

# IASRT



## New Generation Face Mill Dramatically Reduces Roughing Time



**FACE MILL  
STYLE**



### FEATURES

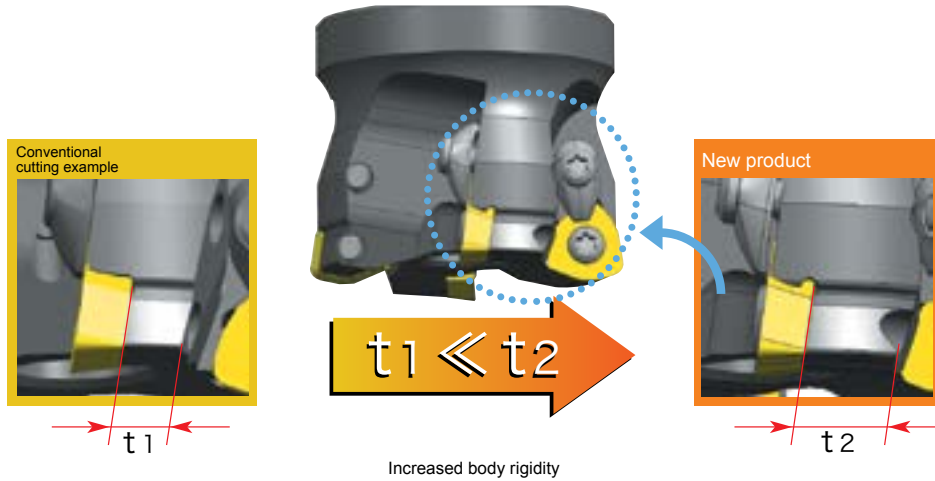
Highly rigid body design for trouble-free machining

Ideal for machining a wide range of materials including mild steels, cast iron, stainless steels and hardened steels up to 55HRC

Two insert types: standard and with chip breaker

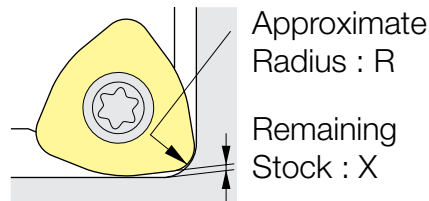
### FEATURES

#### 1. Worry-Free High-Efficient Machining Achieved by Increasing Body Rigidity



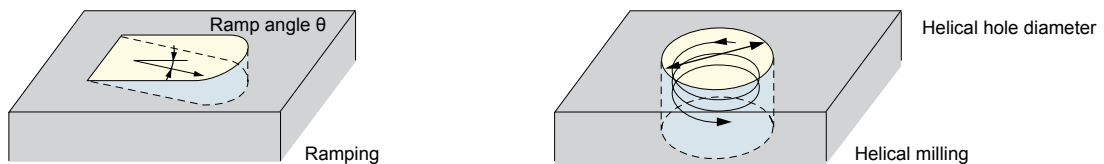
#### 2. Programming Information

Please program the approximate radius as indicated.



Insert Item	Approximate Radius	Remaining Stock	Max Depth of Cut
WDNW/T120420	0.118 inch	0.0248 inch	0.078 inch
WDNW/T140520	0.118 inch	0.0252 inch	0.078 inch
WDNW150620	0.118 Inch	0.036 Inch	0.098 Inch

#### 3. Direct Milling



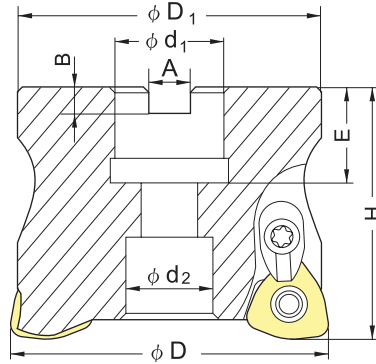
Tool Type	IASRT40**/50**		
Tool Diameter	2.00	3.00	4.00
Ramp angle	2.0°	1.5°	1.0°
Helical Hole Diameter	3.10-3.78	5.05-6.00	6.80-7.75

Tool Type	IASRT60**			
Tool Diameter	2.50	3.00	4.00	5.00
Ramp angle	1.0° or less	1.0° or less	1.0° or less	1.0° or less
Helical Hole Diameter	3.70-4.92	4.72-5.92	6.69-7.92	8.70-9.92

**[Note]** 1. The ramp angle  $\theta$  should be set within the ranges listed above. Use at ramp angles of 1° or less is recommended.  
 2. For hole diameters outside the ranges listed above, a pilot hole should be drilled before milling.

