

Square shoulder milling tool C/SSM390

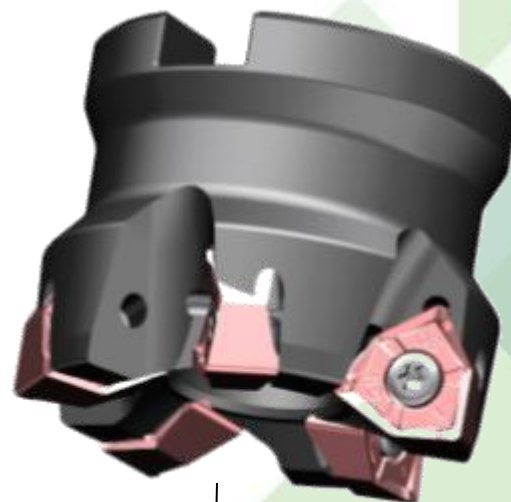


ZNMU0403*PNR-**

ZNMU0806*PNR-**

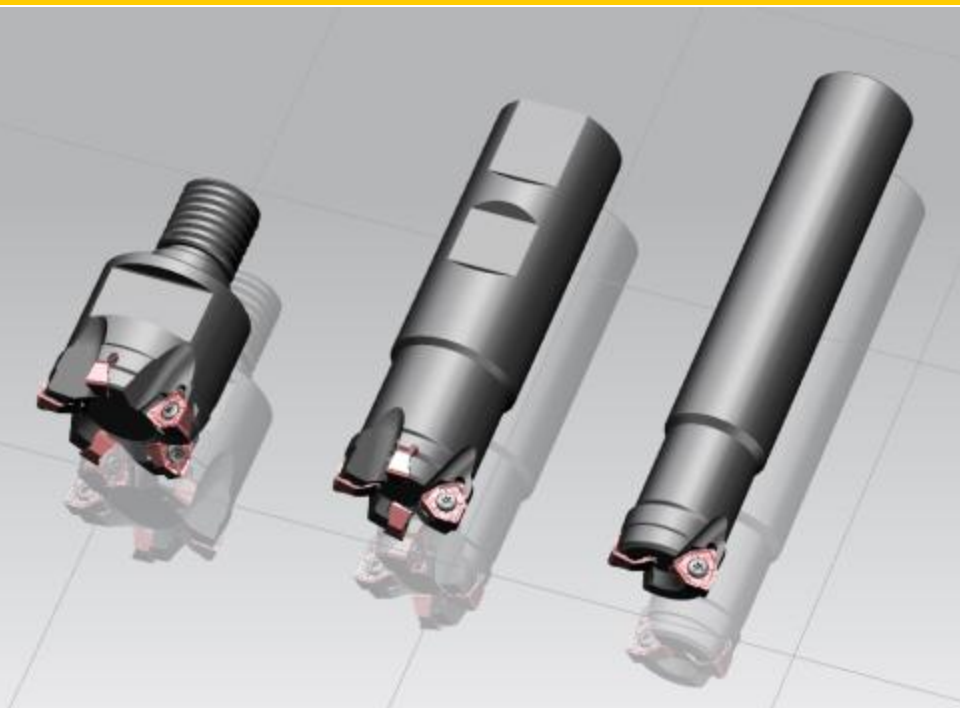


SSM390***



CSM390**

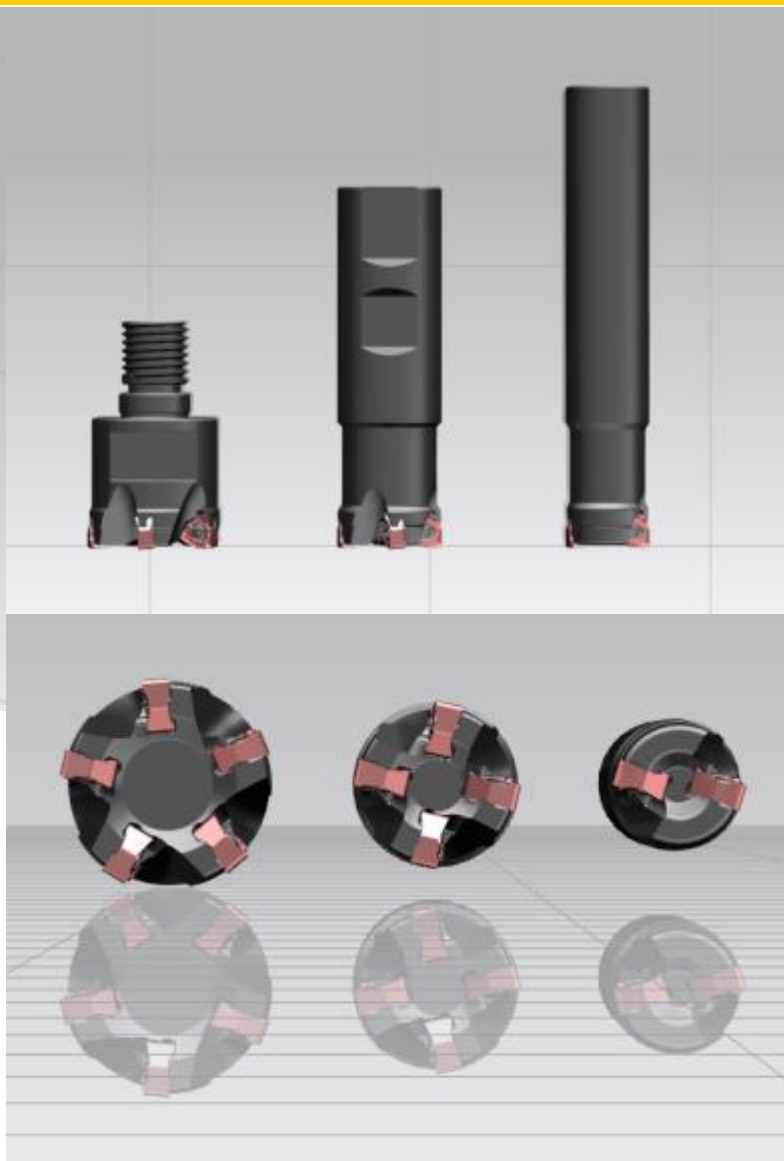
Advantage of milling tool



Type: rod , side-pressure,indexable

Two length series, which can be customized.

The structure of milling tool adopts 3 tooth pitch configuration.



Application case 1:



