



## **General Information**

# Lok-Bolt AS®

Sleeve Anchor

### **Product Description**

The Lok-Bolt As is an all-steel pre-assembled single unit sleeve anchor which is designed for use in concrete or masonry base materials. The anchors are available in multiple head styles for multiple applications and a finished appearance. Anchor extender sleeves can be added to create longer lengths.

## General Applications And Uses

- Door and window frame installations
- Masonry applications
- Electrical / Mechanical applications
- Mounting fixtures on walls
- General purpose anchoring

#### Features And Benefits

- + Variety of head styles, lengths and sizes
- + All steel component design
- + Preassembled anchor for immediate installation
- + Sleeve design keeps anchor centered in hole
- + Sleeve has 360° contact area for even stress distribution
- + Versatile can be used for solid and hollow concrete or masonry applications
- + Designed to allow fixture to draw snug against the base material during tightening

## **Guide Specifications**

Csi divisions: 03 16 00 - Concrete Anchors and 05 05 19 - Post-installed Concrete Anchors Expansion anchors shall be Lok-Bolt As as supplied by Powers Fasteners, inc., Brewster, NY. Anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction.

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Hex Head

#### **Head Styles**

- HexHead
- Acorn Nut
- Round Head
- Combo Flat Head
- Threshold Flat Head
- Rod Hanger
- Tie-Wire

#### Anchor Materials

- Zinc Plated Carbon Steel
- Type 304 Stainless Steel

## Anchor Size Range (typ.)

• 1/4" diameter through 3/4" diameter

## Suitable Basematerials

- Normal-Weight Concrete
- Grouted Concrete Masonry (CMU)
- Hollow Concrete Masonry (CMU)
- Brick Masonry





# **Material Specifications**

Anchor Component	Carbon Steel Version	Stainless Steel Version		
Plow-Bolt	Aisi 1010/1018	Type 304 stainless steel		
Expansion sleeve	Aisi 1010	Type 304 stainless steel		
Extender	Aisi 1010	N/A		
Zinc Plating	AsTM B 633, sCi, Type iii (Fe/Zn5)	N/A		

# **Installation Specifications**

### Acorn Nut and Hex Head Lok-Bolt AS

Dimension	Nominal Anchor Diameter, d							
Dimension	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"		
ANsi drill Bit size, dыt (in.)	1/4	5/16	3/8	1/2	5/8	3/4		
Fixture Clearance Hole, d₁ (in.)	5/16	3/8	7/16	9/16	11/16	15/16		
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11		
Nut Height (in.)	3/16	7/32	17/64	21/64	7/16	35/64		
Washero.d., dw (in.)	1/2	5/8	13/16	1	1-3/8	1-3/4		
Wrench size (in.)	3/8	7/16	1/2	9/16	3/4	15/16		





#### Round Head Lok-Bolt AS

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Dimension	Nominal Anchor Diameter, d								
Dimension	1/4"	5/16"	3/8"						
ANsi drill Bit size, dbit (in.)	1/4	5/16	3/8						
Fixture Clearance Hole, d₁ (in.)	5/16	3/8	7/16						
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18						
Head Height (in.)	11/64	13/64	15/64						
Head Width, dhd (in.)	29/64	9/16	43/64						



#### Combo Flat Head Lok-Bolt AS

Combo Hat Head Lok Bolt As										
Dimension	No	Nominal Anchor Diameter, d								
Dimension	1/4"	5/16"	3/8"							
ANsi drill Bit size, dыt (in.)	1/4	5/16	3/8							
Fixture Clearance Hole, d <sub>h</sub> (in.)	5/16	3/8	7/16							
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18							
Head Height (in.)	5/32	3/16	15/64							
Head Width, dhd (in.)	1/2	5/8	3/4							



### **Rod Hanger Lok-Bolt AS**

Discounting.	Nominal Anchor Diameter, d						
Dimension	1/4"	5/16"	3/8"				
ANsi drill Bit size, dəit (in.)	5/16	3/8	1/2				
Plow Bolt size (UNC)	1/4-20	5/16-18	3/8-16				
Coupling Height(in.)	7/8	1	1-1/4				
Washero.d., dw (in.)	5/8	13/16	1				
Coupling Wrench size (in.)	3/8	1/2	11/16				



