

Milling Cutter



Milling Cutter - Content structure

- Products are listed by application.
- Please refer the table of contents and the icons.

How to use the page

Method ①

Select the application (①) and the approach angle (②) at the left end of each page and choose a designation you need (⑤) in the dimension table (④). Applicable inserts are shown in (⑧).

The screenshot shows the TUNEFEE EXLS product page. On the left, there are icons for application selection (①) and approach angle selection (②). The main content area includes a technical drawing of the tool with dimensions (④) and a table of designations. The table has columns for Designation, APMAX, DCKX, CICT, DC, DCONMS, LS, LA, F (kg), and Insert. Callouts 1-8 highlight specific elements: 1 (Application icon), 2 (Approach angle icon), 4 (Dimension table), 5 (Designation table), and 8 (Insert column).

Method ②

Select the tool series name on H008 - H009 and check the details on the product page.

The screenshot shows the 'Application Overview' page. It lists various tool series and their applications:

- Face milling, High feed milling:** DO TMILL (H000 page), DO DOCTO (H043 page), DO QMILL (H067 page), DO FEED (H070 page), TUNESMILL (H078 page), TPE (H082 page), TUNE-ALUMILL (H174 page).
- High feed milling:** DO FEED (H026 page), DO TMILL (H038 page), MILLQFEED (H046 page).
- Profile milling:** H022 page.
- Roughing:** TUNEFEE (H022 page), DO FEED (H026 page), DO TMILL (H038 page).
- Semi-finishing:** SOLIDMASTER (H008 page).
- Finishing:** BALLFINISH (H012, H006 page).

Method ③

Select the tool series or the tool specification on H010 - H019 and see the details on each page.

The screenshot shows the 'High-Feed Milling - Quick Guide' table. It lists specifications for five tool series: TUNEFEE, DO FEED, DO TMILL, DO FEEDOLD, and MILLQFEED. The table includes columns for Cutting edge angle, Depth of cut (APMax), Tool diameter, Workpiece material, and application icons. A legend at the bottom explains the icons:

- ★: Most suitable
- ☆: Suitable
- : Usable

Icon

Approach angle

	10° ~ 20°
	45°
	70°
	85°
	88°
	90°

Application

	Thin workpiece
	Ramping
	Long overhang
	Axial plunging
	Hole enlarging
	Slot milling

	Deep shoulder milling
	Face milling
	External threading
	Back facing
	Peck milling
	Hollow workpiece

	Chamfering
	Shoulder milling
	Internal threading
	Profiling
	Edging / Contouring
	Interrupted surface
	Cutting off

3 BALL NOSE HBRM...
Ball nose endmill for semi-roughing, shank type, with screw clamp system

6

Designation	APMX	DC	CICT	DCONMS	LS	LF	LH	LB	BHTA	WT(kg)	Air hole	Insert
EBRM16T20S130	11.8	16	2	20	70	130	60	35	3	0.235	With	ZRBM16Q...
EBRM16T20S200	11.8	16	2	20	140	200	60	35	3	0.395	With	ZRBM16Q...
EBRM20T25S180	13.6	20	2	25	95	160	75	45	3	0.46	With	ZRBM20Q...
EBRM20T25S220	13.6	20	2	25	135	220	85	60	5	0.655	With	ZRBM20Q...
EBRM25T32S200	17.7	25	2	32	115	200	85	55	6	0.965	With	ZRBM25Q...
EBRM25T32S300	17.7	25	2	32	180	300	120	70	4	1.505	With	ZRBM25Q...

5

4

8

7 SPARE PARTS

Designation	Clamping screw	Wrench
EBRM16...	TS25064	T-50
EBRM20...	TS30065HG	T-60
EBRM25...	TS30065HG	T-50

*Recommended clamping torque (N·m): TS25064=1.3, TS30065HG=2.3, TS30065HG=3.5

BALL NOSE HBRM...
Ball nose endmill for semi-roughing, modular type, with screw clamp system (TungFlex)

Designation	APMX	DC	CICT	OAL	LF	H	DCSFM5	CRKS	WT(kg)	Air hole	Insert
HBRM16M08	11.8	16	2	42.5	25	10	13	M8	0.025	With	ZRBM16Q...
HBRM20M10	13.6	20	2	50	30	15	15	M10	0.05	With	ZRBM20Q...
HBRM25M12	17.7	25	2	57	35	17	21	M12	0.08	With	ZRBM25Q...