Workpiece: moulded steel

Processing: surface milling, dry cutting

HARDSTONE

Milling tool: CSM390-200C6012-ZN08

Insert: ZNMU080608PNR-GM/WS5120

tooth: Z=12

Cutting parameters:

N=300/min , F=700mm/r., Ap=2~5mm

Working life: 3Hours

Better cutting effect, longer cutting life, higher cost performance

COMPETITOR

Milling tool: D200

Insert: WNMU**

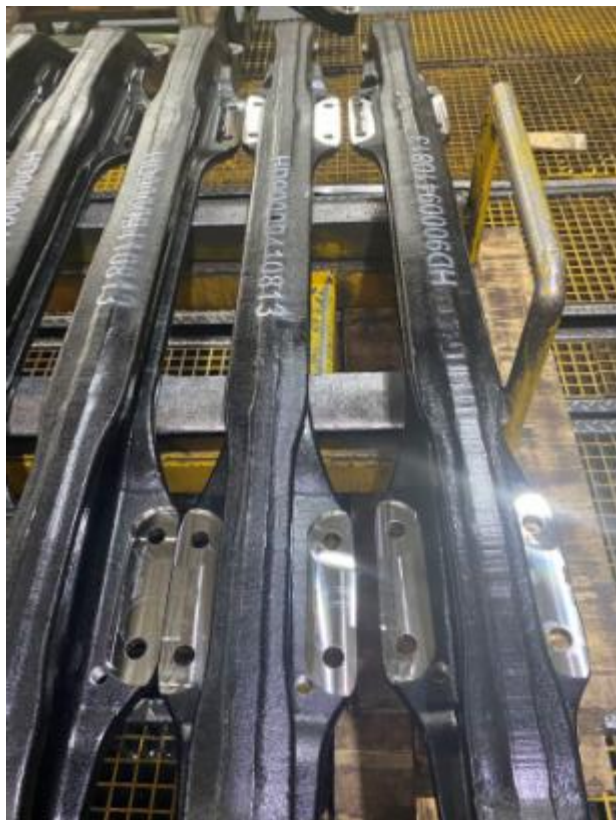
Tooth: Z=12

Cutting parameters:

