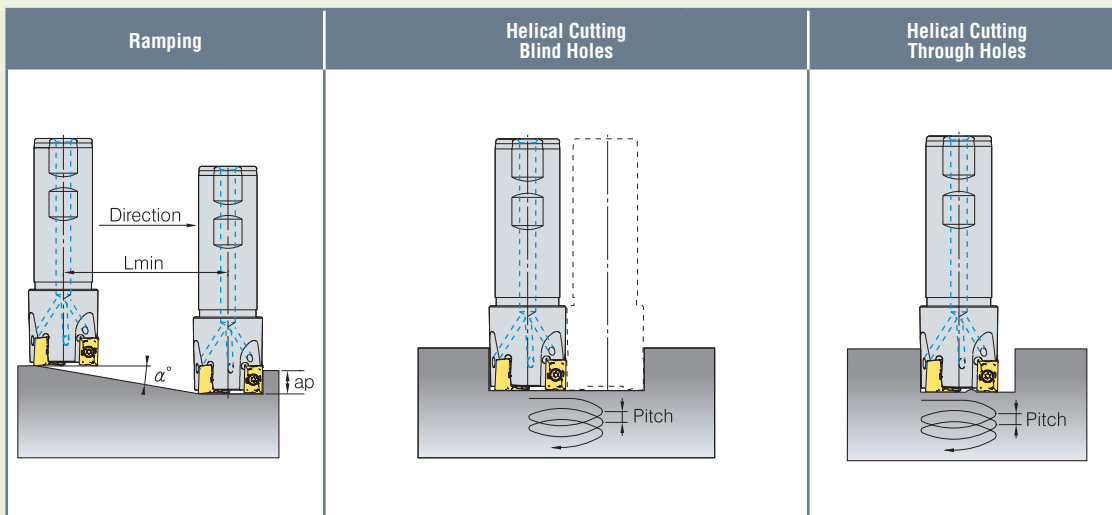


**RICH MILL RM4**

**RAMPING • HELICAL CUTTING BLIND HOLES • HELICAL CUTTING THROUGH HOLES**

**CUTTING DATA**



The Lmin is when depth of cut is 10mm  
( $L_{min} = 10/\tan \alpha$ )

ORDER CODE	D	Maximum angle $\alpha^\circ$	Lmin	Maximum Hole Diameter	Maximum Pitch	Minimum Hole Diameter	Minimum Pitch	Minimum Hole Diameter	Minimum Pitch
<b>RM4PS END MILL</b>									
RM4PS3014HR	14	5	114	27	3	25	2.5	19	1
RM4PS3016HR	16	4	143	31	3	29	2	23	1
RM4PS3018HR	18	4	143	35	3	33	3	27	2
RM4PS3020HR	20	4	143	39	4	37	3	31	2
RM4PS3025HR	25	3.5	163	49	4	47	4	41	3
RM4PS3032HR	32	3	191	63	4.5	61	4	55	3.5
RM4PS3040HR	40	2	286	79	4	77	3.5	71	3
RM4PS3050HR	50	1.5	382	99	3.5	97	3.5	91	3
RM4PS4032HR	32	2.5	229	62	4	59.5	3	49	2
RM4PS4040HR	40	2	286	78	4	75.5	3	65	2
RM4PS4050HR	50	2	286	98	5	95.5	4	85	3.5
RM4PS4063HR	63	2	286	124	5	121.5	5	111	5
<b>RM4PC FACE MILL</b>									
RM4PCM3040HR	40	2	286	79	4	77	4	71	3
RM4PCM3050HR	50	1.5	382	99	3.5	97	3.5	91	3
RM4PCM3063HR	63	1	573	125	3	123	3	117	2.5
RM4PCM3080HR	80	1	573	159	4	157	4	151	3.5
RM4PCM3100HR	100	0.5	1146	199	2	197	2	191	2
RM4PCM4050HR	50	2	286	98	5	95.5	4	85	3.5
RM4PCM4063HR	63	2	286	124	5	121.5	5	111	5
RM4PCM4080HR	80	1.5	382	158	5	155.5	5	145	5
RM4PCM4100HR	100	1	573	198	5	195.5	4.5	185	4
RM4PCM4125HR	125	1	573	248	5	245.5	5	235	5
RM4PCM4160R	160	0.5	1146	318	4	315.5	3.5	305	3.5

