**
18	450	2**
20	500	2**
24	600	2**
Horizontal crosses		
2	50	4**
4	100	4**
6	150	4**
8	200	4***
12	300	4***
16	400	4***
18	450	4***
20	500	4***
24	600	4***

* Add 1 (one) ETH-SP-EG for additional support shown on page C16

** Add 2 (two) ETH-SP-EG for additional support shown on page C16

*** Add 4 (four) ETH-SP-EG for additional support shown on page C16

**J – Horizontal tee or cross without a radius** To create a horizontal 90° tee junction without a radius from two straight sections of ExpressTray, use the 90° brackets shown on page C25.

- To form the horizontal tee, position one length of tray perpendicular to the other and attach using the universal splice on page C16.
- Attach one bracket to each of the two 90° angles using two bracket clamps (see page C35) per angle.

To form a horizontal cross without a radius, proceed in the same way as a tee, repeating the process on the other side of the main run.

#### K – Reduction / expansion

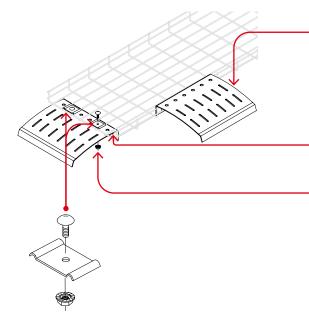
To make the most efficient and economical use of space, it is often necessary to make reductions and expansions of tray widths. To connect two unequal widths of ExpressTray, a combination of side and bottom wires must be cut and removed.

To reconnect lengths of tray, use a combination of both universal and adjustable splices shown on pages C16–C17.

#### L – Cable drop-out

To ease the strain on cables when exiting or entering runs of ExpressTray, install this 2 in. radius cable drop-out (see page C26).

• Quick and easy to install, this cable drop-out attaches to tray using built-in tabs. It can also be used as a radius limiter on tees, crosses and vertical bends.



#### M – Large cable drop-out

 For larger cable tray widths or heavier loads of cables, install the large, 7 in. radius cable drop-out (see page C26) to ease the strain on cables as they exit or enter runs of wire basket tray. The large cable drop-out is ideally suited for use with Category 5 and fiber optic cables.

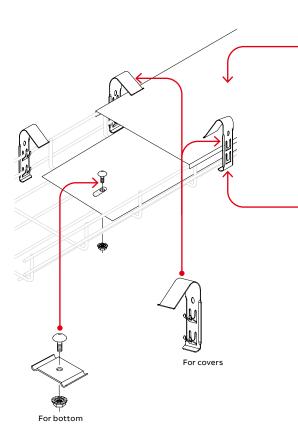
• When attaching the large drop-out to tray siderails, install using the built-in tabs.

• When attaching to the end of a cable run, use two universal clamps (see page C27).

Use the convenient slotted design to secure bundles of cables using Ty-Rap cable ties.

#### N – Vertical drop

- To redirect select cables from a main run, cut and remove bottom wires of tray in accordance with space required for tray intersection.
- Remove side wires on vertical tray at point of intersection with original tray. Secure tray using universal splice on page C16.
- This configuration can also be used to route additional cables into main cable runs from below.

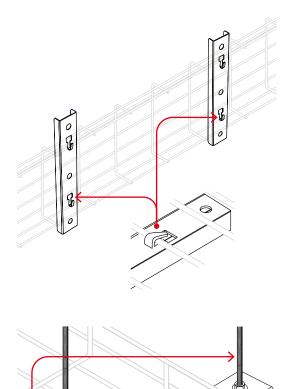


#### O – Covers and bottoms

For environments where cables need protection from dirt build-up or cable damage, install ExpressTray covers and bottoms.

To install a bottom, simply select the correct width for the tray and attach to tray using the universal clamp shown on page C27. Use one (1) universal clamp for a 1-meter length and three (3) for a 3-meter length.