N=300/min , F=700mm/r., Ap=2~5mm

Working life: 2.5Hours

Application case 2:



Workpiece: 40CrMo HB285-333

Processing: dry cutting

HARDSTONE

Milling tool: SSM390-063A2205-ZN08

Insert: ZNMU080608PNR-GM/WS5120

Tooth: Z=5

Cutting parameters:

N=720/min , F=540mm/r, Ap=1.5*3mm

Working life: 27pcs

COMPETITOR

Milling tool: D63

Insert: APMT16**

Tooth: Z=5

Cutting parameters:

N=720/min , F=540mm/r, Ap=1.5*3mm

Working life: 12pcs

Application case 3:



Workpiece: 45# Steel

Processing: back chipping of mould frame

HARDSTONE

Milling: SSM390-021G2002L-ZN04

Insert: ZNMU040308PNR-GM/WS5130

Tooth: Z=2

Cutting parameters:

N=2750/min, F=2500mm/r, $A_p=1\text{mm}$, $A_e=0.5\sim 21\text{mm}$

Working life: 2Hours with 2pcs

constant and quick cutting, good surface quality

COMPETITOR

Milling: D20

Insert: APMT11**

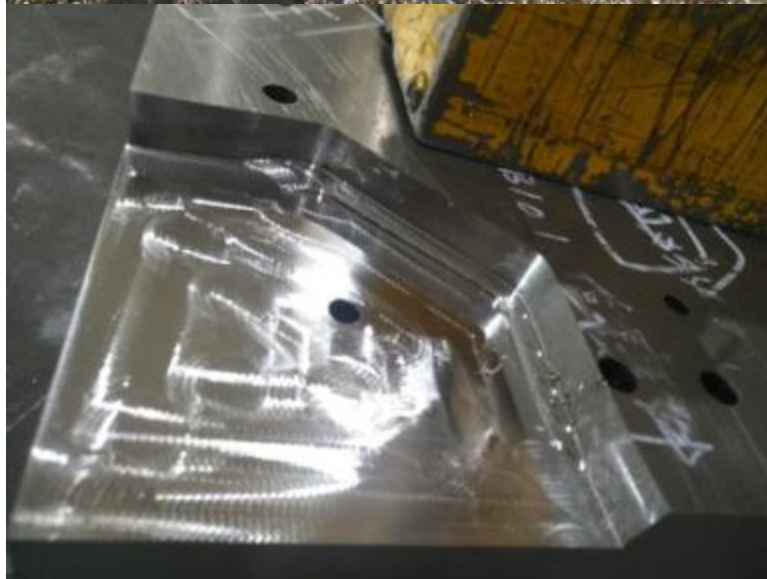
Tooth: Z=2

Cutting parameters:

N=2750/min, F=2500mm/r, $A_p=0.3\text{mm}$, $A_e=0.5\sim 21\text{mm}$

Working life: 2Hours with 1pcs

Application case 4:



Workpiece: XF136BDHH

Processing: Rough machining with dry.

HARDSTONE

Milling: SSM390-021G2002L-ZN04

Insert: ZNMU040308PNR-GM/WS5115

Tooth: Z=2

Cutting parameters:

$V_c=132\text{m/min}$, $N=2000/\text{min}$, $F=3000\text{mm/r}$, $A_p=0.4\text{mm}$, $A_e=15\text{mm}$

Working life: It was processed for 40min without obvious wear and tear.

