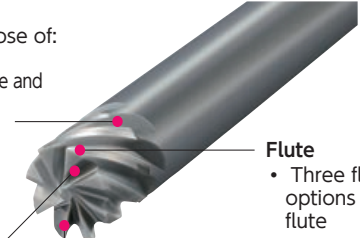


Ceramic Endmill (RCS) for Cast Iron & HRSA Materials



Helix angle

- Designed for the purpose of:
 - 4-flute: toughness
 - 6/8-flute: less tool pressure and better chip evacuation



End Gash

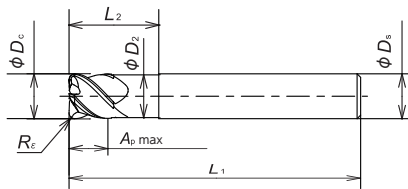
- Bigger end gash brings toughness

Edge

- Added chamfer provides toughness for cast iron machining

RCS-H4

○ No center cutting edge



Slotting



Pocketing



Ramping



Z=4



35°



1.5°

Heat Resistant Alloy		S	●	Cast Iron		K	●						
Item Number	Grade	Flute	ϕD_c (Inch) (mm)	ϕD_s (Inch) (mm)	ϕD_2 (Inch) (mm)	R_c (Inch) (mm)	$A_p \text{ max}$ (Inch) (mm)	L_1 (Inch) (mm)	L_2 (Inch) (mm)				
										SX9			
RCSI500H4R068S	●	4	1/2	1/2	.484 12.3	.068 1.73	3/8	2.75 69.85	1 25.4				
RCSI625H4R078S	●	4	5/8	5/8	.605 15.4	.078 1.98	.469 11.91	3 76.2	1.25 31.75				
RCSM120H4R150S	●	4	.472 12	.472 12	.457 11.6	.059 1.5	.354 9	2.76 70	.954 24				
RCSM160H4R200S	●	4	.630 16	.630 16	.610 15.5	.079 2.0	.472 12	2.95 75	1.26 32				

RCS-J6 / RCS-J8

○ No center cutting edge



Face Milling



Side Milling



Profiling



Ramping



Z=6



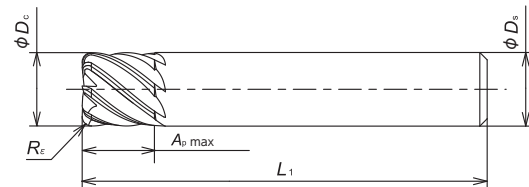
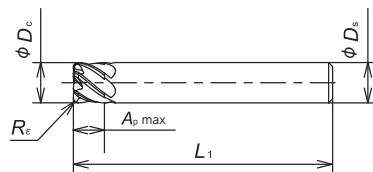
Z=8



40°




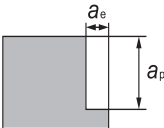


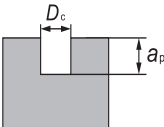




1.5°



Heat Resistant Alloy		S	●	Cast Iron		K	●						
Item Number	Grade	Flute	ϕD_c (Inch) (mm)	ϕD_s (Inch) (mm)	R_c (Inch) (mm)	$A_p \text{ max}$ (Inch) (mm)	L_1 (Inch) (mm)						
								SX9					
RCSI500J6R068S	●	6	1/2	1/2	.068 1.73	3/8	2.75						
RCSI625J6R078S	●	6	5/8	5/8	.078 1.98	.469 11.91	3						
RCSM120J6R150S	●	6	.472 12	.472 12	.059 1.5	.354 9	2.76 70						
RCSM160J6R200S	●	6	.630 16	.630 16	.079 2.0	.472 12	2.95 75						
RCSI750J8R094S	●	8	3/4	3/4	.094 2.38	.563 14.29	4.25						
RCSM200J8R250S	●	8	.787 20	.787 20	.098 2.5	.984 15	4.33 110						

Recommended Cutting Conditions for Cast Iron & HRSA Materials

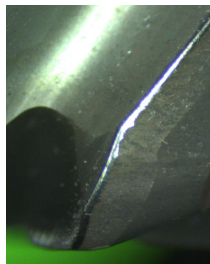
Application	Grade	ϕD_c	Flute	Cutting Speed (SFM)			Feed (IPT)	Depth of cut (a_p —inch)	Width of cut (a_e —inch)	Coolant
				500	2000	3500				
Face Milling 	SX9	1/2"	4/6/8				.004	.094	—	DRY 
		5/8"						.156		
		3/4"						.187		
		12mm						.118		
		16mm						.158		
20mm	.197									
Side Milling 	SX9	1/2"	4/6/8				.004	.375	.083	DRY 
		5/8"						.469	.104	
		3/4"						.563	.125	
		12mm						.354	.079	
		16mm						.472	.098	
20mm	.591	.130								
Slotting 	SX9	1/2"	4/6/8				.004	.094	—	DRY 
		5/8"						.156		
		3/4"						.187		
		12mm						.118		
		16mm						.157		
20mm	.197									

For Maximum Productivity

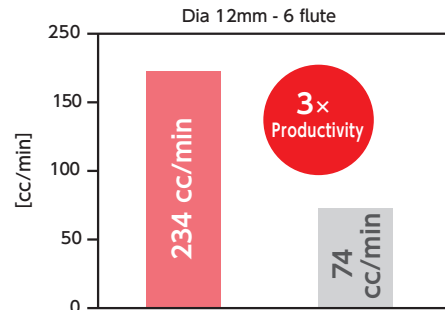
- A continuous cut is recommended. An interrupted cut may cause chipping or breakage.
- When using a Hydraulic or Shrink chuck, blow air to the arbor body, DON'T blow air to the endmill itself.
- A Minimum speed of 980 SFM is required. (Don't run at lower speed.)
- A 1.5 degree ramping angle is recommended. Run at 50% lower feed rate when ramping cut.

When cutting HRSA materials

- Continue to machine even if you see BUE, removing BUE may cause chipping or breakage to the edge.
- High speed machining work hardens the material. For this reason, leave at least 0.3mm of material for a finishing process.



Cast Iron Block	
End Mill:	RCSI750J8R094S SX9
Speed	2700 SFM
Feed	.0025 IPT
DOC	.480"
Coolant	DRY



	SX9	Carbide
SFM	2300	360
IPT	.002	←
DOC	.138	.275