

Features of the Future Mill Button Tools

4-8 Edged Inserts For High Metal Removal

- Wide coverage for medium to roughing of general steels and high hardness tool steels
- Rotation prevention seat pocket system ensuring the maximum number of edges is used with each insert
- Uneven flute spacing prevents vibration at high speed applications
- Short to long length holders for deep pocket machining
- Smooth cutting action with low cutting load is achieved with the high rake angle insert
- MM chip breaker for general machining & MA chip breaker for high speed machining of aluminium, copper, plastic & brass



Machining Examples

Copying
Helical Cutting
Slotting & Side Cutting
Ramping

Chip Breakers

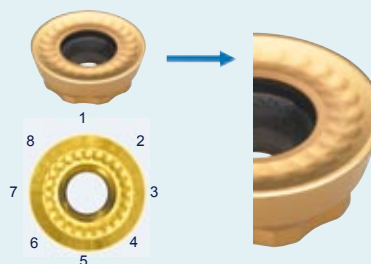
General Cutting	RDKT	Features
MM Chip Breaker		Suitable for machining steel, stainless, cast iron and tool steels. Strong cutting edge makes it the first choice for high metal removal milling
Aluminium	RDCT	Features
MA Chip Breaker		Highly polished high rake chip breaker to prevent built up edge. Ultra smooth chip control.

Clamping System

		Rotation prevention system in insert pocket
FMR 3000 Series, FMR 5000 Series, FMR 5000 Series, FMR 6000 Series,	RDCT10, RDCT12, RDKT10, RDKT12, RDKT16, RDKT20	



Uneven flute spacing prevents chatter & vibration in high speed operations.



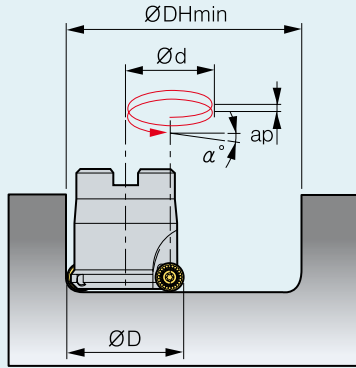
Special chip breaker for low cutting load.

Smooth cutting edge preparation. Inclined land angle for better surface finish.

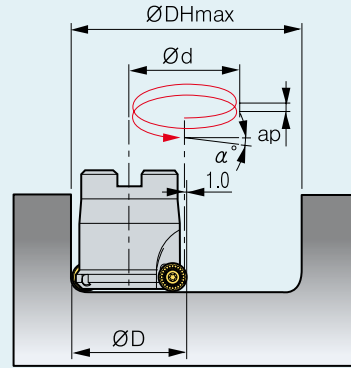
Stable and tight clamping.

4-8 Cutting edges per insert (depending on the size of insert)

