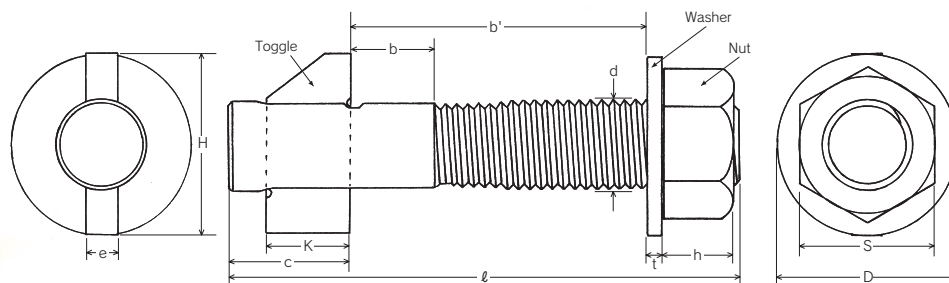
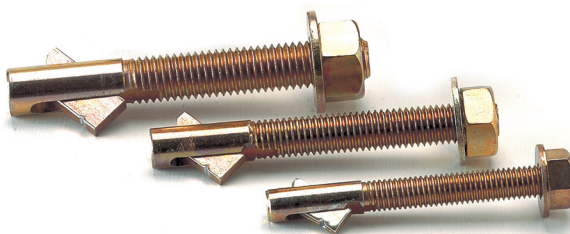


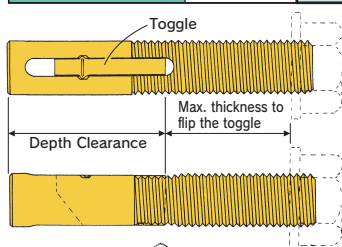


* OTHER SIZES ARE AVAILABLE UPON REQUEST
* High Tensile Steel Zinc Yellow.



b=Min. Fixing Thickness b'=Max. Fixing Thickness

d × ℓ (mm)	HOLE DIAMETER (mm)	b (mm)	b' (mm)	c (mm)	H (mm)	K (mm)	e (mm)	D (mm)	t (mm)	S (mm)	h (mm)
8 × 50	8.5	11	28	13.0	16	7.6	2.6	16	1.6	13	6.5
8 × 75	8.5	11	53	13.0	16	7.6	2.6	16	1.6	13	6.5
10 × 60	10.5	9	34	15.5	20	9.5	3.2	22	1.6	17	8.0
10 × 85	10.5	9	59	15.5	20	9.5	3.2	22	1.6	17	8.0
10 × 130	10.5	9	104	15.5	20	9.5	3.2	22	1.6	17	8.0
12 × 70	12.5	9	39	18.5	24	11.4	3.9	24	2.5	19	10.0
12 × 90	12.5	9	59	18.5	24	11.4	3.9	24	2.5	19	10.0
16 × 80	16.5	13	40	23.5	32	15.0	5.5	30	3.0	24	13.0
16 × 100	16.5	13	60	23.5	32	15.0	5.5	30	3.0	24	13.0
20 × 110	20.5	19	61	29.5	40	18.8	7.0	37	3.0	30	16.0
20 × 140	20.5	19	91	29.5	40	18.8	7.0	37	3.0	30	16.0
24 × 105	24.5	22	47	34.5	48	22.4	8.4	48	4.0	36	19.0
24 × 135	24.5	22	77	34.5	48	22.4	8.4	48	4.0	36	19.0



BOLT SIZE	Max. thickness to flip the toggle (mm)	Depth Clearance (mm)	BOLT SIZE	Max. thickness to flip the toggle (mm)	Depth Clearance (mm)
8 × 50	21	25.5	16 × 80	26	48
8 × 75	46	25.5	16 × 100	46	48
10 × 60	26	30	20 × 110	43	59
10 × 85	51	30	20 × 140	73	59
10 × 130	96	30	24 × 105	26	70
12 × 70	28	36	24 × 135	56	70
12 × 90	48	36			

Above Max. thickness to flip the toggle: With nuts and washer assembled 2 threads.

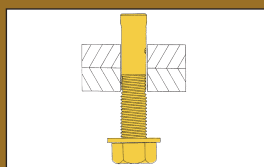
BOLT SIZE	TORQUE/Nm	MAX. TENSILE kN(kgf)	MAX. SHEAR kN(kgf)	BOLT SIZE	TORQUE/Nm	MAX. TENSILE kN(kgf)	MAX. SHEAR kN(kgf)
M8	9N·m	10.8(1100)	10.2(1040)	M16	77N·m	60.8(6200)	43.7(4456)
M10	18N·m	13.7(1400)	16.1(1642)	M20	150N·m	90.2(9200)	68.1(6944)
M12	31N·m	25.5(2600)	23.4(2386)	M24	259N·m	117.7(12000)	98.1(10003)

* Average Safe Working Load

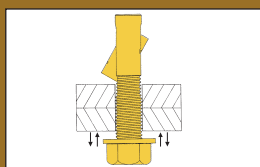
* Do not exceed maximum Torque settings as recommended.

FIXING INSTRUCTIONS

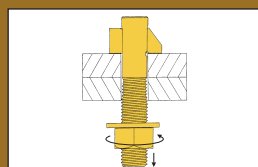
Vertical work



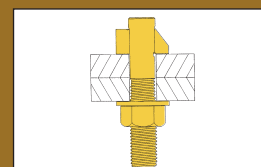
Insert bolt into pre-hole.



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

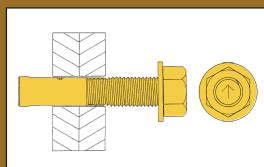


Pull and secure bolt with nut and washer supplied.

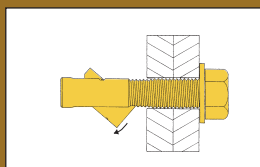


Completed.

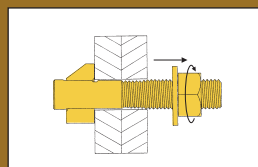
Horizontal work



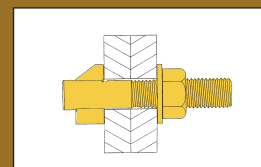
Insert bolt with marker pointing ↑ up position.



Insert till washer hit the work-piece.



Pull and secure bolt with nut and washer supplied.



Completed.