

**Trak-It® C4 High Performance Gas Fastening System**

**PRODUCT DESCRIPTION**

The Trak-It C4 and C4EX gas fastening systems were developed for use in high volume production applications. Powerful rugged tools for fastening wood to concrete or steel. The systems are designed for speed, increased power and durability. The C4 CZ tool was designed for use with single shot powder pins together with gas fastening technology. Operation of a gas fastening system does not require licensing.

**GENERAL APPLICATIONS AND USES**

- Attaching wood to concrete, block or steel
- Attaching Steel to concrete, block or steel
- Attaching Plywood to Steel
- Attaching Steel track to concrete

**FEATURES AND BENEFITS**

- + No licensing required
- + Increased power and durability
- + Handles up to 2-9/16" length fasteners
- + Each fuel cell contains enough gas to install up to 800 fasteners
- + Pin diameter range 0.102" to 0.145"

**APPROVALS AND LISTINGS**

International Code Council , Evaluation Service (ICC-ES), ESR-2249

**GUIDE SPECIFICATIONS**

CSI Divisions: 03151–Concrete Anchoring, 04081-Masonry Anchorage, 05090-Metal Fastenings, 06090-Wood and Plastic Fastening. Gas fastening systems shall be Trak-It as supplied by Powers Fasteners, Inc.

**TOOL SPECIFICATIONS**

**Trak-It C4 Tool/C4EX Tool**

Tool Body	Precision Moulded Aluminum and Plastic
Tool Length	17-3/4"
Tool Weight	9.7 lbs
Pin Length	2-9/16" Total Length
Pin Capacity	42 pins
Power Capacity	120 Joules (C4) , 150 Joules (C4EX)
Approximate Shots per Fuel Cell	800 pins
Approximate Shots per Battery Charge	5,500

**Trak-It C4CZ Single Shot Tool**

Tool Body	Precision Moulded Aluminum and Plastic
Tool Length	17-3/4"
Tool Weight	9.7 lbs
Pin Length	3" Total Length
Pin Capacity	Single Shot
Power Capacity	150 Joules
Approximate Shots per Fuel Cell	800 pins
Approximate Shots per Battery Charge	5,500

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Trak-It C4 Tool



Trak-It C4EX Tool



Trak-It C4CZ Tool

**SUITABLE BASE MATERIALS**

Normal-Weight Concrete  
 Structural Lightweight Concrete  
 Concrete Masonry  
 Steel

GAS FASTENING

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**PERFORMANCE DATA**

**Allowable Load Capacities for Trak-It C4 Fasteners Installed in Normal Weight Concrete<sup>1,2,3</sup>**

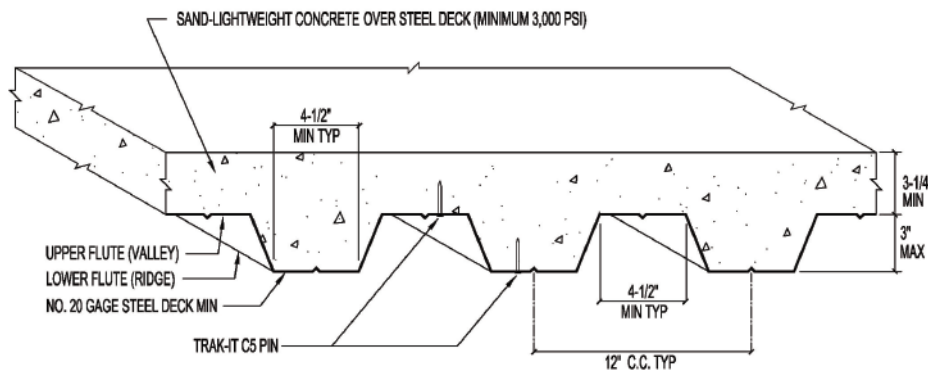
Shank Type	Shank Diameter in. (mm)	Minimum Embedment inches (mm)	Minimum Spacing inches (mm)	Minimum Edge Distance inches (mm)	Minimum Concrete Compressive Strength (f'c)			
					2,500 psi (17.2 mPa)		3,000 psi (20.7 mPa)	
					Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
Straight	0.145 (3.68)	3/4 (19.1)	4 (101.6)	3 (76.2)	65 (0.29)	105 (0.47)	70 (0.31)	110 (0.49)
Straight	0.145 (3.68)	7/8 (22.2)			125 (0.56)	105 (0.47)	135 (0.60)	110 (0.49)
Step	0.145 (3.68)	3/4 (19.1)	4 (101.6)	3 (76.2)	80 (0.36)	220 (0.98)	90 (0.40)	235 (1.04)
Step	0.145 (3.68)	1 (25.4)			130 (0.58)	245 (1.09)	140 (0.62)	270 (1.20)
Taper	0.137 (3.48)	3/4 (19.1)	4 (101.6)	1-3/4 (44.5)	80 (0.36)	90 (0.40)	90 (0.40)	100 (0.44)
Taper	0.137 (3.48)	1 (25.4)	4 (101.6)	1-3/4 (44.5)	90 (0.40)	70 (0.31)	100 (0.44)	80 (0.36)

