
MS DRILL SERIES

DRILLS FOR UNIVERSAL MACHINING



MS DRILL

SOLID CARBIDE DRILL SERIES



A new choice of quality tooling for a superior cost performance ratio.

A versatile combination of reliable carbide and coating technology for the needs of the modern metal cutting world.

Solutions to cutting problems built over decades of production knowledge enables us to provide a comprehensive and more cost effective range of tools.

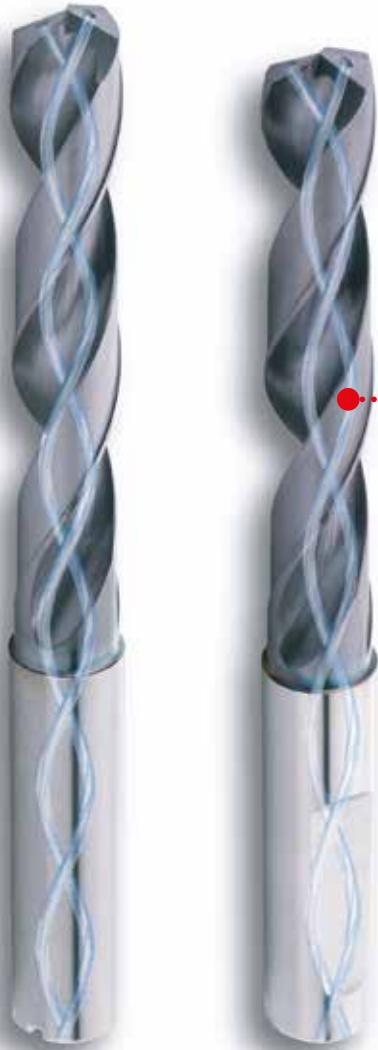


Our dedication to quality and reliability is continued with this new range of MS drills that are manufactured to the exacting standards of DIN 6537.



FEATURES

SOLID CARBIDE DRILL SERIES

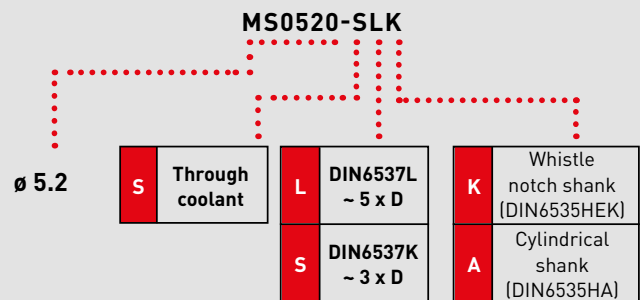


- Through coolant type
- 3 x D and 5 x D drilling length
- Strong cutting edge geometry
- For a wide range of materials
- Whistle notch / cylindrical shank types
- Super micro grain cemented carbide
- PVD coating for long tool life



ORDER CODE DESCRIPTION

MS○○○○○-S○○○ (Internal coolant)

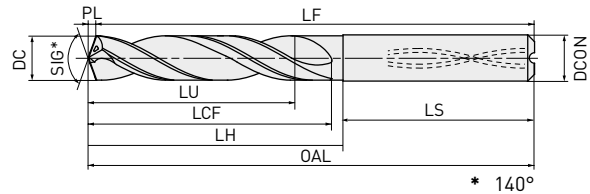


MS-DRILL



D Tolerance	D≤3.0	3.0<D≤6.0	6.0<D≤10.0	10.0<D≤14.0
m7	+0.016	+0.016	+0.021	+0.025
	+0.004	+0.004	+0.006	+0.007

MS○○○○○-S○○○ (Internal coolant)



DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
3.0	MS0300-SSA	-3	Int.	Cylindrical	62	15	20	25	61	0.5	36	6
	MS0300-SSK	-3	Int.	Whistle notch	62	15	20	25	61	0.5	36	6
	MS0300-SLA	-5	Int.	Cylindrical	66	23	28	29	65	0.5	36	6
	MS0300-SLK	-5	Int.	Whistle notch	66	23	28	29	65	0.5	36	6
3.1	MS0310-SSA	-3	Int.	Cylindrical	62	14.9	20	25	61	0.6	36	6
	MS0310-SSK	-3	Int.	Whistle notch	62	14.9	20	25	61	0.6	36	6
	MS0310-SLA	-5	Int.	Cylindrical	66	22.9	28	29	65	0.6	36	6
	MS0310-SLK	-5	Int.	Whistle notch	66	22.9	28	29	65	0.6	36	6
3.3	MS0330-SSA	-3	Int.	Cylindrical	62	14.7	20	25	61	0.6	36	6
	MS0330-SSK	-3	Int.	Whistle notch	62	14.7	20	25	61	0.6	36	6
	MS0330-SLA	-5	Int.	Cylindrical	66	22.7	28	29	65	0.6	36	6
	MS0330-SLK	-5	Int.	Whistle notch	66	22.7	28	29	65	0.6	36	6
3.4	MS0340-SSA	-3	Int.	Cylindrical	62	14.5	20	25	61	0.6	36	6
	MS0340-SSK	-3	Int.	Whistle notch	62	14.5	20	25	61	0.6	36	6
	MS0340-SLA	-5	Int.	Cylindrical	66	22.5	28	29	65	0.6	36	6
	MS0340-SLK	-5	Int.	Whistle notch	66	22.5	28	29	65	0.6	36	6
3.5	MS0350-SSA	-3	Int.	Cylindrical	62	14.4	20	25	61	0.6	36	6
	MS0350-SSK	-3	Int.	Whistle notch	62	14.4	20	25	61	0.6	36	6
	MS0350-SLA	-5	Int.	Cylindrical	66	22.4	28	29	65	0.6	36	6
	MS0350-SLK	-5	Int.	Whistle notch	66	22.4	28	29	65	0.6	36	6
3.7	MS0370-SSA	-3	Int.	Cylindrical	62	14.1	20	25	61	0.7	36	6
	MS0370-SSK	-3	Int.	Whistle notch	62	14.1	20	25	61	0.7	36	6
	MS0370-SLA	-5	Int.	Cylindrical	66	22.1	28	29	65	0.7	36	6
	MS0370-SLK	-5	Int.	Whistle notch	66	22.1	28	29	65	0.7	36	6
3.8	MS0380-SSA	-3	Int.	Cylindrical	66	18	24	29	65	0.7	36	6
	MS0380-SSK	-3	Int.	Whistle notch	66	18	24	29	65	0.7	36	6
	MS0380-SLA	-5	Int.	Cylindrical	74	30	36	37	73	0.7	36	6
	MS0380-SLK	-5	Int.	Whistle notch	74	30	36	37	73	0.7	36	6
3.9	MS0390-SSA	-3	Int.	Cylindrical	66	17.9	24	29	65	0.7	36	6
	MS0390-SSK	-3	Int.	Whistle notch	66	17.9	24	29	65	0.7	36	6
	MS0390-SLA	-5	Int.	Cylindrical	74	29.9	36	37	73	0.7	36	6
	MS0390-SLK	-5	Int.	Whistle notch	74	29.9	36	37	73	0.7	36	6
4.0	MS0400-SSA	-3	Int.	Cylindrical	66	17.7	24	29	65	0.7	36	6
	MS0400-SSK	-3	Int.	Whistle notch	66	17.7	24	29	65	0.7	36	6
	MS0400-SLA	-5	Int.	Cylindrical	74	29.7	36	37	73	0.7	36	6
	MS0400-SLK	-5	Int.	Whistle notch	74	29.7	36	37	73	0.7	36	6

