

# **CALK-IN**

Mechanical Bolt Anchor

### **PRODUCT DESCRIPTION**

The Calk-In is a pre-assembled precision cast calking type machine bolt anchor which can be used in concrete, block, brick or stone. The Calk-In consists of an antimonial lead alloy calking sleeve and a Zamac alloy internally threaded expanded cone. This anchor is not recommended for use in overhead applications.

#### **GENERAL APPLICATIONS AND USES**

- Windows
- Screen
- Sliding Doors
- Shutters

#### FEATURES AND BENEFITS

- + Readily accepts machine bolts
- + Internally threaded anchor for easy removability and service work
- + Shallow embedment

#### APPROVALS AND LISTINGS

 Federal GSA Specification – Meets descriptive and proof load requirements of CID A-A-1922A, Type 1

#### **GUIDE SPECIFICATIONS**

CSI Divisions: 03151-Concrete Anchoring, 04081-Masonry Anchorage and 05090-Metal Fastening. Machine bolt anchors shall be Calk-In as supplied by Powers Fasteners, Inc., Brewster, NY.

#### SECTION CONTENTS

General Information Installation and Material Specifications Performance Data Ordering Information



#### THREAD VERSION

• UNC Thread

#### **ANCHOR MATERIALS**

 Antimonial Lead Alloy Body and Zamac Alloy Cone

## **ROD/ANCHOR SIZE RANGE (TYP.)**

• No. 8 Screw to 1/2" diameter

# SUITABLE BASE MATERIALS

- Normal-Weight Concrete
- Grout-Filled Concrete Masonry (CMU)
- Brick Masonry

## **INSTALLATION AND MATERIAL SPECIFICATIONS**

**Installation Specifications** 

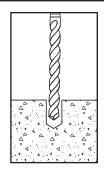
Dimension	Rod/Anchor Size								
	#8-32	#10-24	1/4"	5/16"	3/8"	1/2"			
ANSI Drill Bit Size, (in.)	5/16	3/8	1/2	5/8	3/4	7/8			
Max. Tightening Torque	15 (inlbs.)	20 (inlbs.)	60 (inlbs.)	7 (ftlbs.)	10 (ftlbs.)	15 (ftlbs.)			
Threaded Length in Cone (in.)	13/32	15/32	19/32	3/4	1	1-1/8			

**Material Specifications** 

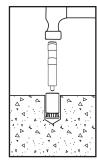
Anchor Component	Component Material
Anchor Sleeve (Body)	Antimonial Lead Alloy
Cone	Zamac Alloy

## **INSTALLATION GUIDELINES**

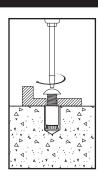
Drill a hole into the base material to the required depth. The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15. Do not over drill the hole.



Blow the hole clean of dust and other material. Insert the anchor into the hole. Position the setting tool in the anchor.



Using the tool, set the anchor by driving the lead sleeve over the cone using several sharp hammer blows. Be sure the anchor is at the required embedment depth so that anchor threads do not protrude above the surface of the base material. Positions the fixture, insert screw or bolt and tighten.



