

## TuffCut® Micro

### 3MVS / 3MVR Series Recommended Cutting Data - Inch

Note: Square corner tools recommended for finishing applications only.

| Stub Length - 3MVS Series                |     |  |                |     |             |                              |            |          |                                  |        |        |        |        |        |        |        |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |        |        |        |        |        |        |        |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031   | .047   | .062   | .078   | .093   | .109   | .125   |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |        |        |        |        |        |        |        |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .2 x D                       | 1 x D      | 490      | .00010                           | .00020 | .00031 | .00041 | .00051 | .00061 | .00072 | .00083 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 100      | .00003                           | .00006 | .00009 | .00012 | .00016 | .00019 | .00022 | .00025 |
|  |     |  |                |     | Profiling   | .1 x D                       | 1 x D      | 150      | .00008                           | .00017 | .00026 | .00035 | .00044 | .00052 | .00061 | .00070 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .2 x D                       | 1 x D      | 350      | .00006                           | .00012 | .00019 | .00025 | .00031 | .00037 | .00044 | .00050 |

| Regular Length - 3MVR Series             |     |  |                |     |             |                              |            |          |                                  |        |        |        |        |        |        |        |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |        |        |        |        |        |        |        |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031   | .047   | .062   | .078   | .093   | .109   | .125   |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |        |        |        |        |        |        |        |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .1 x D                       | 2-2.5 x D  | 490      | .00010                           | .00020 | .00031 | .00041 | .00051 | .00061 | .00072 | .00083 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 100      | .00003                           | .00006 | .00009 | .00012 | .00016 | .00019 | .00022 | .00025 |
|  |     |  |                |     | Profiling   | .05 x D                      | 2-2.5 x D  | 150      | .00008                           | .00017 | .00026 | .00035 | .00044 | .00052 | .00061 | .00070 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .1 x D                       | 2-2.5 x D  | 350      | .00006                           | .00012 | .00019 | .00025 | .00031 | .00037 | .00044 | .00050 |

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:  
 (Calculated Feed x Spindle Maximum)/Calculated Speed.

Inch necked tools cutting data on page 166.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

# TuffCut® Micro

## 3MVS / 3MVR Series Recommended Cutting Data - Metric

Note: Square corner tools recommended for finishing applications only.

| Stub Length - 3MVS Series                |     |  |                |     |             |                              |            |            |                                  |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|------------|----------------------------------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - m/min | End Mill Diameter (mm)           |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |            | 0.5                              | 1.0   | 1.5   | 2.0   | 2.5   | 3.0   |
|  |     |  |                |     |             |                              |            |            | fz - mm/tooth by Cutter Diameter |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .5 x D     | 75         | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .2 x D                       | 1 x D      | 150        | .0033                            | .0066 | .0099 | .0132 | .0165 | .0198 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 30         | .0010                            | .0020 | .0030 | .0040 | .0050 | .0060 |
|  |     |  |                |     | Profiling   | .1 x D                       | 1 x D      | 45         | .0028                            | .0056 | .0084 | .0112 | .0140 | .0168 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 75         | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .2 x D                       | 1 x D      | 107        | .0020                            | .0040 | .0060 | .0080 | .0100 | .0120 |

| Regular Length - 3MVR Series             |     |  |                |     |             |                              |            |            |                                  |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|------------|----------------------------------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - m/min | End Mill Diameter (mm)           |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |            | 0.5                              | 1.0   | 1.5   | 2.0   | 2.5   | 3.0   |
|  |     |  |                |     |             |                              |            |            | fz - mm/tooth by Cutter Diameter |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .5 x D     | 75         | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .1 x D                       | 2-2.5 x D  | 150        | .0033                            | .0066 | .0099 | .0132 | .0165 | .0198 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 30         | .0010                            | .0020 | .0030 | .0040 | .0050 | .0060 |
|  |     |  |                |     | Profiling   | .05 x D                      | 2-2.5 x D  | 45         | .0028                            | .0056 | .0084 | .0112 | .0140 | .0168 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 75         | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .1 x D                       | 2-2.5 x D  | 107        | .0020                            | .0040 | .0060 | .0080 | .0100 | .0120 |

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:  
 (Calculated Feed x Spindle Maximum)/Calculated Speed.