To install a cover, use the cover clip shown on page C32. Clips install quickly with no tools using built-in tabs and can be easily removed when access to cables is required. Four (4) clips are required to secure a 1-meter length of cover; six (6) clips are required to secure a 3-meter length.



#### 1 – TabLok profile

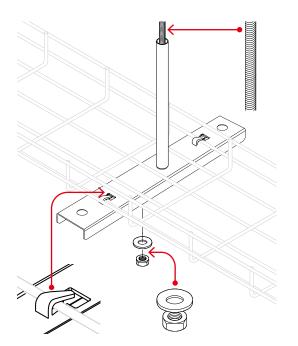
TabLok profile is the fastest way to mount tray on walls, floors, racks and cabinets.

Attach the bracket to the mounting surface, position tray over bracket and slide tray under tabs. Lock tabs down using a screwdriver. The tray is locked into place – no additional hardware required.



Use TabLok profile to create trapeze-hung installations. For trapeze configurations, specify TabLok profile 4 in. wider than width of tray to be hung. Attach a 3/8 in. diameter threaded rod (page C28) to either side of the profile using two nuts and washers (page C34).

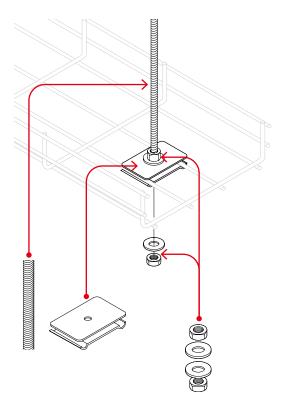
Lock tray length into position as described above.



#### 3 – TabLok center-hung

Center-hung configurations are quick and easy when you use the pre-assembled TabLok center-hung assembly. Lock tray into position on the TabLok profile and secure a single  $\frac{3}{8}$  in. diameter threaded rod (page C28) to the TabLok center-hung assembly using a nut and washer (page C34).

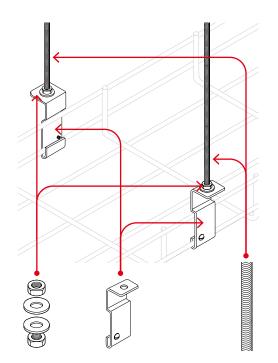
Note: 6 in. center-hung assembly has offset suspension tube to avoid center wire.



#### 4 – Center-hung clamp

For light-duty applications using 4 in., 8 in. or 12 in. U-profile ExpressTray, a ceiling-mounted support made up of a single ³/₈ in. diameter threaded rod (see page C28) and a threaded rod clamp (see page C28) can be used. The clamp attaches to tray mid-wires as illustrated. A nut and washer (see page C34) are secured on either side of the threaded rod attachment. Order nut and washer separately.

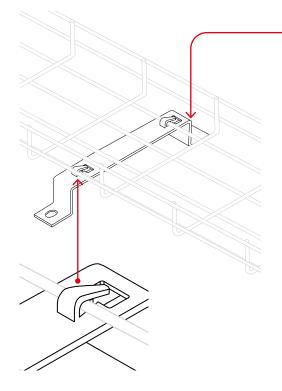
Because the load must be evenly distributed on either side of the clamp, this attachment method can be used only with tray that has a central pair of wires. For this reason, this clamp cannot be used with C-profile ExpressTray.



#### 5 – Side hanger

Another method of ceiling-mounted support, side hangers (see page C27) are an alternative for tray that cannot be supported using the center-hung clamp. ¼ in. threaded rod (see page C28) is threaded into side hangers, the tray is hooked onto the hangers and pivoted into position. Tray is held securely in position by means of a set screw, which prevents the wire from jumping out of the side hanger.

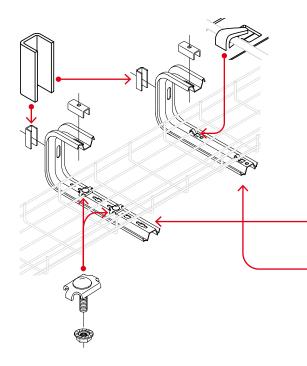
Use a nut and washer (see page C34) on the top and bottom of each threaded rod attachment.