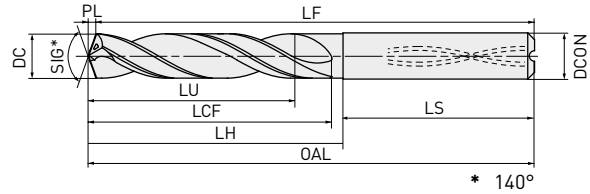
DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
4.1	MS0410-SSA	-3	Int.	Cylindrical	66	17.6	24	29	65	0.7	36	6
	MS0410-SSK	-3	Int.	Whistle notch	66	17.6	24	29	65	0.7	36	6
	MS0410-SLA	-5	Int.	Cylindrical	74	29.6	36	37	73	0.7	36	6
	MS0410-SLK	-5	Int.	Whistle notch	74	29.6	36	37	73	0.7	36	6
4.2	MS0420-SSA	-3	Int.	Cylindrical	66	17.5	24	29	65	0.8	36	6
	MS0420-SSK	-3	Int.	Whistle notch	66	17.5	24	29	65	0.8	36	6
	MS0420-SLA	-5	Int.	Cylindrical	74	29.5	36	37	73	0.8	36	6
	MS0420-SLK	-5	Int.	Whistle notch	74	29.5	36	37	73	0.8	36	6
4.3	MS0430-SSA	-3	Int.	Cylindrical	66	17.3	24	29	65	0.8	36	6
	MS0430-SSK	-3	Int.	Whistle notch	66	17.3	24	29	65	0.8	36	6
	MS0430-SLA	-5	Int.	Cylindrical	74	29.3	36	37	73	0.8	36	6
	MS0430-SLK	-5	Int.	Whistle notch	74	29.3	36	37	73	0.8	36	6
4.5	MS0450-SSA	-3	Int.	Cylindrical	66	17.1	24	29	65	0.8	36	6
	MS0450-SSK	-3	Int.	Whistle notch	66	17.1	24	29	65	0.8	36	6
	MS0450-SLA	-5	Int.	Cylindrical	74	29.1	36	37	73	0.8	36	6
	MS0450-SLK	-5	Int.	Whistle notch	74	29.1	36	37	73	0.8	36	6
4.6	MS0460-SSA	-3	Int.	Cylindrical	66	16.9	24	29	65	0.8	36	6
	MS0460-SSK	-3	Int.	Whistle notch	66	16.9	24	29	65	0.8	36	6
	MS0460-SLA	-5	Int.	Cylindrical	74	28.9	36	37	73	0.8	36	6
	MS0460-SLK	-5	Int.	Whistle notch	74	28.9	36	37	73	0.8	36	6
4.8	MS0480-SSA	-3	Int.	Cylindrical	66	20.7	28	29	65	0.9	36	6
	MS0480-SSK	-3	Int.	Whistle notch	66	20.7	28	29	65	0.9	36	6
	MS0480-SLA	-5	Int.	Cylindrical	74	36.7	44	45	81	0.9	36	6
	MS0480-SLK	-5	Int.	Whistle notch	74	36.7	44	45	81	0.9	36	6
5.0	MS0500-SSA	-3	Int.	Cylindrical	66	20.4	30	29	65	0.9	36	6
	MS0500-SSK	-3	Int.	Whistle notch	66	20.4	30	29	65	0.9	36	6
	MS0500-SLA	-5	Int.	Cylindrical	82	36.4	46	45	81	0.9	36	6
	MS0500-SLK	-5	Int.	Whistle notch	82	36.4	46	45	81	0.9	36	6
5.1	MS0510-SSA	-3	Int.	Cylindrical	66	20.3	30	29	65	0.9	36	6
	MS0510-SSK	-3	Int.	Whistle notch	66	20.3	30	29	65	0.9	36	6
	MS0510-SLA	-5	Int.	Cylindrical	82	36.3	46	45	81	0.9	36	6
	MS0510-SLK	-5	Int.	Whistle notch	82	36.3	46	45	81	0.9	36	6
5.2	MS0520-SSA	-3	Int.	Cylindrical	66	20.1	30	29	65	0.9	36	6
	MS0520-SSK	-3	Int.	Whistle notch	66	20.1	30	29	65	0.9	36	6
	MS0520-SLA	-5	Int.	Cylindrical	82	36.1	46	45	81	0.9	36	6
	MS0520-SLK	-5	Int.	Whistle notch	82	36.1	46	45	81	0.9	36	6
5.5	MS0550-SSA	-3	Int.	Cylindrical	66	19.8	30	29	65	1	36	6
	MS0550-SSK	-3	Int.	Whistle notch	66	19.8	30	29	65	1	36	6
	MS0550-SLA	-5	Int.	Cylindrical	82	35.8	46	45	81	1	36	6
	MS0550-SLK	-5	Int.	Whistle notch	82	35.8	46	45	81	1	36	6
5.6	MS0560-SSA	-3	Int.	Cylindrical	66	19.6	30	29	65	1	36	6
	MS0560-SSK	-3	Int.	Whistle notch	66	19.6	30	29	65	1	36	6
	MS0560-SLA	-5	Int.	Cylindrical	82	35.6	46	45	81	1	36	6
	MS0560-SLK	-5	Int.	Whistle notch	82	35.6	46	45	81	1	36	6
5.7	MS0570-SSA	-3	Int.	Cylindrical	66	19.5	30	29	65	1	36	6
	MS0570-SSK	-3	Int.	Whistle notch	66	19.5	30	29	65	1	36	6
	MS0570-SLA	-5	Int.	Cylindrical	82	35.5	46	45	81	1	36	6
	MS0570-SLK	-5	Int.	Whistle notch	82	35.5	46	45	81	1	36	6
5.8	MS0580-SSA	-3	Int.	Cylindrical	66	19.4	30	29	65	1.1	36	6
	MS0580-SSK	-3	Int.	Whistle notch	66	19.4	30	29	65	1.1	36	6
	MS0580-SLA	-5	Int.	Cylindrical	82	35.4	46	45	81	1.1	36	6
	MS0580-SLK	-5	Int.	Whistle notch	82	35.4	46	45	81	1.1	36	6