COMPETITOR

Milling: D21

Insert: APMT11**

Tooth: Z=2

Cutting parameters:

$V_c=132\text{m/min}$, $N=2000/\text{min}$, $F=2000\text{mm/r}$, $A_p=0.25\text{mm}$, $A_e=15\text{mm}$

Working life: sticky and broken edge appear after cutting 30mins

Application case 5:



Workpiece: JY136ADHH

Processing: Dry cutting

HARDSTONE

Milling tool: SSM390-021G2002L-ZN04

Insert: ZNMU040308PNR-GM/WS5115

Tooth: Z=2

Cutting parameters:

$V_c=132\text{m/min}$, $N=2000/\text{min}$, $F=3000\text{mm/r}$, $A_p=0.4\text{mm}$, $A_e=15\text{mm}$

Working life: 37min

COMPETITOR A \COMPETITOR B

Milling tool: D21\D20

Insert: APMT11**\R5

Tooth: Z=2

Cutting parameters:

$V_c=132\text{m/min}$, $N=2000/\text{min}$, $F=2000\text{mm/r}$, $A_p=0.4\text{mm}$, $A_e=15\text{mm}$

Working life: 10+min\5~6min

Application case 6:

Workpiece: titanium alloy

No Photo

HARDSTONE

Milling: CSM390-063A2205-ZN08

Insert: ZNMU08068PNR-GM/WS5120

Tooth: Z=5

Cutting Parameters:

N=350/min, F=500mm/r, Ap=0.2~0.3mm

Working life: 8pcs

light cutting, good surface quality, high cost performance

COMPETITOR

Milling: D63

Insert: HNMX0906ANN-M

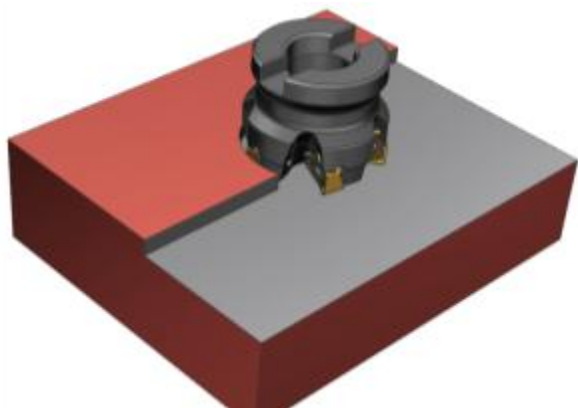
Tooth: Z=5

Cutting parameters:

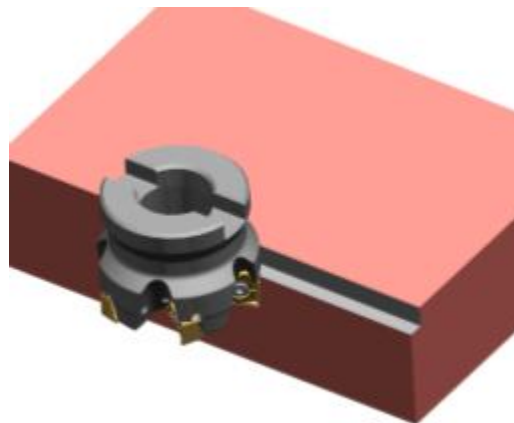
N=350/min, F=500mm/r, Ap=0.2~0.3mm

Working life: 8件

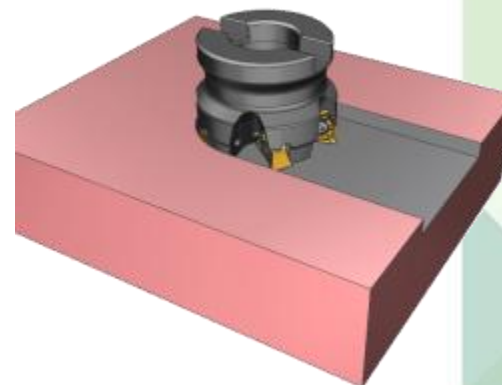
Applicable occasions and recommended parameters