7 SPARE PARTS

Designation	Clamping screw	Wrench
HBRM16...	TS25064	T-50
HBRM20...	TS30065HG	T-60
HBRM25...	TS30065HG	T-50

*Recommended clamping torque (N·m): TS25064=1.3, TS30065HG=2.3, TS30065HG=3.5

10 Reference pages: Inserts, Standard cutting conditions → H205
H204 www.tungaloy.com

8 INSERT ZRBM...

Designation	RE	APH730	LE	S
ZRBM16Q-MM	8	●	12.4	3.7
ZRBM20Q-MM	10	●	14.9	4.8
ZRBM25Q-MM	12.5	●	18.3	5.9

5 pieces per package

9 STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Hardness	Selection criteria	Recommended grade	Chip breaker	Cutting speed Vc (m/min)	Feed per tooth fz (mm/rev)
P	Low carbon steel S15C, etc.	-300HB	First choice	APH730	MM	150-350	0.05-0.6
	High carbon and alloy steel S55C, SCr440, etc.	-300HB	First choice	APH730	MM	120-320	0.05-0.5
	CrS, CrCMnS, etc.	-300HB	First choice	APH730	MM	100-200	0.05-0.5
M	Pearlhardened steels NAM80, P15, etc.	30-40HRC	First choice	APH730	MM	100-200	0.05-0.5
	Austenitic stainless steel SUS304, SUS316, etc.	-200HB	First choice	APH730	MM	100-280	0.05-0.6
	Martensitic stainless steel SUS410, etc.	-200HB	First choice	APH730	MM	100-300	0.05-0.6
K	Gray cast irons FC150, etc.	150-250HB	First choice	APH730	MM	120-380	0.08-0.8
	Cast irons FC250, etc.	150-250HB	First choice	APH730	MM	100-280	0.08-0.6
S	Double cast iron FC500, etc.	150-250HB	First choice	APH730	MM	100-280	0.08-0.6
	Titanium alloy Ti-6Al-4V, etc.	-	First choice	APH730	MM	20-80	0.05-0.6
H	Heat-resistance alloys Inconel® 718, etc.	-	First choice	APH730	MM	20-60	0.05-0.4
	Hardened steel SKD11®, etc.	40-50HRC	First choice	APH730	MM	40-80	0.05-0.2
	X40CrMoV9.1, etc.	50-60HRC	First choice	APH730	MM	30-60	0.04-0.14

The above cutting parameters are for reference. Adjustments may be required depending on applications, machine powers and rigidity, and/or workpiece texture/clamping methods.

Tungaloy H205

- 1 : Application
- 2 : Approach angle
- 3 : Tool series name
- 4 : Dimension table
- 5 : Mill designation
- 6 : Dimension drawing (conforming to ISO13399)
- 7 : Spare parts
- 8 : Insert
- 9 : Standard cutting conditions
- 10 : Reference page

Machining accuracy

- F** Finishing
- M** Medium cutting
- R** Roughing
- Coolant hole

Workpiece material

- P** Steel
- M** Stainless
- K** Cast iron
- N** Non-ferrous
- S** Superalloys
- H** Hard material

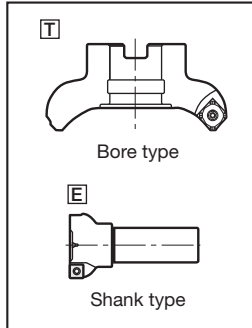
When ordering

- Please specify the designation and quantity for mills.
e.g. **TPW13R080M25.4-06** ... 1 (one mill per package)
- Please specify the designation, grade, and quantity for inserts.
e.g. **SWMT1304PDPR-MJ AH120** ... 10 (10 inserts per package)

*You will find a note if the number per package is not 10.

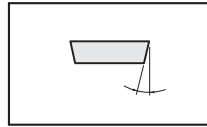
Designation system

TAC Mills [New products]



Symbol	Type
T	Bore type
E	Shank type

H Hybrid TAC Mill Series



Symbol	Relief angle
C	7°
P	11°
D	15°
E	20°
F	25°
N	0°
Others	Special

3 Relief angle

Symbol	Hand
R	Right
L	Left

5 Direction of cut

Symbol	Unit
M	mm
U	in

7 Unit

Symbol	Type
T~: General type	
-	JIS
E	ISO
A	ANSI
E~: Shank type	
-	Cylindrical
W	Weldon
C	Combination

9 Attachment specification

Symbol	Type
W	Wedge clamp
L	Long shank
LE	Long edge
CS	Carbide shank

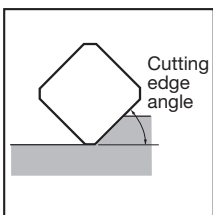
11 Additional feature

1 **2** **3** **4** **5** **6** **7** **8** **9** **10** **11**
T A W 13 R 080 M 25.4 - 06 --

1 **2** **3** **4** **5** **6** **7** **8** **9** **10** **11**
E V H 07 R 012 M 12.0 - 02 L

2 Angle, Category

Symbol	Cutting edge angle
P	90° ~ 80°
E	80° ~ 70°
D	60° ~ 50°
A	50° ~ 40°
L	With long cutting edge
Others	Special



