

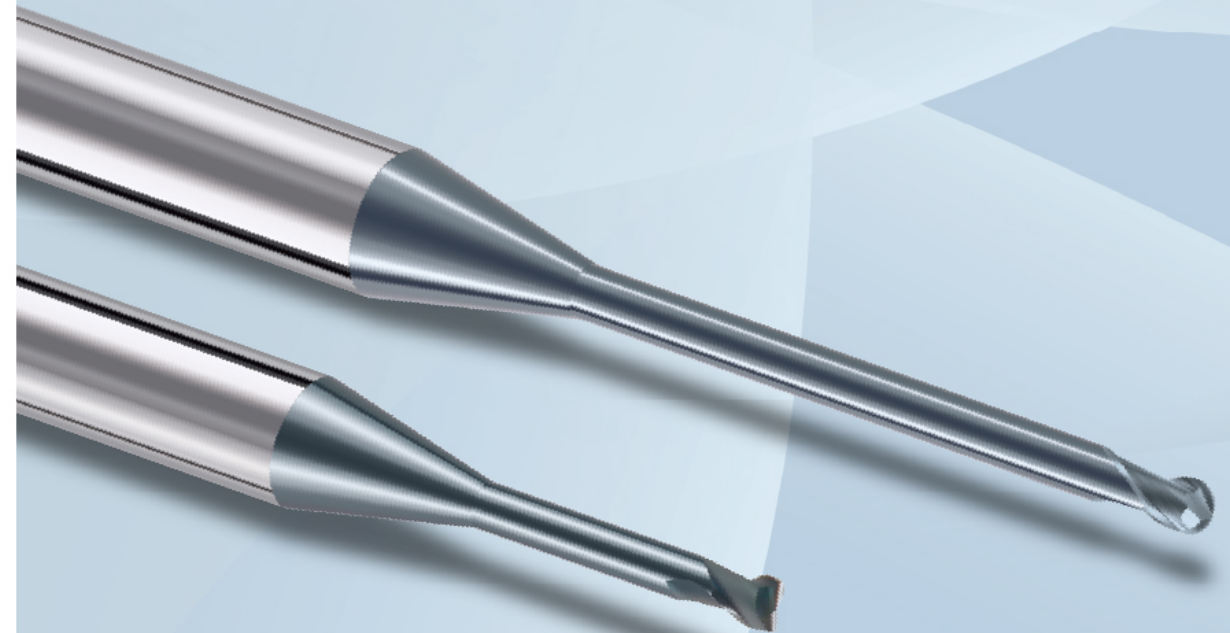
High Precision
End Mill

SUDE®

常州市百洋工具厂

CHANGZHOU BAIYANG TOOLS FACTORY

专注
微小径生产



SUDE®

常州市百洋工具厂

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Vol.2026



SOLID CARBIDE END MILL MANUFACTURER



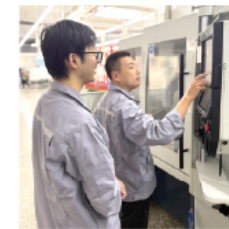
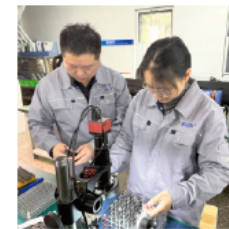
超硬系列 高精加工圆鼻刀

Supper Hardness series
High precision machining Corner Radius End Mill

CHANGZHOU BAIYANG
TOOLS FACTORY



每一次的进步都离不开每一个人的付出，
让我们在生产过程中共同成长。



关于我们 About Us

欢迎大家来到百洋。我们成立于2012年，目前拥有20多台进口磨床，是一家专业生产高品质、高精度、以微小直径（模具、产品）铣刀为主的生产型企业。我们一直秉承努力追求卓越的理念，用创新的产品，数字化的管理，努力成为国内高端刀具的制造商，更精准更高效的服务于未来市场。让客户体验到品质、服务与价值的完美融合。为我们的客户、员工创造幸福生活的同时创造社会价值。

Welcome everyone to Baiyang. We were founded in 2012 and currently have over 20 imported grinding machines. We are a production-oriented enterprise specializing in the production of high-quality, high-precision milling cutters with small diameters (molds, products). We have always adhered to the concept of striving for excellence, using innovative products and digital management to become a manufacturer of high-end cutting tools in China, and serving the future market more accurately and efficiently. Enable customers to experience the perfect integration of quality, service, and value. Create a happy life for our customers and employees while also creating social value.

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图示说明

Guide Lines to Icons

钨钢种类 Carbide

超微粒
Micro grain极超微粒
Super micro grain

圆隅角 Corner R

圆隅角
Corner Radius

颗粒大小 Grain Size

0.2
μm粉末颗粒是0.2μm
Grain size is 0.2μm0.4
μm粉末颗粒是0.4μm
Grain size is 0.4μm0.6
μm粉末颗粒是0.6μm
Grain size is 0.6μm

刃数 Flute



螺旋角 Helix Angle

螺旋角度30°、35°、37°、40°、45°、55°
Helix Angle are 30°,35°,37°,40°,45°,55°

镀层 Coating

超硬复合涂层
Superhard Composite Coating铬铝纳米涂层
AlCrTiN钛硅复合涂层
SiTiNO Composite Coating

DLC彩色涂层

UU 超硬系列

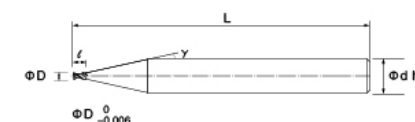
Supper hardness series

推荐加工 ≤HRC65

- ☆ Selected imported ultra-fine grain substrate with a grain size of 0.2μm, combining good toughness and hardness to effectively reduce chipping risk.
- ☆ Applied ultra-hard composite coating with excellent high-temperature resistance, suitable for dry or low-lubrication cutting.
- ☆ Ideal for semi-finishing and finishing of hardened materials (>HRC55) such as S136, SKD11, SKD 61, DC53, 440C, D2, Cr12MoV, H13, 42CrMoA, and ASP30 after quenching.

2刃微小径平刀

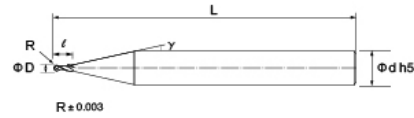
2-flute Micro Diameter End Mill



型号 No.	刃径 D	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
UUE-20005-04042	0.05	0.1	12°	4	42
UUE-20006-04042	0.06	0.12	12°	4	42
UUE-20007-04042	0.07	0.14	12°	4	42
UUE-20008-04042	0.08	0.16	12°	4	42
UUE-20009-04042	0.09	0.18	12°	4	42
UUE-20010-04042	0.1	0.2	12°	4	42
UUE-20015-04045	0.15	0.3	12°	4	45
UUE-20020-04045	0.2	0.4	12°	4	45
UUE-20025-04045	0.25	0.5	12°	4	45
UUE-20030-04045	0.3	0.6	12°	4	45
UUE-20035-04045	0.35	0.7	12°	4	45
UUE-20040-04045	0.4	0.8	12°	4	45
UUE-20045-04045	0.45	0.9	12°	4	45
UUE-20050-04045	0.5	1	12°	4	45
UUE-20055-04045	0.55	1.1	12°	4	45
UUE-20060-04045	0.6	1.2	12°	4	45
UUE-20065-04045	0.65	1.3	12°	4	45
UUE-20070-04045	0.7	1.4	12°	4	45
UUE-20075-04045	0.75	1.5	12°	4	45
UUE-20080-04045	0.8	1.6	12°	4	45
UUE-20085-04045	0.85	1.7	12°	4	45
UUE-20090-04045	0.9	1.8	12°	4	45

2刃微小径球刀

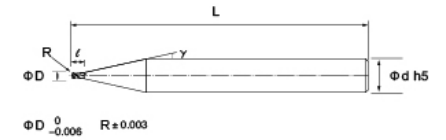
2-flute Micro Diameter Ball End Mill



型号 No.	球半径 R	刃长 ℓ	刃径 D	颈角 γ (为参考值)	柄径 d	全长 L
UUB-20010-04042	R0.05	0.15	0.1	12°	4	42
UUB-20015-04045	R0.075	0.2	0.15	12°	4	45
UUB-20020-04045	R0.1	0.3	0.2	12°	4	45
UUB-20030-04045	R0.15	0.45	0.3	12°	4	45
UUB-20040-04045	R0.2	0.6	0.4	12°	4	45
UUB-20050-04045	R0.25	0.8	0.5	12°	4	45
UUB-20060-04045	R0.3	0.9	0.6	12°	4	45
UUB-20070-04045	R0.35	1.1	0.7	12°	4	45
UUB-20080-04045	R0.4	1.2	0.8	12°	4	45
UUB-20090-04045	R0.45	1.4	0.9	12°	4	45

2刃微小径圆鼻刀

2-flute Micro Diameter Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-20020-04045	0.2	0.02	0.4	12°	4	45
UUR005-20020-04045		0.05				45
UUR002-20030-04045	0.3	0.02	0.6	12°	4	45
UUR005-20030-04045		0.05				45
UUR002-20040-04045	0.4	0.02	0.8	12°	4	45
UUR005-20040-04045		0.05				45
UUR010-20040-04045		0.1				45
UUR002-20050-04045	0.5	0.02	1.0	12°	4	45
UUR005-20050-04045		0.05				45
UUR010-20050-04045		0.1				45
UUR002-20060-04045	0.6	0.02	1.2	12°	4	45
UUR005-20060-04045		0.05				45
UUR010-20060-04045		0.1				45
UUR020-20060-04045		0.2				45
UUR002-20080-04045	0.8	0.02	1.6	12°	4	45
UUR005-20080-04045		0.05				45
UUR010-20080-04045		0.1				45
UUR020-20080-04045		0.2				45

2刃深沟平刀

2-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUE-20010-003-04045	0.1	0.3	0.1	0.085	12°	4	45
UUE-20010-005-04045		0.5					45
UUE-20010-008-04045		0.8					45
UUE-20010-010-04045		1					45
UUE-20015-005-04045	0.15	0.5	0.15	0.13	12°	4	45
UUE-20015-010-04045		1					45
UUE-20020-010-04045	0.2	1	0.2	0.18	12°	4	45
UUE-20020-015-04045		1.5					45
UUE-20020-020-04045		2					45
UUE-20020-030-04045		3					45
UUE-20020-040-04045		4					45
UUE-20030-010-04045	0.3	1	0.3	0.27	12°	4	45
UUE-20030-015-04045		1.5					45
UUE-20030-020-04045		2					45
UUE-20030-030-04045		3					45
UUE-20030-040-04045		4					45
UUE-20030-050-04045	0.4	5	0.4	0.37	12°	4	45
UUE-20040-015-04045		1.5					45
UUE-20040-020-04045		2					45
UUE-20040-030-04045		3					45
UUE-20040-040-04045		4					45
UUE-20040-050-04045		5					45
UUE-20040-060-04045	0.5	6	0.5	0.46	12°	4	45
UUE-20050-020-04045		2					45
UUE-20050-030-04045		3					45
UUE-20050-040-04045		4					45
UUE-20050-050-04045		5					45
UUE-20050-060-04045		6					45
UUE-20050-080-04045		8					45
UUE-20050-100-04045	0.6	10	0.6	0.56	12°	4	45
UUE-20060-020-04045		2					45
UUE-20060-030-04045		3					45
UUE-20060-040-04045		4					45
UUE-20060-050-04045		5					45
UUE-20060-060-04045		6					45
UUE-20060-080-04045		8					45
UUE-20060-100-04045		10					45
UUE-20070-020-04045	0.7	2	0.7	0.66	12°	4	45
UUE-20070-030-04045		3					45
UUE-20070-040-04045		4					45
UUE-20070-050-04045		5					45
UUE-20070-060-04045		6					45
UUE-20070-080-04045		8					45
UUE-20070-100-04045		10					45

2刃深沟平刀

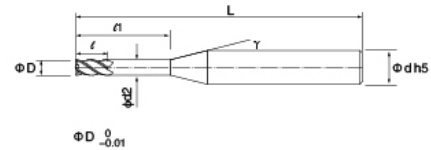
2-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUE-20080-020-04045	0.8	2	0.8	0.76	12°	4	45
UUE-20080-030-04045		3					45
UUE-20080-040-04045		4					45
UUE-20080-050-04045		5					45
UUE-20080-060-04045		6					45
UUE-20080-080-04045		8					45
UUE-20080-100-04045		10					45

4刃深沟平刀

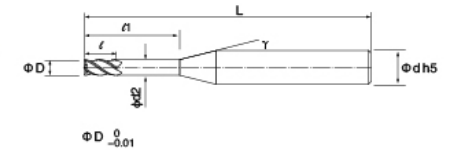
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUE-40100-040-04050	1	4	1	0.95	12°	4	50
UUE-40100-050-04050		5					50
UUE-40100-060-04050		6					50
UUE-40100-080-04050		8					50
UUE-40100-100-04050		10					50
UUE-40100-120-04050		12					50
UUE-40100-140-04050		14					50
UUE-40100-160-04050		16					50
UUE-40100-180-04050		18					50
UUE-40100-200-04050		20					50
UUE-40150-060-04050	1.5	6	1.5	1.44	12°	4	50
UUE-40150-080-04050		8					50
UUE-40150-100-04050		10					50
UUE-40150-120-04050		12					50
UUE-40150-140-04050		14					50
UUE-40150-160-04050		16					50
UUE-40150-180-04050		18					50
UUE-40150-200-04050		20					50
UUE-40200-080-04050	2	8	2	1.94	12°	4	50
UUE-40200-100-04050		10					50
UUE-40200-120-04050		12					50
UUE-40200-140-04050		14					50
UUE-40200-160-04050		16					50
UUE-40200-180-04050		18					50
UUE-40200-200-04050		20					50
UUE-40300-100-04050	3	10	3	2.92	12°	4	50
UUE-40300-120-04050		12					50
UUE-40300-140-04050		14					50
UUE-40300-160-04050		16					50
UUE-40300-180-04050		18					50
UUE-40300-200-04050		20					50
UUE-40300-160-06060		16				6	60
UUE-40300-180-06060		18					60
UUE-40300-200-06060		20					60
UUE-40300-250-06060		25					60
UUE-40300-160-06075		16					75
UUE-40300-180-06075		18					75
UUE-40300-200-06075		20					75
UUE-40300-250-06075		25					75
UUE-40300-300-06075		30					75
UUE-40300-350-06075		35					75

4刃深沟平刀

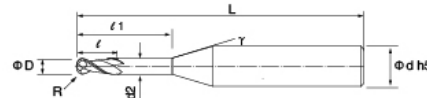
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUE-40400-160-06060	4	16	4	3.9	12°	6	60
UUE-40400-180-06060		18					60
UUE-40400-200-06060		20					60
UUE-40400-250-06060		25					60
UUE-40400-160-06075		16					75
UUE-40400-180-06075		18					75
UUE-40400-200-06075		20					75
UUE-40400-250-06075		25					75
UUE-40400-300-06075		30					75
UUE-40400-350-06075		35					75

2刃深沟球刀

2-flute Long Neck Ball End Mill



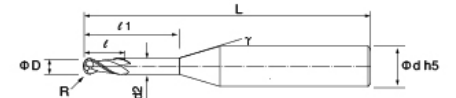
$$D < 1 \Phi D \begin{matrix} 0 \\ -0.006 \end{matrix} \quad R \pm 0.003$$

$$1 \leq D \leq 4 \Phi D \begin{matrix} 0 \\ -0.01 \end{matrix} \quad R \pm 0.005$$

型号 No.	球头半径 R	颈长 l1	刃长 l	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUB-20010-003-04045	R0.05	0.3	0.1	0.1	0.085	12°	4	45
UUB-20010-005-04045		0.5						45
UUB-20010-008-04045		0.8						45
UUB-20010-010-04045		1						45
UUB-20015-005-04045	R0.075	0.5	0.15	0.15	0.13	12°	4	45
UUB-20015-010-04045		1						45
UUB-20020-010-04045	R0.1	1	0.2	0.2	0.18	12°	4	45
UUB-20020-015-04045		1.5						45
UUB-20020-020-04045		2						45
UUB-20020-030-04045		3						45
UUB-20030-010-04045	R0.15	1	0.3	0.3	0.27	12°	4	45
UUB-20030-015-04045		1.5						45
UUB-20030-020-04045		2						45
UUB-20030-030-04045		3						45
UUB-20030-040-04045		4						45
UUB-20030-050-04045		5						45
UUB-20040-015-04045	R0.2	1.5	0.4	0.4	0.37	12°	4	45
UUB-20040-020-04045		2						45
UUB-20040-030-04045		3						45
UUB-20040-040-04045		4						45
UUB-20040-050-04045		5						45
UUB-20040-060-04045		6						45
UUB-20050-020-04045	R0.25	2	0.5	0.5	0.46	12°	4	45
UUB-20050-030-04045		3						45
UUB-20050-040-04045		4						45
UUB-20050-050-04045		5						45
UUB-20050-060-04045		6						45
UUB-20050-080-04045		8						45
UUB-20060-020-04045	R0.3	2	0.6	0.6	0.56	12°	4	45
UUB-20060-030-04045		3						45
UUB-20060-040-04045		4						45
UUB-20060-050-04045		5						45
UUB-20060-060-04045		6						45
UUB-20060-080-04045		8						45
UUB-20060-100-04045	R0.4	10	0.8	0.8	0.76	12°	4	45
UUB-20080-020-04045		2						45
UUB-20080-030-04045		3						45
UUB-20080-040-04045		4						45
UUB-20080-050-04045		5						45
UUB-20080-060-04045		6						45
UUB-20080-080-04045	R0.4	8						45
UUB-20080-100-04045		10						45

2刃深沟球刀

2-flute Long Neck Ball End Mill



$$D < 1 \Phi D \begin{matrix} 0 \\ -0.006 \end{matrix} \quad R \pm 0.003$$

$$1 \leq D \leq 4 \Phi D \begin{matrix} 0 \\ -0.01 \end{matrix} \quad R \pm 0.005$$

型号 No.	球头半径 R	颈长 l1	刃长 l	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUB-20100-030-04050	R0.5	3	1	1	0.95	12°	4	50
UUB-20100-040-04050		4						50
UUB-20100-050-04050		5						50
UUB-20100-060-04050		6						50
UUB-20100-080-04050		8						50
UUB-20100-100-04050		10						50
UUB-20100-120-04050		12						50
UUB-20100-140-04050		14						50
UUB-20100-160-04050	R0.75	16	1.5	1.5	1.44	12°	4	50
UUB-20100-180-04050		18						50
UUB-20100-200-04050		20						50
UUB-20150-040-04050		4						50
UUB-20150-050-04050		5						50
UUB-20150-060-04050		6						50
UUB-20150-080-04050		8						50
UUB-20150-100-04050		10						50
UUB-20150-120-04050	R1	12	2	2	1.94	12°	4	50
UUB-20150-140-04050		14						50
UUB-20150-160-04050		16						50
UUB-20150-180-04050		18						50
UUB-20150-200-04050		20						50
UUB-20200-060-04050		6					6	50
UUB-20200-080-04050		8						50
UUB-20200-100-04050		10						50
UUB-20200-120-04050	R1.5	12	3	3	2.92	12°	4	50
UUB-20200-140-04050		14						50
UUB-20200-160-04050		16						50
UUB-20200-180-04050		18						50
UUB-20200-200-04050		20						50
UUB-20200-160-06060		16					6	60
UUB-20200-180-06060		18						60
UUB-20200-200-06060		20						60
UUB-20200-250-06060		25						60
UUB-20300-080-04050	R1.5	8	3	3	2.92	12°	4	50
UUB-20300-100-04050		10						50
UUB-20300-120-04050		12						50
UUB-20300-160-04050		16						50
UUB-20300-200-04050		20						50
UUB-20300-160-06060		16					6	60
UUB-20300-180-06060		18						60
UUB-20300-200-06060		20						60
UUB-20300-250-06060		25						60

2刃深沟球刀

2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 l_1	刃长 l	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUB-20300-160-06075	R1.5	16	3	3	2.92	12°	6	75
UUB-20300-180-06075		18						75
UUB-20300-200-06075		20						75
UUB-20300-250-06075		25						75
UUB-20300-300-06075		30						75
UUB-20400-160-06060	R2	16	4	4	3.9	12°	6	60
UUB-20400-180-06060		18						60
UUB-20400-200-06060		20						60
UUB-20400-250-06060		25						60
UUB-20400-160-06075		16						75
UUB-20400-180-06075		18						75
UUB-20400-200-06075		20						75
UUB-20400-250-06075		25						75
UUB-20400-300-06075		30						75
UUB-20400-350-06075		35						75

