

GENERAL INFORMATION

TRAK-IT® C5

Gas Fastening System

PRODUCT DESCRIPTION

The Trak-It C5 gas fastening system was developed for use in light-duty applications, including attaching drywall track to concrete, block or steel, lath to concrete or block, furring strips to concrete or block, and plywood to concrete or block base materials. The system is designed for speed, efficiency and consistency. Operation of a gas fastening system does not require licensing.

GENERAL APPLICATIONS AND USES

- Attaching steel track to concrete, block or steel
- Attaching plywood to concrete or block
- Attaching lath to concrete, block or steel
- Attaching furring strips to concrete or block

FEATURES AND BENEFITS

- + No licensing requirements
- + Each fuel cell contains enough gas to install up to 800 fasteners
- + Available for use with most Stick-E™ accessories
- + Tracks are easily removed and exchanged on tool
- + Adjustable depth control on tool nose piece
- + Maintenance counter and LED indicator
- + Dust resistant tool manifolds
- + Ergonomic handle with light trigger pull load
- + Can be used with a C5 pole tool

APPROVALS AND LISTINGS

- International Code Council, Evaluation Service (ICC-ES), ESR-3275
- Code compliant with the 2018 IBC/IRC, 2015 IBC/IRC, 2012 IBC/IRC, and 2009 IBC/IRC

GUIDE SPECIFICATIONS

CSI Divisions: 03 16 00 - Concrete Anchors, 04 05 19.16 - Masonry Anchors, 05 05 23 - Metal Fastenings, 06 05 23 - Wood, plastic, and composite fastenings and 09 22 16.23 - Fasteners. Power-driven fastening systems shall be Trak-It C5 as supplied by DEWALT / Powers Fasteners, Towson, MD.

TOOL SPECIFICATIONS

Trak-It C5 Tool

Tool Body	Precision Moulded Aluminum and Plastic
Tool Length	17.25"
Tool Weight	7.9 lbs
Pin Length (Maximum)	1-1/4" for deep track; 1-1/2" for short track & long track
Pin Capacity	42 pins for deep track & long track; 22 pins for short track
Power Capacity	105 joules
Approximate Shots per Fuel Cell	800 pins
Approximate Shots per Battery Charge	5,700

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TRAK-IT C5 TOOL (SHOWN WITH DEEP TRACK) FOR 1-1/4" PIN LENGTH



SHORT TRACK & LONG TRACK FOR 1-1/2" PIN LENGTH



FASTENERS FOR CONCRETE AND MASONRY



FASTENERS FOR STEEL



SPECIALTY FASTENERS

SUITABLE BASE MATERIALS

- Normal-Weight Concrete
- Lightweight Concrete
- Grouted Concrete Masonry
- Hollow Concrete Masonry (CMU)
- Steel

PERFORMANCE DATA

Allowable Loads for Trak-It C5 Fasteners Installed in Normal Weight Concrete^{1,2,3,9,10}

Shank Type (inch)	Shank Diameter (inch)	Minimum Embedment (inch)	Minimum Fastener Length ¹ (inch)	Minimum Spacing ² (inch)	Minimum Edge Distance ⁶ (inch)	Minimum Concrete Compressive Strength (f'c)					
						2,500 psi		3,000 psi		4,000 psi	
						Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
Straight	0.102	5/8	3/4	4	3-1/4	120	135	120	140	120	145
		7/8	1	4	3-1/4	180	185	180	195	180 ⁷	215 ⁷
		1-1/8	1-1/4	4	3-1/4	240	225	240	255	245	310
	0.145	5/8	3/4	4	3-1/4	105	75	110	95	120	135
		7/8	1	4	3	125	105	135	110	-	-
Step	0.120/0.102	0.600 ⁵	0.680 ⁵	4	3	-	-	-	-	90	65
		5/8	0.730	4	3	-	-	-	-	115 ⁸	80 ⁸
	0.145/0.102	3/4	1-1/4	4	3	80	215	85	235	-	-
		1	1-1/4	4	3	125	245	135	265	-	-
		1-1/8	1-1/4	4	1-3/4	215	250	250	250	320	250
		3/4	1	4	3-1/4	145	180	155	185	170	190
Tapered	0.120	5/8	3/4	3-1/4	3-1/4	150	120	170	135	170	145
				2-3/4		150	120	170	135	165	135
				2		150	90	170	100	160	100