4 Cutting edge length

Symbol	Size (ℓ)
S	
T	
R	
H	
A	

6 Effective cutter diameter

Symbol	Size
M: Unit in mm	
080	80 mm
200	200 mm
I: Unit in inch	
200	2 in
10H	10 in

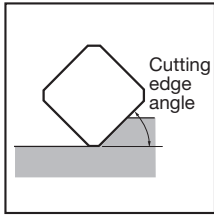
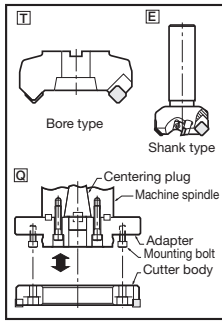
Effective cutter diameter
Body diameter

8 Attachment size

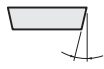
Symbol	Size
M: Unit in mm Hole diameter	
20.0	20 mm
25.4	25.4 mm
31.7	31.75 mm
47.6	47.625 mm
I: Unit in inch Hole diameter	
0075	0.75 in
0125	1.25 in
0200	2 in
E~: Shank type Shank diameter	
10.0	10 mm
12.0	12 mm
16.0	16 mm
25.0	25 mm
32.0	32 mm

10 Number of inserts

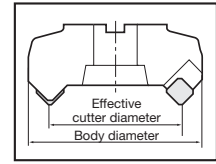
TAC Mills [Previous products]



Symbol	Relief angle
C	7°
D	15°
E	20°
F	25°
N	0°
P	11°
X	Others



R		S		C		A		Inscribed circle dia. (mm)		
Symbol	Size	Symbol	Size	Symbol	Size	Symbol	Size			
		06	6.35	06	6.5	11	11	6.35		
		07	7.94	08	8.1	13	13.8	7.94		
		09	9.525	09	9.525	09	9.7	16	16.5	9.525
		10	10	-	-	-	-	-	-	10
		12	12	-	-	-	-	-	-	12
		12	12.7	12	12.7	12	12.9	22	22	12.7
		15	15.875	15	15.875	16	16.1	27	27.5	15.875
		16	16	-	-	-	-	-	-	16
		19	19.05	19	19.05	19	19.3	33	33	19.05
		20	20	-	-	-	-	-	-	20
		25	25	-	-	-	-	-	-	25
		25	25.4	25	25.4	25	25.8	44	44	25.4
		31	31.75	31	31.75	32	32.2	55	55	31.75



Symbol	Effective diameter (mm)
050	50
063	63
080	80
100	100
125	125
160	160
200	200
250	250
315	315
355	355
400	400

Symbol	Type
V	Vertical insert
Q	Quick change
E	Shank
T	Bore
S	Special
D	All PCD tipped
Q	All PCBN tipped

Symbol	Cutting edge angle
X	Others
Z	Others
V	Others
P	90° ~ 80°
E	80° ~ 70°
D	60° ~ 50°
A	50° ~ 40°

③ Relief angle

④ Cutting edge length

⑤ Effective cutter diameter

Example
Metric system

① T ② F ③ E ④ 12 ⑤ 063 ⑥ R

Example
Inch system

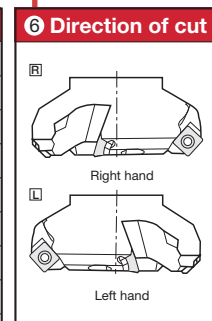
① T ⑧ M ③ D ⑨ 4 ⑩ 4 ⑪ 06 ⑥ R ⑦ I

⑧ Application, etc.	
M	For machining centers
F	For finishing
G	General purpose
S	For square shoulder milling
H	High rake geometry
P	Negative axial, positive radial rake geometry
R	Use round inserts
U	For difficult to cut materials
C	For chamfering
L	Long edge type
T	For threading

⑨ Size of applicable insert	
3	9.525
4	12.7
5	15.875
6	19.05
7	22.225
8	25.4
9	31.75

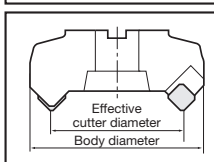
⑩ Angle	
0	90° ~ 80°
1	80° ~ 70°
2	70° ~ 60°
3	60° ~ 50°
4	50° ~ 40°
5	40° ~ 30°
6	30° ~ 20°
7	20° ~ 10°

⑪ Effective cutter diameter	
50	50
63	63
03	80
04	100
05	125
06	160
08	200
10	250
12	315
14	355
16	400



⑥ Direction of cut	
B	Close pitch
I	Irregular pitch
A(-A)	Modified type
S	For distinguishing shank size
L	Long shank

Note: For diameter of less than 80mm, nominal dimensions (mm) of effective diameter are shown



Note: The above nomenclature is not applicable for VSN6000I, MS cutter, TCB, PES1500 and TBN etc.