2刃深沟圆鼻刀

2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l_1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-20020-010-04045	0.2	0.02	1	0.2	0.18	12°	4	45
UUR002-20020-015-04045			1.5					45
UUR002-20020-020-04045			2					45
UUR002-20020-030-04045			3					45
UUR005-20020-010-04045		0.05	1					45
UUR005-20020-015-04045			1.5					45
UUR005-20020-020-04045			2					45
UUR005-20020-030-04045			3					45
UUR002-20030-010-04045		0.3	1	0.3	0.27	12°	4	45
UUR002-20030-015-04045			1.5					45
UUR002-20030-020-04045			2					45
UUR002-20030-030-04045			3					45
UUR002-20030-040-04045			4					45
UUR005-20030-010-04045		0.05	1					45
UUR005-20030-015-04045			1.5					45
UUR005-20030-020-04045			2					45
UUR005-20030-030-04045			3					45
UUR005-20030-040-04045			4					45
UUR002-20040-010-04045	0.4	0.02	1	0.4	0.37	12°	4	45
UUR002-20040-015-04045			1.5					45
UUR002-20040-020-04045			2					45
UUR002-20040-030-04045			3					45
UUR002-20040-040-04045			4					45
UUR002-20040-050-04045			5					45
UUR002-20040-060-04045			6					45
UUR005-20040-010-04045		0.05	1					45
UUR005-20040-015-04045			1.5					45
UUR005-20040-020-04045			2					45
UUR005-20040-030-04045			3					45
UUR005-20040-040-04045			4					45
UUR005-20040-050-04045			5					45
UUR005-20040-060-04045			6					45
UUR010-20040-010-04045		0.1	1					45
UUR010-20040-015-04045			1.5					45
UUR010-20040-020-04045			2					45
UUR010-20040-030-04045			3					45
UUR010-20040-040-04045			4					45
UUR010-20040-050-04045			5					45
UUR010-20040-060-04045			6					45
UUR002-20050-020-04045		0.02	2					45
UUR002-20050-030-04045			3					45
UUR002-20050-040-04045			4					45
UUR002-20050-050-04045			5					45

2刃深沟圆鼻刀

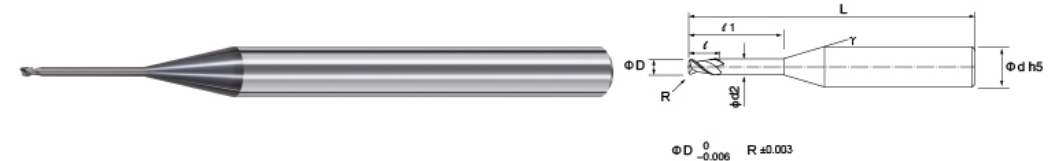
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ_1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-20050-060-04045	0.5	0.02	6	0.5	0.46	12°	4	45
UUR002-20050-080-04045			8					45
UUR002-20050-100-04045			10					45
UUR005-20050-020-04045		0.05	2					45
UUR005-20050-030-04045			3					45
UUR005-20050-040-04045			4					45
UUR005-20050-050-04045			5					45
UUR005-20050-060-04045			6					45
UUR005-20050-080-04045			8					45
UUR005-20050-100-04045			10					45
UUR010-20050-020-04045		0.1	2					45
UUR010-20050-030-04045			3					45
UUR010-20050-040-04045			4					45
UUR010-20050-050-04045			5					45
UUR010-20050-060-04045			6					45
UUR010-20050-080-04045			8					45
UUR010-20050-100-04045			10					45
UUR002-20060-020-04045	0.6	0.02	2	0.6	0.56	12°	4	45
UUR002-20060-030-04045			3					45
UUR002-20060-040-04045			4					45
UUR002-20060-050-04045			5					45
UUR002-20060-060-04045			6					45
UUR002-20060-080-04045			8					45
UUR002-20060-100-04045			10					45
UUR005-20060-020-04045		0.05	2					45
UUR005-20060-030-04045			3					45
UUR005-20060-040-04045			4					45
UUR005-20060-050-04045			5					45
UUR005-20060-060-04045			6					45
UUR005-20060-080-04045			8					45
UUR005-20060-100-04045			10					45
UUR010-20060-020-04045		0.1	2					45
UUR010-20060-030-04045			3					45
UUR010-20060-040-04045			4					45
UUR010-20060-050-04045			5					45
UUR010-20060-060-04045			6					45
UUR010-20060-080-04045			8					45
UUR010-20060-100-04045			10					45
UUR020-20060-020-04045		0.2	2					45
UUR020-20060-030-04045			3					45
UUR020-20060-040-04045			4					45
UUR020-20060-050-04045			5					45
UUR020-20060-060-04045			6					45
UUR020-20060-080-04045			8					45
UUR020-20060-100-04045			10					45

2刃深沟圆鼻刀

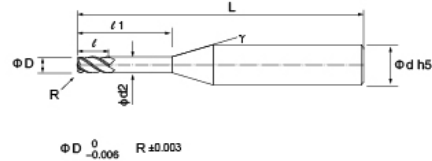
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ_1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-20080-020-04045	0.8	0.02	2	0.8	0.76	12°	4	45
UUR002-20080-030-04045			3					45
UUR002-20080-040-04045			4					45
UUR002-20080-050-04045			5					45
UUR002-20080-060-04045			6					45
UUR002-20080-080-04045			8					45
UUR002-20080-100-04045			10					45
UUR005-20080-020-04045		0.05	2					45
UUR005-20080-030-04045			3					45
UUR005-20080-040-04045			4					45
UUR005-20080-050-04045			5					45
UUR005-20080-060-04045			6					45
UUR005-20080-080-04045			8					45
UUR005-20080-100-04045			10					45
UUR010-20080-020-04045		0.1	2					45
UUR010-20080-030-04045			3					45
UUR010-20080-040-04045			4					45
UUR010-20080-050-04045			5					45
UUR010-20080-060-04045			6					45
UUR010-20080-080-04045			8					45
UUR010-20080-100-04045			10					45
UUR020-20080-020-04045		0.2	2					45
UUR020-20080-030-04045			3					45
UUR020-20080-040-04045			4					45
UUR020-20080-050-04045			5					45
UUR020-20080-060-04045			6					45
UUR020-20080-080-04045			8					45
UUR020-20080-100-04045			10					45

4刃深沟圆鼻刀

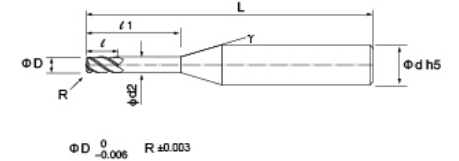
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-40020-010-04045	0.2	0.02	1	0.2	0.18	12°	4	45
UUR002-40020-015-04045			1.5					45
UUR002-40020-020-04045			2					45
UUR002-40020-030-04045		0.05	3					45
UUR005-40020-010-04045			1					45
UUR005-40020-015-04045			1.5					45
UUR005-40020-020-04045			2					45
UUR005-40020-030-04045			3					45
UUR002-40030-010-04045	0.3	0.02	1	0.3	0.27	12°	4	45
UUR002-40030-015-04045			1.5					45
UUR002-40030-020-04045			2					45
UUR002-40030-030-04045			3					45
UUR002-40030-040-04045		0.05	4					45
UUR005-40030-010-04045			1					45
UUR005-40030-015-04045			1.5					45
UUR005-40030-020-04045			2					45
UUR005-40030-030-04045			3					45
UUR005-40030-040-04045			4					45
UUR002-40040-010-04045	0.4	0.02	1	0.4	0.37	12°	4	45
UUR002-40040-015-04045			1.5					45
UUR002-40040-020-04045			2					45
UUR002-40040-030-04045			3					45
UUR002-40040-040-04045			4					45
UUR002-40040-050-04045			5					45
UUR002-40040-060-04045		0.05	6					45
UUR005-40040-010-04045			1					45
UUR005-40040-015-04045			1.5					45
UUR005-40040-020-04045			2					45
UUR005-40040-030-04045			3					45
UUR005-40040-040-04045			4					45
UUR005-40040-050-04045		0.1	5					45
UUR005-40040-060-04045			6					45
UUR010-40040-010-04045			1					45
UUR010-40040-015-04045			1.5					45
UUR010-40040-020-04045			2					45
UUR010-40040-030-04045			3					45
UUR010-40040-040-04045			4					45
UUR010-40040-050-04045			5					45
UUR010-40040-060-04045			6					45
UUR002-40050-020-04045	0.5	0.02	2	0.5	0.46	12°	4	45
UUR002-40050-030-04045			3					45
UUR002-40050-040-04045			4					45
UUR002-40050-050-04045			5					45

4刃深沟圆鼻刀

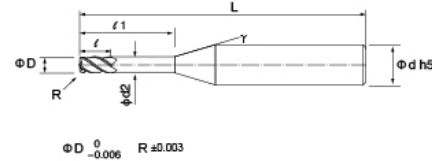
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-40050-060-04045	0.5	0.02	6	0.5	0.46	12°	4	45
UUR002-40050-080-04045			8					45
UUR002-40050-100-04045			10					45
UUR005-40050-020-04045		0.05	2					45
UUR005-40050-030-04045			3					45
UUR005-40050-040-04045			4					45
UUR005-40050-050-04045			5					45
UUR005-40050-060-04045			6					45
UUR005-40050-080-04045		0.1	8					45
UUR005-40050-100-04045			10					45
UUR010-40050-020-04045			2					45
UUR010-40050-030-04045			3					45
UUR010-40050-040-04045			4					45
UUR010-40050-050-04045			5					45
UUR010-40050-060-04045			6					45
UUR010-40050-080-04045			8					45
UUR010-40050-100-04045			10					45
UUR002-40060-020-04045	0.6	0.02	2	0.6	0.56	12°	4	45
UUR002-40060-030-04045			3					45
UUR002-40060-040-04045			4					45
UUR002-40060-050-04045			5					45
UUR002-40060-060-04045			6					45
UUR002-40060-080-04045		0.05	8					45
UUR002-40060-100-04045			10					45
UUR005-40060-020-04045			2					45
UUR005-40060-030-04045			3					45
UUR005-40060-040-04045			4					45
UUR005-40060-050-04045			5					45
UUR005-40060-060-04045		0.1	6					45
UUR005-40060-080-04045			8					45
UUR005-40060-100-04045			10					45
UUR010-40060-020-04045			2					45
UUR010-40060-030-04045			3					45
UUR010-40060-040-04045			4					45
UUR010-40060-050-04045			5					45
UUR010-40060-060-04045		0.2	6					45
UUR010-40060-080-04045			8					45
UUR010-40060-100-04045			10					45
UUR020-40060-020-04045			2					45
UUR020-40060-030-04045			3					45
UUR020-40060-040-04045			4					45
UUR020-40060-050-04045			5					45
UUR020-40060-060-04045			6					45
UUR020-40060-080-04045			8					45
UUR020-40060-100-04045			10					45

4刃深沟圆鼻刀

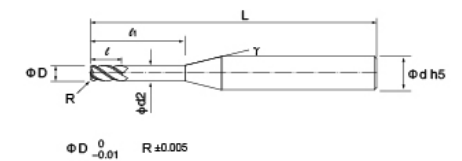
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR002-40080-020-04045	0.8	0.02	2	0.8	0.76	12°	4	45
UUR002-40080-030-04045			3					45
UUR002-40080-040-04045			4					45
UUR002-40080-050-04045			5					45
UUR002-40080-060-04045			6					45
UUR002-40080-080-04045			8					45
UUR002-40080-100-04045			10					45
UUR005-40080-020-04045		0.05	2					45
UUR005-40080-030-04045			3					45
UUR005-40080-040-04045			4					45
UUR005-40080-050-04045			5					45
UUR005-40080-060-04045			6					45
UUR005-40080-080-04045			8					45
UUR005-40080-100-04045			10					45
UUR010-40080-020-04045		0.1	2					45
UUR010-40080-030-04045			3					45
UUR010-40080-040-04045			4					45
UUR010-40080-050-04045			5					45
UUR010-40080-060-04045			6					45
UUR010-40080-080-04045			8					45
UUR010-40080-100-04045			10					45
UUR020-40080-020-04045		0.2	2					45
UUR020-40080-030-04045			3					45
UUR020-40080-040-04045			4					45
UUR020-40080-050-04045			5					45
UUR020-40080-060-04045			6					45
UUR020-40080-080-04045			8					45
UUR020-40080-100-04045			10					45

4刃深沟圆鼻刀

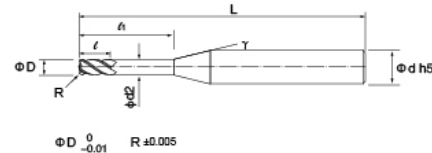
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR010-40100-040-04050	1	0.1	4	1	0.95	12°	4	50
UUR010-40100-060-04050			6					50
UUR010-40100-080-04050			8					50
UUR010-40100-100-04050			10					50
UUR010-40100-120-04050			12					50
UUR010-40100-140-04050			14					50
UUR010-40100-160-04050			16					50
UUR010-40100-180-04050			18					50
UUR010-40100-200-04050			20					50
UUR020-40100-040-04050		0.2	4					50
UUR020-40100-060-04050			6					50
UUR020-40100-080-04050			8					50
UUR020-40100-100-04050			10					50
UUR020-40100-120-04050			12					50
UUR020-40100-140-04050			14					50
UUR020-40100-160-04050			16					50
UUR020-40100-180-04050			18					50
UUR020-40100-200-04050			20					50
UUR010-40150-060-04050	1.5	0.1	6	1.5	1.44	12°	4	50
UUR010-40150-080-04050			8					50
UUR010-40150-100-04050			10					50
UUR010-40150-120-04050			12					50
UUR010-40150-140-04050			14					50
UUR010-40150-160-04050			16					50
UUR010-40150-180-04050			18					50
UUR010-40150-200-04050			20					50
UUR020-40150-060-04050		0.2	6					50
UUR020-40150-080-04050			8					50
UUR020-40150-100-04050			10					50
UUR020-40150-120-04050			12					50
UUR020-40150-140-04050			14					50
UUR020-40150-160-04050			16					50
UUR020-40150-180-04050			18					50
UUR020-40150-200-04050			20					50
UUR010-40200-080-04050	2	0.1	8	2	1.94	12°	4	50
UUR010-40200-100-04050			10					50
UUR010-40200-120-04050			12					50
UUR010-40200-140-04050			14					50
UUR010-40200-160-04050			16					50
UUR010-40200-180-04050			18					50
UUR010-40200-200-04050			20					50

4刃深沟圆鼻刀

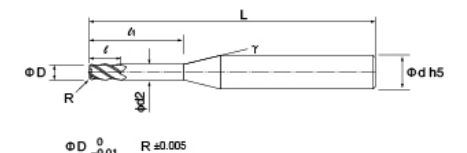
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR020-40200-080-04050	2	0.2	8	2	1.94	12°	4	50
UUR020-40200-100-04050			10					50
UUR020-40200-120-04050			12					50
UUR020-40200-140-04050			14					50
UUR020-40200-160-04050			16					50
UUR020-40200-180-04050			18					50
UUR020-40200-200-04050			20					50
UUR050-40200-080-04050		0.5	8					50
UUR050-40200-100-04050			10					50
UUR050-40200-120-04050			12					50
UUR050-40200-140-04050			14					50
UUR050-40200-160-04050			16					50
UUR050-40200-180-04050			18					50
UUR050-40200-200-04050			20					50
UUR010-40300-100-04050	3	0.1	10	3	2.92	12°	4	50
UUR010-40300-120-04050			12					50
UUR010-40300-140-04050			14					50
UUR010-40300-160-04050			16					50
UUR010-40300-180-04050			18					50
UUR010-40300-200-04050			20					50
UUR020-40300-100-04050		0.2	10					50
UUR020-40300-120-04050			12					50
UUR020-40300-140-04050			14					50
UUR020-40300-160-04050			16					50
UUR020-40300-180-04050			18					50
UUR020-40300-200-04050			20					50
UUR050-40300-100-04050		0.5	10					50
UUR050-40300-120-04050			12					50
UUR050-40300-140-04050			14					50
UUR050-40300-160-04050			16					50
UUR050-40300-180-04050			18					50
UUR050-40300-200-04050			20					50
UUR020-40300-120-06060		0.2	12				6	60
UUR020-40300-140-06060			14					60
UUR020-40300-160-06060			16					60
UUR020-40300-180-06060			18					60
UUR020-40300-200-06060			20					60
UUR020-40300-250-06060			25					60

4刃深沟圆鼻刀

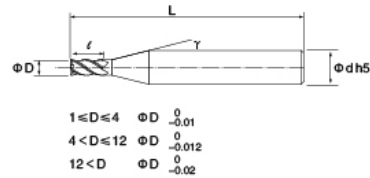
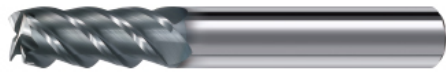
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
UUR050-40300-120-06060	3	0.5	12	3	2.92	12°	6	60
UUR050-40300-140-06060			14					60
UUR050-40300-160-06060			16					60
UUR050-40300-180-06060			18					60
UUR050-40300-200-06060			20					60
UUR050-40300-250-06060			25					60
UUR020-40300-120-06075		0.2	12					75
UUR020-40300-140-06075			14					75
UUR020-40300-160-06075			16					75
UUR020-40300-180-06075			18					75
UUR020-40300-200-06075			20					75
UUR020-40300-250-06075			25					75
UUR020-40300-300-06075			30					75
UUR050-40300-120-06075		0.5	12					75
UUR050-40300-140-06075			14					75
UUR050-40300-160-06075			16					75
UUR050-40300-180-06075			18					75
UUR050-40300-200-06075			20					75
UUR050-40300-250-06075			25					75
UUR050-40300-300-06075			30					75
UUR020-40400-160-06060	4	0.2	16	4	3.9	12°	6	60
UUR020-40400-200-06060			20					60
UUR020-40400-250-06060			25					60
UUR050-40400-160-06060		0.5	16					60
UUR050-40400-200-06060			20					60
UUR050-40400-250-06060			25					60
UUR020-40400-160-06075		0.2	16					75
UUR020-40400-200-06075			20					75
UUR020-40400-250-06075			25					75
UUR020-40400-300-06075			30					75
UUR020-40400-350-06075		0.5	35					75
UUR050-40400-160-06075			16					75
UUR050-40400-200-06075			20					75
UUR050-40400-250-06075			25					75
UUR050-40400-300-06075			30					75
UUR050-40400-350-06075			35					75

4刃平刀

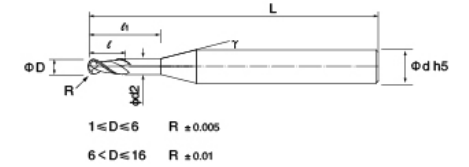
4-flute Square End Mill



型号 No.	刃径 D	刃长 l	颈角 γ (为参考值)	柄径 d	全长 L
UUE-4010-04050	1	3	12°	4	50
UUE-4015-04050	1.5	4	12°	4	50
UUE-4020-04050	2	6	12°	4	50
UUE-4025-04050	2.5	7	12°	4	50
UUE-4030-04050	3	8	12°	4	50
UUE-4040-04050	4	10	-	4	50
UUE-4040-04075	4	15	-	4	75
UUE-4040-04100	4	15	-	4	100
UUE-4050-06050	5	13	12°	6	50
UUE-4050-06075	5	18	12°	6	75
UUE-4060-06050	6	15	-	6	50
UUE-4060-06060	6	15	-	6	60
UUE-4060-06075	6	20	-	6	75
UUE-4060-06100	6	20	-	6	100
UUE-4080-08060	8	20	-	8	60
UUE-4080-08075	8	20	-	8	75
UUE-4080-08100	8	25	-	8	100
UUE-4100-10075	10	25	-	10	75
UUE-4100-10100	10	30	-	10	100
UUE-4120-12075	12	30	-	12	75
UUE-4120-12100	12	35	-	12	100

2刃球刀

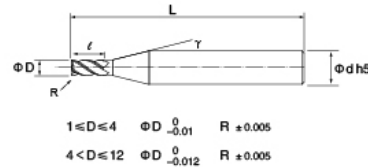
2-flute Ball End Mill



型号 No.	球半径 R	直径 D	刃长 l	有效长 l ₁	颈径 d ₂	颈角 γ (为参考值)	柄径 d	全长 L
UUB-2010-04050	R0.5	1	1	2	0.95	12°	4	50
UUB-2015-04050	R0.75	1.5	1.5	3	1.44	12°	4	50
UUB-2020-04050	R1	2	2	4	1.94	12°	4	50
UUB-2030-04050	R1.5	3	3	6	2.92	12°	4	50
UUB-2040-04050	R2	4	4	10	3.9	-	4	50
UUB-2040-04075	R2	4	4	10	3.9	-	4	75
UUB-2050-06050	R2.5	5	5	12	4.8	12°	6	50
UUB-2050-06060	R2.5	5	5	12	4.8	12°	6	60
UUB-2050-06075	R2.5	5	5	12	4.8	12°	6	75
UUB-2050-06100	R2.5	5	5	12	4.8	12°	6	100
UUB-2060-06050	R3	6	6	12	5.8	-	6	50
UUB-2060-06060	R3	6	6	12	5.8	-	6	60
UUB-2060-06075	R3	6	6	12	5.8	-	6	75
UUB-2060-06100	R3	6	6	12	5.8	-	6	100
UUB-2080-08060	R4	8	8	16	7.8	-	8	60
UUB-2080-08075	R4	8	8	16	7.8	-	8	75
UUB-2080-08100	R4	8	8	16	7.8	-	8	100
UUB-2100-10075	R5	10	10	20	9.8	-	10	75
UUB-2100-10100	R5	10	10	20	9.8	-	10	100
UUB-2120-12075	R6	12	12	24	11.8	-	12	75
UUB-2120-12100	R6	12	12	24	11.8	-	12	100

