

4 枚刃 ハイグレードロングネックラジアスエンドミル  
4 Flute High-grade Long Neck Radius End Mills

| 型番<br>Model<br>Number | 外径<br>Outside<br>Diameter<br>φD | コーナ半径<br>Corner<br>Radius<br>CR | 有効長<br>Effective<br>Length<br>ℓ <sub>i</sub> | 刃長<br>Length<br>of Cut<br>ℓ | 首径<br>Neck<br>Diameter<br>φd <sub>i</sub> | シャンクテーパ角<br>Shank Taper<br>Angle<br>Bta | 全長<br>Overall<br>Length<br>L | シャンク径<br>Shank<br>Diameter<br>φd | 希望小売価格<br>Suggested<br>Retail Price<br>¥ | ワーク勾配角に対する実有効長<br>Effective Length by<br>Inclined Angles |       |       |       |       |
|-----------------------|---------------------------------|---------------------------------|----------------------------------------------|-----------------------------|-------------------------------------------|-----------------------------------------|------------------------------|----------------------------------|------------------------------------------|----------------------------------------------------------|-------|-------|-------|-------|
|                       |                                 |                                 |                                              |                             |                                           |                                         |                              |                                  |                                          | 30°                                                      | 1°    | 1°30' | 2°    | 3°    |
| CBN-LRF 4005-002010   | 0.5                             | R0.02                           | 1                                            | 0.3                         | 0.48                                      | 15°                                     | 50                           | 4                                | 31,750                                   | 1.03                                                     | 1.07  | 1.11  | 1.15  | 1.25  |
| CBN-LRF 4005-005005   |                                 |                                 | 0.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,310                                   | 0.51                                                     | 0.53  | 0.55  | 0.57  | 0.62  |
| CBN-LRF 4005-005010   |                                 | R0.05                           | 1                                            |                             |                                           |                                         | 50                           | 4                                | 28,530                                   | 1.03                                                     | 1.07  | 1.10  | 1.15  | 1.24  |
| CBN-LRF 4005-005015   |                                 |                                 | 1.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,860                                   | 1.54                                                     | 1.59  | 1.65  | 1.71  | 1.85  |
| CBN-LRF 4005-010005   |                                 | R0.1                            | 0.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,310                                   | 0.51                                                     | 0.53  | 0.54  | 0.56  | 0.61  |
| CBN-LRF 4005-010015   |                                 |                                 | 1.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,860                                   | 1.53                                                     | 1.59  | 1.64  | 1.70  | 1.84  |
| CBN-LRF 4005-015005   |                                 | R0.15                           | 0.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,310                                   | 0.51                                                     | 0.52  | 0.54  | 0.56  | 0.59  |
| CBN-LRF 4005-015015   |                                 |                                 | 1.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,860                                   | 1.53                                                     | 1.58  | 1.64  | 1.69  | 1.83  |
| CBN-LRF 4006-005005   | 0.6                             | R0.05                           | 0.5                                          | 0.3                         | 0.58                                      | 15°                                     | 50                           | 4                                | 28,200                                   | 0.51                                                     | 0.53  | 0.55  | 0.57  | 0.62  |
| CBN-LRF 4006-010005   |                                 | R0.1                            | 0.5                                          |                             |                                           |                                         | 50                           | 4                                | 28,200                                   | 0.51                                                     | 0.53  | 0.54  | 0.56  | 0.61  |
| CBN-LRF 4006-010010   |                                 |                                 | 1                                            |                             |                                           |                                         | 50                           | 4                                | 28,440                                   | 1.03                                                     | 1.06  | 1.10  | 1.14  | 1.23  |
| CBN-LRF 4008-005010   | 0.8                             | R0.05                           | 1                                            | 0.56                        | 0.78                                      | 15°                                     | 50                           | 4                                | 28,680                                   | 1.03                                                     | 1.07  | 1.10  | 1.15  | 1.24  |
| CBN-LRF 4008-010010   |                                 | R0.1                            | 1                                            |                             |                                           |                                         | 50                           | 4                                | 28,680                                   | 1.03                                                     | 1.06  | 1.10  | 1.14  | 1.23  |
| CBN-LRF 4008-010020   |                                 |                                 | 2                                            |                             |                                           |                                         | 50                           | 4                                | 28,680                                   | 2.05                                                     | 2.12  | 2.20  | 2.28  | 2.46  |