Helical cutting technical data - DHmin



Helical cutting technical data - DHmax



Tool Series	Insert size	Tool Diameter	Ø DHmin	Ød	Ramping angle (α°)																
					ap=																
					1	2	2.5	3	3.5	4	5	6	8	10							
FMR 1000	5	8	11	3	6.11	12.35	15.57	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	10	15	5	3.65	7.34	7.34	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	12	19	7	2.61	5.23	5.23	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	15	25	10	1.83	3.65	3.65	-	-	-	-	-	-	-	-	-	-	-	-	-	
FMR 1500	6	10	14	4	4.57	9.2	9.2	13.95	-	-	-	-	-	-	-	-	-	-	-	-	
	6	12	18	6	3.04	6.11	6.11	9.2	-	-	-	-	-	-	-	-	-	-	-	-	
	6	16	26	10	1.83	3.65	3.65	5.49	-	-	-	-	-	-	-	-	-	-	-	-	
	6	20	34	14	1.3	2.61	2.61	3.92	-	-	-	-	-	-	-	-	-	-	-	-	
FMR 2000	7	15	23	8	2.28	4.57	4.57	6.88	8.04	-	-	-	-	-	-	-	-	-	-	-	
	7	20	33	13	1.4	2.81	2.81	4.22	4.92	-	-	-	-	-	-	-	-	-	-	-	
FMR 2500	8	16	24	8	2.28	4.57	4.57	6.88	8.04	9.2	-	-	-	-	-	-	-	-	-	-	
	8	20	32	12	1.52	3.04	3.04	4.57	5.34	6.11	-	-	-	-	-	-	-	-	-	-	
	8	25	42	17	1.07	2.15	2.15	3.22	3.76	4.3	-	-	-	-	-	-	-	-	-	-	
FMR 3000	10	25	40	15	1.22	2.43	2.43	3.65	4.27	4.88	6.11	-	-	-	-	-	-	-	-	-	
	10	32	54	22	0.83	1.66	1.66	2.49	2.91	3.32	4.15	-	-	-	-	-	-	-	-	-	
	10	40	70	30	0.61	1.22	1.22	1.83	2.13	2.43	3.04	-	-	-	-	-	-	-	-	-	
	10	50	90	40	0.46	0.91	0.91	1.37	1.6	1.83	2.28	-	-	-	-	-	-	-	-	-	
	10	63	116	53	0.34	0.69	0.69	1.03	1.21	1.38	1.72	-	-	-	-	-	-	-	-	-	
	10	80	150	70	0.26	0.52	0.52	0.78	0.91	1.04	1.3	-	-	-	-	-	-	-	-	-	
FMR 4000	12	32	52	20	0.91	1.83	1.83	2.74	3.2	3.65	4.57	5.49	-	-	-	-	-	-	-	-	
	12	40	68	28	0.65	1.3	1.3	1.96	2.28	2.61	3.26	3.92	-	-	-	-	-	-	-	-	
	12	50	88	38	0.48	0.96	0.96	1.44	1.68	1.92	2.4	2.88	-	-	-	-	-	-	-	-	
	12	63	114	51	0.36	0.72	0.72	1.07	1.25	1.43	1.79	2.15	-	-	-	-	-	-	-	-	
	12	80	148	68	0.27	0.54	0.54	0.81	0.94	1.07	1.34	1.61	-	-	-	-	-	-	-	-	
	12	100	188	88	0.21	0.41	0.41	0.62	0.73	0.83	1.04	1.24	-	-	-	-	-	-	-	-	
FMR 5000	16	40	64	24	0.76	1.52	1.52	2.28	2.66	3.04	3.81	4.57	6.11	-	-	-	-	-	-	-	
	16	50	84	34	0.54	1.07	1.07	1.61	1.88	2.15	2.69	3.22	4.3	-	-	-	-	-	-	-	
	16	63	110	47	0.39	0.78	0.78	1.16	1.36	1.55	1.94	2.33	3.11	-	-	-	-	-	-	-	
	16	80	144	64	0.29	0.57	0.57	0.86	1	1.14	1.43	1.71	2.28	-	-	-	-	-	-	-	
	16	100	184	84	0.22	0.43	0.43	0.65	0.76	0.87	1.09	1.3	1.74	-	-	-	-	-	-	-	
	16	125	234	109	0.17	0.33	0.33	0.5	0.59	0.67	0.84	1	1.34	-	-	-	-	-	-	-	-
FMR 6000	20	50	80	30	0.61	1.22	1.22	1.83	2.13	2.43	3.04	3.65	4.88	6.11	-	-	-	-	-	-	
	20	63	106	43	0.42	0.85	0.85	1.27	1.49	1.7	2.12	2.55	3.4	4.25	-	-	-	-	-	-	
	20	80	140	60	0.3	0.61	0.61	0.91	1.06	1.22	1.52	1.83	2.43	3.04	-	-	-	-	-	-	
	20	100	180	80	0.23	0.46	0.46	0.68	0.8	0.91	1.14	1.37	1.83	2.28	-	-	-	-	-	-	
	20	125	230	105	0.17	0.35	0.35	0.52	0.61	0.7	0.87	1.04	1.39	1.74	-	-	-	-	-	-	-
	20	160	300	140	0.13	0.26	0.26	0.39	0.46	0.52	0.65	0.78	1.04	1.30	-	-	-	-	-	-	-

