

Diameters:

0.250" - 0.750"

Cutting Edge Length:

0.012" - 0.039"

Overall Length:

2.50" - 4.00"

Number of Flutes:

4

Corner Configurations:

0.039" - 0.118"

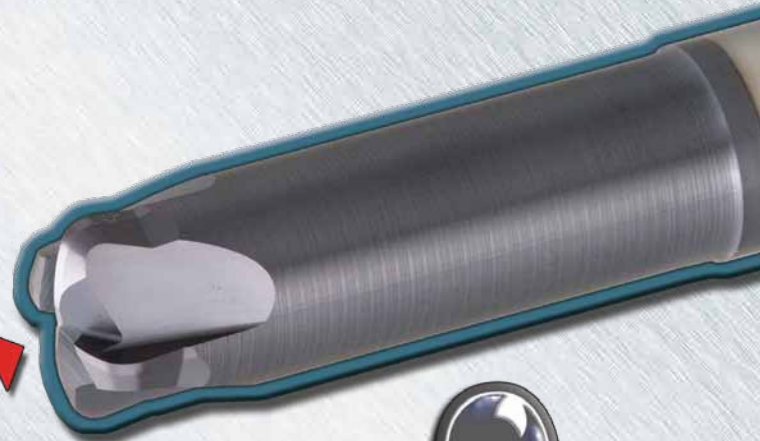
Relief Radius:

0.220" - 0.665"

Grade:

IN2006

Hybrid High
Feed Geometry



Series 45A...RA 4 Flute Hi-Feed Endmills

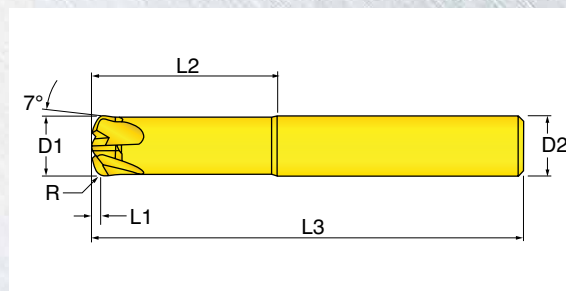
Ingersoll's series 45A...RA solid carbide Hi-Feed Endmill utilizes a special hybrid geometry cutting edge configuration that allows greatly increased feed rates. The resultant cutting forces are directed axially towards the spindle. This results in exceptional stability and enables machining at high feeds.

Features and Benefits

- New 0.625" and 0.750" diameters
- 4 flutes for blistering feedrates
- An optimal solution for roughing operations
- Covers a wide range of applications including slotting, pocketing, helical interpolation and 3D contouring
- Useful for machining materials such as hardened steel up to 65 HRC, P20, H13, cast iron, stainless steel, titanium and high alloy temperature alloys.
- Feed Round can operate at feed rates up to 0.020" per tooth, at 0.012" to 0.04" depth of cut, providing a significant reduction in cycle time
- Feed rates obtained by the Feed Round is five to ten times higher, when compared to conventional ball nose endmills

FEED^oROUNDS™ SERIES 45A_RA

HI-FEED SOLID CARBIDE ENDMILLS, 4-FLUTES



Grade	P	M	K	N _(K)	S _(M)	H _(P/K)
IN2006	+	+	+		+	

	e8
	h6



⊕ Preferred choice ○ Second choice

Cutter Number	D1 Diameter	Z Flutes	R Radius	L2 Height	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style
45A-2500R6RA03	0.250	4	0.039	0.750	2.50	0.01	.250" C
45A-3100R7RA05	0.312	4	0.051	1.000	2.50	0.02	.312" C
45A-3700R8RA06	0.375	4	0.059	1.200	3.00	0.02	.375" C
45A-5000S4RA07	0.500	4	0.083	1.300	3.00	0.02	.500" C
45A-6200S6RA10	0.625	4	0.102	1.650	3.50	0.03	.625" C
45A-7500S1RA11	0.750	4	0.118	1.800	4.00	0.04	.750" C