For SI: 1 lbf = 4.48 N, 1 inch = 25.4mm, 1 psi = 6.895 kPa

1. Fasteners must not be driven until the concrete has reached the tabulated compressive strength.
2. Concrete thickness must be a minimum of 3 times the embedment depth of the fastener or 2 inches, whichever is greater.
3. The tabulated allowable load values are for the fastener only. Wood or steel members connected to the steel substrate must be investigated in accordance with accepted design criteria.
4. Based upon attachment of 16 gage sheet metal or thinner, except as noted.
5. Based upon attachment of 25 gage sheet metal or thinner.
6. Installing fasteners less than the minimum spacing and edge distance values in this table can result in a reduction in capacity. Such conditions are outside the scope of this published information.
7. For installations in 6,000 psi concrete, the tabulated tension and shear loads may be increased to 200 lbs and 220 lbs, respectively.
8. For installations in 6,000 psi concrete, the tabulated shear load may be increased to 125 lbs. The tabulated tension load must not be increased.
9. Allowable load capacities are calculated using minimum required safety factors in accordance with ICC-ES AC70; the applied safety factor for the tabulated allowable loads is 4.0.
10. Multiple fasteners are recommended for any attachment for increased reliability.

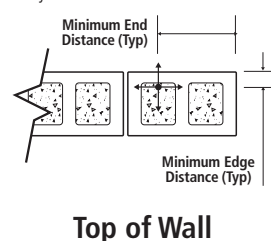
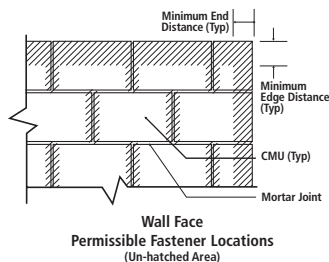
Allowable Loads for Trak-It C5 Fasteners Driven into Concrete Masonry Units^{1,2,3,8}

Shank Type	Shank Diameter (inch)	Min. Embed. Depth (inch)	Min. End and Edge Distance (inches)	Allowable Loads (lbf)									
				Hollow CMU				Grouted CMU					
				Face Shell ⁶		Horizontal Mortar Joint ⁷		Face Shell ⁶		Horizontal Mortar Joint ⁷		Top and Center of Grouted Cell	
				Tension	Shear ¹	Tension	Shear ²	Tension	Shear ⁴	Tension	Shear ⁵	Tension	Shear ⁴
Straight	0.102	7/8	3-3/4	65	80	-	-	-	-	-	-	-	-
	0.145	3/4	3-3/4	-	-	-	-	80	90	-	-	-	-
Step	0.145/0.120	3/4	3-3/4	-	-	-	-	85	100	-	-	-	-
	0.145/0.102	1-1/8	3-3/4	-	-	-	-	180	215	-	-	-	-
Tapered	0.120	5/8	3-3/4	45	65	60	80	60	70	60	80	135	100
			2			-	-			-	-	-	-

For SI: 1 lbf = 4.4 N, 1 inch = 25.4 mm.