4刃圆鼻刀

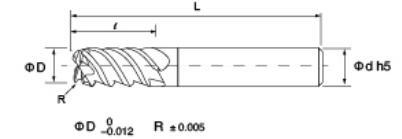
4-flute Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
UUR005-4010-04050	1	0.05	2	12°	4	50
UUR010-4010-04050		0.1				50
UUR020-4010-04050		0.2				50
UUR010-4015-04050	1.5	0.1	3	12°	4	50
UUR020-4015-04050		0.2				50
UUR010-4020-04050	2	0.1	4	12°	4	50
UUR020-4020-04050		0.2				50
UUR050-4020-04050		0.5				50
UUR010-4030-04050	3	0.1	6	12°	4	50
UUR020-4030-04050		0.2				50
UUR050-4030-04050		0.5				50
UUR020-4040-04050	4	0.2	8	-	4	50
UUR020-4040-04075		0.2				75
UUR050-4040-04050		0.5				50
UUR050-4040-04075		0.5				75
UUR100-4040-04050		1				50
UUR100-4040-04075	6	1	12	-	6	75
UUR020-4060-06050		0.2				50
UUR020-4060-06060		0.2				60
UUR020-4060-06075		0.2				75
UUR020-4060-06100		0.2				100
UUR050-4060-06050		0.5				50
UUR050-4060-06060		0.5				60
UUR050-4060-06075		0.5				75
UUR050-4060-06100		0.5				100
UUR100-4060-06050		1				50
UUR100-4060-06060		1				60
UUR100-4060-06075		1				75
UUR100-4060-06100		1				100
UUR050-4080-08060	8	0.5	16	-	8	60
UUR050-4080-08075		0.5				75
UUR050-4080-08100		0.5				100
UUR100-4080-08060		1				60
UUR100-4080-08075		1				75
UUR100-4080-08100	10	1	20	-	10	100
UUR050-4100-10075		0.5				75
UUR050-4100-10100		0.5				100
UUR100-4100-10075		1				75
UUR100-4100-10100	12	1	24	-	12	100
UUR050-4120-12075		0.5				75
UUR050-4120-12100		0.5				100
UUR100-4120-12075		1				75
UUR100-4120-12100		1				100

4刃 55°螺旋角圆鼻刀

4-flute Helix Angle 55° Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	柄径 d	全长 L
UURR020-4040-04050	4	0.2	8	4	50
UURR050-4040-04050		0.5			50
UURR050-4060-06060	6	0.5	12	6	60
UURR050-4060-06075		0.5			75
UURR050-4060-06100		0.5			100
UURR050-4080-08060	8	0.5	16	8	60
UURR050-4080-08075		0.5			75
UURR050-4080-08100		0.5			100
UURR050-4100-10075	10	0.5	20	10	75
UURR050-4100-10100		0.5			100

SS 高硬系列

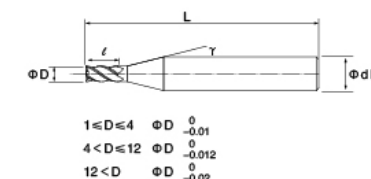
High hardness series

推荐加工 ≤HRC60

- ☆ Ultra-fine grain substrate with high density (0.4μm) ensures superior performance.
- ☆ Nano-scale titanium-based coating offers exceptional versatility and wear resistance.
- ☆ Ideal for machining soft materials such as P20 and 718H.
- ☆ Perfect for semi-finishing and finishing of hardened materials(HRC48-60)like NAK80,H13,and S136.

4刃平刀

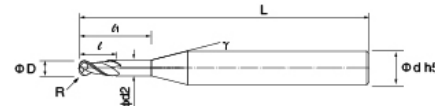
4-flute Square End Mill



型号 No.	刃径 D	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
SSE-4010-04050	1	3	12°	4	50
SSE-4015-04050	1.5	4	12°	4	50
SSE-4020-04050	2	6	12°	4	50
SSE-4025-04050	2.5	7	12°	4	50
SSE-4030-04050	3	8	12°	4	50
SSE-4040-04050	4	10	-	4	50
SSE-4040-04075	4	15	-	4	75
SSE-4040-04100	4	15	-	4	100
SSE-4050-06050	5	13	12°	6	50
SSE-4050-06075	5	18	12°	6	75
SSE-4060-06050	6	15	-	6	50
SSE-4060-06060	6	15	-	6	60
SSE-4060-06075	6	20	-	6	75
SSE-4060-06100	6	20	-	6	100
SSE-4080-08060	8	20	-	8	60
SSE-4080-08075	8	20	-	8	75
SSE-4080-08100	8	25	-	8	100
SSE-4100-10075	10	25	-	10	75
SSE-4100-10100	10	30	-	10	100
SSE-4120-12075	12	30	-	12	75
SSE-4120-12100	12	35	-	12	100
SSE-4160-16100	16	45	-	16	100

2刃球刀

2-flute Ball End Mill

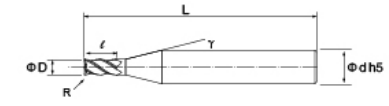


1 ≤ D ≤ 6 R ± 0.005
6 < D ≤ 16 R ± 0.01

型号 No.	球半径 R	直径 D	刃长 ℓ	有效长 ℓ1	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
SSB-2010-04050	R0.5	1	1	2	0.95	12°	4	50
SSB-2015-04050	R0.75	1.5	1.5	3	1.44	12°	4	50
SSB-2020-04050	R1	2	2	4	1.94	12°	4	50
SSB-2030-04050	R1.5	3	3	6	2.92	12°	4	50
SSB-2040-04050	R2	4	6	-	-	-	4	50
SSB-2040-04075	R2	4	6	-	-	-	4	75
SSB-2050-06050	R2.5	5	8	-	-	12°	6	50
SSB-2050-06060	R2.5	5	8	-	-	12°	6	60
SSB-2050-06075	R2.5	5	8	-	-	12°	6	75
SSB-2050-06100	R2.5	5	8	-	-	12°	6	100
SSB-2060-06050	R3	6	9	-	-	-	6	50
SSB-2060-06060	R3	6	9	-	-	-	6	60
SSB-2060-06075	R3	6	9	-	-	-	6	75
SSB-2060-06100	R3	6	9	-	-	-	6	100
SSB-2080-08060	R4	8	12	-	-	-	8	60
SSB-2080-08075	R4	8	12	-	-	-	8	75
SSB-2080-08100	R4	8	12	-	-	-	8	100
SSB-2100-10075	R5	10	15	-	-	-	10	75
SSB-2100-10100	R5	10	15	-	-	-	10	100
SSB-2120-12075	R6	12	18	-	-	-	12	75
SSB-2120-12100	R6	12	18	-	-	-	12	100

4刃圆鼻刀

4-flute Corner Radius End Mill



1 ≤ D ≤ 4 $\Phi D \begin{smallmatrix} 0 \\ -0.01 \end{smallmatrix}$ R ± 0.005
4 < D ≤ 12 $\Phi D \begin{smallmatrix} 0 \\ -0.012 \end{smallmatrix}$ R ± 0.005

型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
SSR005-4010-04050	1	0.05	3	12°	4	50
SSR010-4010-04050		0.1				50
SSR020-4010-04050		0.2				50
SSR010-4015-04050	1.5	0.1	4	12°	4	50
SSR020-4015-04050		0.2				50
SSR010-4020-04050	2	0.1	6	12°	4	50
SSR020-4020-04050		0.2				50
SSR050-4020-04050		0.5				50
SSR010-4030-04050	3	0.1	8	12°	4	50
SSR020-4030-04050		0.2				50
SSR050-4030-04050		0.5				50
SSR020-4040-04050	4	0.2	8	-	4	50
SSR020-4040-04075		0.2				75
SSR050-4040-04050		0.5				50
SSR050-4040-04075		0.5				75
SSR100-4040-04050		1				50
SSR100-4040-04075	6	1	12	-	6	75
SSR020-4060-06050		0.2				50
SSR020-4060-06060		0.2				60
SSR020-4060-06075		0.2				75
SSR020-4060-06100		0.2				100
SSR050-4060-06050		0.5				50
SSR050-4060-06060		0.5				60
SSR050-4060-06075		0.5				75
SSR050-4060-06100		0.5				100
SSR100-4060-06050		1				50
SSR100-4060-06060		1				60
SSR100-4060-06075		1				75
SSR100-4060-06100		1				100
SSR050-4080-08060	8	0.5	16	-	8	60
SSR050-4080-08075		0.5				75
SSR050-4080-08100		0.5				100
SSR100-4080-08060		1				60
SSR100-4080-08075		1				75
SSR100-4080-08100	10	1	20	-	10	100
SSR050-4100-10075		0.5				75
SSR050-4100-10100		0.5				100
SSR100-4100-10075		1				75
SSR100-4100-10100	12	1	24	-	12	100
SSR050-4120-12075		0.5				75
SSR050-4120-12100		0.5				100
SSR100-4120-12075		1				75
SSR100-4120-12100		1				100

SUDE[®]

常州市百洋工具厂

US 通用系列

Universal Series

推荐加工 ≤HRC45

- ☆ Grain Size 0.4 μm ultrafine particle matrix.
- ☆ AlCrTiN nano-coating for enhanced versatility and wear resistance.
- ☆ Suitable for machining soft materials such as P20 and 718H.
- ☆ Ideal for semi-finishing and finishing of hardened materials (HRC 30-45) like NAK80, H13, and S136 after quenching.



SUDE[®]

常州市百洋工具厂

US 通用系列

Universal Series

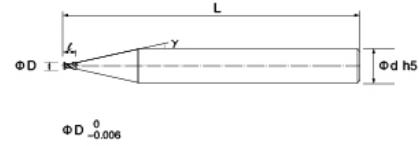
推荐加工 ≤HRC52

- ☆ Ultra-fine grain substrate with high density (0.4μm) ensures superior performance.
- ☆ Nano-scale titanium-based coating offers exceptional versatility and wear resistance.
- ☆ Ideal for machining soft materials such as P20 and 718H.
- ☆ Perfect for semi-finishing and finishing of hardened materials (HRC48-52) like NAK80, H13, and S136.



2刃微小径平刀

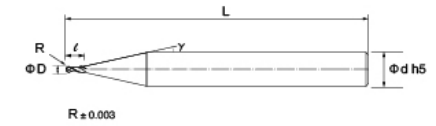
2-flute Micro Square End Mill



型号 No.	刃径 D	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
USE-20010-04042	0.1	0.2	12°	4	42
USE-20015-04045	0.15	0.3	12°	4	45
USE-20020-04045	0.2	0.4	12°	4	45
USE-20025-04045	0.25	0.5	12°	4	45
USE-20030-04045	0.3	0.6	12°	4	45
USE-20035-04045	0.35	0.7	12°	4	45
USE-20040-04045	0.4	0.8	12°	4	45
USE-20045-04045	0.45	0.9	12°	4	45
USE-20050-04045	0.5	1	12°	4	45
USE-20055-04045	0.55	1.1	12°	4	45
USE-20060-04045	0.6	1.2	12°	4	45
USE-20065-04045	0.65	1.3	12°	4	45
USE-20070-04045	0.7	1.4	12°	4	45
USE-20075-04045	0.75	1.5	12°	4	45
USE-20080-04045	0.8	1.6	12°	4	45
USE-20085-04045	0.85	1.7	12°	4	45
USE-20090-04045	0.9	1.8	12°	4	45

2刃微小径球刀

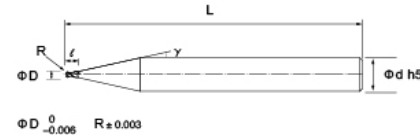
2-flute Micro Ball End Mill



型号 No.	球半径 R	刃长 ℓ	刃径 D	颈角 γ (为参考值)	柄径 d	全长 L
USB-20010-04042	R0.05	0.15	0.1	12°	4	42
USB-20015-04045	R0.075	0.2	0.15	12°	4	45
USB-20020-04045	R0.1	0.3	0.2	12°	4	45
USB-20030-04045	R0.15	0.45	0.3	12°	4	45
USB-20040-04045	R0.2	0.6	0.4	12°	4	45
USB-20050-04045	R0.25	0.8	0.5	12°	4	45
USB-20060-04045	R0.3	0.9	0.6	12°	4	45
USB-20070-04045	R0.35	1.1	0.7	12°	4	45
USB-20080-04045	R0.4	1.2	0.8	12°	4	45
USB-20090-04045	R0.45	1.4	0.9	12°	4	45

2刃微小径圆鼻刀

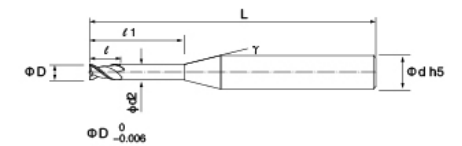
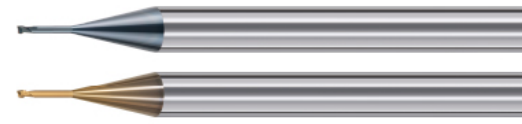
2-flute Micro Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
USR002-20020-04045	0.2	0.02	0.4	12°	4	45
USR005-20020-04045		0.05				45
USR002-20030-04045	0.3	0.02	0.6	12°	4	45
USR005-20030-04045		0.05				45
USR002-20040-04045	0.4	0.02	0.8	12°	4	45
USR005-20040-04045		0.05				45
USR010-20040-04045		0.1				45
USR002-20050-04045	0.5	0.02	1.0	12°	4	45
USR005-20050-04045		0.05				45
USR010-20050-04045		0.1				45
USR002-20060-04045	0.6	0.02	1.2	12°	4	45
USR005-20060-04045		0.05				45
USR010-20060-04045		0.1				45
USR020-20060-04045	0.8	0.02	1.6	12°	4	45
USR002-20080-04045		0.05				45
USR010-20080-04045		0.1				45
USR020-20080-04045		0.2				45

2刃深沟平刀

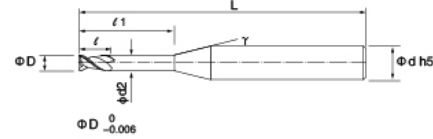
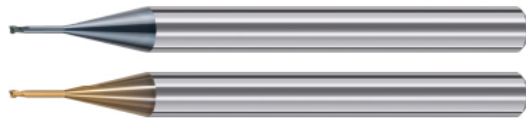
2-flute Long Neck Square End Mill



型号 No.	刃径 d	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 D	全长 L
USE-20010-003-04045	0.1	0.3	0.1	0.085	12°	4	45
USE-20010-005-04045		0.5					45
USE-20010-008-04045		0.8					45
USE-20010-010-04045	0.15	1	0.15	0.13	12°	4	45
USE-20015-005-04045		0.5					45
USE-20015-010-04045	0.2	1	0.2	0.18	12°	4	45
USE-20020-010-04045		1.5					45
USE-20020-015-04045		2					45
USE-20020-020-04045		3					45
USE-20020-030-04045	0.3	4	0.3	0.27	12°	4	45
USE-20020-040-04045		1					45
USE-20030-010-04045		1.5					45
USE-20030-015-04045		2					45
USE-20030-020-04045	0.4	3	0.4	0.37	12°	4	45
USE-20030-030-04045		4					45
USE-20030-040-04045		5					45
USE-20030-050-04045		1.5					45
USE-20040-015-04045	0.5	2	0.5	0.46	12°	4	45
USE-20040-020-04045		3					45
USE-20040-030-04045		4					45
USE-20040-040-04045		5					45
USE-20040-050-04045	0.6	6	0.6	0.56	12°	4	45
USE-20040-060-04045		2					45
USE-20050-020-04045		3					45
USE-20050-030-04045		4					45
USE-20050-040-04045	0.7	5	0.7	0.66	12°	4	45
USE-20050-050-04045		6					45
USE-20050-060-04045		8					45
USE-20050-080-04045		10					45
USE-20050-100-04045	0.8	2	0.8	0.76	12°	4	45
USE-20060-020-04045		3					45
USE-20060-030-04045		4					45
USE-20060-040-04045		5					45
USE-20060-050-04045	0.9	6	0.9	0.86	12°	4	45
USE-20060-060-04045		8					45
USE-20060-080-04045		10					45
USE-20060-100-04045		2					45
USE-20070-020-04045	1.0	3	1.0	1.06	12°	4	45
USE-20070-030-04045		4					45
USE-20070-040-04045		5					45
USE-20070-050-04045		6					45
USE-20070-060-04045	1.2	8	1.2	1.26	12°	4	45
USE-20070-080-04045		10					45
USE-20070-100-04045		2					45
USE-20070-120-04045		3					45

2刃深沟平刀

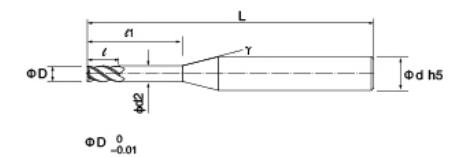
2-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USE-20080-020-04045	0.8	2	0.8	0.76	12°	4	45
USE-20080-030-04045		3					45
USE-20080-040-04045		4					45
USE-20080-050-04045		5					45
USE-20080-060-04045		6					45
USE-20080-080-04045		8					45
USE-20080-100-04045		10					45

4刃深沟平刀

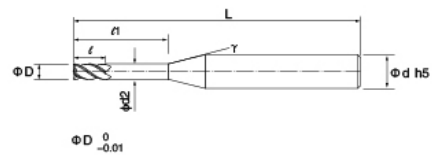
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USE-40100-040-04050	1	4	1	0.95	12°	4	50
USE-40100-050-04050		5					50
USE-40100-060-04050		6					50
USE-40100-080-04050		8					50
USE-40100-100-04050		10					50
USE-40100-120-04050		12					50
USE-40100-140-04050		14					50
USE-40100-160-04050		16					50
USE-40100-180-04050		18					50
USE-40100-200-04050		20					50
USE-40150-060-04050	1.5	6	1.5	1.44	12°	4	50
USE-40150-080-04050		8					50
USE-40150-100-04050		10					50
USE-40150-120-04050		12					50
USE-40150-140-04050		14					50
USE-40150-160-04050		16					50
USE-40150-180-04050		18					50
USE-40150-200-04050		20					50
USE-40200-080-04050	2	8	2	1.94	12°	4	50
USE-40200-100-04050		10					50
USE-40200-120-04050		12					50
USE-40200-140-04050		14					50
USE-40200-160-04050		16					50
USE-40200-180-04050		18					50
USE-40200-200-04050		20					50
USE-40300-100-04050	3	10	3	2.92	12°	4	50
USE-40300-120-04050		12					50
USE-40300-140-04050		14					50
USE-40300-160-04050		16					50
USE-40300-180-04050		18					50
USE-40300-200-04050		20					50
USE-40300-160-06060		16				6	60
USE-40300-180-06060		18					60
USE-40300-200-06060		20					60
USE-40300-250-06060		25					60
USE-40300-160-06075		16					75
USE-40300-180-06075		18					75
USE-40300-200-06075		20					75
USE-40300-250-06075		25					75
USE-40300-300-06075		30					75
USE-40300-350-06075		35					75

4刃深沟平刀

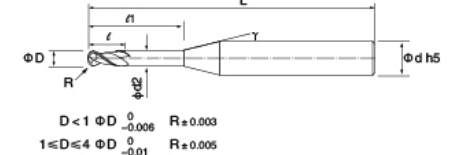
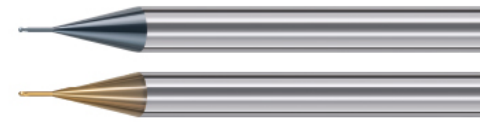
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USE-40400-160-06060	4	16	4	3.9	12°	6	60
USE-40400-180-06060		18					60
USE-40400-200-06060		20					60
USE-40400-250-06060		25					60
USE-40400-160-06075		16					75
USE-40400-180-06075		18					75
USE-40400-200-06075		20					75
USE-40400-250-06075		25					75
USE-40400-300-06075		30					75
USE-40400-350-06075		35					75