### 6 – Stand-off brackets

 Use stand-off brackets for floor- or wall-mounted applications that require the tray to be raised off the mounting surface.

The stand-off bracket (page C19) attaches to the ExpressTray bottom as shown using lock down tabs. No other hardware is required.

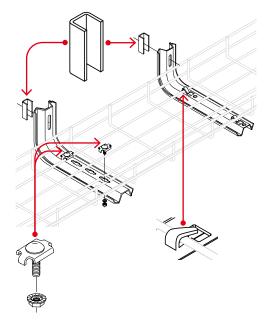


#### 7 – "J" brackets

Two types of "J" brackets are available – standard "J" brackets (page C20) and TabLok profile "J" brackets (page C19).

"J"-brackets are used for sections of cabling runs that run parallel and close to the ceiling and/or wall. The "J"-bracket mounts to the ceiling and/or wall using standard hardware (not supplied) and a spacer (see page C36) to prevent distortion of the bracket profile.

- The standard bracket clamp (see page C35) is then used to attach the tray to the bracket.
- For TabLok "J" brackets, no additional hardware is required. Simply lock tray into position using fold-down tabs.

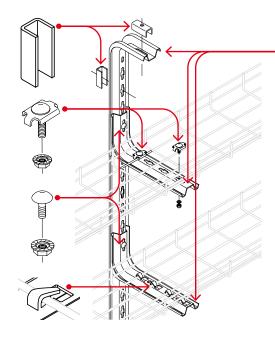


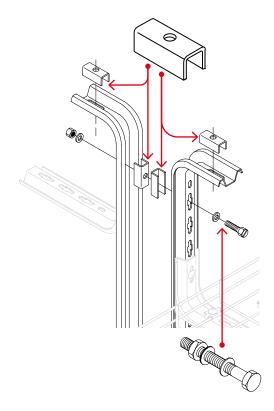
#### 8 – Wall-mounted "L" brackets

Two types of "L" brackets are available for wall-mounted supports: the standard "L" bracket and the TabLok "L" bracket.

Both brackets can be attached directly to the wall surface or to metal framing channel (see page C28). Use spacers (see page C36) to prevent distortion of bracket profile.

The tray is then attached to the bracket using either a bracket clamp (see page C35) in the case of the "L" bracket or integrated bend-down tabs for the TabLok bracket.





#### 9 – Tiered "L" brackets

• Use brackets to create multi-level installations for applications that require separation of different types of cables.

To create this configuration, use standard "L" brackets (see pageC21) or a combination of "L" and TabLok "L" brackets (see page C20). Brackets are attached together using the nested "J" or "L" bolting kit (see page C36).

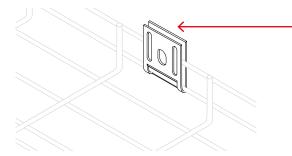
Depending on the bracket, the tray can be attached using bracket clamps (standard "L" bracket) shown on page C35 or bend-down tabs.

Use spacers (see page C36) to prevent distortion of the bracket profile during tightening.

# 10 – Back-to-back brackets

Brackets can be used in a variety of configurations for both wall and ceiling mounting. Attach the bracket profiles together using the back-to-back bracket bolting kit and spacers (see page C36) to prevent distortion of the bracket profile during tightening.

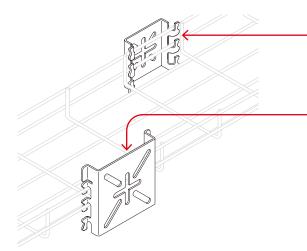
The number of spacers required will vary according to the length of the brackets used.