1. Concrete masonry units must be normalweight units conforming to ASTM C90. The minimum allowable nominal size of the CMU must be 8 inches high by 8 inches wide by 16 inches long, with a minimum, 1-1/4-inch-thick face shell thickness.
2. Straight shank and step shank fasteners must only be placed into the unit face, including ends of masonry units. Only one straight shank or step shank fastener may be installed in each cell, and it must be a minimum of 1-1/2 inches from the mortar joints and 1-1/2 inches from the CMU web.
3. For tapered shank fasteners, minimum fastener spacing is 2 inches center-to-center.
4. Shear loads for straight shank and step shank fasteners installed in the face shell (including ends of masonry units) may be applied in any direction. Shear loads for tapered shank fasteners installed in the face shell (including ends of masonry units) or in the top of grouted cells may be applied in any direction.
5. Shear loads for tapered shank fasteners installed into the horizontal mortar joint may be applied in any direction along the CMU wall plane.
6. Installations in the face shell of the wall are applicable for fasteners in the ends of masonry units where the minimum edge and end distances are maintained.
7. Mortar must be Type N, M or S complying with ASTM C270 for use with tapered shank fasteners for installations into the horizontal mortar joint.
8. Allowable loads for straight shank, step shank and tapered shank fasteners installed into vertical mortar joints, including the intersection of the head joint and bed joint, are outside the scope of this report. Fasteners with a straight shank and step shank must be installed a minimum of 3-3/4 inches from the vertical mortar joints. Fasteners with a tapered shank must be installed a minimum of 1-1/4 inches from the vertical mortar joints.

Fasteners Installed into Hollow or Grout-Filled Concrete Masonry Units



Allowable Loads for Trak-It C5 Fasteners Installed in ASTM A36 Steel^{1,2}

Shank Type	Shank Diameter (inch)	Minimum Spacing (inch)	Minimum Edge Distance (inch)	Steel Thickness (inch)									
				1/8		3/16		1/4		3/8		1/2	
				Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
Step	0.120/0.102	1	1/2	115	280	230	280	250	240	165 ³	125 ³	220 ⁴	205 ⁴
	0.145/0.120	1	1/2	95	300	285	300	225	190	-	-	-	-
Tapered	0.120	1	1/2	-	-	-	-	130	230	215 ⁵	325 ⁵	185 ⁶	325 ⁶

For SI: 1 lbf = 4.48 N, 1 inch = 25.4mm, 1 psi = 6.895 kPa

- Steel base material must have minimum yield and tensile strengths (F_y and F_u) equal to 36 ksi and 58 ksi, respectively.
- Unless otherwise noted, fasteners must be driven to where the point of the fastener penetrates through the steel base material.
- An embedment depth of 0.350-inch is required for the tabulated value. Allowable load value applies to steel base material with a thickness of 3/8-inch and thickness up to but not including 1/2-inch. For cases where the embedment depth is less than 0.350-inch but at least 0.250-inch, the allowable tension load is 115 lbs and the allowable shear is 120 lbs.
- An embedment depth of 0.375-inch is required for the tabulated value. Allowable load value applies to steel base material with a thickness of 1/2-inch or greater. For cases where the embedment depth is less than 0.375-inch, but is at least 0.350-inch, the allowable tension load is 165 lbs and the allowable shear load is 125 lbs. For cases where the embedment depth is less than 0.350-inch but at least 0.250-inch, the allowable tension load is 110 lbs and the allowable shear is 120 lbs.
- An embedment depth of 0.350 inch is required. Allowable load value applies to steel base material with thickness of 3/8 inch and thicknesses up to but not including 1/2 inch.
- An embedment depth of 0.340 inch is required for the tabulated value. Allowable load value applies to steel base material with thickness of 1/2 inch and greater.

Allowable Loads for Trak-It C5 Fasteners Installed in ASTM A572 Grade 50 or ASTM A992 Steel^{1,2}

Shank Type	Shank Diameter (inch)	Minimum Spacing (inch)	Minimum Edge Distance (inch)	Steel Thickness (inch)									
				1/8		3/16		1/4		3/8		1/2	
				Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
Step	0.120/0.102	1	1/2	120	290	245	290	270	255	175 ³	135 ³	240 ⁴	220 ⁴
	0.145/0.120	1	1/2	100	320	305	320	245	205	-	-	-	-
Tapered	0.120	1	1/2	-	-	-	-	140	250	215 ⁵	325 ⁵	195 ⁶	340 ⁶

