

INSTALLATION GUIDE for Self-tapping Inserts

Step 1: Prepare the hole by molding or drilling, the hole size is recommended, and may adjusted after trial test. It is better to countersink the hole.

Step 2: Screw the inserts onto the installation tool with the cutting slot or cutting bore downwards (fig 1), then put the insert into the hole and begin to tap. Note that the insert is to be vertically aligned with the hole axis, do not tilt during tapping. Observe the first 1~2 picthes tapping, if any tilt found, stop tapping and re-align the insert. Never reverse the tool when tapping is in progress (fig 2).

Step 3: The insert is supposed to arrive at 0.2mm lower than the workpiece top surface, then tighten the hexgonal nut of the installtion tool with a wrench, and back out the tool counterclockwisely (fig 3).

Recommended Borehole Sizes

Borehole Diameter (mm)			Standard Value for 302 Series				Standard Value for 307/308 Series			
Workpiece Metal	Light Alloys Rm=Tensile Strength (N/mm2)		Rm<250							
			Rm<300				Rm<300			
				Rm<350				Rm<350		
	Ms, Bronze, NF-Metals				Rm>350				Rm>350	
	Cast Iron HB=Brinell Hardness (N/mm2)		<150 HB				<150 HB			
				<200 HB				<200 HB		
Self-tapping Insert Internal Thread	M2/M2.5	N/A		4.1	4.2	4.3	-	-	-	-
	M3	#4		4.6	4.7	4.8	4.6	4.7	4.8	
	M3.5	#6	5.4	5.5	5.6	5.7	5.5	5.6	5.7	
	M4	#8	5.9	6	6.1	6.2	6	6.1	6.2	
	M5	#10	7.2	7.3	7.5	7.6	7.4	7.5	7.6	7.7
	M6(a)	-	8.2	8.3	8.5	8.6	-	-	-	-
	M6	1/4"	8.8	9	9.2	9.4	9.3	9.4	9.5	9.6
	M8	5/16"	10.8	11	11.2	11.4	11.1	11.2	11.3	11.5
	M10	3/8"	12.8	13	13.2	13.4	13.1	13.2	13.3	13.5
	M12	7/16"	14.8	15	15.2	15.4	15	15.1	15.2	15.4
	M14	1/2"	16.8	17	17.2	17.4	17	17.1	17.2	17.4
	M16	5/8"	18.8	19	19.2	19.4	19	19.1	19.2	19.4
	M18	-	20.8	21	21.2	21.4				
	M20/M22	3/4"	24.8	25	25.2	25.4				
	M24		28.8	29	29.2	29.4				
	M27		32.8	33	33.2	33.4				
	M30		34.8	35	35.2	35.4				
External Thread Penetrated %			60%	50%	40%	30%	80%	70%	60%	50%

Note 1: NF-Metal includes Tin, Aluminum, Copper, Zinc, Nickel

Note 2: The hole sizes are for reference, it is necessary to do test to find the most suitable hole sizes

Borehole Wall Thickness

Light Alloys: 0.2~0.6 of Insert Outer Diameter

Cast Iron: 0.3~0.5 of Insert Outer Diameter

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