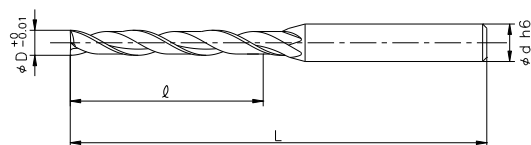


KSEL-2

超硬ロングエンドミル Tungsten Carbide 2 Flutes Long Endmill

- 刃径をφ0.1～φ6までラインナップ
Lineup of blade diameters from φ0.1 to φ6
- 刃長が刃径の4倍～最大16倍までラインナップ
Lineup of blade lengths from 4 times to a maximum of 16 times the blade diameter



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	アルミ合金 Aluminum Alloy
○	○	○	○	○	○

- 切削条件表はP179に記載
- Cutting conditions are recommended on page 179.

単位 [寸法: mm]
Unit [size: mm]

品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-201003	0.1	0.3	40	3
KSEL-201004	0.1	0.4	40	3
KSEL-201005	0.1	0.5	40	3
KSEL-201006	0.1	0.6	40	3
KSEL-201007	0.1	0.7	40	3
KSEL-201008	0.1	0.8	40	3
KSEL-201010	0.1	1	40	3
KSEL-201012	0.1	1.2	40	3
KSEL-201015	0.1	1.5	40	3
KSEL-201505	0.15	0.5	40	3
KSEL-201510	0.15	1	40	3
KSEL-201515	0.15	1.5	40	3
KSEL-201520	0.15	2	40	3
KSEL-202006	0.2	0.6	40	3
KSEL-202010	0.2	1	40	3
KSEL-202015	0.2	1.5	40	3
KSEL-202020	0.2	2	40	3
KSEL-202025	0.2	2.5	40	3
KSEL-202510	0.25	1	40	3
KSEL-202520	0.25	2	40	3
KSEL-202525	0.25	2.5	40	3
KSEL-202530	0.25	3	40	3
KSEL-203015	0.3	1.5	40	3
KSEL-203020	0.3	2	40	3
KSEL-203030	0.3	3	40	3
KSEL-203040	0.3	4	40	3
KSEL-203520	0.35	2	40	3
KSEL-203530	0.35	3	40	3
KSEL-203540	0.35	4	40	3
KSEL-203550	0.35	5	40	3

品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-204020	0.4	2	40	3
KSEL-204030	0.4	3	40	3
KSEL-204040	0.4	4	40	3
KSEL-204050	0.4	5	40	3
KSEL-204520	0.45	2	40	3
KSEL-204530	0.45	3	40	3
KSEL-204540	0.45	4	40	3
KSEL-204550	0.45	5	40	3
KSEL-204560	0.45	6	40	3
KSEL-205015	0.5	1.5	40	3
KSEL-205020	0.5	2	40	3
KSEL-205025	0.5	2.5	40	3
KSEL-205030	0.5	3	40	3
KSEL-205035	0.5	3.5	40	3
KSEL-205040	0.5	4	40	3
KSEL-205050	0.5	5	40	3
KSEL-205060	0.5	6	40	3
KSEL-205520	0.55	2	40	3
KSEL-205530	0.55	3	40	3
KSEL-205540	0.55	4	40	3
KSEL-205550	0.55	5	40	3
KSEL-205560	0.55	6	40	3
KSEL-206030	0.6	3	40	3
KSEL-206040	0.6	4	40	3
KSEL-206050	0.6	5	40	3
KSEL-206060	0.6	6	40	3
KSEL-206530	0.65	3	40	3
KSEL-206545	0.65	4.5	40	3
KSEL-206560	0.65	6	40	3
KSEL-206570	0.65	7	40	3

