

Cutting rate recommendations for cut taps

Material group		Approximate Rc	Approximate HB	Recommended SFM					
				HSS-E		HSS-E-PM		Solid carbide	
				bright finish	hard coated	bright finish	hard coated	bright finish	hard coated
● Structural steels, free-cutting steels Unalloyed case hardened steels Unalloyed heat-treatable steels			<180	30-50	40-70	50-70	55-95	-	-
		<20	<230	20-40	30-70	40-65	40-80	-	-
		<25	<250	15-35	25-50	30-60	35-75	-	-
● Structural steels, free-cutting steels Case hardened steels, heat-treatable steels Nitriding steels, spheroidal graphite iron		<20	<230	40-50	40-75	40-65	40-80	-	-
		<25	<250	30-45	30-65	30-60	35-75	-	-
		<30	<280	20-30	30-55	30-50	35-65	-	-
		<35	<320	15-25	20-35	25-45	30-60	-	-
		<38	<380	10-25	20-40	20-45	30-55	-	-
● Stainless- and acid-resistant steels, sulphured austenitic martensitic			<180	25-35	40-55	30-55	35-70	-	-
		<25	<250	20-30	30-40	30-50	35-60	-	-
		<30	<280	20-30	25-40	25-45	30-50	-	-
		<35	<320	10-20	20-30	20-35	25-50	-	-
● Alloyed case hardened steels Alloyed heat-treatable steels Alloyed tool steels High speed tool steels		<25	<250	10-20	30-40	30-50	35-70	-	-
		<30	<280	25-35	30-50	25-45	35-65	-	-
		<35	<320	15-30	20-40	20-45	30-60	-	-
		<38	<380	8-15	10-30	15-35	25-55	-	-
		<44	<415	-	-	4-10	8-15	4-8	8-16
		<60		-	-	-	4-10	3-6	6-12
● Cast iron Spheroidal graphite iron Malleable cast iron			<180	50-70	60-90	55-85	65-110	70-100	80-130
		<25	<250	30-50	45-85	40-70	60-100	70-100	80-130
		<35	<320	15-35	20-40	25-45	35-55	60-110	70-120
● Aluminium and Al-alloys		SILICON CONTENT	WROUGHT ALUMINIUM						
		< 6%	n/a	30-50	50-75	50-70	65-80	80-140	90-165
		6-10%	n/a	25-35	40-50	40-65	65-80	80-140	90-165
		>10%	n/a	-	25-35	40-65	65-80	60-130	80-140
		n/a	30-80	50-65	65-100	-	-	-	-
		n/a	75-150	35-60	50-65	-	-	-	-
● Titanium and Ti-alloys			140-275	-	-	12-25	20-30	-	-
			300-380	-	-	6-12	10-18	-	-
● Nickel and Ni-alloys			200-300	-	-	6-12	10-18	-	-
			>300	-	-	3-6	6-12	-	-
Plastics				15-30	-	20-40	-	30-60	-
Magnesium-alloys				90-140	-	-	-	110-180	-
Brass, short-chipping long-chipping				30-45	-	45-60	-	80-100	-
				30-45	-	45-60	-	80-100	-