Face milling



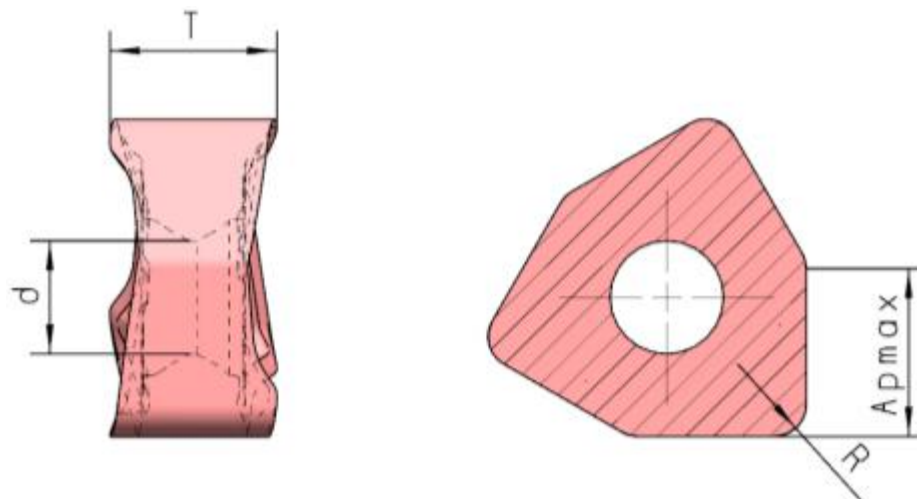
Square shoulder milling



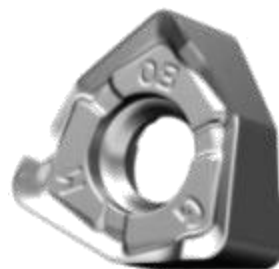
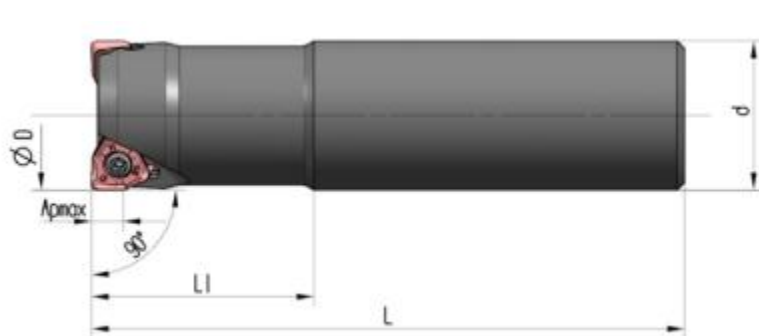
Slot milling

Workpiece	Hardness	Grade	Recommended parameters	
			VC(m/min)	FZ(mm/z)
P	Mild steel	WS5130 WS5120	120~250	0.08~0.3
	Carbon steel, alloy steel		120~200	0.08~0.3
	Pre hardened steel		120~200	0.08~0.3
M	Martensitic stainless steel		120~180	0.08~0.3
	Austenitic stainless steel		120~160	0.08~0.3
K	Grey cast iron		100~220	0.08~0.3
	Nodular cast iron		100~180	0.08~0.3
S	heat-resisting alloy		50~100	0.08~0.3

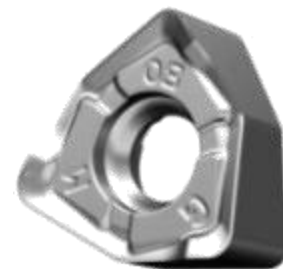
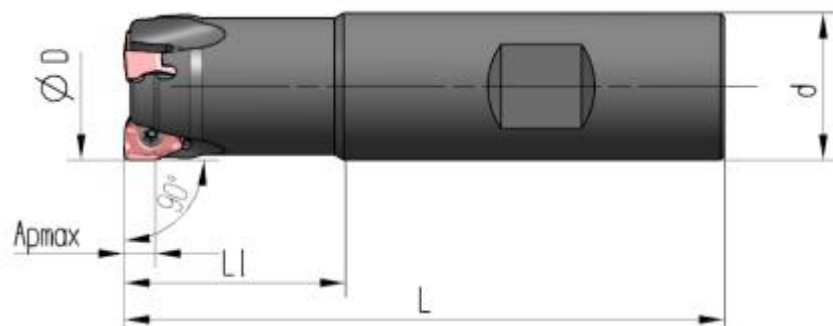
Information of insert



