Atkore™

Talon® Cable Cleats

Data Sheet

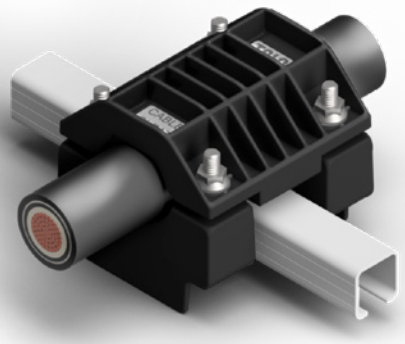
Talon® Cable Cleats

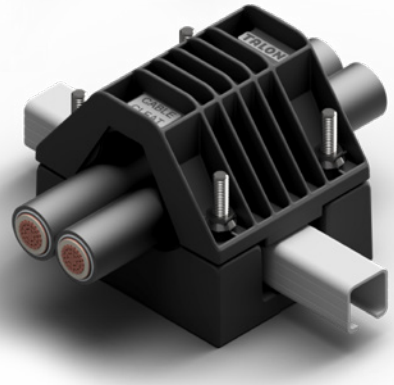
Talon® cable cleats utilize a high strength interlocking frame that simultaneously encloses cables and a cable tray rung or attaches to a channel strut or structural mounting substrate. In addition to securing cables subject to axial, lateral and torsional forces, Talon® cable cleats provide superior strain relief for vertical cables.

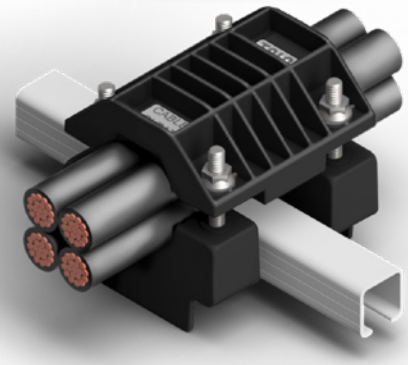
Talon® cable cleats are designed and tested to protect high voltage, medium voltage and low voltage cables from mechanical damage resulting from short circuits. You can trust Talon® cable cleats to maintain constant vigilance over your cables and support system.

Staggered Rung Application

Common Rung Application







Talon® Cable Cleats

Table 1 – Classifications And Testing[1,2]

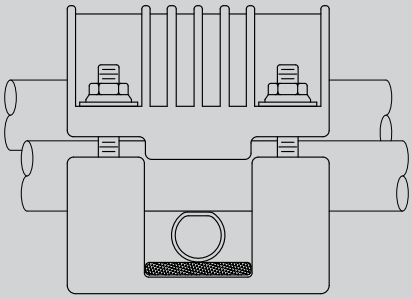
Category	Classification and Test Results
Color	Permanent Black
Strength Classification (ISO 527-1 §3.12)	Rigid — Cable cleats intact and reusable; no deformation after lateral retention or short circuit tests[3]
Material Classification (IEC 61914:2021 §6.1.3)	Composite — Nonmetallic frame with austenitic stainless steel gripping bolts and flange nuts
Ambient Application Temperature (IEC 61914:2021 §6.2)	-60 °C to +85 °C (-76 °F to +185 °F) — Suitable for direct sunlight and 250 °C momentary conductor temperature
Resistant to Impact (IEC 61914:2021 §6.3.5, §9.1.b, §9.2)	Very Heavy, 20.0 J Impact Energy @ -60 °C (-76 °F) — Performed on UV test specimens
Lateral Retention (IEC 61914:2021 §6.4.2, §9.1.c, §9.3.1, §9.3.2)	> 15,000 N (3,373 lbf) @ +60 °C (140 °F) — Parallel or Perpendicular to mounting surface[3,4]
Axial Retention (IEC 61914:2021 §6.4.3, §9.1.d, §9.4)	T3 (three mandrels): 5,000 N (1,124 lbf) @ +60 °C (140 °F) — Performed on lateral test and short circuit test specimens[3,4] T1 (four mandrels): 4,448 N (1,000 lbf) @ +60 °C (140 °F) — Performed on lateral test specimens[3,4] T1 (single mandrel): 3,336 N (750 lbf) @ +60 °C (140 °F) — Performed on lateral test specimens[3,4]
Resistant to Electromechanical Forces (IEC 61914:2021 §6.4.4, §6.4.5, §9.1. e, §9.5.2, §9.5.3)	Trefoil: 154 kA PEAK (Ø33 mm cables) — Specimens subsequently tested for axial retention Cables, cable cleats and cable tray are intact and reusable after multiple short circuit tests[3,4]
Resistant to Environmental Influences (IEC 61914:2021 §6.5.1.2, CSA C22.2 No. 18.4-15/ UL 2239:2015 §6.8)	Pass – Resistant to Ultraviolet Light (§11.1) — Specimens subsequently tested for impact resistance Pass – Resistant to Ultraviolet Light (CSA C22.2 No. 18.4-15/ UL 2239:2015 §6.8) — Suitable for wet locations Pass – Exceeds Classification "Outdoor" Corrosion Resistance (§6.5.2.2, §6.5.2.3, §11.2.2, §11.2.3) — Suitable for wet locations
Resistant to Flame Propagation (IEC 61914:2021 §10.1)	Pass – Exceeds Test Criteria – No flaming, no dripping, and no ignition of paper
Low Smoke Emission (IEC 61914:2021 §10.2, §10.3)	Pass – Low Smoke Zero Halogen (LSZH) resin
Electromagnetic Compatibility (IEC 61914:2021 §6.6.2, §12)	Pass – Zero electromagnetic emission (§12.1) Pass – Not susceptible to inductive eddy current heating (§6.6.2, §12.2)

