



# Application Chart and Cutting Speeds

Material groups		Material designation	Hardness (HB)	Tensile strength Rm (N/mm <sup>2</sup> )	Elongation A (%)	Vc (m/min)	NJS920VS-4	NJS960VS-3
								
Steels	11	Free-cutting steels	< 200	< 700	< 10	20 - 30	✓	✓
	12	Structural / cementation steels	< 200	< 700	< 30	20 - 30	✓	✓
	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			
	*	High tensile alloy steels 55 - 63 HRC	> 560	> 2000	< 10			
Stainless Steels	21	Free machining stainless steels	< 250	< 850	< 25	20 - 30	✓	✓
	22	Austenitic stainless steels	< 250	< 850	> 20			
	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			
Cast Iron	31	Cast iron	< 250	< 850	< 10	20 - 30	✓	✓
	32	Spheroidal graphite + malleable cast iron	< 250	< 850	> 10	20 - 30	✓	✓
Titanium	41	Pure titanium	< 250	< 850	> 20			
	42	Titanium alloys	> 250	> 850	< 20			
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			
Copper	61	Pure copper (electrolitic copper)	< 120	< 400	> 12			
	62	Short chip brass, phosphor bronze, gun metal	< 200	< 700	< 12	20 - 30	✓	✓
	63	Long chip brass	< 200	< 700	> 12			
Aluminium Magnesium	71	Al unalloyed	< 100	< 350	> 15			
	72	Al alloyed Si < 1.5 %	< 150	< 500	> 15			
	73	Al alloyed Si > 1.5 % - < 10 %	< 120	< 400	< 15	20 - 30	✓	✓
	74	Al alloyed Si > 10 %, Mg-Alloys	< 120	< 400	< 10	20 - 30	✓	✓
Plastic Compounds	81	Thermoplastics	-	-	-			
	82	Duroplastics	-	-	-	16 - 24	✓	✓
	83	Glass fibre reinforced plastics	-	-	-	8 - 16	✓	✓

✓ = Optimal    ✓ = Suitable

**JIS**  
TAP STANDARD



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**DC** <sup>®</sup> **THREADING TECHNOLOGY**  
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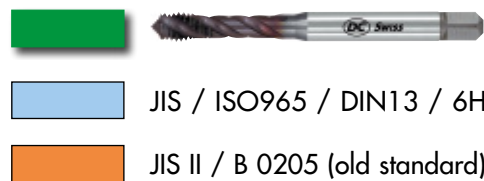
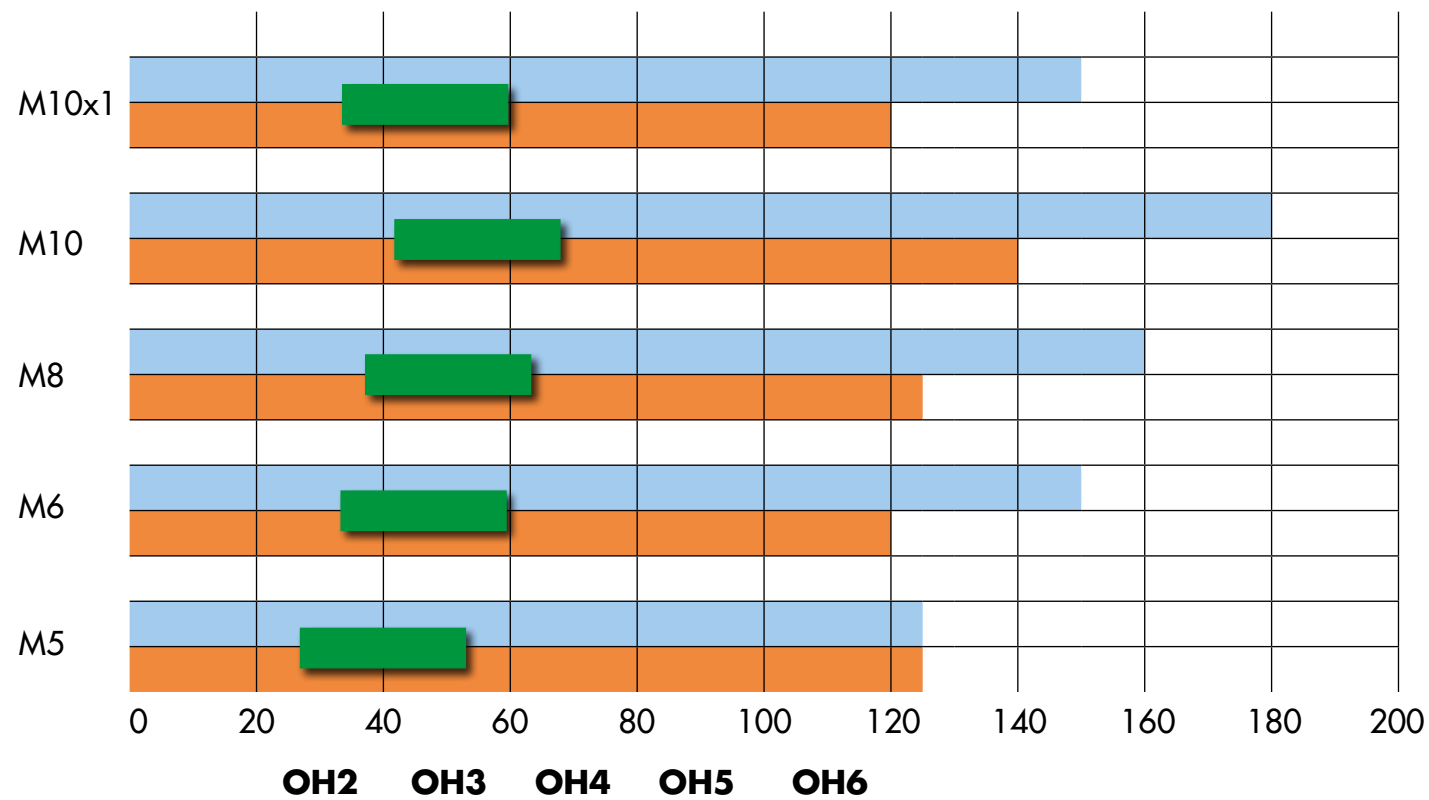
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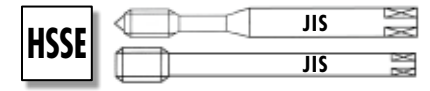
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## JIS TOLERANCES



# M/MF ISO DIN 13



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