For SI: 1 lbf = 4.48 N, 1 inch = 25.4mm, 1 psi = 6.895 kPa

- Steel base material must have minimum yield and tensile strengths (F_y and F_u) equal to 50 ksi and 65 ksi, respectively.
- Unless otherwise noted, fasteners must be driven to where the point of the fastener penetrates through the steel base material.
- An embedment depth of 0.350-inch is required for the tabulated value. Allowable load value applies to steel base material with a thickness of 3/8-inch and thickness up to but not including 1/2-inch. For cases where the embedment depth is less than 0.350-inch but at least 0.188-inch, the allowable tension load is 65 lbs and the allowable shear is 90 lbs.
- An embedment depth of 0.375-inch is required for the tabulated value. Allowable load value applies to steel base material with a thickness of 1/2-inch or greater. For cases where the embedment depth is less than 0.375-inch, but is at least 0.350-inch, allowable tension load is 175 lbs and the allowable shear load is 135 lbs. For cases where the embedment depth is less than 0.350-inch but at least 0.125-inch, the allowable tension load is 25 lbs and the allowable shear is 55 lbs.
- An embedment depth of 0.350 inch is required. Allowable load value applies to steel base material with thickness of 3/8 inch and thicknesses up to but not including 1/2 inch.
- An embedment depth of 0.340 inch is required for the tabulated value. Allowable load value applies to steel base material with thickness of 1/2 inch and greater.

Allowable Loads for Trak-It C5 Spiral Knurl Pin Installed into Steel^{1,2,3}

Fastener Type (Style)	Shank Diameter inch	16 Gage Steel		18 Gage Steel		20 Gage Steel	
		Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
Spiral Knurl Pin	0.102 (K)	45	220	30	140	20	90

- Tested in accordance with general provisions of ASTM E 1190 / ICC-ES AC70 and with steel members meeting ASTM C 955/A 653. Allowable loads are calculated using an applied safety factor of 5.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety.
- The tabulated allowable load values are for the fastener pullout capacity in the steel member. Wood members and/or proprietary materials connected to the steel must be investigated in accordance with the applicable code(s).
- Multiple fasteners are recommended for any attachment for increased redundancy.

Allowable Loads for Trak-It C5 Fasteners Driven into Minimum 3,000 Psi Sand-Lightweight Concrete and Sand-Lightweight Concrete-Filled Steel Deck^{1,5}

Shank Type	Shank Diameter (inch)	Min. Embed. Depth (inch)	Allowable Loads (lbf)										TOP COVER (inches)
			Installed Directly into Concrete ²		Installed through 3" Deep Steel Deck Panel into Concrete ³				Installed through 1-1/2" Deep Steel Deck Panel into Concrete ⁴				
					Upper Flute	Lower Flute	Upper Flute	Lower Flute	Upper Flute	Lower Flute	Upper Flute	Lower Flute	
			Tension	Shear	Tension		Shear		Tension		Shear		
Straight	0.102	5/8	115 ⁶	135 ⁶	110 ⁶	85 ⁶	225 ⁶	1956	50 ⁶	105 ⁶	125 ⁶	195 ⁶	2
		3/4	120	150	120	105	225	195	115	105	225	195	2-1/4
		7/8	120	205	—	105	—	255	—	110	—	245	2-5/8
	0.145	3/4	70	80	110	80	220	200	—	60	—	200	2-1/4
Step	0.145/0.102	1-1/8	280	230	—	160	—	300	—	150	—	300	3-1/4
Tapered	0.120	5/8	120 ⁶	140 ⁶	95 ⁶	80 ⁶	205 ⁶	1856	100 ⁶	90 ⁶	205 ⁶	200 ⁶	2

For Sl: 1 lbf = 4.4 N, 1 inch = 25.4 mm, 1 psi = 6.895 kPa.