Designation system for Insert

Symbol	Hole	Shape of hole	Chipbreaker	Shape
N	Without	-	Without	
R			Single-sided	
F			Double-sided	
W	With	Partly cylindrical hole, single-side 40° ~ 60° Counter sink	Without	
T			Single-sided	
Q			Double-sided	
U		Partly cylindrical hole, double-side 40° ~ 60° Counter sink	Without	
B			Single-sided	
H			Double-sided	
C	Partly cylindrical hole, single-side 70° ~ 90° Counter sink	Without		
J		Double-sided		
X	-	-	-	

4 Groove and hole

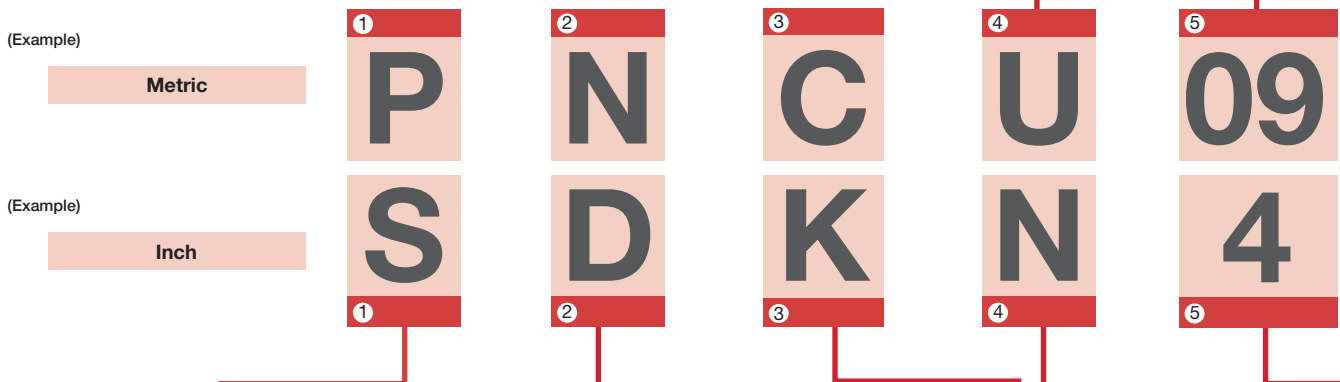
Shape	Cutting edge length (ℓ)
S	
T	
R	
H	
A	

5 Cutting edge length

Symbol	Thickness (mm)
02	2.38
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52



6 Thickness



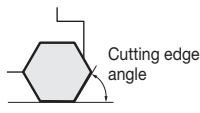
1 Shape			
Symbol	Shape	Nose angle (degree)	Figure
H	Hexagonal	120°	
S	Square	90°	
T	Triangular	60°	
C	Rhombic	80°	
E		75°	
G		70°	
L	Rectangular	90°	
A	Parallelogram	85°	
R	Round		
W	Wiper	80°	
W	Special	-	
O	Octagonal	135°	
P	Pentagonal	108°	
X	Special	Others	
Y	Special		
Z	Special		

2 Relief angle	
Symbol	Relief angle
C	7°
D	15°
E	20°
F	25°
G	30°
M	Others
N	0°
P	11°
Q	Other applications
O	Other applications
X	Other applications
S	Other applications
W	2-step relief

3 Accuracy (mm)			
Symbol (class)	Corner height (m)	Thickness (s)	I. C. dia. (ød)
A	± 0.005	± 0.025	± 0.025
C	± 0.013	± 0.025	± 0.025
E	± 0.025	± 0.025	± 0.025
G	± 0.025	± 0.13	± 0.025
H	± 0.013	± 0.025	± 0.013
K	± 0.013	± 0.025	± 0.05 ~ ± 0.13
M	± 0.08 ~ ± 0.18	± 0.13	± 0.05 ~ ± 0.13
N	± 0.08 ~ ± 0.18	± 0.025	± 0.05 ~ ± 0.13

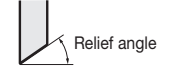
Standard I. C. dia.	I. C. dia. (ød) tolerance		Corner height (mm) tolerance	
	J, K, L, M, N	U	M, N	U
6.35	± 0.05	± 0.08	± 0.08	± 0.13
9.525				
12.7	± 0.08	± 0.13	± 0.13	± 0.2
15.875				
19.05				
25.4	± 0.13	± 0.25	± 0.18	± 0.38

Symbol	Cutting edge angle
A	45°
D	60°
E	75°
F	85°
G	70°
H	87°
P	90°
U	Special, small entering angle
Z	Special, universal



7 Cutting edge angle

Symbol	Relief angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z	Special



8 Wiper relief angle

Symbol	Cutting edge	Shape
F	Sharp	
E	Round	
T	Chamfer	
S	Combination	
P	Combination	

