

PRODUCT SUBMITTAL / SUBSTITUTION REQUEST

TO:

PROJECT:

SPECIFIED ITEM:

Section

Page

Paragraph

Description

PRODUCT SUBMITTAL / SUBSTITUTION REQUESTED:

The attached submittal package includes the product description, specifications, drawings, and performance data for use in the evaluation of the request.

SUBMITTED BY:

Name:

Signature:

Company:

Address:

Date:

Telephone:

Fax:

FOR USE BY THE ARCHITECT AND/OR ENGINEER

Approved **Approved as Noted** **Not Approved**

(If not approved, please briefly explain why the product was not accepted.)

By:

Date:

Remarks:

Trak-It® C5 *Gas Fastening System*

PRODUCT DESCRIPTION

The Trak-It C5 gas fastening system was developed for use in light-duty static 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 required
- + Each fuel cell contains enough gas to install up to 800 fasteners
- + Available for use with most Stick-E™ accessories
- + Tracks removeable
- + Adjustable depth control
- + Maintenance counter and LED indicator
- + Dust resistant
- + Light trigger pull load

APPROVALS AND LISTINGS

International Code Council , Evaluation Service (ICC-ES), ESR-3275

GUIDE SPECIFICATIONS

CSI Divisions: 03151–Concrete Anchoring, 04081-Masonry Anchorage, 05090-Metal Fastenings, 06090-Wood and Plastic Fastenings, 09260-Finishes. Gas fastening systems shall be Trak-It® C5 as supplied by Powers Fasteners, Inc.

TOOL SPECIFICATIONS

Trak-It C5 Tool

Tool Body	Precision Moulded Aluminum and Plastic
Tool Length	17-1/4"
Tool Weight	7.9 lbs
Pin Length (Maxumim)	1-1/2" total length(ST & LT) 1-1/4" total length(DT)
Pin Capacity	42 pins (LT&DT), 22pins (ST)
Power Capacity	105 joules
Approximate Shots per Fuel Cell	800 pins
Approximate Shots per Battery Charge	5,700

SECTION CONTENTS Page No.

General Information..... 1
Tool Specification 1
Performance Data 2
Pin Specifications 4
Ordering Information 4



Trak-It C5 Tool
(shown with deep track)



Short Track - Long Track

SUITABLE BASE MATERIALS

- Normal-Weight Concrete
- Structural Lightweight Concrete
- Concrete Masonry
- Steel

PERFORMANCE DATA

Allowable Shear Values for Trak-It C5 Fasteners Installed in Normal-Weight Concrete^{1,2,3,4}

Shank Type	Shank Diameter (inch)	Minimum Embedment (inch)	Minimum Spacing (inches)	Minimum Edge Distance (inches)	Minimum Concrete Compressive Strength (f'c)			
					2,500 psi		3,000 psi	
					Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
Straight	0.102	3/4	4	3	70	25	70	25
		7/8	4	3	70	25	70	25
	0.145	3/4	4	3	65	105	70	110
		7/8	4	3	125	105	135	110
Step	0.145/0.102	3/4	4	3	80	215	85	235
		1	4	3	125	245	135	265

For SI: 1lbf=4.48 N, 1 inch = 25.4 mm, 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.
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. The stress increases and load reductions described in Section 1605.3 of the IBC and the stress increases described in Section 1612.3.2 of the UBC are not allowed for wind loads acting alone or when combined with gravity loads. No adjustment is allowed for vertical loads acting alone.

Allowable Service Loads for Trak-It C5 Fasteners Installed in Concrete Masonry Units^{1,2,3}

Shank Type	Shank Diameter (inch)	Minimum Embedment (inch)	Minimum Spacing (inches)	Minimum Edge Distance (inches)	HOLLOW CMU (ANY LOCATION)	
					Tension (lbs)	Shear (lbs)
Straight	0.102	7/8	4	3 3/4	65	80

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

1. The allowable tension and shear values are for the fasteners only. Members connected to the concrete masonry must be investigated in accordance with accepted design criteria.
2. Concrete masonry units must be Grade N, type II, units conforming to ASTM Standard C90.
3. Fasteners must be placed into unit face only. Face shell thickness of the concrete masonry units shall be 1-1/4 inches, minimum.