### Threshold Lok-Bolt AS

Dimension	Anchor Size, d
Dimension	1/4"
ANsi drill Bit size, dbit (in.)	1/4
Fixture Clearance Hole, dh (in.)	5/16
Plow Bolt size (UNC)	10-24
Head Height (in.)	5/64
Head Width, dhd (in.)	23/64

### Tie-Wire Lok-Bolt AS

Dimension	Anchor Size, d
Dimension	5/16"
ANsi drill Bit size, dыt (in.)	5/16
Fixture Clearance Hole, d₁ (in.)	3/8
Plow Bolt size (UNC)	1/4-20
Head Height (in.)	1-9/16
Head Width, dhd (in.)	31/64









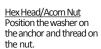
## **Installation Instructions**

## Hex/Acorn/Flat Head **Round Versions**

Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required.

The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15

Blow the hole clean of dust and other material. do not expand the anchor prior to installation.



drive the anchor through the fixture into the anchor hole until the nut and washer are firmly seated against the fixture. Be sure the anchor is driven to the required embedment depth.

Flat Head/round Head drive the anchor through the fixture until the anchor is firmly seated. Be sure the anchor is driven to the required embedment depth.

Hex Head/Acom Nut Tighten the anchor by turning the nut or head 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.

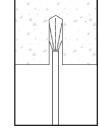
Flat Head/round Head Tighten the anchor by turning the head 3 to 5

## **Rod Hanger Version**

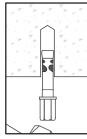
Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required.

The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15

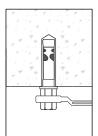
Blow the hole clean of dust and other material. do not expand the anchor prior to



drive the anchor into the hole until the anchor is at the required embedment depth.



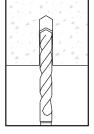
Tighten the coupler nut and washer up to the concrete surface and tighten the anchor by turning the nut 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.



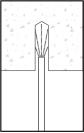
#### Tie-Wire Version

Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required.

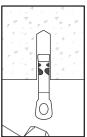
The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15



Blow the hole clean of dust and other material. do not expand the anchor prior to installation.

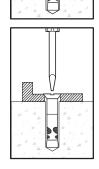


drive the anchor into the hole until the head is firmly seated against the base material. Be sure the anchor is driven to the required embedment depth.



Tighten the tie wire nut by turning the head 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.





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## **Performance Data**

## **Ultimate and Allowable Load Capacities for Carbon and Stainless** Steel Lok-Bolt AS Anchors in Normal Weight Concrete<sup>1,2,3</sup>



Nominal Min. Guide Installatic Anchor Embed. ftlbs.				Minimum Concrete Compressive Strength, f'c											
					3,00	0 psi	psi 3				3,500 psi			4,000 psi	
Diameter d	Depth h <sub>v</sub>			Ultir	nate	Allow	Allowable L		Ultimate Allowable		vable	Ultimate		Allowable	
in.	in.	Carbon	Stainless	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
1/4	1/2	2	-	225	1,000	55	250	240	1,000	60	250	260	1,000	65	250
1/4	1	6	4	910	1,120	230	280	980	1,120	245	280	1,050	1,120	265	280
5/16	1	12	-	1,205	2,360	300	590	1,300	2,360	325	590	1,390	2,360	350	590
3/8	1-1/4	18	18	1,875	4,110	470	1,030	2,040	4,110	510	1,030	2,165	4,110	540	1,030
1/2	1-1/2	26	26	2,235	4,860	560	1,215	2,420	4,860	605	1,215	2,580	4,860	645	1,215
5/8	2	50	40	4,870	4,860	1,220	1,215	5,260	4,860	1,315	1,215	5,625	4,860	1,405	1,215
3/4	2-1/4	90	60	5,045	11,040	1,260	2,760	5,450	11,040	1,365	2,760	5,825	11,040	1,455	2,760

- 1. The ultimate load values listed above must be reduced by a minimum safety factor of 4.0 or greater to determine the allowable working load. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
- 2. Allowable load capacities listed are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life
- 3. Tabulated load values are for anchors installed at a minimum spacing distance between anchors and an edge distance of 12 times the anchor diameters.