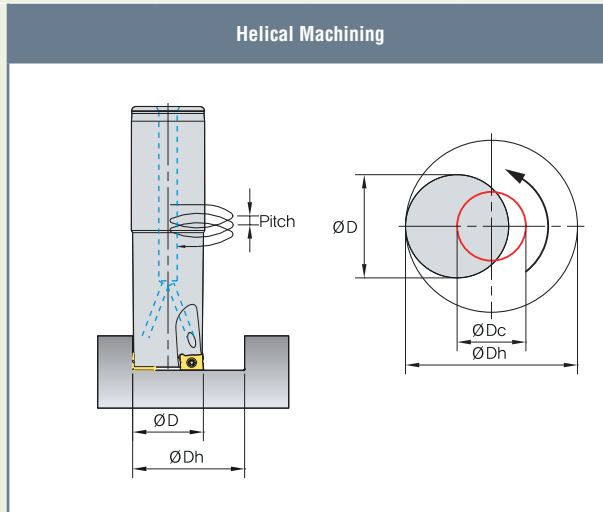
**RECOMMENDED CUTTING CONDITIONS**

ISO	Grade	LNM(E)X100605PNR-MF		LNM(E)X100605PNR-MM		LNEX100605PNR-MA		Max. ap	LNM(E)X151008PNR-MF		LNM(E)X151008PNR-MM		LNEX151008PNR-MA		Max. ap
		vc(m/min)	fz(mm/t)	vc(m/min)	fz(mm/t)	vc(m/min)	fz(mm/t)		vc(m/min)	fz(mm/t)	vc(m/min)	fz(mm/t)	vc(m/min)	fz(mm/t)	
P	PC3500	150-300	0.05-0.25	120-300	0.05-0.30	-	-	9	150-300	0.05-0.30	120-300	0.05-0.35	-	-	14
	PC5300	100-250	0.05-0.25	100-200	0.05-0.30	-	-		100-250	0.05-0.30	100-200	0.05-0.30	-	-	
M	PC5300	150-300	0.08-0.30	120-300	0.08-0.35	-	-		150-300	0.08-0.35	120-300	0.08-0.35	-	-	
	PC5400	150-300	0.08-0.30	120-300	0.08-0.35	-	-		150-300	0.08-0.35	120-300	0.08-0.35	-	-	
K	PC6510	120-180	0.05-0.25	100-180	0.05-0.30	-	-		120-180	0.05-0.30	100-180	0.05-0.3	-	-	
N	H01	-	-	-	-	300-750	0.1-0.4		-	-	-	-	300-750	0.1-0.4	

