

Recommended Cutting Conditions

Cutting Conditions Table

Recommended Cutting Conditions (MSD45 M31, MSP15 M39)

Workpiece Material	fz (mm/t)	Recommended Insert Grade (Cutting Speed Vc: m/min)													
		Cermet			PVD Coated Carbide						Carbide		PCD		
		TN60	TN100M	TC60	PR630	PR730	PR830			PR660	PR905	PW30	KW10	KPD001	KPD010
Stainless Steel	~0.25		☆ 120-200	☆ 120-200	☆ 120-200	☆ 120-200				★ 100-200		☆ 80-120			
Carbon Steel	~0.3	☆ 150-220	★ 120-200	☆ 120-200	☆ 120-200	★ 120-200				☆ 100-180		☆ 80-150			
Alloy Steel	~0.3	☆ 120-200	★ 100-180	☆ 100-180	☆ 100-180	★ 100-180				☆ 80-150		☆ 80-150			
Mold Steel	~0.25	☆ 120-200	★ 100-180	☆ 100-180	☆ 80-150	★ 80-150				☆ 60-130		☆ 80-150			
Cast Iron	~0.3										★ 100-200		☆ 80-150		
Non-ferrous Metals	~0.2												★ 100-300	★ 300-800	☆ 300-800

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (MSO45 M34)

Workpiece Material	fz (mm/t)	Recommended Insert Grade (Cutting Speed Vc: m/min)													
		Cermet			PVD Coated Carbide						Carbide		PCD		
		TN60	TN100M	TC60	PR630	PR730	PR830			PR660	PR905	PW30	KW10	KPD001	KPD010
Stainless Steel	~0.25		☆ 120~200		☆ 120~200	☆ 120~200				★ 100~200					
Carbon Steel	~0.3		★ 120~200		☆ 120~200	★ 120~200				☆ 100~180					
Alloy Steel	~0.3		★ 100~180		☆ 100~180	★ 100~180				☆ 80~150					
Mold Steel	~0.25		★ 100~180		☆ 80~150	★ 80~150				☆ 60~130					
Cast Iron	~0.3										★ 100~200		☆ 80~150		
Non-ferrous Metals	~0.2												★ 100~300		

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (MSE15 M39)

Workpiece Material	fz (mm/t)	Recommended Insert Grade (Cutting Speed Vc: m/min)													
		Cermet			PVD Coated Carbide						Carbide		PCD		
		TN60	TN100M	TC60	PR630	PR730	PR830			PR660	PR905	PW30	KW10	KPD001	KPD010
Stainless Steel	~0.25		☆ 120~200	☆ 120~200	☆ 120~200	★ 120~200									
Carbon Steel	~0.25		★ 120~200	☆ 120~200	☆ 120~200	★ 120~200									
Alloy Steel	~0.25		★ 100~180	☆ 100~180	☆ 100~180	★ 100~180									
Mold Steel	~0.25		★ 100~180	☆ 100~180	☆ 80~150	★ 80~150									
Cast Iron	-														
Non-ferrous Metals	-														

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (DMC / DMC-SX M78)

Workpiece Material	fz (mm/t)	Recommended Insert Grade (Cutting Speed Vc: m/min)											Max. ap (mm)			
		Cermet			PVDCoated Carbide						Carbide		Cutting Dia. (øD)	Slotting (ap)	Shouldering (ap×ae)	
		TN60	TN100M	TC60	PR630	PR730	PR830			PR660	PR905	PW30				KW10
Stainless Steel	~0.15		☆ 120~200	☆ 120~200	☆ 100~200	★ 120~200								~ø12	1.5	4×2
Carbon Steel	~0.2		★ 120~200	☆ 120~200	☆ 100~200	★ 120~200								ø14~	2	6×2
														~ø12	2	6×2
Alloy Steel	~0.2		★ 100~180	☆ 100~180	☆ 100~180	★ 100~180								ø14~	3	9×3
														~ø12	2	6×2
Mold Steel	~0.15		★ 100~180	☆ 100~180	☆ 80~150	★ 80~150								~ø12	2	6×2
														ø14~	3	9×3
Cast Iron	~0.2												★ 80~150	~ø12	2	6×2
														ø14~	3	9×3
Non-ferrous Metals	~0.2												★ 100~300	~ø12	2	6×2
														ø14~	3	9×3

• Use DMC8 ○○ with d = 6mm Max. for shouldering.

★ : 1st Recommendation ☆ : 2nd Recommendation