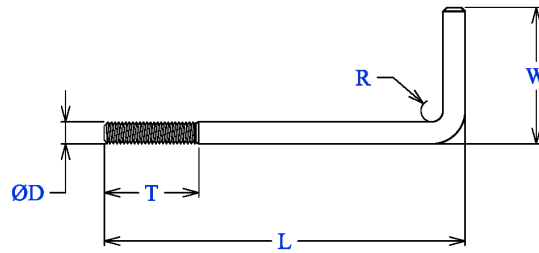


Technical Data [ข้อมูลทางเทคนิค] (อ้างอิงจาก ASTM A36, JIS B1178, ASTM A153)

Hot-dip Galvanized Foundation Bolt

1. Dimension [JIS B1178]

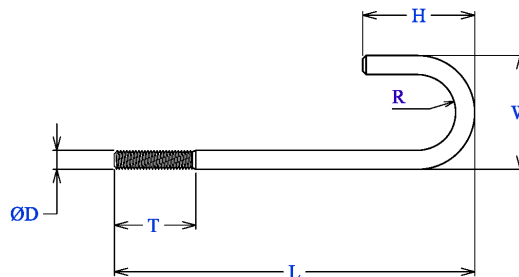
1.1 L - Bolt



Type L

Designation of screw thread (ØD)	(ØD)		T		W (Approx.) mm.	R (Approx.) mm.
	Basic dimension	Tolerances	Basic dimension	Tolerances		
M10	10	±0.4	25	+6.3,-0	40	20
M12	12	±0.4	32	+6.3,-0	50	25
M16	16	±0.5	40	+8,-0	63	32
M20	20	±0.5	50	+8,-0	80	40

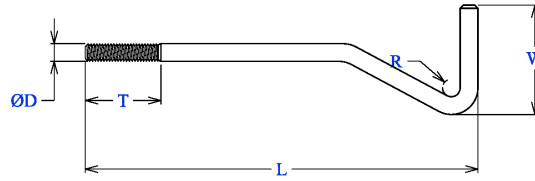
1.2 J - Bolt



Type J

Designation of screw thread (ØD)	(ØD)		T		W (Approx.) mm.	R (Approx.) mm.
	Basic dimension	Tolerances	Basic dimension	Tolerances		
M10	10	±0.4	25	+6.3,-0	45	20
M12	12	±0.4	32	+6.3,-0	56	25
M16	16	±0.5	40	+8,-0	71	32
M20	20	±0.6	50	+8,-0	90	40
M24	24	±0.7	63	+10,-0	112	50
M30	30	±0.6	80	+10,-0	140	63
M36	36	±0.7	90	+10,-0	160	71
M42	42	±0.8	112	+10,-0	200	90
M48	48	±0.9	125	+12.5,-0	224	100

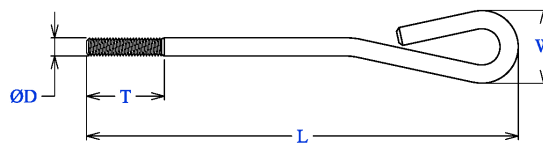
1.3 LA - Bolt



Type LA

Designation of screw thread (ØD)	(ØD)		T		W (Approx.) mm.	R (Approx.) mm.
	Basic dimension	Tolerances	Basic dimension	Tolerances		
M8	8	±0.4	20	+6.3, -0	32	8
M10	10	±0.4	30	+6.3, -0	40	10
M12	12	±0.4	35	+8, -0	50	12
M16	16	±0.5	40	+8, -0	63	16
M20	20	±0.5	50	+8, -0	80	20
M24	24	±0.5	80	+10, -0	100	24
M30	30	±0.6	90	+10, -0	125	30
M36	36	±0.7	110	+10, -0	140	36
M42	42	±0.8	125	+10, -0	180	42
M48	48	±0.9	150	+12.5, -0	200	48

1.4 JA - Bolt



Type JA

Designation of screw thread (ØD)	(ØD)		T		W (Approx.) mm.	R (Approx.) mm.
	Basic dimension	Tolerances	Basic dimension	Tolerances		
M10	10	±0.4	30	+6.3, -0	35	50
M12	12	±0.4	35	+8, -0	40	65
M16	16	±0.5	40	+8, -0	55	85
M20	20	±0.5	50	+8, -0	70	105
M24	24	±0.5	80	+10, -0	80	125
M30	30	±0.6	90	+10, -0	100	155
M36	36	±0.7	110	+10, -0	120	190
M42	42	±0.8	125	+10, -0	140	220
M48	48	±0.9	150	+12.5, -0	160	250

2. ASTM A36/A36M [Material]

2.1 Chemical Composite

Chemical Requirements

Product Diameter inch [mm.]	Composition					
	C, max, %	Mn, %	P, max,%	S, max,%	Si,%	Cu, %
≤ 3/4" ,[20]	0.26	...	0.04	0.05	0.40	0.20
3/4" to 1 1/2" , [20 - 40]	0.27	0.60 - 0.90	0.04	0.05	0.40	0.20
1 1/2" to 4" , [40 - 100]	0.28	0.60 - 0.90	0.04	0.05	0.40	0.20
> 4" , [100]	0.29	0.60 - 0.90	0.04	0.05	0.40	0.20

2.2 Tensile Requirements

Tensile Requirements

Tensile Strength, ksi [MPa]		Yield Strength, min, ksi [MPa]	Elongation in 2 in, min [%]
min	max		
58 [400]	80 [550]	36 [250]	20 - 23

3. ASTM A153/A153M [HDG]

Specification of ASTM A153/153M

Class of material	Min. Thickness of HDG [μm.]	
	Average of Specimens	Any Individual
Class A : Castings-Malleable Iron, Steel	85	77
Class B : Rolled, Pressd, and forged articles		
B.1 : ≥ 3/16 in. (4.76 mm.) in thickness, > 15 in. (381 mm.) in length.	85	77
B.2 : < 3/16 in. (4.76 mm.) in thickness, > 15 in. (381 mm.) in length.	65	54
B.3 : any thickness, ≤ 15 in. (381 mm.) in length.	56	47
Class C : Fasteners, 0 > 3/8" (9.52 mm.), Washers in thickness 3/16" to 1/4" (4.76 mm. to 6.35 mm.)	54	43
Class D : Fasteners, 0 < 3/8" (9.52 mm.), Washers in thickness < 3/16" (4.76 mm.)	45	37