



Slotting Mills

SMP08
SMP09



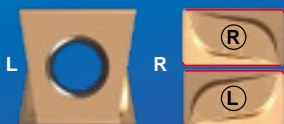
CMT ZHUZHOU CEMENTED CARBIDE
CUTTING TOOLS CO., LTD.

Slotting Mills

SMP08 series

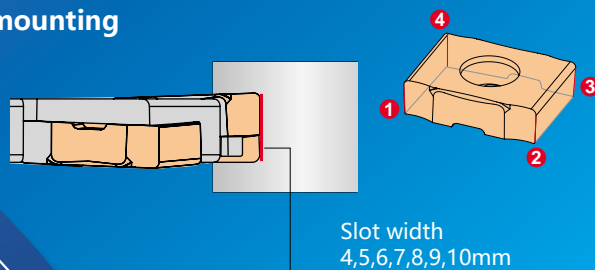


- Optimized cutter body design with high precision inserts creates optimal machined surface of the grooving bottom;
- The range of grooving width is between 4-10mm. Cutter diameters are between 63~250mm. The cutting width and diameter can be tailor-made according to customer needs;
- Inserts' positive edge inclination angle and light machining edge help reduce cutting forces and therefore alleviate the impact on cutting body in machining.

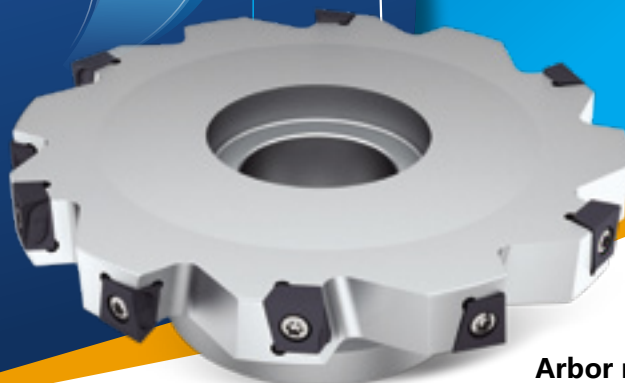


- Each insert has two left and two right cutting edges;
- The fully-ground inserts are consistent in quality, which therefore can achieve desirable slot bottom;
- Inserts with sharp and strong cutting edge make smooth cut and therefore work best under the conditions with light to medium cutting parameters;
- Paired with optimal cutting grades, the tool works efficiently in machining P, M, and K materials.

Keyway mounting



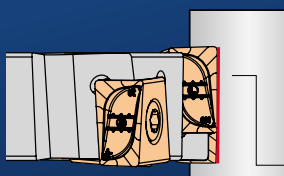
SMP09 series



- Optimized cutter structure design and stable positioning;

- Inserts with tangential mounting structure excel in impact resistance;

- The slot width is 12-26mm, and the cutter diameter is 80-315mm. Can be customized to customer's needs;



The range of grooving width is 12-26mm

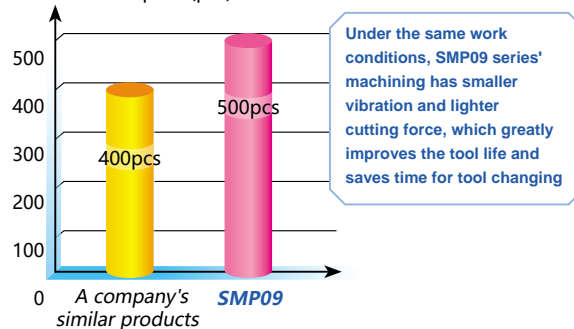
Arbor mounting

SMP09 application case

Workpiece: cam shaft
 Machined material: QT500
 Inserts: LNGX140708-GM/YB9320
 Cutter body: SMP09-315x25-C60-LN14-20
 Working parameters: $V_c = 150\text{m/min}$, $f = 0.15\text{mm/z}$, $a_p = 25\text{mm}$
 Cooling way: external



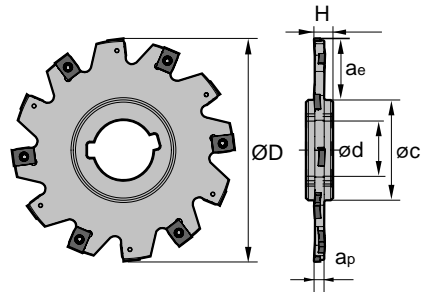
Machined workpiece(pcs)