\*Please adjust vc and fz to suit material type

RICH MILL RM4Z PLUNGE MILL  
HELICAL MACHINING

CUTTING DATA

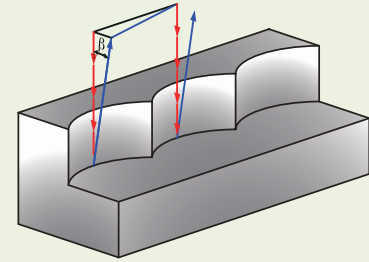


$\text{ØDc} = \text{ØDh} - \text{ØD}$

ØDc = Tool centre path  
ØDh = Desired hole diameter  
ØD = Tool diameter

ORDER CODE	D	Maximum Hole Diameter	Maximum Pitch	Minimum Hole Diameter	Minimum Pitch
<b>RM4ZS END MILL</b>					
RM4ZS3025HR-L25	25	48	1	30	0.4
RM4ZS3032HR-L32	32	62	0	43	0.3
RM4ZS3040HR-L32	40	78	0	59	0.3
<b>RM4ZM SCREW SHANK END MILL</b>					
RM4ZM3025HR-M12	25	48	1	30	0.4
RM4ZM3032HR-M16	32	62	0	43	0.3
RM4ZM3040HR-M16	40	78	0	59	0.3
<b>RM4ZC FACE MILL</b>					
RM4ZCM3040HR	40	78	0	59	0.3
RM4ZCM3050HR	50	98	0	79	0.3
RM4ZCM3052HR	52	102	0	83	0.3
RM4ZCM4063HR	63	124	1	95	0.5
RM4ZCM4066HR	66	130	1	101	0.5
RM4ZCM4080HR	80	158	0	129	0.5
RM4ZCM4100HR	100	198	0	169	0.3

PROGRAMMING TIP

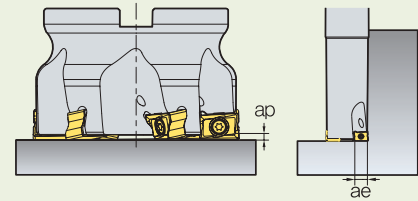


- Plunging feed direction
- Tool escape
- $\beta$  Escape angle ( $\beta \geq 1^\circ$ )

When retracting your tool please ensure escape angle is over  $1^\circ$ .

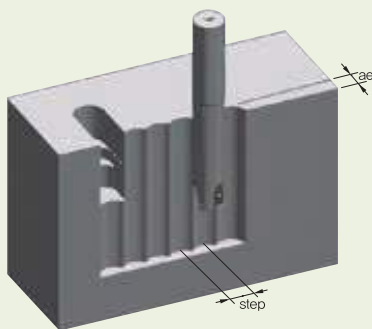
MAXIMUM DEPTH OF CUT BY MACHINING METHOD

**HORIZONTAL MACHINING** Depth of cut = ap  
**PLUNGING** Depth of cut = ae



INSERT	HORIZONTAL		PLUNGING	
	Max. ap	Max ae	Max ae	Step
LNEX10	1.5	9	9	<0.7D
LNEX15	2.5	14	14	<0.7D

MAXIMUM STEP WHEN PLUNGING



Cutter Diameter	ae													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	9.7	13.5	16.2	18.3	20	21.3	22.4	23.3	24	-	-	-	-	-
32	11.1	15.4	18.6	21.1	23.2	24.9	26.4	27.7	28.7	-	-	-	-	-
40	12.4	17.4	21	24	26.4	28.5	30.3	32	33.4	-	-	-	-	-
50	14	19.5	23.7	27.1	30	32.4	34.6	36.6	38.4	-	-	-	-	-
52	14.2	20	24.2	27.7	30.6	33.2	35.4	37.5	39.3	-	-	-	-	-
63	15.7	22	26.8	30.7	34	36.9	39.5	41.9	44	46	47.8	49.4	50.9	52.3
66	16.1	22.6	27.4	31.4	34.9	37.9	40.6	43	45.2	47.3	49.1	50.9	52.4	53.9
80	17.7	24.9	30.3	34.8	38.7	42.1	45.2	48	50.5	52.9	55.1	57.1	59	60.7
100	19.9	28	34.1	39.1	43.5	47.4	51	54.2	57.2	60	62.5	64.9	67.2	69.3

RECOMMENDED CUTTING CONDITIONS

ISO	Grade	LNM(E)X100605PNL-MM				LNM(E)X151008PNL-MM			
		vc(m/min)	fz(mm/t)	Max. ae	Max. ap	vc(m/min)	fz(mm/t)	Max. ae	Max. ap
P	PC3500	100-250	0.05-0.25	9	1.5	120-250	0.05-0.25	14	2.5
M	PC5300	100-250	0.08-0.30			120-250	0.08-0.30		
K	PC6510	80-180	0.05-0.20	100-180	0.05-0.20				

Max ae: (Plunging) max. radial depth of cut, Max ap: (Shouldering/Facing) max depth of cut

\*Please adjust vc and fz to suit material type

