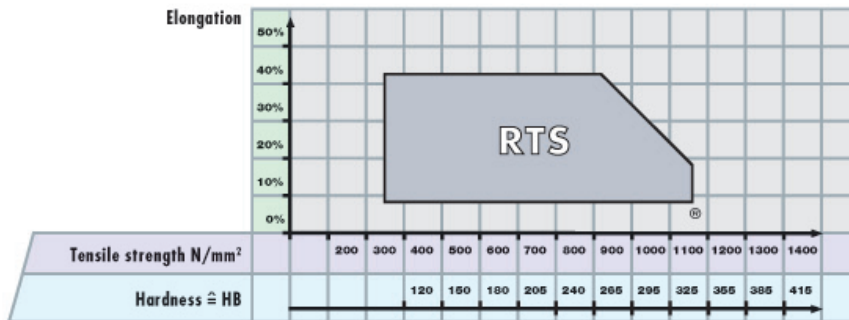


**RTS** Rigid Tapping



**Material classification**

Material groups	Material designation	Hardness (HB)	Tensile strength R <sub>m</sub> (N/mm <sup>2</sup> )	Elongation A (%)	V <sub>c</sub> (m/min) < Ø 20 mm Guide line Coated VS
10 Steels	11 Free-cutting steels	< 200	< 700	< 10	20 – 40
	12 Structural / cementation steels	< 200	< 700	< 30	20 – 40
	13 Carbon steels	< 300	<1000	< 20	16 – 24
	14 Alloy steels <850 N/mm <sup>2</sup>	< 250	< 850	< 30	16 – 24
	15 Alloy steels hard. / temp. >850 - <1150 N/mm <sup>2</sup>	> 250	> 850	< 30	6 – 12
	16 High tensile alloy steels	> 250	> 850	< 12	
20 Stainless Steels	21 Free machining stainless steels	< 250	< 850	< 25	20 – 40
	22 Austenitic stainless steels	< 250	< 850	> 20	8 – 16
	23 Ferritic and martensitic <850 N/mm <sup>2</sup>	< 250	< 850	> 20	
	24 Ferritic and martens. >850 - <1150 N/mm <sup>2</sup>	> 250	> 850	> 15	
30 Cast iron	31 Cast iron	< 250	< 850	< 10	20 – 40
	32 Spheroidal graphite + malleable cast iron	< 250	< 850	> 10	20 – 40
40 Titanium	41 Pure titanium	< 250	< 850	> 20	
	42 Titanium alloys	> 250	> 850	< 20	
50 Nickel	51 Nickel alloys 1 <850 N/mm <sup>2</sup>	< 250	< 850	> 25	
	52 Nickel alloys 2 >850 - <1150 N/mm <sup>2</sup>	> 250	> 850	< 25	
	53 Nickel alloys 3 >1150 - ≤1600 N/mm <sup>2</sup>	> 340	> 1150	< 20	
60 Copper	61 Pure copper (electrolytic copper)	< 120	< 400	> 12	10 – 20
	62 Short chip brass, phosphor bronze, gun metal	< 200	< 700	< 12	
	63 Long chip brass	< 200	< 700	> 12	20 – 40
70 Aluminium Magnesium	71 Al / Mg unalloyed	< 100	< 350	> 15	
	72 Al alloyed Si < 1.5 %	< 150	< 500	> 15	30 – 50
	73 Al alloyed Si > 1.5 % - < 10 %	< 120	< 400	< 15	20 – 40
	74 Al alloyed Si > 10 %, Mg-Alloys	< 120	< 400	< 10	20 – 40
80 Plastic compounds	81 Thermoplastics	-	-	-	
	82 Duroplastics	-	-	-	
	83 Glass fibre reinforced plastics	-	-	-	