SMP08 P M K



K type connection



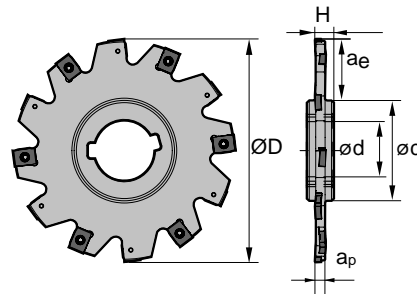
Specification of tools

Type	Basic dimensions(mm)						Applicable inserts	Teeth Z	Coupling Type	Weight	
	ØD	ød	øc	H	ap	aemax					
SMP08	-063x4-K22-LN1023-08	63	22	34	8	4	LNET102304-GvM	8	K	0.1	
	-080x4-K22-LN1023-10	80	22	34	8	4		10	K	0.1	
	-100x4-K27-LN1023-12	100	27	41	12	4		12	K	0.2	
	-125x4-K40-LN1023-14	125	40	55	12	4		14	K	0.4	
	-160x4-K40-LN1023-18	160	40	55	12	4		18	K	0.6	
	-063x5-K22-LN1028-08	63	22	34	8	5	LNET102804-GM	8	K	0.1	
	-080x5-K22-LN1028-10	80	22	34	8	5		10	K	0.2	
	-100x5-K27-LN1028-12	100	27	41	12	5		12	K	0.3	
	-125x5-K40-LN1028-14	125	40	55	12	5		14	K	0.4	
	-160x5-K40-LN1028-18	160	40	55	12	5		18	K	0.7	
	-063x6-K22-LN1033-08	63	22	34	8	6	LNET103304-GM	8	K	0.1	
	-080x6-K22-LN1033-10	80	22	34	8	6		10	K	0.2	
	-100x6-K27-LN1033-12	100	27	41	12	6		12	K	0.3	
	-125x6-K40-LN1033-14	125	40	55	12	6		14	K	0.5	
	-160x6-K40-LN1033-18	160	40	55	12	6		18	K	0.8	
	-200x6-K50-LN1033-20	200	50	69	12	6	63.0	20	K	1.2	
	-250x6-K50-LN1033-24	250	50	69	12	6	88.0	24	K	2.0	
	-080x7-K22-LN1238-08	80	22	34	12	7	20.0	LNET123804-GM	8	K	0.2
	-100x7-K27-LN1238-10	100	27	41	12	7	26.5		10	K	0.3
	-125x7-K40-LN1238-12	125	40	55	12	7	32.0		12	K	0.5
-160x7-K40-LN1238-16	160	40	55	12	7	49.5	16		K	0.8	
-200x7-K50-LN1238-18	200	50	69	12	7	62.5	18		K	1.3	
-250x7-K50-LN1238-24	250	50	69	12	7	87.5	24	K	2.1		