MS-DRILL



D Tolerance	D≤3.0	3.0<D≤6.0	6.0<D≤10.0	10.0<D≤14.0
m7	+0.016 +0.004	+0.016 +0.004	+0.021 +0.006	+0.025 +0.007

MS○○○○○-S○○○ (Internal coolant)



DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
6.0	MS0600-SSA	-3	Int.	Cylindrical	66	19.1	30	29	65	1.1	36	6
	MS0600-SSK	-3	Int.	Whistle notch	66	19.1	30	29	65	1.1	36	6
	MS0600-SLA	-5	Int.	Cylindrical	82	35.1	46	45	81	1.1	36	6
	MS0600-SLK	-5	Int.	Whistle notch	82	35.1	46	45	81	1.1	36	6
6.1	MS0610-SSA	-3	Int.	Cylindrical	79	25	34	42	78	1.1	36	8
	MS0610-SSK	-3	Int.	Whistle notch	79	25	34	42	78	1.1	36	8
	MS0610-SLA	-5	Int.	Cylindrical	91	44	53	54	90	1.1	36	8
	MS0610-SLK	-5	Int.	Whistle notch	91	44	53	54	90	1.1	36	8
6.2	MS0620-SSA	-3	Int.	Cylindrical	79	24.8	34	42	78	1.1	36	8
	MS0620-SSK	-3	Int.	Whistle notch	79	24.8	34	42	78	1.1	36	8
	MS0620-SLA	-5	Int.	Cylindrical	91	43.8	53	54	90	1.1	36	8
	MS0620-SLK	-5	Int.	Whistle notch	91	43.8	53	54	90	1.1	36	8
6.5	MS0650-SSA	-3	Int.	Cylindrical	79	24.4	34	42	78	1.2	36	8
	MS0650-SSK	-3	Int.	Whistle notch	79	24.4	34	42	78	1.2	36	8
	MS0650-SLA	-5	Int.	Cylindrical	91	43.4	53	54	90	1.2	36	8
	MS0650-SLK	-5	Int.	Whistle notch	91	43.4	53	54	90	1.2	36	8
6.6	MS0660-SSA	-3	Int.	Cylindrical	79	24.3	34	42	78	1.2	36	8
	MS0660-SSK	-3	Int.	Whistle notch	79	24.3	34	42	78	1.2	36	8
	MS0660-SLA	-5	Int.	Cylindrical	91	43.3	53	54	90	1.2	36	8
	MS0660-SLK	-5	Int.	Whistle notch	91	43.3	53	54	90	1.2	36	8
6.8	MS0680-SSA	-3	Int.	Cylindrical	79	24	34	42	78	1.2	36	8
	MS0680-SSK	-3	Int.	Whistle notch	79	24	34	42	78	1.2	36	8
	MS0680-SLA	-5	Int.	Cylindrical	91	43	53	54	90	1.2	36	8
	MS0680-SLK	-5	Int.	Whistle notch	91	43	53	54	90	1.2	36	8
6.9	MS0690-SSA	-3	Int.	Cylindrical	79	23.9	34	42	78	1.3	36	8
	MS0690-SSK	-3	Int.	Whistle notch	79	23.9	34	42	78	1.3	36	8
	MS0690-SLA	-5	Int.	Cylindrical	91	42.9	53	54	90	1.3	36	8
	MS0690-SLK	-5	Int.	Whistle notch	91	42.9	53	54	90	1.3	36	8
7.0	MS0700-SSA	-3	Int.	Cylindrical	79	23.8	34	42	78	1.3	36	8
	MS0700-SSK	-3	Int.	Whistle notch	79	23.8	34	42	78	1.3	36	8
	MS0700-SLA	-5	Int.	Cylindrical	91	42.8	53	54	90	1.3	36	8
	MS0700-SLK	-5	Int.	Whistle notch	91	42.8	53	54	90	1.3	36	8
7.3	MS0730-SSA	-3	Int.	Cylindrical	79	30.4	34	42	78	1.3	36	8
	MS0730-SSK	-3	Int.	Whistle notch	79	30.4	34	42	78	1.3	36	8
	MS0730-SLA	-5	Int.	Cylindrical	91	42.4	53	54	90	1.3	36	8
	MS0730-SLK	-5	Int.	Whistle notch	91	42.4	53	54	90	1.3	36	8