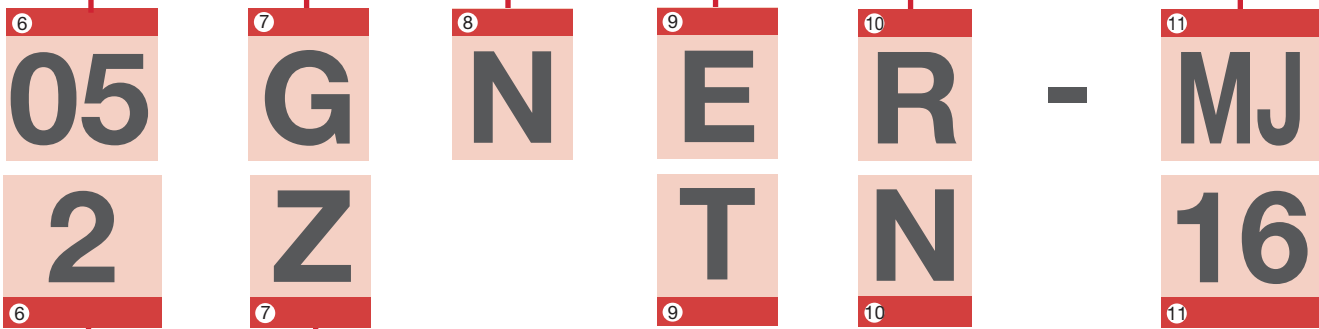
9 Major cutting edge

Symbol	Hand of insert
R	Right
L	Left
N	Without

10 Hand of insert

Symbol	Description
HM	General-purpose high feed milling chipbreaker
MM	General-purpose milling chipbreaker
MW	Milling insert with wiper edge
B	Milling insert for burr removal
D	Insert with diamond sintered body
W	Wiper insert (multiple corners)
WS	Wiper insert (single corner)
WD	Wiper insert (with diamond sintered body)
BD	Wiper for burr removal (diamond sintered body)
MJ	General-purpose milling chipbreaker
MH	Milling chipbreaker with reinforced cutting edge
ML	Milling chipbreaker for low cutting force
MS	Milling chipbreaker for stainless steel
HJ	High feed milling chipbreaker
AJ	Milling chipbreaker for non-ferrous metal
NMJ	General-purpose milling chipbreaker with serration
NAJ	Milling chipbreaker with serration for non-ferrous metal

11 Supplementary symbol



4 Groove and hole		
Symbol	Shape of hole	Hole
A	Without	With
F	Double side	Without
G	Double side	With
M	Single side	With
N	Without	With
U	Without	Without
W	Without	With

5 Inscribed circle (I. C.)		
Symbol	I. C. dia. (mm)	
Inch	3	9.525
	4	12.7
	5	15.875
	6	19.05

6 Thickness		
Symbol	Thickness (mm)	
Inch	2	3.18
	3	4.76
	4	6.35
	6	9.52

7 Corner radius	
Symbol	Corner radius (mm)
1	0.4 (0.397)
2	0.8 (0.794)
3	1.2 (1.191)
4	1.6 (1.588)
5	2.0 (1.984)
6	2.4 (2.381)

Symbol	Description
F	Special design (e.g. for MS cutter)
H	 Chamfer for corner angle 60°
S	 Chamfer for corner angle 15°
Z	 Flat chamfer

*For wiper inserts, the designation uses "W" as the shape symbol of inch items. For metric items, the shape symbol is the same as that of regular inserts, and a supplementary symbol, such as W, WS, and WD, is at the end of each designation.