SMP08 P M K



K type connection



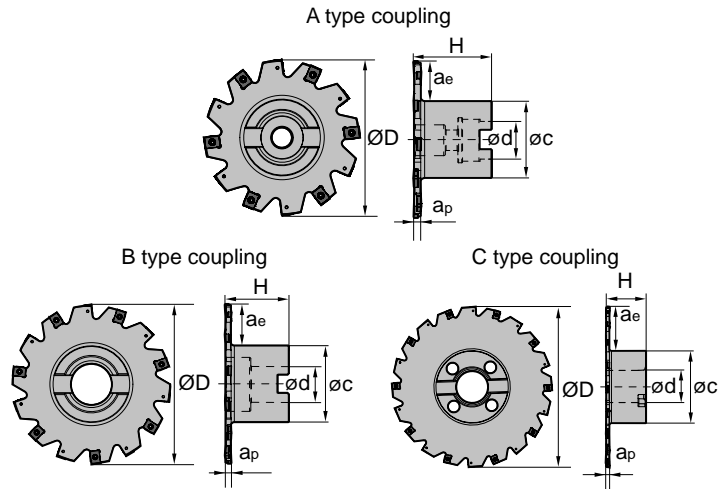
Specification of tools

Type	Basic dimensions(mm)						Applicable inserts	Teeth Z	Coupling Type	Weight	
	ØD	ød	øc	H	a _p	a _e max					
SMP08	-080x8-K22-LN1243-08	80	22	34	12	8	20.5	LNET124304-GM	8	K	0.2
	-100x8-K27-LN1243-10	100	27	41	12	8	27.0		10	K	0.3
	-125x8-K40-LN1243-12	125	40	55	12	8	32.5		12	K	0.9
	-160x8-K40-LN1243-16	160	40	55	12	8	50.0		16	K	0.9
	-200x8-K50-LN1243-18	200	50	69	12	8	63.0		18	K	1.4
	-250x8-K50-LN1243-24	250	50	69	12	8	83.0		24	K	2.3
	-100x9-K27-LN1248-10	100	27	41	12	9	27.5	LNET124804-GM	10	K	0.4
	-125x9-K40-LN1248-12	125	40	55	12	9	33.0		12	K	0.6
	-160x9-K40-LN1248-16	160	40	55	12	9	50.5		16	K	1
	-200x9-K50-LN1248-18	200	50	69	12	9	63.5		18	K	1.6
	-250x9-K50-LN1248-24	250	50	69	12	9	88.5		24	K	2.6
	-100x10-K27-LN1253-10	100	27	41	12	10	28.0	LNET125304-GM	10	K	0.4
	-125x10-K40-LN1253-12	125	40	55	12	10	33.5		12	K	0.6
	-160x10-K40-LN1253-16	160	40	55	12	10	51.0		16	K	1.1
	-200x10-K50-LN1253-18	200	50	69	12	10	64.0		18	K	1.8
-250x10-K50-LN1253-24	250	50	69	12	10	89.0	24		K	2.9	

Spare parts

Diameter ØD	Cutting edge width a _p (mm)	Screw	Wrench	
Ø63-Ø160	4	I60M2.5x3.2XB	WT06iP/IS	
	5	I60M2.5x3.9XB		
	6	I60M2.5x4.8XB		
Ø63-Ø250	7	I60M4x5.6XB	WT10iP/IS	
	8	I60M4x6.6XB		
	9	I60M4x7.6XB		
	10	I60M4x8.5XB		