1. Allowable load capacities listed are calculated using a safety factor of 5.0 or greater. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. The concrete thickness must be a minimum of 3 times the embedment depth of the fastener.
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.

**Allowable Load Capacities for Trak-It C4 Fasteners Installed in Lightweight Concrete and Structural Sand-Lightweight Concrete over Steel Deck<sup>1,2,3,4</sup>**

Shank Type	Shank Diameter in. (mm)	Minimum Embedment inches (mm)	Minimum Spacing inches (mm)	Minimum Edge Distance inches (mm)	Location	Minimum Concrete Compressive Strength (f'c)			
						2,500 psi (17.2 mPa)		3,000 psi (20.7 mPa)	
						Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
Straight	0.145 (3.68)	3/4 (19.1)	4 (101.6)	1-1/8 (28.6)	Top	110 (0.49)	150 (0.67)	120 (0.53)	165 (0.73)
					Lower Flute	70 (0.31)	180 (0.80)	80 (0.36)	200 (0.89)
					Upper Flute	100 (0.44)	205 (0.91)	110 (0.49)	220 (0.98)

1. Allowable load capacities listed are calculated using a safety factor of 5.0 or greater. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. The steel deck must have a minimum base material thickness of No. 20 gage.
3. Concrete thickness must be a minimum of 3 times the embedment depth of the fastener. i.e. minimum yield strength, Fy, of 33 ksi, and conform to the Steel Deck Institute requirements for Standard Wide Rib Deck, Type B.
4. 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.



**PERFORMANCE DATA**

**Allowable Load Capacities for Trak-It C4 Fasteners Installed in ASTM A36 Steel (minimum  $f_{ut} = 58 \text{ ksi}$ )<sup>1</sup>**

Fastener Type (Style)	Shank Diameter inches (mm)	Minimum Spacing inches (mm)	Minimum Edge Distance inches (mm)	Minimum Steel Member Thickness inches (mm)	Tension lbs (kN)	Shear lbs (kN)
1/2" Steel Pin	0.120 (3.05)	1 (25.4)	1/2 (12.7)	1/4 (6.4)	245 (1.09)	100 (0.44)
.680 Steel Pin	0.120 (3.05)				270 (1.20)	170 (0.75)
.730 Steel Pin	0.120 (3.05)				330 (1.46)	235 (1.04)
1" Steel Pin	0.145 (3.68)				360 (1.60)	360 (1.60)
1-1/4" Steel Pin	0.145 (3.68)				390 (1.73)	310 (1.38)
2" Steel Pin	0.145 (3.68)				240 (1.06)	280 (1.24)
2" Steel Pin (ACQ)	0.145 (3.68)				170 (0.75)	280 (1.24)

1. Allowable load capacities listed are calculated using a safety factor of 5.0 or greater. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.

**Allowable Load Capacities for C4 Coated Step Shank ACQ Pin in Normal-Weight Concrete <sup>1,2</sup>**

Fastener Type (Style)	Minimum Embedment in. (mm)	Minimum Concrete Compressive Strength	
		4,000 psi (27.6 mPa)	
		Tension lbs. (kN)	Shear lbs. (kN)
C4 Coated Step Shank ACQ Pin	3/4 (19.1)	200 (0.89)	280 (1.24)

1. Allowable load capacities listed are calculated using a safety factor of 5.0 or greater. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.

2. Tabulated values are listed for the fastener only. Wood or steel members connected to the concrete substrate must be investigated in accordance with accepted design criteria.