Tool Series	Insert size	Tool Diameter	Ø DHmax	Ød	Ramping angle (α°)																
					ap=																
					1	2	2.5	3	3.5	4	5	6	8	10							
FMR 1000	5	8	14	6	3.04	6.11	7.65	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	10	18	8	2.28	4.57	5.72	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	12	22	10	1.83	3.65	4.57	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	15	28	13	1.4	2.81	3.51	-	-	-	-	-	-	-	-	-	-	-	-	-	
FMR 1500	6	10	18	8	2.28	4.57	5.72	6.88	-	-	-	-	-	-	-	-	-	-	-	-	
	6	12	22	10	1.83	3.65	4.57	5.49	-	-	-	-	-	-	-	-	-	-	-	-	
	6	16	30	14	1.3	2.61	3.26	3.92	-	-	-	-	-	-	-	-	-	-	-	-	
	6	20	38	18	1.01	2.03	2.54	3.04	-	-	-	-	-	-	-	-	-	-	-	-	
FMR 2000	7	15	28	13	1.4	2.81	3.51	4.22	4.92	-	-	-	-	-	-	-	-	-	-	-	
	7	20	38	18	1.01	2.03	2.54	3.04	3.55	-	-	-	-	-	-	-	-	-	-	-	
FMR 2500	8	16	30	14	1.3	2.61	3.26	3.92	4.57	5.23	-	-	-	-	-	-	-	-	-	-	
	8	20	38	18	1.01	2.03	2.54	3.04	3.55	4.06	-	-	-	-	-	-	-	-	-	-	
	8	25	48	23	0.79	1.59	1.98	2.38	2.78	3.18	-	-	-	-	-	-	-	-	-	-	
FMR 3000	10	25	48	23	0.79	1.59	1.98	2.38	2.78	3.18	3.97	-	-	-	-	-	-	-	-	-	
	10	32	62	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	-	-	-	-	-	-	-	-	-	
	10	40	78	38	0.48	0.96	1.2	1.44	1.68	1.92	2.4	-	-	-	-	-	-	-	-	-	
	10	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.9	-	-	-	-	-	-	-	-	-	
	10	63	124	61	0.3	0.6	0.75	0.9	1.05	1.2	1.5	-	-	-	-	-	-	-	-	-	
	10	80	158	78	0.23	0.47	0.58	0.7	0.82	0.94	1.17	-	-	-	-	-	-	-	-	-	-
FMR 4000	12	32	62	30	0.61	1.22	1.52	1.83	2.13	2.43	3.04	3.65	-	-	-	-	-	-	-	-	
	12	40	78	38	0.48	0.96	1.2	1.44	1.68	1.92	2.4	2.88	-	-	-	-	-	-	-	-	
	12	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.9	2.28	-	-	-	-	-	-	-	-	
	12	63	124	61	0.3	0.6	0.75	0.9	1.05	1.2	1.5	1.8	-	-	-	-	-	-	-	-	
	12	80	158	78	0.23	0.47	0.58	0.7	0.82	0.94	1.17	1.4	-	-	-	-	-	-	-	-	-
	12	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	-	-	-	-	-	-	-	-	-
FMR 5000	16	40	78	38	0.48	0.96	1.2	1.44	1.68	1.92	2.4	2.88	3.85	-	-	-	-	-	-	-	
	16	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.9	2.28	3.04	-	-	-	-	-	-	-	-
	16	63	124	61	0.3	0.6	0.75	0.9	1.05	1.2	1.5	1.8	2.39	-	-	-	-	-	-	-	-
	16	80	158	78	0.23	0.47	0.58	0.7	0.82	0.94	1.17	1.4	1.87	-	-	-	-	-	-	-	-
	16	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	-	-	-	-	-	-	-	-
	16	125	248	123	0.15	0.3	0.37	0.45	0.52	0.59	0.74	0.89	1.19	-	-	-	-	-	-	-	-
FMR 6000	20	50	98	48	0.38	0.76	0.95	1.14	1.33	1.52	1.9	2.28	3.04	3.81	-	-	-	-	-	-	-
	20	63	124	61	0.3	0.6	0.75	0.9	1.05	1.2	1.5	1.8	2.39	2.99	-	-	-	-	-	-	-
	20	80	158	78	0.23	0.47	0.58	0.7	0.82	0.94	1.17	1.4	1.87	2.34	-	-	-	-	-	-	-
	20	100	198	98	0.19	0.37	0.47	0.56	0.65	0.74	0.93	1.12	1.49	1.86	-	-	-	-	-	-	-
	20	125	248	123	0.15	0.3	0.37	0.45	0.52	0.59	0.74	0.89	1.19	1.48	-	-	-	-	-	-	-
	20	160	318	158	0.12	0.23	0.29	0.35	0.4	0.46	0.58	0.69	0.92	1.16	-	-	-	-	-	-	-

ØD = Tool diameter (mm), ØDHmin, max = Min, Max diameter (mm)
 Ød = Tool path, mm
 Ø DHmin (Max diameter = ØD * 2 - Insert size, Ø DHmax (Max diameter) = ØD * 2-2
 Ød (tool path) = ØDHmin, max - ØD

INDEXABLE MILLING

FUTURE MILL FAMILY

Recommended Machining Conditions

- Side Milling, Slotting, Ramping, Copying

ISO	WORKPIECE	HARDNESS	SURFACE SPEED (vc)	FMRS1000		FMRS1500		FMRS2000	
				ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
P	GENERAL STRUCTURAL STEEL	200HB<	100~250	≤1.0	≤0.4	≤1.2	≤0.4	≤1.5	≤0.4
	GENERAL CARBON STEEL	30HRC<	100~220	≤0.7	≤0.4	≤1.2	≤0.4	≤1.5	≤0.4
	HIGH CARBON STEEL, ALLOY STEEL	30~40HRC	100~200	≤0.7	≤0.2	≤0.9	≤0.2	≤1.2	≤0.2
	HIGH CARBON STEEL, ALLOY STEEL	40~50HRC	90~150	≤0.7	≤0.2	≤0.9	≤0.2	≤1.2	≤0.2
	ALLOY STEEL	50HRC>	90~150	≤0.7	≤0.2	≤0.9	≤0.2	≤1.2	≤0.2
M	STAINLESS STEEL	270HB<	50~200	≤0.7	≤0.2	≤0.9	≤0.2	≤1.2	≤0.2
K	CAST IRON		150~250	≤1.0	≤0.4	≤1.2	≤0.4	≤1.5	≤0.4