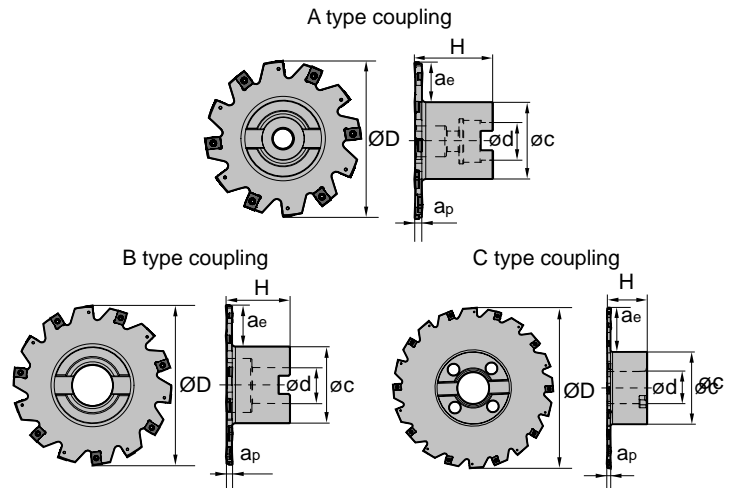
SMP08 P M K



Specification of tools

Type	Basic dimensions(mm)							Applicable inserts	Teeth Z	Coupling Type	Weight
	$\varnothing D$	$\varnothing d$	$\varnothing c$	H	a_p	a_{max}					
SMP08	-080x4-A22-LN1023-10	80	22	42	50	4	18	LNET102304-GM	10	A	0.4
	-100x4-A27-LN1023-12	100	27	52	50	4	23		12	A	0.6
	-125x4-B32-LN1023-14	125	32	63	50	4	30		14	B	1.0
	-160x4-B40-LN1023-18	160	40	76	50	4	41		18	B	1.2
	-080x5-A22-LN1028-10	80	22	42	50	5	18	LNET102804-GM	10	A	0.4
	-100x5-A27-LN1028-12	100	27	52	50	5	23		12	A	0.6
	-125x5-B32-LN1028-14	125	32	63	50	5	30		14	B	1.0
	-160x5-B40-LN1028-18	160	40	76	50	5	41		18	B	1.2
	-080x6-A22-LN1033-10	80	22	42	50	6	18	LNET103304-GM	10	A	0.5
	-100x6-A27-LN1033-12	100	27	52	50	6	23		12	A	0.7
	-125x6-B32-LN1033-14	125	32	63	50	6	30		14	B	1.1
	-160x6-B40-LN1033-18	160	40	76	50	6	41		18	B	1.4
	-200x6-C40-LN1033-20	200	40	94	50	6	52	LNET123804-GM	20	C	2.8
	-250x6-C60-LN1033-24	250	60	132	50	6	58		24	C	4.6
	-080x7-A22-LN1238-08	80	22	42	50	7	18		8	A	0.5
	-100x7-A27-LN1238-10	100	27	52	50	7	23		10	A	0.7
	-125x7-B32-LN1238-12	125	32	63	50	7	30	12	B	1.1	
	-160x7-B40-LN1238-16	160	40	76	50	7	41	16	B	1.4	
	-200x7-C40-LN1238-18	200	40	94	50	7	52	18	C	2.9	
	-250x7-C60-LN1238-24	250	60	132	50	7	58	24	C	4.7	

SMP08 P M K



● Specification of tools

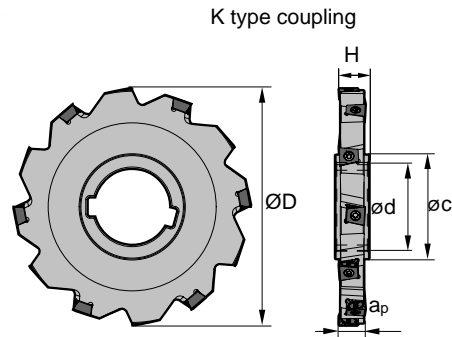
Type	Basic dimensions(mm)						Applicable inserts	Teeth Z	Coupling Type	Weight	
	ØD	ød	øc	H	ap	aemax					
SMP08	-080x8-A22-LN1243-08	80	22	42	50	8	18	LNET124304-GM	8	A	0.5
	-100x8-A27-LN1243-10	100	27	52	50	8	23		10	A	0.7
	-125x8-B32-LN1243-12	125	32	63	50	8	30		12	B	1.1
	-160x8-B40-LN1243-16	160	40	76	50	8	41		16	B	1.4
	-200x8-C40-LN1243-18	200	40	94	50	8	52		18	C	2.9
	-250x8-C60-LN1243-24	250	60	132	50	8	58		24	C	4.7
	-100x9-A27-LN1248-10	100	27	52	50	9	23	LNET124804-GM	10	A	0.7
	-125x9-B32-LN1248-12	125	32	63	50	9	30		12	B	1.1
	-160x9-B40-LN1248-16	160	40	76	50	9	41		16	B	1.5
	-200x9-C40-LN1248-18	200	40	94	50	9	52		18	C	3
	-250x9-C60-LN1248-24	250	60	132	50	9	58	24	C	4.8	
	-100x10-A27-LN1253-10	100	27	52	50	10	23	LNET125304-GM	10	A	0.7
	-125x10-B32-LN1253-12	125	32	63	50	10	30		12	B	1.1
	-160x10-B40-LN1253-16	160	40	76	50	10	41		16	B	1.5
-200x10-C40-LN1253-18	200	40	94	50	10	52	18		C	3	
	-250x10-C60-LN1253-24	250	60	132	50	10	58	24	C	5	

● Spare parts

Diameter ØD	Cutting edge width ap (mm)	Screw	Wrench
Ø63-Ø160	4	I60M2.5x3.2XB	WT06IP/IS
	5	I60M2.5x3.9XB	
	6	I60M2.5x4.8XB	
Ø63-Ø250	7	I60M4x5.1XB	WT10IP/IS
	8	I60M4x6.6XB	
	9	I60M4x7.6XB	
	10	I60M4x8.5XB	



