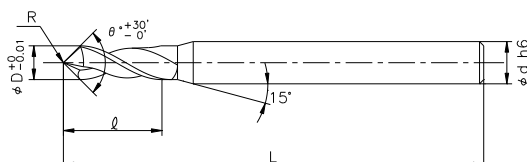


KSVRA-2

超硬センターVエンドミル（先端R付）・TiA ℓ Nコーティング付
Tungsten Carbide Center V Endmill With Edge TiA ℓ N Coating

■先端角60° 90° 120°にTiALNコーティングを施しました
TiALN coating is applied to the tip angles of 60°, 90°, and 120°

■先端R0.1～R2.0
Tip Radius R0.1～R0.2



被削材 Workpiece					
一般構造鋼 General Structural Steel	炭素鋼 Carbon Steel	合金鋼・工具鋼 Alloy Steel Tool Steel	プリハードン鋼 Pre-Harden Steel	鋳鉄 Cast Iron	ステンレス鋼 Stainless Steel
◎	◎	◎	◎	◎	◎

●切削条件表はP226、227に記載

●Cutting conditions are recommended on page 226、227.

単位 [寸法:mm]

Unit [size:mm]

品番 Code No.	刃径 D Flute Diameter	先端角 Edge Angle	先端 R Edge R	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSVRA-206010010	1	60°	R0.1	2	50	4
KSVRA-206010015	1	60°	R0.15	2	50	4
KSVRA-206010020	1	60°	R0.2	2	50	4
KSVRA-206010025	1	60°	R0.25	2	50	4
KSVRA-206010030	1	60°	R0.3	2	50	4
KSVRA-209010010	1	90°	R0.1	2	50	4
KSVRA-209010015	1	90°	R0.15	2	50	4
KSVRA-209010020	1	90°	R0.2	2	50	4
KSVRA-209010025	1	90°	R0.25	2	50	4
KSVRA-209010030	1	90°	R0.3	2	50	4
KSVRA-212010010	1	120°	R0.1	2	50	4
KSVRA-212010015	1	120°	R0.15	2	50	4
KSVRA-212010020	1	120°	R0.2	2	50	4
KSVRA-212010025	1	120°	R0.25	2	50	4
KSVRA-212010030	1	120°	R0.3	2	50	4
KSVRA-206015010	1.5	60°	R0.1	3	50	4
KSVRA-206015015	1.5	60°	R0.15	3	50	4
KSVRA-206015020	1.5	60°	R0.2	3	50	4
KSVRA-206015025	1.5	60°	R0.25	3	50	4
KSVRA-206015030	1.5	60°	R0.3	3	50	4
KSVRA-209015010	1.5	90°	R0.1	3	50	4
KSVRA-209015015	1.5	90°	R0.15	3	50	4
KSVRA-209015020	1.5	90°	R0.2	3	50	4
KSVRA-209015025	1.5	90°	R0.25	3	50	4
KSVRA-209015030	1.5	90°	R0.3	3	50	4
KSVRA-212015010	1.5	120°	R0.1	3	50	4
KSVRA-212015015	1.5	120°	R0.15	3	50	4
KSVRA-212015020	1.5	120°	R0.2	3	50	4
KSVRA-212015025	1.5	120°	R0.25	3	50	4
KSVRA-212015030	1.5	120°	R0.3	3	50	4