## Ultimate and Allowable Load Capacities for Carbon and Stainless Steel Lok-Bolt AS Anchors in Hollow or Solid Concrete Masonry<sup>1,2,3,4</sup>



Nominal	Minimum	Guide			Ultimat	e Loads	Allowab	le Loads						
Anchor Diameter d in.	Embed. Depth h <sub>v</sub> in.	Installation Torque ftlbs.	Minimum Edge Dist. in.	Minimum End Dist. in.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.						
1/4	1	4	3-3/4	3-3/4	3-3/4	3-3/4					800	1,140	160	225
5/16	1	8						905	1,570	180	310			
3/8	1-1/4	15					3-3/4	3-3/4	3-3/4	4	1,100	1,570	220	310
1/2	1-1/2	18				1,525	1,570	305	310					
5/8	1-1/2	30			2,250	1,770	450	355						

- 1. Tabulated load values are for anchors installed in minimum 6 inch wide, Grade N, Type II, normal-weight concrete masonry units conforming to ASTM C 90. Mortar must be minimum Type N, S, or  $\hbox{M. Masonry prism compressive strength must be 1,500 psi minimum at time of installation.}\\$
- 2. Allowable load capacities listed 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
- 3. A suitable anchor length must be selected which includes consideration of a fixture to engage the base material at the minimum embedment depth when anchoring into hollow concrete masonry. (e.g. attachment thickness + face shell thickness embedment + one half inch = suitable anchor length)
- 4. The consistence of hollow concrete block masonry base material can vary greatly. Consideration of job site testing should be given to verify conformance of base materials and anchor performance in actual conditions.

## Ultimate and Allowable Load Capacties for Carbon or Stainless Steel Lok-Bolt AS Anchors in Solid Clay Brick Masonry<sup>1,2</sup>



Nominal Minimum Cuida		Guido			f'm ≥ 1,500 psi (10.4 MPa)					
Anchor Diameter	Diameter Denth Histaliation Dist		Minimum Edge Minimum Dist. End Dist.	Ultir	mate	Allowable				
d in.	hv ftlbs. in. in.		Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.				
1/4	1	4	4	1-1/2	800	950	160	190		
3/8	1-1/4	15	8	8	1,100	3,000	220	600		
1/2	1-1/2	26	8	8	1,560	3,150	310	630		
5/8	2	40	8	8	2,470	5,250	495	1,050		

- 1. Tabulated load values are for anchors installed in Grade SW, multiple wythe solid clay brick masonry conforming to ASTM C 62.
- 2. 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.





# **Ordering Information**



#### **Hex Nut Lok-Bolt AS**

Catalog Number			Drill	Std.	Std.
Carbon Steel	Stainless Steel	Size	Dia.	Box	Wt.
3114J	-	5/16" x 1-1/2"	5/16"	100	4.25
3124J	-	5/16" x 2-3/8"	5/16"	100	5.75
3717J	-	3/8" x 1-7/8"	3/8"	50	3.50
3730J	3730SS	3/8" x 3"	3/8"	25	2.50
-	-	3/8" x 4"	3/8"	50	-
5022SJ	5022SS	1/2" x 2-1/2"	1/2"	25	3.50
5030SJ	-	1/2" x 3"	1/2"	25	4.31
5040J	5040SS	1/2" x 3-3/4"	1/2"	25	5.50
-	-	1/2" x 5-1/4"	1/2"	25	-
5060	-	1/2" x 6"	1/2"	25	8.75
6222	-	5/8" x 2-1/2"	5/8"	25	6.31
-	-	5/8" x 3"	5/8"	25	-
6242	-	5/8" x 4-1/4"	5/8"	10	4.10
-	-	5/8" x 5-3/4"	5/8"	10	-
7524	-	3/4" x 2-3/4"	3/4"	10	4.60
7542	-	3/4" x 4-1/4"	3/4"	5	3.50
7562	-	3/4" x 6-1/4"	3/4"	5	4.50
-	-	3/4" x 8-1/4"	3/4"	10	-



#### Threshold Flat Head Lok-Bolt AS

Combo Flat Head Lok-Bolt AS

Size

1/4" x 1-1/2"

1/4" x 2-1/4"

1/4" x 3"

1/4" x 4"

1/4" x 5-1/4"

5/16" x 2-1/2"

3/8" x 2-3/4"

3/8" x 4"

3/8" x 5"

**Catalog Number** 

Stainless Steel

Carbon Steel

Cat #	Size	Drill Dia.	Std. Box	Std. Ctn.
-	1/4" x 2"	1/4"	100	-

Drill Dia.