#### 11 – Wall clamp attachment

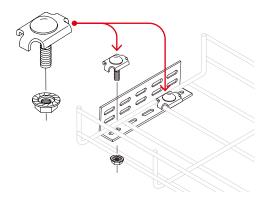
 Use wall clamps (see page C27) to attach the side rail of ExpressTray U- and C-profiles directly to the wall surface. Use standard ³/₄ in. hardware to attach (not included).

Note: Not to be used on tray wider than 8 in.



#### 12 - Mounting bases

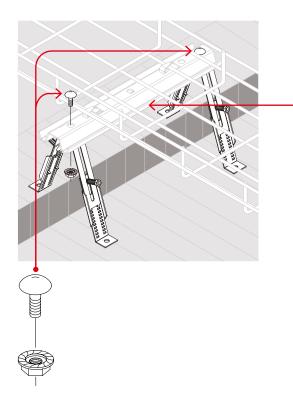
- Use these versatile mounting bases (page C24) as a wall-mount or under-floor attachment.
   Secure the base to the tray side rails or bottom using fold-over tabs.
- The mounting base can also be used as a support for electrical outlet boxes.



#### 13 – Wall termination

Wall termination angles or universal blind ends (page C25) can be used as wall and floor-to-ceiling supports or to safely terminate runs of ExpressTray.

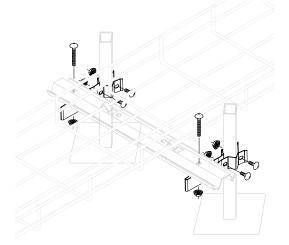
The termination angle attaches to the tray using a bracket clamp (page C35).



#### 14 – Adjustable A-frame bracket

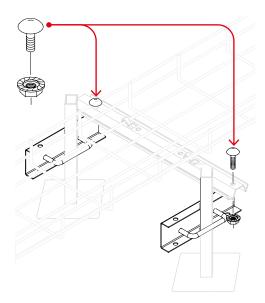
Use the adjustable A-frame bracket (page C21) with TabLok profile (page C18) to create a level support stand or wall bracket on uneven surfaces.

• To install, attach TabLok profile to the A-frame bracket using the supplied nut and bolt. Adjust A-frame legs to level, tighten downspring-loaded adjustment bolt and attach to support surface.



#### 15 – Under-floor support clamp

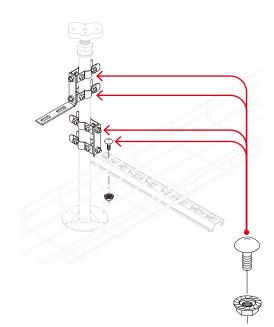
Attach clamp to two floor posts using supplied hardware. Position TabLok profile (page C18) across the support clamps and secure the profile to the clamp by inserting the supplied bolt through the TabLok profile and securing with a nut.



#### 16 – Under-floor U-bolt support

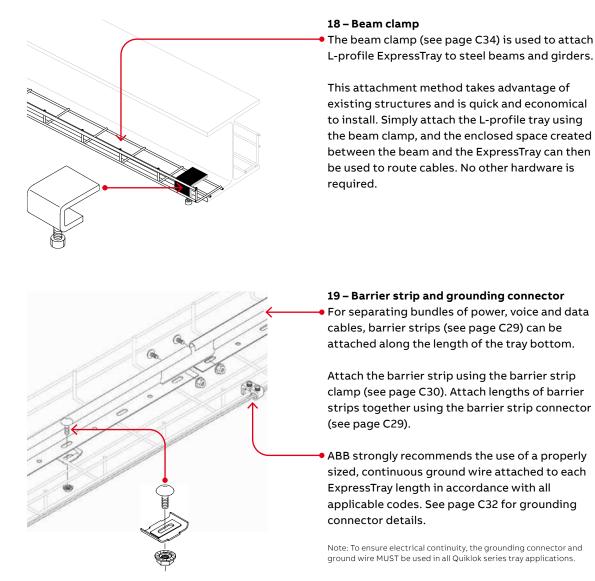
Another method of creating support platforms for sub-floor runs of ExpressTray is the U-bolt support (page C22).