品番 Code No.	刃径 D Flute Diameter	先端角 Edge Angle	先端 R Edge R	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSVRA-206020010	2	60°	R0.1	4	50	4
KSVRA-206020015	2	60°	R0.15	4	50	4
KSVRA-206020020	2	60°	R0.2	4	50	4
KSVRA-206020025	2	60°	R0.25	4	50	4
KSVRA-206020030	2	60°	R0.3	4	50	4
KSVRA-206020040	2	60°	R0.4	4	50	4
KSVRA-206020050	2	60°	R0.5	4	50	4
KSVRA-209020010	2	90°	R0.1	4	50	4
KSVRA-209020015	2	90°	R0.15	4	50	4
KSVRA-209020020	2	90°	R0.2	4	50	4
KSVRA-209020025	2	90°	R0.25	4	50	4
KSVRA-209020030	2	90°	R0.3	4	50	4
KSVRA-209020040	2	90°	R0.4	4	50	4
KSVRA-209020050	2	90°	R0.5	4	50	4
KSVRA-212020010	2	120°	R0.1	4	50	4
KSVRA-212020015	2	120°	R0.15	4	50	4
KSVRA-212020020	2	120°	R0.2	4	50	4
KSVRA-212020025	2	120°	R0.25	4	50	4
KSVRA-212020030	2	120°	R0.3	4	50	4
KSVRA-212020040	2	120°	R0.4	4	50	4
KSVRA-212020050	2	120°	R0.5	4	50	4
KSVRA-206030010	3	60°	R0.1	6	50	6
KSVRA-206030015	3	60°	R0.15	6	50	6
KSVRA-206030020	3	60°	R0.2	6	50	6
KSVRA-206030025	3	60°	R0.25	6	50	6
KSVRA-206030030	3	60°	R0.3	6	50	6
KSVRA-206030040	3	60°	R0.4	6	50	6
KSVRA-206030050	3	60°	R0.5	6	50	6
KSVRA-206030075	3	60°	R0.75	6	50	6
KSVRA-206030100	3	60°	R1	6	50	6

KSVRA-2

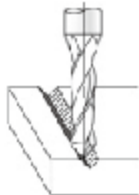
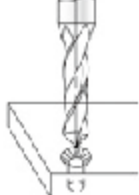
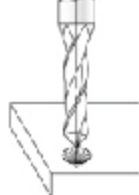
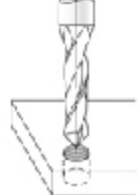
品番 Code No.	刃径 D Flute Diameter	先端角 Edge Angle	先端 R Edge R	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSVRA-209030010	3	90°	R0.1	6	50	6
KSVRA-209030015	3	90°	R0.15	6	50	6
KSVRA-209030020	3	90°	R0.2	6	50	6
KSVRA-209030025	3	90°	R0.25	6	50	6
KSVRA-209030030	3	90°	R0.3	6	50	6
KSVRA-209030040	3	90°	R0.4	6	50	6
KSVRA-209030050	3	90°	R0.5	6	50	6
KSVRA-209030075	3	90°	R0.75	6	50	6
KSVRA-209030100	3	90°	R1	6	50	6
KSVRA-212030010	3	120°	R0.1	6	50	6
KSVRA-212030015	3	120°	R0.15	6	50	6
KSVRA-212030020	3	120°	R0.2	6	50	6
KSVRA-212030025	3	120°	R0.25	6	50	6
KSVRA-212030030	3	120°	R0.3	6	50	6
KSVRA-212030040	3	120°	R0.4	6	50	6
KSVRA-212030050	3	120°	R0.5	6	50	6
KSVRA-212030075	3	120°	R0.75	6	50	6
KSVRA-212030100	3	120°	R1	6	50	6
KSVRA-206060010	6	60°	R0.1	12	60	6
KSVRA-206060015	6	60°	R0.15	12	60	6
KSVRA-206060020	6	60°	R0.2	12	60	6
KSVRA-206060025	6	60°	R0.25	12	60	6
KSVRA-206060030	6	60°	R0.3	12	60	6
KSVRA-206060040	6	60°	R0.4	12	60	6
KSVRA-206060050	6	60°	R0.5	12	60	6
KSVRA-206060075	6	60°	R0.75	12	60	6
KSVRA-206060100	6	60°	R1	12	60	6
KSVRA-206060125	6	60°	R1.25	12	60	6
KSVRA-206060150	6	60°	R1.5	12	60	6
KSVRA-206060175	6	60°	R1.75	12	60	6
KSVRA-206060200	6	60°	R2	12	60	6
KSVRA-209060010	6	90°	R0.1	12	60	6
KSVRA-209060015	6	90°	R0.15	12	60	6
KSVRA-209060020	6	90°	R0.2	12	60	6
KSVRA-209060025	6	90°	R0.25	12	60	6
KSVRA-209060030	6	90°	R0.3	12	60	6
KSVRA-209060040	6	90°	R0.4	12	60	6
KSVRA-209060050	6	90°	R0.5	12	60	6
KSVRA-209060075	6	90°	R0.75	12	60	6
KSVRA-209060100	6	90°	R1	12	60	6
KSVRA-209060125	6	90°	R1.25	12	60	6
KSVRA-209060150	6	90°	R1.5	12	60	6
KSVRA-209060175	6	90°	R1.75	12	60	6
KSVRA-209060200	6	90°	R2	12	60	6
KSVRA-212060010	6	120°	R0.1	12	60	6
KSVRA-212060015	6	120°	R0.15	12	60	6
KSVRA-212060020	6	120°	R0.2	12	60	6
KSVRA-212060025	6	120°	R0.25	12	60	6