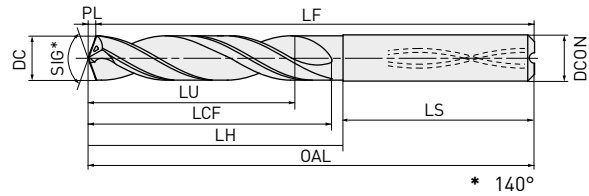
DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
7.4	MS0740-SSA	-3	Int.	Cylindrical	79	30.2	41	42	78	1.3	36	8
	MS0740-SSK	-3	Int.	Whistle notch	79	30.2	41	42	78	1.3	36	8
	MS0740-SLA	-5	Int.	Cylindrical	91	42.2	53	54	90	1.3	36	8
	MS0740-SLK	-5	Int.	Whistle notch	91	42.2	53	54	90	1.3	36	8
7.5	MS0750-SSA	-3	Int.	Cylindrical	79	30.1	41	42	78	1.4	36	8
	MS0750-SSK	-3	Int.	Whistle notch	79	30.1	41	42	78	1.4	36	8
	MS0750-SLA	-5	Int.	Cylindrical	91	42.1	53	54	90	1.4	36	8
	MS0750-SLK	-5	Int.	Whistle notch	91	42.1	53	54	90	1.4	36	8
7.8	MS0780-SSA	-3	Int.	Cylindrical	79	29.7	41	42	78	1.4	36	8
	MS0780-SSK	-3	Int.	Whistle notch	79	29.7	41	42	78	1.4	36	8
	MS0780-SLA	-5	Int.	Cylindrical	91	41.7	53	54	90	1.4	36	8
	MS0780-SLK	-5	Int.	Whistle notch	91	41.7	53	54	90	1.4	36	8
8.0	MS0800-SSA	-3	Int.	Cylindrical	79	29.5	41	42	78	1.5	36	10
	MS0800-SSK	-3	Int.	Whistle notch	79	29.5	41	42	78	1.5	36	10
	MS0800-SLA	-5	Int.	Cylindrical	91	41.5	53	54	90	1.5	36	10
	MS0800-SLK	-5	Int.	Whistle notch	91	41.5	53	54	90	1.5	36	10
8.3	MS0830-SSA	-3	Int.	Cylindrical	89	34.1	47	48	87	1.5	40	10
	MS0830-SSK	-3	Int.	Whistle notch	89	34.1	47	48	87	1.5	40	10
	MS0830-SLA	-5	Int.	Cylindrical	103	48.1	61	62	101	1.5	40	10
	MS0830-SLK	-5	Int.	Whistle notch	103	48.1	61	62	101	1.5	40	10
8.5	MS0850-SSA	-3	Int.	Cylindrical	89	33.8	47	48	87	1.5	40	10
	MS0850-SSK	-3	Int.	Whistle notch	89	33.8	47	48	87	1.5	40	10
	MS0850-SLA	-5	Int.	Cylindrical	103	47.8	61	62	101	1.5	40	10
	MS0850-SLK	-5	Int.	Whistle notch	103	47.8	61	62	101	1.5	40	10
8.6	MS0860-SSA	-3	Int.	Cylindrical	89	33.7	47	48	87	1.6	40	10
	MS0860-SSK	-3	Int.	Whistle notch	89	33.7	47	48	87	1.6	40	10
	MS0860-SLA	-5	Int.	Cylindrical	103	47.7	61	62	101	1.6	40	10
	MS0860-SLK	-5	Int.	Whistle notch	103	47.7	61	62	101	1.6	40	10
8.7	MS0870-SSA	-3	Int.	Cylindrical	89	33.5	47	48	87	1.6	40	10
	MS0870-SSK	-3	Int.	Whistle notch	89	33.5	47	48	87	1.6	40	10
	MS0870-SLA	-5	Int.	Cylindrical	103	47.5	61	62	101	1.6	40	10
	MS0870-SLK	-5	Int.	Whistle notch	103	47.5	61	62	101	1.6	40	10
8.8	MS0880-SSA	-3	Int.	Cylindrical	89	33.4	47	48	87	1.6	40	10
	MS0880-SSK	-3	Int.	Whistle notch	89	33.4	47	48	87	1.6	40	10
	MS0880-SLA	-5	Int.	Cylindrical	103	47.4	61	62	101	1.6	40	10
	MS0880-SLK	-5	Int.	Whistle notch	103	47.4	61	62	101	1.6	40	10
9.0	MS0900-SSA	-3	Int.	Cylindrical	89	33.3	47	48	87	1.6	40	10
	MS0900-SSK	-3	Int.	Whistle notch	89	33.3	47	48	87	1.6	40	10
	MS0900-SLA	-5	Int.	Cylindrical	103	47.3	61	62	101	1.6	40	10
	MS0900-SLK	-5	Int.	Whistle notch	103	47.3	61	62	101	1.6	40	10
9.3	MS0930-SSA	-3	Int.	Cylindrical	89	33.1	47	48	87	1.6	40	10
	MS0930-SSK	-3	Int.	Whistle notch	89	33.1	47	48	87	1.6	40	10
	MS0930-SLA	-5	Int.	Cylindrical	103	47.1	61	62	101	1.6	40	10
	MS0930-SLK	-5	Int.	Whistle notch	103	47.1	61	62	101	1.6	40	10
9.5	MS0950-SSA	-3	Int.	Cylindrical	89	32.5	47	48	87	1.7	40	10
	MS0950-SSK	-3	Int.	Whistle notch	89	32.5	47	48	87	1.7	40	10
	MS0950-SLA	-5	Int.	Cylindrical	103	46.5	61	62	101	1.7	40	10
	MS0950-SLK	-5	Int.	Whistle notch	103	46.5	61	62	101	1.7	40	10
9.8	MS0980-SSA	-3	Int.	Cylindrical	89	32.1	47	48	87	1.8	40	10
	MS0980-SSK	-3	Int.	Whistle notch	89	32.1	47	48	87	1.8	40	10
	MS0980-SLA	-5	Int.	Cylindrical	103	46.1	61	62	101	1.8	40	10
	MS0980-SLK	-5	Int.	Whistle notch	103	46.1	61	62	101	1.8	40	10

