

Ultimate and Allowable load Capacities for Hollow Block Anchors in Hollow Concrete Masonry (Masonry Unit 2000 PSI) 1,2,3,4,5,6,7

Aerosmith Part #	Anchor Length	Rod Diameter (inches)	Drill Bit Dia. (ANSI inches)	Embedment (inches)	Ultimate Load		Allowable Load	
					Tension	Shear	Tension	Shear
HBA-38	1-5/16"	3/8"	5/8"	1-5/16"	1300	2350	325	587
HBA-12	1-3/4"	1/2"	3/4"	1-3/4"	1500	2700	375	675

- Load values are applicable to masonry units conforming to ASTM C-90. Mortar must be minimum type N. masonry cells may be grouted. Masonry compressive strength must at specified minimum at the time of installation.
- Allowable loads are calculated using a safety factor of 4.0. Consideration of safety factors of 20 or higher may be necessary depending on application, (Life Safety and sustained loading conditions).
- The load values are applicable for anchors installed into masonry wall faces.
- The values are applicable to single anchors.
- Anchors were installed with sleeves flush to the block surface and with a Hollow Block Setting tool. (sold separately) Embedment is measured from the surface of the base material.
- Minimum face shell thickness must be at minimum 1.25 inches thick for both 1/2 diameter and 3/8 diameter anchors.
- Tested to ASTM E488.

Hollow Block Anchor-Tension Edge Distance

		HBA-38	HBA-12
Anchor Diameter		3/8"	1/2"
Critical Edge Distance		5-1/4"	7"
Min. Edge Distance		3"	4"
Actual Edge Distance	2"	-	-
	2-1/2"	-	-
	3"	0.80	-
	3-1/2"	0.84	-
	4"	0.89	0.80
	5-1/4"	1.00	0.88
	6"	-	0.93
	7"	-	1.00

For tension anchor loads, the critical edge distance is equal to 14 anchor diameters at which the anchor achieves 100% of load. Minimum edge distance is equal to 8 anchor diameters at which the anchor achieves 80% of load.

Hollow Block Anchor-Shear Edge Distance

		HBA-38	HBA-12
Anchor Diameter		3/8"	1/2"
Critical Edge Distance		5-1/4"	7"
Min. Edge Distance		3"	4"
Actual Edge Distance	2"	-	-
	3"	0.50	-
	3-1/2"	0.61	-
	4"	0.72	0.50
	5-1/4"	1.00	0.71
	7"	-	1.00

For shear anchor loads, the critical edge distance is equal to 14 anchor diameters at which the anchor achieves 100% of load. Minimum edge distance is equal to 8 anchor diameter at which the anchor achieves 50% of load.

Hollow Block Anchor-Tension & Shear, Spacing

		HBA-38	HBA-12
Anchor Diameter		3/8"	1/2"
Embedment		1-1/2"	2"
Critical Spacing		4-1/2"	6"
Min. Spacing		2-1/4"	3"
Actual Spacing	1-3/8"	-	-
	2-1/4"	0.50	-
	2-5/8"	0.58	-
	3"	0.67	0.50
	4-1/2"	1.00	0.75
	5"	-	0.83
	6"	-	0.83

For tension and shear anchor loads, the critical spacing is equal to 3 embedment depths at which the anchor achieves 100% of load. Minimum spacing is equal to 1.5 embedment depths at which the anchor achieves 50% of load.