To install, separate U-bolt from bracket, encircle under-floor support post, reinsert bracket and tighten down nuts. Position TabLok profile across supports and secure the profile to the support using the supplied bolt and nut.



#### 17 – Under-floor brackets

Use these under-floor brackets (page C22) to create supports for tiered runs of ExpressTray. Simply install brackets to round or square posts using supplied hardware. Attach TabLok profile extremity to bracket tab using a nut and bolt.



ExpressTray is offered in three material and finish combinations:

### Electro-galvanized steel

By means of an electrolysis process after fabrication, a zinc coating is bonded to the surface of the steel tray. The electro-galvanized zinc coating is ideally suited for indoor applications.

#### Hot-dipped galvanized steel

The zinc coating is provided by immersing the product in a molten zinc bath. This finish is ideal for outdoor installations exposed to corrosion accelerators such as pollution, sea air and other mild atmospheric conditions, and can also be used for indoor applications requiring additional corrosion resistance.

#### Stainless steel (types 304 and 316)

Stainless steel with no additional surface treatment provides the highest protection against corrosion and is used primarily in marine environments, food processing and other industrial facilities, both indoor and outdoor.

#### 2 in. deep U-profile – Maximum suggested load

Width				Quiklok "ETQ" series
in. (mm)	Electro-galvanized	Hot-dipped galvanized	Stainless steel (304)	Stainless steel (316)
4 (100)	ETQ 2004SE10	ETQ 2004SH10	ETQ 2004SS10	ETQ 2004S610
6 (150)	ETQ 2006SE10	ETQ 2006SH10	ETQ 2006SS10	ETQ 2006S610
8 (200)	ETQ 2008SE10	ETQ 2008SH10	ETQ 2008SS10	ETQ 2008S610
12 (300)	ETQ 2012SE10	ETQ 2012SH10	ETQ 2012SS10	ETQ 2012S610
16 (400)	ETQ 2016SE10	ETQ 2016SH10	ETQ 2016SS10	ETQ 2016S610
18 (450)	ETQ 2018SE10	ETQ 2018SH10	ETQ 20185S10	ETQ 2018S610
20 (500)	ETQ 2020SE10	ETQ 2020SH10	ETQ 2020SS10	ETQ 2020S610
24 (600)	ETQ 2024SE10	ETQ 2024SH10	ETQ 2024SS10	ETQ 2024S610

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#### 4 in. deep U-profile – Maximum suggested load

Width				Quiklok "ETQ" series	
in. (mm)	Electro-galvanized	Hot-dipped galvanized	Stainless steel (304)	Stainless steel (316)	
4 (100)	ETQ 4004SE10	ETQ 4004SH10	ETQ 4004SS10	ETQ 4004S610	
6 (150)	ETQ 4006SE10	ETQ 4006SH10	ETQ 4006SS10	ETQ 4006S610	
8 (200)	ETQ 4008SE10	ETQ 4008SH10	ETQ 4008SS10	ETQ 4008S610	
12 (300)	ETQ 4012SE10	ETQ 4012SH10	ETQ 4012SS10	ETQ 4012S610	
16 (400)	ETQ 4016SE10	ETQ 4016SH10	ETQ 4016SS10	ETQ 4016S610	
18 (450)	ETQ 4018SE10	ETQ 4018SH10	_	_	
20 (500)	ETQ 4020SE10	ETQ 4020SH10	ETQ 4020SS10	ETQ 4020S610	
24 (600)	ETQ 4024SE10	ETQ 4024SH10	ETQ 4024SS10	ETQ 4024S610	