2刃深沟球刀

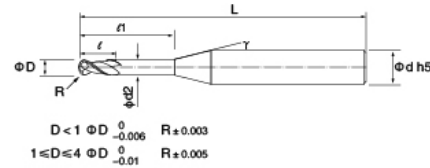
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 L1	刃长 L	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USB-20010-003-04045	R0.05	0.3	0.1	0.1	0.085	12°	4	45
USB-20010-005-04045		0.5						45
USB-20010-008-04045		0.8						45
USB-20010-010-04045		1						45
USB-20015-005-04045	R0.075	0.5	0.15	0.15	0.13	12°	4	45
USB-20015-010-04045		1						45
USB-20020-010-04045	R0.1	1	0.2	0.2	0.18	12°	4	45
USB-20020-015-04045		1.5						45
USB-20020-020-04045		2						45
USB-20020-030-04045		3						45
USB-20030-010-04045	R0.15	1	0.3	0.3	0.27	12°	4	45
USB-20030-015-04045		1.5						45
USB-20030-020-04045		2						45
USB-20030-030-04045		3						45
USB-20030-040-04045		4						45
USB-20030-050-04045	R0.2	5	0.4	0.4	0.37	12°	4	45
USB-20040-015-04045		1.5						45
USB-20040-020-04045		2						45
USB-20040-030-04045		3						45
USB-20040-040-04045		4						45
USB-20040-050-04045		5						45
USB-20040-060-04045	R0.25	6	0.5	0.5	0.46	12°	4	45
USB-20050-020-04045		2						45
USB-20050-030-04045		3						45
USB-20050-040-04045		4						45
USB-20050-050-04045		5						45
USB-20050-060-04045		6						45
USB-20050-080-04045	R0.3	8	0.6	0.6	0.56	12°	4	45
USB-20060-020-04045		2						45
USB-20060-030-04045		3						45
USB-20060-040-04045		4						45
USB-20060-050-04045		5						45
USB-20060-060-04045		6						45
USB-20060-080-04045	R0.4	8	0.8	0.8	0.76	12°	4	45
USB-20060-100-04045		10						45
USB-20080-020-04045		2						45
USB-20080-030-04045		3						45
USB-20080-040-04045		4						45
USB-20080-050-04045		5						45
USB-20080-060-04045	R0.4	6	0.8	0.8	0.76	12°	4	45
USB-20080-080-04045		8						45
USB-20080-100-04045		10						45

2刃深沟球刀

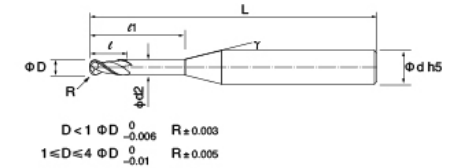
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 ℓ_1	刃长 ℓ	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USB-20100-030-04050	R0.5	3	1	1	0.95	12°	4	50
USB-20100-040-04050		4						50
USB-20100-050-04050		5						50
USB-20100-060-04050		6						50
USB-20100-080-04050		8						50
USB-20100-100-04050		10						50
USB-20100-120-04050		12						50
USB-20100-140-04050		14						50
USB-20100-160-04050		16						50
USB-20100-180-04050		18						50
USB-20100-200-04050		20						50
USB-20150-040-04050	R0.75	4	1.5	1.5	1.44	12°	4	50
USB-20150-050-04050		5						50
USB-20150-060-04050		6						50
USB-20150-080-04050		8						50
USB-20150-100-04050		10						50
USB-20150-120-04050		12						50
USB-20150-140-04050		16						50
USB-20150-160-04050		18						50
USB-20150-180-04050		20						50
USB-20150-200-04050		20						50
USB-20200-060-04050	R1	6	2	2	1.94	12°	4	50
USB-20200-080-04050		8						50
USB-20200-100-04050		10						50
USB-20200-120-04050		12						50
USB-20200-140-04050		14						50
USB-20200-160-04050		16						50
USB-20200-180-04050		18						50
USB-20200-200-04050		20						50
USB-20200-160-06060		16					6	60
USB-20200-180-06060		18						60
USB-20200-200-06060		20						60
USB-20200-250-06060		25						60
USB-20300-080-04050	R1.5	8	3	3	2.92	12°	4	50
USB-20300-100-04050		10						50
USB-20300-120-04050		12						50
USB-20300-160-04050		16						50
USB-20300-200-04050		20						50
USB-20300-160-06060		16					6	60
USB-20300-180-06060		18						60
USB-20300-200-06060		20						60
USB-20300-250-06060		25						60

2刃深沟球刀

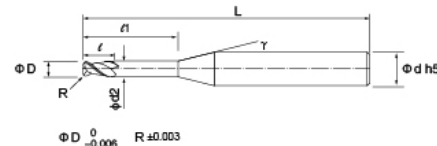
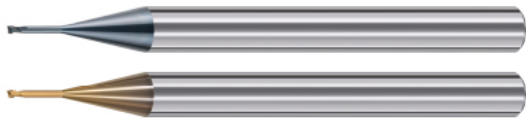
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 ℓ_1	刃长 ℓ	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USB-20300-160-06075	R1.5	16	3	3	2.92	12°	6	75
USB-20300-180-06075		18						75
USB-20300-200-06075		20						75
USB-20300-250-06075		25						75
USB-20300-300-06075		30						75
USB-20400-160-06060	R2	16	4	4	3.9	12°	6	60
USB-20400-180-06060		18						60
USB-20400-200-06060		20						60
USB-20400-250-06060		25						60
USB-20400-160-06075		16						75
USB-20400-180-06075		18						75
USB-20400-200-06075		20						75
USB-20400-250-06075		25						75
USB-20400-300-06075		30						75
USB-20400-350-06075		35						75

2刃深沟圆鼻刀

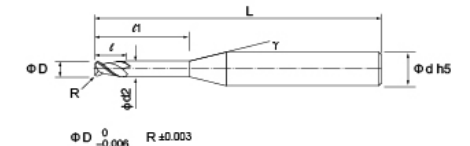
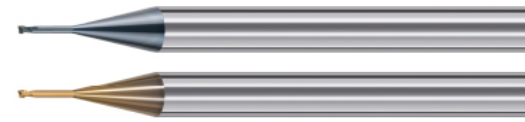
2-flute Long Neck Corner Radius End Mill



型号	刃径	R角半径	颈长	刃长	颈径	颈角	柄径	全长
No.	D	R	ℓ ₁	ℓ	d ₂	γ (为参考值)	d	L
USR002-20020-010-04045	0.2	0.02	1	0.2	0.18	12°	4	45
USR002-20020-015-04045			1.5					45
USR002-20020-020-04045			2					45
USR002-20020-030-04045			3					45
USR005-20020-010-04045		0.05	1	0.2	0.18	12°	4	45
USR005-20020-015-04045			1.5					45
USR005-20020-020-04045			2					45
USR005-20020-030-04045			3					45
USR002-20030-010-04045	0.3	0.02	1	0.3	0.27	12°	4	45
USR002-20030-015-04045			1.5					45
USR002-20030-020-04045			2					45
USR002-20030-030-04045			3					45
USR002-20030-040-04045			4					45
USR005-20030-010-04045		0.05	1	0.3	0.27	12°	4	45
USR005-20030-015-04045			1.5					45
USR005-20030-020-04045			2					45
USR005-20030-030-04045			3					45
USR005-20030-040-04045			4					45
USR002-20040-010-04045	0.4	0.02	1	0.4	0.37	12°	4	45
USR002-20040-015-04045			1.5					45
USR002-20040-020-04045			2					45
USR002-20040-030-04045			3					45
USR002-20040-040-04045			4					45
USR002-20040-050-04045			5					45
USR002-20040-060-04045			6					45
USR005-20040-010-04045		0.05	1	0.4	0.37	12°	4	45
USR005-20040-015-04045			1.5					45
USR005-20040-020-04045			2					45
USR005-20040-030-04045			3					45
USR005-20040-040-04045			4					45
USR005-20040-050-04045			5					45
USR005-20040-060-04045			6					45
USR010-20040-010-04045		0.1	1	0.4	0.37	12°	4	45
USR010-20040-015-04045			1.5					45
USR010-20040-020-04045			2					45
USR010-20040-030-04045			3					45
USR010-20040-040-04045			4					45
USR010-20040-050-04045			5					45
USR010-20040-060-04045			6					45
USR002-20050-020-04045	0.5	0.02	2	0.5	0.46	12	4	45
USR002-20050-030-04045			3					45
USR002-20050-040-04045			4					45
USR002-20050-050-04045			5					45

2刃深沟圆鼻刀

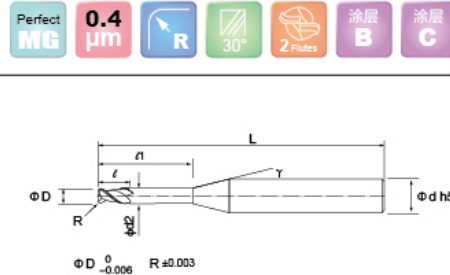
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USR002-20050-060-04045	0.5	0.02	6	0.5	0.46	12°	4	45
USR002-20050-080-04045			8					45
USR002-20050-100-04045			10					45
USR005-20050-020-04045		0.05	2					45
USR005-20050-030-04045			3					45
USR005-20050-040-04045			4					45
USR005-20050-050-04045			5					45
USR005-20050-060-04045			6					45
USR005-20050-080-04045			8					45
USR005-20050-100-04045			10					45
USR010-20050-020-04045		0.1	2					45
USR010-20050-030-04045			3					45
USR010-20050-040-04045			4					45
USR010-20050-050-04045			5					45
USR010-20050-060-04045			6					45
USR010-20050-080-04045			8					45
USR010-20050-100-04045			10					45
USR002-20060-020-04045	0.6	0.02	2	0.6	0.56	12°	4	45
USR002-20060-030-04045			3					45
USR002-20060-040-04045			4					45
USR002-20060-050-04045			5					45
USR002-20060-060-04045			6					45
USR002-20060-080-04045		0.05	8					45
USR002-20060-100-04045			10					45
USR005-20060-020-04045			2					45
USR005-20060-030-04045			3					45
USR005-20060-040-04045			4					45
USR005-20060-050-04045			5					45
USR005-20060-060-04045			6					45
USR005-20060-080-04045			8					45
USR005-20060-100-04045			10					45
USR010-20060-020-04045		0.1	2					45
USR010-20060-030-04045			3					45
USR010-20060-040-04045			4					45
USR010-20060-050-04045			5					45
USR010-20060-060-04045			6					45
USR010-20060-080-04045			8					45
USR010-20060-100-04045			10					45
USR020-20060-020-04045		0.2	2					45
USR020-20060-030-04045			3					45
USR020-20060-040-04045			4					45
USR020-20060-050-04045			5					45
USR020-20060-060-04045			6					45
USR020-20060-080-04045			8					45
USR020-20060-100-04045			10					45

2刃深沟圆鼻刀

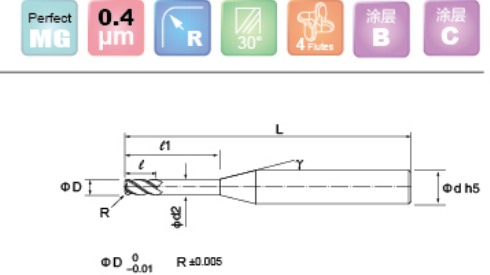
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l ₁	刃长 l	颈径 d ₂	颈角 γ (为参考值)	柄径 d	全长 L
USR002-20080-020-04045	0.8	0.02	2	0.8	0.76	12°	4	45
USR002-20080-030-04045			3					45
USR002-20080-040-04045			4					45
USR002-20080-050-04045			5					45
USR002-20080-060-04045			6					45
USR002-20080-080-04045			8					45
USR002-20080-100-04045			10					45
USR005-20080-020-04045		0.05	2					45
USR005-20080-030-04045			3					45
USR005-20080-040-04045			4					45
USR005-20080-050-04045			5					45
USR005-20080-060-04045			6					45
USR005-20080-080-04045			8					45
USR005-20080-100-04045			10					45
USR010-20080-020-04045		0.1	2					45
USR010-20080-030-04045			3					45
USR010-20080-040-04045			4					45
USR010-20080-050-04045			5					45
USR010-20080-060-04045			6					45
USR010-20080-080-04045			8					45
USR010-20080-100-04045			10					45
USR020-20080-020-04045		0.2	2					45
USR020-20080-030-04045			3					45
USR020-20080-040-04045			4					45
USR020-20080-050-04045			5					45
USR020-20080-060-04045			6					45
USR020-20080-080-04045			8					45
USR020-20080-100-04045			10					45

4刃深沟圆鼻刀

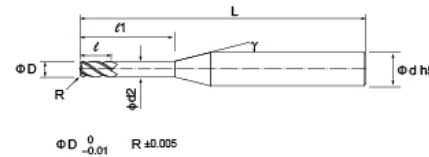
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l ₁	刃长 l	颈径 d ₂	颈角 γ (为参考值)	柄径 d	全长 L
USR010-40100-040-04050	1	0.1	4	1	0.95	12°	4	50
USR010-40100-060-04050			6					50
USR010-40100-080-04050			8					50
USR010-40100-100-04050			10					50
USR010-40100-120-04050			12					50
USR010-40100-140-04050			14					50
USR010-40100-160-04050			16					50
USR010-40100-180-04050			18					50
USR010-40100-200-04050			20					50
USR020-40100-040-04050		0.2	4					50
USR020-40100-060-04050			6					50
USR020-40100-080-04050			8					50
USR020-40100-100-04050			10					50
USR020-40100-120-04050			12					50
USR020-40100-140-04050			14					50
USR020-40100-160-04050			16					50
USR020-40100-180-04050			18					50
USR020-40100-200-04050			20					50
USR010-40150-060-04050	1.5	0.1	6	1.5	1.44	12°	4	50
USR010-40150-080-04050			8					50
USR010-40150-100-04050			10					50
USR010-40150-120-04050			12					50
USR010-40150-140-04050			14					50
USR010-40150-160-04050			16					50
USR010-40150-180-04050			18					50
USR010-40150-200-04050			20					50
USR020-40150-060-04050		0.2	6					50
USR020-40150-080-04050			8					50
USR020-40150-100-04050			10					50
USR020-40150-120-04050			12					50
USR020-40150-140-04050			14					50
USR020-40150-160-04050			16					50
USR020-40150-180-04050			18					50
USR020-40150-200-04050			20					50
USR010-40200-080-04050	2	0.1	8	2	1.94	12°	4	50
USR010-40200-100-04050			10					50
USR010-40200-120-04050			12					50
USR010-40200-140-04050			14					50
USR010-40200-160-04050			16					50
USR010-40200-180-04050			18					50
USR010-40200-200-04050			20					50

4刃深沟圆鼻刀

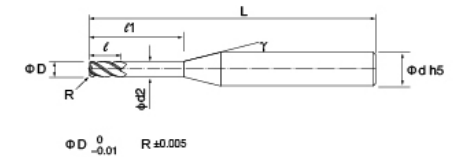
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USR020-40200-080-04050	2	0.2	8	2	1.94	12°	4	50
USR020-40200-100-04050			10					50
USR020-40200-120-04050			12					50
USR020-40200-140-04050			14					50
USR020-40200-160-04050			16					50
USR020-40200-180-04050			18					50
USR020-40200-200-04050			20					50
USR050-40200-080-04050		0.5	8					50
USR050-40200-100-04050			10					50
USR050-40200-120-04050			12					50
USR050-40200-140-04050			14					50
USR050-40200-160-04050			16					50
USR050-40200-180-04050			18					50
USR050-40200-200-04050			20					50
USR010-40300-100-04050	3	0.1	10	3	2.92	12°	4	50
USR010-40300-120-04050			12					50
USR010-40300-140-04050			14					50
USR010-40300-160-04050			16					50
USR010-40300-180-04050			18					50
USR010-40300-200-04050			20					50
USR020-40300-100-04050		0.2	10					50
USR020-40300-120-04050			12					50
USR020-40300-140-04050			14					50
USR020-40300-160-04050			16					50
USR020-40300-180-04050			18					50
USR020-40300-200-04050			20					50
USR050-40300-100-04050		0.5	10					50
USR050-40300-120-04050			12					50
USR050-40300-140-04050			14					50
USR050-40300-160-04050			16					50
USR050-40300-180-04050			18					50
USR050-40300-200-04050			20					50
USR020-40300-120-06060		0.2	12				6	60
USR020-40300-160-06060			16					60
USR020-40300-200-06060			20					60
USR020-40300-250-06060			25					60

4刃深沟圆鼻刀

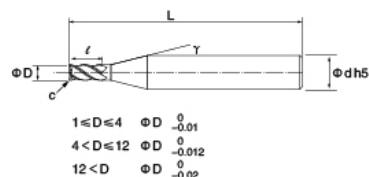
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
USR050-40300-120-06060	3	0.5	12	3	2.92	12°	6	60
USR050-40300-160-06060			16					60
USR050-40300-200-06060			20					60
USR050-40300-250-06060			25					60
USR020-40300-120-06075		0.2	12					75
USR020-40300-160-06075			16					75
USR020-40300-200-06075			20					75
USR020-40300-250-06075			25					75
USR020-40300-300-06075		0.5	30					75
USR050-40300-120-06075			12					75
USR050-40300-160-06075			16					75
USR050-40300-200-06075			20					75
USR050-40300-250-06075			25					75
USR050-40300-300-06075			30					75
USR020-40400-160-06060	4	0.2	16	4	3.9	12°	6	60
USR020-40400-200-06060			20					60
USR020-40400-250-06060			25					60
USR050-40400-160-06060		0.5	16					60
USR050-40400-200-06060			20					60
USR050-40400-250-06060			25					60
USR020-40400-160-06075		0.2	16					75
USR020-40400-200-06075			20					75
USR020-40400-250-06075			25					75
USR020-40400-300-06075			30					75
USR020-40400-350-06075		0.5	35					75
USR050-40400-160-06075			16					75
USR050-40400-200-06075			20					75
USR050-40400-250-06075			25					75
USR050-40400-300-06075			30					75
USR050-40400-350-06075			35					75

4刃平刀

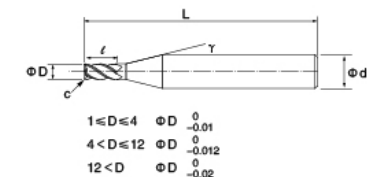
4-flute Square End Mill



型号 No.	刃径 D	刃长 L	颈角 γ (为参考值)	柄径 d	全长 L
USE-4010-04050	1	3	12°	4	50
USE-4015-04050	1.5	4	12°	4	50
USE-4020-04050	2	6	12°	4	50
USE-4025-04050	2.5	7	12°	4	50
USE-4030-04050	3	8	12°	4	50
USE-4040-04050	4	10	-	4	50
USE-4050-06050	5	13	12°	6	50
USE-4060-06050	6	15	-	6	50
USE-4080-08060	8	20	-	8	60
USE-4080-08075	8	24	-	8	75
USE-4080-08100	8	24	-	8	100
USE-4100-10075	10	25	-	10	75
USE-4100-10100	10	40	-	10	100
USE-4120-12075	12	30	-	12	75
USE-4120-12100	12	45	-	12	100
USE-4140-14100	14	40	-	14	100
USE-4160-16100	16	45	-	16	100
USE-4200-20100	20	45	-	20	100

4刃平刀(45°螺旋角)

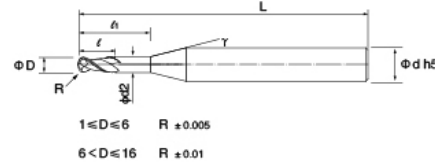
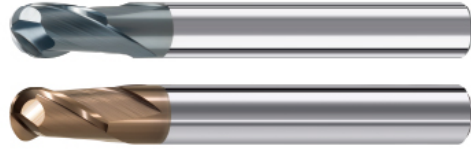
4-flute Square End Mill (helix angle 45°)



型号 No.	刃径 D	刃长 L	颈角 γ (为参考值)	柄径 d	全长 L
USEF-4010-04050	1	3	12°	4	50
USEF-4015-04050	1.5	4	12°	4	50
USEF-4020-04050	2	6	12°	4	50
USEF-4025-04050	2.5	7	12°	4	50
USEF-4030-04050	3	8	12°	4	50
USEF-4040-04050	4	10	-	4	50
USEF-4050-06050	5	13	12°	6	50
USEF-4060-06050	6	15	-	6	50
USEF-4060-06075	6	20	-	6	75
USEF-4060-06100	6	20	-	6	100
USEF-4080-08060	8	20	-	8	60
USEF-4080-08075	8	20	-	8	75
USEF-4080-08100	8	25	-	8	100
USEF-4100-10075	10	25	-	10	75
USEF-4100-10100	10	30	-	10	100
USEF-4120-12075	12	30	-	12	75
USEF-4120-12100	12	35	-	12	100

2刃球刀

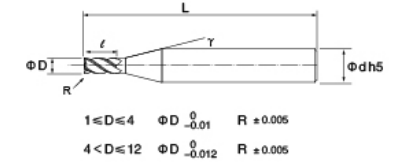
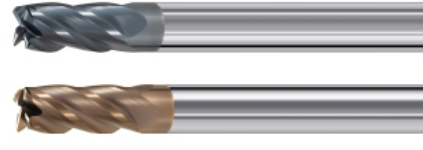
2-flute Ball End Mill