超硬
エンドミル

Carbide
Endmill

KSEL-2

品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-207030	0.7	3	40	3
KSEL-207040	0.7	4	40	3
KSEL-207050	0.7	5	40	3
KSEL-207060	0.7	6	40	3
KSEL-207070	0.7	7	40	3
KSEL-207080	0.7	8	40	3
KSEL-207540	0.75	4	40	3
KSEL-207560	0.75	6	40	3
KSEL-207580	0.75	8	40	3
KSEL-207590	0.75	9	40	3
KSEL-208030	0.8	3	40	3
KSEL-208035	0.8	3.5	40	3
KSEL-208040	0.8	4	40	3
KSEL-208060	0.8	6	40	3
KSEL-208080	0.8	8	40	3
KSEL-208100	0.8	10	40	3
KSEL-208120	0.8	12	40	3
KSEL-208550	0.85	5	40	3
KSEL-208560	0.85	6	40	3
KSEL-208580	0.85	8	40	3
KSEL-208510	0.85	10	40	3
KSEL-209050	0.9	5	40	3
KSEL-209060	0.9	6	40	3
KSEL-209080	0.9	8	40	3
KSEL-209100	0.9	10	40	3
KSEL-209560	0.95	6	40	3
KSEL-209580	0.95	8	40	3
KSEL-209510	0.95	10	40	3
KSEL-209512	0.95	12	40	3
KSEL-210040	1	4	45	4
KSEL-210050	1	5	45	4
KSEL-210060	1	6	45	4
KSEL-210070	1	7	45	4
KSEL-210080	1	8	45	4
KSEL-210090	1	9	45	4
KSEL-210100	1	10	45	4
KSEL-210120	1	12	45	4
KSEL-210140	1	14	45	4
KSEL-210560	1.05	6	45	4
KSEL-210580	1.05	8	45	4
KSEL-210510	1.05	10	45	4
KSEL-210512	1.05	12	45	4
KSEL-211060	1.1	6	45	4
KSEL-211080	1.1	8	45	4
KSEL-211100	1.1	10	45	4
KSEL-211120	1.1	12	45	4
KSEL-211580	1.15	8	45	4
KSEL-211510	1.15	10	45	4

品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-211512	1.15	12	45	4
KSEL-211514	1.15	14	45	4
KSEL-212060	1.2	6	45	4
KSEL-212080	1.2	8	45	4
KSEL-212100	1.2	10	45	4
KSEL-212120	1.2	12	45	4
KSEL-212140	1.2	14	45	4
KSEL-212580	1.25	8	45	4
KSEL-212510	1.25	10	45	4
KSEL-212512	1.25	12	45	4
KSEL-212514	1.25	14	45	4
KSEL-213060	1.3	6	45	4
KSEL-213080	1.3	8	45	4
KSEL-213100	1.3	10	45	4
KSEL-213120	1.3	12	45	4
KSEL-213150	1.3	15	45	4
KSEL-213580	1.35	8	45	4
KSEL-213510	1.35	10	45	4
KSEL-213512	1.35	12	45	4
KSEL-213515	1.35	15	45	4
KSEL-214060	1.4	6	45	4
KSEL-214080	1.4	8	45	4
KSEL-214100	1.4	10	45	4
KSEL-214120	1.4	12	45	4
KSEL-214140	1.4	14	45	4
KSEL-214160	1.4	16	45	4
KSEL-214580	1.45	8	45	4
KSEL-214512	1.45	12	45	4
KSEL-214515	1.45	15	50	4
KSEL-214518	1.45	18	55	4
KSEL-215060	1.5	6	45	4
KSEL-215080	1.5	8	45	4
KSEL-215100	1.5	10	45	4
KSEL-215120	1.5	12	45	4
KSEL-215150	1.5	15	50	4
KSEL-215180	1.5	18	55	4
KSEL-215200	1.5	20	60	4
KSEL-215580	1.55	8	45	4
KSEL-215512	1.55	12	45	4
KSEL-215516	1.55	16	50	4
KSEL-215520	1.55	20	60	4
KSEL-216080	1.6	8	45	4
KSEL-216100	1.6	10	45	4
KSEL-216120	1.6	12	45	4
KSEL-216160	1.6	16	50	4
KSEL-216200	1.6	20	60	4
KSEL-216580	1.65	8	45	4
KSEL-216512	1.65	12	45	4