Allowable Service Loads for Trak-It C5 Fasteners Installed in ASTM A36 Steel¹

Shank Type	Minimum Spacing (inches)	Minimum Edge Distance (inches)	STEEL THICKNESS (inch)							
			3/16 ²		1/4 ³		3/8 ³		1/2 ³	
			Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/2 inch-long step shank	1	1/2	130	120	115	120	115	120	110	120

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

1. The allowable tension and shear values are for the fasteners only. Steel members connected to the steel must be investigated in accordance with accepted design criteria.
2. Fasteners installed in 3/16-inch-thick steel shall penetrate the steel such that the shank pierces the steel and protrudes 1/8 inch.
3. Fasteners installed in 1/4-, 3/8-, and 1/2-inch-thick steel must have a minimum embedment depth of 1/4 inch.

Allowable Service Loads for Trak-It C5 Fasteners Installed in ASTM A572 Grade 50 Steel¹

Shank Type	Minimum Spacing (inches)	Minimum Edge Distance (inches)	STEEL THICKNESS (inch)					
			1/4 ²		3/8 ²		1/2 ³	
			Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/2 inch-long step shank	1	1/2	95	115	65	90	25	55

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

1. The allowable tension and shear values are for the fasteners only. Steel members connected to the steel must be investigated in accordance with accepted design criteria.
2. Fasteners installed in 1/4, and 3/8, and 1/2-inch-thick steel must have a minimum embedment depth of 3/16 inch.
3. Fasteners installed in 1/2 - inch-thick steel must have a minimum embedment of 1/8 - inch.

GAS FASTENING

PERFORMANCE DATA

Allowable Shear Values for Trak-It C5 Fasteners Installed in Structural Sand-Lightweight Concrete over Steel Deck^{1,2,3,4,5}

Shank Type	Shank Diameter (inch)	Minimum Embedment (inch)	Minimum Spacing (inches)	Minimum Edge Distance (inches)	Installed Into Concrete		Installed Through Metal Deck				
					Tension (lbs)	Shear (lbs)	Deck Type	Tension		Shear	
								Upper Flute	Lower Flute	Upper Flute	Lower Flute
Straight	0.102	3/4	4	1	-	-	Note 5	80	80	105	105
		7/8			-	-	Note 5	85	85	120	120
	0.145	3/4	4	1 1/8	-	-	Note 6	110	80	220	200
				3	115	165	-	-	-	-	

For SI: 1lbf=4.48 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
- Concrete thickness must be a minimum of 3 times the embedment depth of the fastener.
- 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.
- The stress increases and load reductions described in Section 1605.3 of the IBC and the stress increases described in Section 1612.3.2 of the UBC are not allowed for wind loads acting alone or when combined with gravity loads. No adjustment is allowed for vertical loads acting alone.
- The steel deck must have a minimum base material thickness of 0.034 inch, minimum yield strength, F_y , of 33ksi, and conform to the profile shown in Figure 1. Concrete fill must be at least 3-1/4 inches above the top flutes.
- The steel deck must have a minimum base material thickness of 0.034 inch, minimum yield strength, F_y , of 33ksi, and conform to the profile shown in Figure 2. Concrete fill must be at least 3-1/4 inches above the top flutes.

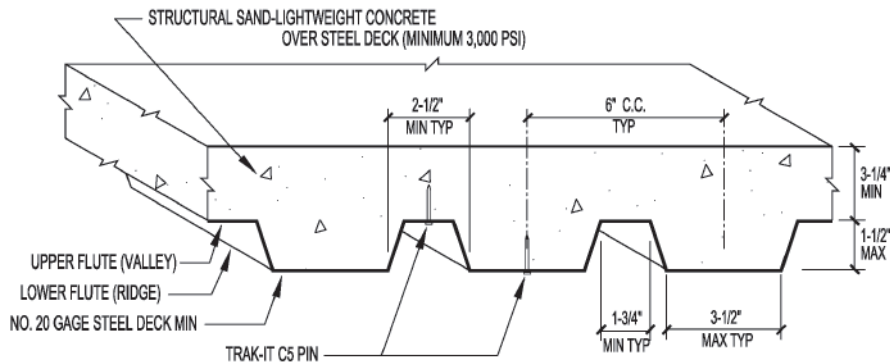


Figure 1: Fastener installation location in 1-1/2 - inch deep composite deck.