SMP09 P M K



Specification of tools

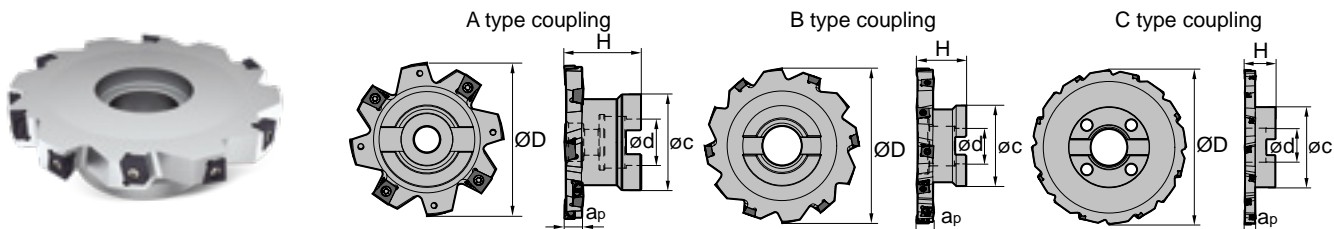
Type	Basic dimensions(mm)						Applicable inserts	Teeth Z	Coupling Type	Weight	
	ØD	ød	øc	H	ap	aemax					
SMP09	-080x10-K27-LN10-08	80	27	43	14	10	17	LNGX1005□□-GM	8	K	0.2
	-100x10-K32-LN10-10	100	32	47	14	10	25		10	K	0.37
	-125x10-K40-LN10-12	125	40	55	14	10	34		12	K	0.5
	-160x10-K40-LN10-14	160	40	62	14	10	47		14	K	1
	-200x10-K50-LN10-16	200	50	72	14	10	62	LNGX1407□□-GM	16	K	1.6
	-100x12-K32-LN14-08	100	32	47	16	12	25		8	K	0.4
	-125x12-K40-LN14-10	125	40	55	16	12	34		10	K	0.6
	-160x12-K40-LN14-12	160	40	62	16	12	47		12	K	1.1
	-200x12-K50-LN14-14	200	50	72	16	12	62	LNGX1005□□-GM	14	K	1.8
	-100x14-K32-LN10-10	100	32	47	18	14	25		10	K	0.4
	-125x14-K40-LN10-12	125	40	55	18	14	34		12	K	0.9
	-160x14-K40-LN10-14	160	40	62	18	14	47		14	K	1.6
	-200x14-K50-LN10-16	200	50	72	18	14	62	LNGX1005□□-GM	16	K	2.5
	-125x16-K40-LN10-12	125	40	55	20	16	34		12	K	1
	-160x16-K40-LN10-14	160	40	62	20	16	47		14	K	1.8
	-200x16-K50-LN10-16	200	50	72	20	16	62		16	K	2.9
	-125x18-K40-LN10-12	125	40	55	24	18	34	LNGX1005□□-GM	12	K	1.2
	-160x18-K40-LN10-14	160	40	62	24	18	47		14	K	2.1
	-200x18-K50-LN10-16	200	50	72	24	18	62		16	K	3.4
	-250x18-K50-LN10-18	250	50	80	24	18	83		18	K	5.5
	-125x20-K40-LN14-10	125	40	55	26	20	34	LNGX1407□□-GM	10	K	1.2
	-160x20-K40-LN14-12	160	40	62	26	20	47		12	K	2.1
	-200x20-K50-LN14-14	200	50	72	26	20	62		14	K	3.5
	-250x20-K50-LN14-16	250	50	80	26	20	83		16	K	5.8
	-160x25-K40-LN14-12	160	40	62	30	25	47	LNGX1407□□-GM	12	K	2.8
	-200x25-K50-LN14-14	200	50	72	30	25	62		14	K	4.5
	-250x25-K50-LN14-16	250	50	80	30	25	83		16	K	7.5

Spare parts

Diameter ØD	Cutting edge width ap (mm)	Inserts	Screw	Wrench	
Ø80-Ø200	10	LNGX1005□□-GM	I60M3.5x8TT	WP10IS	
Ø100-Ø200	12	LNGX1407□□-GM	I60M4x10	WP15IS	
Ø100-Ø250	14-18	LNGX1005□□-GM	I60M3.5x8TT	WP10IS	
Ø125-Ø315	20-25	LNGX1407□□-GM	I60M4x12	WP15IS	



