ToYo TooL ®

High efficiency

New product

Twist Chamfer Mill
Solid Carbide 90° Front Chamfering End Mill

Non-Coating

Coating

Model number		Tip diameter D	Effective blade length K	Number of flutes	Shank diameterDS	Full length L
Non-coating type	Coating type					
TCM90-3	TCM90C-3	0.5	1.25	3	3	40
TCM90-4	TCM90C-4	0.5	1.75		4	50
TCM90-6	TCM90C-6	0.75	2.625	5	6	60
TCM90-8	TCM90C-8	1.25	3.375		8	
TCM90-10	TCM90C-10	2.5	3.75	7	10	70
TCM90-12	TCM90C-12	2.5	4.75		12	

＜Recommended cutting conditions＞

Work material	Aluminum alloy	General steel	Stainless steel	Titanium alloy	Heat resistant alloy
Cutting speed (m/min)	85 ～ 175	40 ～ 90	30 ～ 60	25 ～ 55	20 ～ 45
Shank diameter	Feed per tooth(mm/tooth)				
φ3./φ4.	0.01 ～ 0.05	0.025 ～ 0.065	0.02 ～ 0.06	0.025 ～ 0.05	0.02 ～ 0.04
φ6./φ8.	0.015 ～ 0.055	0.02 ～ 0.06	0.015 ～ 0.055	0.02 ～ 0.055	0.01 ～ 0.05
φ10./φ12.	0.015 ～ 0.055	0.015 ～ 0.055	0.01 ～ 0.05	0.02 ～ 0.045	0.01 ～ 0.035
Chamfer width at one time	～ 0.3DS	～ 0.15DS	～ 0.2DS	～ 0.15DS	～ 0.15DS

＜Precautions＞
※Since the recommended cutting conditions are calculated by us, fine adjustment is required depending on the material, work condition, processing machine, etc.
※Recommended cut direction: Down cut
※It is recommended to use "oil-based coolant / water-soluble coolant" during processing.
※Depending on the material, work condition, processing machine, etc., cut in several times.
※In order to suppress the occurrence of "tool damage / chatter / burr etc.", pay attention to "clamp / tool runout of machining work".
※If you want to increase the surface roughness, set a low feed amount per blade or a small cut chamfer amount.
※When chamfering holes by thrusting, set the cutting speed low.
※If the amount of protrusion is long, set the condition low.

＜Recommended type＞

	Aluminum alloy	General steel	Stainless steel	Titanium alloy	Heat resistant alloy
Non-coating	◎	△	△	○	×
Coating	○	○	◎	◎	○

▪ K=Cutting blade