PAB *Pre-Assembled Anchor Bolt*

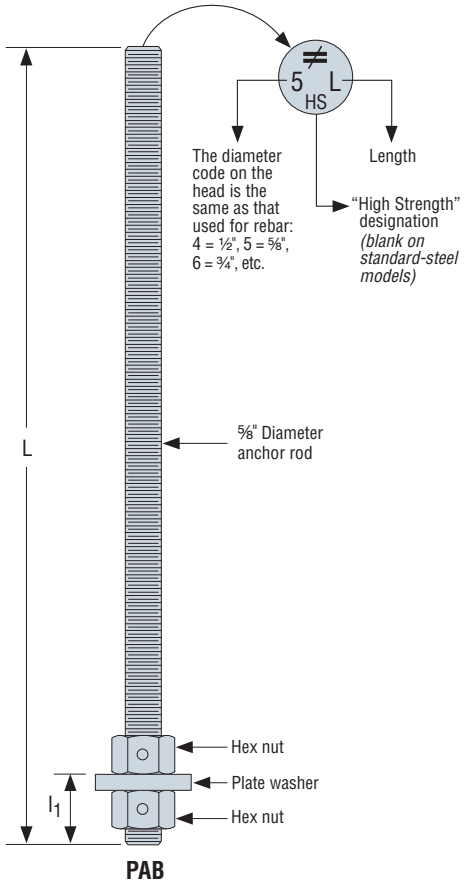
The PAB anchor bolt is a versatile new cast-in-place anchor bolt ideal for high-tension-load applications. It features a plate washer at the embedded end sandwiched between two fixed hex nuts and a head stamp for easy identification after the pour.

- Available in diameters from ½" to 1¼" in lengths from 6" to 36" (in ½" increments)
- Available in standard and high-strength steel
- Head stamp contains the No Equal sign, diameter designation and an "HS" on high-strength rods

MATERIAL: Standard Steel – F_u = 58 ksi
High-Strength Steel *(up to 1" dia.)* – F_u = 120 ksi
High-Strength Steel *(1⅛" and 1¼" dia.)* – F_u = 125 ksi

FINISH: None

The Simpson Strong-Tie® Anchor Designer Software™ for ACI 318 analyzes and suggests anchor solutions using the ACI 318 Appendix D strength-design methodology *(or CAN/CSA A23.3 Annex D Limit States Design methodology)*. It provides cracked and uncracked-concrete anchorage solutions for numerous Simpson Strong-Tie Anchor Systems® mechanical and adhesive anchors as well as the PAB anchor bolt. With its easy-to-use graphical user interface, the software makes it easy for the Designer to identify anchorage solutions without having to perform time-consuming calculations by hand.



PAB Anchor Bolt – Standard Steel

Diameter (in.)	Plate Washer Size (in.)	l_1 (in.)	Root Model No.	Length Range
½	¼ x 1¼ x 1¼	1	PAB4-XX	6" to 36" (in ½" increments)
⅝	⅜ x 1½ x 1½	1¼	PAB5-XX	
¾	⅜ x 2 x 2	1⅜	PAB6-XX	
⅞	⅜ x 2¼ x 2¼	1½	PAB7-XX	
1	⅜ x 2½ x 2½	1⅝	PAB8-XX	
1⅛	⅜ x 2¾ x 2¾	1¾	PAB9-XX	
1¼	½ x 3 x3	2½	PAB10-XX	

How to specify and order:

When calling out PAB anchor bolts, substitute the desired length for the "XX" in the Root Model Number.

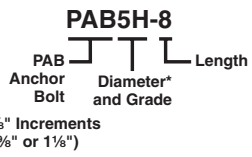
For a ⅝"x16½" anchor bolt, the model number would be PAB5-16.5 *(or PAB5H-16.5 for high strength)*.