Notes to Table 1:

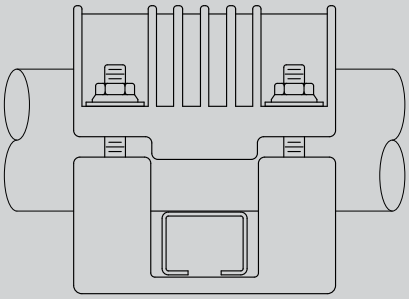
1. Unless otherwise noted, section numbers refer to the international cable cleat standard IEC 61914:2021, Cable cleats for electrical installations.
2. Talon® cable cleats are tested to applicable US and Canadian safety standards.
3. To prove suitability for continued use after exposure to dynamic electromechanical forces, Talon® cable cleats are tested for axial resistance after lateral resistance and short circuit testing. Any and all business undertaken with Atkore is subject to the latest revision of the Atkore Sales Terms and Conditions as stated therein.
4. For other classifications and test results, contact Atkore - Talon.

Talon® Cable Cleats

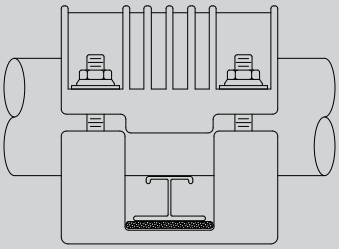
Figure 1 - Talon® Cable Cleats On Common Ladder-Type Cable Tray Rungs and Channel Strut



