

MILLING

Series

5C4M

Diameter Range

4.00"-14.00" (RH)

10.00"-14.00" (LH)

Depth of Cut

.484"

Insert Series

SEXN2007DFTR-HDP (RH)

SEXN2007DFTR-MR (RH)

SEXN2007DFTL-HDP (LH)

SEXN2007DFTL-MR (LH)

Grades

IN4040

IN4030

IN2530

IN2535

IN2536

Materials

■ Steel

■ Stainless Steel

■ Cast Iron

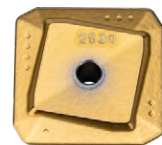
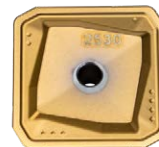
■ High-Temp Alloys

COUGAR MILL HSHR™



Features & Benefits

- » 60° lead family of face mills with unique wedge-clamp design that mechanically secures and heavily pre-loads the insert for superior stability.
- » 20% lower cutting forces vs. standard Cougar (5C2M), higher metal removal rates and better tool life in heavy machining conditions.
- » Power•Shear designed inserts with robust rake face geometries are ideal for heavy continuous chip loads in the most hardened and abrasive materials.
- » Inserts are designed with an integrated axial wiper producing lower Ra surface finishes.



(LH)



(LH)

See it in
action! »

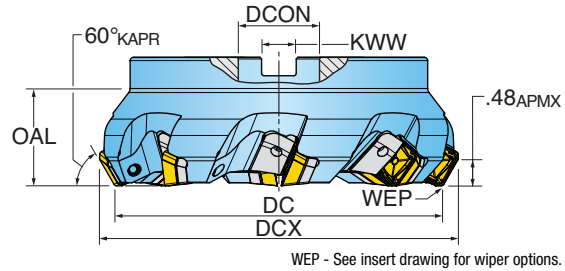


Series 5C4M

Slabbing Facing Lead Angle

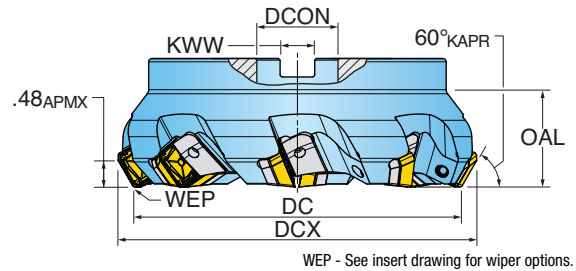


HEAVY DUTY 60° LEAD FACE MILL



RIGHT HAND

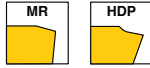
Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Dia.	KWW Keyway Width	DBC Bolt Circle Dia.
5C4M-04R01	4.000	4.640	2.500	6	1.500	0.625	N/A
5C4M-06R01	6.000	6.650	2.375	8	1.500	0.625	N/A
5C4M-08R01	8.000	8.660	2.375	10	2.500	2.500	4.00
5C4M-10R01	10.000	10.660	2.375	12	2.500	2.500	4.00, 4.750, 7.00
5C4M-12R01	12.000	12.660	2.375	14	2.500	2.500	4.00, 4.750, 7.00
5C4M-14R01	14.000	14.660	2.375	16	2.500	2.500	4.00, 4.750, 7.00



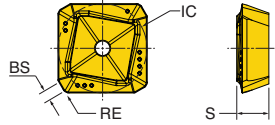
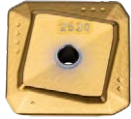
LEFT HAND

Part Number	DC Cutting Diameter	DCX Cutting Dia. Max.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Dia.	KWW Keyway Width	DBC Bolt Circle Dia.
5C4M-10L01	10.000	10.660	2.375	12	2.500	1.000	4.00, 4.750, 7.00
5C4M-12L01	12.000	12.660	2.375	14	2.500	1.000	4.00, 4.750, 7.00
5C4M-14L01	14.000	14.660	2.375	16	2.500	1.000	4.00, 4.750, 7.00

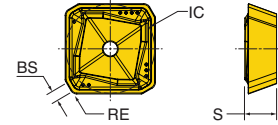
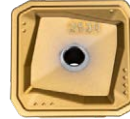
Inserts •



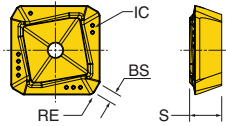
SEXN2007DFTR-HDP



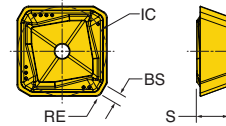
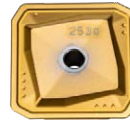
SEXN2007DFTR-MR