- Pocketing

ISO	WORKPIECE	HARDNESS	SURFACE SPEED (vc)	FMRS1000		FMRS1500		FMRS2000	
				ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
P	GENERAL STRUCTURAL STEEL	200HB<	100~250	≤1.0	≤0.3	≤1.2	≤0.3	≤1.5	≤0.3
	GENERAL CARBON STEEL	30HRC<	100~220	≤0.7	≤0.3	≤1.2	≤0.3	≤1.5	≤0.3
	HIGH CARBON STEEL, ALLOY STEEL	30~40HRC	100~200	≤0.7	≤0.1	≤0.9	≤0.1	≤1.2	≤0.1
	HIGH CARBON STEEL, ALLOY STEEL	40~50HRC	90~150	≤0.7	≤0.1	≤0.9	≤0.1	≤1.2	≤0.1
	ALLOY STEEL	50HRC>	90~150	≤0.7	≤0.1	≤0.9	≤0.1	≤1.2	≤0.1
M	STAINLESS STEEL	270HB<	50~200	≤0.7	≤0.1	≤0.9	≤0.1	≤1.2	≤0.1
K	CAST IRON		150~250	≤1.0	≤0.3	≤1.2	≤0.3	≤1.5	≤0.3

- Plunging

ISO	WORKPIECE	HARDNESS	SURFACE SPEED (vc)	FMRS1000		FMRS1500		FMRS2000	
				ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
P	GENERAL STRUCTURAL STEEL	200HB<	100~250	≤2.5	≤0.2	≤3.0	≤0.2	≤3.5	≤0.2
	GENERAL CARBON STEEL	30HRC<	100~220	≤2.5	≤0.2	≤3.0	≤0.2	≤3.5	≤0.2
	HIGH CARBON STEEL, ALLOY STEEL	30~40HRC	100~200	≤2.5	≤0.1	≤3.0	≤0.1	≤3.5	≤0.1
	HIGH CARBON STEEL, ALLOY STEEL	40~50HRC	90~150	≤2.5	≤0.1	≤3.0	≤0.1	≤3.5	≤0.1
	ALLOY STEEL	50HRC>	90~150	≤2.5	≤0.1	≤3.0	≤0.1	≤3.5	≤0.1
M	STAINLESS STEEL	270HB<	50~200	≤2.5	≤0.1	≤3.0	≤0.1	≤3.5	≤0.1
K	CAST IRON		150~250	≤2.5	≤0.2	≤3.0	≤0.2	≤3.5	≤0.2

- Helical Cutting

ISO	WORKPIECE	HARDNESS	SURFACE SPEED (vc)	FMRS1000		FMRS1500		FMRS2000	
				ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
P	GENERAL STRUCTURAL STEEL	200HB<	100~250	≤1.0	≤0.2	≤1.0	≤0.2	≤1.0	≤0.2
	GENERAL CARBON STEEL	30HRC<	100~220	≤0.7	≤0.2	≤0.7	≤0.2	≤0.7	≤0.2
	HIGH CARBON STEEL, ALLOY STEEL	30~40HRC	100~200	≤0.7	≤0.1	≤0.7	≤0.1	≤0.7	≤0.1
	HIGH CARBON STEEL, ALLOY STEEL	40~50HRC	90~150	≤0.7	≤0.1	≤0.7	≤0.1	≤0.7	≤0.1
	ALLOY STEEL	50HRC>	90~150	≤0.7	≤0.1	≤0.7	≤0.1	≤0.7	≤0.1
M	STAINLESS STEEL	270HB<	50~200	≤0.7	≤0.1	≤0.7	≤0.1	≤0.7	≤0.1
K	CAST IRON		150~250	≤1.0	≤0.2	≤1.0	≤0.2	≤1.0	≤0.2

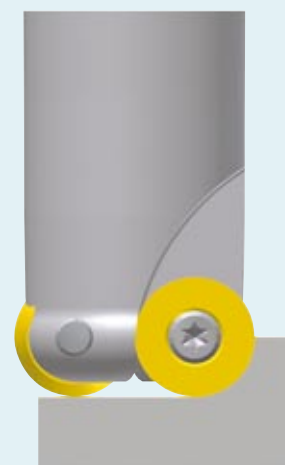
FMRS2500		FMRS3000		FMRS4000		FMRS5000		FMRS6000	
ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
≤1.7	≤0.4	≤2.0	≤0.5	≤2.4	≤0.6	≤3.0	≤0.7	≤4.0	≤0.8
≤1.7	≤0.4	≤2.0	≤0.5	≤2.4	≤0.6	≤3.0	≤0.7	≤4.0	≤0.8
≤1.5	≤0.2	≤1.7	≤0.3	≤2.0	≤0.4	≤2.7	≤0.5	≤3.7	≤0.6
≤1.5	≤0.2	≤1.7	≤0.3	≤2.0	≤0.4	≤2.7	≤0.5	≤3.7	≤0.6
≤1.5	≤0.2	≤1.7	≤0.3	≤2.0	≤0.4	≤2.7	≤0.5	≤3.7	≤0.6
≤1.5	≤0.2	≤1.7	≤0.3	≤2.0	≤0.4	≤2.7	≤0.5	≤3.7	≤0.6
≤1.7	≤0.4	≤2.0	≤0.5	≤2.4	≤0.6	≤3.0	≤0.7	≤4.0	≤0.8