# IASRT/ASRT

Bore Style  
Inch



D 0/-0.2

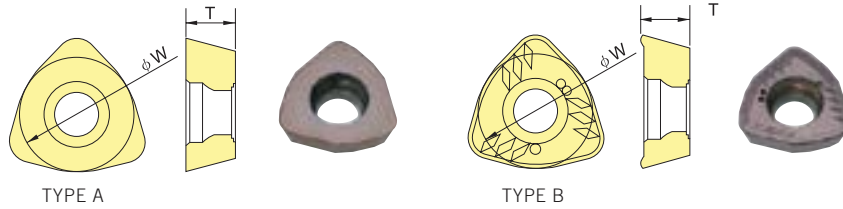
## IASRT-Inch

Part No.	Flutes	ØD	ØD1	H	E	A	B	Ød1	Ød2	Insert
IASRT4032-4	4	2.0	1.850	1.969	0.748	0.315	0.197	0.75	0.630	WDNW120420, WDNT120420
IASRT5048-5	5	3.0	2.992	2.480	1.378	0.374	0.236	1.00	0.827	WDNW140520, WDNT140520
IASRT5064-6	6	4.0	3.780	2.756	1.378	0.626	0.394	1.50	1.260	WDNW140520, WDNT140520
IASRT6040R-4	4	2.5	2.362	1.969	1.024	0.320	0.197	0.75	0.630	WDNW150620
IASRT6048R-5	5	3.0	2.756	2.480	1.378	0.380	0.236	1.00	0.827	WDNW150620
IASRT6064R-6	6	4.0	3.937	2.756	1.378	0.630	0.394	1.50	1.240	WDNW150620
IASRT6080R-7	7	5.0	3.937	2.756	1.378	0.630	0.394	1.50	1.969	WDNW150620

Part No.	Clamp Screw	Clamp Piece Set	Wrench
IASRT4032	262-142	CM4-141	105-T15
IASRT5048	555-141	CM5-147	105-T20
IASRT5064	555-141	CM5-147	105-T20
IASRT60**	555-141	CM5-147	105-T20

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## Inserts



### Inserts

Part No.						Type	ØW	T	Body
	JS4045	JP4020	JP4120	JS4060	JM4060				
WDNW120420	•	•		•	•	A	0.472	0.187	IASRT4032-4
WDNT120420	•	•		•	•	B	0.472	0.187	IASRT4032-4
WDNW140520	•	•		•	•	A	0.551	0.219	IASRT5048-5
WDNT140520	•	•		•	•	B	0.551	0.219	IASRT5064-6
WDNW150620	•		•	•		A	0.630	0.236	IASRT60***

All inserts have three effective cutting edges

### COATING MATERIALS FOR INSERTS

Material name ISO Classification	Coating Name Coating Type	Application	Features
<b>JP4120</b> P10-M10-K10	<b>AJ Coating</b> PVD	For cutting of pre-hardened steels (35-50 HRC)	Uses fine grain substrate and AJ coating Suitable for cutting of general steels through pre-hardened steels
<b>JP4020</b> P10-M10-K10	<b>JP Coating</b> PVD	For cutting of pre-hardened steels (40-50HRC)	Uses coating with excellent shock resistance, making it superior for cutting pre-hardened steels
<b>JS4045</b> P30-K30	<b>JS Coating</b> PVD	General purpose for steel	Uses rough grain substrate and JS coating. Suitable for general steel cutting.
<b>JS4060</b> P40	<b>JS Coating</b> PVD	General purpose for steel	Uses coating with excellent heat resistance and lubrication characteristics. Has a wide cutting range.
<b>JM4060</b> P40-M40	<b>JM Coating</b> PVD	For cutting stainless steel materials	Uses coating with adhesion of membranes to reduce peeling of membranes due to welding.

