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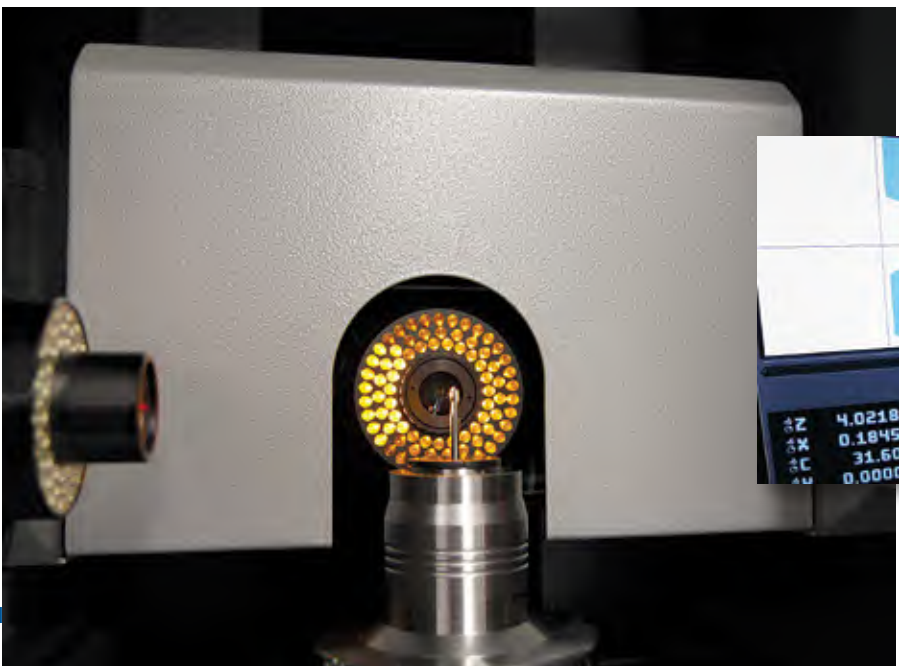
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“...these tools are amazing! They run faster and longer than any other tool we have ever tried.”



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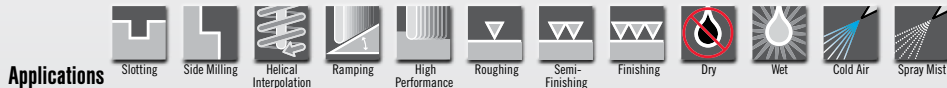
NEW
Coatings
Available!



SS-2 2 Flute Miniature End Mills



Characteristics



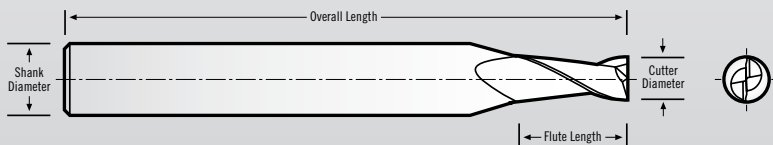
Applications



Materials



Coatings



SS/SR Tolerances

Cutting Dia. = ± 0.005 "
 Shank Dia. = $-0.001/-0.002$ "
 Flute Length = $+0.003/-0.000$ "
 OAL = $+0.040/-0.000$ "

MSS/MSR Tolerances

Cutting Dia. = ± 0.10 mm
 Shank Dia. = $-0.002/-0.005$ mm
 Flute Length = $+0.10/-0.00$ mm
 OAL = $+1/-0.00$ mm



SS-2 2 Flute Tuffy Grade Stub Length



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number Coated	Tool Number DLC Coated
.005"	1/8"	.0100"	1-1/2"	SS-2-005	SS-2-005-T	SS-2-005-C	SS-2-005-A	SS-2-005-DLC
.006"	1/8"	.0120"	1-1/2"	SS-2-006	SS-2-006-T	SS-2-006-C	SS-2-006-A	SS-2-006-DLC
.007"	1/8"	.0140"	1-1/2"	SS-2-007	SS-2-007-T	SS-2-007-C	SS-2-007-A	SS-2-007-DLC
.008"	1/8"	.0160"	1-1/2"	SS-2-008	SS-2-008-T	SS-2-008-C	SS-2-008-A	SS-2-008-DLC
.009"	1/8"	.0180"	1-1/2"	SS-2-009	SS-2-009-T	SS-2-009-C	SS-2-009-A	SS-2-009-DLC
.010"	1/8"	.0150"	1-1/2"	SS-2-010	SS-2-010-T	SS-2-010-C	SS-2-010-A	SS-2-010-DLC
.011"	1/8"	.0165"	1-1/2"	SS-2-011	SS-2-011-T	SS-2-011-C	SS-2-011-A	SS-2-011-DLC
.012"	1/8"	.0180"	1-1/2"	SS-2-012	SS-2-012-T	SS-2-012-C	SS-2-012-A	SS-2-012-DLC
.013"	1/8"	.0195"	1-1/2"	SS-2-013	SS-2-013-T	SS-2-013-C	SS-2-013-A	SS-2-013-DLC
.014"	1/8"	.0210"	1-1/2"	SS-2-014	SS-2-014-T	SS-2-014-C	SS-2-014-A	SS-2-014-DLC
.015"	1/8"	.0225"	1-1/2"	SS-2-015	SS-2-015-T	SS-2-015-C	SS-2-015-A	SS-2-015-DLC
.016"	1/8"	.0240"	1-1/2"	SS-2-016	SS-2-016-T	SS-2-016-C	SS-2-016-A	SS-2-016-DLC
.017"	1/8"	.0255"	1-1/2"	SS-2-017	SS-2-017-T	SS-2-017-C	SS-2-017-A	SS-2-017-DLC
.018"	1/8"	.0270"	1-1/2"	SS-2-018	SS-2-018-T	SS-2-018-C	SS-2-018-A	SS-2-018-DLC
.019"	1/8"	.0285"	1-1/2"	SS-2-019	SS-2-019-T	SS-2-019-C	SS-2-019-A	SS-2-019-DLC
.020"	1/8"	.0300"	1-1/2"	SS-2-020	SS-2-020-T	SS-2-020-C	SS-2-020-A	SS-2-020-DLC
.021"	1/8"	.0315"	1-1/2"	SS-2-021	SS-2-021-T	SS-2-021-C	SS-2-021-A	SS-2-021-DLC
.022"	1/8"	.0330"	1-1/2"	SS-2-022	SS-2-022-T	SS-2-022-C	SS-2-022-A	SS-2-022-DLC
.023"	1/8"	.0345"	1-1/2"	SS-2-023	SS-2-023-T	SS-2-023-C	SS-2-023-A	SS-2-023-DLC
.024"	1/8"	.0360"	1-1/2"	SS-2-024	SS-2-024-T	SS-2-024-C	SS-2-024-A	SS-2-024-DLC
.025"	1/8"	.0375"	1-1/2"	SS-2-025	SS-2-025-T	SS-2-025-C	SS-2-025-A	SS-2-025-DLC
.026"	1/8"	.0390"	1-1/2"	SS-2-026	SS-2-026-T	SS-2-026-C	SS-2-026-A	SS-2-026-DLC
.027"	1/8"	.0405"	1-1/2"	SS-2-027	SS-2-027-T	SS-2-027-C	SS-2-027-A	SS-2-027-DLC
.028"	1/8"	.0420"	1-1/2"	SS-2-028	SS-2-028-T	SS-2-028-C	SS-2-028-A	SS-2-028-DLC
.029"	1/8"	.0435"	1-1/2"	SS-2-029	SS-2-029-T	SS-2-029-C	SS-2-029-A	SS-2-029-DLC
.030"	1/8"	.0450"	1-1/2"	SS-2-030	SS-2-030-T	SS-2-030-C	SS-2-030-A	SS-2-030-DLC
.031"	1/8"	.0465"	1-1/2"	SS-2-031	SS-2-031-T	SS-2-031-C	SS-2-031-A	SS-2-031-DLC
.032"	1/8"	.0480"	1-1/2"	SS-2-032	SS-2-032-T	SS-2-032-C	SS-2-032-A	SS-2-032-DLC
.033"	1/8"	.0495"	1-1/2"	SS-2-033	SS-2-033-T	SS-2-033-C	SS-2-033-A	SS-2-033-DLC
.034"	1/8"	.0510"	1-1/2"	SS-2-034	SS-2-034-T	SS-2-034-C	SS-2-034-A	SS-2-034-DLC

