

295920

Cutting speed ( $V_c$ )

Workpiece Materials	Material No. VDI 3323	Hardness (BHN)	Cutting Speed: $V_c$ (m/min) for IC908	
			Drilling	Turning & Boring
Low carbon steel (<0.25% C)	1	~150	40-100	40-180
Carbon steel ( $\geq 0.25\%$ C)	2	150-250	40-100	40-180
Low alloy steel	6	~180	40-80	40-140
Medium alloy steel	7	200-250	40-80	40-140
High alloy steel	8, 9	250-350	40-60	40-120
Martensitic stainless steel	12	200	20-60	40-140
Austenitic stainless steel	14	200	20-60	40-140
Grey cast iron	15,16	180-220	40-140	40-140
Ductile cast iron	17,18	200-240	40-150	40-150
Aluminum alloy	21-24	60-130	50-200	150-320
Copper alloy	26-28	90-100	50-200	150-320

Feed (f) and depth of cut ( $a_p$ ) 2xD

Tool Diameter (mm)	Machining Type	Cutting Conditions	
		$a_p$ (mm)	f (mm/rev)
3-4	External Turning	0.8 (0.2-2.5)	0.04 (0.01-0.08)
	Face Turning	0.6 (0.02-1.7)	0.03 (0.01-0.06)
	Drilling	-	0.02 (0.01-0.06)
5-6	External Turning	1.0 (0.2-3.0)	0.04 (0.01-0.08)
	Face Turning	0.8 (0.2-2.5)	0.03 (0.01-0.06)
	Drilling	-	0.03 (0.01-0.08)
7-8	External Turning	1.3 (0.3-3.5)	0.04 (0.01-0.08)
	Face Turning	1.0 (0.25-3.0)	0.04 (0.01-0.07)
	Drilling	-	0.04 (0.01-0.10)

Feed (f) and depth of cut ( $a_p$ ) 4xD

Tool Diameter (mm)	Machining Type	Cutting Conditions	
		$a_p$ (mm)	f (mm/rev)
3-4	External Turning	0.8 (0.2-2.5)	0.03 (0.01-0.07)
	Face Turning	0.6 (0.02-1.7)	0.02 (0.01-0.04)
	Drilling	-	0.02 (0.01-0.05)
5-6	External Turning	1.0 (0.2-3.0)	0.03 (0.01-0.07)
	Face Turning	0.8 (0.2-2.5)	0.02 (0.01-0.04)
	Drilling	-	0.02 (0.01-0.06)
7-8	External Turning	1.3 (0.3-3.5)	0.03 (0.01-0.07)
	Face Turning	1.0 (0.25-3.0)	0.02 (0.01-0.04)
	Drilling	-	0.03 (0.01-0.08)