**ORDERING INFORMATION**

**C4 Pins - Straight and Taper Pins**

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55111	3/4" Pin	0.102	800	4000
55113	1" Pin	0.102	800	4000
55130	3/4" Straight Shank Pin	0.145	800	4000
55132	1" Straight Shank Pin	0.145	800	4000
55124	2-1/4" Pin	0.102	800	4000
55128	2-1/2" Pin	0.102	800	4000
55145	2-9/16" Taper Pin	0.137	800	4000
55147	2-9/16" Taper Pin w/ Washer	0.137	800	4000
55161	.500 Pin, (K)	0.120	800	4000
55163	.680 Pin, (K)	0.102	800	4000
55165	.730 Pin, (K)	0.120	800	4000
55116	1-1/4" Pin	0.102	800	4000
55118	1-1/2" Pin	0.102	800	4000
55172	1" Wood / Steel Pin, (K)	0.145	800	4000
55173	1-1/4" Wood / Steel Pin, (K)	0.145	800	4000
55174	2" Wood / Steel Pin, (K)	0.145	800	4000

(K) = knurled  
Each box of pins come packaged with one fuel cell.

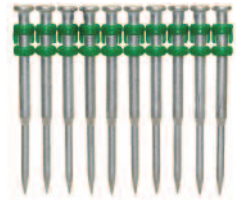
55149	1" Square Washer (Stick E)	-	800	-
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**C4 Step Shank Pins**

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55134	1-1/4" Step Shank Pin	0.145/0.102	800	4000
55136	1-1/2" Step Shank Pin	0.145/0.102	800	4000
55141	1-7/8" Step Shank Pin, (K)	0.145/0.102	800	4000
55138	2-3/8" Step Shank Pin	0.145/0.102	800	4000
55140	2-1/2" Step Shank Pin	0.145/0.102	800	4000
55139	2-1/4" Step Shank Pin	0.145/0.102	800	4000

(K) = knurled  
Each box of pins come packaged with one fuel cell.



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**C4 Coated Step Shank Pins (ACQ)**

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55167	1" Step Shank Pin ACQ, (K)	0.145	800	4000
55169	1-1/4" Step Shank Pin ACQ, (K)	0.145	800	4000
55171	2" Step Shank Pin ACQ, (K)	0.145	800	4000

(K) = knurled  
Each box of pins come packaged with one fuel cell.



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**ORDERING INFORMATION**

Cat No.	Description	STD Box	STD Ctn.
55160	C4 Insulation Washer	500	-



Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55180	2-1/4" Duplex Kicker Pin	0.131"	800	4,000



**Tools and Accessories**

**Trak-It C4 Tools**

Cat No.	Description	STD Box	STD Ctn.
55112	C4 Trak-It	1	1
55127	C4 EX Trak-It	1	1
55133	C4 CZ Trak-It	1	1



Tools comes with case, charger and two batteries.

**Trak-It C4 Fuel Cell**

Cat No.	Description	STD Box	STD Ctn.
55115	C4 Trak-It Fuel Cell	12	72



Fuel cell works in temperatures down to 10°F.

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## Stick-E *Accessories for Trak-It C3*

### PRODUCT DESCRIPTION


The Stick-E fastening system uses Trak-It C3 gas technology with specially designed accessories for fastening typical applications encountered by electricians and mechanical contractors. The Stick-E fastening system allows direct fastening through the fixture with the magazine pin and accessory eliminating the need for drilling or anchoring.

### APPLICATIONS GUIDE


#### Cable Tie Donut

<b>Application</b>	For attaching small and large diameter cable ties to all types of walls and ceilings including wood, steel beams, concrete and block. Ideal for strapping wires and cable for hanging temporary lighting fixtures from all base materials. (fits ties up to 1/4" wide.)	
<b>Contractor(s)</b>	Electricians	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	


#### Mini Conduit Clip

<b>Application</b>	For attaching conduit and piping to steel beams, wood and concrete ceilings.	
<b>Contractor(s)</b>	Electricians	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	


#### Conduit Clip (One Hole Strap)

<b>Application</b>	For attaching conduit and light duty pipe to walls and ceilings of any base material including wood, steel beams, concrete and steel purlins.	
<b>Contractor(s)</b>	Electricians	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	


#### Bridal Ring

<b>Application</b>	For suspending single or multiple wires and cable in runs from overhead ceilings of all base materials including wood, steel beams, concrete and steel purlins.	
<b>Contractor(s)</b>	Electricians	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins 1" Trak-It Step Shank Pins	

#### BX Clip


<b>Application</b>	For attaching BX cable to walls and ceilings of any base material including wood, steel beams, concrete and steel purlins.	
<b>Contractor(s)</b>	Cable Installers, Telecommunication Installers, Electricians	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	

#### Strap Washer


<b>Application</b>	For attaching duct straps to suspend HVAC ductwork onto ceiling of various base materials.	
<b>Contractor(s)</b>	Sheet Metal Contractors	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	