1/4"

1/4"

1/4"

1/4"

1/4"

5/16'

3/8"

3/8"

3/8"

3/8"

Std. Box

100

100

100

100

100

50

Std. Ctn.

-



### **Acorn Nut Lok-Bolt AS**

Catalog	Number		Drill	Ct-I	Ct-1
Carbon Steel	Stainless Steel	Size	Dia.	Std. Qty	Std. Wt.
2505J	-	1/4" x 5/8"	1/4"	100	2.00
2513J	2513SS-100	1/4" x 1-3/8"	1/4"	100	2.75
2522J	-	1/4" x 2-1/4"	1/4"	100	3.25



### **Rod Hanger Lok-Bolt AS**

Cat #	Size	Drill Dia.	Std. Qty	Std. Wt.
5810J	1/4" x 1-1/2"	5/16"	50	2.75
5815J	3/8" x 1-7/8"	3/8"	50	4.50
5825	1/2" x 2-1/4"	1/2"	25	5.25



## Round Head Lok-Bolt AS. Slotted

Nouna fieua Eok Boit A3, Slottea					
Catalog	Number		D.:!!!	Chal	Ct-I
Carbon Steel	Stainless Steel	Size	Drill Dia.	Std. Box	Std. Wt.
5205J	-	1/4" x 1-3/8"	1/4"	100	4.25
-	-	1/4" x 2-1/4"	1/4"	100	-
-	-	1/4" x 3"	1/4"	100	-
-	-	1/4" x 3-3/4"	1/4"	100	-
-	-	5/16" x 2-3/8"	5/16"	100	-
-	-	5/16" x 3-3/8"	5/16"	100	-
-	-	3/8" x 2-3/4"	3/8"	50	-
-	-	3/8" x 3-3/4"	3/8"	50	-



# Tie-Wire Lok-Bolt AS

Cat #	Size	Drill Dia.	Std. Box	Std. Ctn.
-	5/16" x 2-3/8"	5/16"	100	-



## **Lok-Bolt AS Extenders**

Cat #	Size	Drill Dia.	Std. Box	Std. Ctn.
-	3/8" x 1-1/4"	3/8"	50	-





## **General Information**

# Lok-Bolt AS®

Sleeve Anchor

### **Product Description**

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#### Features And Benefits

- + Variety of head styles, lengths and sizes
- + All steel component design
- + Preassembled anchor for immediate installation
- + Sleeve design keeps anchor centered in hole
- + Sleeve has 360° contact area for even stress distribution
- + Versatile can be used for solid and hollow concrete or masonry applications
- + Designed to allow fixture to draw snug against the base material during tightening

## **Guide Specifications**

Csi divisions: 03 16 00 - Concrete Anchors and 05 05 19 - Post-installed Concrete Anchors Expansion anchors shall be Lok-Bolt As as supplied by Powers Fasteners, inc., Brewster, NY. Anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction.

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Hex Head

#### **Head Styles**

- HexHead
- Acorn Nut
- Round Head
- Combo Flat Head
- Threshold Flat Head
- Rod Hanger
- Tie-Wire

#### Anchor Materials

- Zinc Plated Carbon Steel
- Type 304 Stainless Steel

## Anchor Size Range (typ.)

• 1/4" diameter through 3/4" diameter

## Suitable Basematerials

- Normal-Weight Concrete
- Grouted Concrete Masonry (CMU)
- Hollow Concrete Masonry (CMU)
- Brick Masonry





# **Material Specifications**

Anchor Component	Carbon Steel Version	Stainless Steel Version
Plow-Bolt	Aisi 1010/1018	Type 304 stainless steel
Expansion sleeve	Aisi 1010	Type 304 stainless steel
Extender	Aisi 1010	N/A
Zinc Plating	AsTM B 633, sCi, Type iii (Fe/Zn5)	N/A

