

Speeds & Feeds

Product Table: End Mills for Hardened Steels - Finishers - Ball - Taper Reach **Characteristics:** 3° Taper, 2 Flutes **Series:** 9949xx-C6

| Material | Hardness | SFM | | Chip Load (IPT) By Cutter Diameter | | | | | | | | | | Depth of Cut | | | |
|-----------------|-----------|-----|-----------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|--------|-----------|-----------|
| Material | Tiaruness | SEM | | .015 | .031 | .047 | .062 | .078 | .093 | .125 | .187 | .250 | .312 | .375 | .500 | Radial | Axial |
| Hardened Steels | 45-55 RC | 700 | Finishing | .00026 | .00053 | .00081 | .00106 | .00134 | .00160 | .00215 | .00321 | .00429 | .00535 | .00644 | .00858 | .10 x Dia | .04 x Dia |
| Tardened Steels | 56-68 Rc | 600 | Finishing | .00021 | .00043 | .00065 | .00085 | .00107 | .00128 | .00172 | .00257 | .00343 | .00428 | .00515 | .00686 | .07 x Dia | .04 x Dia |

Product Notes:

Posted values represent a 5x Reach. Use the table below to adjust Chip Load (IPT) and Depths of Cut for tools with longer reach.

| Reach | Chip | Depth of Cu | ut (45-55 Rc) | Depth of Cut (56-68 Rc) | | | | |
|---|------|-------------|---------------|-------------------------|-------|--|--|--|
| Multiple | Load | Radial* | Axial | Radial* | Axial | | | |
| 5x | 100% | 100% | 100% | 100% | 100% | | | |
| 8x | 88% | 100% | 75% | 100% | 75% | | | |
| 10x | 80% | 100% | 50% | 100% | 50% | | | |
| 12x | 70% | 80% | 50% | 86% | 50% | | | |
| 15x | 65% | 80% | 25% | 86% | 25% | | | |
| 18x | 65% | 80% | 25% | 86% | 25% | | | |
| 20x | 60% | 80% | 25% | 86% | 25% | | | |
| 25x | 60% | 80% | 25% | 86% | 25% | | | |
| 30x | 55% | 60% | 25% | 57% | 25% | | | |
| 40x | 50% | 60% | 25% | 57% | 25% | | | |
| 50x | 45% | 50% | 25% | 43% | 25% | | | |
| 60x | 40% | 50% | 25% | 43% | 25% | | | |
| * Radial DOC values represent typical starting parameters. For other finish options, consult a Cusp Height & Finish chart. | | | | | | | | |

General Notes:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. If less than minimum Axial or Radial DOC values are used, increased feed rates are possible. If greater than maximum Axial or Radial DOC values are used, decreased feed rates may be needed.

If you require additional information, Harvey Tool has a team of technical experts available to assist you through even the most challenging applications. Please contact us at **800-645-5609** or **Harveytech@harveyperformance.com**.

WARNING: Cutting tools may shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment in the vicinity of use.