MS-DRILL



D Tolerance	D≤3.0	3.0<D≤6.0	6.0<D≤10.0	10.0<D≤14.0
m7	+0.016 +0.004	+0.016 +0.004	+0.021 +0.006	+0.025 +0.007

MS○○○○○-S○○○ (Internal coolant)



DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
10.0	MS1000-SSA	-3	Int.	Cylindrical	89	31.8	47	48	87	1.8	40	10
	MS1000-SSK	-3	Int.	Whistle notch	89	31.8	47	48	87	1.8	40	10
	MS1000-SLA	-5	Int.	Cylindrical	103	45.8	61	62	101	1.8	40	10
	MS1000-SLK	-5	Int.	Whistle notch	103	45.8	61	62	101	1.8	40	10
10.2	MS1020-SSA	-3	Int.	Cylindrical	102	39.6	55	56	100	1.9	45	12
	MS1020-SSK	-3	Int.	Whistle notch	102	39.6	55	56	100	1.9	45	12
	MS1020-SLA	-5	Int.	Cylindrical	118	55.6	71	72	116	1.9	45	12
	MS1020-SLK	-5	Int.	Whistle notch	118	55.6	71	72	116	1.9	45	12
10.3	MS1030-SSA	-3	Int.	Cylindrical	102	39.4	55	56	100	1.9	45	12
	MS1030-SSK	-3	Int.	Whistle notch	102	39.4	55	56	100	1.9	45	12
	MS1030-SLA	-5	Int.	Cylindrical	118	55.4	71	72	116	1.9	45	12
	MS1030-SLK	-5	Int.	Whistle notch	118	55.4	71	72	116	1.9	45	12
10.4	MS1040-SSA	-3	Int.	Cylindrical	102	39.3	55	56	100	1.9	45	12
	MS1040-SSK	-3	Int.	Whistle notch	102	39.3	55	56	100	1.9	45	12
	MS1040-SLA	-5	Int.	Cylindrical	118	55.3	71	72	116	1.9	45	12
	MS1040-SLK	-5	Int.	Whistle notch	118	55.3	71	72	116	1.9	45	12
10.5	MS1050-SSA	-3	Int.	Cylindrical	102	39.2	55	56	100	1.9	45	12
	MS1050-SSK	-3	Int.	Whistle notch	102	39.2	55	56	100	1.9	45	12
	MS1050-SLA	-5	Int.	Cylindrical	118	55.2	71	72	116	1.9	45	12
	MS1050-SLK	-5	Int.	Whistle notch	118	55.2	71	72	116	1.9	45	12
10.7	MS1070-SSA	-3	Int.	Cylindrical	102	38.9	55	56	100	1.9	45	12
	MS1070-SSK	-3	Int.	Whistle notch	102	38.9	55	56	100	1.9	45	12
	MS1070-SLA	-5	Int.	Cylindrical	118	54.9	71	72	116	1.9	45	12
	MS1070-SLK	-5	Int.	Whistle notch	118	54.9	71	72	116	1.9	45	12
10.8	MS1080-SSA	-3	Int.	Cylindrical	102	38.8	55	56	100	2	45	12
	MS1080-SSK	-3	Int.	Whistle notch	102	38.8	55	56	100	2	45	12
	MS1080-SLA	-5	Int.	Cylindrical	118	54.8	71	72	116	2	45	12
	MS1080-SLK	-5	Int.	Whistle notch	118	54.8	71	72	116	2	45	12
11.0	MS1100-SSA	-3	Int.	Cylindrical	102	38.5	55	56	100	2	45	12
	MS1100-SSK	-3	Int.	Whistle notch	102	38.5	55	56	100	2	45	12
	MS1100-SLA	-5	Int.	Cylindrical	118	54.5	71	72	116	2	45	12
	MS1100-SLK	-5	Int.	Whistle notch	118	54.5	71	72	116	2	45	12
11.2	MS1120-SSA	-3	Int.	Cylindrical	102	38.2	55	56	100	2	45	12
	MS1120-SSK	-3	Int.	Whistle notch	102	38.2	55	56	100	2	45	12
	MS1120-SLA	-5	Int.	Cylindrical	118	54.2	71	72	116	2	45	12
	MS1120-SLK	-5	Int.	Whistle notch	118	54.2	71	72	116	2	45	12

