

## Allowable tensile force for Lobtex resin anchors and plugs

We confirmed conformity to the following conditions under Ministry of Land, Infrastructure, Transport and Tourism Notice No. 1447 on December 12, 2012.

During work with these products, thoroughly check the conditions for use.

Product name/No.	Target base material	Hole diameter (mm)	Type of screw	Screw insertion depth (mm)	Allowable tensile force per piece (kN/piece)
LOBSTER/Mungo nylon plug MP630	General concrete	6.0	JIS wood screw, steel 5.1 × 45	40.4	0.91
LOBSTER/Mungo nylon plug MP840	General concrete	8.0	JIS wood screw, steel 6.2 × 50	44.0	0.53
LOBSTER/Mungo multi-purpose plug MM850	General concrete	8.0	Tapping screw, steel 6.0 × 65	59.0	0.55
LOBSTER/Mungo Quatro plug MQ630	General concrete	6.0	JIS wood screw, stainless steel 4.8 × 32	29.0	0.79
			JIS wood screw, stainless steel 4.8 × 38	35.0	1.29
			Tapping screw, stainless steel 5.0 × 30	25.5	0.71
			Tapping screw, steel 5.0 × 40	35.4	0.92
LOBSTER/Mungo Quatro plug MQ840	ALC	7.7	JIS wood screw, stainless steel 5.8 × 45	40.3	0.34
			Tapping screw, steel 6.0 × 50	44.0	0.43
	General concrete	8.0	JIS wood screw, stainless steel 5.1 × 32	27.3	0.57
			JIS wood screw, stainless steel 5.8 × 45	40.3	1.11
			JIS wood screw, steel 6.2 × 50	44.0	1.73
LOBSTER plug EP632	General concrete	6.0	JIS wood screw, steel 4.1 × 45	40.4	1.07
LOBSTER plug EP838	General concrete	8.0	JIS wood screw, steel 5.8 × 45	40.5	1.34
LOBSTER nail plug NP635	General concrete	6.0	(Attachment)	---	0.41

### Remarks

- Allowable tensile force is calculated from results of tensile tests.  
Allowable tensile force = Short-term load value = Long-term load value × 2 = Maximum load value × 1/5
- Base material used for tests  
ALC: JIS A 5416 for wall was used.  
General concrete:  $F_c = 27 \text{ N/mm}^2$  was used.
- JIS wood screw conforms to JIS B 1112 or JIS B 1135.
- It is recommended to use screws longer than the plug. The tip of screw should protrude from the tip of the plug. (For LOBSTER nail plugs, drive the attachment.)

## Tensile test results

Size / Screw	Screw insertion depth [mm]	Base material	Maximum tensile load (Min./Max. value) [kN]
MP630 wood screw $5.1 \times 45$	40.4	General concrete	4.53 (4.38/4.85)
MP840 wood screw $6.2 \times 50$	44		2.65 (2.23/3.03)
MM850 tapping screw $6.0 \times 65$	59	General concrete	2.75 (2.27/3.15)
MQ630B wood screw $4.8 \times 32$	29	General concrete	3.96 (3.38/4.44)
MQ630B wood screw $4.8 \times 38$	35		6.45 (6.15/6.88)
MQ630B tapping screw $5.0 \times 30$	25.5		3.56 (3.28/3.95)
MQ630B tapping screw $5.0 \times 40$	35.4		4.61 (4.16/4.90)
MQ840B wood screw $5.8 \times 45$	40.3	ALC	1.71 (1.63/1.83)
MQ840B tapping screw $6 \times 50$	44		2.16 (1.93/2.31)
MQ840B wood screw $5.1 \times 32$	27.3	General concrete	2.83 (2.40/3.15)
MQ840B wood screw $5.8 \times 45$	40.3		5.57 (4.94/6.43)
MQ840B wood screw $6.2 \times 50$	44		8.63 (7.29/9.42)
EP632 wood screw $4.1 \times 45$	40.4	General concrete	5.34 (5.18/5.49)
EP838 wood screw $5.8 \times 45$	40.5		6.69 (6.10/7.72)
NP635 wood screw $6.2 \times 50$	----	General concrete	2.06 (1.99/2.09)

### Remarks

- Base material used for tests  
ALC: JIS A 5416 for wall was used.  
General concrete:  $F_c = 27 \text{ N/mm}^2$  was used.
- JIS wood screw conforms to JIS B 1112 or JIS B 1135.
- It is recommended to use screws longer than the plug. The tip of screw should protrude from the tip of the plug. (For LOBSTER nail plugs, drive the attachment.)
- Maximum tensile load is expressed as a mean value.