

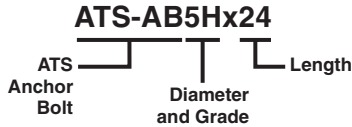
ANCHOR BOLTS

ATS-AB anchor bolts are pre-assembled anchor bolts that have been designed for use with the ATS system. They are available in 18", 24" and 36" lengths and match the strength and material grade of the corresponding Strong-Rod connecting rods. The heavy hex nuts are pressed onto the bolt to keep them in place.

Material: Standard (Model AB_) – ASTM A307, Grade A
 High strength (Model AB_H) – ASTM A449 or ASTM A193, Grade B7
 Higher strength (Model AB_H150) – ASTM A434, Class BD or ASTM A354, Class BD

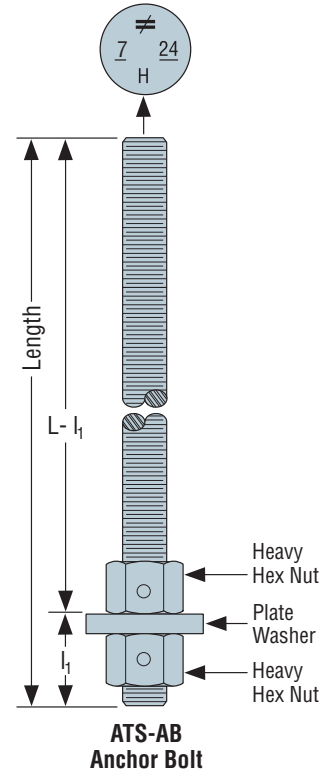
Finish: None

Naming Scheme:



* Units in 1/8" Increments
 (Ex: 9 = 9/8" or 1 1/8")

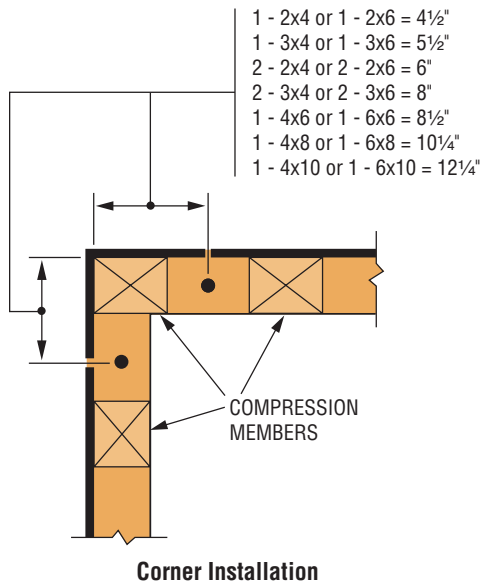
Anchor Bolt Model No.	Bolt Diameter (in)	Plate Washer Size (in)	l_1 (in)	Component Color Code
ATS-AB5	5/8	3/8 x 1 1/2 x 1 1/2	1 1/4	Blue
ATS-AB7	7/8	3/8 x 2 1/4 x 2 1/4	1 1/2	Green
ATS-AB9	1 1/8	3/8 x 2 3/4 x 2 3/4	1 3/4	Orange
ATS-AB5H	5/8	3/8 x 1 1/2 x 1 1/2	1 1/4	Blue
ATS-AB7H	7/8	3/8 x 2 1/4 x 2 1/4	1 1/2	Green
ATS-AB9H	1 1/8	3/8 x 2 3/4 x 2 3/4	1 3/4	Orange
ATS-AB9H150	1 1/8	1/2 x 3 x 3	1 7/8	Orange
ATS-AB10H150	1 1/4	1 x 3 1/2 x 3 1/2	2 1/2	Purple



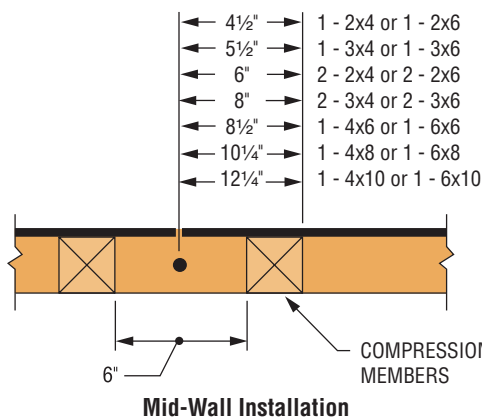
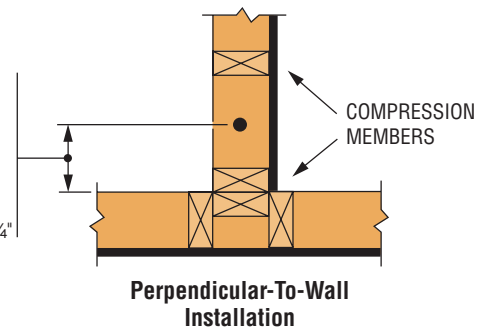
- Anchor rods are available in 18", 24" and 36" lengths.
- Standard Anchor bolts are based on minimum $F_u = 60,000$ psi and $F_y = 43,000$ psi.
- High strength anchor bolts are based on minimum $F_u = 120,000$ psi and $F_y = 92,000$ psi.
- H150 anchor bolts are based on minimum $F_u = 150,000$ psi and $F_y = 130,000$ psi.

ANCHOR BOLT LOCATIONS

Anchor bolts shall be specified by the Designer.