SEXN2007DFTL-HDP



SEXN2007DFTL-MR



Part Number	Application	RE Corner Radius	BS Wiper Length	IC Inscribed Circle Dia.	S Thickness	NOI Number of Indexes	IH Insert Hand	Grade				
								IN4040	IN4030	IN2530	IN2535	IN2536
SEXN2007DFTR-HDP	HD, High Chip Loads	0.060	0.080	20 mm	0.276	4	Right	•	•	•		
SEXN2007DFTR-MR	HD, Medium Chip Loads	0.060	0.093	20 mm	0.276	4	Right			•	•	•
SEXN2007DFTL-HDP	HD, High Chip Loads	0.060	0.080	20 mm	0.276	4	Left	•	•	•		
SEXN2007DFTL-MR	HD, Medium Chip Loads	0.060	0.093	20 mm	0.276	4	Left			•	•	•

Note: SEXN is not compatible, neither forward nor reverse with SPEN/SPKN (5C2M).

Hardware

RIGHT HAND

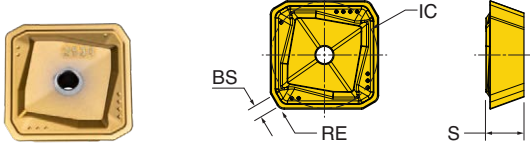
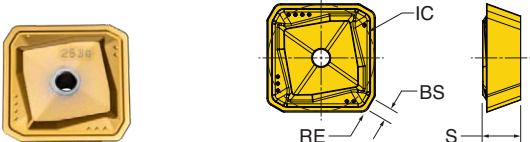
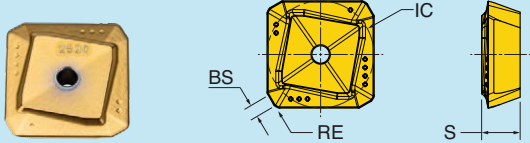
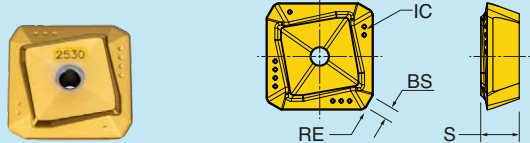
Part Number	 Wedge Screw Driver	 Driver Handle	 Insert Driver Blade	 Retention Bolt	 Seat Screw	 Seat	 Wedge	 Wedge Screw
5C4M-04R01	DS-H04T	DS-A00T	DS-T206B	SD-12-82	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
5C4M-06R01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
5C4M-08R01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
5C4M-10R01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
5C4M-12R01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
5C4M-14R01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAR0750	WSC8R-21	TS80200W
KIT HARDWARE 5C4M-R (Kit includes one of each item)					SM50-130-R0	PAR0750	WSC8R-21	TS80200W

LEFT HAND

Part Number	 Wedge Screw Driver	 Driver Handle	 Insert Driver Blade	 Retention Bolt	 Seat Screw	 Seat	 Wedge	 Wedge Screw
5C4M-10L01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAL0750	WSC8L-21	TS80200W
5C4M-12L01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAL0750	WSC8L-21	TS80200W
5C4M-14L01	DS-H04T	DS-A00T	DS-T206B	-	SM50-130-R0	PAL0750	WSC8L-21	TS80200W
KIT HARDWARE 5C4M-L (Kit includes one of each item)					SM50-130-R0	PAL0750	WSC8L-21	TS80200W

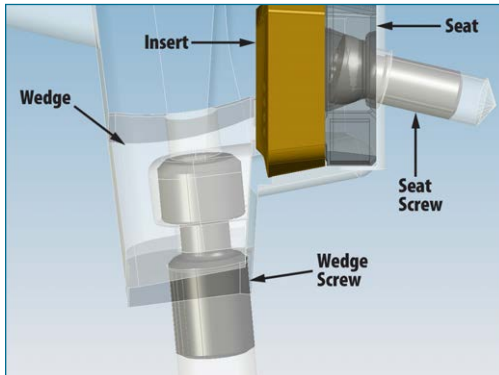
Note: Insert seat screw tightening torque: 40-45 in.-lbs. Insert wedge screw tightening torque: 50-60 in.-lbs.