SMP09 P M K



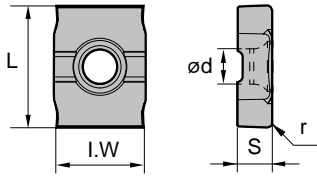
Specification of tools

Type	Basic dimensions(mm)						Applicable inserts	Teeth Z	Coupling Type	Weight	
	ØD	ød	øc	H	ap	aemax					
SMP09	-080x10-A22-LN10-08	80	22	45	40	10	20	LNGX1005□□-GM	8	A	0.4
	-100x10-B27-LN10-10	100	27	55	45	10	24		10	B	0.6
	-125x10-B32-LN10-12	125	32	65	45	10	33		12	B	1
	-160x10-B40-LN10-14	160	40	80	50	10	42		14	B	2
	-200x10-C40-LN10-16	200	40	92	50	10	53		16	C	2.9
	-100x12-B27-LN14-08	100	27	55	45	12	24	LNGX1407□□-GM	8	B	0.6
	-125x12-B32-LN14-10	125	32	65	45	12	33		10	B	1
	-160x12-B40-LN14-12	160	40	80	50	12	42		12	B	2.1
	-200x12-C40-LN14-14	200	40	92	50	12	53		14	C	2.9
	-100x14-B27-LN10-10	100	27	55	50	14	24	LNGX1005□□-GM	10	B	0.7
	-125x14-B32-LN10-12	125	32	65	50	14	33		12	B	1.2
	-160x14-B40-LN10-14	160	40	80	50	14	42		14	B	2.4
	-200x14-C40-LN10-16	200	40	92	50	14	53		16	C	3.6
	-125x16-B32-LN10-12	125	32	65	50	16	33	LNGX1005□□-GM	12	B	1.4
	-160x16-B40-LN10-14	160	40	80	50	16	42		14	B	2.6
	-200x16-C40-LN10-16	200	40	92	50	16	53		16	C	4
	-125x18-B32-LN10-12	125	32	65	50	18	33		12	B	1.5
	-160x18-B40-LN10-14	160	40	80	50	18	42	LNGX1005□□-GM	14	B	2.9
	-200x18-C40-LN10-16	200	40	92	50	18	53		16	C	4.3
	-250x18-C60-LN10-18	250	60	132	50	18	58		18	C	7.2
-125x20-B32-LN14-10	125	32	65	50	20	33	LNGX1407□□-GM	10	B	1.6	
-160x20-B40-LN14-12	160	40	80	50	20	42		12	B	2.7	
-200x20-C40-LN14-14	200	40	92	50	20	53		14	C	4.6	
-250x20-C60-LN14-16	250	60	132	50	20	58		16	C	7.4	
-160x25-B40-LN14-12	160	40	80	50	25	42	LNGX1407□□-GM	12	B	3.2	
-200x25-C40-LN14-14	200	40	92	50	25	53		14	C	5.2	
-250x25-C60-LN14-16	250	60	132	50	25	58		16	C	8.6	
-315x25-C60-LN14-20	315	60	132	50	25	90		20	C	13.2	

Spare parts

Diameter ØD	Cutting edge width ap (mm)	Inserts	Screw	Wrench	
Ø80-Ø200	10	LNGX1005□□-GM	I60M3.5x8TT	WP10IS	
Ø100-Ø200	12	LNGX1407□□-GM	I60M4x10	WP15IS	
Ø100-Ø250	14-18	LNGX1005□□-GM	I60M3.5x8TT	WP10IS	
Ø125-Ø315	20-25	LNGX1407□□-GM	I60M4x12	WP15IS	

SMP08 applicable inserts



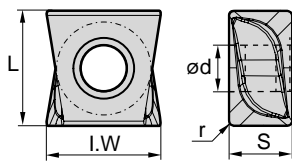
😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	P Steel	M Stainless steel	K Cast iron	N Non-ferrous metal	S Heat-resistant alloy, Ti alloy
P Steel	😊	😊			
M Stainless steel	😊	😊			
K Cast iron			😊	😊	
N Non-ferrous metal					
S Heat-resistant alloy, Ti alloy				😊	😊