Span												
0 ft./3 m	10	./2.75 m	9 ft	t./2.5 m	8 f	7 ft./2 m	-	./1.75 m	6 ft	ft./1.5 m	5 f	Wire size
kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	in. (mm)
12	8	15	10	19	13	24	16	33	22	48	32	0.153 (3.9)
13	9	17	11	21	14	27	18	37	25	54	36	0.153 (3.9)
13	9	17	11	21	14	27	18	37	25	54	36	0.153 (3.9)
27	18	33	22	42	28	55	37	75	50	107	72	0.189 (4.8)
27	18	33	22	42	28	55	37	75	50	107	72	0.189 (4.8)
27	18	33	22	42	28	55	37	75	50	107	72	0.189 (4.8)
27	18	33	22	42	28	55	37	75	50	107	72	0.189 (4.8)
33	22	41	27	51	34	67	45	91	61	131	88	0.189 (4.8)

Span												
0 ft./3 m	10	./2.75 m	9 ft.	t./2.5 m	8 f	/ ft./2 m	7	./1.75 m	6 ft	t./1.5 m	5 f	Wire size
kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	in. (mm)
12	8	15	10	19	13	24	16	33	22	48	32	0.153 (3.9)
13	9	17	11	21	14	27	18	37	25	54	36	0.153 (3.9)
27	18	33	22	42	28	55	37	75	50	107	72	0.189 (4.8)
36	24	44	30	56	38	73	49	99	67	143	96	0.189 (4.8)
36	24	44	30	56	38	73	49	99	67	143	96	0.189 (4.8)
36	24	44	30	56	38	73	49	99	67	143	96	0.189 (4.8)
39	26	48	32	61	41	79	53	108	72	155	104	0.189 (4.8)
40	27	50	33	63	42	82	55	112	75	161	108	0.189 (4.8)

#### 6 in. deep U-profile – Maximum suggested load

Width		"ETU" series
in. (mm)	Electro-galvanized	Hot-dipped galvanized
12 (300)	ETU 6012SE10	ETU 6012SH10
18 (450)	ETU 6018SE10	ETU 6018SH10
20 (500)	ETU 6020SE10	ETU 6020SH10
24 (600)	ETU 6024SE10	ETU 6024SH10

#### 2½ in. deep U-profile – Maximum suggested load

Hot-dipped galvanized	Stainless steel (304)
ETC 2502SH10	ETC 2502SS10
ETC 2504SH10	ETC 2504SS10
ETC 2508SH10	ETC 2508SS10
ETC 2512SH10	_
ETC 2516SH10	_
	ETC 2502SH10 ETC 2504SH10 ETC 2508SH10 ETC 2512SH10

											Span
Wire size	size	6	ft./1.75 m	7 ft./2 m		8 ft./2.5 m		9 ft./2.75 m		10 ft./3 m	
in. (n		lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m
0.250 (	6.4)	119	177	88	131	67	100	53	79	43	64
0.250 (	6.4)	150	224	110	164	84	125	67	100	54	80
0.250 (	6.4)	161	240	118	176	91	136	71	106	58	86
0.250 (	6.4)	180	268	132	197	101	150	80	119	65	97

													Span
Wire size in. (mm)	size	5 ft./1.5 m		6 ft./1.75 m		7 ft./2 m		8 ft./2.5 m		9 ft./2.75 m		10 ft./3 m	
		lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m	lb/ft.	kg/m
0.177	(4.5)	36.1	53.7	25.1	37.4	18.4	27.4	14.1	21.0	11.0	16.4	9.8	14.6
0.177	(4.5)	65.8	97.9	45.7	68.0	33.6	50.0	25.7	38.2	15.0	22.3	12.8	19.0
0.177	(4.5)	67.1	99.9	46.6	69.3	34.2	50.9	26.2	39.0	20.0	29.8	16.7	24.9
0.177	(4.5)	95.5	142.1	66.3	98.7	48.7	72.5	37.3	55.5	22.6	33.6	18.7	27.8
0.177	(4.5)	82.4	122.6	57.2	85.1	42.1	62.7	32.2	47.9	22.3	33.2	18.2	27.1