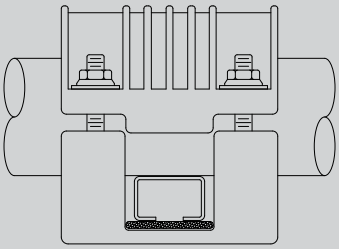
CABLE TRAY MOUNTING
ATKORE SWAGE RUNG



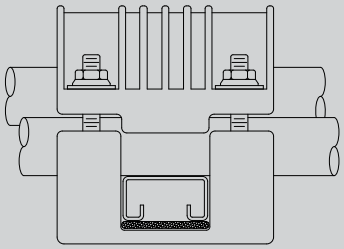
CABLE TRAY MOUNTING
ATKORE WELDED RUNG



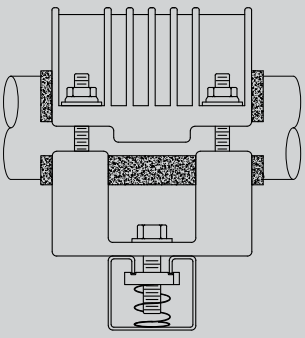
CABLE TRAY MOUNTING
I-BEAM RUNG



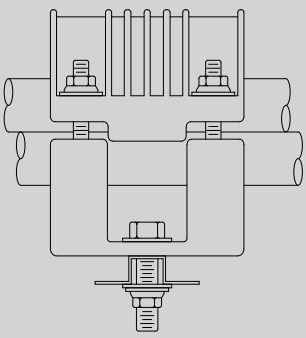
CABLE TRAY MOUNTING
BOX RUNG



CABLE TRAY MOUNTING
STRUT RUNG



CHANNEL STRUT MOUNTING
w/ OPTIONAL LINER



CABLE TRAY MOUNTING
HAT RUNG

Talon® Cable Cleats

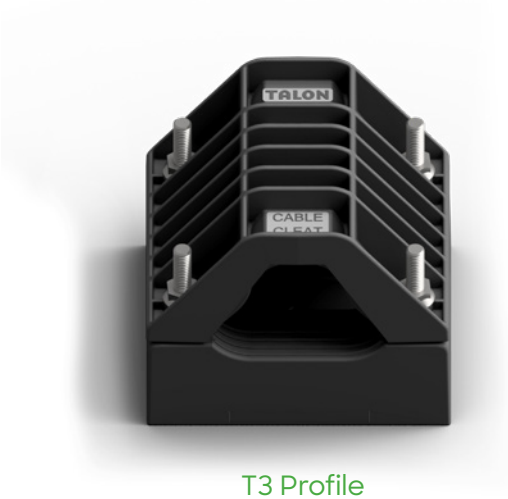
Table 2 – Talon® Cable Cleat Part Numbers[1]

Frame Size [2, 3, 4]	Dash	Frame Type [5, 6]	Integral Gripping Hardware	Rung Spacer	Dash	Custom Features
T104* T105* T106* T303* T304* T305* T306*	-	F1 = Heavy Duty	H4 = 304 Stainless Steel Hex Bolts and Flange Nuts H6 = 316 Stainless Steel Hex Bolts and Flange Nuts	R00 R10 R15 R20 R30 R40	-	00 = Type tested to IEC 61914 CI = Rung Channel Insert

Notes to Table 2:

1. For assistance in specifying Talon® cable cleat part numbers, refer to Talon Cable Cleat Sell Sheet.
2. * = Talon® cable cleat frame sizes normally in stock
3. Talon® cable cleats are molded from high-strength polyamide that is electrically insulating, flame resistant, UV resistant, weather resistant, low smoke, zero halogen and resistant to drilling mud, gaseous atmospheres, salts, and many other chemicals.
4. Talon® cable cleats are tested to US and Canadian safety standards, are suitable for wet locations and have passed rigorous testing in accordance with ASTM B117, D256, D570, D638, D789, D790, D792, D3418 & D5630, CSA C22.2 No. 18.4-15, IEC 60695 & 61914, ISO 75, 178, 179, 180, 527-1, 1183, 3146, 3451, 4892-2, 15512 & 60695-11, and UL 94, 746, 969 & 2239. Refer to Table 1 for classifications and testing.
5. Talon® cable cleats comprising F1 heavy duty frames are designed and tested to protect cables from mechanical damage resulting from short circuits, secure cables subject to axial, lateral and torsional forces and provide superior strain relief for vertical cables. Talon® cable cleats may be used with high voltage, medium voltage, and low voltage cables.
6. Talon® cable cleats include integral stainless steel gripping bolts that are held captive in the base for ease of installation. Talon® cable cleats do not require additional mounting hardware when simultaneously enclosing cable(s) and a ladder-type cable tray rung. Auxiliary mounting holes are included in cable cleat bases for attaching to a channel strut or structural mounting substrate. Mounting hardware kits are normally in stock.

