

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	5,700

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	5,700

SECTION CONTENTS Page No.

General Information..... 5
 Tool Specification 5
 Performance Data..... 6
 Pin Specifications 8
 Ordering Information 9



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

PERFORMANCE DATA

Allowable Load Capacities for Trak-It C4 Fasteners Installed in Normal Weight Concrete^{1,2,3}

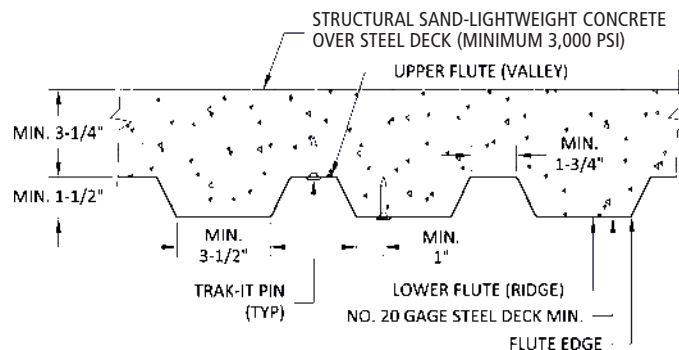
Shank Type	Shank Diameter in. (mm)	Minimum Embedment inches (mm)	Minimum Spacing inches (mm)	Minimum Edge Distance inches (mm)	Minimum Concrete Compressive Strength (f'c)			
					2,500 psi (17.2 mPa)		3,000 psi (20.7 mPa)	
					Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
Straight	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^{1,2,3,4}

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 $f_{ut} = 58$ ksi) ¹

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 ^{1,2}

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.	Discription	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.	Discription	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.



GAS FASTENING

C4 Coated Step Shank Pins (ACQ)

Cat No.	Discription	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.



ORDERING INFORMATION

Tools and Accessories

Trak-It C4 Tools

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

Tool comes with case, charger and two batteries.



Trak-It C4 Fuel Cell

Cat No.	Discription	STD Box	STD Ctn.
55115	C4 Trak-It Fuel Cell	20	80

Fuel cell works in temperatures down to 10°F.



GAS FASTENING