| CBN-LRF 4008-010050   |                                 |                                 | 5                                            |                             |                                           |                                         | 50                           | 4                                | 32,520                                   | 5.15                                                     | 5.33  | 5.52  | 5.73  | 6.19  |
| CBN-LRF 4008-020010   |                                 |                                 | 1                                            |                             |                                           |                                         | 50                           | 4                                | 28,680                                   | 1.02                                                     | 1.05  | 1.09  | 1.12  | 1.20  |
| CBN-LRF 4010-002010   | 1                               | R0.02                           | 1                                            | 0.7                         | 0.98                                      | 15°                                     | 50                           | 4                                | 29,300                                   | 1.03                                                     | 1.07  | 1.11  | 1.15  | 1.25  |
| CBN-LRF 4010-002030   |                                 |                                 | 3                                            |                             |                                           |                                         | 50                           | 4                                | 29,300                                   | 3.10                                                     | 3.21  | 3.33  | 3.45  | 3.73  |
| CBN-LRF 4010-005010   |                                 | R0.05                           | 1                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 1.03                                                     | 1.07  | 1.11  | 1.15  | 1.24  |
| CBN-LRF 4010-005020   |                                 |                                 | 2                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 2.06                                                     | 2.14  | 2.21  | 2.30  | 2.48  |
| CBN-LRF 4010-010010   |                                 | R0.1                            | 1                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 1.03                                                     | 1.06  | 1.10  | 1.14  | 1.23  |
| CBN-LRF 4010-010020   |                                 |                                 | 2                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 2.06                                                     | 2.13  | 2.21  | 2.29  | 2.47  |
| CBN-LRF 4010-010030   |                                 |                                 | 3                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 3.10                                                     | 3.20  | 3.32  | 3.44  | 3.72  |
| CBN-LRF 4010-020020   |                                 |                                 | 2                                            |                             |                                           |                                         | 50                           | 4                                | 26,420                                   | 2.06                                                     | 2.13  | 2.20  | 2.28  | 2.45  |
| CBN-LRF 4015-002030   | 1.5                             | R0.02                           | 3                                            | 1                           | 1.46                                      | 15°                                     | 50                           | 4                                | 34,520                                   | 3.13                                                     | 3.24  | 3.36  | 3.49  | 3.78  |
| CBN-LRF 4015-010030   |                                 | R0.1                            | 3                                            |                             |                                           |                                         | 50                           | 4                                | 31,080                                   | 3.13                                                     | 3.24  | 3.35  | 3.48  | 3.76  |
| CBN-LRF 4015-030030   |                                 | R0.3                            | 3                                            |                             |                                           |                                         | 50                           | 4                                | 31,080                                   | 3.12                                                     | 3.23  | 3.33  | 3.45  | 3.71  |
| CBN-LRF 4015-050030   |                                 | R0.5                            | 3                                            |                             |                                           |                                         | 50                           | 4                                | 31,080                                   | 3.12                                                     | 3.21  | 3.31  | 3.42  | 3.66  |
| CBN-LRF 4020-002040   | 2                               | R0.02                           | 4                                            | 1.2                         | 1.97                                      | 15°                                     | 50                           | 4                                | 35,630                                   | 4.15                                                     | 4.29  | 4.45  | 4.62  | 5.00  |
| CBN-LRF 4020-002060   |                                 |                                 | 6                                            |                             |                                           |                                         | 50                           | 4                                | 35,630                                   | 6.22                                                     | 6.43  | 6.67  | 6.92  | 7.48  |
| CBN-LRF 4020-002100   |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 4                                | 38,650                                   | 10.35                                                    | 10.71 | 11.10 | 11.52 | 12.46 |
