

achievable surface quality Ra						capability				cost/part	cycle time	required operator experience	page(s)
P	M	K	N	S	H								
20–40 µ-in 0,5–1,0 µm	20–40 µ-in 0,5–1,0 µm	20–60 µ-in 0,5–1,5 µm	–	20–40 µ-in 0,5–1,0 µm	–	●	●	●	●	moderate	low	low	W8–W10, W13–W14
20–40 µ-in 0,5–1,0 µm	20–40 µ-in 0,5–1,0 µm	20–60 µ-in 0,5–1,5 µm	–	20–40 µ-in 0,5–1,0 µm	–	●	●	carbide only	carbide only	moderate	low	low	W11–W12, W15–W16
32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	<48 µ-in <1,2 µm	●	●	●	●	low	moderate	low–moderate	W49–W51
32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	<48 µ-in <1,2 µm	●	●	●	●	low	moderate	low–moderate	W52–W53
40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–80 µ-in 1,0–2,0 µm	40–200 µ-in 1,0–5,0 µm	–	●	●	●	●	low	moderate	low–moderate	W36–W37
40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–80 µ-in 1,0–2,0 µm	40–200 µ-in 1,0–5,0 µm	–	●	●	●	●	low	low	low–moderate	W38–W39
40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–200 µ-in 1,0–5,0 µm	40–80 µ-in 1,0–2,0 µm	40–200 µ-in 1,0–5,0 µm	–	●	●	●	●	low	moderate	low–moderate	W40–W45
32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	32–80 µ-in 0,8–2,0 µm	–	●	●	○	○	low	moderate	low–moderate	W46–W48
32–80 µ-in -2,0 µm	32–80 µ-in -2,0 µm	32–80 µ-in -2,0 µm	32–80 µ-in 0,8–2,0 µm	–	–	●	●	●	●	very low	very low	moderate	W76–W77
32–80 µ-in -2,0 µm	32–80 µ-in -2,0 µm	32–80 µ-in -2,0 µm	32–80 µ-in 0,8–2,0 µm	–	–	●	●	●	●	very low	very low	moderate	W74–W75
–	–	–	4–32 µ-in 0,1–0,8 µm	–	–	●	●	●	●	low	very low	moderate	W80–W81
–	–	–	4–32 µ-in 0,1–0,8 µm	–	–	●	●	●	●	low	very low	moderate	W80–W81

Ra Surface roughness

NOTE: Surface roughness values are guidelines and depend on the application, coolant situation, machine, and cutting data applied.