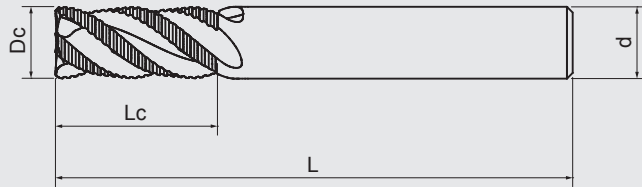


F638TX / F649TX

Roughing End Mills

Fine tooth staggered chip breaker design on cutting flutes are good for chip breaking.
Good wear resistance and lubricating effect with Nano multilayer coating.



VHM
Carbide

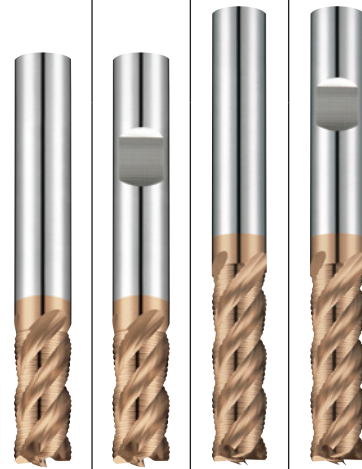
AlTiSiN
TX



NEW-HR

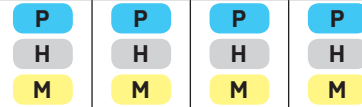


Steel
<56HRC



Suitable for cutting different steel below 56HRC as well as cast iron.

Application for roughing cutting process.



DIN 6527 Standard Length

Dc h10	Lc mm	L mm	d h5	Z T	45° mm	F638TX HA	F638TX HB				
3	8	57	6	3	0.3	●	●				
4	11	57	6	3	0.3	●	●				
5	13	57	6	3	0.4	●	●				
6	13	57	6	4	0.4	●	●				
8	19	63	8	4	0.4	●	●				
10	22	72	10	4	0.5	●	●				
12	26	83	12	4	0.5	●	●				
14	26	83	14	4	0.5	●	●				
16	32	92	16	4	0.5	●	●				
18	32	92	18	4	0.5	●	●				
20	38	104	20	4	0.5	●	●				

Long Length

Dc h10	Lc mm	L mm	d h5	Z T	45° mm			F649TX HA	F649TX HB		
6	19	63	6	4	0.4			●	●		
8	28	72	8	4	0.4			●	●		
10	34	84	10	4	0.5			●	●		
12	40	97	12	4	0.5			●	●		
16	48	108	16	4	0.5			●	●		
20	56	122	20	4	0.5			●	●		

Cutting Conditions

F638TX F649TX							
		cutting speed V_c (m/min)	feed per tooth f_z (mm)	cutting speed V_c (m/min)	feed per tooth f_z (mm)	cutting speed V_c (m/min)	feed per tooth f_z (mm)
Carbon Steel Materials							
P	GR1 Carbon Steel	60	$0.006 \times D_c$	70	$0.006 \times D_c$	80	$0.006 \times D_c$
	GR2 <24HRC Low-alloyed Steel	60	$0.005 \times D_c$	70	$0.005 \times D_c$	80	$0.005 \times D_c$
	GR3 <30HRC Hi-alloyed Steel	50	$0.005 \times D_c$	60	$0.005 \times D_c$	70	$0.005 \times D_c$
Hardened Steel Materials							
H	GR4 30-38HRC Hardened Steel	45	$0.003 \times D_c$	65	$0.003 \times D_c$	70	$0.003 \times D_c$
	GR5 38-48HRC Hardened Steel	40	$0.003 \times D_c$	60	$0.003 \times D_c$	65	$0.003 \times D_c$
Stainless Steel Materials							
M	GR8-1 Ferritic \ Martensitic	60	$0.002 \times D_c$	70	$0.004 \times D_c$	80	$0.003 \times D_c$
	GR8-2 Austenitic	50	$0.002 \times D_c$	60	$0.003 \times D_c$	70	$0.003 \times D_c$
	GR8-3 Austenitic-ferritic	40	$0.002 \times D_c$	50	$0.003 \times D_c$	60	$0.002 \times D_c$
	GR8-4 Austenitic-ferritic Heat-resistant	30	$0.002 \times D_c$	40	$0.003 \times D_c$	50	$0.002 \times D_c$

All cutting data serve for orientation only and should be adapted individually to the technical conditions on location

1. Please work with good rigidity / high precision facilities and collet chuck.
2. Please choose proper cutting fluid.
3. The cutting data is reference value only. Please adjust it according to your real working conditions.
4. If RPM is lower the reference value, the Feed rate (f_z) and RPM should be reduced by the same proportion.
5. If vibration occurs during cutting, please reduce cutting parameter.