# **Installation Specifications**

### Acorn Nut and Hex Head Lok-Bolt AS

Dimension	Nominal Anchor Diameter, d					
Dimension	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
ANsi drill Bit size, dыt (in.)	1/4	5/16	3/8	1/2	5/8	3/4
Fixture Clearance Hole, d₁ (in.)	5/16	3/8	7/16	9/16	11/16	15/16
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11
Nut Height (in.)	3/16	7/32	17/64	21/64	7/16	35/64
Washero.d., dw (in.)	1/2	5/8	13/16	1	1-3/8	1-3/4
Wrench size (in.)	3/8	7/16	1/2	9/16	3/4	15/16





#### Round Head Lok-Bolt AS

Nouna Noua Ion Doit /10					
Dimension	Nominal Anchor Diameter, d				
Dimension	1/4" 5/16" 3/5				
ANsi drill Bit size, dbit (in.)	1/4	5/16	3/8		
Fixture Clearance Hole, d₁ (in.)	5/16	3/8	7/16		
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18		
Head Height (in.)	11/64	13/64	15/64		
Head Width, dhd (in.)	29/64	9/16	43/64		



#### Combo Flat Head Lok-Bolt AS

Combo Hat Head Lok Bolt As					
Dimension	No	minal Anchor Diameter	, d		
Dimension	1/4" 5/16" 3/8'				
ANsi drill Bit size, dыt (in.)	1/4	5/16	3/8		
Fixture Clearance Hole, d <sub>h</sub> (in.)	5/16	3/8	7/16		
Plow Bolt size (UNC)	10-24	1/4-20	5/16-18		
Head Height (in.)	5/32	3/16	15/64		
Head Width, dhd (in.)	1/2	5/8	3/4		



### **Rod Hanger Lok-Bolt AS**

Discounting.	Nominal Anchor Diameter, d			
Dimension	1/4"	3/8"		
ANsi drill Bit size, dəit (in.)	5/16	3/8	1/2	
Plow Bolt size (UNC)	1/4-20	5/16-18	3/8-16	
Coupling Height(in.)	7/8	1	1-1/4	
Washero.d., dw (in.)	5/8	13/16	1	
Coupling Wrench size (in.)	3/8	1/2	11/16	



### Threshold Lok-Bolt AS

Dimension	Anchor Size, d
Dimension	1/4"
ANsi drill Bit size, dbit (in.)	1/4
Fixture Clearance Hole, dh (in.)	5/16
Plow Bolt size (UNC)	10-24
Head Height (in.)	5/64
Head Width, dhd (in.)	23/64

### Tie-Wire Lok-Bolt AS

Dimension	Anchor Size, d
Dimension	5/16"
ANsi drill Bit size, dыt (in.)	5/16
Fixture Clearance Hole, d₁ (in.)	3/8
Plow Bolt size (UNC)	1/4-20
Head Height (in.)	1-9/16
Head Width, dhd (in.)	31/64









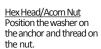
## **Installation Instructions**

## Hex/Acorn/Flat Head **Round Versions**

Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required.

The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15

Blow the hole clean of dust and other material. do not expand the anchor prior to installation.



drive the anchor through the fixture into the anchor hole until the nut and washer are firmly seated against the fixture. Be sure the anchor is driven to the required embedment depth.

Flat Head/round Head drive the anchor through the fixture until the anchor is firmly seated. Be sure the anchor is driven to the required embedment depth.

Hex Head/Acom Nut Tighten the anchor by turning the nut or head 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.

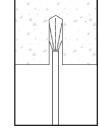
Flat Head/round Head Tighten the anchor by turning the head 3 to 5

## **Rod Hanger Version**

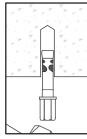
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The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15

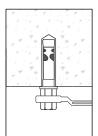
Blow the hole clean of dust and other material. do not expand the anchor prior to



drive the anchor into the hole until the anchor is at the required embedment depth.



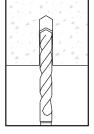
Tighten the coupler nut and washer up to the concrete surface and tighten the anchor by turning the nut 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.



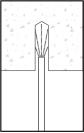
#### Tie-Wire Version

Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required.

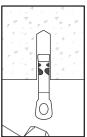
The tolerances of the drill bit used must meet the requirements of ANsi standard B212.15



Blow the hole clean of dust and other material. do not expand the anchor prior to installation.

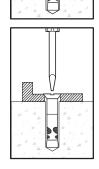


drive the anchor into the hole until the head is firmly seated against the base material. Be sure the anchor is driven to the required embedment depth.