FMRS2500		FMRS3000		FMRS4000		FMRS5000		FMRS6000	
ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
≤1.7	≤0.3	≤2.0	≤0.4	≤2.4	≤0.5	≤3.0	≤0.6	≤4.0	≤0.7
≤1.7	≤0.3	≤2.0	≤0.4	≤2.4	≤0.5	≤3.0	≤0.6	≤4.0	≤0.7
≤1.5	≤0.1	≤1.7	≤0.2	≤2.0	≤0.3	≤2.7	≤0.4	≤3.7	≤0.5
≤1.5	≤0.1	≤1.7	≤0.2	≤2.0	≤0.3	≤2.7	≤0.4	≤3.7	≤0.5
≤1.5	≤0.1	≤1.7	≤0.2	≤2.0	≤0.3	≤2.7	≤0.4	≤3.7	≤0.5
≤1.5	≤0.1	≤1.7	≤0.2	≤2.0	≤0.3	≤2.7	≤0.4	≤3.7	≤0.5
≤1.5	≤0.1	≤1.7	≤0.2	≤2.0	≤0.3	≤2.7	≤0.4	≤3.7	≤0.5
≤1.7	≤0.3	≤2.0	≤0.4	≤2.4	≤0.5	≤3.0	≤0.6	≤4.0	≤0.7

FMRS2500		FMRS3000		FMRS4000		FMRS5000		FMRS6000	
ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
≤4.0	≤0.2	≤5.0	≤0.3	≤6.0	≤0.4	≤8.0	≤0.5	≤10.0	≤0.6
≤4.0	≤0.2	≤5.0	≤0.3	≤6.0	≤0.4	≤8.0	≤0.5	≤10.0	≤0.6
≤4.0	≤0.1	≤5.0	≤0.2	≤6.0	≤0.3	≤8.0	≤0.4	≤10.0	≤0.5
≤4.0	≤0.1	≤5.0	≤0.2	≤6.0	≤0.3	≤8.0	≤0.4	≤10.0	≤0.5
≤4.0	≤0.1	≤5.0	≤0.2	≤6.0	≤0.3	≤8.0	≤0.4	≤10.0	≤0.5
≤4.0	≤0.1	≤5.0	≤0.2	≤6.0	≤0.3	≤8.0	≤0.4	≤10.0	≤0.5
≤4.0	≤0.1	≤5.0	≤0.2	≤6.0	≤0.3	≤8.0	≤0.4	≤10.0	≤0.5
≤4.0	≤0.2	≤5.0	≤0.3	≤6.0	≤0.4	≤8.0	≤0.5	≤10.0	≤0.6

FMRS2500		FMRS3000		FMRS4000		FMRS5000		FMRS6000	
ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)	ae (mm)	fz (mm/t)
≤1.0	≤0.2	≤2.0	≤0.3	≤2.0	≤0.4	≤4.0	≤0.5	≤4.0	≤0.6
≤0.7	≤0.2	≤2.0	≤0.3	≤2.0	≤0.4	≤4.0	≤0.5	≤4.0	≤0.6
≤0.7	≤0.1	≤1.7	≤0.2	≤1.7	≤0.3	≤3.7	≤0.4	≤3.7	≤0.5
≤0.7	≤0.1	≤1.7	≤0.2	≤1.7	≤0.3	≤3.7	≤0.4	≤3.7	≤0.5
≤0.7	≤0.1	≤1.7	≤0.2	≤1.7	≤0.3	≤3.7	≤0.4	≤3.7	≤0.5
≤0.7	≤0.1	≤1.7	≤0.2	≤1.7	≤0.3	≤3.7	≤0.4	≤3.7	≤0.5
≤0.7	≤0.1	≤1.7	≤0.2	≤1.7	≤0.3	≤3.7	≤0.4	≤3.7	≤0.5
≤1.0	≤0.2	≤2.0	≤0.3	≤2.0	≤0.4	≤4.0	≤0.5	≤4.0	≤0.6

Symbol	Key
vc	Surface speed (m/min)
n	Revolutions per minute
ae	Width of cut
ap	Depth of cut
fz	Feed per tooth (mm/t)
D	Cutting diameter
Z	Number of teeth



Machining Formulae	
RPM	$n = \frac{vc \times 1000}{\pi \times D}$
Feed (per min)	$V_f = fz \times n \times z$ (mm/min)

Feed rate as per depth of cut

Insert	Depth of cut (mm)								
	0.2~0.5	0.5~1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
RDHW0501M0	0.25	0.15	-	-	-	-	-	-	-
RDHW06T1M0	0.3	0.2	0.1	-	-	-	-	-	-
RDHW0702M0	0.35	0.25	0.1	0.07	-	-	-	-	-
RDHW0803M0	0.4	0.3	0.15	0.01	-	-	-	-	-
RDKT10T3M0	-	0.4	0.35	0.3	0.2	-	-	-	-
RDKT1204M0	-	0.5	0.45	0.3	0.25	0.22	-	-	-
RDHW1605M0	-	0.6	0.5	0.45	0.35	0.3	0.2	0.1	-
RDHW2006M0	-	-	0.6	0.5	0.4	0.3	0.25	0.15	0.1
RDKT1605M0	-	0.6	0.5	0.45	0.35	0.3	0.2	0.1	-
RDKT2006M0	-	-	0.6	0.5	0.4	0.3	0.25	0.15	0.1