2 Flute Miniature End Mills **SS-2/MSS-2**



SS-2 2 Flute Tuffly Grade Stub Length —CONTINUED FROM PREVIOUS



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TIN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.035"	1/8"	.0525"	1-1/2"	SS-2-035	SS-2-035-T	SS-2-035-C	SS-2-035-A	SS-2-035-DLC
.036"	1/8"	.0540"	1-1/2"	SS-2-036	SS-2-036-T	SS-2-036-C	SS-2-036-A	SS-2-036-DLC
.037"	1/8"	.0555"	1-1/2"	SS-2-037	SS-2-037-T	SS-2-037-C	SS-2-037-A	SS-2-037-DLC
.038"	1/8"	.0570"	1-1/2"	SS-2-038	SS-2-038-T	SS-2-038-C	SS-2-038-A	SS-2-038-DLC
.039"	1/8"	.0585"	1-1/2"	SS-2-039	SS-2-039-T	SS-2-039-C	SS-2-039-A	SS-2-039-DLC
.040"	1/8"	.0600"	1-1/2"	SS-2-040	SS-2-040-T	SS-2-040-C	SS-2-040-A	SS-2-040-DLC
.041"	1/8"	.0615"	1-1/2"	SS-2-041	SS-2-041-T	SS-2-041-C	SS-2-041-A	SS-2-041-DLC
.042"	1/8"	.0630"	1-1/2"	SS-2-042	SS-2-042-T	SS-2-042-C	SS-2-042-A	SS-2-042-DLC
.043"	1/8"	.0645"	1-1/2"	SS-2-043	SS-2-043-T	SS-2-043-C	SS-2-043-A	SS-2-043-DLC
.044"	1/8"	.0660"	1-1/2"	SS-2-044	SS-2-044-T	SS-2-044-C	SS-2-044-A	SS-2-044-DLC
.045"	1/8"	.0675"	1-1/2"	SS-2-045	SS-2-045-T	SS-2-045-C	SS-2-045-A	SS-2-045-DLC
.046"	1/8"	.0690"	1-1/2"	SS-2-046	SS-2-046-T	SS-2-046-C	SS-2-046-A	SS-2-046-DLC
.047"	1/8"	.0705"	1-1/2"	SS-2-047	SS-2-047-T	SS-2-047-C	SS-2-047-A	SS-2-047-DLC
.048"	1/8"	.0720"	1-1/2"	SS-2-048	SS-2-048-T	SS-2-048-C	SS-2-048-A	SS-2-048-DLC
.049"	1/8"	.0735"	1-1/2"	SS-2-049	SS-2-049-T	SS-2-049-C	SS-2-049-A	SS-2-049-DLC
.050"	1/8"	.0750"	1-1/2"	SS-2-050	SS-2-050-T	SS-2-050-C	SS-2-050-A	SS-2-050-DLC
.051"	1/8"	.0765"	1-1/2"	SS-2-051	SS-2-051-T	SS-2-051-C	SS-2-051-A	SS-2-051-DLC
.052"	1/8"	.0780"	1-1/2"	SS-2-052	SS-2-052-T	SS-2-052-C	SS-2-052-A	SS-2-052-DLC
.053"	1/8"	.0795"	1-1/2"	SS-2-053	SS-2-053-T	SS-2-053-C	SS-2-053-A	SS-2-053-DLC
.054"	1/8"	.0810"	1-1/2"	SS-2-054	SS-2-054-T	SS-2-054-C	SS-2-054-A	SS-2-054-DLC
.055"	1/8"	.0825"	1-1/2"	SS-2-055	SS-2-055-T	SS-2-055-C	SS-2-055-A	SS-2-055-DLC
.056"	1/8"	.0840"	1-1/2"	SS-2-056	SS-2-056-T	SS-2-056-C	SS-2-056-A	SS-2-056-DLC
.057"	1/8"	.0855"	1-1/2"	SS-2-057	SS-2-057-T	SS-2-057-C	SS-2-057-A	SS-2-057-DLC
.058"	1/8"	.0870"	1-1/2"	SS-2-058	SS-2-058-T	SS-2-058-C	SS-2-058-A	SS-2-058-DLC
.059"	1/8"	.0885"	1-1/2"	SS-2-059	SS-2-059-T	SS-2-059-C	SS-2-059-A	SS-2-059-DLC
.060"	1/8"	.0900"	1-1/2"	SS-2-060	SS-2-060-T	SS-2-060-C	SS-2-060-A	SS-2-060-DLC
.061"	1/8"	.0915"	1-1/2"	SS-2-061	SS-2-061-T	SS-2-061-C	SS-2-061-A	SS-2-061-DLC
.062"	1/8"	.0930"	1-1/2"	SS-2-062	SS-2-062-T	SS-2-062-C	SS-2-062-A	SS-2-062-DLC