Application Overview

Face milling, High feed milling H020 - H119 page

General face milling

DOT^{TRIPLE}MILL H060 page

DOOCTO H063 page

DOQ^{UAP}MILL H067 page

DOPENT H070 page



Aluminium machining

TUNGS^SMILL H078 page

TFE H082 page

TUNG-ALUMILL H174 page

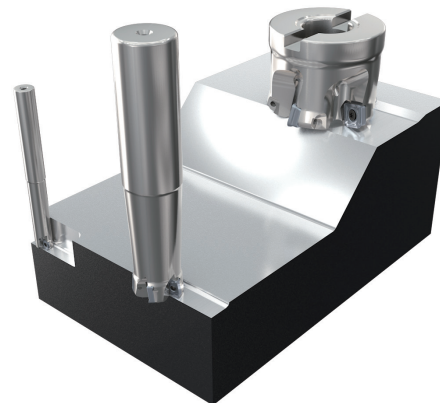


High feed milling

DOFEED H026 page

DOT^{WIST}BALL H036 page

MILLQ^{UAP}FEED H046 page



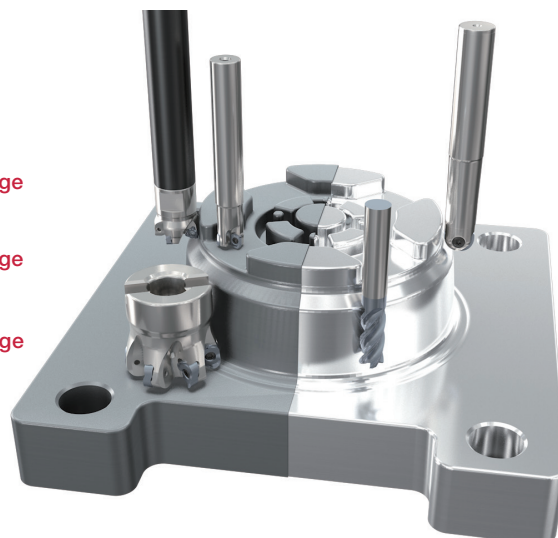
Profile milling H202 - H236 page

Roughing

TUNGF^{ORCE}FEED H022 page

DOFEED H026 page

DOT^{WIST}BALL H036 page



Semi-finishing

SOLIDMEISTER I006 page

Finishing

BALL^{FINISH}NOSE H206 page

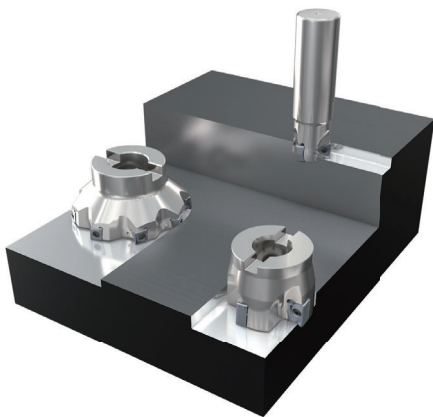
Shoulder milling H121 - H188 page

Shoulder milling (double side)

DOFTRI H122 page

DOREC H167 page

TECMILL H171 page

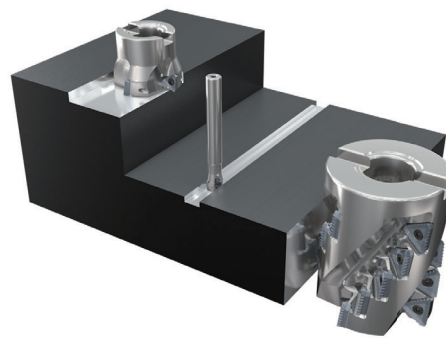


Shoulder milling (single side)

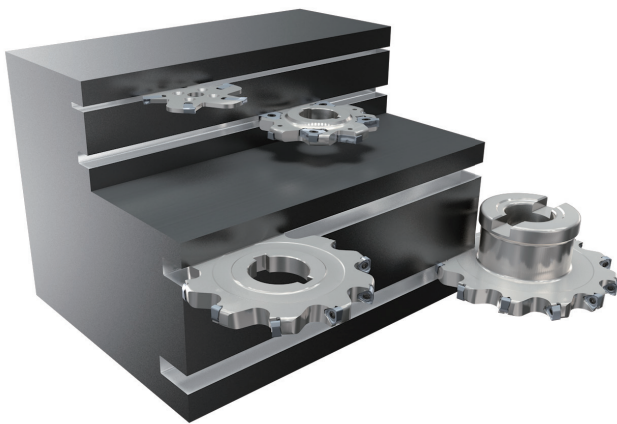
TUNG-TRI H125 page

TUNG TSHRED H135 page

TUNG FREC H138 page



Other applications H189 - H201 page



Thread milling

Thread milling cutter H122 page

THREADMILLING H102 page

TUNGMEISTER H060 page

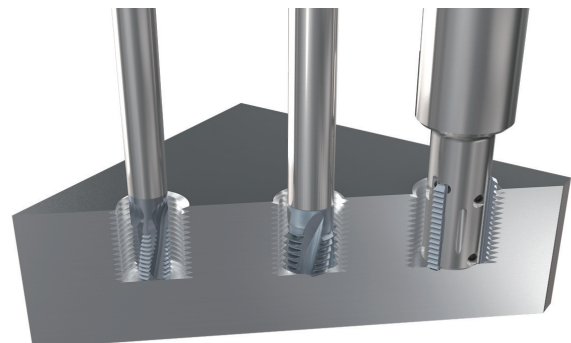
Slot milling

TUNGMSLIT H190 page

TUNG TSLIT H194 page

TUNG UNIVERSAL SLOT H196 page

TEC T SENSENTIAL SLOT H199 page





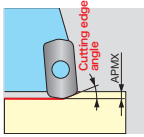









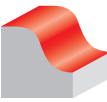






High Feed Milling

High-Feed Milling - Quick Guide

	TUNGF ^{FACE} FEED	DOFEED	DO T ^{WIST} BALL	DOFEEDQUAD	MILLQ ^{WAVE} FEED
Cutting edge angle	12°	15° / 17°	20° / 25°	13°	7° / 10° / 12° / 14°
Depth of cut (APMX)	0.5	1.0 / 1.5	1.3 / 2.0	2	1 / 1.5 / 2 / 2.5
Tool diameter	ø8 - ø16	ø16 - ø200	ø20 - ø63	ø50 - ø125	ø25 - ø160
Workpiece material	P M K S H	P M K S H	P M K S H	P M K S H	P M K S H
No. of corners (insert)	2	4	4	8	4
Reference pages	H022 - H025	H026 - H035	H036 - H042	H043 - H045	H046 - H050