Insert Selection Guide

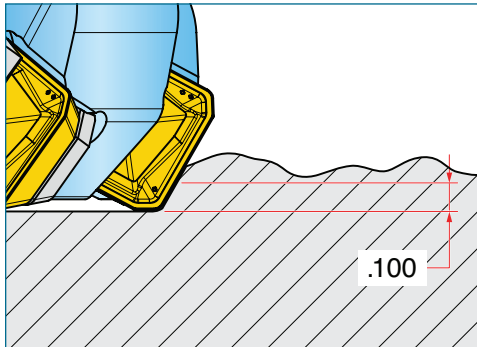
Insert	No. of Indexes	Material Focus	Description
SEXN2007DFTR-MR (RH)  SEXN2007DFTL-MR (LH) 	4	Steels: Low - High Carbon Low - High Alloy HSLA Impact Resistant Abrasion Resistant Stainless Steels: PH Series Martensitic Irons: Ductile	Medium - High chip loads in steels, stainless steels Rake geometry is presented Pos./Pos. with the edge strengthened with both land and hone. IN2530 recommended for steels. IN2535 & IN2536 recommended for stainless steels. If additional toughness is needed, switch to IN2530. IN2530 recommended for irons.
SEXN2007DFTR-HDP (RH)  SEXN2007DFTL-HDP (LH) 	4	Steels: Low - High Carbon Low - High Alloy HSLA Impact Resistant Abrasion Resistant	High - Very high chip loads in steels. Rake geometry is presented Neg./Pos. with the edge strengthened with both land and hone. IN4040 recommended for all steels. If additional toughness is needed, switch to IN4030. Power-Shear is the combination of a strong insert cross-section that is inclined for smooth chip formation. Primary benefit is improved edge life in difficult material conditions (sand and hard spots cast and forged scale, slag and mechanical shock).

Notes: SEXN is not compatible, neither forward nor reverse, with SPEN/SPKN (5C2M).

Assembly



Milling Forgings



When milling forgings, Depth of Cut needs to be a minimum of .100" below the scale to avoid "skimming" of the wiper flat.



Operating Guidelines: SEZN...-MR Series Inserts

ISO	Materials			Vc Cutting Speed SFM	fz Feed/Tooth (inch)	Harder «-----» Tougher			Coolant
	Mat'l Group #VDI 3323	Type	Examples			IN2530	IN2535	IN2536	
P	1-5	Non-alloy steel	1018, A36, 1045, A572, 1070	400-800	.006 - .018	1			No
	6-9	Low-alloy steel	4140, 4340, P20, 8620, 300M	250-500	.006 - .015	1			No
	10, 11	High-alloy steel	H13, A2, D2, M2, T1	250-500	.006 - .015	1			No
	10, 11	High-alloy steel	SR & AR Armor, Rail, Hardox	200-350	.006 - .012	1			No
M	12, 13	Stainless steel (ferritic and martensitic)	410, 416, 440	250-450	.006 - .014	2	2	1	Yes
	14	Stainless steel (austenitic)	303, 304, 316, 15-5, 17-4	200-350	.006 - .014	2	2	1	No
K	15, 16	Gray cast iron	CLS. 20, 30, 45	500-900	.006 - .018	1			No
	17-18	Ductile cast iron	60-40-18, 100-70-03	400-800	.006 - .018	1			No
S	36, 37	Titanium alloys	6AL-4V, 5AI-5Mo-5V-3Cr	90-130	.004-.008	2	2	1	Yes



Operating Guidelines: SEZN...-HDP Series Inserts

ISO	Materials			Vc Cutting Speed SFM	fz Feed/Tooth (inch)	Harder «-----» Tougher			Coolant
	Mat'l Group #VDI 3323	Type	Examples			IN4040	IN4030	IN2530	
P	1-5	Non-alloy steel	1018, A36, 1045, A572, 1070	400-700	.010 - .024	1	2	3	No
	6-9	Low-alloy steel	4140, 4340, P20, 8620, 300M	250-500	.010 - .018	1	3	2	No
	10, 11	High-alloy steel	H13, A2, D2, M2, T1	250-500	.010 - .018	1	3	2	No
	10, 11	High-alloy steel	SR & AR Armor, Rail, Hardox	200-350	.010 - .014	1	3	2	No
K	15, 16	Gray cast iron	CLS. 20, 30, 45	500-800	.010 - .024	1	3	2	No
	17-18	Ductile cast iron	60-40-18, 100-70-03	400-700	.010 - .024	1	3	2	No

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.