| CBN-LRF 4020-005060   |                                 | R0.05                           | 6                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 6.21                                                     | 6.43  | 6.66  | 6.91  | 7.48  |
| CBN-LRF 4020-005100   |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 4                                | 34,800                                   | 10.35                                                    | 10.71 | 11.10 | 11.51 | 12.45 |
| CBN-LRF 4020-010040   |                                 | R0.1                            | 4                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 4.15                                                     | 4.29  | 4.44  | 4.61  | 4.98  |
| CBN-LRF 4020-010060   |                                 |                                 | 6                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 6.21                                                     | 6.43  | 6.66  | 6.91  | 7.46  |
| CBN-LRF 4020-010100   |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 4                                | 34,800                                   | 10.35                                                    | 10.71 | 11.09 | 11.51 | 12.44 |
| CBN-LRF 4020-020040   |                                 |                                 | 4                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 4.14                                                     | 4.28  | 4.43  | 4.59  | 4.95  |
| CBN-LRF 4020-020060   |                                 | R0.2                            | 6                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 6.21                                                     | 6.42  | 6.65  | 6.89  | 7.44  |
| CBN-LRF 4020-020100   |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 4                                | 34,800                                   | 10.34                                                    | 10.70 | 11.08 | 11.49 | 12.41 |
| CBN-LRF 4020-050060   |                                 | R0.5                            | 6                                            |                             |                                           |                                         | 50                           | 4                                | 31,970                                   | 6.20                                                     | 6.40  | 6.62  | 6.85  | 7.37  |
| CBN-LRF 4020-050100   |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 4                                | 34,800                                   | 10.33                                                    | 10.68 | 11.05 | 11.45 | 12.34 |
| ※ CBN-LRF 4030-005060 |                                 | R0.05                           | 6                                            |                             |                                           |                                         | 50                           | 6                                | 41,300                                   | 6.27                                                     | 6.49  | 6.73  | 6.98  | 7.55  |
| ※ CBN-LRF 4030-005100 |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 6                                | 42,200                                   | 10.41                                                    | 10.77 | 11.16 | 11.58 | 12.52 |
| ※ CBN-LRF 4030-005150 |                                 |                                 | 15                                           |                             |                                           |                                         | 50                           | 6                                | 44,000                                   | 15.58                                                    | 16.12 | 16.70 | 17.33 | 18.73 |
| ※ CBN-LRF 4030-010060 | 3                               | R0.1                            | 6                                            | 0.7                         | 2.94                                      | 15°                                     | 50                           | 6                                | 41,300                                   | 6.27                                                     | 6.49  | 6.72  | 6.97  | 7.53  |
| ※ CBN-LRF 4030-010100 |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 6                                | 42,200                                   | 10.41                                                    | 10.77 | 11.15 | 11.57 | 12.51 |
| ※ CBN-LRF 4030-010150 |                                 |                                 | 15                                           |                             |                                           |                                         | 50                           | 6                                | 44,000                                   | 15.57                                                    | 16.12 | 16.70 | 17.32 | 18.72 |
| ※ CBN-LRF 4030-020060 |                                 | R0.2                            | 6                                            |                             |                                           |                                         | 50                           | 6                                | 41,300                                   | 6.27                                                     | 6.48  | 6.71  | 6.96  | 7.51  |
| ※ CBN-LRF 4030-020100 |                                 |                                 | 10                                           |                             |                                           |                                         | 50                           | 6                                | 42,200                                   | 10.40                                                    | 10.76 | 11.14 | 11.56 | 12.48 |
| ※ CBN-LRF 4030-020150 |                                 |                                 | 15                                           |                             |                                           |                                         | 50                           | 6                                | 44,000                                   | 15.57                                                    | 16.11 | 16.68 | 17.31 | 18.70 |

※追加型番 Additional model

※φ3は刃長0.7 mmまでCBN層となっております。 For φ3, 0.7 mm of the tool tip is made of CBN material.