MSS-2 Metric 2 Flute Miniature Stub Length **METRIC**



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TIN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.15mm	3mm	.225mm	38mm	MSS-2-015	MSS-2-015-T	MSS-2-015-C	MSS-2-015-A	MSS-2-015-DLC
.20mm	3mm	.300mm	38mm	MSS-2-020	MSS-2-020-T	MSS-2-020-C	MSS-2-020-A	MSS-2-020-DLC
.25mm	3mm	.375mm	38mm	MSS-2-025	MSS-2-025-T	MSS-2-025-C	MSS-2-025-A	MSS-2-025-DLC
.30mm	3mm	.450mm	38mm	MSS-2-030	MSS-2-030-T	MSS-2-030-C	MSS-2-030-A	MSS-2-030-DLC
.35mm	3mm	.525mm	38mm	MSS-2-035	MSS-2-035-T	MSS-2-035-C	MSS-2-035-A	MSS-2-035-DLC
.40mm	3mm	.600mm	38mm	MSS-2-040	MSS-2-040-T	MSS-2-040-C	MSS-2-040-A	MSS-2-040-DLC
.45mm	3mm	.675mm	38mm	MSS-2-045	MSS-2-045-T	MSS-2-045-C	MSS-2-045-A	MSS-2-045-DLC
.50mm	3mm	.750mm	38mm	MSS-2-050	MSS-2-050-T	MSS-2-050-C	MSS-2-050-A	MSS-2-050-DLC
.55mm	3mm	.825mm	38mm	MSS-2-055	MSS-2-055-T	MSS-2-055-C	MSS-2-055-A	MSS-2-055-DLC
.60mm	3mm	.900mm	38mm	MSS-2-060	MSS-2-060-T	MSS-2-060-C	MSS-2-060-A	MSS-2-060-DLC
.65mm	3mm	.975mm	38mm	MSS-2-065	MSS-2-065-T	MSS-2-065-C	MSS-2-065-A	MSS-2-065-DLC
.70mm	3mm	1.05mm	38mm	MSS-2-070	MSS-2-070-T	MSS-2-070-C	MSS-2-070-A	MSS-2-070-DLC
.80mm	3mm	1.20mm	38mm	MSS-2-080	MSS-2-080-T	MSS-2-080-C	MSS-2-080-A	MSS-2-080-DLC
1mm	3mm	1.50mm	38mm	MSS-2-100	MSS-2-100-T	MSS-2-100-C	MSS-2-100-A	MSS-2-100-DLC
1.50mm	3mm	2.25mm	38mm	MSS-2-150	MSS-2-150-T	MSS-2-150-C	MSS-2-150-A	MSS-2-150-DLC

SR-2 2 Flute Miniature End Mills



SR-2 2 Flute Tuffy Grade Standard Length



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TIN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.010"	1/8"	.0300	1-1/2"	SR-2-010	SR-2-010-T	SR-2-010-C	SR-2-010-A	SR-2-010-DLC
.011"	1/8"	.0330	1-1/2"	SR-2-011	SR-2-011-T	SR-2-011-C	SR-2-011-A	SR-2-011-DLC
.012"	1/8"	.0360	1-1/2"	SR-2-012	SR-2-012-T	SR-2-012-C	SR-2-012-A	SR-2-012-DLC
.013"	1/8"	.0390	1-1/2"	SR-2-013	SR-2-013-T	SR-2-013-C	SR-2-013-A	SR-2-013-DLC
.014"	1/8"	.0420	1-1/2"	SR-2-014	SR-2-014-T	SR-2-014-C	SR-2-014-A	SR-2-014-DLC
.015"	1/8"	.0450	1-1/2"	SR-2-015	SR-2-015-T	SR-2-015-C	SR-2-015-A	SR-2-015-DLC
.016"	1/8"	.0480	1-1/2"	SR-2-016	SR-2-016-T	SR-2-016-C	SR-2-016-A	SR-2-016-DLC
.017"	1/8"	.0510	1-1/2"	SR-2-017	SR-2-017-T	SR-2-017-C	SR-2-017-A	SR-2-017-DLC
.018"	1/8"	.0540	1-1/2"	SR-2-018	SR-2-018-T	SR-2-018-C	SR-2-018-A	SR-2-018-DLC
.019"	1/8"	.0570	1-1/2"	SR-2-019	SR-2-019-T	SR-2-019-C	SR-2-019-A	SR-2-019-DLC
.020"	1/8"	.0600	1-1/2"	SR-2-020	SR-2-020-T	SR-2-020-C	SR-2-020-A	SR-2-020-DLC
.021"	1/8"	.0630	1-1/2"	SR-2-021	SR-2-021-T	SR-2-021-C	SR-2-021-A	SR-2-021-DLC
.022"	1/8"	.0660	1-1/2"	SR-2-022	SR-2-022-T	SR-2-022-C	SR-2-022-A	SR-2-022-DLC
.023"	1/8"	.0690	1-1/2"	SR-2-023	SR-2-023-T	SR-2-023-C	SR-2-023-A	SR-2-023-DLC
.024"	1/8"	.0720	1-1/2"	SR-2-024	SR-2-024-T	SR-2-024-C	SR-2-024-A	SR-2-024-DLC
.025"	1/8"	.0750	1-1/2"	SR-2-025	SR-2-025-T	SR-2-025-C	SR-2-025-A	SR-2-025-DLC
.026"	1/8"	.0780	1-1/2"	SR-2-026	SR-2-026-T	SR-2-026-C	SR-2-026-A	SR-2-026-DLC
.027"	1/8"	.0810	1-1/2"	SR-2-027	SR-2-027-T	SR-2-027-C	SR-2-027-A	SR-2-027-DLC
.028"	1/8"	.0840	1-1/2"	SR-2-028	SR-2-028-T	SR-2-028-C	SR-2-028-A	SR-2-028-DLC
.029"	1/8"	.0870	1-1/2"	SR-2-029	SR-2-029-T	SR-2-029-C	SR-2-029-A	SR-2-029-DLC
.030"	1/8"	.0900	1-1/2"	SR-2-030	SR-2-030-T	SR-2-030-C	SR-2-030-A	SR-2-030-DLC
.031"	1/8"	.0930	1-1/2"	SR-2-031	SR-2-031-T	SR-2-031-C	SR-2-031-A	SR-2-031-DLC
.032"	1/8"	.0960	1-1/2"	SR-2-032	SR-2-032-T	SR-2-032-C	SR-2-032-A	SR-2-032-DLC
.033"	1/8"	.0990	1-1/2"	SR-2-033	SR-2-033-T	SR-2-033-C	SR-2-033-A	SR-2-033-DLC
.034"	1/8"	.1020	1-1/2"	SR-2-034	SR-2-034-T	SR-2-034-C	SR-2-034-A	SR-2-034-DLC
.035"	1/8"	.1050	1-1/2"	SR-2-035	SR-2-035-T	SR-2-035-C	SR-2-035-A	SR-2-035-DLC
.036"	1/8"	.1080	1-1/2"	SR-2-036	SR-2-036-T	SR-2-036-C	SR-2-036-A	SR-2-036-DLC
.037"	1/8"	.1110	1-1/2"	SR-2-037	SR-2-037-T	SR-2-037-C	SR-2-037-A	SR-2-037-DLC
.038"	1/8"	.1140	1-1/2"	SR-2-038	SR-2-038-T	SR-2-038-C	SR-2-038-A	SR-2-038-DLC
.039"	1/8"	.1170	1-1/2"	SR-2-039	SR-2-039-T	SR-2-039-C	SR-2-039-A	SR-2-039-DLC
.040"	1/8"	.1200	1-1/2"	SR-2-040	SR-2-040-T	SR-2-040-C	SR-2-040-A	SR-2-040-DLC
.041"	1/8"	.1230	1-1/2"	SR-2-041	SR-2-041-T	SR-2-041-C	SR-2-041-A	SR-2-041-DLC
.042"	1/8"	.1260	1-1/2"	SR-2-042	SR-2-042-T	SR-2-042-C	SR-2-042-A	SR-2-042-DLC
.043"	1/8"	.1290	1-1/2"	SR-2-043	SR-2-043-T	SR-2-043-C	SR-2-043-A	SR-2-043-DLC
.044"	1/8"	.1320	1-1/2"	SR-2-044	SR-2-044-T	SR-2-044-C	SR-2-044-A	SR-2-044-DLC
.045"	1/8"	.1350	1-1/2"	SR-2-045	SR-2-045-T	SR-2-045-C	SR-2-045-A	SR-2-045-DLC
.046"	1/8"	.1380	1-1/2"	SR-2-046	SR-2-046-T	SR-2-046-C	SR-2-046-A	SR-2-046-DLC
.047"	1/8"	.1410	1-1/2"	SR-2-047	SR-2-047-T	SR-2-047-C	SR-2-047-A	SR-2-047-DLC
.048"	1/8"	.1440	1-1/2"	SR-2-048	SR-2-048-T	SR-2-048-C	SR-2-048-A	SR-2-048-DLC
.049"	1/8"	.1470	1-1/2"	SR-2-049	SR-2-049-T	SR-2-049-C	SR-2-049-A	SR-2-049-DLC
.050"	1/8"	.1500	1-1/2"	SR-2-050	SR-2-050-T	SR-2-050-C	SR-2-050-A	SR-2-050-DLC
.051"	1/8"	.1530	1-1/2"	SR-2-051	SR-2-051-T	SR-2-051-C	SR-2-051-A	SR-2-051-DLC
.052"	1/8"	.1560	1-1/2"	SR-2-052	SR-2-052-T	SR-2-052-C	SR-2-052-A	SR-2-052-DLC
.053"	1/8"	.1590	1-1/2"	SR-2-053	SR-2-053-T	SR-2-053-C	SR-2-053-A	SR-2-053-DLC
.054"	1/8"	.1620	1-1/2"	SR-2-054	SR-2-054-T	SR-2-054-C	SR-2-054-A	SR-2-054-DLC
.055"	1/8"	.1650	1-1/2"	SR-2-055	SR-2-055-T	SR-2-055-C	SR-2-055-A	SR-2-055-DLC
.056"	1/8"	.1680	1-1/2"	SR-2-056	SR-2-056-T	SR-2-056-C	SR-2-056-A	SR-2-056-DLC
.057"	1/8"	.1710	1-1/2"	SR-2-057	SR-2-057-T	SR-2-057-C	SR-2-057-A	SR-2-057-DLC
.058"	1/8"	.1740	1-1/2"	SR-2-058	SR-2-058-T	SR-2-058-C	SR-2-058-A	SR-2-058-DLC
.059"	1/8"	.1770	1-1/2"	SR-2-059	SR-2-059-T	SR-2-059-C	SR-2-059-A	SR-2-059-DLC
.060"	1/8"	.1800	1-1/2"	SR-2-060	SR-2-060-T	SR-2-060-C	SR-2-060-A	SR-2-060-DLC
.061"	1/8"	.1830	1-1/2"	SR-2-061	SR-2-061-T	SR-2-061-C	SR-2-061-A	SR-2-061-DLC
.062"	1/8"	.1860	1-1/2"	SR-2-062	SR-2-062-T	SR-2-062-C	SR-2-062-A	SR-2-062-DLC