**APPLICATIONS GUIDE**


**Rebar Basket Clip**

<b>Application</b>	For attaching rebar to existing concrete or wood forms prior to a pour. Most popular in road and bridge construction and repair.	
<b>Contractor(s)</b>	Concrete Contractors	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins	


**Rod Hanger**

<b>Application</b>	Attaching rod overhead to steel beams, wood or concrete ceilings for the purpose of suspending utilities, cable trays, conduit and pipe.	
<b>Contractor(s)</b>	Electricians, Plumbers, Mechanical Contractors	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins Break-Free Pins	


**Right Angle Clip**

<b>Application</b>	For suspending acoustical ceiling systems or light fixtures.	
<b>Contractor(s)</b>	Acoustical and Ceiling Contractors	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins Break-Free Pins	


**Insulation Washer**

<b>Application</b>	For attaching exterior foam insulation to all base materials including wood, steel and concrete.	
<b>Contractor(s)</b>	Insulation Contractors, Waterproofers	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins Break-Free Pins 1 1/4" Break Free Rolled Point Trak-It Pins (most base materials) 1 1/2" Break Free Rolled Point Trak-It Pins (most base materials)	


**Lathing Washer**

<b>Application</b>	For attaching wire lath to wood, steel, concrete or block for the purpose of troweling stucco in exterior applications or plaster in interior applications. Can also be used as a general purpose washer.	
<b>Contractor(s)</b>	Drywall, Plaster, Exterior Siding Contractors	
<b>Suggested Pin Size(s)</b>	780 Trak-It Step Shank Pins 1" Break Free Rolled Point Trak-It Pins (most base materials) 1 1/4" Break Free Rolled Point Trak-It Pins (most base materials)	

**Stainless Steel Sealing Washer**

<b>Application</b>	For attaching waterproofing membrane to foundations and roofing applications.	
<b>Contractor(s)</b>	Insulation Contractors, Waterproofers, Roofers	
<b>Suggested Pin Size(s)</b>	3/4" Perma-Seal Coated Rolled Point Trak-It Pins (most base materials) 1" Perma-Seal Coated Rolled Point Trak-It Pins (most base materials)	

**Denz-Tight™ Washer**

<b>Application</b>	For attaching Densglass® exterior sheathing to steel studs.	
<b>Contractor(s)</b>	Drywall Contractors	
<b>Suggested Pin Size(s)</b>	1-3/8" Plywood/Densglass® Pins	

\* Densglass® is a registered trademark of Georgia Pacific.

**GAS FASTENING**

**PERFORMANCE DATA**

**Ultimate Load Capacities for Stick-E Accessories Installed with 780 Pin into Concrete, Concrete Block, or Lightweight Concrete over Steel Deck<sup>1,2</sup>**

Stick-E	Minimum Embed. Depth $h_v$ in. (mm)	Ultimate Load	
		Tension lbs. (kN)	Shear lbs. (kN)
Conduit Clip	3/4 (19.1)	80 (0.35)	60 (0.27)
BX Clip	3/4 (19.1)	80 (0.35)	70 (0.31)
Bridal Ring	3/4 (19.1)	325 (1.44)	200 (0.89)
Cable Tie	3/4 (19.1)	50 (0.22)	60 (0.27)
Insulation Washer	3/4 (19.1)	300 (1.33)	400 (1.78)
Rebar Clip	3/4 (19.1)	275 (1.22)	275 (1.22)
Strap Washer	3/4 (19.1)	275 (1.22)	400 (1.78)
Rod Hanger	3/4 (19.1)	420 (1.86)	N/A
Right Angle Clip	3/4 (19.1)	300 (1.33)	400 (1.78)

1. The values listed above are ultimate load capacities which should be reduced by a minimum safety factor of 5.0 or greater to determine the allowable working load. Consideration of safety factors of 10.0 or higher may be necessary depending on the application, such as life safety or overhead.
2. Minimum 2,000 psi Concrete or Concrete Block at time of installation.