PAB Anchor Bolt – High-Strength Steel

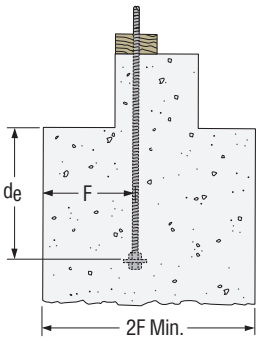
Diameter (in.)	Plate Washer Size (in.)	l_1 (in.)	Root Model No.	Length Range
½	¼ x 1¼ x 1¼	1	PAB4H-XX	6" to 36" (in ½" increments)
⅝	⅜ x 1½ x 1½	1¼	PAB5H-XX	
¾	⅜ x 2 x 2	1⅜	PAB6H-XX	
⅞	⅜ x 2¼ x 2¼	1½	PAB7H-XX	
1	⅜ x 2½ x 2½	1⅝	PAB8H-XX	
1⅛	⅜ x 2¾ x 2¾	1¾	PAB9H-XX	
1¼	½ x 3 x 3	2½	PAB10H-XX	

1. Plate washers are designed to develop the capacity of the bolt.

Naming Scheme:



*** Units in ⅛" Increments (Ex: 9 = ⅝" or 1⅛")**



Design loads are calculated using a full shear cone. Coverage on each side of the bolt shall be a minimum of F or reductions must be taken.

PAB Anchor Bolt – Anchorage Solutions

Design Criteria	Diameter (in.)	Anchor Bolt Model No.	2500 psi Concrete				3000 psi Concrete			
			Dimensions (in.)		Tension Load (lbs.)		Dimensions (in.)		Tension Load (lbs.)	
			d_e	F	ASD	LRFD	d_e	F	ASD	LRFD
Wind	⅝	PAB5	4	6	4,200	6,720	4	6	4,600	7,360
			5	7½	5,870	9,390	5	7½	6,140	9,830
	¾	PAB6	5	7½	5,870	9,390	5	7½	6,430	10,290
	⅞	PAB7	6	9	7,720	12,350	5	7½	6,430	10,290
			8	12	11,880	19,010	7	10½	10,650	17,040
		PAB7H	10	15	16,600	26,560	10	15	18,190	29,100
			14	28	25,970	41,560	13	26	25,970	41,560
	1	PAB8	8	12	11,880	19,010	7	10½	10,650	17,040
			10	15	16,470	26,350	9	13½	15,530	24,840
		PAB8H	11	16½	19,040	30,470	11	16½	20,860	33,380
			16	24	34,070	54,520	15	22½	34,070	54,520
	1⅛	PAB9	6	9	7,720	12,350	6	9	8,450	13,520
			9	13½	14,180	22,680	9	13½	15,530	24,840
			11	16½	19,040	30,470	10	15	18,190	29,100
	1¼	PAB10	12	24	22,010	35,220	11	16½	20,860	33,380
Seismic	⅝	PAB5	7	10½	6,870	9,830	6	9	6,870	9,830
	¾	PAB6	9	13½	10,170	14,550	8	12	10,170	14,550
	⅞	PAB7	11	16½	14,050	20,090	10	15	14,050	20,090
		PAB7H	16	24	29,060	41,560	15	22½	29,060	41,560
	1	PAB8	12	18	18,430	26,350	12	18	18,430	26,350
		PAB8H	19	28½	38,120	54,520	18	27	38,120	54,520
	1⅛	PAB9	14	21	23,220	33,200	13	19½	23,220	33,200
	1¼	PAB10	16	24	29,480	42,160	16	24	29,480	42,160

1. Anchorage designs conform to ACI 318 Appendix D and assume cracked concrete with no supplementary reinforcement.
2. Seismic indicates Seismic Design Category C through F. Detached one- and two-family dwellings in SDC C may use wind anchorage solutions. Seismic anchorage designs conform to ACI 318-05 Section D3.3.4.
3. Wind includes Sesmic Design Category A and B.
4. Foundation dimensions are for anchorage only. Foundation design *(size and reinforcement)* by Designer. The registered design professional may specify alternate embedment, footing size, and anchor bolt.
5. Allowable Stress Design (ASD) values are obtained by dividing Load Factor Resistance Design (LRFD) capacities by 1.43 for Seismic and 1.6 for Wind.

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