Miniatures

2 Flute Miniature End Mills **MSR-2**



Tight Tolerances



MSR-2 2 Flute Standard Length **METRIC**

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TIN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number Coated
.25mm	3mm	.75mm	38mm	MSR-2-025	MSR-2-025-T	MSR-2-025-C	MSR-2-025-A	MSR-2-025-DLC
.30mm	3mm	.90mm	38mm	MSR-2-030	MSR-2-030-T	MSR-2-030-C	MSR-2-030-A	MSR-2-030-DLC
.35mm	3mm	1.05mm	38mm	MSR-2-035	MSR-2-035-T	MSR-2-035-C	MSR-2-035-A	MSR-2-035-DLC
.40mm	3mm	1.20mm	38mm	MSR-2-040	MSR-2-040-T	MSR-2-040-C	MSR-2-040-A	MSR-2-040-DLC
.45mm	3mm	1.35mm	38mm	MSR-2-045	MSR-2-045-T	MSR-2-045-C	MSR-2-045-A	MSR-2-045-DLC
.50mm	3mm	1.50mm	38mm	MSR-2-050	MSR-2-050-T	MSR-2-050-C	MSR-2-050-A	MSR-2-050-DLC
.55mm	3mm	1.65mm	38mm	MSR-2-055	MSR-2-055-T	MSR-2-055-C	MSR-2-055-A	MSR-2-055-DLC
.60mm	3mm	1.80mm	38mm	MSR-2-060	MSR-2-060-T	MSR-2-060-C	MSR-2-060-A	MSR-2-060-DLC
.65mm	3mm	1.95mm	38mm	MSR-2-065	MSR-2-065-T	MSR-2-065-C	MSR-2-065-A	MSR-2-065-DLC
.70mm	3mm	2.10mm	38mm	MSR-2-070	MSR-2-070-T	MSR-2-070-C	MSR-2-070-A	MSR-2-070-DLC
.80mm	3mm	2.40mm	38mm	MSR-2-080	MSR-2-080-T	MSR-2-080-C	MSR-2-080-A	MSR-2-080-DLC
1mm	3mm	3.00mm	38mm	MSR-2-100	MSR-2-100-T	MSR-2-100-C	MSR-2-100-A	MSR-2-100-DLC
1.50mm	3mm	4.50mm	38mm	MSR-2-150	MSR-2-150-T	MSR-2-150-C	MSR-2-150-A	MSR-2-150-DLC

Minimatures



Videos Online



See RobbJack's miniatures in action online:
www.youtube.com/RobbJackCorp
 or
robbjack.com/robbjack-tv