Metric necked tools cutting data on page 168.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

## TuffCut® Micro

### 3MVS Series Recommended Cutting Data - Necked Tools - Inch

Note: Square corner tools recommended for finishing applications only.

| 3 X D Necked Tools (3MVS Series - N3)    |     |  |                |     |             |                              |            |          |                                  |        |        |        |        |        |        |        |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |        |        |        |        |        |        |        |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031   | .047   | .062   | .078   | .093   | .109   | .125   |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |        |        |        |        |        |        |        |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .1 x D                       | 1 x D      | 490      | .00010                           | .00020 | .00031 | .00041 | .00051 | .00061 | .00072 | .00083 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 100      | .00003                           | .00006 | .00009 | .00012 | .00016 | .00019 | .00022 | .00025 |
|  |     |  |                |     | Profiling   | .05 x D                      | 1 x D      | 150      | .00008                           | .00017 | .00026 | .00035 | .00044 | .00052 | .00061 | .00070 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .5 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .1 x D                       | 1 x D      | 350      | .00006                           | .00012 | .00019 | .00025 | .00031 | .00037 | .00044 | .00050 |

| 5 X D Necked Tools (3MVS Series - N5)    |     |  |                |     |             |                              |            |          |                                  |        |        |        |        |        |        |        |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |        |        |        |        |        |        |        |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031   | .047   | .062   | .078   | .093   | .109   | .125   |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |        |        |        |        |        |        |        |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .3 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .08 x D                      | 1 x D      | 490      | .00010                           | .00020 | .00031 | .00041 | .00051 | .00061 | .00072 | .00083 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .3 x D     | 100      | .00003                           | .00006 | .00009 | .00012 | .00016 | .00019 | .00022 | .00025 |
|  |     |  |                |     | Profiling   | .05 x D                      | 1 x D      | 150      | .00008                           | .00017 | .00026 | .00035 | .00044 | .00052 | .00061 | .00070 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .3 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .08 x D                      | 1 x D      | 350      | .00006                           | .00012 | .00019 | .00025 | .00031 | .00037 | .00044 | .00050 |

| 8 X D Necked Tools (3MVS Series - N8)    |     |  |                |     |             |                              |            |          |                                  |        |        |        |        |        |        |        |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |        |        |        |        |        |        |        |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031   | .047   | .062   | .078   | .093   | .109   | .125   |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |        |        |        |        |        |        |        |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .2 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 490      | .00010                           | .00020 | .00031 | .00041 | .00051 | .00061 | .00072 | .00083 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .2 x D     | 100      | .00003                           | .00006 | .00009 | .00012 | .00016 | .00019 | .00022 | .00025 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 150      | .00008                           | .00017 | .00026 | .00035 | .00044 | .00052 | .00061 | .00070 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .2 x D     | 245      | .00004                           | .00007 | .00011 | .00015 | .00019 | .00022 | .00026 | .00030 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 350      | .00006                           | .00012 | .00019 | .00025 | .00031 | .00037 | .00044 | .00050 |

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:  
 (Calculated Feed x Spindle Maximum)/Calculated Speed.

Inch non-necked tools cutting data on page 164.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

# TuffCut® Micro

## 3MVS Series Recommended Cutting Data - Necked Tools - Inch Continued

Note: Square corner tools recommended for finishing applications only.

| 10 X D Necked Tools (3MVS Series - N10)  |     |  |                |     |             |                              |            |          |                                  |       |       |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |       |       |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031  | .047  | .062  | .078  | .093  | .109  | .125  |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |       |       |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .15 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .15 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .15 x D    | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
|  |     |  |                |     | Profiling   | .5 x D                       | .15 x D    | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .15 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .15 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |

| 12 X D Necked Tools (3MVS Series - N12)  |     |  |                |     |             |                              |            |          |                                  |       |       |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |       |       |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031  | .047  | .062  | .078  | .093  | .109  | .125  |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |       |       |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .1 x D     | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .1 x D     | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .1 x D     | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
|  |     |  |                |     | Profiling   | .5 x D                       | .1 x D     | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .1 x D     | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .1 x D     | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |

| 15 X D Necked Tools (3MVS Series - N15)  |     |  |                |     |             |                              |            |          |                                  |       |       |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|----------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | vc - SFM | End Mill Diameter (inch)         |       |       |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |          | .015                             | .031  | .047  | .062  | .078  | .093  | .109  | .125  |
|  |     |  |                |     |             |                              |            |          | fz - in/tooth by Cutter Diameter |       |       |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .07 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .07 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .07 x D    | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
|  |     |  |                |     | Profiling   | .5 x D                       | .07 x D    | 100      | .0002                            | .0005 | .0008 | .0010 | .0012 | .0015 | .0017 | .0020 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .07 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |
|  |     |  |                |     | Profiling   | .5 x D                       | .07 x D    | 245      | .0003                            | .0006 | .0009 | .0012 | .0016 | .0019 | .0022 | .0025 |

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:  
(Calculated Feed x Spindle Maximum)/Calculated Speed.

Inch non-necked tools cutting data on page 164.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

## TuffCut® Micro

### 3MVS Series Recommended Cutting Data - Necked Tools - Metric

Note: Square corner tools recommended for finishing applications only.

| 5 X D Necked Tools (3MVS Series - N5)    |     |  |                |     |             |                              |            |             |                                  |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|-------------|----------------------------------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | Vc<br>m/min | End Mill Diameter (mm)           |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |             | 0.5                              | 1.0   | 1.5   | 2.0   | 2.5   | 3.0   |
|  |     |  |                |     |             |                              |            |             | fz - mm/tooth by Cutter Diameter |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .3 x D     | 75          | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .08 x D                      | 1 x D      | 150         | .0033                            | .0066 | .0099 | .0132 | .0165 | .0198 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .3 x D     | 30          | .0010                            | .0020 | .0030 | .0040 | .0050 | .0060 |
|  |     |  |                |     | Profiling   | .05 x D                      | 1 x D      | 45          | .0028                            | .0056 | .0084 | .0112 | .0140 | .0168 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .3 x D     | 75          | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .08 x D                      | 1 x D      | 107         | .0020                            | .0040 | .0060 | .0080 | .0100 | .0120 |

| 8 X D Necked Tools (3MVS Series - N8)    |     |  |                |     |             |                              |            |             |                                  |       |       |       |       |       |
|--|-----|--|----------------|-----|-------------|------------------------------|------------|-------------|----------------------------------|-------|-------|-------|-------|-------|
| Workpiece Material Group                 | ISO | Coolant<br>● Preferred<br>○ Possible<br>x Not Possible |                |     | Application | Depth of Cut Per Application |            | Vc<br>m/min | End Mill Diameter (mm)           |       |       |       |       |       |
|  |     | Emulsion   | Compressed Air | MQL |             | Radial (Ae)                  | Axial (Ap) |             | 0.5                              | 1.0   | 1.5   | 2.0   | 2.5   | 3.0   |
|  |     |  |                |     |             |                              |            |             | fz - mm/tooth by Cutter Diameter |       |       |       |       |       |
| Moderate Machining & PH Stainless Steels | M   | ●  | X              | ○   | Slotting    | -                            | .2 x D     | 75          | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 150         | .0033                            | .0066 | .0099 | .0132 | .0165 | .0198 |
| High Temp Alloys                         | S   | ●  | X              | X   | Slotting    | -                            | .2 x D     | 30          | .0010                            | .0020 | .0030 | .0040 | .0050 | .0060 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 45          | .0028                            | .0056 | .0084 | .0112 | .0140 | .0168 |
| Titanium Alloys                          | S   | ●  | X              | X   | Slotting    | -                            | .2 x D     | 75          | .0012                            | .0024 | .0036 | .0048 | .0060 | .0072 |
|  |     |  |                |     | Profiling   | .05 x D                      | .75 x D    | 107         | .0020                            | .0040 | .0060 | .0080 | .0100 | .0120 |

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:  
 (Calculated Feed x Spindle Maximum)/Calculated Speed.

Metric non-necked tools cutting data on page 165.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.