FEED^oROUNDS™ OPERATING GUIDELINES

ROUND LINE - HIGH FEED END MILL (4 FLUTE) OPERATING GUIDELINES Series 45A

Workpiece Material	Diameter / Programming radius	cutting speed	feed per tooth	recommended cutting depth	
	in	Vc in/min	fz (in)	ap (in)	
Unalloyed steel P	.250 R.040	650 - 950	.012	.012	
	.312 R.065	650 - 950	.015	.015	
	.375 R.080	650 - 950	.020	.020	
	.500 R.100	650 - 950	.020	.025	
	.625 R.125	650 - 950	.025	.030	
	.750 R.160	650 - 950	.030	.040	
High Carbon steel P	1.00 R.145	650 - 950	.030	.045	
	.250 R.040	600 - 850	.012	.012	
	.312 R.065	600 - 850	.015	.015	
	.375 R.080	600 - 850	.020	.020	
	.500 R.100	600 - 850	.020	.025	
	.625 R.125	600 - 850	.025	.030	
Alloyed / Tool steel < 1400N/mm ² P	.750 R.160	600 - 850	.030	.040	
	1.00 R.145	600 - 850	.030	.045	
	.250 R.040	500 - 700	.012	.008	
	.312 R.065	500 - 700	.015	.012	
	.375 R.080	500 - 700	.020	.015	
	.500 R.100	500 - 700	.020	.020	
Stainless steel M	.625 R.125	500 - 700	.025	.025	
	.750 R.160	500 - 700	.030	.030	
	1.00 R.145	500 - 700	.030	.040	
	.250 R.040	450 - 650	.012	.008	
	.312 R.065	450 - 650	.015	.012	
	.375 R.080	450 - 650	.020	.015	
Gray cast iron K	.500 R.100	450 - 650	.020	.020	
	.625 R.125	450 - 650	.025	.025	
	.750 R.160	450 - 650	.030	.030	
	1.00 R.145	450 - 650	.030	.040	
	.250 R.040	650 - 950	.012	.012	
	.312 R.065	650 - 950	.015	.015	
Cast alloys K	.375 R.080	650 - 950	.020	.020	
	.500 R.100	650 - 950	.020	.025	
	.625 R.125	650 - 950	.025	.030	
	.750 R.160	650 - 950	.030	.040	
	1.00 R.145	650 - 950	.030	.045	
	.250 R.040	500 - 700	.012	.008	
Cast alloys K	.312 R.065	500 - 700	.015	.012	
	.375 R.080	500 - 700	.020	.015	
	.500 R.100	500 - 700	.020	.020	
	.625 R.125	500 - 700	.025	.025	
	.750 R.160	500 - 700	.030	.030	
	1.00 R.145	500 - 700	.030	.040	

ROUND LINE - HIGH FEED END MILL (4 FLUTE) OPERATING GUIDELINES Series 45A

Workpiece Material	Diameter / Programming radius	cutting speed	feed per tooth	recommended cutting depth
	in	Vc in/min	fz (in)	ap (in)
Super alloys S	.250 R.040	130 - 250	.008	.004
	.312 R.065	130 - 250	.008	.008
	.375 R.080	130 - 250	.012	.012
	.500 R.100	130 - 250	.012	.012
	.625 R.125	130 - 250	.015	.020
	.750 R.160	130 - 250	.015	.020
	1.00 R.145	130 - 250	.018	.020
Hardened steel < 50 HRC	.250 R.040	300 - 450	.012	.004
	.312 R.065	300 - 450	.012	.008
	.375 R.080	300 - 450	.015	.012
	.500 R.100	300 - 450	.015	.012
	.625 R.125	300 - 450	.020	.020
	.750 R.160	300 - 450	.020	.020
	1.00 R.145	300 - 450	.020	.020
Hardened steel < 58 HRC	.250 R.040	150 - 250	.008	.004
	.312 R.065	150 - 250	.008	.008
	.375 R.080	150 - 250	.012	.008
	.500 R.100	150 - 250	.012	.012
	.625 R.125	150 - 250	.015	.015
	.750 R.160	150 - 250	.015	.015
	1.00 R.145	150 - 250	.015	.015