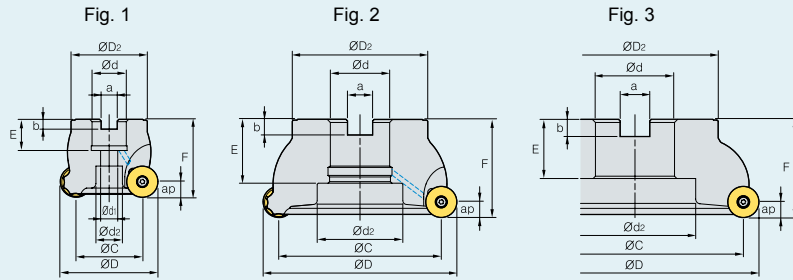
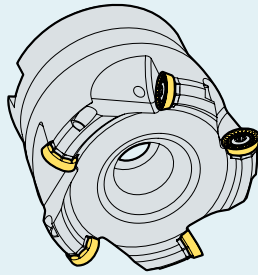
Ramping technical data

Tool Series	Tool Diameter	Ramping angle α°(Max)	Cutting length by ramping angle L(mm)									
			ap=1mm	ap=2mm	ap=2.5mm	ap=3mm	ap=3.5mm	ap=4mm	ap=5mm	ap=6mm	ap=8mm	ap=10mm
FMR1000	8	18.14	3	6.0	8.0	-	-	-	-	-	-	-
	10	11.7	5	10	12	-	-	-	-	-	-	-
	12	8.43	7	13	17	-	-	-	-	-	-	-
	15	5.93	10	19	24	-	-	-	-	-	-	-
FMR1500	10	20.67	21	5	7	8	-	-	-	-	-	-
	12	10.05	10	11	14	17	-	-	-	-	-	-
	16	6.12	6	19	23	28	-	-	-	-	-	-
	20	4.36	4	26	33	39	-	-	-	-	-	-
FMR2000	15	9.42	6	12	15	18	21	-	-	-	-	-
	20	5.85	10	20	24	29	34	-	-	-	-	-
FMR2500	16	13.7	4	8	10	12	14	16	-	-	-	-
	20	9.29	6	12	15	18	21	24	-	-	-	-
FMR3000	25	6.56	9	17	22	26	30	35	-	-	-	-
	25	21.8	3	5	6	8	9	10	13	-	-	-
	32	13.24	4	9	11	13	15	17	21	-	-	-
	40	9.09	6	13	16	19	22	25	31	-	-	-
	50	6.52	9	17	22	26	31	35	44	-	-	-
	63	4.76	12	24	30	36	42	48	60	-	-	-
	80	3.52	16	33	41	49	57	65	81	-	-	-
FMR4000	100	2.69	21	43	53	64	74	85	106	-	-	-
	32	15.95	3	7	9	10	12	14	17	21	-	-
	40	10.3	6	11	14	17	19	22	28	33	-	-
	50	7.13	8	16	20	24	28	32	40	48	-	-
	63	5.08	11	22	28	34	39	45	56	67	-	-
	80	3.69	16	31	39	47	54	62	78	93	-	-
	100	2.79	21	41	51	62	72	82	103	123	-	-
FMR5000	125	2.14	27	54	67	80	94	107	134	161	-	-
	40	7.4	8	15	19	23	27	31	38	46	62	-
	50	5.22	11	22	27	33	38	44	55	66	88	-
	63	3.79	15	30	38	45	53	60	75	91	121	-
	80	2.97	19	39	48	58	67	77	96	116	154	-
FMR6000	100	2.09	27	55	69	82	96	110	137	164	219	-
	40	7.44	8	15	19	23	27	31	38	46	61	77
	50	4.97	11	23	29	34	40	46	57	69	92	46
	63	3.69	16	31	39	47	54	62	78	93	124	62
	80	2.72	21	42	53	63	74	84	105	126	168	84
FMR6000	100	2.12	27	54	68	81	95	108	135	162	216	108
	125	1.57	36	73	91	109	128	146	182	219	292	146