★ : Most suitable
 ☆ : Suitable
 ☆ : Usable

Icon

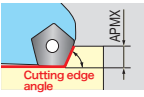
















	MILLFEED TXP				
					
Cutting edge angle	10° / 15° / 20°				
Depth of cut (APMX)	1.5 / 3				
Tool diameter	ø20 - ø160				
Workpiece material	P M K H				
No. of corners (insert)	3				
 Face milling	 ★  ☆  ☆  ★  ★				
 Shoulder milling	 ☆				
 Profile milling	 ☆  ☆  ☆				
 Slot milling	 ☆				
Other applications	 ☆				
Reference pages	H051 - H057				

★ : Most suitable
☆ : Suitable
★ : Usable

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Face Milling - Quick Guide

	DO TMILL	DOOCTO	DOPENT	DO QMILL	TUNGEMILL
					
Cutting edge angle	45°	44° / 45° / 15°	70°	88°	30°~45°
Depth of cut (APMX)	6 / 3.4	4.75 / 7.5 / 3.5 / 1.5	6.4	9.5	4 / 5 / 2
Tool diameter	ø50 - ø160	ø63 - ø315	ø32 - ø160	ø50 - ø100	ø25 - ø200
Workpiece material	P M K S H	P M K S H	P M K N S	P M K S H	P M K S N
No. of corners (insert)	8 / 16	8 / 16	10	8	4
Face milling					
Shoulder milling					
Profile milling					
Slot milling					
Other applications					
Reference pages	H060 - H062	H063 - H066	H070 - H072	H067 - H069	H073 - H077

★ : Most suitable
☆ : Suitable
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Icon

 Thin workpiece	 Ramping	 Long overhang	 Axial plunging	 Hole enlarging	 Slot milling	 Deep shoulder milling
 Face milling	 External threading	 Back facing	 Peck milling	 Hollow workpiece	 Chamfering	 Shoulder milling
 Internal threading	 Profiling	 Edging / Contouring	 Interrupted surface	 Cutting off		

	TFE	TUNGSMILL		DPD EDPD	NMS, EMS MS, SFP, EFP
					
Cutting edge angle	85°	90°	90°	90°	-
Depth of cut (APMX)	8 / 3.5 / 1.5	4.5	4 / 11	8	0.2
Tool diameter	ø63 - ø125	ø50 - ø160	ø25 - ø125	ø63 - ø160	ø80 - ø300
Workpiece material	P M K N	N	N	N	P M K S
No. of corners (insert)	4 / 1 / 2	1	1 / 2	1	4
 Face milling					
 Shoulder milling					
 Profile milling					
 Slot milling					
Other applications					
Reference pages	H082 - H085	H080 - H081	H078 - H079	H086 - H087	H114 - H119

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- High Feed Milling
- Face Milling
- Shoulder Milling
- Slot Milling
- Profile Milling




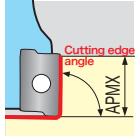








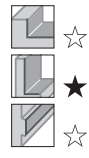












Shoulder milling - Quick Guide

	TUNGFRREC	TUNGREC		TUNG-TRI	
Cutting edge angle	90°	90°	90°	90°	90°
Depth of cut (APMX)	6	7 / 10.6 / 16.7	30.4 - 48.8	6 / 10 / 15	54 - 97 (-153)
Tool diameter	ø8 - ø40	ø12 - ø160	ø25 - ø50	ø12 - ø160	ø50 - ø100
Workpiece material	P M K N S H	P M K N S	P M K N S	P M K N S	P M K N S
No. of corners (insert)	2	2	2	3	3
Face milling	★ ☆ ★ ☆ ★	☆ ☆ ★ ★ ★	★ ★ ★ ★ ★	★ ☆ ★ ☆ ★	★ ★ ★ ☆ ★
Shoulder milling	★ ★ ★	★ ☆ ★	★ ☆ ★	★ ★ ☆	★ ★ ★
Profile milling	★ ☆ ☆	★ ☆ ★	★ ★ ★	★ ★ ☆	★ ★ ★
Slot milling	★	☆		★	
Other applications	★	★		★	
Reference pages	H138 - H142	H143 - H156		H125 - H134	

- ★ : Most suitable
- ☆ : Suitable
- ★ : Usable

Icon

Thin workpiece	Ramping	Long overhang	Axial plunging	Hole enlarging	Slot milling	Deep shoulder milling
Face milling	External threading	Back facing	Peck milling	Hollow workpiece	Chamfering	Shoulder milling
Internal threading	Profiling	Edging / Contouring	Interrupted surface	Cutting off		