型号 No.	球半径 R	直径 D	刃长 ℓ	有效长 ℓ ₁	颈径 d ₂	颈角 γ (为参考值)	柄径 d	全长 L
USB-2010-04050	R0.5	1	1	2	0.95	12°	4	50
USB-2015-04050	R0.75	1.5	1.5	3	1.44	12°	4	50
USB-2020-04050	R1	2	2	4	1.94	12°	4	50
USB-2030-04050	R1.5	3	3	6	2.92	12°	4	50
USB-2040-04050	R2	4	6	-	-	-	4	50
USB-2040-04075	R2	4	6	-	-	-	4	75
USB-2050-06050	R2.5	5	8	-	-	12°	6	50
USB-2050-06075	R2.5	5	8	-	-	12°	6	75
USB-2050-06100	R2.5	5	8	-	-	12°	6	100
USB-2060-06050	R3	6	9	-	-	-	6	50
USB-2060-06060	R3	6	9	-	-	-	6	60
USB-2060-06075	R3	6	9	-	-	-	6	75
USB-2060-06100	R3	6	9	-	-	-	6	100
USB-2080-08060	R4	8	12	-	-	-	8	60
USB-2080-08075	R4	8	12	-	-	-	8	75
USB-2080-08100	R4	8	12	-	-	-	8	100
USB-2100-10075	R5	10	15	-	-	-	10	75
USB-2100-10100	R5	10	15	-	-	-	10	100
USB-2120-12075	R6	12	18	-	-	-	12	75
USB-2120-12100	R6	12	18	-	-	-	12	100

4刃圆鼻刀

4-flute Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
USR005-4010-04050	1	0.05	3	12°	4	50
USR010-4010-04050		0.1				50
USR020-4010-04050		0.2				50
USR010-4015-04050	1.5	0.1	4	12°	4	50
USR020-4015-04050		0.2				50
USR010-4020-04050	2	0.1	6	12°	4	50
USR020-4020-04050		0.2				50
USR050-4020-04050		0.5				50
USR010-4030-04050	3	0.1	8	12°	4	50
USR020-4030-04050		0.2				50
USR050-4030-04050		0.5				50
USR020-4040-04050	4	0.2	8	-	4	50
USR020-4040-04075		0.2				75
USR050-4040-04050		0.5				50
USR050-4040-04075	6	0.5	8	-	6	75
USR020-4060-06050		0.2				50
USR020-4060-06060		0.2				60
USR020-4060-06075		0.2				75
USR020-4060-06100		0.2				100
USR050-4060-06050		0.5				50
USR050-4060-06060		0.5				60
USR050-4060-06075		0.5				75
USR050-4060-06100		0.5				100
USR100-4060-06050		1				50
USR100-4060-06060		1				60
USR100-4060-06075		1				75
USR100-4060-06100		1				100
USR050-4080-08060	8	0.5	16	-	8	60
USR050-4080-08075		0.5				75
USR050-4080-08100		0.5				100
USR100-4080-08060		1				60
USR100-4080-08075		1				75
USR100-4080-08100	10	1	16	-	10	100
USR050-4100-10075		0.5				75
USR050-4100-10100		0.5				100
USR100-4100-10075		1				75
USR100-4100-10100	12	1	20	-	12	100
USR050-4120-12075		0.5				75
USR050-4120-12100		0.5				100
USR100-4120-12075		1				75
USR100-4120-12100		1				100

模架刀

End Mill for Mould Steel



$D \leq 12$ $\Phi D \begin{smallmatrix} 0 \\ -0.012 \end{smallmatrix}$
 $12 < D$ $\Phi D \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$

型号 No.	刃径 D	刃长 l	柄径 d	全长 L
USMU-4040-04050	4	15	4	50
USMU-4060-06050	6	20	6	50
USMU-4060-06075	6	25	6	75
USMU-4060-06100	6	30	6	100
USMU-4080-08060	8	30	8	60
USMU-4080-08100	8	35	8	100
USMU-4100-10075	10	35	10	75
USMU-4100-10100	10	45	10	100
USMU-4120-12075	12	35	12	75
USMU-4120-12100	12	52	12	100
USMU-4160-16100	16	52	16	100
USMU-4160-16150	16	70	16	150

常州市百洋工具厂

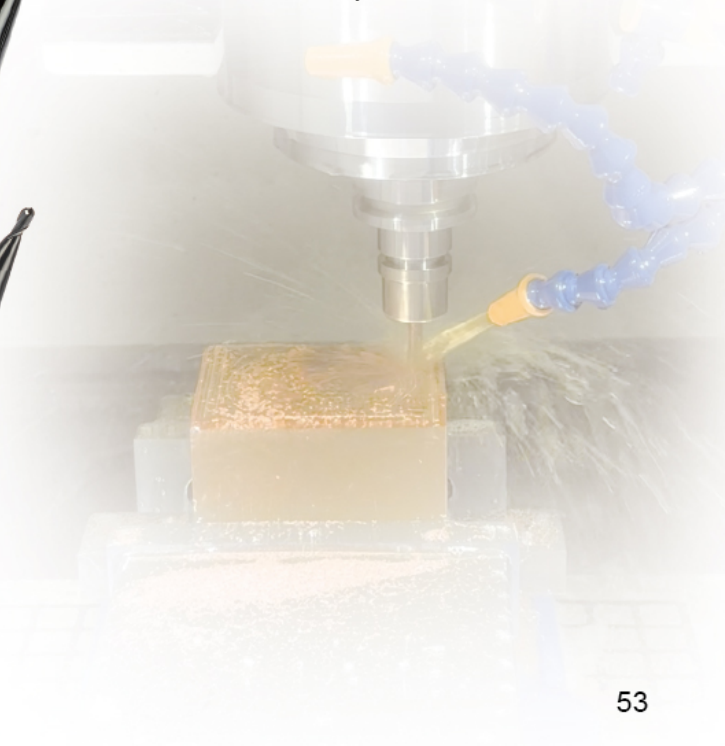
ES 铜铝系列

Copper&Aluminium Series

推荐加工 有色金属

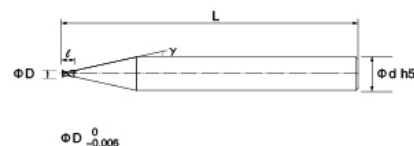


- ☆ Ultra-fine grain substrate with a grain size of 0.2μm ensures exceptional performance.
- ☆ Features a colored DLC coating with high hardness and excellent wearresistance. Friction coefficient ranges from 0.05 to 0.1, and hardness can reach up to 5000HV. A black chromium-aluminum-basedcoating is also available for stainless steel andtitanium alloy machining.
- ☆ Highly suitable for processing non-ferrous metals such as copper electrodes, aluminum alloys, aluminum-magnesium alloys, and titanium alloys.



2刃微小径平刀

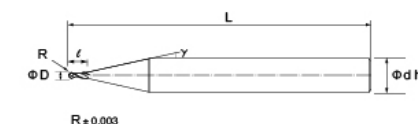
2-flute Micro Square End Mill



型号 No.	刃径 D	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
ESE-20010-04042	0.1	0.2	12°	4	42
ESE-20015-04045	0.15	0.3	12°	4	45
ESE-20020-04045	0.2	0.4	12°	4	45
ESE-20030-04045	0.3	0.6	12°	4	45
ESE-20040-04045	0.4	0.8	12°	4	45
ESE-20050-04045	0.5	1.0	12°	4	45
ESE-20060-04045	0.6	1.2	12°	4	45
ESE-20070-04045	0.7	1.4	12°	4	45
ESE-20080-04045	0.8	1.6	12°	4	45
ESE-20090-04045	0.9	1.8	12°	4	45

2刃微小径球刀

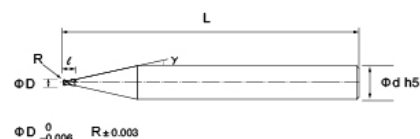
2-flute Micro Ball End Mill



型号 No.	球半径 R	刃长 ℓ	刃径 D	颈角 γ (为参考值)	柄径 d	全长 L
ESB-20010-04042	R0.05	0.15	0.1	12°	4	42
ESB-20015-04045	R0.075	0.2	0.15	12°	4	45
ESB-20020-04045	R0.1	0.3	0.2	12°	4	45
ESB-20030-04045	R0.15	0.45	0.3	12°	4	45
ESB-20040-04045	R0.2	0.6	0.4	12°	4	45
ESB-20050-04045	R0.25	0.8	0.5	12°	4	45
ESB-20060-04045	R0.3	0.9	0.6	12°	4	45
ESB-20070-04045	R0.35	1.1	0.7	12°	4	45
ESB-20080-04045	R0.4	1.2	0.8	12°	4	45
ESB-20090-04045	R0.45	1.4	0.9	12°	4	45

2刃微小径圆鼻刀

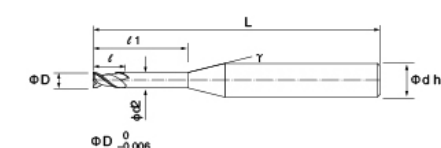
2-flute Micro Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 ℓ	颈角 γ (为参考值)	柄径 d	全长 L
ESR002-20020-04045	0.2	0.02	0.4	12°	4	45
ESR005-20020-04045		0.05				45
ESR002-20030-04045	0.3	0.02	0.6	12°	4	45
ESR005-20030-04045		0.05				45
ESR002-20040-04045	0.4	0.02	0.8	12°	4	45
ESR005-20040-04045		0.05				45
ESR010-20040-04045		0.1				45
ESR002-20050-04045	0.5	0.02	1.0	12°	4	45
ESR005-20050-04045		0.05				45
ESR010-20050-04045		0.1				45
ESR002-20060-04045	0.6	0.02	1.2	12°	4	45
ESR005-20060-04045		0.05				45
ESR010-20060-04045		0.1				45
ESR020-20060-04045	0.8	0.2	1.6	12°	4	45
ESR002-20080-04045		0.02				45
ESR005-20080-04045		0.05				45
ESR010-20080-04045		0.1				45
ESR020-20080-04045		0.2				45

2刃深沟平刀

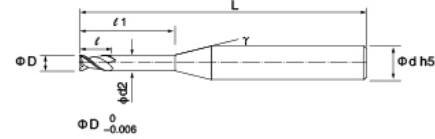
2-flute Long Neck Square End Mill



型号 No.	刃径 d	颈长 ℓ1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 D	全长 L
ESE-20010-003-04045	0.1	0.3	0.1	0.085	12°	4	45
ESE-20010-005-04045		0.5					45
ESE-20010-008-04045		0.8					45
ESE-20010-010-04045	0.15	1	0.15	0.13	12°	4	45
ESE-20015-005-04045		0.5					45
ESE-20015-010-04045		1					45
ESE-20020-010-04045	0.2	1	0.2	0.18	12°	4	45
ESE-20020-015-04045		1.5					45
ESE-20020-020-04045		2					45
ESE-20020-030-04045		3					45
ESE-20020-040-04045	0.3	4	0.3	0.27	12°	4	45
ESE-20030-010-04045		1					45
ESE-20030-015-04045		1.5					45
ESE-20030-020-04045		2					45
ESE-20030-030-04045		3					45
ESE-20030-040-04045	0.4	4	0.4	0.37	12°	4	45
ESE-20030-050-04045		5					45
ESE-20040-015-04045		1.5					45
ESE-20040-020-04045		2					45
ESE-20040-030-04045		3					45
ESE-20040-040-04045	0.5	4	0.5	0.46	12°	4	45
ESE-20040-050-04045		5					45
ESE-20040-060-04045		6					45
ESE-20050-020-04045		2					45
ESE-20050-030-04045	0.6	3	0.6	0.56	12°	4	45
ESE-20050-040-04045		4					45
ESE-20050-050-04045		5					45
ESE-20050-060-04045		6					45
ESE-20050-080-04045		8					45
ESE-20050-100-04045	0.7	10	0.7	0.66	12°	4	45
ESE-20060-020-04045		2					45
ESE-20060-030-04045		3					45
ESE-20060-040-04045		4					45
ESE-20060-050-04045		5					45
ESE-20060-060-04045	0.8	6	0.8	0.76	12°	4	45
ESE-20060-080-04045		8					45
ESE-20060-100-04045		10					45
ESE-20070-020-04045		2					45
ESE-20070-030-04045	0.9	3	0.9	0.86	12°	4	45
ESE-20070-040-04045		4					45
ESE-20070-050-04045		5					45
ESE-20070-060-04045		6					45
ESE-20070-080-04045		8					45
ESE-20070-100-04045	1.0	10	1.0	1.06	12°	4	45
ESE-20070-100-04045		10					45

2刃深沟平刀

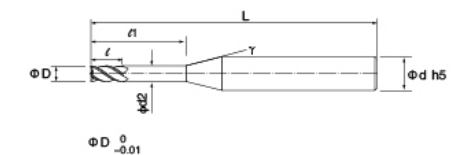
2-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 Y (为参考值)	柄径 d	全长 L
ESE-20080-020-04045	0.8	2	0.8	0.76	12°	4	45
ESE-20080-030-04045		3					45
ESE-20080-040-04045		4					45
ESE-20080-050-04045		5					45
ESE-20080-060-04045		6					45
ESE-20080-080-04045		8					45
ESE-20080-100-04045		10					45

4刃深沟平刀

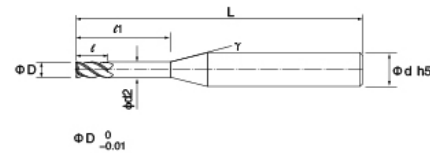
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 l1	刃长 l	颈径 d2	颈角 Y (为参考值)	柄径 d	全长 L
ESE-40100-040-04050	1	4	1	0.95	12°	4	50
ESE-40100-050-04050		5					50
ESE-40100-060-04050		6					50
ESE-40100-080-04050		8					50
ESE-40100-100-04050		10					50
ESE-40100-120-04050		12					50
ESE-40100-140-04050		14					50
ESE-40100-160-04050		16					50
ESE-40100-180-04050		18					50
ESE-40100-200-04050		20					50
ESE-40150-060-04050	1.5	6	1.5	1.44	12°	4	50
ESE-40150-080-04050		8					50
ESE-40150-100-04050		10					50
ESE-40150-120-04050		12					50
ESE-40150-140-04050		14					50
ESE-40150-160-04050		16					50
ESE-40150-180-04050		18					50
ESE-40150-200-04050		20					50
ESE-40200-080-04050	2	8	2	1.94	12°	4	50
ESE-40200-100-04050		10					50
ESE-40200-120-04050		12					50
ESE-40200-140-04050		14					50
ESE-40200-160-04050		16					50
ESE-40200-180-04050	3	18	3	2.92	12°	4	50
ESE-40200-200-04050		20					50
ESE-40300-100-04050		10				4	50
ESE-40300-120-04050		12					50
ESE-40300-140-04050		14					50
ESE-40300-160-04050		16					50
ESE-40300-180-04050		18					50
ESE-40300-200-04050		20				6	50
ESE-40300-160-06060		16					60
ESE-40300-180-06060		18					60
ESE-40300-200-06060		20					60
ESE-40300-250-06060		25					60
ESE-40300-160-06075		16					75
ESE-40300-180-06075		18					75
ESE-40300-200-06075		20					75
ESE-40300-250-06075		25					75
ESE-40300-300-06075		30					75
ESE-40300-350-06075		35					75

4刃深沟平刀

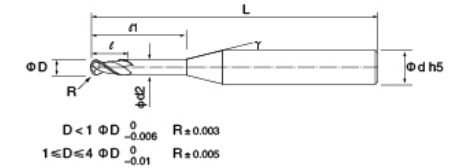
4-flute Long Neck Square End Mill



型号 No.	刃径 D	颈长 L1	刃长 L	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESE-40400-160-06060	4	16	4	3.9	12°	6	60
ESE-40400-180-06060		18					60
ESE-40400-200-06060		20					60
ESE-40400-250-06060		25					60
ESE-40400-160-06075		16					75
ESE-40400-180-06075		18					75
ESE-40400-200-06075		20					75
ESE-40400-250-06075		25					75
ESE-40400-300-06075		30					75
ESE-40400-350-06075		35					75

2刃深沟球刀

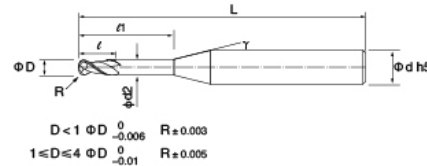
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 L1	刃长 L	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESB-20010-003-04045	R0.05	0.3	0.1	0.1	0.085	12°	4	45
ESB-20010-005-04045		0.5						45
ESB-20010-008-04045		0.8						45
ESB-20010-010-04045		1						45
ESB-20015-005-04045	R0.075	0.5	0.15	0.15	0.13	12°	4	45
ESB-20015-010-04045		1						45
ESB-20020-010-04045	R0.1	1	0.2	0.2	0.18	12°	4	45
ESB-20020-015-04045		1.5						45
ESB-20020-020-04045		2						45
ESB-20020-030-04045		3						45
ESB-20030-010-04045	R0.15	1	0.3	0.3	0.27	12°	4	45
ESB-20030-015-04045		1.5						45
ESB-20030-020-04045		2						45
ESB-20030-030-04045		3						45
ESB-20030-040-04045		4						45
ESB-20030-050-04045	R0.2	5	0.4	0.4	0.37	12°	4	45
ESB-20040-015-04045		1.5						45
ESB-20040-020-04045		2						45
ESB-20040-030-04045		3						45
ESB-20040-040-04045		4						45
ESB-20040-050-04045		5						45
ESB-20040-060-04045	R0.25	6	0.5	0.5	0.46	12°	4	45
ESB-20050-020-04045		2						45
ESB-20050-030-04045		3						45
ESB-20050-040-04045		4						45
ESB-20050-050-04045		5						45
ESB-20050-060-04045		6						45
ESB-20050-080-04045		8						45
ESB-20060-020-04045	R0.3	2	0.6	0.6	0.56	12°	4	45
ESB-20060-030-04045		3						45
ESB-20060-040-04045		4						45
ESB-20060-050-04045		5						45
ESB-20060-060-04045		6						45
ESB-20060-080-04045		8						45
ESB-20060-100-04045	R0.4	10	0.8	0.8	0.76	12°	4	45
ESB-20080-020-04045		2						45
ESB-20080-030-04045		3						45
ESB-20080-040-04045		4						45
ESB-20080-050-04045		5						45
ESB-20080-060-04045		6						45
ESB-20080-080-04045		8						45
ESB-20080-100-04045		10						45

2刃深沟球刀

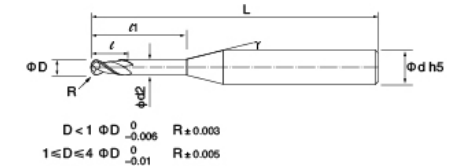
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 l_1	刃长 l	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESB-20100-030-04050	R0.5	3	1	1	0.95	12°	4	50
ESB-20100-040-04050		4						50
ESB-20100-050-04050		5						50
ESB-20100-060-04050		6						50
ESB-20100-080-04050		8						50
ESB-20100-100-04050		10						50
ESB-20100-120-04050		12						50
ESB-20100-140-04050		14						50
ESB-20100-160-04050	R0.75	16	1.5	1.5	1.44	12°	4	50
ESB-20100-180-04050		18						50
ESB-20100-200-04050		20						50
ESB-20150-040-04050		4						50
ESB-20150-050-04050		5						50
ESB-20150-060-04050		6						50
ESB-20150-080-04050		8						50
ESB-20150-100-04050		10						50
ESB-20150-120-04050	R1	12	2	2	1.94	12°	4	50
ESB-20150-140-04050		14						50
ESB-20150-160-04050		16						50
ESB-20150-180-04050		18						50
ESB-20150-200-04050		20						50
ESB-20200-060-04050		6	2	2	1.94	12°	4	50
ESB-20200-080-04050		8						50
ESB-20200-100-04050		10						50
ESB-20200-120-04050		12						50
ESB-20200-140-04050	R1.5	14					6	50
ESB-20200-160-04050		16						50
ESB-20200-180-04050		18						50
ESB-20200-200-04050		20						50
ESB-20200-160-06060		16	3	3	2.92	12°	4	60
ESB-20200-180-06060		18						60
ESB-20200-200-06060		20						60
ESB-20200-250-06060		25						60
ESB-20300-080-04050	R1.5	8	3	3	2.92	12°	4	50
ESB-20300-100-04050		10						50
ESB-20300-120-04050		12						50
ESB-20300-160-04050		16					6	50
ESB-20300-200-04050		20						50
ESB-20300-160-06060		16						60
ESB-20300-180-06060		18						60
ESB-20300-200-06060		20						60
ESB-20300-250-06060		25						60

