

One-side Fixing Heavy-duty Blind Bolt

# FLIP BOLT® GEOMET® COATING High Performance Hollow wall and Steel Structure Fixing

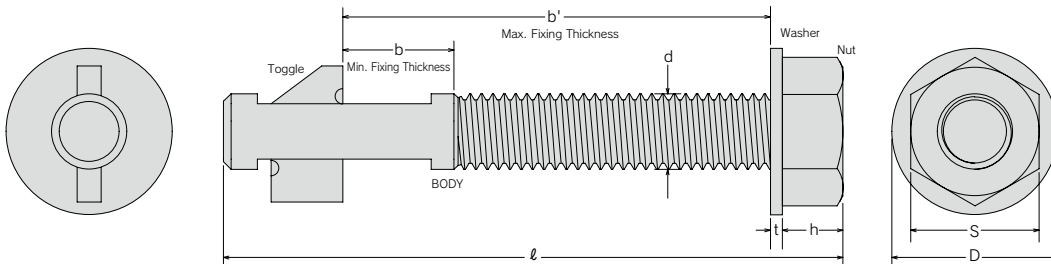
There is NO pin to hold a toggle! Very Strong strength, it requires a very small pre-hole. And not necessary to use a special tool. (PATENTED)



## SURFACE: GEOMET® COATING

- Water-based chemical solution
- Completely chromium-free
- Metallic silver appearance
- Outstanding resistance to the salt spray test and cyclic corrosion test
- Superb resistance to heat and corrosion
- Superior prevention of galvanic corrosion of aluminum
- No concern for hydrogen embrittlement
- Overcoat can be applied on GEOMET® coating

## FIXING CONDITIONS



## MATERIAL

- BODY..... AISI 1144 STEEL
- TOGGLE..... AISI 1045 STEEL
- NUT..... AISI 1010 STEEL
- WASHER..... JIS SS400 STEEL

BOLT SIZE d x l (mm)	HOLE DIAMETER (mm)	b (mm)		D (mm)	t (mm)	S (mm)	h (mm)
		Min. Fixing Thickness	Max. Fixing Thickness				
8 x 50	8.5	13	29	18	1.6	13	6.5
8 x 75	8.5	13	54	18	1.6	13	6.5
10 x 60	10.5	16	35	22	1.6	17	8.0
10 x 85	10.5	16	60	22	1.6	17	8.0
10 x 130	10.5	16	105	22	1.6	17	8.0
12 x 70	12.5	19	39	26	2.3	19	10.0
12 x 90	12.5	19	59	26	2.3	19	10.0
16 x 90	16.5	22	51	32	2.6	24	13.0
20 x 110	20.5	25	61	40	3.2	30	16.0

## STRENGTHS

BOLT SIZE	TORQUE/Nm	MAX. TENSILE STRENGTH/kN(Kgf)
M8	9N·m	11.3(1,152)
M10	18N·m	24.4(2,488)
M12	31N·m	28.6(2,916)
M16	77N·m	55.8(5,690)
M20	150N·m	100.7(10,269)

\* Do not exceed maximum Torque settings as recommended.

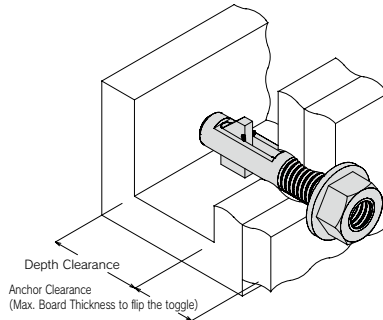
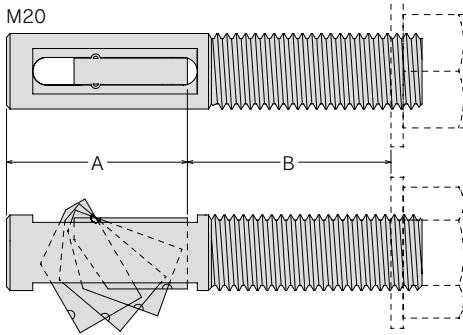
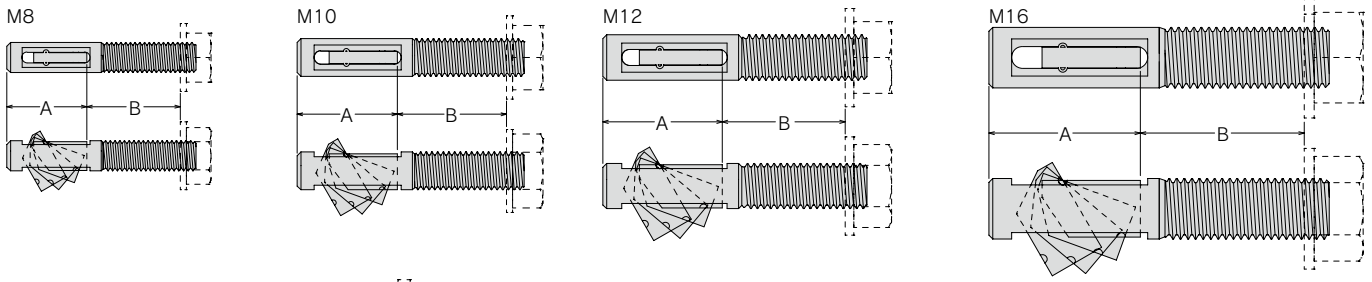