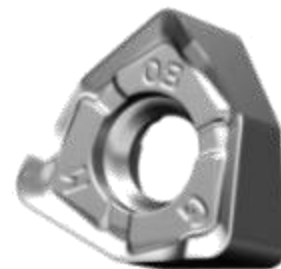
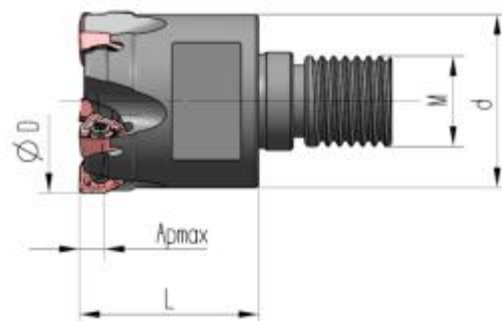
Insert Code	Specification				Grade		
	$Apmax$	T	R	d	WS5115	WS5120	WS5130
ZNMU040308PNR-GM	4.2	4.2	0.8	4.4	◎	●	●
ZNMU080608PNR-GM	7.3	7.5	0.8	2.8	◎	●	●



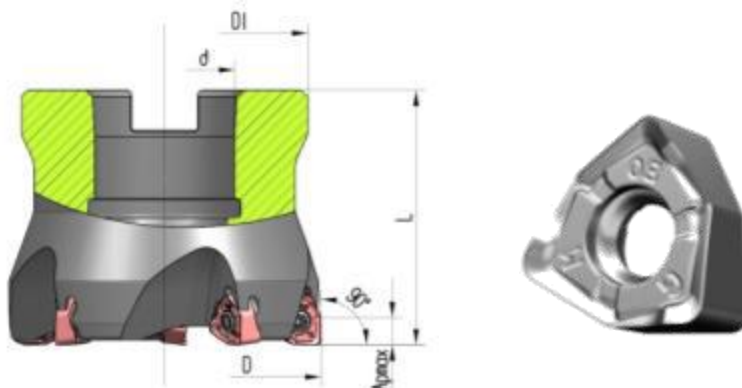
Code	Tooth	Specification				Apmax	Insert	inner-cooling	Pic	Inventory
		D	d	L	L1					
SSM390-020G2002L-ZN04	2	20	20	150	30	4.2	ZNMU0403**			●
SSM390-020G2003L-ZN04	3	20	20	150	30	4.2				
SSM390-021G2002L-ZN04	2	21	20	150	30	4.2				●
SSM390-021G2003L-ZN04	3	21	20	150	30	4.2				
SSM390-025G2502L-ZN04	2	25	25	170	30	4.2				●
SSM390-025G2503L-ZN04	3	25	25	170	30	4.2				●
SSM390-025G2504L-ZN04	4	25	25	170	30	4.2				
SSM390-025G2505L-ZN04	5	25	25	170	30	4.2				
SSM390-026G2502L-ZN04	2	26	25	170	30	4.2				●
SSM390-026G2503L-ZN04	3	26	25	170	30	4.2				
SSM390-032G3202L-ZN04	2	32	32	200	30	4.2				●
SSM390-032G3203L-ZN04	3	32	32	200	30	4.2				●
SSM390-032G3204L-ZN04	4	32	32	200	30	4.2				
SSM390-032G3205L-ZN04	5	32	32	200	30	4.2				
SSM390-032G3206L-ZN04	6	32	32	200	30	4.2				
SSM390-035G3202L-ZN04	2	35	32	200	30	4.2				●
SSM390-035G3203L-ZN04	3	35	32	200	30	4.2				●
SSM390-040G3204L-ZN04	4	40	32	200	30	4.2				
SSM390-040G3205L-ZN04	5	40	32	200	30	4.2				
SSM390-040G3206L-ZN04	6	40	32	200	30	4.2				