Tighten the tie wire nut by turning the head 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.





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## **Performance Data**

## **Ultimate and Allowable Load Capacities for Carbon and Stainless** Steel Lok-Bolt AS Anchors in Normal Weight Concrete<sup>1,2,3</sup>



		Guide Installation Torque ftlbs.			Minimum Concrete Compressive Strength, f'c										
Nominal Min. Anchor Embed.				3,000 psi			3,500 psi			4,000 psi					
Diameter d	Depth h <sub>v</sub>			Ultir	nate	Allow	vable	Ultir	nate	Allov	vable	Ultin	nate	Allow	vable
in.	in.	Carbon	Stainless	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
1/4	1/2	2	-	225	1,000	55	250	240	1,000	60	250	260	1,000	65	250
1/4	1	6	4	910	1,120	230	280	980	1,120	245	280	1,050	1,120	265	280
5/16	1	12	-	1,205	2,360	300	590	1,300	2,360	325	590	1,390	2,360	350	590
3/8	1-1/4	18	18	1,875	4,110	470	1,030	2,040	4,110	510	1,030	2,165	4,110	540	1,030
1/2	1-1/2	26	26	2,235	4,860	560	1,215	2,420	4,860	605	1,215	2,580	4,860	645	1,215
5/8	2	50	40	4,870	4,860	1,220	1,215	5,260	4,860	1,315	1,215	5,625	4,860	1,405	1,215
3/4	2-1/4	90	60	5,045	11,040	1,260	2,760	5,450	11,040	1,365	2,760	5,825	11,040	1,455	2,760

- 1. The ultimate load values listed above must be reduced by a minimum safety factor of 4.0 or greater to determine the allowable working load. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
- 2. Allowable load capacities listed are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life
- 3. Tabulated load values are for anchors installed at a minimum spacing distance between anchors and an edge distance of 12 times the anchor diameters.

## Ultimate and Allowable Load Capacities for Carbon and Stainless Steel Lok-Bolt AS Anchors in Hollow or Solid Concrete Masonry<sup>1,2,3,4</sup>



Nominal	The second of th		Ultimat	e Loads	Allowab	le Loads		
Anchor Diameter d in.	Embed. Depth h <sub>v</sub> in.	Installation Torque ftlbs.	Minimum Edge Dist. in.	Minimum End Dist. in.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
1/4	1	4			800	1,140	160	225
5/16	1	8			905	1,570	180	310
3/8	1-1/4	15	3-3/4	4	1,100	1,570	220	310
1/2	1-1/2	18			1,525	1,570	305	310
5/8	1-1/2	30			2,250	1,770	450	355

- 1. Tabulated load values are for anchors installed in minimum 6 inch wide, Grade N, Type II, normal-weight concrete masonry units conforming to ASTM C 90. Mortar must be minimum Type N, S, or  $\hbox{M. Masonry prism compressive strength must be 1,500 psi minimum at time of installation.}\\$
- 2. Allowable load capacities listed 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
- 3. A suitable anchor length must be selected which includes consideration of a fixture to engage the base material at the minimum embedment depth when anchoring into hollow concrete masonry. (e.g. attachment thickness + face shell thickness embedment + one half inch = suitable anchor length)
- 4. The consistence of hollow concrete block masonry base material can vary greatly. Consideration of job site testing should be given to verify conformance of base materials and anchor performance in actual conditions.

## Ultimate and Allowable Load Capacties for Carbon or Stainless Steel Lok-Bolt AS Anchors in Solid Clay Brick Masonry<sup>1,2</sup>



Nominal	Minimum				f'm ≥ 1,500 psi (10.4 MPa)				
Anchor Diameter	Embed. Depth	Installation	Minimum Edge Dist.	Minimum End Dist.	Ultir	mate	Allov	vable	
d in.	h <sub>v</sub> in.	Torque ftlbs.	in.	in.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	
1/4	1	4	4	1-1/2	800	950	160	190	
3/8	1-1/4	15	8	8	1,100	3,000	220	600	
1/2	1-1/2	26	8	8	1,560	3,150	310	630	
5/8	2	40	8	8	2,470	5,250	495	1,050	

- 1. Tabulated load values are for anchors installed in Grade SW, multiple wythe solid clay brick masonry conforming to ASTM C 62.
- 2. 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.