Insert shape	Type	Basic dimensions(mm)					CVD coating				PVD coating			
		I.W	L	S	ød	r	YBC302	YBM253	YBD152	YBD252	YB9320	YBG302	YBS203	YBS303
	LNET102304-GM	7.5	10	2.3	2.9	0.4					●			
	LNET102804-GM	7.5	10	2.8	2.9	0.4					●			
	LNET103304-GM	7.5	10	3.3	2.9	0.4					●			
	LNET123804-GM	10	13	3.8	4.4	0.4					●			
	LNET124304-GM	10	13	4.3	4.4	0.4					●			
	LNET124804-GM	10	13	4.8	4.4	0.4					●			
	LNET125304-GM	10	13	5.3	4.4	0.4					●			

★ Recommended grade(stock available) ● Available grade(stock available) ○ Make-to-order

SMP09 applicable inserts




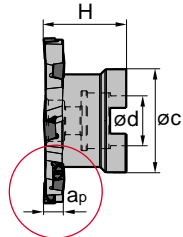

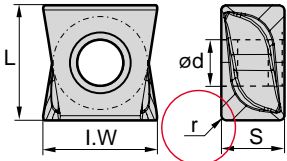
😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	P Steel	M Stainless steel	K Cast iron	N Non-ferrous metal	S Heat-resistant alloy, Ti alloy
P Steel	😊	😊			
M Stainless steel	😊	😊			
K Cast iron			😊	😊	
N Non-ferrous metal					
S Heat-resistant alloy, Ti alloy				😊	😊

Insert shape	Type	Basic dimensions(mm)					CVD coating				PVD coating			
		I.W	L	S	ød	r	YBC302	YBM253	YBD152	YBD252	YB9320	YBG302	YBS203	YBS303
	LNGX100504-GM	9.9	10	5.5	4.1	0.4		●			●			
	LNGX100508-GM	9.9	10	5.5	4.1	0.8		●			●			
	LNGX100512-GM	9.9	10	5.5	4.1	1.2		●			●			
	LNGX100516-GM	9.9	10	5.5	4.1	1.6		●			●			
	LNGX100520-GM	9.9	10	5.5	4.1	2.0		●			●			
	LNGX100524-GM	9.9	10	5.5	4.1	2.4		●			●			
	LNGX100530-GM	9.9	10	5.5	4.1	3.0		●			●			
	LNGX100540-GM	9.9	10	5.5	4.1	4.0		●			●			
	LNGX140704-GM	13.4	14	7.5	4.4	0.4		●			●			
	LNGX140708-GM	13.4	14	7.5	4.4	0.8		●			●			
	LNGX140712-GM	13.4	14	7.5	4.4	1.2		●			●			
	LNGX140716-GM	13.4	14	7.5	4.4	1.6		●			●			
	LNGX140720-GM	13.4	14	7.5	4.4	2.0		●			●			
	LNGX140724-GM	13.4	14	7.5	4.4	2.4		●			●			
	LNGX140730-GM	13.4	14	7.5	4.4	3.0		●			●			
	LNGX140740-GM	13.4	14	7.5	4.4	4.0		●			●			
	LNGX140750-GM	13.4	14	7.5	4.4	5.0		●			●			

★ Recommended grade(stock available) ● Available grade(stock available) ○ Make-to-order

Insert size and grooving width

Insert type		Grooving width a_p (mm)	Insert radius r (mm)	Schematic diagram
	LNET1023	4-6.2	0.4,0.8	
	LNET1028		0.4,0.8	
	LNET1033		0.4,0.8	
	LNET1238	6.3-10	0.4,0.8	
	LNET1243		0.4,0.8	
	LNET1248		0.4,0.8	
	LNET1253		0.4,0.8	
	LNGX10	10 13-18	0.4-4.0	
	LNGX14	12 18-26	0.4-5.0	