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品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-216516	1.65	16	50	4
KSEL-216520	1.65	20	60	4
KSEL-217080	1.7	8	45	4
KSEL-217100	1.7	10	45	4
KSEL-217120	1.7	12	45	4
KSEL-217150	1.7	15	50	4
KSEL-217170	1.7	17	50	4
KSEL-217210	1.7	21	60	4
KSEL-217510	1.75	10	45	4
KSEL-217515	1.75	15	50	4
KSEL-217518	1.75	18	55	4
KSEL-217521	1.75	21	60	4
KSEL-218080	1.8	8	45	4
KSEL-218100	1.8	10	45	4
KSEL-218120	1.8	12	45	4
KSEL-218150	1.8	15	50	4
KSEL-218180	1.8	18	55	4
KSEL-218220	1.8	22	60	4
KSEL-218510	1.85	10	45	4
KSEL-218515	1.85	15	50	4
KSEL-218518	1.85	18	55	4
KSEL-218522	1.85	22	60	4
KSEL-219080	1.9	8	45	4
KSEL-219100	1.9	10	45	4
KSEL-219120	1.9	12	45	4
KSEL-219150	1.9	15	50	4
KSEL-219190	1.9	19	55	4
KSEL-219220	1.9	22	60	4
KSEL-219510	1.95	10	45	4
KSEL-219515	1.95	15	50	4
KSEL-219520	1.95	20	60	4
KSEL-219524	1.95	24	60	4
KSEL-220080	2	8	45	4
KSEL-220100	2	10	45	4
KSEL-220120	2	12	45	4
KSEL-220150	2	15	50	4
KSEL-220170	2	17	55	4
KSEL-220200	2	20	60	4
KSEL-220220	2	22	60	4
KSEL-220240	2	24	60	4
KSEL-221100	2.1	10	45	4
KSEL-221150	2.1	15	50	4
KSEL-221200	2.1	20	60	4
KSEL-221250	2.1	25	60	4
KSEL-222100	2.2	10	45	4
KSEL-222150	2.2	15	50	4
KSEL-222200	2.2	20	60	4
KSEL-222250	2.2	25	60	4

品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-223100	2.3	10	45	4
KSEL-223150	2.3	15	50	4
KSEL-223200	2.3	20	60	4
KSEL-223250	2.3	25	60	4
KSEL-224100	2.4	10	45	4
KSEL-224150	2.4	15	50	4
KSEL-224200	2.4	20	60	4
KSEL-224250	2.4	25	60	4
KSEL-225100	2.5	10	45	4
KSEL-225150	2.5	15	50	4
KSEL-225200	2.5	20	60	4
KSEL-225250	2.5	25	60	4
KSEL-225300	2.5	30	70	4
KSEL-226100	2.6	10	45	4
KSEL-226150	2.6	15	50	4
KSEL-226200	2.6	20	60	4
KSEL-226250	2.6	25	60	4
KSEL-226300	2.6	30	70	4
KSEL-227100	2.7	10	45	4
KSEL-227150	2.7	15	50	4
KSEL-227200	2.7	20	60	4
KSEL-227250	2.7	25	60	4
KSEL-227300	2.7	30	70	4
KSEL-228100	2.8	10	45	4
KSEL-228150	2.8	15	50	4
KSEL-228200	2.8	20	60	4
KSEL-228250	2.8	25	60	4
KSEL-228300	2.8	30	70	4
KSEL-229150	2.9	15	50	4
KSEL-229200	2.9	20	60	4
KSEL-229250	2.9	25	60	4
KSEL-229300	2.9	30	70	4
KSEL-230150	3	15	60	6
KSEL-230200	3	20	60	6
KSEL-230250	3	25	70	6
KSEL-230300	3	30	70	6
KSEL-230400	3	40	100	6
KSEL-230500	3	50	110	6
KSEL-231300	3.1	30	70	6
KSEL-232300	3.2	30	70	6
KSEL-233300	3.3	30	70	6
KSEL-234300	3.4	30	70	6
KSEL-235200	3.5	20	70	6
KSEL-235250	3.5	25	70	6
KSEL-235300	3.5	30	70	6
KSEL-235400	3.5	40	100	6
KSEL-235500	3.5	50	110	6
KSEL-236300	3.6	30	70	6