# **Ordering Information**



#### **Hex Nut Lok-Bolt AS**

Catalog	Number		Drill	Std.	Std.
Carbon Steel	Stainless Steel	Size	Dia.	Box	Wt.
3114J	-	5/16" x 1-1/2"	5/16"	100	4.25
3124J	-	5/16" x 2-3/8"	5/16"	100	5.75
3717J	-	3/8" x 1-7/8"	3/8"	50	3.50
3730J	3730SS	3/8" x 3"	3/8"	25	2.50
-	-	3/8" x 4"	3/8"	50	-
5022SJ	5022SS	1/2" x 2-1/2"	1/2"	25	3.50
5030SJ	-	1/2" x 3"	1/2"	25	4.31
5040J	5040SS	1/2" x 3-3/4"	1/2"	25	5.50
-	-	1/2" x 5-1/4"	1/2"	25	-
5060	-	1/2" x 6"	1/2"	25	8.75
6222	-	5/8" x 2-1/2"	5/8"	25	6.31
-	-	5/8" x 3"	5/8"	25	-
6242	-	5/8" x 4-1/4"	5/8"	10	4.10
-	-	5/8" x 5-3/4"	5/8"	10	-
7524	-	3/4" x 2-3/4"	3/4"	10	4.60
7542	-	3/4" x 4-1/4"	3/4"	5	3.50
7562	-	3/4" x 6-1/4"	3/4"	5	4.50
-	-	3/4" x 8-1/4"	3/4"	10	-



#### Threshold Flat Head Lok-Bolt AS

Combo Flat Head Lok-Bolt AS

Size

1/4" x 1-1/2"

1/4" x 2-1/4"

1/4" x 3"

1/4" x 4"

1/4" x 5-1/4"

5/16" x 2-1/2"

3/8" x 2-3/4"

3/8" x 4"

3/8" x 5"

**Catalog Number** 

Stainless Steel

Carbon Steel

Cat #	Size	Drill Dia.	Std. Box	Std. Ctn.
-	1/4" x 2"	1/4"	100	-

Drill Dia.

1/4"

1/4"

1/4"

1/4"

1/4"

5/16'

3/8"

3/8"

3/8"

3/8"

Std. Box

100

100

100

100

100

50

Std. Ctn.

-



### **Acorn Nut Lok-Bolt AS**

Catalog	Number		Drill	Ct-I	Ct-1
Carbon Steel	Stainless Steel		Dia.	Std. Qty	Std. Wt.
2505J	-	1/4" x 5/8"	1/4"	100	2.00
2513J	2513SS-100	1/4" x 1-3/8"	1/4"	100	2.75
2522J	-	1/4" x 2-1/4"	1/4"	100	3.25



### **Rod Hanger Lok-Bolt AS**

Cat #	Size	Drill Dia.	Std. Qty	Std. Wt.
5810J	1/4" x 1-1/2"	5/16"	50	2.75
5815J	3/8" x 1-7/8"	3/8"	50	4.50
5825	1/2" x 2-1/4"	1/2"	25	5.25



## Round Head Lok-Bolt AS. Slotted

Nound Head Lok Boil A3, Slotted						
Catalog	Number		D.:!!!	Chal	Ct-I	
Carbon Steel	Stainless Steel	Size	Drill Dia.	Std. Box	Std. Wt.	
5205J	-	1/4" x 1-3/8"	1/4"	100	4.25	
-	-	1/4" x 2-1/4"	1/4"	100	-	
-	-	1/4" x 3"	1/4"	100	-	
-	-	1/4" x 3-3/4"	1/4"	100	-	
-	-	5/16" x 2-3/8"	5/16"	100	-	
-	-	5/16" x 3-3/8"	5/16"	100	-	
-	-	3/8" x 2-3/4"	3/8"	50	-	
-	-	3/8" x 3-3/4"	3/8"	50	-	



# Tie-Wire Lok-Bolt AS

Cat #	- 5/16" x 2-3/8"		Std. Box	Std. Ctn.
-	5/16" x 2-3/8"	5/16"	100	-



## **Lok-Bolt AS Extenders**

Cat #	Size	Drill Dia.	Std. Box	Std. Ctn.
-	3/8" x 1-1/4"	3/8"	50	-