**Hand-Select
 +/- .0002
 Available**

Speed & Feed



Speed & Feed Calculations now online at:
robbjack.com/speeds-and-feeds/



SS/SR-2BN 2 Flute Miniature Ball End Mills

Miniatures

Characteristics

- Ball End
- 2 Flute
- 30° Helix

Applications

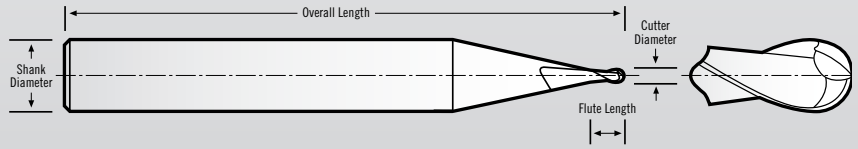
- Slotting
- Side Milling
- Helical Interpolation
- Conventional
- Ramping
- 3-D
- High Performance
- Roughing
- Semi-Finishing
- Finishing
- Dry
- Wet
- Cold Air
- Spray Mist

Materials

- Aluminum
- Copper
- Titanium
- Magnesium
- Cast Iron
- Steel
- Stainless Steel
- Super Alloys
- Plastics
- Composites
- 40 HRC Hardness
- BRASS

Coatings

- Titanium Nitride
- Titanium Carbo-Nitride
- Aluminum Titan. Nitride
- Diamond-Like Carbon (DLC)



SS/SR Tolerances

Cutting Dia. = ±.0005"
 Shank Dia. = -.0001/-.0002"
 Flute Length = +.003/-.000"
 OAL = +.040/-.000"

MSS/MSR Tolerances

Cutting Dia. = ±.010 mm
 Shank Dia. = -.002/-.005 mm
 Flute Length = +0.10/-0.00 mm
 OAL = +1/-0.00 mm



SS-2BN 2 Flute Ball End Stub Length

TiN TiCN AlTiN DLC

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.010"	1/8"	.0150"	1-1/2"	SS-2-010-BN	SS-2-010-BN-T	SS-2-010-BN-C	SS-2-010-BN-A	SS-2-010-BN-DLC
.015"	1/8"	.0230"	1-1/2"	SS-2-015-BN	SS-2-015-BN-T	SS-2-015-BN-C	SS-2-015-BN-A	SS-2-015-BN-DLC
.016"	1/8"	.0240"	1-1/2"	SS-2-016-BN	SS-2-016-BN-T	SS-2-016-BN-C	SS-2-016-BN-A	SS-2-016-BN-DLC
.020"	1/8"	.0300"	1-1/2"	SS-2-020-BN	SS-2-020-BN-T	SS-2-020-BN-C	SS-2-020-BN-A	SS-2-020-BN-DLC
.025"	1/8"	.0375"	1-1/2"	SS-2-025-BN	SS-2-025-BN-T	SS-2-025-BN-C	SS-2-025-BN-A	SS-2-025-BN-DLC
.030"	1/8"	.0450"	1-1/2"	SS-2-030-BN	SS-2-030-BN-T	SS-2-030-BN-C	SS-2-030-BN-A	SS-2-030-BN-DLC
.031"	1/8"	.0465"	1-1/2"	SS-2-031-BN	SS-2-031-BN-T	SS-2-031-BN-C	SS-2-031-BN-A	SS-2-031-BN-DLC
.040"	1/8"	.0600"	1-1/2"	SS-2-040-BN	SS-2-040-BN-T	SS-2-040-BN-C	SS-2-040-BN-A	SS-2-040-BN-DLC
.047"	1/8"	.0750"	1-1/2"	SS-2-047-BN	SS-2-047-BN-T	SS-2-047-BN-C	SS-2-047-BN-A	SS-2-047-BN-DLC
.055"	1/8"	.0825"	1-1/2"	SS-2-055-BN	SS-2-055-BN-T	SS-2-055-BN-C	SS-2-055-BN-A	SS-2-055-BN-DLC
.060"	1/8"	.0900"	1-1/2"	SS-2-060-BN	SS-2-060-BN-T	SS-2-060-BN-C	SS-2-060-BN-A	SS-2-060-BN-DLC



MSS-2BN Metric 2 Flute Ball End Stub Length METRIC

TiN TiCN AlTiN DLC

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.50mm	3mm	.750mm	38mm	MSS-2-050-BN	MSS-2-050-BN-T	MSS-2-050BN-C	MSS-2-050BN-A	MSS-2-050BN-DLC
.60mm	3mm	.900mm	38mm	MSS-2-060-BN	MSS-2-060-BN-T	MSS-2-060BN-C	MSS-2-060BN-A	MSS-2-060BN-DLC
.70mm	3mm	1.05mm	38mm	MSS-2-070-BN	MSS-2-070-BN-T	MSS-2-070BN-C	MSS-2-070BN-A	MSS-2-070BN-DLC
.80mm	3mm	1.20mm	38mm	MSS-2-080-BN	MSS-2-080-BN-T	MSS-2-080BN-C	MSS-2-080BN-A	MSS-2-080BN-DLC
1mm	3mm	1.50mm	38mm	MSS-2-100-BN	MSS-2-100-BN-T	MSS-2-100BN-C	MSS-2-100BN-A	MSS-2-100BN-DLC
1.50mm	3mm	2.25mm	38mm	MSS-2-150-BN	MSS-2-150-BN-T	MSS-2-150BN-C	MSS-2-150BN-A	MSS-2-150BN-DLC

2 Flute Miniature Ball End Mills **MSS/MSR-2BN**



Tight Tolerances



SR-2BN 2 Flute Ball End Tuffy Grade Standard Length



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.010"	1/8"	.0300"	1-1/2"	SR-2-010-BN	SR-2-010-BN-T	SR-2-010-BN-C	SR-2-010-BN-A	SR-2-010-BN-DLC
.015"	1/8"	.0450"	1-1/2"	SR-2-015-BN	SR-2-015-BN-T	SR-2-015-BN-C	SR-2-015-BN-A	SR-2-015-BN-DLC
.016"	1/8"	.0480"	1-1/2"	SR-2-016-BN	SR-2-016-BN-T	SR-2-016-BN-C	SR-2-016-BN-A	SR-2-016-BN-DLC
.020"	1/8"	.0600"	1-1/2"	SR-2-020-BN	SR-2-020-BN-T	SR-2-020-BN-C	SR-2-020-BN-A	SR-2-020-BN-DLC
.025"	1/8"	.0750"	1-1/2"	SR-2-025-BN	SR-2-025-BN-T	SR-2-025-BN-C	SR-2-025-BN-A	SR-2-025-BN-DLC
.030"	1/8"	.0900"	1-1/2"	SR-2-030-BN	SR-2-030-BN-T	SR-2-030-BN-C	SR-2-030-BN-A	SR-2-030-BN-DLC
.031"	1/8"	.0930"	1-1/2"	SR-2-031-BN	SR-2-031-BN-T	SR-2-031-BN-C	SR-2-031-BN-A	SR-2-031-BN-DLC
.040"	1/8"	.1200"	1-1/2"	SR-2-040-BN	SR-2-040-BN-T	SR-2-040-BN-C	SR-2-040-BN-A	SR-2-040-BN-DLC
.047"	1/8"	.1410"	1-1/2"	SR-2-047-BN	SR-2-047-BN-T	SR-2-047-BN-C	SR-2-047-BN-A	SR-2-047-BN-DLC
.050"	1/8"	.1500"	1-1/2"	SR-2-050-BN	SR-2-050-BN-T	SR-2-050-BN-C	SR-2-050-BN-A	SR-2-050-BN-DLC
.055"	1/8"	.1650"	1-1/2"	SR-2-055-BN	SR-2-055-BN-T	SR-2-055-BN-C	SR-2-055-BN-A	SR-2-055-BN-DLC
.060"	1/8"	.1800"	1-1/2"	SR-2-060-BN	SR-2-060-BN-T	SR-2-060-BN-C	SR-2-060-BN-A	SR-2-060-BN-DLC