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品番 Code No.	刃径 D Flute Diameter	刃長 ℓ Flute Length	全長 L Total Length	柄径 d Shank Diameter
KSEL-237300	3.7	30	70	6
KSEL-238300	3.8	30	70	6
KSEL-239300	3.9	30	70	6
KSEL-240200	4	20	70	6
KSEL-240250	4	25	70	6
KSEL-240300	4	30	70	6
KSEL-240350	4	35	80	6
KSEL-240400	4	40	80	6
KSEL-240500	4	50	110	6
KSEL-240600	4	60	120	6
KSEL-241300	4.1	30	70	6
KSEL-242300	4.2	30	70	6
KSEL-243300	4.3	30	70	6
KSEL-244300	4.4	30	70	6
KSEL-245300	4.5	30	70	6
KSEL-245350	4.5	35	80	6
KSEL-245400	4.5	40	80	6
KSEL-246300	4.6	30	70	6
KSEL-247300	4.7	30	70	6
KSEL-248300	4.8	30	70	6
KSEL-249300	4.9	30	70	6
KSEL-250300	5	30	70	6
KSEL-250350	5	35	80	6
KSEL-250400	5	40	80	6
KSEL-250450	5	45	90	6
KSEL-250500	5	50	90	6
KSEL-250600	5	60	120	6
KSEL-250800	5	80	150	6
KSEL-251400	5.1	40	80	6
KSEL-252400	5.2	40	80	6
KSEL-253400	5.3	40	80	6
KSEL-254400	5.4	40	80	6
KSEL-255300	5.5	30	80	6
KSEL-255350	5.5	35	80	6
KSEL-255400	5.5	40	80	6
KSEL-255450	5.5	45	90	6
KSEL-255500	5.5	50	90	6
KSEL-256400	5.6	40	80	6
KSEL-257400	5.7	40	80	6
KSEL-258400	5.8	40	80	6
KSEL-259400	5.9	40	80	6
KSEL-260300	6	30	80	6
KSEL-260350	6	35	80	6
KSEL-260400	6	40	80	6
KSEL-260450	6	45	90	6
KSEL-260500	6	50	90	6
KSEL-260600	6	60	100	6
KSEL-260800	6	80	150	6

[illegible]

KSEL-2

切削条件参考

Referential Cutting Conditions



刃 径 Flute Diameter	切込み巾 Cutting Width	切込み深さ Cutting Depth
	Ar	Ad
$D < \phi 0.2$	0.05D	0.4D
$\phi 0.2 \leq D < \phi 1.0$	0.10D	0.4D
$\phi 1.0 \leq D$	0.10D	0.8D

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		プリハードン鋼 Pre-Harden Steel HPM-1・NAK55・SKT		鋳 鉄 Cast iron FC・FCD	
刃 径 Flute Diameter mm	回転数 Revolution min ⁻¹	送り速度 Feed mm/min	回転数 Revolution min ⁻¹	送り速度 Feed mm/min	回転数 Revolution min ⁻¹	送り速度 Feed mm/min	回転数 Revolution min ⁻¹	送り速度 Feed mm/min
0.1~0.2	32,000	15	32,000	15	32,000	15	32,000	15
0.3~0.4	19,000	20	19,000	20	19,000	20	19,000	20
0.5~0.6	13,000	25	13,000	25	10,000	20	13,000	25
0.7~0.8	9,600	30	9,600	30	7,400	20	9,600	30
0.9~1	7,500	40	7,500	40	5,800	25	7,500	40
1.1~1.2	6,200	40	6,200	40	4,800	25	6,200	40
1.3~1.4	5,300	40	5,300	40	4,100	30	5,300	40
1.5~1.6	4,600	40	4,600	40	3,600	30	4,600	40
1.7~1.8	4,100	40	4,100	40	3,200	30	4,100	40
1.9~2	3,700	40	3,700	40	2,800	30	3,700	40
2.1~2.2	3,300	50	3,300	50	2,600	35	3,300	50
2.3~2.4	3,000	50	3,000	50	2,400	35	3,000	50
2.5~2.6	2,800	55	2,800	55	2,200	40	2,800	55
2.7~2.8	2,600	55	2,600	55	2,000	40	2,600	55
2.9~3	2,500	55	2,500	55	1,900	40	2,500	60
3.1~3.5	2,100	55	2,000	55	1,600	40	2,200	60
3.6~4	1,750	55	1,550	50	1,250	40	1,950	80
4.1~4.5	1,550	55	1,400	50	1,100	40	1,700	80
4.6~5	1,400	55	1,250	50	1,000	40	1,550	80
5.1~5.5	1,200	55	1,150	50	920	40	1,400	80
5.6~6	1,100	55	1,050	50	845	40	1,300	80
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. ・刃長により回転数、送り速度を調整して下さい。・Adjust Revolution and Feed Speed according to Flute Length. ・切削油を使用して下さい。・Use Cutting Oil.							