T1 Profile



T3 Profile

Talon Cable Cleats
Quotation Checklist

Talon Cable Cleats
in Atkore Virtual Solutions Center

Figure 2 - Talon® Cable Cleat Dimensional Profiles

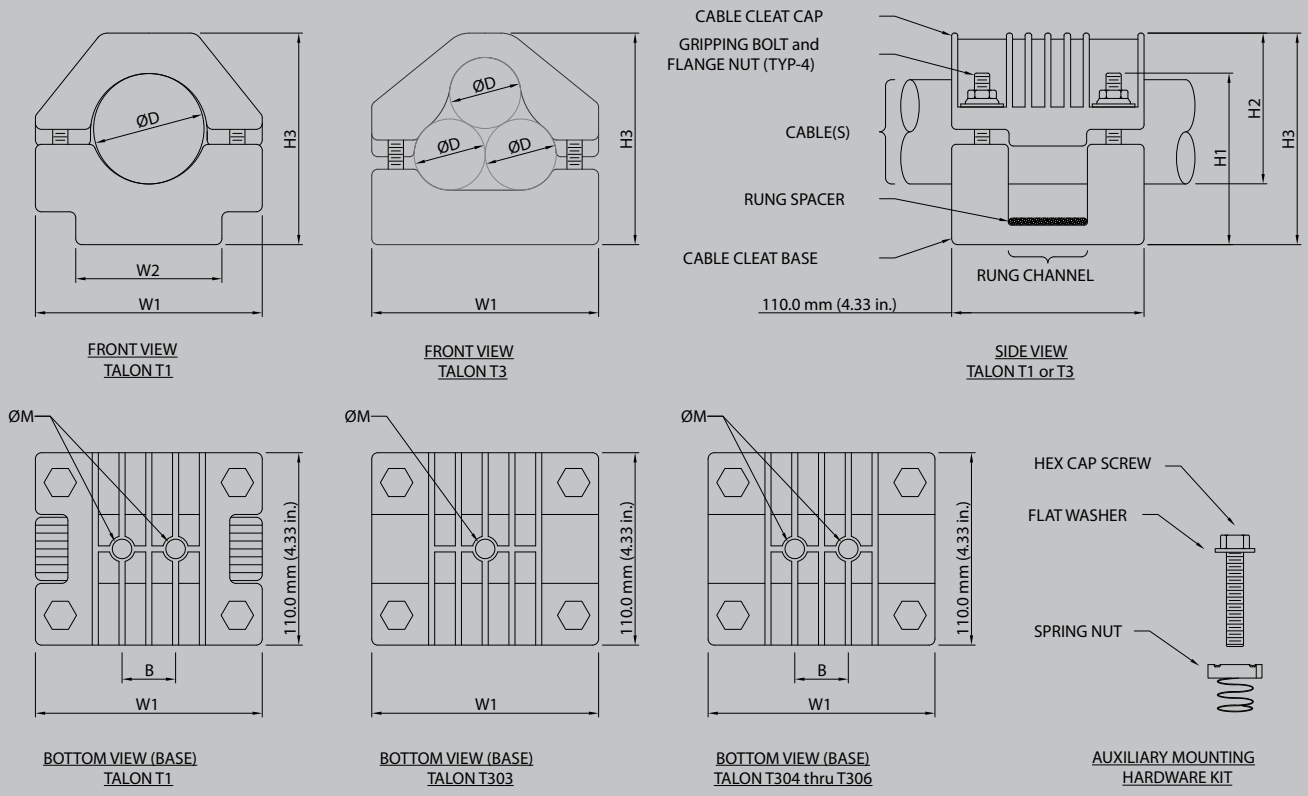


Table 3 – Physical Specifications[1]

Frame Size	H1 Overall Base Height	H2 Height Above Rung[2] [Min - Max]	H3 Overall Height[2] [Min - Max]	W1 Overall Width	W2 Lower Width	ØM Auxiliary Mounting Holes Quantity and Bolt Diameter	B Mounting Hole Spacing	Weight
T104	100.1 mm (3.94 in.)	59.6 – 69.3 mm (2.35 – 2.73 in.)	100.1 – 109.8 mm (3.94 – 4.32 in.)	101.6 mm (4.00 in.)	68.1 mm (2.68 in.)	Qty-2 3/8 in. (M10)	23.8 mm (0.94 in.)	0.46 kg (1.02 lbm)
T105	119.9 mm (4.72 in.)	69.3 – 97.9 mm (2.73 – 3.85 in.)	119.9 – 138.4 mm (4.72 – 5.45 in.)	126.7 mm (4.99 in.)	79.0 mm (3.11 in.)		30.0 mm (1.18 in.)	0.58 kg (1.27 lbm)
T106	133.4 mm (5.25 in.)	92.9 – 126.5 mm (3.66 – 4.98 in.)	133.4 – 167.0 mm (5.25 – 6.57 in.)	156.2 mm (6.15 in.)	110.7 mm (4.36 in.)		30.0 mm (1.18 in.)	0.81 kg (1.79 lbm)
T303	90.9 mm (3.58 in.)	75.1 – 91.9 mm (2.96 – 3.62 in.)	116.1 – 132.9 mm (4.57 – 5.23 in.)	130.5 mm (5.14 in.)	n/a	Qty-1 3/8 in. (M10)	n/a	0.54 kg (1.19 lbm)
T304	105.1 mm (4.14 in.)	86.3 – 107.8 mm (3.40 – 4.24 in.)	127.3 – 148.9 mm (5.01 – 5.86 in.)	147.8 mm (5.82 in.)	n/a	Qty-2 3/8 in. (M10)	34.0 mm (1.34 in.)	0.64 kg (1.42 lbm)
T305	108.0 mm (4.25 in.)	101.4 – 127.9 mm (3.99 – 5.03 in.)	142.4 – 168.9 mm (5.61 – 6.65 in.)	168.4 mm (6.63 in.)	n/a		40.0 mm (1.57 in.)	0.72 kg (1.59 lbm)
T306	123.5 mm (4.86 in.)	120.1 – 152.6 mm (4.73 – 6.01 in.)	161.1 – 193.6 mm (6.34 – 7.62 in.)	197.4 mm (7.77 in.)	n/a		36.0 mm (1.42 in.)	0.95 kg (2.09 lbm)