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# DIMENSION

# FLIP BOLT



BOLT SIZE	Depth Clearance	Anchor Clearance (Max. Board Thickness to flip the toggle)
8 × 50	21	24
8 × 75	21	49
10 × 60	26.5	29
10 × 85	26.5	54
10 × 130	26.5	99
12 × 70	32	33
12 × 90	32	53
16 × 90	40	43
20 × 110	48	53

A = Depth Clearance B = Anchor Clearance (Max. Board Thickness to flip the toggle)  
 ※ ABOVE ILLUSTRATIONS ARE HALF SIZE OF ACTUAL FLIP BOLTS

Above Anchor Clearances:  
 With nuts and washer were assembled 2 threads.

# FIXING INSTRUCTIONS

Vertical work

1. Insert bolt into pre-hole.

2. Hit the washer's surface to the workpiece 2 or 3 times.

3. Pull and secure bolt with nut and washer supplied.

4. Completed.

Horizontal work

1. Insert bolt with marker pointing ↑ up position.

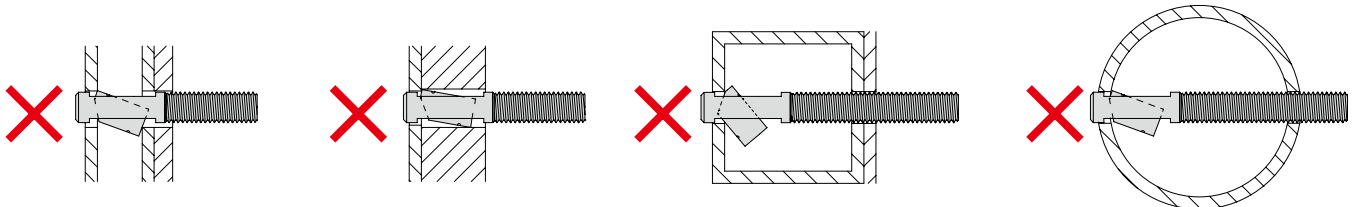
2. Insert till washer hit the workpiece.

3. Pull and secure bolt with nut and washer supplied.

4. Completed.

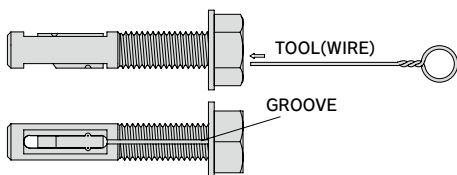
- \* THERE IS A STICKER ON THE TOGGLE. IT SHOWS UPSIDE DIRECTIONS. PEEL OFF THE STICKER BEFORE INSERT THE FLIP BOLT INTO THE HOLE.
- \* IT MUST HAVE ENOUGH DEPTH CLEARANCE WHICH NEED ABOUT 10mm SPACE.
- \* JUST IN CASE, IF TOGGLE WON'T FLIP CORRECTLY, PLEASE TRY TO HIT 2-3 TIMES THEN TOGGLE FLIPS CORRECTLY.

# OPERATING PRECAUTIONS DO NOT USE BELOW CASES

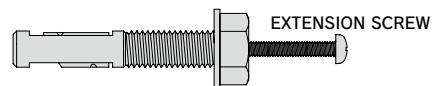


CUSTOMIZED VERSIONS ARE AVAILABLE UPON REQUEST AS BELOW

TYPE A (WITH GROOVE AND TOOL)



TYPE B (WITH EXTENSION SCREW)



\*All details correct at time of going to print, the company reserves the right to alter specifications without notice.