2刃深沟球刀

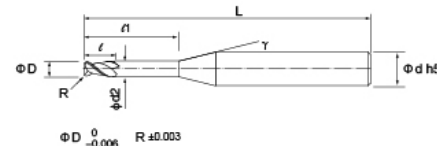
2-flute Long Neck Ball End Mill



型号 No.	球头半径 R	颈长 l_1	刃长 l	外径 D	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESB-20300-160-06075	R1.5	16	3	3	2.92	12°	6	75
ESB-20300-180-06075		18						75
ESB-20300-200-06075		20						75
ESB-20300-250-06075		25						75
ESB-20300-300-06075		30						75
ESB-20400-160-06060	R2	16	4	4	3.9	12°	6	60
ESB-20400-180-06060		18						60
ESB-20400-200-06060		20						60
ESB-20400-250-06060		25						60
ESB-20400-160-06075		16						75
ESB-20400-180-06075		18						75
ESB-20400-200-06075		20						75
ESB-20400-250-06075		25						75
ESB-20400-300-06075		30						75
ESB-20400-350-06075		35						75

2刃深沟圆鼻刀

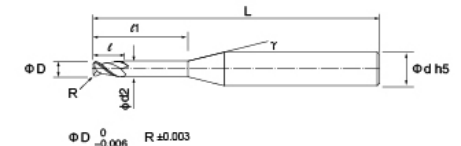
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 d1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR002-20020-010-04045	0.2	0.02	1	0.2	0.18	12°	4	45
ESR002-20020-015-04045			1.5					45
ESR002-20020-020-04045			2					45
ESR002-20020-030-04045			3					45
ESR005-20020-010-04045			1					45
ESR005-20020-015-04045	0.2	0.05	1.5	0.2	0.18	12°	4	45
ESR005-20020-020-04045			2					45
ESR005-20020-030-04045			3					45
ESR002-20030-010-04045	0.3	0.02	1	0.3	0.27	12°	4	45
ESR002-20030-015-04045			1.5					45
ESR002-20030-020-04045			2					45
ESR002-20030-030-04045			3					45
ESR002-20030-040-04045		0.05	4	0.3	0.27	12°	4	45
ESR005-20030-010-04045			1					45
ESR005-20030-015-04045			1.5					45
ESR005-20030-020-04045			2					45
ESR005-20030-030-04045			3					45
ESR005-20030-040-04045			4					45
ESR002-20040-010-04045	0.4	0.02	1	0.4	0.37	12°	4	45
ESR002-20040-015-04045			1.5					45
ESR002-20040-020-04045			2					45
ESR002-20040-030-04045			3					45
ESR002-20040-040-04045			4					45
ESR002-20040-050-04045			5					45
ESR002-20040-060-04045		0.05	6	0.4	0.37	12°	4	45
ESR005-20040-010-04045			1					45
ESR005-20040-015-04045			1.5					45
ESR005-20040-020-04045			2					45
ESR005-20040-030-04045			3					45
ESR005-20040-040-04045			4					45
ESR005-20040-050-04045			5					45
ESR005-20040-060-04045			6					45
ESR010-20040-010-04045		0.1	1	0.4	0.37	12°	4	45
ESR010-20040-015-04045			1.5					45
ESR010-20040-020-04045			2					45
ESR010-20040-030-04045			3					45
ESR010-20040-040-04045			4					45
ESR010-20040-050-04045			5					45
ESR010-20040-060-04045			6					45
ESR002-20050-020-04045	0.5	0.02	2	0.5	0.46	12°	4	45
ESR002-20050-030-04045			3					45
ESR002-20050-040-04045			4					45
ESR002-20050-050-04045			5					45

2刃深沟圆鼻刀

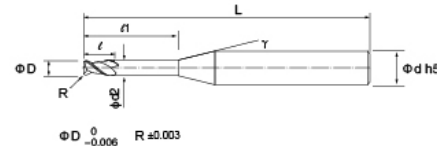
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 d1	刃长 ℓ	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR002-20050-060-04045	0.5	0.02	6	0.5	0.46	12°	4	45
ESR002-20050-080-04045			8					45
ESR002-20050-100-04045			10					45
ESR005-20050-020-04045		0.05	2					45
ESR005-20050-030-04045			3					45
ESR005-20050-040-04045			4					45
ESR005-20050-050-04045			5					45
ESR005-20050-060-04045			6					45
ESR005-20050-080-04045			8					45
ESR005-20050-100-04045			10					45
ESR010-20050-020-04045		0.1	2					45
ESR010-20050-030-04045			3					45
ESR010-20050-040-04045			4					45
ESR010-20050-050-04045			5					45
ESR010-20050-060-04045			6					45
ESR010-20050-080-04045			8					45
ESR010-20050-100-04045			10					45
ESR002-20060-020-04045	0.6	0.02	2	0.6	0.56	12°	4	45
ESR002-20060-030-04045			3					45
ESR002-20060-040-04045			4					45
ESR002-20060-050-04045			5					45
ESR002-20060-060-04045			6					45
ESR002-20060-080-04045			8					45
ESR002-20060-100-04045		0.05	10					45
ESR005-20060-020-04045			2					45
ESR005-20060-030-04045			3					45
ESR005-20060-040-04045			4					45
ESR005-20060-050-04045			5					45
ESR005-20060-060-04045			6					45
ESR005-20060-080-04045			8					45
ESR005-20060-100-04045			10					45
ESR010-20060-020-04045		0.1	2					45
ESR010-20060-030-04045			3					45
ESR010-20060-040-04045			4					45
ESR010-20060-050-04045			5					45
ESR010-20060-060-04045			6					45
ESR010-20060-080-04045			8					45
ESR010-20060-100-04045			10					45
ESR020-20060-020-04045		0.2	2					45
ESR020-20060-030-04045			3					45
ESR020-20060-040-04045			4					45
ESR020-20060-050-04045			5					45
ESR020-20060-060-04045			6					45
ESR020-20060-080-04045			8					45
ESR020-20060-100-04045			10					45

2刃深沟圆鼻刀

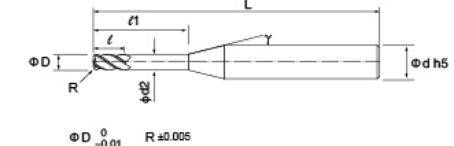
2-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR002-20080-020-04045	0.8	0.02	2	0.8	0.76	12°	4	45
ESR002-20080-030-04045			3					45
ESR002-20080-040-04045			4					45
ESR002-20080-050-04045			5					45
ESR002-20080-060-04045			6					45
ESR002-20080-080-04045			8					45
ESR002-20080-100-04045			10					45
ESR005-20080-020-04045		0.05	2					45
ESR005-20080-030-04045			3					45
ESR005-20080-040-04045			4					45
ESR005-20080-050-04045			5					45
ESR005-20080-060-04045			6					45
ESR005-20080-080-04045			8					45
ESR005-20080-100-04045			10					45
ESR010-20080-020-04045		0.1	2					45
ESR010-20080-030-04045			3					45
ESR010-20080-040-04045			4					45
ESR010-20080-050-04045			5					45
ESR010-20080-060-04045			6					45
ESR010-20080-080-04045			8					45
ESR010-20080-100-04045			10					45
ESR020-20080-020-04045		0.2	2					45
ESR020-20080-030-04045			3					45
ESR020-20080-040-04045			4					45
ESR020-20080-050-04045			5					45
ESR020-20080-060-04045			6					45
ESR020-20080-080-04045			8					45
ESR020-20080-100-04045			10					45

4刃深沟圆鼻刀

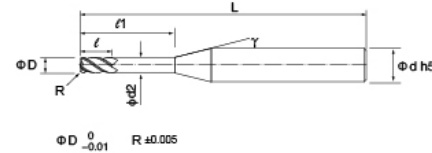
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR010-40100-040-04050	1	0.1	4	1	0.95	12°	4	50
ESR010-40100-060-04050			6					50
ESR010-40100-080-04050			8					50
ESR010-40100-100-04050			10					50
ESR010-40100-120-04050			12					50
ESR010-40100-140-04050			14					50
ESR010-40100-160-04050			16					50
ESR010-40100-180-04050			18					50
ESR010-40100-200-04050			20					50
ESR020-40100-040-04050		0.2	4					50
ESR020-40100-060-04050			6					50
ESR020-40100-080-04050			8					50
ESR020-40100-100-04050			10					50
ESR020-40100-120-04050			12					50
ESR020-40100-140-04050			14					50
ESR020-40100-160-04050			16					50
ESR020-40100-180-04050			18					50
ESR020-40100-200-04050			20					50
ESR010-40150-060-04050	1.5	0.1	6	1.5	1.44	12°	4	50
ESR010-40150-080-04050			8					50
ESR010-40150-100-04050			10					50
ESR010-40150-120-04050			12					50
ESR010-40150-140-04050			14					50
ESR010-40150-160-04050			16					50
ESR010-40150-180-04050			18					50
ESR010-40150-200-04050			20					50
ESR020-40150-060-04050		0.2	6					50
ESR020-40150-080-04050			8					50
ESR020-40150-100-04050			10					50
ESR020-40150-120-04050			12					50
ESR020-40150-140-04050			14					50
ESR020-40150-160-04050			16					50
ESR020-40150-180-04050			18					50
ESR020-40150-200-04050			20					50
ESR010-40200-080-04050	2	0.1	8	2	1.94	12°	4	50
ESR010-40200-100-04050			10					50
ESR010-40200-120-04050			12					50
ESR010-40200-140-04050			14					50
ESR010-40200-160-04050			16					50
ESR010-40200-180-04050			18					50
ESR010-40200-200-04050			20					50

4刃深沟圆鼻刀

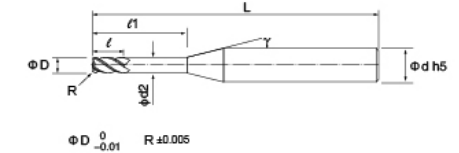
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR020-40200-080-04050	2	0.2	8	2	1.94	12°	4	50
ESR020-40200-100-04050			10					50
ESR020-40200-120-04050			12					50
ESR020-40200-140-04050			14					50
ESR020-40200-160-04050			16					50
ESR020-40200-180-04050			18					50
ESR020-40200-200-04050			20					50
ESR050-40200-080-04050		0.5	8					50
ESR050-40200-100-04050			10					50
ESR050-40200-120-04050			12					50
ESR050-40200-140-04050			14					50
ESR050-40200-160-04050			16					50
ESR050-40200-180-04050			18					50
ESR050-40200-200-04050			20					50
ESR010-40300-100-04050	3	0.1	10	3	2.92	12°	4	50
ESR010-40300-120-04050			12					50
ESR010-40300-140-04050			14					50
ESR010-40300-160-04050			16					50
ESR010-40300-180-04050			18					50
ESR010-40300-200-04050			20					50
ESR020-40300-100-04050		0.2	10					50
ESR020-40300-120-04050			12					50
ESR020-40300-140-04050			14					50
ESR020-40300-160-04050			16					50
ESR020-40300-180-04050			18					50
ESR020-40300-200-04050			20					50
ESR050-40300-100-04050		0.5	10					50
ESR050-40300-120-04050			12					50
ESR050-40300-140-04050			14					50
ESR050-40300-160-04050			16					50
ESR050-40300-180-04050			18					50
ESR050-40300-200-04050			20					50
ESR020-40300-120-06060		0.2	12				6	60
ESR020-40300-160-06060			16					60
ESR020-40300-200-06060			20					60
ESR020-40300-250-06060			25					60

4刃深沟圆鼻刀

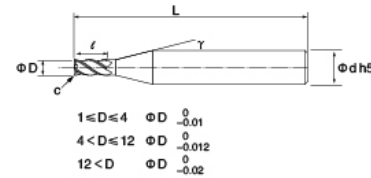
4-flute Long Neck Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	颈长 l1	刃长 l	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESR050-40300-120-06060	3	0.5	12	3	2.92	12°	6	60
ESR050-40300-160-06060			16					60
ESR050-40300-200-06060			20					60
ESR050-40300-250-06060			25					60
ESR020-40300-120-06075		0.2	12					75
ESR020-40300-160-06075			16					75
ESR020-40300-200-06075			20					75
ESR020-40300-250-06075			25					75
ESR020-40300-300-06075			30					75
ESR050-40300-120-06075		0.5	12					75
ESR050-40300-160-06075			16					75
ESR050-40300-200-06075			20					75
ESR050-40300-250-06075			25					75
ESR050-40300-300-06075			30					75
ESR020-40400-160-06060	4	0.2	16	4	3.9	12°	6	60
ESR020-40400-200-06060			20					60
ESR020-40400-250-06060			25					60
ESR050-40400-160-06060		0.5	16					60
ESR050-40400-200-06060			20					60
ESR050-40400-250-06060			25					60
ESR020-40400-160-06075		0.2	16					75
ESR020-40400-200-06075			20					75
ESR020-40400-250-06075			25					75
ESR020-40400-300-06075		0.5	30					75
ESR020-40400-350-06075			35					75
ESR050-40400-160-06075			16					75
ESR050-40400-200-06075			20					75
ESR050-40400-250-06075			25					75
ESR050-40400-300-06075			30					75
ESR050-40400-350-06075			35					75

4刃平刀

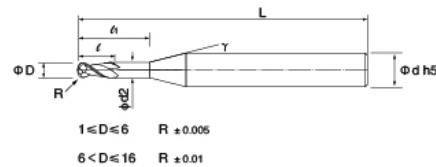
4-flute Square End Mill



型号 No.	刃径 D	刃长 l	颈角 γ (为参考值)	柄径 d	全长 L
ESE-4010-04050	1	3	12°	4	50
ESE-4015-04050	1.5	4	12°	4	50
ESE-4020-04050	2	6	12°	4	50
ESE-4025-04050	2.5	7	12°	4	50
ESE-4030-04050	3	8	12°	4	50
ESE-4040-04050	4	12	-	4	50
ESE-4060-06050	6	16	-	6	50
ESE-4080-08060	8	22	-	8	60
ESE-4100-10075	10	30	-	10	75
ESE-4100-10100	10	40	-	10	100
ESE-4120-12075	12	36	-	12	75
ESE-4120-12100	12	45	-	12	100

2刃球刀

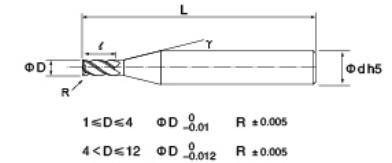
2-flute Ball End Mill



型号 No.	球半径 R	直径 D	刃长 l	有效长 l1	颈径 d2	颈角 γ (为参考值)	柄径 d	全长 L
ESB-2010-04050	R0.5	1	1	2	0.95	12°	4	50
ESB-2015-04050	R0.75	1.5	1.5	3	1.44	12°	4	50
ESB-2020-04050	R1	2	2	4	1.94	12°	4	50
ESB-2030-04050	R1.5	3	3	6	2.92	12°	4	50
ESB-2040-04050	R2	4	6	-	-	-	4	50
ESB-2060-06050	R3	6	9	-	-	-	6	50
ESB-2060-06060	R3	6	9	-	-	-	6	60
ESB-2080-08060	R4	8	12	-	-	-	8	60
ESB-2100-10075	R5	10	15	-	-	-	10	75
ESB-2100-10100	R5	10	15	-	-	-	10	100
ESB-2120-12075	R6	12	18	-	-	-	12	75
ESB-2120-12100	R6	12	18	-	-	-	12	100

4刃圆鼻刀

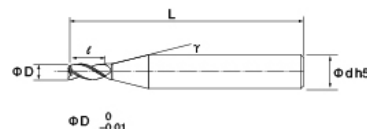
4-flute Corner Radius End Mill



型号 No.	刃径 D	R角半径 R	刃长 l	颈角 γ (为参考值)	柄径 d	全长 L
ESR005-4010-04050	1	0.05	3	12°	4	50
ESR001-4010-04050		0.1				50
ESR002-4010-04050		0.2				50
ESR001-4015-04050	1.5	0.1	4	12°	4	50
ESR002-4015-04050		0.2				50
ESR001-4020-04050		0.1				50
ESR002-4020-04050	2	0.2	6	12°	4	50
ESR005-4020-04050		0.5				50
ESR001-4030-04050		0.1				50
ESR002-4030-04050	3	0.2	8	12°	4	50
ESR005-4030-04050		0.5				50
ESR002-4040-04050		0.2				50
ESR005-4040-04050	4	0.5	8	-	4	50
ESR002-4060-06050		0.2				50
ESR005-4060-06050		0.5				50
ESR010-4060-06050	6	1	12	-	6	50
ESR010-4060-06050		1				50
ESR005-4080-08060		0.5				60
ESR010-4080-08060	8	1	16	-	8	60
ESR005-4100-10075		0.5				75
ESR005-4100-10100		0.5				100
ESR010-4100-10075	10	1	20	-	10	75
ESR010-4100-10100		1				100
ESR005-4120-12075		0.5				75
ESR005-4120-12100	12	0.5	30	-	12	100
ESR010-4120-12075		1				75
ESR010-4120-12100		1				100

高效铝用刀

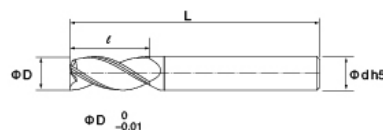
End Mill for Aluminum (High Efficiency)



型号 No.	刃径 D	刃长 L	颈角 γ (为参考值)	柄径 d	全长 L
ESEU-3010-04050	1	3	12°	4	50
ESEU-3015-04050	1.5	4.5	12°	4	50
ESEU-3020-04050	2	6	12°	4	50
ESEU-3030-04050	3	9	12°	4	50
ESEU-3040-04050	4	12	12°	4	50
ESEU-3040-04075	4	16	-	4	75
ESEU-3040-04100	4	20	-	4	100
ESEU-3050-05050	5	15	12°	6	50
ESEU-3050-05075	5	20	12°	6	75
ESEU-3050-05100	5	25	12°	6	100
ESEU-3060-06050	6	16	-	6	50
ESEU-3060-06075	6	25	-	6	75
ESEU-3060-06100	6	30	-	6	100
ESEU-3080-08060	8	22	-	8	60
ESEU-3080-08075	8	32	-	8	75
ESEU-3080-08100	8	40	-	8	100
ESEU-3100-10075	10	30	-	10	75
ESEU-3100-10100	10	40	-	10	100
ESEU-3120-12075	12	36	-	12	75
ESEU-3120-12100	12	45	-	12	100

高光铝用刀

End Mill for Aluminum (High Precision)



型号 No.	刃径 D	刃长 L	柄径 d	全长 L
ESEA-3040-04050	4	12	4	50
ESEA-3060-06050	6	16	6	50
ESEA-3080-08060	8	22	8	60
ESEA-3100-10075	10	30	10	75
ESEA-3120-12075	12	36	12	75

2刃深沟平刀

2-flute Long Neck Square End Mill

被削材 Work Type No.		预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
		转速 Rev/min	进给速度 Feed/mm/min	切深 A _p /mm	切宽 A _e /mm	转速 Rev/min	进给速度 Feed/mm/min	切深 A _p /mm	切宽 A _e /mm	转速 Rev/min	进给速度 Feed/mm/min	切深 A _p /mm	切宽 A _e /mm
Φ0.1	0.5	48600	348	0.004	0.043	42750	255	0.003	0.038	40050	208	0.003	0.033
	0.75	45800	325	0.0035	0.043	38930	273	0.003	0.038	34350	200	0.003	0.033
Φ0.15	0.5	40000	380	0.015	0.064	34000	323	0.012	0.056	30000	285	0.011	0.049
	0.75	40000	360	0.01	0.064	34000	306	0.008	0.056	30000	270	0.008	0.049
	1	39200	340	0.008	0.064	33320	289	0.006	0.056	29400	255	0.006	0.049
	1.5	38500	320	0.005	0.064	32725	272	0.004	0.056	28875	240	0.004	0.049
Φ0.2	0.5	38250	403	0.02	0.085	33750	301	0.016	0.075	31500	242	0.015	0.065
	1	38250	403	0.014	0.085	33750	301	0.011	0.075	31500	242	0.011	0.065
	1.5	34425	362	0.008	0.085	30375	271	0.006	0.075	28350	218	0.006	0.065
Φ0.3	2	30600	286	0.005	0.085	27000	214	0.004	0.075	25200	172	0.004	0.065
	0.5	36000	380	0.025	0.128	30600	323	0.020	0.113	27000	285	0.019	0.098
	1	34000	358	0.021	0.128	30000	267	0.017	0.113	28000	216	0.016	0.098
	1.5	34000	358	0.021	0.128	30000	267	0.017	0.113	28000	216	0.016	0.098
Φ0.4	2	30600	322	0.012	0.128	27000	241	0.010	0.113	25200	194	0.009	0.098
	3	30600	322	0.008	0.128	27000	241	0.006	0.113	22400	194	0.006	0.098
	1	27200	446	0.04	0.170	24000	333	0.032	0.150	22400	268	0.030	0.130
	1.5	27200	446	0.028	0.170	24000	333	0.022	0.150	22400	268	0.021	0.130
Φ0.5	2	27200	446	0.028	0.170	24000	333	0.022	0.150	20160	268	0.021	0.130
	3	24480	401	0.016	0.170	21600	299	0.013	0.150	20160	241	0.012	0.130
	4	24480	401	0.01	0.170	21600	299	0.008	0.150	20160	241	0.008	0.130
	1	27200	535	0.05	0.213	24000	333	0.040	0.188	22400	268	0.038	0.163
Φ0.6	2	27200	535	0.035	0.213	24000	333	0.028	0.188	22400	268	0.026	0.163
	3	24480	441	0.02	0.213	21600	299	0.016	0.188	20160	241	0.015	0.163
	4	24480	401	0.02	0.213	21600	299	0.016	0.188	20160	241	0.015	0.163
	5	24480	401	0.013	0.213	21600	299	0.010	0.188	20160	241	0.010	0.163
Φ0.7	6	21760	260	0.013	0.213	19200	230	0.010	0.188	17920	181	0.010	0.163
	2	27200	636	0.042	0.255	24000	475	0.034	0.225	22400	383	0.032	0.195
	3	24480	573	0.035	0.255	21600	428	0.028	0.225	20160	345	0.026	0.195
	4	24480	573	0.024	0.255	21600	428	0.019	0.225	20160	345	0.018	0.195
Φ0.8	5	24480	573	0.02	0.255	21600	428	0.016	0.225	20160	345	0.015	0.195
	6	24480	573	0.015	0.255	21600	428	0.012	0.225	20160	345	0.011	0.195
	8	21760	372	0.015	0.255	19200	328	0.012	0.225	17920	258	0.011	0.195
	10	21760	372	0.009	0.255	19200	328	0.007	0.225	17920	258	0.007	0.195
Φ0.9	2	27200	636	0.07	0.298	24000	475	0.056	0.263	22400	384	0.053	0.228
	3	27200	636	0.07	0.298	24000	475	0.056	0.263	22400	384	0.053	0.228
	4	24480	573	0.049	0.298	21600	428	0.039	0.263	20160	345	0.037	0.228
	5	24480	573	0.018	0.298	21600	428	0.014	0.263	20160	345	0.014	0.228
Φ1.0	6	22380	485	0.015	0.298	19023	410	0.012	0.263	19023	320	0.011	0.228
	7	22380	485	0.015	0.298	19023	410	0.012	0.263	19023	320	0.011	0.228