	TUNG T ^S SHRED		TUNGQUAD		TUNG-ALUMILL
		Roughing		Roughing	
					
Cutting edge angle	90°	90°	90°	90°	90°
Depth of cut (APMX)	16	61 - 76	4	20.3 - 24.2	13 - 16
Tool diameter	ø50 - ø100	ø63 - ø80	ø12 - ø40	ø20 - ø25	ø25 - ø125
Workpiece material	P M K S	P M K S	P M K N S	P M K N S	N
No. of corners (insert)	3	3	4	4	2
 Face milling					
 Shoulder milling					
 Profile milling					
 Slot milling					
Other applications					
Reference pages	H135 - H137	H135	H157 - H161		H174 - H176

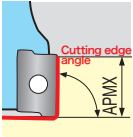
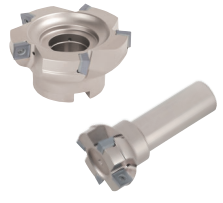






















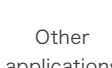




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- Profile Milling

Shoulder milling - Quick Guide

	TUNG MILL	DO FTR I	DO REC	TEC MILL	
					Roughing 
Cutting edge angle	90°	90°	90°	90°	90°
Depth of cut (APMX)	10	11	9.0 / 16	9.7 / 15.1	58.5 / 66.9
Tool diameter	ø32 - ø200	ø32 - ø125	ø25 - ø160	ø32 - ø125	ø50 - ø63
Workpiece material	P M K N S H	P M K S H	P M K S H	P M K S H	P M K S H
No. of corners (insert)	4	6	4	4	4
 Face milling					
 Shoulder milling					
 Profile milling					
 Slot milling					
 Other applications					
Reference pages	H162 - H166	H122 - H124	H167 - H170	H171 - H173	

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- ★ : Usable

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 Thin workpiece	 Ramping	 Long overhang	 Axial plunging	 Hole enlarging	 Slot milling	 Deep shoulder milling
 Face milling	 External threading	 Back facing	 Peck milling	 Hollow workpiece	 Chamfering	 Shoulder milling
 Internal threading	 Profiling	 Edging / Contouring	 Interrupted surface	 Cutting off		

Slot milling - Quick Guide

	TUNGMSLIT	TUNGTSLIT	TUNGUŚLÖT	TECTSLÖT	
Depth of cut (W)	1.6 - 4.1	4 - 8	10 - 16	16 - 25	
Tool diameter	ø63 - ø125	ø80 - ø200	ø80 - ø160	ø100 - ø250	
Workpiece material	PMK	PMKS	PMKS	PMKS	
No. of corners (insert)	1	6	6	4	
 Face milling					
 Shoulder milling					
 Profile milling					
 Slot milling					
Other applications					
Reference pages	H190 - H193	H194 - H195	H196 - H198	H199 - H201	

★ : Most suitable
☆ : Suitable
★ : Usable

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Profile milling - Quick Guide

	DO T^{WIST} BALL	ROUND SPLIT	BALL R^{NOSE}	BALL F^{NOSE}	DO M^{INI} MILL
Depth of cut (APMX)	4 / 5 / 6	6 / 8	11.8 / 13.6 / 17.7	4 - 16	1
Tool diameter	ø20 - ø63	ø32 - ø125	ø16 - ø25	ø8 - ø32	ø16 - ø25
Workpiece material	P M K S H	P M K N S	P M K S H	P M K N S H	P H
No. of corners (insert)	4	4 / 8	2	1	6
 Face milling					
 Shoulder milling					
 Profile milling					
 Slot milling					
 Other applications					
Reference pages	H036 - H042	H217 - H220	H204 - H205	H206 - H209	H211

★ : Most suitable
☆ : Suitable
★ : Usable




















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Thread milling - Quick Guide

	SOLIDTHREAD	TUNGMEISTER	THREADMILLING	
			ETTL, ETLN	Thread milling cutter
				
Pitch	0.25 - 3.5	0.5 - 4.5	1 - 3	1.5 - 6
Tool diameter	ø0.7 - ø20	ø10 - ø21.7	ø17 - ø30	ø23 - ø80
Workpiece material	P M K S	P M K S	P M K S	P M K
No. of corners (insert)	-	-	1 / 2	2
Thread milling	 ★  ★	 ★  ★	 ★  ★	 ★  ★
Reference pages	I102 - I121	I116 - I117	I122 - I125	I126 - I127

★ : Most suitable
☆ : Suitable
☆ : Usable

Icon

 Thin workpiece	 Ramping	 Long overhang	 Axial plunging	 Hole enlarging	 Slot milling	 Deep shoulder milling
 Face milling	 External threading	 Back facing	 Peck milling	 Hollow workpiece	 Chamfering	 Shoulder milling
 Internal threading	 Profiling	 Edging / Contouring	 Interrupted surface	 Cutting off		