MSR-2BN Metric 2 Flute Ball End Tuffy Grade Standard Length



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated	Tool Number TiN Coated	Tool Number TiCN-Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.50mm	3mm	1.50mm	38mm	MSR-2-050-BN	MSR-2-050-BN-T	MSR-2-050-BN-C	MSR-2-050-BN-A	MSR-2-050-BN-DLC
.60mm	3mm	1.80mm	38mm	MSR-2-060-BN	MSR-2-060-BN-T	MSR-2-060-BN-C	MSR-2-060-BN-A	MSR-2-060-BN-DLC
.70mm	3mm	2.10mm	38mm	MSR-2-070-BN	MSR-2-070-BN-T	MSR-2-070-BN-C	MSR-2-070-BN-A	MSR-2-070-BN-DLC
.80mm	3mm	2.40mm	38mm	MSR-2-080-BN	MSR-2-080-BN-T	MSR-2-080-BN-C	MSR-2-080-BN-A	MSR-2-080-BN-DLC
1mm	3mm	3.00mm	38mm	MSR-2-100-BN	MSR-2-100-BN-T	MSR-2-100-BN-C	MSR-2-100-BN-A	MSR-2-100-BN-DLC
1.50mm	3mm	4.50mm	38mm	MSR-2-150-BN	MSR-2-150-BN-T	MSR-2-150-BN-C	MSR-2-150-BN-A	MSR-2-150-BN-DLC

Videos Online



See RobbJack's miniatures in action online:
www.youtube.com/RobbJackCorp
 or
robbjack.com/robbjack-tv

SS/MSS-4 4 Flute Miniature End Mills













Miniatures

Characteristics





Applications

Materials









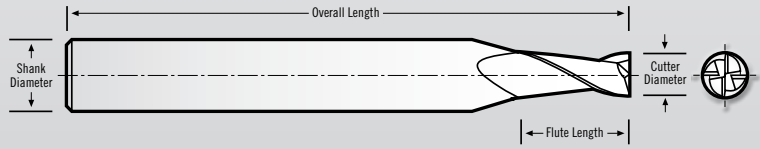





Coatings











SS/SR Tolerances
 Cutting Dia. = ±.0005"
 Shank Dia. = -.0001/-.0002"
 Flute Length = +.003/-.000"
 OAL = +.040/-.000"

MSS/MSR Tolerances
 Cutting Dia. = ±.010mm
 Shank Dia. = -.002/-.005mm
 Flute Length = +0.10/-0.00mm
 OAL = +1/-0.00mm







SS-4 4 Flute Tuffy Grade Stub Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated				
					Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.031"	1/8"	.0465"	1-1/2"	SS-4-031	SS-4-031-T	SS-4-031-C	SS-4-031-A	SS-4-031-DLC
.040"	1/8"	.0600"	1-1/2"	SS-4-040	SS-4-040-T	SS-4-040-C	SS-4-040-A	SS-4-040-DLC
.047"	1/8"	.0705"	1-1/2"	SS-4-047	SS-4-047-T	SS-4-047-C	SS-4-047-A	SS-4-047-DLC
.050"	1/8"	.0750"	1-1/2"	SS-4-050	SS-4-050-T	SS-4-050-C	SS-4-050-A	SS-4-050-DLC
.055"	1/8"	.0825"	1-1/2"	SS-4-055	SS-4-055-T	SS-4-055-C	SS-4-055-A	SS-4-055-DLC
.060"	1/8"	.0900"	1-1/2"	SS-4-060	SS-4-060-T	SS-4-060-C	SS-4-060-A	SS-4-060-DLC







METRIC

MSS-4 Metric 4 Flute Tuffy Grade Stub Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated				
					Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.80mm	3mm	1.20mm	38mm	MSS-4-080	MSS-4-080-T	MSS-4-080-C	MSS-4-080-A	MSS-4-080-DLC
1mm	3mm	1.50mm	38mm	MSS-4-100	MSS-4-100-T	MSS-4-100-C	MSS-4-100-A	MSS-4-100-DLC
1.50mm	3mm	2.25mm	38mm	MSS-4-150	MSS-4-150-T	MSS-4-150-C	MSS-4-150-A	MSS-4-150-DLC







SR-4 4 Flute Tuffy Grade Standard Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated				
					Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.031"	1/8"	.0930"	1-1/2"	SR-4-031	SR-4-031-T	SR-4-031-C	SR-4-031-A	SR-4-031-DLC
.040"	1/8"	.1200"	1-1/2"	SR-4-040	SR-4-040-T	SR-4-040-C	SR-4-040-A	SR-4-040-DLC
.047"	1/8"	.1410"	1-1/2"	SR-4-047	SR-4-047-T	SR-4-047-C	SR-4-047-A	SR-4-047-DLC
.050"	1/8"	.1500"	1-1/2"	SR-4-050	SR-4-050-T	SR-4-050-C	SR-4-050-A	SR-4-050-DLC
.055"	1/8"	.1650"	1-1/2"	SR-4-055	SR-4-055-T	SR-4-055-C	SR-4-055-A	SR-4-055-DLC
.060"	1/8"	.1800"	1-1/2"	SR-4-060	SR-4-060-T	SR-4-060-C	SR-4-060-A	SR-4-060-DLC



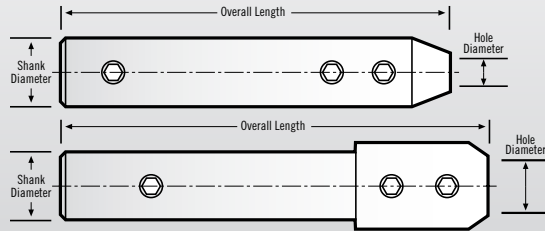
METRIC

MSR-4 Metric 4 Flute Tuffy Grade Standard Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number Uncoated				
					Tool Number TiN Coated	Tool Number TiCN Coated	Tool Number AlTiN Coated	Tool Number DLC Coated
.80mm	3mm	2.40mm	38mm	MSR-4-080	MSR-4-080-T	MSR-4-080-C	MSR-4-080-A	MSR-4-080-DLC
1mm	3mm	3.00mm	38mm	MSR-4-100	MSR-4-100-T	MSR-4-100-C	MSR-4-100-A	MSR-4-100-DLC
1.50mm	3mm	4.50mm	38mm	MSR-4-150	MSR-4-150-T	MSR-4-150-C	MSR-4-150-A	MSR-4-150-DLC