**Ultimate Load Capacities for Stick-E Accessories Installed with 780 Pin into A36 and A572 Steel<sup>1</sup>**

Stick-E	Minimum Embedment Depth $h_v$ in. (mm)	Ultimate Load					
		A36 Steel		A572 Steel		A572 Steel	
		(3/16" Thick)		(1/8" Thick)		(12 Gage)	
		Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
Conduit BX Clip	3/4 (19.1)	80 (0.35)	70 (0.35)	80 (0.35)	70 (0.35)	80 (0.35)	70 (0.35)
Bridal Ring	3/4 (19.1)	325 (1.44)	200 (0.89)	325 (1.44)	200 (0.89)	325 (1.44)	200 (0.89)
Cable Tie	3/4 (19.1)	50 (0.22)	60 (0.27)	50 (0.22)	60 (0.27)	50 (0.22)	60 (0.27)
Strap Washer	3/4 (19.1)	275 (1.22)	400 (1.78)	275 (1.22)	400 (1.78)	275 (1.22)	400 (1.78)
Rod Hanger	3/4 (19.1)	420 (1.86)	N/A	420 (1.86)	N/A	420 (1.86)	N/A

1. The values listed above are ultimate load capacities which should be reduced by a minimum safety factor of 5.0 or greater to determine the allowable working load. Consideration of safety factors of 10.0 or higher may be necessary depending on the application, such as life safety or overhead.

**Ultimate Load Capacities for Electrical Boxes Installed with 780 Trak-It Step Shank Pin into Concrete or Concrete Block<sup>1,2,3</sup>**

Trak-It Pin	Minimum Embed. Depth $h_v$ in. (mm)	Number of Pins (Per Box)	Maximum Spacing in. (mm)	Fastening Pattern	Ultimate Load		
					Tension lbs. (kN)	Shear Vert. Axis lbs. (kN)	Shear Horiz. Axis lbs. (kN)
780	5/8 (15.9)	2	1 (25.5)	Line	640 (2.85)	975 (4.34)	850 (3.78)
		3	2 (50.9)	Triangle	720 (3.20)	1,115 (4.96)	1,055 (4.69)
		4	2 (50.9)	Square/Diamond	900 (4.00)	1,840 (8.18)	1,840 (8.18)

1. The values listed above are ultimate load capacities which should be reduced by a minimum safety factor of 5.0 or greater to determine the allowable working load. Consideration of safety factors of 10.0 or higher may be necessary depending on the application, such as life safety or overhead.
1. Installations for Nominal 16 Gage Electrical Boxes, All Finishes.
2. Minimum 2,000 psi Concrete or Concrete Block at time of installation.

GAS FASTENING



**ORDERING INFORMATION**

**Stick-E Mini Conduit Clip**

Cat. No.	Description	Standard Box	Standard Carton
55064	Mini Conduit Clip 1/2"	100	1,000
55066	Mini Conduit Clip 3/4"	100	1,000
55068	Mini Conduit Clip 1"	100	1,000

**Stick-E Cable Tie Donut**

Cat. No.	Description	Standard Box	Standard Carton
55076	Cable Tie Donut	100	1,000

**Stick-E Conduit Clip (One Hole Strap)**

Cat. No.	Description	Standard Box	Standard Carton
55059	Conduit Clip 1/2"	100	1,000
55061	Conduit Clip 3/4"	100	1,000
55063	Conduit Clip 1"	100	1,000

**Stick-E BX Clip**

Cat. No.	Description	Standard Box	Standard Carton
55054	Stick-E 3/8" BX Clips	100	1,000

**Stick-E Bridal Ring**

Cat. No.	Description	Standard Box	Standard Carton
55094	Bridal Ring 1 1/4"	100	1,000
55095	Bridal Ring 1 1/2"	100	1,000
55096	Bridal Ring 2"	100	1,000

**Stick-E Strap Washer**

Cat. No.	Description	Standard Box	Standard Carton
55062	Strap Washer 1/2" Diameter	100	1,000

**Stick-E Rod Hanger**

Cat. No.	Description	Standard Box	Standard Carton
55050	Rod Hanger 1/4"	100	1,000
55052	Rod Hanger 3/8"	100	1,000

**Stick-E Rebar Basket Clip**

Cat. No.	Description	Standard Box	Standard Carton
55070	#3 and #4 Bar	100	1,000

**Stick-E Right Angle Clip**

Cat. No.	Description	Standard Box	Standard Carton
55092	Right Angle Clip (Wirehole 0.278")	100	1,000

**Stick-E Insulation Washer**

Cat. No.	Description	Standard Box	Standard Carton
55042	Insulation Washer 1 7/16"	100	1,000

**Stick-E Lathing Washer**

Cat. No.	Description	Standard Box	Standard Carton
55040	Lathing Washer 1" with holes	100	1,000

**Stick-E Stainless Steel Sealing Washer**

Cat. No.	Description	Standard Box	Standard Carton
55043	SS Sealing Washer 3/4"	100	1,000

**Stick-E Denz-Tight™ Washer**

Cat. No.	Description	Standard Box	Standard Carton
55157	Denz-Tight™ Washer	100	1,000



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