DC	Order Number	L x DC	Coolant (Int./Ext.)	Shank type	OAL	LU	LCF	LH	LF	PL	LS	DCON
11.4	MS1140-SSA	-3	Int.	Cylindrical	102	38	55	56	100	2.1	45	12
	MS1140-SSK	-3	Int.	Whistle notch	102	38	55	56	100	2.1	45	12
	MS1140-SLA	-5	Int.	Cylindrical	118	54	71	72	116	2.1	45	12
	MS1140-SLK	-5	Int.	Whistle notch	118	54	71	72	116	2.1	45	12
11.5	MS1150-SSA	-3	Int.	Cylindrical	102	37.8	55	56	100	2.1	45	12
	MS1150-SSK	-3	Int.	Whistle notch	102	37.8	55	56	100	2.1	45	12
	MS1150-SLA	-5	Int.	Cylindrical	118	53.8	71	72	116	2.1	45	12
	MS1150-SLK	-5	Int.	Whistle notch	118	53.8	71	72	116	2.1	45	12
11.7	MS1170-SSA	-3	Int.	Cylindrical	102	37.6	55	56	100	2.1	45	12
	MS1170-SSK	-3	Int.	Whistle notch	102	37.6	55	56	100	2.1	45	12
	MS1170-SLA	-5	Int.	Cylindrical	118	53.6	71	72	116	2.1	45	12
	MS1170-SLK	-5	Int.	Whistle notch	118	53.6	71	72	116	2.1	45	12
11.8	MS1180-SSA	-3	Int.	Cylindrical	102	37.4	55	56	100	2.1	45	12
	MS1180-SSK	-3	Int.	Whistle notch	102	37.4	55	56	100	2.1	45	12
	MS1180-SLA	-5	Int.	Cylindrical	118	53.4	71	72	116	2.1	45	12
	MS1180-SLK	-5	Int.	Whistle notch	118	53.4	71	72	116	2.1	45	12
12.0	MS1200-SSA	-3	Int.	Cylindrical	102	37.2	55	56	100	2.2	45	12
	MS1200-SSK	-3	Int.	Whistle notch	102	37.2	55	56	100	2.2	45	12
	MS1200-SLA	-5	Int.	Cylindrical	118	53.2	71	72	116	2.2	45	12
	MS1200-SLK	-5	Int.	Whistle notch	118	53.2	71	72	116	2.2	45	12
12.5	MS1250-SSA	-3	Int.	Cylindrical	107	41.5	60	61	105	2.3	45	14
	MS1250-SSK	-3	Int.	Whistle notch	107	41.5	60	61	105	2.3	45	14
	MS1250-SLA	-5	Int.	Cylindrical	124	58.5	77	78	122	2.3	45	14
	MS1250-SLK	-5	Int.	Whistle notch	124	58.5	77	78	122	2.3	45	14
12.6	MS1260-SSA	-3	Int.	Cylindrical	107	41.4	60	61	105	2.3	45	14
	MS1260-SSK	-3	Int.	Whistle notch	107	41.4	60	61	105	2.3	45	14
	MS1260-SLA	-5	Int.	Cylindrical	124	58.4	77	78	122	2.3	45	14
	MS1260-SLK	-5	Int.	Whistle notch	124	58.4	77	78	122	2.3	45	14
12.7	MS1270-SSA	-3	Int.	Cylindrical	107	41.3	60	61	105	2.3	45	14
	MS1270-SSK	-3	Int.	Whistle notch	107	41.3	60	61	105	2.3	45	14
	MS1270-SLA	-5	Int.	Cylindrical	124	58.3	77	78	122	2.3	45	14
	MS1270-SLK	-5	Int.	Whistle notch	124	58.3	77	78	122	2.3	45	14
13.0	MS1300-SSA	-3	Int.	Cylindrical	107	40.9	60	61	105	2.4	45	14
	MS1300-SSK	-3	Int.	Whistle notch	107	40.9	60	61	105	2.4	45	14
	MS1300-SLA	-5	Int.	Cylindrical	124	57.9	77	78	122	2.4	45	14
	MS1300-SLK	-5	Int.	Whistle notch	124	57.9	77	78	122	2.4	45	14
13.5	MS1350-SSA	-3	Int.	Cylindrical	107	40.2	60	61	105	2.5	45	14
	MS1350-SSK	-3	Int.	Whistle notch	107	40.2	60	61	105	2.5	45	14
	MS1350-SLA	-5	Int.	Cylindrical	124	57.2	77	78	122	2.5	45	14
	MS1350-SLK	-5	Int.	Whistle notch	124	57.2	77	78	122	2.5	45	14
13.7	MS1370-SSA	-3	Int.	Cylindrical	107	39.9	60	61	105	2.5	45	14
	MS1370-SSK	-3	Int.	Whistle notch	107	39.9	60	61	105	2.5	45	14
	MS1370-SLA	-5	Int.	Cylindrical	124	56.9	77	78	122	2.5	45	14
	MS1370-SLK	-5	Int.	Whistle notch	124	56.9	77	78	122	2.5	45	14
14.0	MS1400-SSA	-3	Int.	Cylindrical	107	39.5	60	62	105	2.5	45	14
	MS1400-SSK	-3	Int.	Whistle notch	107	39.5	60	62	105	2.5	45	14
	MS1400-SLA	-5	Int.	Cylindrical	124	56.5	77	79	122	2.5	45	14
	MS1400-SLK	-5	Int.	Whistle notch	124	56.5	77	79	122	2.5	45	14