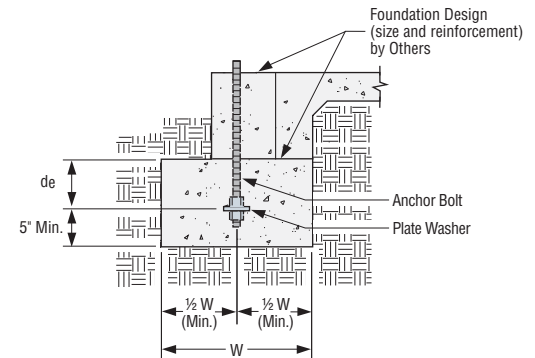


- 1 - 2x4 or 1 - 2x6 = 4 1/2"
- 1 - 3x4 or 1 - 3x6 = 5 1/2"
- 2 - 2x4 or 2 - 2x6 = 6"
- 2 - 3x4 or 2 - 3x6 = 8"
- 1 - 4x6 or 1 - 6x6 = 8 1/2"
- 1 - 4x8 or 1 - 6x8 = 10 1/4"
- 1 - 4x10 or 1 - 6x10 = 12 1/4"

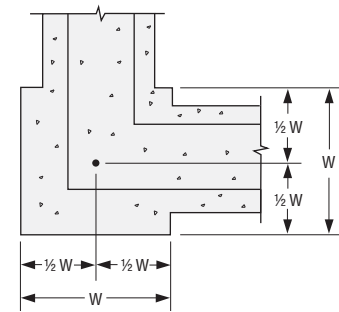


Wind and Seismic Design 97 UBC with Supplementary Reinforcing

Anchor Rod Model No.	$f'_c = 2500$		$f'_c = 3000$		$f'_c = 4500$	
	de	W	de	W	de	W
ATS-AB5	5.5	11	4.5	9	4	8
ATS-AB7	8	16	6	12	5	10
ATS-AB9	10	20	7.5	15	6.5	13
ATS-AB5H	8.5	17	6.5	13	5.5	11
ATS-AB7H	11.5	23	8.5	17	7.5	15
ATS-AB9H	14.5	29	11	22	10	20
ATS-AB9H150	16.5	33	12.5	25	11	22
ATS-AB10H150	18	36	13.5	27	12	24

**Section View****Wind and Seismic Design 97 UBC without Supplementary Reinforcing**

Anchor Rod Model No.	$f'_c = 2500$		$f'_c = 3000$		$f'_c = 4500$	
	de	W	de	W	de	W
ATS-AB5	6.5	13	5	10	4.5	9
ATS-AB7	9	18	7	14	6	12
ATS-AB9	11.5	23	8.5	17	8	16
ATS-AB5H	9.5	19	7.5	15	6.5	13
ATS-AB7H	13	26	10	20	9	18
ATS-AB9H	17	34	13	26	11.5	23
ATS-AB9H150	19	38	14.5	29	13	26
ATS-AB10H150	21	42	16	32	14	28

**Plan View****Seismic Design All IBC Codes**

Anchor Rod Model No.	$f'_c = 2500$		$f'_c = 3000$		$f'_c = 4500$	
	de	W	de	W	de	W
ATS-AB5	6.5	19.5	6.5	19.5	5.5	16.5
ATS-AB7	10.5	31.5	10	30	8.5	25.5
ATS-AB9	14	42	13.5	40.5	12	36
ATS-AB5H	10.5	31.5	10	30	8.5	25.5
ATS-AB7H	16	48	15	45	13.5	40.5
ATS-AB9H	21	63	20	60	18	54
ATS-AB9H150	24	72	23	69	20.5	61.5
ATS-AB10H150	27.5	82.5	26	78	23	69

Wind Design All IBC Codes

Anchor Rod Model No.	$f'_c = 2500$		$f'_c = 3000$		$f'_c = 4500$	
	de	W	de	W	de	W
ATS-AB5	5.5	16.5	5.5	16.5	4.5	13.5
ATS-AB7	8.5	25.5	8	24	7	21
ATS-AB9	12	36	11	33	10	30
ATS-AB5H	8.5	25.5	8	24	7	21
ATS-AB7H	13.5	40.5	12.5	37.5	11	33
ATS-AB9H	18	54	17	51	15	45
ATS-AB9H150	20.5	61.5	19.5	58.5	17	51
ATS-AB10H150	23	69	22	66	19.5	58.5

1. IBC calculations are based on ACI 318, Appendix D
2. For UBC and IBC wind design, embedment d_e is based on the design strength of the anchor per AISC. Embedment and edge distances are calculated in order to attain a ductile steel failure mode.
3. For IBC seismic design, concrete strength is reduced by a factor of 0.75 per ACI 318, Section D.3.3.3. Steel strength is based on AISC calculations and does not include a 0.75 reduction factor. Embedment and edge distances meet the ductile requirements of ACI 318, Section D.3.3.4.
4. For UBC design anchor design for 2500 psi minimum concrete assumes no special inspection and a multiplier of 2.0 on the concrete per section 1923.3.2. For 3000 psi and 4500 psi concrete, special inspection is assumed and a multiplier of 1.3 is applied.
5. Plate washers have been designed for plate bending.
6. Alternate anchor bolt solutions may be provided by the Designer.
7. Foundation dimensions are for anchorage only. The Designer is responsible for the foundation size and reinforcement for all load conditions.