

■ UEDE • 3-Flute • Sharp Edge



| Material Group | Side Milling (A) and Slotting (B) |         |         | KC643M                 |     | Recommended feed per tooth (IPT = inch/th) for side milling (A). For slotting (B), reduce IPT by 20%. |      |       |       |       |       |       |       |       |
|----------------|-----------------------------------|---------|---------|------------------------|-----|---|------|-------|-------|-------|-------|-------|-------|-------|
|                | A                                 |         | B       | Cutting Speed – vc SFM |     | D1 – Diameter   |      |       |       |       |       |       |       |       |
|                | ap                                | ae      | ap      | min                    | max | frac.   | 5/64 | 1/8   | 3/16  | 1/4   | 5/16  | 3/8   | 1/2   |       |
|                |                                   |         |         |                        |     | dec.  | 0.08 | 0.13  | 0.19  | 0.250 | 0.31  | 0.38  | 0.50  |       |
| P              | 0                                 | 1.5 x D | 0.5 x D | 1 x D                  | 490 | 660   | IPT  | .0005 | .0009 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 490 | 660   | IPT  | .0005 | .0009 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 460 | 620   | IPT  | .0005 | .0009 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 390 | 520   | IPT  | .0004 | .0007 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 4                                 | 1.5 x D | 0.5 x D | 0.75 x D               | 300 | 490   | IPT  | .0004 | .0007 | .0010 | .0014 | .0017 | .0020 | .0026 |
|                | 5                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 330   | IPT  | .0004 | .0006 | .0009 | .0012 | .0016 | .0018 | .0023 |
| M              | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 300 | 380   | IPT  | .0004 | .0007 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 260   | IPT  | .0004 | .0006 | .0009 | .0012 | .0016 | .0018 | .0023 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 230   | IPT  | .0003 | .0005 | .0008 | .0010 | .0013 | .0015 | .0019 |
| K              | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 390 | 490   | IPT  | .0005 | .0009 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 360 | 460   | IPT  | .0004 | .0007 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 360 | 430   | IPT  | .0004 | .0006 | .0009 | .0012 | .0016 | .0018 | .0023 |
| S              | 1                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 160 | 300   | IPT  | .0004 | .0007 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 2                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 80  | 130   | IPT  | .0002 | .0004 | .0006 | .0008 | .0010 | .0012 | .0015 |
|                | 3                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 80  | 130   | IPT  | .0002 | .0004 | .0006 | .0008 | .0010 | .0012 | .0015 |
|                | 4                                 | 1.5 x D | 0.5 x D | 1 x D                  | 160 | 200   | IPT  | .0003 | .0005 | .0008 | .0011 | .0014 | .0017 | .0021 |
| H              | 1                                 | 1.5 x D | 0.5 x D | 0.75 x D               | 260 | 460   | IPT  | .0004 | .0007 | .0010 | .0014 | .0017 | .0020 | .0026 |



High-Performance Solid Carbide End Mills

■ UEDE • 4-Flute • Chamfer



| Material Group | Side Milling (A) and Slotting (B) |         |         | KC643M                 |     | Recommended feed per tooth (IPT = inch/th) for side milling (A). For slotting (B), reduce IPT by 20%. |       |       |       |       |       |       |       |       |       |
|----------------|-----------------------------------|---------|---------|------------------------|-----|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                | A                                 |         | B       | Cutting Speed – vc SFM |     | D1 – Diameter   |       |       |       |       |       |       |       |       |       |
|                | ap                                | ae      | ap      | min                    | max | frac.   | 5/64  | 1/8   | 5/32  | 3/16  | 1/4   | 5/16  | 3/8   | 1/2   |       |
|                |                                   |         |         |                        |     | dec.  | .0781 | .1250 | .1563 | .1875 | .2500 | .3125 | .3750 | .5000 |       |
| P              | 0                                 | 1.5 x D | 0.5 x D | 1 x D                  | 490 | 660   | IPT   | .0005 | .0009 | .0011 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 490 | 660   | IPT   | .0005 | .0009 | .0011 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 460 | 620   | IPT   | .0005 | .0009 | .0011 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 390 | 520   | IPT   | .0004 | .0007 | .0009 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 4                                 | 1.5 x D | 0.5 x D | 0.75 x D               | 300 | 490   | IPT   | .0004 | .0007 | .0008 | .0010 | .0014 | .0017 | .0020 | .0026 |
|                | 5                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 330   | IPT   | .0004 | .0006 | .0007 | .0009 | .0012 | .0016 | .0018 | .0023 |
| M              | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 300 | 380   | IPT   | .0004 | .0007 | .0009 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 260   | IPT   | .0004 | .0006 | .0007 | .0009 | .0012 | .0016 | .0018 | .0023 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 200 | 230   | IPT   | .0003 | .0005 | .0006 | .0008 | .0010 | .0013 | .0015 | .0019 |
| K              | 1                                 | 1.5 x D | 0.5 x D | 1 x D                  | 390 | 490   | IPT   | .0005 | .0009 | .0011 | .0013 | .0018 | .0023 | .0027 | .0034 |
|                | 2                                 | 1.5 x D | 0.5 x D | 1 x D                  | 360 | 460   | IPT   | .0004 | .0007 | .0009 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 3                                 | 1.5 x D | 0.5 x D | 1 x D                  | 360 | 430   | IPT   | .0004 | .0006 | .0007 | .0009 | .0012 | .0016 | .0018 | .0023 |
| S              | 1                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 160 | 300   | IPT   | .0004 | .0007 | .0009 | .0011 | .0015 | .0020 | .0023 | .0029 |
|                | 2                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 80  | 130   | IPT   | .0002 | .0004 | .0005 | .0006 | .0008 | .0010 | .0012 | .0015 |
|                | 3                                 | 1.5 x D | 0.3 x D | 0.3 x D                | 80  | 130   | IPT   | .0002 | .0004 | .0005 | .0006 | .0008 | .0010 | .0012 | .0015 |
|                | 4                                 | 1.5 x D | 0.5 x D | 1 x D                  | 160 | 200   | IPT   | .0003 | .0005 | .0006 | .0008 | .0011 | .0014 | .0017 | .0021 |
| H              | 1                                 | 1.5 x D | 0.5 x D | 0.75 x D               | 260 | 460   | IPT   | .0004 | .0007 | .0008 | .0010 | .0014 | .0017 | .0020 | .0026 |

NOTE: Those guidelines may require variations to achieve optimum results.  
 Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.  
 Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.  
 For better surface finish, reduce feed per tooth.