Lmin : Min. inclination cutting length
 a° : Max. ramping angle
 ap : Depth of cut

$$L_{min} = \frac{ap}{\tan a^\circ} \text{ (mm)}$$

Future Mill Button Tools FMRCM 3000/4000/5000/6000 SERIES



DESIGNATION	£	STOCK STATUS	ØD		ØC	ØD2	Ød	a	b	E	F	Ød1	Ød2	ap	kg	
FMRCM 3000 SERIES	3040HRD	£92.00	●	40	3	30	36	16	8.4	5	20	40	9	14	5	0.2
	3040HRD-H	£99.00	□	40	4	30	36	16	8.4	5	20	40	9	14	5	0.2
	3050HRD	£100.00	●	50	4	40	42	22	10.4	6.3	20	40	11	16.5	5	0.3
	3050HRD-H	£110.00	□	50	5	40	42	22	10.4	6.3	20	40	11	16.5	5	0.3
	3063HRD	£111.00	●	63	5	53	49	22	10.4	6.3	20	40	11	16.5	5	0.64
	3063HRD-H	£128.00	□	63	6	53	49	22	10.4	6.3	20	40	11	16.5	5	0.64
	3080HRD	£129.00	●	80	6	70	57	27	12.4	7	22	50	14	19	5	1.1
	3080HRD-H	£146.00	□	80	7	70	57	27	12.4	7	22	50	14	19	5	1.1
	3100HRD	£147.00	●	100	7	90	67	32	14.4	8	28	63	18	26	5	2.1
FMRCM 4000 SERIES	4050HRD	£113.00	●	50	4	38	42	22	10.4	6.3	20	50	11	18	6	0.4
	4063HRD	£140.00	●	63	4	51	49	22	10.4	6.3	20	50	11	18	6	0.6
	4063HRD-M	£139.00	□	63	5	51	49	22	10.4	6.3	20	50	11	18	6	0.6
	4080HRD	£147.00	●	80	5	68	57	27	12.4	7	23	50	14	20	6	1
	4080HRD-M	£171.00	□	80	6	68	57	27	12.4	7	23	50	14	20	6	1
	4100HRD	£166.00	●	100	6	88	67	32	14.4	8	25	50	18	26	6	1.5
	4100HRD-M	£201.00	□	100	7	88	67	32	14.4	8	25	50	18	26	6	1.5
	4125HRD	£184.00	●	125	7	113	87	40	16.4	9	29	63	22	32	6	3
FMRCM 5000 SERIES	5080HRD	£174.00	●	80	5	64	57	27	12.4	7	23	50	14	20	8	0.9
	5100HRD	£218.00	●	100	6	84	67	32	14.4	8	25	50	18	26	8	1.4
	5125HRD	£292.00	●	125	7	109	87	40	16.4	9	29	63	22	32	8	3
FMRCM 6000 SERIES	6080HRD	£156.00	●	80	4	60	57	27	12.4	7	22	50	14	20	10	0.8
	6100HRD	£200.00	●	100	5	80	67	32	14.4	8	28	63	18	26	10	1.6
	6125HRD	£275.00	□	125	6	105	87	40	16.4	9	29	63	22	32	10	2.9
6160RD	£374.00	□	160	7	140	107	40	16.4	9	35	63	-	78	10	4.4	

Stock Status ● Stock item (next day delivery) □ Non-stock item (7-10 days)

Spares & Accessories

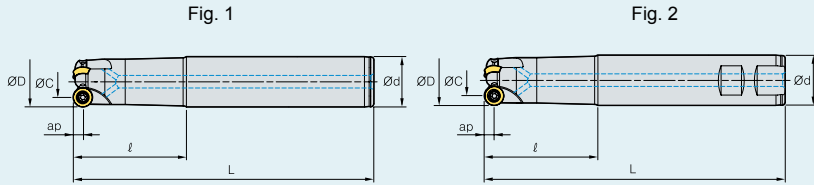
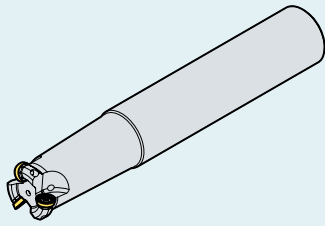
HOLDER SERIES	INSERT DESIGNATION	INSERT DIAMETER	No EDGES	INSERT PAGE	SCREW	WRENCH	ARBORS
FMRCM3000	RDKT10 MM RDCT10 MA	10	8	B9	FTGA03508	TW15S	
FMRCM4000	RDKT12 MM RDCT12 MA	12	8	B9	FTGA04510	TW15S	
FMRCM5000	RDKT16 MM	16	8	B9	FTGA0513-P	TW20S	 Section G
FMRCM6000	RDKT20 MM	20	8	B9	FTGA0515-P	TW20S	



INDEXABLE MILLING

FUTURE MILL FAMILY

Future Mill Button Tools FMRS 1000/1500/2000/2500 SERIES



DESIGNATION	£	STOCK STATUS	ØD		ØC	L	Ød	ℓ	ap	kg.	Fig.	
FMRS 1000 SERIES	1012HRD-M	£73.00	•	12	2	7	100	12	44	2.5	0.3	1
	1012HRD-L	£73.00	•	12	2	7	160	16	80	2.5	0.3	1
FMRS 1500 SERIES	1512HRD-M	£73.00	•	12	2	6	110	12	54	3	0.3	1
	1512HRD-L	£73.00	•	12	2	6	160	16	80	3	0.3	1
FMRS 2000 SERIES	2015HRD-M	£73.00	•	15	2	8	150	20	80	3.5	0.4	2
	2015HRD-L	£73.00	•	15	2	8	200	20	90	3.5	0.5	2
FMRS 2500 SERIES	2516HRD-M	£73.00	•	16	2	8	150	16	80	4	0.4	2
	2516HRD-L	£73.00	•	16	2	8	200	20	90	4	0.5	2