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## Cutting Conditions Inch



Material	Conditions	Ø		2" / 4			2.5" / 4			3" / 5		
		No. of Flutes		<3D		3D-5D	<3D		3D-5D	<3D		3D-5D
		General	Hi-Speed	General	Hi-Speed	3D-5D	General	Hi-Speed	3D-5D	General	Hi-Speed	3D-5D
Mild Steel Carbon Steel (<200HRB) JS4060 JS4045	N(rpm)	960	1280	960	750	1000	750	620	830	620		
	Vf(in/min)	227	302	227	177	236	177	183	245	183		
	fz(in/t)	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059		
	doc(in)	0.059	0.049	0.039	0.059	0.059	0.039	0.059	0.059	0.039		
	woc(in)	1.575	1.575	1.575	1.772	1.772	1.772	2.165	2.165	2.165		
Tool Steel Alloy Steel (30-45HRC) JP4020 JP4120 JS4045 JS4060	N(rpm)	640	950	640	500	750	500	410	620	410		
	Vf(in/min)	81	121	81	79	142	79	81	146	81		
	fz(in/t)	0.031	0.031	0.031	0.039	0.047	0.039	0.039	0.047	0.039		
	doc(in)	0.059	0.059	0.039	0.047	0.047	0.039	0.059	0.059	0.039		
	woc(in)	1.575	1.575	1.575	1.772	1.772	1.772	2.165	2.165	2.165		
Tool Steel Alloy Steel (45-55HRC) JP4020 JP4120	N(rpm)	510	770	510	400	600	400	330	500	330		
	Vf(in/min)	16	24	16	50	94	50	52	98	52		
	fz(in/t)	0.008	0.008	0.008	0.031	0.039	0.031	0.031	0.039	0.031		
	doc(in)	0.059	0.059	0.039	0.039	0.039	0.028	0.039	0.039	0.028		
	woc(in)	1.575	1.575	1.575	1.772	1.772	1.772	2.165	2.165	2.165		
Stainless Steel JM4060	N(rpm)	640	1280	640	500	1000	500	410	830	410		
	Vf(in/min)	81	161	81	63	157	63	65	163	65		
	fz(in/t)	0.031	0.031	0.031	0.031	0.039	0.031	0.031	0.039	0.031		
	doc(in)	0.059	0.059	0.039	0.059	0.059	0.039	0.059	0.059	0.039		
	woc(in)	1.575	1.575	1.575	1.772	1.772	1.772	2.165	2.165	2.165		
Cast Iron JS4045 JP4020 JP4120	N(rpm)	960	1280	960	750	1000	750	620	830	620		
	Vf(in/min)	227	302	227	177	315	177	183	327	183		
	fz(in/t)	0.059	0.059	0.059	0.059	0.079	0.059	0.059	0.079	0.059		
	doc(in)	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059		
	woc(in)	1.575	1.575	1.575	1.772	1.772	1.772	2.165	2.165	2.165		

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## Cutting Conditions Inch



Material	Conditions	Ø No. of Flutes		4" 6		5" 7	
		<3D		3D-5D	<3D		3D-5D
		General	Hi-Speed		General	Hi-Speed	
Mild Steel Carbon Steel (<200HRB) JS4060 JS4045	N(rpm)	470	620	470	370	500	370
	Vf(in/min)	167	220	167	153	207	153
	fz(in/t)	0.059	0.059	0.059	0.059	0.059	0.059
	doc(in)	0.059	0.059	0.039	0.059	0.059	0.039
	woc(in)	3.15	3.15	3.15	3.937	3.937	3.937
Tool Steel Alloy Steel (30-45HRC) JP4020 JP4120 JS4045 JS4060	N(rpm)	310	470	310	250	370	250
	Vf(in/min)	73	133	73	69	122	69
	fz(in/t)	0.039	0.047	0.039	0.039	0.047	0.039
	doc(in)	0.059	0.059	0.039	0.059	0.059	0.039
	woc(in)	3.15	3.15	3.15	3.937	3.937	3.937
Tool Steel Alloy Steel (45-55HRC) JP4020 JP4120	N(rpm)	250	370	250	200	300	200
	Vf(in/min)	47	87	47	44	83	44
	fz(in/t)	0.031	0.039	0.031	0.031	0.039	0.031
	doc(in)	0.039	0.039	0.028	0.039	0.039	0.028
	woc(in)	3.15	3.15	3.15	3.937	3.937	3.937
Stainless Steel JM4060	N(rpm)	310	620	310	250	500	250
	Vf(in/min)	58	146	58	55	138	55
	fz(in/t)	0.031	0.039	0.031	0.031	0.039	0.031
	doc(in)	0.059	0.059	0.039	0.059	0.059	0.039
	woc(in)	3.15	3.15	3.15	3.937	3.937	3.937
Cast Iron JS4045 JP4020 JP4120	N(rpm)	470	620	470	370	500	370
	Vf(in/min)	167	293	167	153	276	153
	fz(in/t)	0.059	0.079	0.059	0.059	0.079	0.059
	doc(in)	0.059	0.059	0.059	0.059	0.059	0.059
	woc(in)	3.15	3.15	3.15	3.937	3.937	3.937