2刃深沟平刀

2-flute Long Neck Square End Mill

被削材 Work		预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
型号 Type No.		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ0.8	2	27200	780	0.08	0.340	24000	688	0.064	0.3	22400	422	0.060	0.260
	3	27200	780	0.08	0.340	24000	688	0.064	0.3	22400	422	0.060	0.260
	4	27200	780	0.056	0.340	24000	688	0.045	0.3	22400	422	0.042	0.260
	5	27200	780	0.056	0.340	24000	688	0.045	0.3	22400	422	0.042	0.260
	6	24480	678	0.032	0.340	24000	665	0.026	0.3	20160	379	0.024	0.260
	8	24480	573	0.02	0.340	21600	428	0.016	0.3	20160	345	0.015	0.260
	10	21760	372	0.02	0.340	19200	328	0.016	0.3	17920	258	0.015	0.260
	12	21760	372	0.012	0.340	19200	328	0.010	0.3	17920	258	0.009	0.260

4刃深沟平刀

4-flute Long Neck Square End Mill

被削材 Work		预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
型号 Type No.		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ1	4	25000	1700	0.055	0.6	22000	1100	0.045	0.6	18700	800	0.032	0.6
	6	20000	1200	0.045	0.6	18000	750	0.035	0.6	15300	600	0.025	0.6
	8	18000	1050	0.035	0.6	15000	600	0.025	0.6	12800	500	0.018	0.6
	10	16000	900	0.025	0.6	14000	520	0.018	0.6	11900	400	0.013	0.6
Φ1.5	6	20000	1800	0.08	0.9	16000	1100	0.07	0.9	13600	800	0.049	0.9
	8	18000	1500	0.07	0.9	14000	900	0.06	0.9	11900	700	0.42	0.9
	10	16000	1300	0.06	0.9	13000	780	0.05	0.9	11100	600	0.035	0.9
	12	14000	1050	0.05	0.9	12000	670	0.04	0.9	10200	500	0.028	0.9
Φ2	8	16000	2000	0.11	1.2	13000	1200	0.09	1.2	11100	900	0.063	1.2
	10	16000	1800	0.1	1.2	13000	1100	0.08	1.2	11100	800	0.056	1.2
	12	14000	1500	0.09	1.2	12000	1000	0.07	1.2	10200	800	0.049	1.2
	16	12000	1200	0.07	1.2	10000	750	0.05	1.2	8500	600	0.035	1.2
Φ3	10	11000	2150	0.18	1.8	9000	1350	0.14	1.8	7700	1000	0.098	1.8
	12	11000	2000	0.16	1.8	9000	1200	0.12	1.8	7700	900	0.084	1.8
	16	10000	1500	0.12	1.8	8000	900	0.09	1.8	6800	700	0.063	1.8
	20	9000	1200	0.1	1.8	7000	680	0.07	1.8	6000	500	0.049	1.8
Φ4	25	8000	1050	0.08	1.8	6000	570	0.06	1.8	5100	400	0.042	1.8
	12	8000	2200	0.3	2.4	6000	1300	0.25	2.4	5100	1000	0.175	2.4
	16	8000	2100	0.25	2.4	6000	1200	0.5	2.4	5100	900	0.140	2.4
	20	8000	2000	0.2	2.4	6000	1100	0.15	2.4	5100	800	0.105	2.4
	25	7000	1700	0.15	2.4	5000	900	0.1	2.4	4300	700	0.070	2.4
	30	7000	1500	0.12	2.4	5000	800	0.08	2.4	4300	600	0.056	2.4

2刃深沟球刀

2-flute Long Neck Ball End Mill

被削材 Work		预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
型号 Type No.		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
R0.1	0.5	50000	350	0.015	0.014	45500	270	0.013	0.011	42000	210	0.012	0.009
	1	50000	350	0.011	0.012	45500	270	0.010	0.010	42000	210	0.009	0.008
	1.5	48600	315	0.007	0.008	40500	210	0.006	0.007	37800	170	0.006	0.006
	2	48600	315	0.005	0.006	40500	210	0.005	0.005	37800	170	0.004	0.004
R0.15	1	50000	450	0.016	0.016	45000	380	0.014	0.013	42000	336	0.012	0.011
	1.5	50000	450	0.012	0.014	45000	380	0.010	0.012	42000	336	0.009	0.010
	2	48600	370	0.009	0.012	40500	310	0.008	0.010	37800	272	0.007	0.008
	3	48600	370	0.006	0.008	40500	310	0.005	0.007	37800	272	0.004	0.006
R0.2	1	40000	450	0.04	0.024	36000	360	0.034	0.020	33600	336	0.030	0.017
	1.5	40000	450	0.034	0.024	36000	360	0.028	0.020	33600	336	0.030	0.017
	2	40000	450	0.028	0.016	36000	360	0.024	0.013	33600	336	0.021	0.011
	3	36700	360	0.011	0.016	32400	290	0.010	0.013	30240	272	0.009	0.011
R0.25	4	36700	360	0.005	0.012	32400	290	0.005	0.010	30240	272	0.004	0.008
	1	34000	610	0.045	0.024	30000	540	0.040	0.020	28000	476	0.003	0.017
	2	34000	610	0.035	0.024	30000	540	0.030	0.020	28000	476	0.027	0.017
	3	30600	490	0.03	0.024	27000	430	0.025	0.020	25200	386	0.023	0.017
R0.3	4	30600	490	0.02	0.024	27000	430	0.017	0.020	25200	386	0.015	0.017
	5	30600	490	0.018	0.016	24000	430	0.015	0.013	25200	386	0.014	0.011
	6	27200	410	0.007	0.016	24000	360	0.006	0.013	22400	324	0.005	0.011
	2	34000	880	0.042	0.028	30000	720	0.040	0.023	28000	560	0.030	0.019
	3	34000	880	0.034	0.028	30000	720	0.030	0.023	28000	560	0.026	0.019
	4	30600	750	0.024	0.024	27000	610	0.020	0.020	25200	479	0.018	0.017
	5	30600	710	0.02	0.024	27000	580	0.017	0.020	25200	454	0.015	0.017
	6	30600	710	0.015	0.020	27000	580	0.013	0.016	25200	454	0.010	0.014
	8	27200	600	0.008	0.020	24000	490	0.007	0.016	22400	381	0.006	0.014
	10	23800	520	0.005	0.016	21000	420	0.005	0.013	19600	333	0.004	0.011

2刃深沟球刀

2-flute Long Neck Ball End Mill

被削材 Work		预硬钢 Pre-Hardened Steels (HRC35-45)				淬硬钢 Hardened Steels (HRC46-55)				淬硬钢 Hardened Steels (HRC56-65)			
型号 Type No.		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
R0.4	2	34000	1088	0.08	0.040	30000	900	0.068	0.033	28000	784	0.060	0.028
	3	34000	1088	0.065	0.040	30000	900	0.055	0.033	28000	784	0.050	0.028
	4	34000	1088	0.056	0.032	30000	900	0.046	0.026	28000	784	0.040	0.022
	5	30600	881	0.045	0.032	27000	729	0.038	0.026	25200	635	0.034	0.022
	6	30600	881	0.032	0.032	27000	729	0.028	0.026	25200	635	0.024	0.022
	8	27200	783	0.02	0.028	24000	648	0.017	0.023	22400	564	0.015	0.019
	10	27200	740	0.01	0.028	24000	612	0.008	0.023	22400	533	0.008	0.019
	12	27000	680	0.005	0.024	24000	580	0.004	0.020	22400	533	0.004	0.017
R0.5	4	20000	1800	0.1	0.05	20000	1500	0.08	0.12	14000	1200	0.06	0.1
	6	20000	1500	0.1	0.05	20000	1200	0.07	0.12	14000	1000	0.05	0.085
	8	20000	1200	0.05	0.05	20000	1000	0.05	0.08	14000	800	0.035	0.055
	10	20000	1000	0.03	0.05	20000	850	0.03	0.05	14000	560	0.02	0.035
R0.75	6	20000	2400	0.1	0.05	20000	1920	0.08	0.04	14000	1680	0.05	0.03
	8	20000	2400	0.1	0.05	20000	1920	0.08	0.04	14000	1680	0.05	0.03
	10	18000	1800	0.08	0.05	18000	1440	0.064	0.04	12000	1260	0.04	0.03
	12	18000	1200	0.07	0.04	18000	960	0.056	0.032	12000	840	0.035	0.024
R1	6	20000	3000	0.1	0.07	20000	2460	0.08	0.056	14000	2100	0.06	0.042
	8	16000	2500	0.1	0.07	16000	2050	0.08	0.056	11200	1750	0.06	0.042
	10	16000	2500	0.08	0.06	16000	2050	0.064	0.048	11200	1750	0.048	0.036
	12	12000	1800	0.08	0.06	12000	1476	0.064	0.048	8400	1260	0.048	0.036
	16	10000	1600	0.07	0.05	10000	1312	0.056	0.04	7000	1120	0.042	0.03
R1.5	10	16000	4000	0.1	0.06	12800	3200	0.08	0.05	11200	2800	0.06	0.04
	12	16000	3000	0.1	0.06	12800	2400	0.08	0.05	11200	2100	0.06	0.04
	16	16000	1800	0.08	0.06	12800	1440	0.06	0.05	11200	1260	0.05	0.04
	20	12000	1200	0.08	0.06	9600	960	0.06	0.05	8400	840	0.05	0.04
	25	10000	1000	0.07	0.05	7200	800	0.01	0.04	6600	720	0.08	0.04
	30	12000	2600	0.06	0.06	9600	2080	0.05	0.05	7200	1560	0.04	0.04
R2	12	16000	4000	0.1	0.1	12800	3200	0.08	0.07	9600	2400	0.06	0.06
	16	16000	3500	0.1	0.08	12800	2800	0.08	0.06	9600	2100	0.06	0.05
	20	14000	3300	0.08	0.08	11200	2640	0.06	0.06	8400	1980	0.05	0.05
	25	12000	2600	0.08	0.06	9600	2080	0.06	0.05	7200	1560	0.05	0.04
	30	12000	2600	0.06	0.06	9600	2080	0.05	0.05	7200	1560	0.04	0.04

2刃深沟圆鼻刀

2-flute Long Neck Corner Radius End Mill

被削材 Work		预硬钢 Pre-Hardened Steels (HRC35-45)				淬硬钢 Hardened Steels (HRC46-55)				淬硬钢 Hardened Steels (HRC56-65)			
型号 Type No.		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ0.3	1	50000	456	0.021	0.034	50000	336	0.018	0.029	50000	320	0.016	0.025
	1.5	45000	456	0.016	0.034	45000	336	0.014	0.029	45000	320	0.012	0.025
	2	45000	420	0.012	0.034	45000	300	0.010	0.029	45000	290	0.009	0.025
	3	35000	336	0.008	0.034	30000	200	0.007	0.029	30000	194	0.006	0.025
Φ0.4	1	50000	461	0.025	0.042	40000	320	0.022	0.036	36000	270	0.020	0.031
	1.5	50000	461	0.02	0.042	40000	320	0.017	0.036	36000	270	0.015	0.031
	2	45000	410	0.016	0.042	36000	290	0.014	0.036	34000	240	0.012	0.031
	3	40000	330	0.014	0.042	32800	240	0.012	0.036	25600	200	0.010	0.031
Φ0.5	4	30000	250	0.008	0.042	21600	160	0.007	0.036	19200	150	0.006	0.031
	1	40000	464	0.03	0.053	30000	378	0.003	0.046	28000	315	0.020	0.039
	2	40000	464	0.023	0.053	30000	378	0.002	0.046	28000	315	0.018	0.039
	3	36000	414	0.017	0.053	27000	315	0.014	0.046	24500	261	0.013	0.039
	4	32000	378	0.017	0.053	24000	279	0.015	0.046	20000	234	0.013	0.039
	5	19400	280	0.011	0.053	18000	250	0.010	0.046	15000	200	0.008	0.039
Φ0.6	6	19400	260	0.008	0.053	18000	250	0.007	0.046	15000	200	0.006	0.039
	2	37830	600	0.040	0.060	30264	510	0.034	0.052	28372	450	0.030	0.044
	3	37830	440	0.030	0.060	30264	374	0.026	0.052	28372	330	0.022	0.044
	4	27800	440	0.030	0.060	23630	374	0.026	0.052	20850	330	0.022	0.044
	5	27800	300	0.020	0.060	23630	422	0.017	0.052	20850	225	0.015	0.044
	6	18000	300	0.020	0.060	15300	410	0.017	0.052	13500	225	0.015	0.044
Φ0.8	8	18000	285	0.015	0.060	15300	242	0.013	0.052	13500	213	0.011	0.044
	10	18000	276	0.015	0.060	15300	235	0.013	0.052	13500	207	0.011	0.044
	2	35200	506	0.030	0.075	29920	430	0.026	0.065	26400	380	0.020	0.055
	3	35000	506	0.026	0.075	29750	430	0.022	0.065	26250	380	0.020	0.055
	4	34600	480	0.024	0.075	29410	408	0.020	0.065	25950	360	0.018	0.055
	5	33800	478	0.020	0.075	28730	400	0.017	0.065	25350	358	0.015	0.055
	6	33000	420	0.018	0.075	28050	357	0.015	0.065	24750	315	0.014	0.055
	8	26800	420	0.015	0.075	22780	357	0.013	0.065	20100	315	0.011	0.055
	10	16800	380	0.013	0.075	14280	323	0.011	0.065	12600	285	0.011	0.055
	12	16800	380	0.012	0.075	14280	323	0.010	0.065	12600	285	0.009	0.055

4刃深沟圆鼻刀

4-flute Long Neck Corner Radius End Mill

被削材 Work	型号 Type No.	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ1	4	25000	1200	0.03	0.036	25000	960	0.033	0.03	20000	840	0.03	0.03
	6	25000	1000	0.02	0.036	25000	800	0.022	0.03	20000	700	0.02	0.03
	8	20000	900	0.015	0.03	18000	720	0.017	0.025	16000	630	0.015	0.025
	10	18000	800	0.01	0.024	16000	640	0.011	0.02	14000	560	0.01	0.02
Φ1.5	6	20000	1200	0.02	0.048	18000	960	0.022	0.04	14000	840	0.02	0.04
	8	20000	1000	0.02	0.048	18000	800	0.022	0.04	14000	700	0.02	0.04
	10	20000	1000	0.015	0.036	18000	800	0.017	0.03	14000	700	0.015	0.03
	12	20000	800	0.015	0.036	18000	640	0.017	0.03	14000	560	0.015	0.03
Φ2	8	20000	1600	0.03	0.048	16000	1280	0.033	0.04	12000	1120	0.03	0.04
	10	20000	1400	0.03	0.048	16000	1120	0.033	0.04	12000	980	0.03	0.04
	12	20000	1200	0.02	0.036	16000	960	0.022	0.03	12000	840	0.02	0.03
	16	20000	1000	0.015	0.036	16000	800	0.017	0.03	12000	700	0.015	0.03
Φ3	10	18000	2000	0.03	0.06	10000	1600	0.033	0.05	8500	1400	0.03	0.05
	12	18000	1600	0.03	0.06	9600	1280	0.033	0.05	8000	1120	0.03	0.05
	16	16000	1200	0.02	0.048	8000	960	0.022	0.04	7000	840	0.02	0.04
	20	16000	800	0.02	0.036	8000	640	0.022	0.03	7000	560	0.02	0.03
Φ4	25	15000	600	0.015	0.03	7200	480	0.017	0.025	6500	420	0.015	0.025
	12	9000	1600	0.04	0.06	7000	1280	0.044	0.05	5000	1120	0.04	0.05
	16	8000	1200	0.03	0.06	6400	960	0.033	0.05	4400	840	0.03	0.05
	20	7500	800	0.02	0.048	6000	640	0.022	0.04	4000	560	0.02	0.04
	25	7000	600	0.02	0.048	5600	480	0.022	0.04	3600	450	0.02	0.04
	30	5000	400	0.02	0.036	3800	320	0.022	0.03	2800	280	0.02	0.03

4刃平刀 (侧铣)

4-flute Square End Mill

被削材 Work	型号 Type No.	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ1	Φ1	15000	250	2	0.05	13200	200	2	0.03	12000	200	2	0.03
	Φ1.5	12000	300	3	0.05	11000	250	3	0.03	10000	250	3	0.03
	Φ2	10000	350	4	0.05	9350	300	4	0.04	8500	300	4	0.04
	Φ2.5	8500	400	5	0.05	7700	350	5	0.04	7000	350	5	0.04
Φ3	Φ3	7500	450	6	0.05	5500	400	6	0.04	5000	400	6	0.04
	Φ4	5800	550	8	0.05	4400	440	8	0.04	4000	440	8	0.04
	Φ5	5000	580	10	0.1	4180	480	10	0.04	3800	480	10	0.04
	Φ6	4500	600	12	0.1	3740	500	12	0.05	3400	500	12	0.05
Φ8	Φ8	3800	600	16	0.1	3080	530	16	0.05	2800	530	16	0.05
	Φ10	3500	550	20	0.1	2750	500	20	0.05	2500	500	20	0.05
	Φ12	2800	500	24	0.1	2420	450	24	0.05	2200	450	24	0.05
	Φ14	2500	500	28	0.1	2200	400	28	0.05	2000	400	28	0.05
Φ16	Φ16	2200	450	32	0.1	1980	400	32	0.05	1800	400	32	0.05
	Φ20	2000	400	40	0.1	1650	350	40	0.05	1500	350	40	0.05

4刃平刀 (平面铣)

4-flute Square End Mill

被削材 Work	型号 Type No.	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
		转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ1	Φ1	19800	1200	0.05	0.7	18000	1000	0.05	0.7	12000	900	0.03	0.7
	Φ1.5	16500	1440	0.05	1.05	15000	1200	0.05	1.05	10000	1080	0.03	1.05
	Φ2	13750	1800	0.1	1.5	12500	1500	0.05	1.5	8500	1350	0.04	1.5
	Φ2.5	11000	2400	0.1	1.75	10000	2000	0.05	1.75	7000	1800	0.04	1.75
Φ3	Φ3	8800	2400	0.1	2.1	8000	2000	0.05	2.1	5000	1800	0.04	2.1
	Φ4	7150	2400	0.1	2.8	6500	2000	0.05	2.8	4000	1800	0.04	2.8
	Φ5	6600	1800	0.1	3.5	6000	1500	0.1	3.5	3800	1350	0.04	3.5
	Φ6	5500	1440	0.1	4.2	5000	1200	0.1	4.2	3400	1080	0.05	4.2
Φ8	Φ8	4950	1440	0.2	5.6	4500	1200	0.1	5.6	2800	1080	0.05	5.6
	Φ10	4400	1200	0.2	7	4000	1000	0.1	7	2500	900	0.05	7
	Φ12	3850	1200	0.2	8.4	3500	1000	0.1	8.4	2200	900	0.05	8.4
	Φ14	3300	1200	0.2	9.6	3000	1000	0.1	9.6	2000	900	0.05	9.6
Φ16	Φ16	3080	1200	0.2	11.2	2800	1000	0.1	11.2	1800	900	0.05	11.2
	Φ20	2750	1200	0.2	14	2500	1000	0.1	14	1500	900	0.05	14