Notes to Table 3:

1. For nominal cable cleat dimensions H1, H2, etc., refer to Figure 2.
2. "Min" represents the nominal dimension of a Talon® cable cleat (no liner) securing the smallest cable(s) in the cable range. "Max" represents the nominal dimension of a Talon® cable cleat (no liner) securing the largest cable(s) in the cable range. For other dimensions, contact Atkore - Talon.

Quotation Checklist for Cable Cleats

Atkore

Necessary for Cable Cleat Quote

Project Owner		Project Name	
Atkore Agent		Project Location	
Preferred Distributor			

Quantity of cables in each cleat ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ Other _____

Cable diameter for each cable ❑ in. ❑ mm _____

Conductor ❑ Single Conductor ❑ Multi-Conductor Cable

If single conductor cables, are the cables plexed (i.e.. twisted together by manufacturer before spooled on cable reel): ❑ Yes ❑ No

If the cables are plexed, what is the lay of the plexing: _____

If multi-conductor cable, is the cable armored (e.g. aluminum, steel, basketweave, etc.): ❑ Yes ❑ No

Will Atkore standard ASTM F593C (304 stainless steel) hardware meet project specifications ❑ Yes ❑ No

Mounting method ❑ Cable Tray ❑ Strut ❑ Structural Steel ❑ Other _____

If utilizing cable tray, please furnish manufacturer and part number: ❑ Atkore ❑ Other _____ Part # _____

If cable tray part number is unknown, list the manufacturer series number: Series # _____

Necessary for Side-by-Side and Lineal Cable Cleat Spacing Calculations

Current ❑ AC ❑ DC	Quantity of parallel cables per phase (if greater than 1)
If AC, frequency: ❑ 50 Hz ❑ 60 Hz ❑ Other _____	Conductor cross-sectional area _____ ❑ AWG ❑ kcmil/MCM ❑ mm^2
If AC: ❑ 1-Phase ❑ 3-Phase	Conductor material ❑ Copper ❑ Aluminum
Available fault current _____	Length of longest straight cable (horizontal and vertical) ❑ ft ❑ m
Please furnish any other electrical parameters, if available (e.g. $I_{RMS-ASYMM}$, $I_{HALF-CYCLE\ PEAK}$, X/R, PF, dc Time Constant, i^2t, etc.):	Number of cables and cable bundles in cable tray (provide sketch)
	Are the cable cleats on ❑ One Common Rung ❑ Two Staggered Rungs
	Does the customer specify the minimum clear space between cables and cable bundles ❑ Yes ❑ No Specs _____
	What is the anticipated cable tray width ❑ in. ❑ mm _____

Necessary for vertical cable lineal spacing calculations

Cable weight ❑ Per Foot ❑ Per Meter _____

Other helpful information, if available

Estimated quantity of cable cleats required

Environmental conditions ❑ Temperatures ❑ Onshore ❑ Offshore ❑ Aboveground ❑ Underground ❑ Chemical Exposure ❑ Nuclear ❑ Other _____

Type(s) of load ❑ Axial ❑ High-Shock ❑ Seismic / Vibration ❑ Short Circuit ❑ Vertical / Strain Relief ❑ Other _____

Cable data sheet ❑ Yes ❑ No

Node reports from short circuit study at upstream bus for each circuit ❑ Yes ❑ No

Additional information _____

If you need assistance, contact one of our Technical Product Engineers who will be happy to help at takeoffs@atkore.com

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