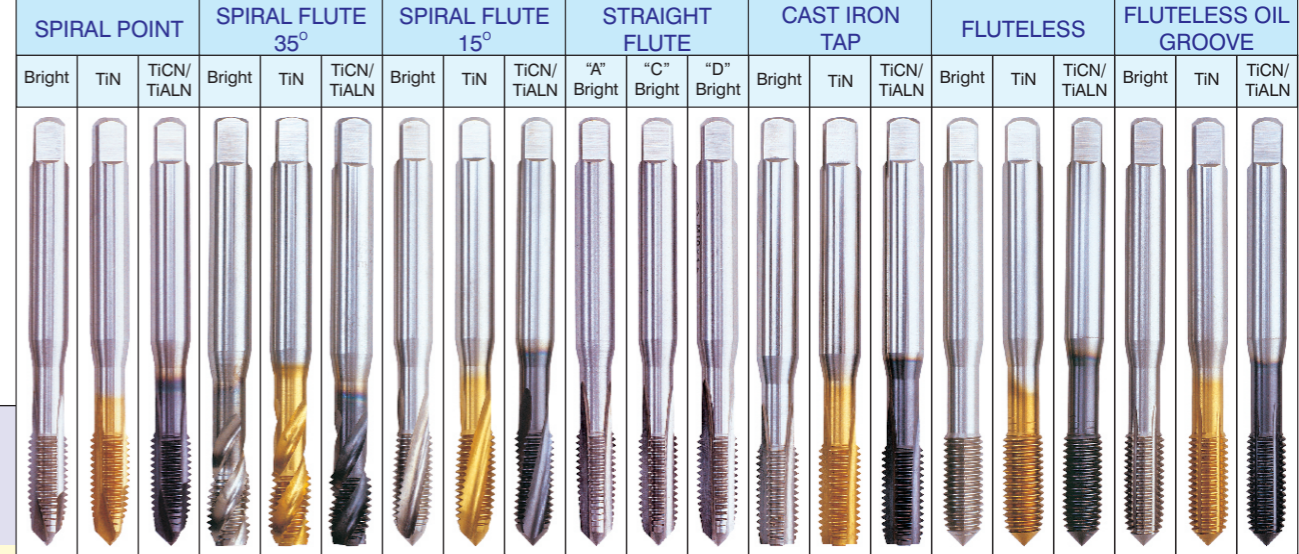


GUIDANCE CHART FOR TAP SELECTION AND APPLICATION

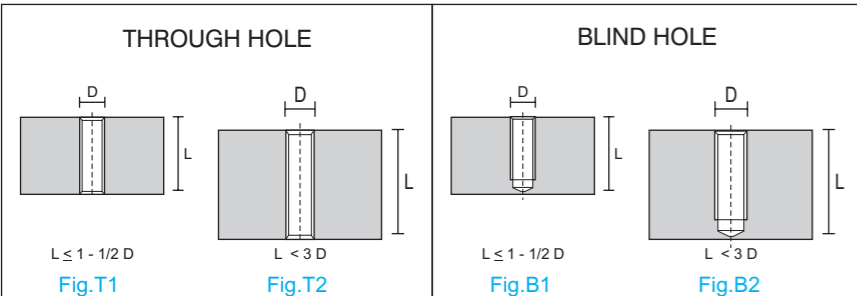
- First Choice
- Second Choice

APPLICATION



MATERIAL		HARDNESS HB	TENSILE STRENGTH N/mm ²	CUTTING SPEED M/Min.		TYPE OF COOLANT	Through Hole / Blind Hole / Through or Blind Hole																						
				BRIGHT	TIN/TICN		Through Hole	Blind Hole	Through or Blind Hole																				
Steel	Low alloy Steel, Structural Steel	<200	<700	20	40	Sulfo- or chlorinated oil	●	●	●	●	●	●	■	■	■	■	■	■				●	●	●	●	●	●		
	Plain Carbon Steel, Alloy Steel & Steels with Good machinability	<250	<850	15	32	Sulfo- or chlorinated oil	●	●	●			●			●	●	■	■				■	●	●	■	●	●		
Stainless Steels	Free Machining Stainless Steel	<250	<850	8	12	Sulfo- or chlorinated oil	■	●	●		●	●									●	●	●	●	●	●			
	Austenitic Ferritic AISI 304,316,321	<250	<850	8	12	Sulfo- or chlorinated oil	■	●	●		●	●									●	●	●	●	●	●			
Cast Iron	Grey cast Iron	<150	<700	15	20	Dry, air jet or soluble oil															●	●	●						
	Malleable Cast Iron	<200	<700	8	15	Soluble oil or chemical-type coolant															●	●	●						
Copper & Its Alloys	Soft	<100	<350	12	20	Light base oil	■		●	■		●						■	■	■									
	Hard	<200	<700	25	40	Light base oil												■	■	■									
Brass	Short Chipping	<200	<700	30	45	Soluble oil, light duty oil		●																					
	Long Chipping	<200	<700	20	40	Soluble oil, light duty oil	■	●			●							●	●	●	●				●	●	●	●	●
Bronze	Short Chipping	<300	<700	4	--	Soluble oil, light duty oil	●											■											
	Long Chipping	<200	<700	20	30	Soluble oil, light duty oil	●											■			■	■	■	■	■	■			
Aluminum	Short Chipping Si<10%	<120	<400	20	35	Water soluble or oil/chemical especially for aluminum	■	■	●	■	■	■							●	●	●								
Magnesium	Short Chipping Si>10%	<120	<400	15	30	Water soluble or oil/chemical especially for aluminum	●			●									●	●	●								
	Long Chipping unalloyed	<100	<350	16	30	Oil specially recommended for magnesium	■	■	■	■	■	■									●	●	●	●	●	●			
	Medium Chipping Si <0.5%	<150	<500	30	50	Oil specially recommended for magnesium	■	■	■	■	■	■									●	●	●	●	●	●			
Zinc alloys			20	40	Soluble oil			■			■										●	●			●	●			

Type of hole



How to find the right tap ?

- Material to be machined
- Hole type in which tapping is to be done
 - Use above chart for tap selection (For Ex :- For Short chipping brass)
 - Select the hole type as given below (For Ex :- Blind hole)
 - Use above chart for tap selection (For Ex :- For short chipping brass)
 - select the hole type as given below (For Ex :- blind hole)
- Thread depth to be produced
 - Select the hole type as given below (For Ex :- blind hole with L < 3D)
- Thread type required (For Ex:- "M" metric type of thread)
- General Tap dimensions required (For Ex:- IS 6175 - III)
- For Thread Forming Tap :
 - (a) For Fig.T1 & B1- Use Fluteless Tap (For Ex:- L ≤ 1 - 1/2 D)
 - (b) For Fig.T2 & B2- Use Fluteless Oil Groove. (For Ex:- L < 3 D)
- For Blind Hole Tapping :
 - (a) For Fig.B1- Use 15° Spiral Flute (For Ex:- L ≤ 1 - 1/2 D)
 - (b) For Fig.B2- Use 35° Spiral Flute (For Ex:- L < 3 D)