- Fasteners must not be driven until the concrete has reached the tabulated compressive strength.
- For straight shank and step shank fasteners installed directly into concrete (e.g. top of concrete-filled steel deck), fastener edge distance must be 3 inches minimum and fastener spacing must be 4 inches minimum. For tapered shank fasteners installed directly into concrete (e.g. top of concrete-filled steel deck), fastener edge distance must be 3 inches minimum and fastener spacing must be 3.25 inches minimum. Shear loads may be applied in any direction.
- The steel deck must have a minimum base material thickness of 0.035 inch, minimum yield strength, F_y , of 33 ksi, a minimum tensile strength of 45ksi, and conform to the profile requirements as shown in Figure 1A. Fastener edge distance (lower flute locations) must be a minimum of 1-1/8 inches. Fastener spacing must be a minimum of 4 inches for straight shank fasteners and a minimum of 3.25 inches for tapered shank fasteners. Shear loads may be applied in any direction.
- The steel deck must have a minimum base material thickness of 0.035 inch, minimum yield strength, F_y , of 33 ksi, a minimum tensile strength of 45ksi, and conform to the profile requirements as shown in Figure 1B. Fastener edge distance (lower flute locations) must be a minimum of 7/8 inches. Fastener spacing must be a minimum of 4 inches for straight shank fasteners and a minimum of 3.25 inches for tapered shank fasteners.
- Unless otherwise noted, for installation into lightweight concrete with $f'c = 3,500$ psi, multiply the tabulated values by 1.05 to determine the applicable allowable load value.
- For installation of 0.102-inch-diameter straight shank fasteners and 0.120-inch-diameter tapered shank fasteners into lightweight concrete with $f'c = 3,500$ psi, no increase in tabulated values is allowed. For installation into lightweight concrete with $f'c = 2,500$ psi, multiply the tabulated values by 0.87 to determine the applicable allowable load value.
- For fastener installations into the lower flute, the minimum required topping thickness above the deck panel is 2 inches.

Figure 1 - Fastener Installation Through Soffit of 3-inch Deep Concrete-filled Composite Steel Deck Floor and Roof Assemblies.

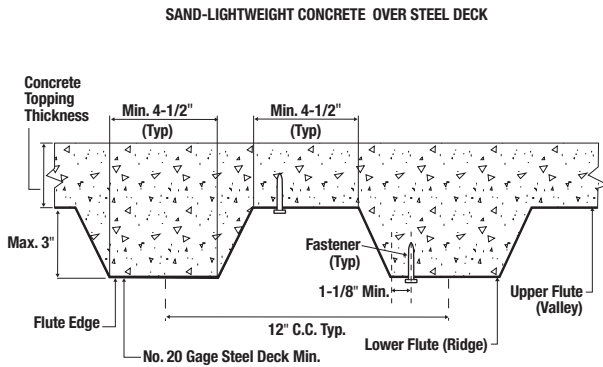
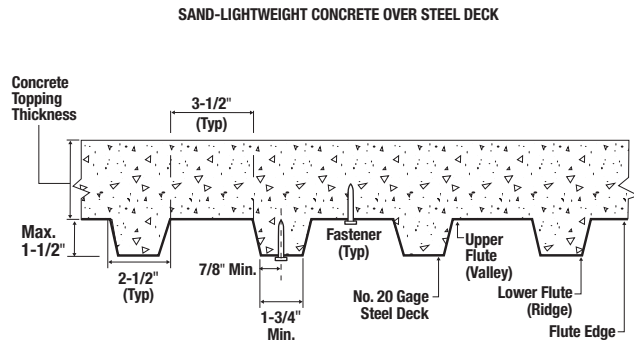


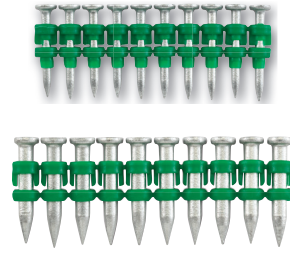
Figure 2 - Fastener Installation Through the Soffit of 1-1/2 inch Deep Concrete-filled Composite Steel Deck Floor and Roof Assemblies.