Accuhold End Mill Extension Holder **ACH/MAH**



ACH Tolerances

Hole Dia. = $+0.0015/-0.0000$
 Shank Dia. = $-0.001/-0.0003$
 OAL = ± 0.060

MAH Tolerances

Hole Dia. = $+0.004/-0.000$ mm
 Shank Dia. = $+0.000/-0.007$ mm
 OAL = ± 1.5 mm



ACH Accuhold End Mill Ultra Precision Extension Holder

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3/32"	3/8"	2-1/8"	5-40	ACH-03
1/8"	3/8"	3-1/4"	8-32	ACH-04
1/8"	3/8"	6"	8-32	ACH-04-L
5/32"	1/2"	3-1/2"	8-32	ACH-05
3/16"	1/2"	3-1/2"	8-32	ACH-06
3/16"	1/2"	5"	8-32	ACH-06-L
1/4"	5/8"	4-1/4"	10-32	ACH-08
1/4"	5/8"	6"	10-32	ACH-08-L
5/16"	3/4"	4-1/2"	1/4-28	ACH-10
3/8"	3/4"	4-1/2"	5/16-24	ACH-12
3/8"	3/4"	6"	5/16-24	ACH-12-L
7/16"	3/4"	4-1/2"	5/16-24	ACH-14
1/2"	3/4"	4-3/4"	3/8-24	ACH-16*
1/2"	1"	4-3/4"	3/8-24	ACH-16L
1/2"	1"	6"	3/8-24	ACH-16-32-L
9/16"	1"	5-1/4"	3/8-24	ACH-18
5/8"	1"	5-1/2"	3/8-24	ACH-20
3/4"	1"	5-1/4"	7/16-20	ACH-24**
3/4"	1-1/4"	6"	7/16-20	ACH-24-1.25
1"	1"	5-1/2"	7/16-20	ACH-32**

* 1" Diameter x 1.5" Long Head

**ACH-24 & ACH-32 have a 1-1/4" diameter x 2-1/4" long head and hole depth of only 2" deep

Metric End Mill Extension Holder with Inch Shank.

Use this precision end mill extension holder to convert your inch tool holder to be able to hold onto metric shanks. This is the tightest tolerance end mill extension used to reach into parts that need longer length. Precision end mills need precision holders to eliminate runout (TIR) and reduce tool breakage. Convert your inch tool holder to metric sizes.



METRIC



MAH Precision Extension Holder for Metric Size End Mill

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3mm	10mm	82.5mm		MAH-03
4mm	12mm	110mm		MAH-04
5mm	12mm	110mm		MAH-05
6mm	16mm	125mm		MAH-06
8mm	20mm	135mm		MAH-08
10mm	20mm	135mm		MAH-10
12mm	25mm	150mm		MAH-12*

* 1" Diameter x 1.5" Long Head



NEW!



ACH-M Metric to Inch End Mill Ultra Precision Extension Holder

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3mm	3/8"	3-1/4"	6-32	ACH-M3
4mm	1/2"	3-1/2"	8-32	ACH-M4
5mm	1/2"	3-1/2"	10-32	ACH-M5
6mm	5/8"	4-1/4"	10-32	ACH-M6
7mm	5/8"	4-1/4"	10-32	ACH-M7
8mm	3/4"	4-1/2"	1/4-28	ACH-M8
9mm	3/4"	4-1/2"	5/16-24	ACH-M9
10mm	3/4"	4-1/2"	5/16-24	ACH-M10
11mm	3/4"	4-1/2"	5/16-24	ACH-M11
12mm	3/4"	4-3/4"	3/8-24	ACH-M12*
12mm	1"	4-3/4"	3/8-24	ACH-M12-1
13mm	1"	4-3/4"	3/8-24	ACH-M13
14mm	1"	5-1/2"	3/8-24	ACH-M14
15mm	1"	5-1/2"	3/8-24	ACH-M15
16mm	1"	5-1/2"	3/8-24	ACH-M16
18mm	1"	5-1/4"	7/16-20	ACH-M18**
20mm	1"	6"	7/16-20	ACH-M20-1
20mm	1-1/4"	6"	7/16-20	ACH-M20
25mm	1"	6-1/2"	7/16-20	ACH-M25**

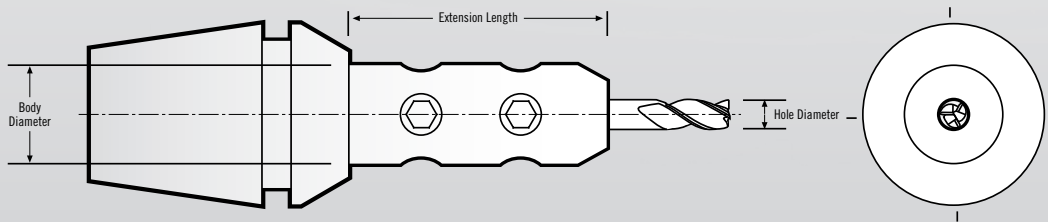
*ACH-M12 has a 1" diameter x 1.5" long head

**ACH-M18 & ACH-M25 have a 1-1/4" diameter x 2-1/4" long head and hole depth of only 2" deep

ER Solid ER-Mill Extensions

- Enables micro tools to clear fixturing
- Maintains exceptional TIR at extended length
- Solves deflection and chatter issues
- Coolant-thru versions for ER16 sizes now available
- TIR <.0002in at full extension

NEW!



Coolant-Thru Versions Available For ER16!

Miniatures

ER8 Solid Mill Extension



Hole Diameter	Extension Length	Body Diameter	ER Size	Tool Number
3mm	10mm	7mm	8	ER8-M3-S
3mm	15mm	7mm	8	ER8-M3-L
1/8"	0.394"	0.276"	8	ER8-04-S

NOTE: ER8 Holders Include a special M10x.75 clamping nut.