# PRODUCT INFORMATION



# **PERFORMANCE DATA**

# Ultimate Load Capacities for Calk-In in Normal-Weight Concrete

	Minimum	Minimum Concrete Compressive Strength (f'c)							
Rod/Anchor Size in.	Embedment	2,000 psi (13.8 MPa)		4,000 psi (27.6 MPa)		6,000 psi (41.4 MPa)			
	Depth in. (mm)	Tension lbs. (kN)	Shear Ibs. (kN)	Tension lbs. (kN)	Shear Ibs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)		
#8-32	1/2	335	310	365	360	380	360		
	(12.7)	(1.5)	(1.4)	(1.6)	(1.6)	(1.7)	(1.7)		
#10-24	5/8	765	885	975	940	1,105	940		
	(15.9)	(3.4)	(4.0)	(4.3)	(4.2)	(4.9)	(4.2)		
1/4-20	7/8	1,200	1,355	1,500	1,410	1,640	1,410		
	(22.2)	(5.3)	(6.1)	(6.7)	(6.3)	(7.3)	(6.3)		
5/16-18	1	1,570	1,880	1,965	2,070	2,160	2,070		
	(25.4)	(7.0)	(8.5)	(8.7)	(9.3)	(9.6)	(9.3)		
3/8-16	1-1/4	1,985	2,700	2,485	3,305	2,895	3,305		
	(31.8)	(8.8)	(12.2)	(11.1)	(14.9)	(12.9)	(14.9)		
1/2-13	1-1/2	2,795	3,995	3,495	4,545	3,810	4,545		
	(38.1)	(12.4)	(18.0)	(15.5)	(20.5)	(16.9)	(20.5)		

<sup>1.</sup> Tabulated load values are for anchors installed in concrete. Concrete compressive strength must be at the specified minimum at the time of installation.

# Allowable Load Capacities for Calk-In in Normal-Weight Concrete

Rod/Anchor Size in.		Minimum Concrete Compressive Strength (f'c)							
	Minimum Embedment	2,000 psi (13.8 MPa)		4,000 psi (27.6 MPa)		6,000 psi (41.4 MPa)			
	Depth in. (mm)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)		
#8-32	1/2	85	75	90	90	95	90		
	(12.7)	(0.4)	(0.3)	(0.4)	(0.4)	(0.4)	(0.4)		
#10-24	5/8	190	220	245	235	275	235		
	(15.9)	(0.8)	(1.0)	(1.1)	(1.1)	(1.2)	(1.1)		
1/4-20	7/8	300	340	375	355	410	355		
	(22.2)	(1.3)	(1.5)	(1.7)	(1.6)	(1.8)	(1.6)		
5/16-18	1	390	470	490	520	540	520		
	(25.4)	(1.7)	(2.1)	(2.2)	(2.3)	(2.4)	(2.3)		
3/8-16	1-1/4	495	675	620	825	725	825		
	(31.8)	(2.2)	(3.0)	(2.8)	(3.7)	(3.2)	(3.7)		
1/2-13	1-1/2	700	1,000	875	1,135	950	1,135		
	(38.1)	(3.1)	(4.5)	(3.9)	(5.1)	(4.2)	(5.1)		

<sup>1.</sup> Allowable load capacities listed are calculated using and applied safety factor of 4.0. Anchors are not recommended for use overhead or for life safety. Consideration of safety factors of 20 or higher may be necessary depending upon the application such as in sustained tensile loading applications.

<sup>2.</sup> Ultimate load capacities must be reduced by a minimum safety factor of 4.0 or greater to determine allowable working load. Anchors are not recommended for use overhead or for life safety. Consideration of safety factors of 20 or higher may be necessary depending upon the application such as in sustained tensile loading applications.

<sup>2.</sup> Linear interpolation may be used to determine allowable loads for intermediate compressive strengths.



Ultimate and Allowable Load Capacities for Calk-In in Grout-Filled Concrete Masonry

	Minimum	f'm ≥ 1,500 psi (10.4 MPa)					
Rod/Anchor Size in.	Embedment	Ultima	te Load	Allowable Load			
	Depth in. (mm)	Tension lbs. (kN)	Shear Ibs. (kN)	Tension Ibs. (kN)	Shear lbs. (kN)		
#8-32	1/2	335	310	65	60		
	(12.7)	(1.5)	(1.4)	(0.3)	(0.3)		
#10-24	5/8	740	885	150	175		
	(15.9)	(3.3)	(4.0)	(0.7)	(0.8)		
1/4-20	7/8	880	1,250	175	250		
	(22.2)	(4.0)	(5.6)	(0.8)	(1.1)		
5/16-18	1	1,470	1,585	295	315		
	(25.4)	(6.6)	(7.1)	(1.3)	(1.4)		
3/8-16	1-1/4	1,700	2,265	340	455		
	(31.8)	(7.7)	(10.2)	(1.5)	(2.0)		
1/2-13	1-1/2	2,360	3,210	470	640		
	(38.1)	(10.6)	(14.4)	(2.1)	(2.9)		