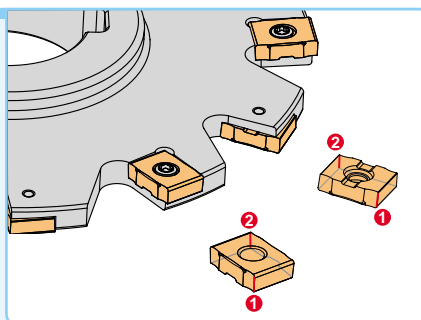
Recommended parameters

	Workpiece material	Hardness(HB)	Insert grade	Cutting parameters	
				Vc(m/min)	f_z (mm/z)
P	Low carbon steel,soft steel	≤ 180	YB9320 YBG302 YBM253	150(100-200)	0.12(0.1-0.3)
	High carbon steel,alloy steel	180-280	YB9320 YBG302 YBM253	120(80-200)	0.12(0.1-0.3)
	Tool alloy steel	280-350	YB9320 YBG302 YBM253	100(80-200)	0.12(0.1-0.3)
M	Stainless steel	≤ 270	YB9320 YBG302 YBM253	100(80-200)	0.08(0.05-0.15)
K	Cast iron,nodular cast iron,high nickel cast iron	180-250	YB9320 YBG302 YBM253	150(100-250)	0.08(0.05-0.15)

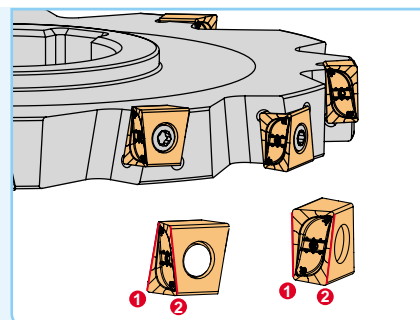
Customization example for slotting mills

- 1) The cutter interface can be customized in either of the two structures, arbor mounting and keyway mounting.
- 2) When the slot width is between 4~10mm, the top choice is SMP08 cutter together with LNET insert with 0.4mm or 0.8mm radius. It can be customized as per customer's needs.
- 3) When the slot width is 10-26mm and arc machining is required, the best choice for general machining is SMP09 cutter together with LNGX inserts, which have 0.4mm-5 mm radius, the top choice for light load machining is SMP03 cutter together with MPHT inserts.
- 4) When the slot width is over 26mm, the top choice is LN** inserts for tangential mounting. The inserts radius range from 0.4mm to 5mm.
- 5) Single slide cutter body can be customized to customers' needs with Left or Right tool clarified.

Installation illustration



SMP08 series



SMP09 series

Non-standard customization illustration for slotting mills

Customer name:



Fax number:

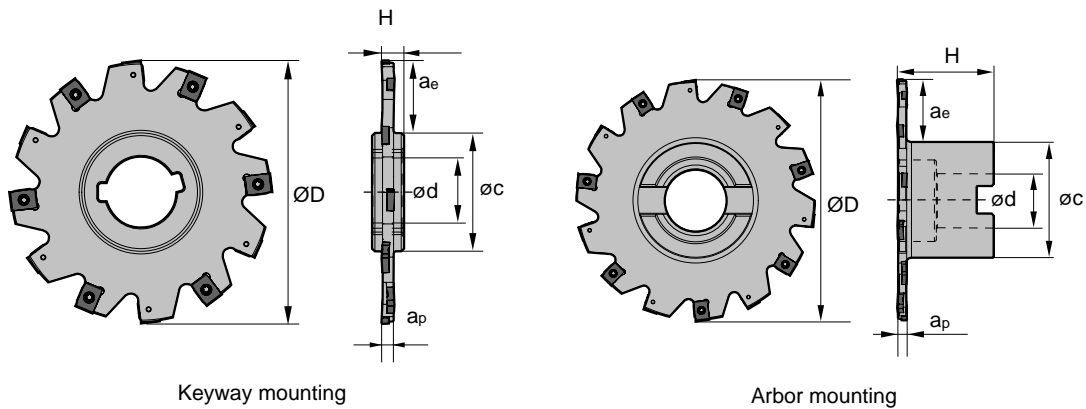
Tel. number:

E-MAIL:

Workpiece material

Cutting depth A_E =	<input type="text"/>	Cutting width A_p =	<input type="text"/>
Teeth number Z =	<input type="text"/>	Insert radius R =	<input type="text"/>
Diameter D =	<input type="text"/>	Coupling type=	<input type="text"/>
Height H =	<input type="text"/>		

Tools information



Remark: please provide drawings of workpiece or machining parts

Order quantity: _____ Expected delivery time: _____ Date _____ month _____ year

Quotation from supplier: _____ Confirmation by user: _____

Date: _____ Date _____ month _____ year



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