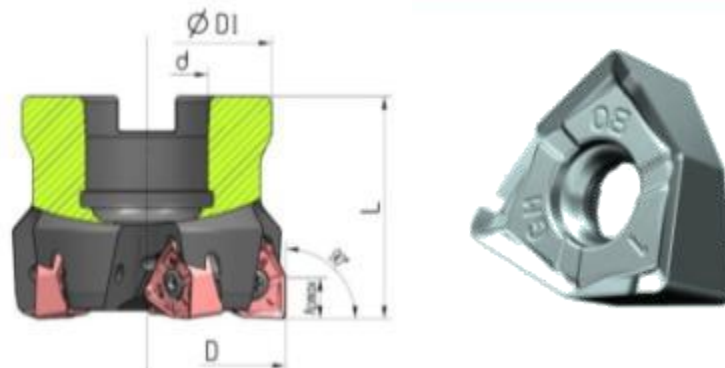
Code	Tooth	Specification				Apmax	Insert	inner-cooling	Pic	Inventory
		D	d	L	L1					
SSM390-020X2002-ZN04	2	20	20	90	30	4.2	ZNMU0403**			
SSM390-020X2003-ZN04	3	20	20	90	30	4.2				
SSM390-025X2502-ZN04	2	25	25	100	30	4.2				
SSM390-025X2503-ZN04	3	25	25	100	30	4.2				
SSM390-025X2504-ZN04	4	25	25	100	30	4.2				
SSM390-025X2505-ZN04	5	25	25	100	30	4.2				
SSM390-032X3202-ZN04	2	32	32	110	30	4.2				
SSM390-032X3203-ZN04	3	32	32	110	30	4.2				
SSM390-032X3204-ZN04	4	32	32	110	30	4.2				
SSM390-032X3205-ZN04	5	32	32	110	30	4.2				
SSM390-032X3206-ZN04	6	32	32	110	30	4.2				



Code	Tooth	Specification				Apmax	Insert	inner-cooling	Pic	Inventory
		D	d	L	M					
KH-2002-ZN04-M10	2	20	18	30	10	4.2	ZNMU0403**			
KH-2003-ZN04-M10	3	20	18	30	10	4.2				
KH-2502-ZN04-M12	2	25	23	30	12	4.2				
KH-2503-ZN04-M12	3	25	23	30	12	4.2				
KH-2504-ZN04-M12	4	25	23	30	12	4.2				
KH-2505-ZN04-M12	5	25	23	30	12	4.2				
KH-3202-ZN04-M16	2	32	30	40	16	4.2				
KH-3203-ZN04-M16	3	32	30	40	16	4.2				
KH-3204-ZN04-M16	4	32	30	40	16	4.2				
KH-3205-ZN04-M16	5	32	30	40	16	4.2				
KH-3206-ZN04-M16	6	32	30	40	16	4.2				



Code	Tooth	specification				Apmax	Insert	inner-cooling	Pic	Inventory
		D	d	D1	L					
CSM390-040A1605-ZN04	5	40	16	35	40		ZNMU0403**			
CSM390-040A1607-ZN04	7	40	16	35	40					
CSM390-050A2206-ZN04	6	50	22	45	40	4.2				
CSM390-050A2208-ZN04	8	50	22	45	40	4.2				
CSM390-063A2207-ZN04	7	63	22	50	40	4.2				
CSM390-063A2210-ZN04	9	63	22	50	40	4.2				



Code	Tooth	specification				Apmax	Insert	inner-cooling	Pic	Inventory
		D	d	D1	L					
CSM390-040A1604-ZN08	4	40	16	35	40	7.3	ZNMU0806**			
CSM390-050A2204-ZN08	4	50	22	45	40	7.3				●
CSM390-050A2205-ZN08	5	50	22	45	40	7.3				
CSM390-063A2205-ZN08	5	63	22	50	40	7.3				●
CSM390-063A2206-ZN08	6	63	22	50	40	7.3				
CSM390-080A2706-ZN08	6	80	27	60	50	7.3				●
CSM390-080A2707-ZN08	7	80	27	60	50	7.3				
CSM390-080A2709-ZN08	9	80	27	60	50	7.3				
CSM390-100B3207-ZN08	7	100	32	80	50	7.3				●
CSM390-100B3208-ZN08	8	100	32	80	50	7.3				
CSM390-100B3211-ZN08	11	100	32	80	50	7.3				
CSM390-125B4008-ZN08	8	125	40	100	63	7.3				●
CSM390-125B4011-ZN08	11	125	40	100	63	7.3				
CSM390-125B4014-ZN08	14	125	40	100	63	7.3				
CSM390-160C4010-ZN08	10	160	40	115	63	7.3				
CSM390-160C4012-ZN08	12	160	40	115	63	7.3				
CSM390-160C4016-ZN08	16	160	40	115	63	7.3				
CSM390-200C6012-ZN08	12	200	60	150	63	7.3				
CSM390-200C6016-ZN08	16	200	60	150	63	7.3				



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