<sup>1.</sup> Tabulated load values are for anchors installed in minimum 6-inch wide, minimum Grade N, Type II, lightweight, medium-weight or normal-weight concrete masonry units conforming to ASTM C 90. Mortar must be minimum Type N. Masonry compressive strength must be at the specified minimum at the time of installation (f'm ≥ 1,500 psi).

Illtimate and Allowable Load Canacities for Calk-In in Clay Brick Masonry

Rod/Anchor Size in.		f'm ≥ 1,500 psi (10.4 MPa)					
	Minimum Embedment	Ultim	ate Load	Allowal	Allowable Load		
	Depth in. (mm)	Tension lbs. (kN)	Shear Ibs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)		
#8-32	1/2	335	310	65	60		
	(12.7)	(1.5)	(1.4)	(0.3)	(0.3)		
#10-24	5/8	765	890	150	180		
	(15.9)	(3.4)	(4.0)	(0.7)	(0.8)		
1/4-20	7/8	1,460	1,480	290	295		
	(22.2)	(6.6)	(6.7)	(1.3)	(1.3)		
5/16-18	1	1,730	1,995	345	400		
	(25.4)	(7.8)	(9.0)	(1.6)	(1.8)		
3/8-16	1-1/4	2,200	3,600	440	720		
	(31.8)	(9.9)	(16.2)	(2.0)	(3.2)		
1/2-13	1-1/2	3,200	4,535	640	905		
	(38.1)	(14.4)	(20.4)	(2.9)	(4.1)		

<sup>1.</sup> Tabulated load values are for anchors installed in minimum 6-inch wide, minimum Grade N, Type II, lightweight, medium-weight or normal-weight concrete masonry units conforming to ASTM C 90. Mortar must be minimum Type N. Masonry compressive strength must be at the specified minimum at the time of installation (f'm ≥ 1,500 psi).

<sup>2.</sup> Allowable load capacities listed are calculated using and applied safety factor of 5.0. Anchors are not recommended for use overhead or for life safety. Consideration of safety factors of 20 or higher may be necessary depending upon the application such as in sustained tensile loading applications.

<sup>2.</sup> Allowable load capacities listed are calculated using and applied safety factor of 5.0. Anchors are not recommended for use overhead or for life safety. Consideration of safety factors of 20 or higher may be necessary depending upon the application such as in sustained tensile loading applications.

# Calk-In

# **PRODUCT INFORMATION**



# **ORDERING INFORMATION**

# Calk-In

Peco Part No.	Bar Code	Size	Min. Hole Depth	Package Type	Package Quantity	Item Weight
Available By Request	Available by request	#8-32	1/2"			
8810J	32003	#10-24	5/8"	Jar	100	1.75
8812J	96438	1/4"-20	7/8"	Jar	100	4.50
8812J-20	32005	1/4"-20	7/8"	Jar	20	0.90
8814J	32007	5/16"-18	1"	Jar	100	7.75
8816J	96440	3/8"-16	1-1/4"	Jar	50	7.00
8816J-20	32009	3/8"-16	1-1/4"	Jar	20	2.80
8818J	32011	1/2"-13	1-1/2"	Jar	25	4.75



Peco Part No.	Bar Code	Size	Package Type	Package Quantity	ltem Weight
Available By Request	Available By Request	#8			
9211CIT	32012	#10	Clamshell	1	0.08
9221CIT	32014	1/4"	Clamshell	1	0.18
9226CIT	32016	5/16"	Clamshell	1	0.33
9231CIT	32018	3/8"	Clamshell	1	0.33
9241CIT	32020	1/2"	Clamshell	1	0.70