

## Toggle Bolt Specifications

- + Adjustable to accomodate various wall thickness up to 2-1/2"
- + Easy to use and works in a variety of base materials

## Installation Specifications

Dimensions		Anchor Diameter, d					
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"
Minimum ANSI Drill Bit Size, d bit (in.)	Wall Board	3/8	1/2	5/8	7/8	7/8	1-1/4
	Hollow CMU	1/2	9/16	3/4	7/8	1	1-1/4
Wing Clearance (in.)		1-1/16	1-3/8	1-1/2	2-1/8	2-1/8	3
Thread Size (UNC)		6-32	10-24	1/4-20	5/16-18	3/8-16	1/2-13

1.) Column highlighted in yellow is in reference to the Ghent supplied hardware.

## Ultimate Load Capacities for Toggle Bolt in Wallboard

Anchor Diameter d in. (mm)	3/8" Wallboard		1/2" Wallboard		5/8" Wallboard		3/4" Wallboard	
	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
1/8 (3.2)	115 (0.5)	120 (0.5)	150 (0.7)	135 (0.6)	190 (0.9)	180 (0.8)	220 (1.0)	210 (0.9)
3/16 (4.8)	130 (0.6)	140 (0.6)	185 (0.8)	190 (0.9)	235 (1.1)	235 (1.1)	290 (1.3)	280 (1.3)
1/4^2 (6.4)	215 (1.0)	210 (0.9)	235 (1.1)	235 (1.1)	265 (1.2)	260 (1.2)	315 (1.4)	300 (1.4)
5/16 (7.9)	240 (1.1)	240 (1.1)	250 (1.1)	280 (1.3)	275 (1.2)	300 (1.4)	320 (1.4)	340 (1.5)
3/8 (9.5)	245 (1.1)	250 (1.1)	255 (1.1)	295 (1.3)	290 (1.3)	315 (1.4)	340 (1.5)	355 (1.6)
1/2 (12.7)	255 (1.1)	275 (1.2)	325 (1.5)	315 (1.4)	390 (1.8)	375 (1.7)	415 (1.9)	400 (1.8)

1.) The values listed above are ultimate load capacities which should be reduced by a minimum safety factor of 4.0 or greater to determine the allowable working load.

2.) Row highlighted in yellow is in reference to the Ghent supplied hardware.

## Material Specifications

Anchor Component	Component Material
Wing	AISI 1010
1/8" - 3/8" Trunion Nut	AISI 1010
1/2" Trunion Nut	Zamac Alloy
Bolt	Carbon Steel - ANSI B18.6.3
Zinc Plating	ASTM B633, SC1, Type III, (Fe/Zn 5)

## Allowable Load Capacities for Toggle Bolt in Wallboard

Anchor Diameter d in. (mm)	3/8" Wallboard		1/2" Wallboard		5/8" Wallboard		3/4" Wallboard	
	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
1/8 (3.2)	30 (0.1)	30 (0.1)	40 (0.2)	35 (0.2)	50 (0.2)	45 (0.2)	55 (0.2)	55 (0.2)
3/16 (4.8)	35 (0.2)	35 (0.2)	45 (0.2)	50 (0.2)	60 (0.3)	60 (0.3)	75 (0.3)	70 (0.3)
1/4^2 (6.4)	55 (0.2)	55 (0.2)	60 (0.3)	60 (0.3)	65 (0.3)	65 (0.3)	80 (0.4)	75 (0.3)
5/16 (7.9)	60 (0.3)	60 (0.3)	65 (0.3)	70 (0.3)	70 (0.3)	75 (0.3)	80 (0.4)	85 (0.4)
3/8 (9.5)	60 (0.3)	65 (0.3)	65 (0.3)	75 (0.3)	75 (0.3)	80 (0.4)	85 (0.4)	90 (0.4)
1/2 (12.7)	65 (0.3)	70 (0.3)	80 (0.4)	80 (0.4)	100 (0.5)	95 (0.4)	105 (0.5)	100 (0.5)

1.) Allowable load capacities listed are calculated using an applied safety factor of 4.0

2.) Row highlighted in yellow is in reference to the Ghent supplied hardware.

## Ultimate & Allowable Load Capacities for Toggle Bolt in Hollow Concrete Masonry

Anchor Diameter d in. (mm)		1/8 (3.2)	3/16 (4.8)	1/4^2 (6.4)	5/16 (7.9)	3/8 (9.5)	1/2 (12.7)
f <sub>m</sub> ≥ 1,500 psi (10.4 Mpa)	Ultimate Load	lbs. (kN)	195 (0.9)	250 (1.1)	350 (1.6)	430 (1.9)	1,160 (3.2)
		lbs. (kN)	180 (0.8)	355 (1.6)	595 (2.7)	680 (3.1)	800 (3.6)
	Allowable Load	lbs. (kN)	40 (0.2)	50 (0.2)	70 (0.3)	85 (0.4)	140 (0.6)
		lbs. (kN)	35 (0.2)	70 (0.3)	120 (0.5)	135 (0.6)	160 (0.7)

1.) Tabulated load values are for anchors installed in minimum 6-inch wide, Grade N, Type II, medium and normal-weight concrete masonry units. Mortar must be minimum Type N.

2.) Allowable loads are based on average ultimate values using a safety factor of 5.0.

3.) Row highlighted in yellow is in reference to the Ghent supplied hardware.