2刃球刀

2-flute Ball End Mills

被削材 Work	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ0.4	28000	600	0.03	0.03	28000	600	0.02	0.03	26600	600	0.03	0.03
Φ0.5	25000	720	0.03	0.03	25000	720	0.02	0.03	23750	720	0.03	0.03
Φ0.6	22000	800	0.03	0.03	22000	800	0.03	0.03	20900	800	0.03	0.03
Φ0.8	20000	1000	0.03	0.03	20000	1000	0.03	0.04	19000	1000	0.03	0.03
Φ1	18000	1200	0.03	0.05	18000	1200	0.03	0.04	17100	1200	0.03	0.05
Φ1.5	16000	1500	0.03	0.05	16000	1500	0.04	0.05	15200	1500	0.03	0.05
Φ2	14800	1560	0.04	0.06	14800	1560	0.04	0.06	14060	1560	0.04	0.06
Φ2.5	14400	1680	0.04	0.06	14400	1680	0.04	0.08	13680	1680	0.04	0.06
Φ3	13000	2000	0.05	0.08	13000	2000	0.04	0.08	12350	2000	0.05	0.08
Φ4	12000	2400	0.05	0.1	12000	2400	0.05	0.1	11400	2400	0.05	0.1
Φ5	10000	2500	0.05	0.1	10000	2500	0.05	0.1	9500	2500	0.05	0.1
Φ6	9000	2800	0.05	0.15	9000	2800	0.05	0.12	8550	2800	0.05	0.15
Φ8	8000	3000	0.05	0.2	8000	3000	0.05	0.15	7600	3000	0.05	0.2
Φ10	7200	3000	0.08	0.25	7200	3000	0.08	0.2	6840	3000	0.08	0.25
Φ12	6400	3000	0.1	0.25	6400	3000	0.08	0.25	6080	3000	0.1	0.25
Φ16	6000	3600	0.1	0.3	6000	3600	0.1	0.25	5700	3600	0.1	0.3

4刃圆鼻刀(侧铣)

4-flute Corner Radius End Mill - Side Milling

被削材 Work	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ1	12760	660	0.05	0.03	11600	600	0.05	0.03	9000	500	0.03	0.03
Φ1.5	10450	880	0.05	0.03	9500	800	0.05	0.03	8800	600	0.03	0.03
Φ2	9900	1650	0.1	0.05	9000	1500	0.1	0.05	8500	1000	0.03	0.03
Φ3	9350	2200	0.1	0.05	8500	2000	0.1	0.05	8000	1200	0.04	0.04
Φ4	8800	2200	0.2	0.05	8000	2000	0.2	0.05	7200	1500	0.05	0.04
Φ6	6600	2750	0.2	0.08	6000	2500	0.2	0.08	4500	2000	0.1	0.05
Φ8	5500	3300	0.2	0.1	5000	3000	0.2	0.1	3600	2500	0.1	0.05
Φ10	4950	3300	0.2	0.1	4500	3000	0.2	0.1	2800	2500	0.2	0.05
Φ12	4400	3300	0.2	0.1	4000	3000	0.2	0.1	2400	2000	0.2	0.05

4刃圆鼻刀(平面铣)

4-flute Corner Radius End Mill - Planing

被削材 Work	预硬钢 Pre-Hardened Steels (HRC35-45)				淬火钢 Hardened Steels (HRC46-55)				淬火钢 Hardened Steels (HRC56-65)			
	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm	转速 Spindle speed min ⁻¹	进给速度 Feed mm/min	切深 Ap mm	切宽 Ae mm
Φ6	6600	660	0.08	3.5	6000	600	0.05	3.5	4500	500	0.04	3.5
Φ8	5500	880	0.08	4.5	5000	800	0.05	4.5	4200	600	0.04	4.5
Φ10	4950	1100	0.08	6	4500	1000	0.06	6	2800	700	0.05	6
Φ12	4400	1320	0.08	8	4000	1200	0.06	8	2400	800	0.05	8

平刀铜电极加工参数

Processing Parameters of End Mill for Copper Electrode

序号 Number	规格 Specifications	转速 Spindle speed min ⁻¹	进给 Feed mm/min	等高切削量		平面切削	
				Ap (切深) mm	Ae (切宽) mm	步距 mm	Ap (切深) mm
1	0.1*0.2L	24000	180	0.01	0.01	0.04	0.01
2	0.1*0.5H	24000	180	0.01	0.01	0.04	0.01
3	0.2*0.4L	24000	300	0.01	0.03	0.08	0.02
4	0.2*1H	24000	300	0.01	0.03	0.08	0.02
5	0.2*2H	24000	300	0.01	0.03	0.08	0.02
6	0.3*0.6L	24000	420	0.015	0.03	0.15	0.03
7	0.3*1H	24000	420	0.015	0.03	0.15	0.03
8	0.3*2H	24000	420	0.015	0.03	0.15	0.03
9	0.3*3H	24000	360	0.015	0.03	0.15	0.03
10	0.4*0.8L	24000	480	0.02	0.03	0.2	0.03
11	0.4*2H	24000	480	0.02	0.03	0.2	0.03
12	0.4*3H	24000	480	0.02	0.03	0.2	0.03
13	0.4*4H	24000	420	0.02	0.03	0.2	0.03
14	0.5*1L	24000	600	0.03	0.04	0.2	0.03
15	0.5*2H	24000	600	0.03	0.04	0.2	0.03
16	0.5*3H	24000	600	0.03	0.04	0.2	0.03
17	0.5*4H	24000	480	0.03	0.04	0.2	0.03
18	0.5*5H	24000	480	0.03	0.04	0.2	0.03
19	0.6*1.2L	24000	720	0.03	0.04	0.3	0.03
20	0.6*2H	24000	720	0.03	0.04	0.3	0.03
21	0.6*3H	24000	720	0.03	0.04	0.3	0.03
22	0.6*4H	24000	480	0.03	0.04	0.3	0.03
23	0.6*5H	24000	420	0.03	0.04	0.3	0.03
24	0.6*6H	24000	360	0.03	0.04	0.3	0.03
25	0.8*1.6L	21600	1200	0.04	0.04	0.35	0.03
26	0.8*2H	21600	1200	0.04	0.04	0.35	0.03
27	0.8*3H	21600	1080	0.04	0.04	0.35	0.03
28	0.8*4H	21600	960	0.04	0.04	0.35	0.03
29	0.8*5H	21600	960	0.04	0.04	0.35	0.03
30	0.8*6H	21600	840	0.04	0.04	0.35	0.03
31	0.8*7H	21600	840	0.04	0.04	0.35	0.03
32	0.8*8H	21600	600	0.04	0.04	0.35	0.03
33	1*3L	21600	1680	0.05	0.05	0.6	0.03
34	1*4L	21600	1680	0.05	0.05	0.6	0.03
35	1*6H	21600	1440	0.05	0.05	0.6	0.03
36	1*8H	21600	1440	0.05	0.05	0.6	0.03
37	1*10H	21600	1200	0.05	0.05	0.6	0.03
38	1*12H	21600	960	0.05	0.05	0.6	0.03
39	1.5*4L	21600	1800	0.05	0.05	0.8	0.03
40	1.5*6H	21600	1800	0.05	0.05	0.8	0.03
41	1.5*8H	21600	1680	0.05	0.05	0.8	0.03
42	1.5*10H	21600	1440	0.05	0.05	0.8	0.03
43	1.5*12H	21600	1200	0.05	0.05	0.8	0.03
44	2*6L	21600	2160	0.05	0.06	1.4	0.04
45	2*8H	21600	2160	0.06	0.06	1.4	0.04
46	2*10H	21600	1800	0.06	0.06	1.4	0.04
47	2*12H	21600	1800	0.06	0.06	1.4	0.04
48	2*14H	21600	1560	0.06	0.06	1.4	0.04
49	2*16H	21600	1200	0.06	0.06	1.4	0.04
50	3*8L	21600	2400	0.06	0.06	2	0.04
51	3*12H	21600	2400	0.06	0.06	2	0.04
52	3*16H	21600	2160	0.06	0.06	2	0.04
53	4*4D*50L	21600	2640	0.07	0.07	2.5	0.04
54	6*6D*50L	14400	3000	0.07	0.07	4	0.04

球刀铜电极加工参数

Processing Parameters of Ball End Mill for Copper Electrode

序号 Number	规格 Specifications	转速 Spindle speed min ⁻¹	进给 Feed mm/min	等高切削量		平面切削	
				Ap (切深) mm	Ae (切宽) mm	步距 mm	Ap (切深) mm
55	R0.05*0.15L	26400	180	0.005	0.01	0.005	0.005
56	R0.05*0.5H	26400	180	0.005	0.01	0.005	0.005
57	R0.1*0.4L	26400	240	0.01	0.02	0.01	0.01
58	R0.1*1H	26400	240	0.01	0.02	0.01	0.01
59	R0.1*2H	26400	300	0.015	0.02	0.01	0.01
60	R0.15*0.6L	21600	300	0.015	0.025	0.015	0.015
61	R0.15*1H	21600	360	0.015	0.025	0.015	0.15
62	R0.15*2H	21600	300	0.015	0.025	0.015	0.015
63	R0.15*3H	21600	300	0.015	0.025	0.015	0.015
64	R0.2*0.8L	21600	480	0.02	0.025	0.015	0.02
65	R0.2*2H	21600	420	0.02	0.025	0.015	0.02
66	R0.2*3H	21600	420	0.02	0.025	0.015	0.02
67	R0.2*4H	21600	360	0.02	0.025	0.015	0.02
68	R0.25*1L	21600	600	0.02	0.025	0.02	0.02
69	R0.25*2H	21600	540	0.02	0.025	0.02	0.02
70	R0.25*3H	21600	540	0.02	0.025	0.02	0.02
71	R0.25*4H	21600	480	0.02	0.025	0.02	0.02
72	R0.25*5H	21600	360	0.02	0.025	0.02	0.02
73	R0.3*1.2L	21600	660	0.025	0.025	0.02	0.02
74	R0.3*2H	21600	660	0.025	0.025	0.025	0.025
75	R0.3*3H	21600	600	0.025	0.025	0.025	0.025
76	R0.3*4H	21600	540	0.025	0.025	0.025	0.025
77	R0.3*5H	21600	480	0.025	0.025	0.025	0.025
78	R0.3*6H	21600	420	0.025	0.025	0.025	0.025
79	R0.4*1.6L	21600	960	0.03	0.03	0.03	0.03
80	R0.4*2H	21600	960	0.03	0.03	0.03	0.03
81	R0.4*3H	21600	960	0.03	0.03	0.03	0.03
82	R0.4*4H	21600	960	0.03	0.03	0.03	0.03
83	R0.4*5H	21600	720	0.03	0.03	0.03	0.03
84	R0.4*6H	21600	720	0.03	0.03	0.03	0.03
85	R0.4*7H	21600	600	0.03	0.03	0.03	0.03
86	R0.4*8H	21600	540	0.03	0.03	0.03	0.03
87	R0.5*2L	21600	1440	0.04	0.04	0.035	0.035
88	R0.5*4H	21600	1440	0.04	0.04	0.035	0.035
89	R0.5*6H	21600	1440	0.04	0.04	0.035	0.035
90	R0.5*8H	21600	1200	0.04	0.04	0.035	0.035
91	R0.5*10H	21600	1200	0.04	0.04	0.035	0.035
92	R0.5*12H	21600	840	0.04	0.04	0.035	0.035
93	R0.75*3L	21600	1680	0.045	0.045	0.04	0.035
94	R0.75*4H	21600	1680	0.045	0.045	0.04	0.035
95	R0.75*6H	21600	1680	0.045	0.045	0.04	0.035
96	R0.75*8H	21600	1560	0.045	0.045	0.04	0.035
97	R0.75*10H	21600	1440	0.045	0.045	0.04	0.035
98	R0.75*12H	21600	1200	0.045	0.045	0.04	0.035
99	R1*4L	21600	2640	0.05	0.05	0.05	0.045
100	R1*6H	21600	2640	0.05	0.05	0.05	0.045
101	R1*8H	21600	2640	0.05	0.05	0.05	0.045
102	R1*10H	21600	2640	0.05	0.05	0.05	0.045
103	R1*12H	21600	2400	0.05	0.05	0.05	0.045
104	R1*14H	21600	2160	0.05	0.05	0.05	0.045
105	R1*16H	21600	1800	0.05	0.05	0.05	0.045
106	R1.5*6L	21600	2640	0.05	0.06	0.055	0.05
107	R1.5*12H	21600	2520	0.05	0.06	0.055	0.05
108	R1.5*16H	21600	2160	0.06	0.06	0.055	0.05
109	R2*4D*50L	21600	3000	0.06	0.07	0.06	0.06
110	R3*6D*50L	14400	3000	0.06	0.07	0.08	0.07

圆鼻刀铜电极加工参数

Processing Parameters of Corner Radius End Mill for Copper Electrode

序号 Number	规格 Specifications	转速 Spindle speed min ⁻¹	进给 Feed mm/min	等高切削量		平面切削	
				Ap (切深) mm	Ae (切宽) mm	步距 mm	Ap (切深) mm
111	0.2R0.02*1H	26400	240	0.015	0.015	0.1	0.03
112	0.2R0.02*2H	26400	240	0.015	0.015	0.1	0.03
113	0.2R0.05*1H	26400	240	0.015	0.015	0.1	0.03
114	0.2R0.05*2H	26400	240	0.015	0.015	0.1	0.03
115	0.3R0.05*1H	24000	360	0.015	0.02	0.1	0.03
116	0.3R0.05*2H	24000	360	0.015	0.02	0.1	0.03
117	0.3R0.05*3H	24000	300	0.015	0.02	0.1	0.03
118	0.4R0.05*1H	24000	420	0.02	0.02	0.15	0.03
119	0.4R0.05*2H	24000	420	0.02	0.025	0.15	0.03
120	0.4R0.05*3H	24000	420	0.02	0.025	0.15	0.03
121	0.4R0.05*4H	24000	360	0.02	0.025	0.15	0.03
122	0.4R0.1*1H	24000	420	0.02	0.025	0.15	0.03
123	0.4R0.1*2H	24000	420	0.02	0.025	0.15	0.03
124	0.4R0.1*3H	24000	420	0.02	0.025	0.15	0.03
125	0.4R0.1*4H	24000	360	0.02	0.025	0.15	0.03
126	0.5R0.05*2H	24000	600	0.02	0.03	0.2	0.03
127	0.5R0.05*3H	24000	600	0.02	0.03	0.2	0.03
128	0.5R0.05*4H	24000	540	0.02	0.03	0.2	0.03
129	0.5R0.05*5H	24000	480	0.02	0.03	0.2	0.03
130	0.5R0.1*2H	24000	600	0.02	0.03	0.2	0.03
131	0.5R0.1*3H	24000	600	0.02	0.03	0.2	0.03
132	0.5R0.1*4H	24000	540	0.02	0.03	0.2	0.03
133	0.5R0.1*5H	24000	480	0.02	0.03	0.2	0.03
134	0.6R0.05*2H	24000	720	0.025	0.03	0.2	0.03
135	0.6R0.05*3H	24000	720	0.025	0.03	0.2	0.03
136	0.6R0.05*4H	24000	600	0.025	0.03	0.2	0.03
137	0.6R0.05*5H	24000	540	0.025	0.03	0.2	0.03
138	0.6R0.05*6H	24000	480	0.025	0.03	0.2	0.03
139	0.6R0.1*2H	24000	720	0.03	0.03	0.2	0.03
140	0.6R0.1*3H	24000	660	0.03	0.03	0.2	0.03
141	0.6R0.1*4H	24000	660	0.03	0.03	0.2	0.03
142	0.6R0.1*5H	24000	540	0.03	0.03	0.2	0.03
143	0.6R0.1*6H	24000	480	0.03	0.03	0.2	0.03
144	0.8R0.05*2H	21600	1020	0.035	0.035	0.3	0.03
145	0.8R0.05*3H	21600	960	0.035	0.035	0.3	0.03
146	0.8R0.05*4H	21600	960	0.035	0.035	0.3	0.03
147	0.8R0.05*5H	21600	720	0.035	0.035	0.3	0.03
148	0.8R0.05*6H	21600	720	0.035	0.035	0.3	0.03
149	0.8R0.05*7H	21600	660	0.035	0.035	0.3	0.03
150	0.8R0.05*8H	21600	600	0.035	0.035	0.3	0.03
151	0.8R0.1*2H	21600	1080	0.035	0.035	0.3	0.03
152	0.8R0.1*3H	21600	960	0.035	0.035	0.3	0.03
153	0.8R0.1*4H	21600	960	0.035	0.035	0.3	0.03
154	0.8R0.1*5H	21600	840	0.035	0.035	0.3	0.03
155	0.8R0.1*6H	21600	720	0.035	0.035	0.3	0.03
156	0.8R0.1*7H	21600	660	0.035	0.035	0.3	0.03
157	0.8R0.1*8H	21600	600	0.035	0.035	0.3	0.03
158	1R0.1*3L	21600	1560	0.04	0.04	0.5	0.03
159	1R0.1*4H	21600	1440	0.04	0.04	0.5	0.03
160	1R0.1*6H	21600	1440	0.04	0.04	0.5	0.03
161	1R0.1*8H	21600	1200	0.04	0.04	0.5	0.03
162	1R0.1*10H	21600	960	0.04	0.04	0.5	0.03
163	1R0.1*12H	21600	960	0.04	0.04	0.5	0.03
164	1R0.2*3L	21600	1560	0.04	0.04	0.5	0.03
165	1R0.2*4H	21600	1560	0.04	0.04	0.5	0.03
166	1R0.2*6H	21600	1440	0.04	0.04	0.5	0.03

圆鼻刀铜电极加工参数

Processing Parameters of Corner Radius End Mill for Copper Electrode

序号 Number	规格 Specifications	转速 Spindle speed min ⁻¹	进给 Feed mm/min	等高切削量		平面切削	
				Ap (切深) mm	Ae (切宽) mm	步距 mm	Ap (切深) mm
167	1R0.2*8H	21600	1200	0.04	0.04	0.5	0.03
168	1R0.2*10H	21600	960	0.04	0.04	0.5	0.03
169	1R0.2*12H	21600	960	0.04	0.04	0.5	0.03
170	1.5R0.1*4L	21600	1680	0.045	0.045	0.6	0.03
171	1.5R0.1*6H	21600	1440	0.045	0.045	0.6	0.03
172	1.5R0.1*8H	21600	1440	0.045	0.045	0.6	0.03
173	1.5R0.1*10H	21600	1200	0.045	0.045	0.6	0.03
174	1.5R0.1*12H	21600	1200	0.045	0.045	0.6	0.03
175	1.5R0.2*4L	21600	1680	0.045	0.045	0.6	0.03
176	1.5R0.2*6H	21600	1440	0.045	0.045	0.6	0.03
177	1.5R0.2*8H	21600	1440	0.045	0.045	0.6	0.03
178	1.5R0.2*10H	21600	1200	0.045	0.045	0.6	0.03
179	1.5R0.2*12H	21600	1200	0.045	0.045	0.6	0.03
180	2R0.1*6L	21600	1920	0.05	0.05	1.2	0.04
181	2R0.1*8H	21600	1680	0.05	0.05	1.2	0.04
182	2R0.1*10H	21600	1440	0.05	0.05	1.2	0.04
183	2R0.1*12H	21600	1440	0.05	0.05	1.2	0.04
184	2R0.1*14H	21600	1440	0.05	0.05	1.2	0.04
185	2R0.1*16H	21600	1200	0.05	0.05	1.2	0.04
186	2R0.2*6L	21600	1920	0.05	0.05	1.2	0.04
187	2R0.2*8H	21600	1680	0.05	0.05	1.2	0.04
188	2R0.2*10H	21600	1440	0.05	0.05	1.2	0.04
189	2R0.2*12H	21600	1440	0.05	0.05	1.2	0.04
190	2R0.2*14H	21600	1440	0.05	0.05	1.2	0.04
191	2R0.2*16H	21600	1200	0.05	0.05	1.2	0.04
192	3R0.2*8L	21600	2400	0.06	0.06	1.8	0.04
193	3R0.2*12H	21600	2400	0.06	0.06	1.8	0.04
194	3R0.2*16H	21600	2160	0.06	0.06	1.8	0.04
195	4R0.2*4D*50L	21600	2640	0.07	0.07	2.5	0.04
196	4R0.5*4D*50L	21600	2640	0.07	0.07	2.5	0.04
197	6R0.2*6D*50L	14400	1440	0.08	0.08	3.5	0.04
198	6R0.5*6D*50L	14400	1440	0.08	0.08	3.5	0.04