ER16 Solid Mill Extension



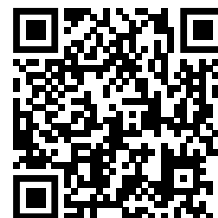
Hole Diameter	Extension Length	Body Diameter	ER Size	Tool Number
3mm	16mm	9.5mm	16	ER16-M3-S
3mm	25mm	9.5mm	16	ER16-M3-L
3mm	25mm	9.5mm	16	ER16-M3-L-TC*
1/8"	5/8"	3/8"	16	ER16-04-S
1/8"	1"	3/8"	16	ER16-04-M
1/8"	1"	3/8"	16	ER16-04-M-TC*
4mm	16mm	9.5mm	16	ER16-M4-S
4mm	25mm	9.5mm	16	ER16-M4-L
3/16"	5/8"	3/8"	16	ER16-06-S
3/16"	1"	3/8"	16	ER16-06-L
5mm	16mm	9.5mm	16	ER16-M5-S
5mm	25mm	9.5mm	16	ER16-M5-L

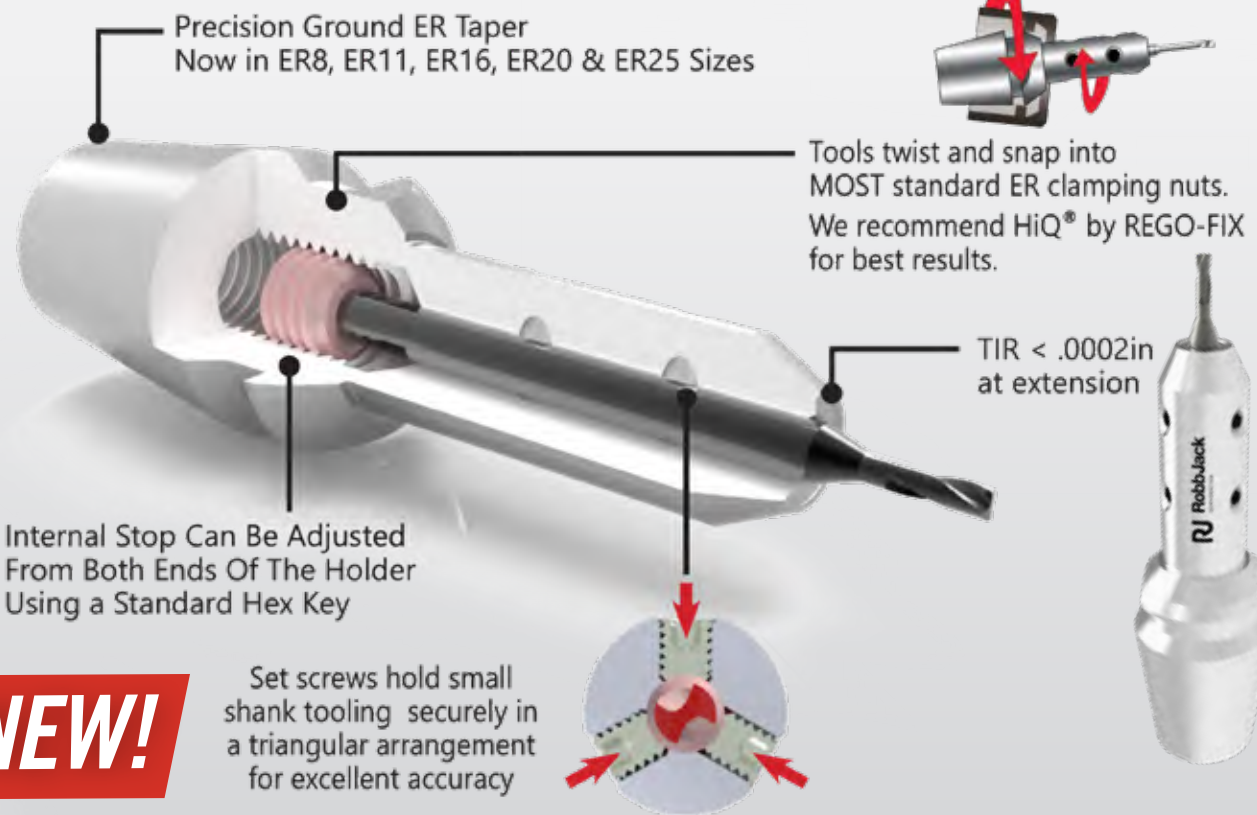
* Coolant-Thru Version

ER11 Solid Mill Extension



Hole Diameter	Extension Length	Body Diameter	ER Size	Tool Number
3mm	10mm	8mm	11	ER11-M3-S
3mm	15mm	8mm	11	ER11-M3-SL
3mm	20mm	8mm	11	ER11-M3-L
1/8"	0.394"	0.315"	11	ER11-04-S
1/8"	0.59"	0.315"	11	ER11-04-SL
1/8"	0.787"	0.315"	11	ER11-04-L
4mm	15mm	8mm	11	ER11-M4-SL
4mm	20mm	8mm	11	ER11-M4-L





Precision Ground ER Taper
Now in ER8, ER11, ER16, ER20 & ER25 Sizes

Tools twist and snap into MOST standard ER clamping nuts. We recommend HiQ® by REGO-FIX for best results.

TIR < .0002in at extension

Internal Stop Can Be Adjusted From Both Ends Of The Holder Using a Standard Hex Key

NEW!

Set screws hold small shank tooling securely in a triangular arrangement for excellent accuracy

ER20 Solid Mill Extension

Hole Diameter	Extension Length	Body Diameter	ER Size	Tool Number
3mm	14mm	9.5mm	20	ER20-M3-S
3mm	25mm	9.5mm	20	ER20-M3-L
1/8"	5/8"	3/8"	20	ER20-04-S
1/8"	1"	3/8"	20	ER20-04-L
4mm	16mm	9.5mm	20	ER20-M4-S
4mm	25mm	9.5mm	20	ER20-M4-L
3/16"	0.55"	0.45"	20	ER20-06-S
3/16"	5/8"	0.45"	20	ER20-06-SL
3/16"	1"	0.45"	20	ER20-06-L
5mm	14mm	11.4mm	20	ER20-M5-S
5mm	25mm	11.4mm	20	ER20-M5-L
6mm	14mm	12.5mm	20	ER20-M6-S
6mm	25mm	12.5mm	20	ER20-M6-L
1/4"	0.55"	0.492"	20	ER20-08-S
1/4"	1"	0.492"	20	ER20-08-L

ER25 Solid Mill Extension

Hole Diameter	Extension Length	Body Diameter	ER Size	Tool Number
3mm	25mm	10mm	25	ER25-M3
1/8"	1"	0.394"	25	ER25-04
4mm	25mm	10mm	25	ER25-M4
3/16"	1"	0.492"	25	ER25-06
5mm	25mm	12.5mm	25	ER25-M5
6mm	25mm	12.5mm	25	ER25-M6
1/4"	1"	0.492"	25	ER25-08
5/16"	1"	0.629"	25	ER25-10
8mm	25mm	16mm	25	ER25-M8

ER Replacement Set Screws

Size	Fits	Tool Number
M6	ER11	M6-ER-SCREW
M8	ER16 & 20	M8-ER-SCREW
M10	ER25	M10-ER-SCREW



ER Replacement Stop Screws

Size	Tool Number
M3	M3-ER-SCREW
M4	M4-ER-SCREW
M5	M5-ER-SCREW