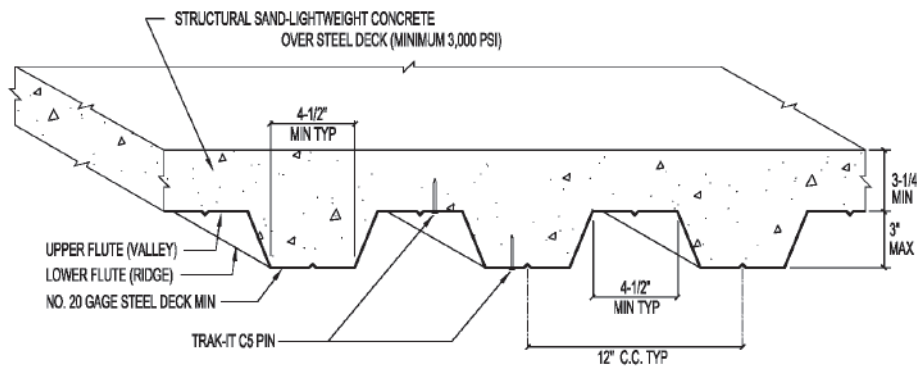


Figure 2: Fastener installation location in 3-inch deep composite deck.

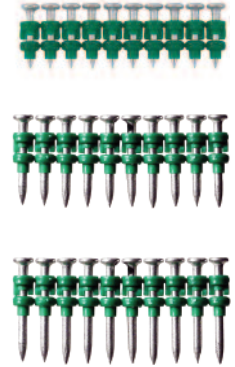
GAS FASTENING

ORDERING INFORMATION

C5 Pins - Straight and Taper Pins

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55310	3/4" Pin	0.102	800	4000
55312	1" Pin	0.102	800	4000
55318	3/4" Straight Shank Pin	0.145	800	4000
55320	1" Straight Shank Pin	0.145	800	4000
55326	.500 Pin, (K)	0.120	800	4000
55328	.680 Pin, (K)	0.102	800	4000
55330	.730 Pin, (K)	0.120	800	4000
55314	1-1/4" Pin	0.102	800	4000
55316	1-1/2" Pin	0.102	800	4000
55336	1" Wood / Steel Pin, (K)	0.145	800	4000
55338	1-1/4" Wood / Steel Pin, (K)	0.145	800	4000

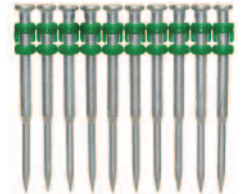
(K) = knurled, Each box of pins come packaged with one fuel cell.



C5 Step Shank Pins

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55322	1-1/4" Step Shank Pin	0.145/0.102	800	4000
55324	1-1/2" Step Shank Pin	0.145/0.102	800	4000

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



C5 Coated Step Shank Pins (ACQ)

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55332	1" Step Shank Pin ACQ, (K)	0.145	800	4000
55334	1-1/4" Step Shank Pin ACQ, (K)	0.145	800	4000

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



Plywood/Denzglass

Cat No.	Description	Shank Diameter	STD Box	STD Ctn.
55330	1-3/8" Zinc	0.102	1000	5000



C5 Pins - Tools and Accessories

Cat No.	Description	STD Box	STD Ctn.
55142	C5 Trak-It Deep Track (1-1/4 pin)	1	1
55144	C5 Trak-It Short Track (1-1/4 pin)	1	1
55148	C5 Trak-It long Track (1-1/4 pin)	1	1
55585	Battery	1	1
55618	Charger Base	1	1
55619	110v Adapter Cord	1	1
55503	Fuel Cell	20	80
55342	Accessory DT (1-1/4 pin)	1	1
55344	Accessory ST (1-1/4 pin)	1	1
55346	Accessory LT (1-1/2 pin)	1	1



GAS FASTENING