

# Identification(Shoulder Milling)

Reduce the cutting parameters by the coefficient values shown according to the length of overhang.  
For long edge and oversize types heads refer to their specific recommended conditions.

(inch)

| L/D | Carbon Steels, Alloy Steels, Mild Steels,<br>Copper, Copper Alloys |                               |                    | Pre-hardened Steels, Carbon Steels,<br>Alloy Steels, Alloy Tool Steels |                               |                    | Austenitic Stainless Steels,<br>Ferritic and Martensitic Stainless Steels,<br>Titanium Alloys |                               |                    |
|-----|--|-------------------------------|--------------------|--|-------------------------------|--------------------|---|-------------------------------|--------------------|
|     | Revolution<br>n<br>(min <sup>-1</sup> )                            | Feed per Tooth<br>fz<br>(IPT) | Width of Cut<br>ae | Revolution<br>n<br>(min <sup>-1</sup> )                                | Feed per Tooth<br>fz<br>(IPT) | Width of Cut<br>ae | Revolution<br>n<br>(min <sup>-1</sup> )   | Feed per Tooth<br>fz<br>(IPT) | Width of Cut<br>ae |
| 2   | 100%   | 100%                          | 100%               | 100%   | 100%                          | 100%               | 100%  | 100%                          | 100%               |
| 3   | 100%   | 100%                          | 100%               | 100%   | 100%                          | 100%               | 100%  | 100%                          | 100%               |
| 4   | 80%  | 90%                           | 70%                | 80%  | 90%                           | 70%                | 80%   | 90%                           | 70%                |
| 5   | 60%  | 80%                           | 40%                | 60%  | 80%                           | 40%                | 60%   | 80%                           | 40%                |
| 6   | 50%  | 70%                           | 30%                | 50%  | 70%                           | 30%                | 50%   | 70%                           | 30%                |
| 7   | 40%  | 70%                           | 20%                | 40%  | 70%                           | 20%                | 30%   | 60%                           | 20%                |
| 8   | 40%  | 60%                           | 10%                | 40%  | 60%                           | 10%                | 30%   | 50%                           | 10%                |
| 9   | 30%  | 60%                           | 10%                | 30%  | 60%                           | 10%                | 20%   | 50%                           | 10%                |

| L/D | Precipitation Hardening Stainless Steels,<br>Cobalt Chromium Alloys |                               |                    | Heat Resistant Alloys<br><br>Inconel718 |                               |                    |
|-----|---|-------------------------------|--------------------|---|-------------------------------|--------------------|
|     | Revolution<br>n<br>(min <sup>-1</sup> )                             | Feed per Tooth<br>fz<br>(IPT) | Width of Cut<br>ae | Revolution<br>n<br>(min <sup>-1</sup> ) | Feed per Tooth<br>fz<br>(IPT) | Width of Cut<br>ae |
| 2   | 100%  | 100%                          | 100%               | 100%                                    | 100%                          | 100%               |
| 3   | 100%  | 100%                          | 100%               | 100%                                    | 100%                          | 100%               |
| 4   | 80%   | 90%                           | 70%                | 80%                                     | 90%                           | 70%                |
| 5   | 60%   | 80%                           | 40%                | 60%                                     | 80%                           | 40%                |
| 6   | 50%   | 70%                           | 30%                | 50%                                     | 70%                           | 30%                |
| 7   | 30%   | 60%                           | 20%                | 30%                                     | 60%                           | 20%                |
| 8   | 30%   | 50%                           | 10%                | 30%                                     | 50%                           | 10%                |
| 9   | 20%   | 50%                           | 10%                | 20%                                     | 50%                           | 10%                |

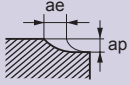
# iMX-C8T/C10T/C12T/C15T-C

Corner radius, Taper head, Multi-flute, With coolant hole

## Recommended Cutting Conditions

### Shoulder Milling

(inch)

| Workpiece Material |                  | Austenitic Stainless Steels,<br>Ferritic and Martensitic Stainless Steels         |                          |                    |                    | Precipitation Hardening Stainless Steels,<br>Titanium Alloys |                          |                    |                    | Heat Resistant Alloys                   |                          |                    |                    |
|--------------------|------------------|---|--------------------------|--------------------|--------------------|--|--------------------------|--------------------|--------------------|---|--------------------------|--------------------|--------------------|
| DC<br>(mm)         | No. of<br>Flutes | Revolution<br>n<br>(min <sup>-1</sup> )   | Feed Rate<br>vf<br>(IPM) | Depth of Cut<br>ap | Width of Cut<br>ae | Revolution<br>n<br>(min <sup>-1</sup> )                      | Feed Rate<br>vf<br>(IPM) | Depth of Cut<br>ap | Width of Cut<br>ae | Revolution<br>n<br>(min <sup>-1</sup> ) | Feed Rate<br>vf<br>(IPM) | Depth of Cut<br>ap | Width of Cut<br>ae |
| <b>8</b>           | <b>8</b>         | 12000   | 378.0                    | .012               | .047               | 8000   | 252.0                    | .012               | .047               | 2400                                    | 59.1                     | .012               | .031               |
| <b>10</b>          | <b>10</b>        | 9500  | 374.0                    | .012               | .059               | 6400   | 252.0                    | .012               | .059               | 1900                                    | 59.1                     | .012               | .039               |
| <b>15</b>          | <b>12</b>        | 6400  | 362.2                    | .012               | .087               | 4200   | 236.2                    | .012               | .087               | 1300                                    | 63.0                     | .012               | .059               |
| <b>15</b>          | <b>15</b>        | 6400  | 378.0                    | .012               | .087               | 4200   | 248.0                    | .012               | .087               | 1300                                    | 63.0                     | .012               | .059               |
| <b>19</b>          | <b>12</b>        | 5000  | 283.5                    | .012               | .110               | 3400   | 192.9                    | .012               | .110               | 1000                                    | 47.2                     | .012               | .075               |
| <b>19</b>          | <b>15</b>        | 5000  | 295.3                    | .012               | .110               | 3400   | 200.8                    | .012               | .110               | 1000                                    | 47.2                     | .012               | .075               |
| Depth of Cut       |                  |  |                          |                    |                    |  |                          |                    |                    |   |                          |                    |                    |

Note 1) Vibration may occur if the rigidity of machine or workpiece material is low.

In this case, please reduce the revolution and the feed rate proportionately, or set a lower depth of cut.

Note 2) The use of water-soluble coolant is effective.