



Stainless Steel

Material Types	Free Machining	Ferritic	Austenitic	Martensitic	Precipitation Hardened	
Material Examples	303, 303SE, 416, 420F, 430F	405, 430	302, 304, 316, 329, 436 <275	403, 410, 420, 431	15-5PH 17-4PH 17-7PH	
Hardness BHN RC	<250 <23	<260 <26	<28 —	<275 <28	<275 <28	350-440 <48
Thread Forming Taps	50-100 SFM	70-100 SFM	—	—	—	—
Carbide Taps	—	—	20-35 SFM	—	—	—
Blue Ring Color Taps	25-50 SFM	35-50 SFM	15-25 SFM	25-50 SFM	25-50 SFM	—
Yellow Ring Color Taps	15-35 SFM	25-35 SFM	—	15-35 SFM	15-35 SFM	—
Red Ring Color Taps	—	15-25 SFM	15-25 SFM	15-25 SFM	15-25 SFM	12-20 SFM

Carbon Steel

Material Types	Free Machining	Low Carbon	Alloy-Low Carbon	Medium Carbon	High Carbon	Alloy-High Carbon
Material Examples	1118, 1114, 1212, 12L14, 12L15, 1215	1008, 1010, 1011, 1015, 1018, 1029	3310, 4620, 4820, 8620	1030, 1035, 1040, 4045, 1050	1050, 1065, 1070, 1080, 1090	4140, 4150, 4340
Hardness BHN RC	<180 <20	<180 <20	<240 <24	<275 <28	<300 <32	<390 <42
Thread Forming Taps	120-180 SFM	60-129 SFM	50-90 SFM	—	—	—
Carbide Taps	—	—	—	—	—	—
Blue Ring Color Taps	20-50 SFM	20-50 SFM	15-25 SFM	20-40 SFM	—	—
Yellow Ring Color Taps	60-90 SFM	30-60 SFM	26-45 SFM	20-50 SFM	25-40 SFM	15-20 SFM
Red Ring Color Taps	—	—	—	25-50 SFM	25-50 SFM	15-25 SFM