[illegible]

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切削条件参考 Referential Cutting Conditions

◆加工例 Cutting Sample

適用 Application						
型番 Model	面取り加工 Chamfer Cutting	側面加工 Side Cutting	V溝加工 V Groove Cutting	皿面取り加工 Recess Cutting	センターモミ加工 Center Cutting	穴あけ加工 Drilling
KSVRA-2 60°	○	○	×	○	×	×
KSVRA-2 90°	○	○	○	○	□	△
KSVRA-2 120°	○	○	○	○	○	○

○印は適合、□印は非鉄・鋳鉄などに適合、△印は厚みの薄い物に使用可、×印は不適合です。

Mark○ : Available、Mark□ : Available for Non - Ferrous Metal and Cast Iron、Mark△ : Available for Thin Workpiece、Mark× : Not Available

◆切削条件表 Referential Cutting Conditions

被削材 Workpiece	炭素鋼・一般構造用鋼 Carbon Steel・General Structural Steel S55C・SS材						合金鋼・工具鋼 Alloy Steel・Tool Steel SCM・SKT・SKS・SKD					
	面取り・側面加工 Chamfer Cutting Side Cutting		V溝加工 V groove Cutting		センターモミ・穴あけ Center Cutting Drilling		面取り・側面加工 Chamfer Cutting Side Cutting		V溝加工 V groove Cutting		センターモミ・穴あけ Center Cutting Drilling	
刃径 Flute Diameter mm	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev
1	20~35	0.015 ~0.035	20~35	0.015 ~0.035	20~35	0.025 ~0.045	15~30	0.01 ~0.025	15~30	0.003 ~0.008	15~30	0.01 ~0.03
1.5	20~35	0.015 ~0.035	20~35	0.015 ~0.035	20~35	0.025 ~0.045	15~30	0.01 ~0.025	15~30	0.003 ~0.008	15~30	0.01 ~0.03
2	20~35	0.015 ~0.035	20~35	0.015 ~0.035	20~35	0.025 ~0.045	15~30	0.01 ~0.025	15~30	0.003 ~0.008	15~30	0.015 ~0.04
3	20~35	0.015 ~0.035	20~35	0.015 ~0.035	20~35	0.025 ~0.045	15~30	0.01 ~0.025	15~30	0.003 ~0.008	15~30	0.015 ~0.04
6	25~40	0.03 ~0.06	25~40	0.03 ~0.06	25~40	0.03 ~0.06	20~35	0.01 ~0.035	20~35	0.008 ~0.02	20~35	0.02 ~0.05

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◆切削条件表 Referential Cutting Conditions

被削材 Workpiece	鋳 鉄 Cast Iron FCT・FCD											
加工種類 Kinds of Processing	面取り・側面加工 Chamfer Cutting Side Cutting		V溝加工 V groove Cutting		センターモミ・穴あけ Center Cutting Drilling							
刃 径 Flute Diameter mm	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev						
1	45~70	0.03 ~0.05	45~70	0.03 ~0.05	45~70	0.04 ~0.07						
1.5	45~70	0.03 ~0.05	45~70	0.03 ~0.05	45~70	0.04 ~0.07						
2	45~70	0.03 ~0.05	45~70	0.03 ~0.05	45~70	0.04 ~0.07						
3	45~70	0.03 ~0.05	45~70	0.03 ~0.05	45~70	0.07 ~0.1						
6	45~80	0.03 ~0.06	45~80	0.03 ~0.06	45~80	0.07 ~0.12						

備 考 Remarks	・回転数と送り速度は同じ割合で調整して下さい。 ・Adjust Revolution and Feed Speed at the same rate. ・切削油を使用して下さい。 ・Use Cutting Oil.
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