ORDERING INFORMATION

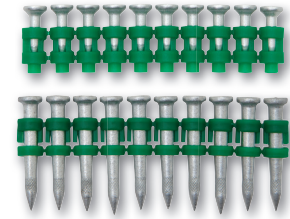
Pins for Concrete and Concrete Masonry (CMU)

Cat. No.	Shank Dia.	Step Dia.	Length	Shank Type	Plate	Box	Ctn.	Typical Applications
55310	0.102"	-	3/4"	Straight, smooth	Zinc	800	4000	Metal track to concrete
55312	0.102"	-	1"	Straight, smooth	Zinc	800	4000	Metal track to concrete
55314	0.102"	-	1-1/4"	Straight, smooth	Zinc	800	4000	Fixture to concrete or CMU
55316	0.102"	-	1-1/2"	Straight, smooth	Zinc	800	4000	Fixture to concrete or CMU
55318	0.145"	-	3/4"	Straight, smooth	Zinc	800	4000	Metal track to concrete
55320	0.145"	-	1"	Straight, smooth	Zinc	800	4000	Light gauge metal track to concrete, 1/4" & 3/8" plywood to concrete/block, rubber membrane to concrete or CMU
55322	0.145"	0.102"	1-1/4"	Step, smooth	Zinc	800	4000	Fixture to concrete or CMU
55324	0.145"	0.102"	1-1/2"	Step, smooth	Zinc	800	4000	Fixture to concrete or CMU
55343	0.120"	-	3/4"	Tapered, smooth	Zinc	800	4000	Metal track to concrete or CMU



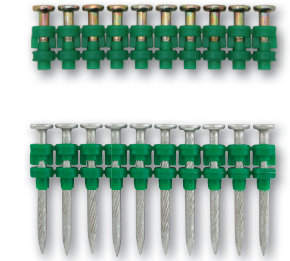
Pins for Steel

Cat. No.	Shank Dia.	Step Dia.	Length	Shank Type	Plate	Box	Ctn.	Typical Applications
55325	0.120"	-	1/2"	Straight, smooth	Zinc	800	4000	Metal track to thick steel
55326	0.120"	0.102"	1/2"	Step, knurled	Zinc	800	4000	Metal track to steel
55336	0.145"	0.120"	1"	Step, knurled	Zinc	800	4000	1/2" & 5/8" plywood to steel
55338	0.145"	0.120"	1-1/4"	Step, knurled	Zinc	800	4000	3/4" plywood to steel, 1" furring strip to steel
55343	0.120"	-	3/4"	Tapered, smooth	Zinc	800	4000	Metal track to steel



Specialty Pins

Cat. No.	Shank Dia.	Step Dia.	Min. Embed.	Shank Type	Plate	Box	Ctn.	Typical Applications
55328	0.120"	0.102"	5/8"	Step, knurled	Zinc	800	4000	Metal track to steel or concrete
55330	0.120"	0.102"	5/8"	Step, knurled	Zinc	800	4000	1/4" plywood to steel or hard concrete
55340	0.102"	-	1-3/8"	Spiral, knurled	Zinc	800	4000	Plywood or Denz-Glass (with washer) to steel stud
55342	0.102"	0.088"	3/4"	Step, knurled	Zinc	800	4000	Steel, stud, precast concrete, block (CMU) and steel



Tools and Accessories

Cat. No.	Description	STD Box	STD Ctn
55142	C5 Trak-It Deep Track (1-1/4 pin) - 42 Pin Magazine Capacity	1	1
55144	C5 Trak-It Short Track (1-1/2 pin) - 22 Pin Magazine Capacity	1	1
55148	C5 Trak-It Long Track (1-1/2 pin) - 42 Pin Magazine Capacity	1	1
56347	C5 Pole Tool Full System	1	1
56348	C5 Pole Tool 3' Extension	1	1
55585	Battery	1	1
55618	Charger Base	1	1
55619	110v Adapter Cord	1	1
55502	Fuel Cell	20	80
55342	Accessory DT (1-1/4 pin)	1	1
55344	Accessory ST (1-1/2 pin)	1	1
55346	Accessory LT (1-1/2 pin)	1	1
55157	Denz-Tight Washer	100	1000