Stock Status • Stock item (next day delivery) □ Non-stock item (7-10 days)

Spares & Accessories

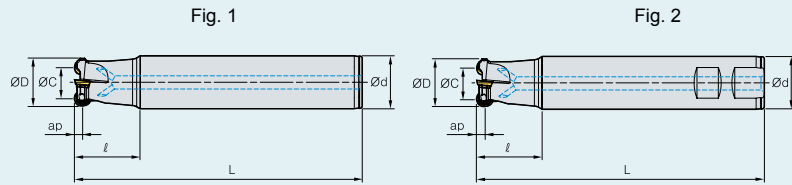
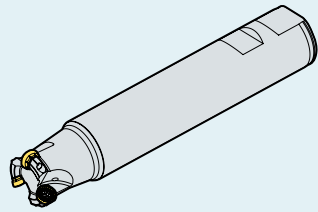
HOLDER SERIES	INSERT DESIGNATION	INSERT DIAMETER	No EDGES	INSERT PAGE	SCREW	WRENCH	END MILL HOLDERS
FMRS 1000	RDHW05 RDKW05	5	4	B9	FTNA0203	TW06P	 Section G
FMRS 1500	RDHW06 RDKW06	6	4	B9	FTNA02205	TW06P	
FMRS 2000	RDHW07 RDKW07	7	4	B9	FTKA02555	TW07S	
FMRS 2500	RDHW08 RDKW08	8	4	B9	FTNA0305	TW09S	

Available inserts

RDHW	RDKW
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Future Mill Button Tools FMRS 3000/4000 SERIES





DESIGNATION	£	STOCK STATUS	ØD		ØC	L	Ød	ℓ	ap	kg.	Fig.	
FMRS 3000 SERIES	3021HRD-M	£44.00	•	21	1	11	150	20	40	5	0.4	1
	3021HRD-M2	£50.00	•	21	2	11	150	20	40	5	0.4	1
	3021HRD-L	£52.00	•	21	1	11	200	20	50	5	0.6	1
	3021HRD-L2	£59.00	•	21	2	11	200	20	50	5	0.6	1
	3025HRD-S	£81.00	•	25	2	15	115	25	35	5	0.5	2
	3025HRD-M	£91.00	•	25	2	15	200	25	70	5	0.7	1
	3025HRD-L	£101.00	•	25	2	15	250	25	100	5	1	1
	3026HRD-M	£91.00	•	26	2	16	200	25	70	5	0.65	1
	3026HRD-L	£101.00	•	26	2	16	250	25	100	5	0.7	1
	3032HRD-S	£104.00	•	32	3	22	125	32	40	5	1	2
	3032HRD-M	£111.00	•	32	3	22	200	32	70	5	1.3	1
	3032HRD-L	£121.00	•	32	3	22	300	32	150	5	1.6	1
	3040HRD-S	£121.00	□	40	4	30	125	32	40	5	1.3	2
	3040HRD-M	£141.00	□	40	4	30	200	32	70	5	1.5	1
3040HRD-L	£157.00	□	40	4	30	300	32	150	5	1.8	1	
FMRS 4000 SERIES	4032HRD-S	£90.00	•	32	2	20	125	32	40	6	0.8	2
	4032HRD-M	£91.00	•	32	2	20	200	32	70	6	1.1	1
	4032HRD-L	£101.00	•	32	2	20	300	32	150	6	1.6	1
	4033HRD-S	£89.00	□	33	2	21	125	32	40	6	0.9	2
	4033HRD-M	£91.00	□	33	2	21	200	32	70	6	1.1	1
	4033HRD-L	£101.00	□	33	2	21	300	32	150	6	1.7	1
	4040HRD-S	£103.00	□	40	3	28	125	32	40	6	1	2
	4040HRD-M	£113.00	□	40	3	28	200	32	70	6	1.6	1
4040HRD-L	£121.00	□	40	3	28	300	32	150	6	1.8	1	

Stock Status • Stock item (next day delivery) □ Non-stock item (7-10 days)

Spares & Accessories

HOLDER SERIES	INSERT DESIGNATION	INSERT DIAMETER	No EDGES	INSERT PAGE	SCREW	WRENCH	END MILL HOLDERS
FMRCM3000	RDKT10 MM RDCT10 MA	10	8	B9	FTGA03508	TW15S	 Section G
FMRCM4000	RDKT12 MM RDCT12 MA	12	8	B9	FTGA04510	TW15S	

General Cutting	RDKT	Features
MM Chip Breaker		Suitable for machining steel, stainless, cast iron and tool steels. Strong cutting edge makes it the first choice for high metal removal milling.
Aluminium	RDCT	Features
MA Chip Breaker		Highly polished high rake chip breaker to prevent built up edge. Ultra smooth chip control.

INDEXABLE MILLING

FUTURE MILL FAMILY