RECOMMENDED CUTTING CONDITIONS

Workpiece	Condition	Tensile Strength N/mm ²	Hardness HB	Ø 3.0 – 5.9		Ø 6.0 – 9.9		Ø 10.0 – 14.0		
				Vc (m/min)	f (mm/rev)	Vc (m/min)	f (mm/rev)	Vc (m/min)	f (mm/rev)	
P	Un-alloyed Sulphur ≤0.25%C	annealed	<500	150	100	0.18	110	0.25	130	0.30
	Phosphour Steel ≤0.25%C	annealed	-680	200	100	0.18	110	0.25	130	0.30
	Carbon Steel ≤0.55%C	tempered	>800	275	80	0.18	90	0.25	100	0.30
	Tempered Steel ≤0.55%C	annealed	-680	300	60	0.18	70	0.25	80	0.30
	Die Steel / Cast Steel	tempered	>800	350	50	0.15	60	0.20	70	0.25
	Low Alloy Steel, Die Steel	annealed	<680	<200	50	0.18	80	0.25	80	0.30
	Spring Steel, Nitrided Steel	tempered	850	250	60	0.18	70	0.25	80	0.30
	Case Hardened Steel	tempered	>850	>250	60	0.18	70	0.25	80	0.30
	Bearing Steel, Cast Steel	tempered	>1000	>300	50	0.15	60	0.20	70	0.30
	High Alloy Heat Resistant Steels	annealed	<680	<200	50	0.15	55	0.20	60	0.25
	Valve Steel	tempered	850	250	45	0.15	50	0.20	55	0.25
	Die Steel	tempered	>850	>250	50	0.18	55	0.20	60	0.25
	Cast Steel	tempered	>1000	>300	45	0.15	50	0.20	55	0.25
M	Stainless Steel	ferrit./mart.	680	200	45	0.15	50	0.20	60	0.25
	Heat Resistant Steel	martensitic	850	250	45	0.15	50	0.20	60	0.25
	Cast Steel	austenitic	-950	230	45	0.15	50	0.20	60	0.25
K	Laminated Graphite	ferritic	<180	100	0.20	100	0.25	110	0.30	
	Cast Iron	pearlitic	100 - 400	220	90	0.20	90	0.25	100	0.30
		Spheroidal Cast Iron	ferritic	<180	80	0.20	80	0.25	90	0.30
	Ductile Cast Iron	pearlitic	400 - 800	250	80	0.20	80	0.25	90	0.30
		Tempered and Black	ferritic	<180	50	0.20	65	0.20	75	0.25
	Cast Iron	pearlitic	350 - 700	220	50	0.15	60	0.20	70	0.22

MEMO

A series of horizontal dashed lines for writing.

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