

## E5E49 SERIES

### 3 FLUTE - SLOTTING

Vc = m/min.      fz = mm/tooth  
RPM = rev./min.      FEED = mm/min.

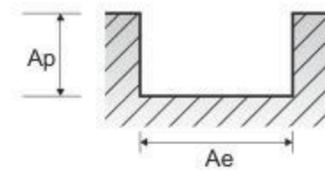
| ISO | VDI 3323 | Material Description   | Ae   | Ap   | Parameter | Diameter (Ø) |       |       |       |       |       |       |       |       |       |
|-----|----------|------------------------|------|------|-----------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     |          |                        |      |      |           | 1.0          | 1.5   | 2.0   | 2.5   | 3.0   | 3.5   | 4.0   | 4.5   | 5.0   | 5.5   |
| N   | 21~22    | Aluminum-wrought alloy | 1.0D | 0.5D | Vc        | 53           | 61    | 63    | 63    | 65    | 75    | 90    | 100   | 110   | 120   |
|     |          |                        |      |      | fz        | 0.023        | 0.027 | 0.027 | 0.033 | 0.035 | 0.035 | 0.045 | 0.050 | 0.050 | 0.060 |
|     |          |                        |      |      | RPM       | 16870        | 12945 | 10027 | 8021  | 6897  | 6821  | 7162  | 7074  | 7003  | 6945  |
|     |          |                        |      |      | FEED      | 1164         | 1049  | 812   | 794   | 724   | 716   | 967   | 1061  | 1050  | 1250  |
|     | 23~24    | Aluminum-cast, alloyed | 1.0D | 0.5D | Vc        | 34           | 40    | 41    | 41    | 42    | 49    | 59    | 65    | 72    | 78    |
|     |          |                        |      |      | fz        | 0.023        | 0.027 | 0.027 | 0.033 | 0.035 | 0.035 | 0.045 | 0.050 | 0.050 | 0.060 |
|     |          |                        |      |      | RPM       | 10823        | 8488  | 6525  | 5220  | 4483  | 4456  | 4655  | 4598  | 4552  | 4514  |
|     |          |                        |      |      | FEED      | 747          | 688   | 529   | 517   | 471   | 468   | 628   | 690   | 683   | 813   |

| ISO | VDI 3323 | Material Description   | Ae   | Ap   | Parameter | Diameter (Ø) |       |       |       |       |       |       |       |       |       |
|-----|----------|------------------------|------|------|-----------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     |          |                        |      |      |           | 6.0          | 7.0   | 8.0   | 9.0   | 10.0  | 12.0  | 14.0  | 16.0  | 18.0  | 20.0  |
| N   | 21~22    | Aluminum-wrought alloy | 1.0D | 0.5D | Vc        | 130          | 130   | 140   | 160   | 175   | 210   | 185   | 210   | 160   | 175   |
|     |          |                        |      |      | fz        | 0.060        | 0.081 | 0.088 | 0.097 | 0.106 | 0.131 | 0.150 | 0.158 | 0.173 | 0.200 |
|     |          |                        |      |      | RPM       | 6897         | 5911  | 5570  | 5659  | 5570  | 5570  | 4206  | 4178  | 2829  | 2785  |
|     |          |                        |      |      | FEED      | 1241         | 1436  | 1471  | 1647  | 1771  | 2189  | 1893  | 1980  | 1468  | 1671  |
|     | 23~24    | Aluminum-cast, alloyed | 1.0D | 0.5D | Vc        | 85           | 85    | 91    | 104   | 114   | 137   | 120   | 137   | 104   | 114   |
|     |          |                        |      |      | fz        | 0.060        | 0.081 | 0.088 | 0.097 | 0.106 | 0.131 | 0.150 | 0.158 | 0.173 | 0.200 |
|     |          |                        |      |      | RPM       | 4483         | 3865  | 3621  | 3678  | 3621  | 3621  | 2728  | 2716  | 1839  | 1810  |
|     |          |                        |      |      | FEED      | 807          | 939   | 956   | 1070  | 1151  | 1423  | 1228  | 1287  | 954   | 1086  |

※ For long flute tools, it is recommended to adjust the conditions according to the following ratios.

| Length of Cut | RPM             | FEED |
|---------------|-----------------|------|
| Up to 3D      | 100%            | 100% |
| Up to 5D      | 70%             | 80%  |
| Up to 7D      | Not recommended |      |
| Over 7D       |                 |      |



### 3 FLUTE - SIDE CUTTING

| ISO | VDI 3323 | Material Description   | Ae    | Ap          | Parameter | Diameter (Ø) |       |       |       |       |       |       |       |       |       |
|-----|----------|------------------------|-------|-------------|-----------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     |          |                        |       |             |           | 1.0          | 1.5   | 2.0   | 2.5   | 3.0   | 3.5   | 4.0   | 4.5   | 5.0   | 5.5   |
| N   | 21~22    | Aluminum-wrought alloy | 0.15D | 1.5D ~ 2.5D | Vc        | 53           | 61    | 63    | 63    | 65    | 75    | 90    | 100   | 110   | 120   |
|     |          |                        |       |             | fz        | 0.038        | 0.046 | 0.044 | 0.046 | 0.045 | 0.054 | 0.055 | 0.060 | 0.065 | 0.069 |
|     |          |                        |       |             | RPM       | 16870        | 12945 | 10027 | 8021  | 6897  | 6821  | 7162  | 7074  | 7003  | 6945  |
|     |          |                        |       |             | FEED      | 1923         | 1786  | 1324  | 1107  | 931   | 1105  | 1182  | 1273  | 1366  | 1438  |
|     | 23~24    | Aluminum-cast, alloyed | 0.15D | 1.5D ~ 2.5D | Vc        | 34           | 40    | 41    | 41    | 42    | 49    | 59    | 65    | 72    | 78    |
|     |          |                        |       |             | fz        | 0.038        | 0.046 | 0.044 | 0.046 | 0.045 | 0.054 | 0.055 | 0.060 | 0.065 | 0.069 |
|     |          |                        |       |             | RPM       | 10823        | 8488  | 6525  | 5220  | 4483  | 4456  | 4655  | 4598  | 4552  | 4514  |
|     |          |                        |       |             | FEED      | 1234         | 1171  | 861   | 720   | 605   | 722   | 768   | 828   | 888   | 934   |

| ISO | VDI 3323 | Material Description   | Ae    | Ap          | Parameter | Diameter (Ø) |       |       |       |       |       |       |       |       |       |
|-----|----------|------------------------|-------|-------------|-----------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     |          |                        |       |             |           | 6.0          | 7.0   | 8.0   | 9.0   | 10.0  | 12.0  | 14.0  | 16.0  | 18.0  | 20.0  |
| N   | 21~22    | Aluminum-wrought alloy | 0.15D | 1.5D ~ 2.5D | Vc        | 130          | 130   | 140   | 160   | 175   | 210   | 185   | 210   | 160   | 175   |
|     |          |                        |       |             | fz        | 0.075        | 0.096 | 0.113 | 0.122 | 0.131 | 0.163 | 0.183 | 0.200 | 0.225 | 0.238 |
|     |          |                        |       |             | RPM       | 6897         | 5911  | 5570  | 5659  | 5570  | 5570  | 4206  | 4178  | 2829  | 2785  |
|     |          |                        |       |             | FEED      | 1552         | 1702  | 1888  | 2071  | 2189  | 2724  | 2309  | 2507  | 1910  | 1989  |
|     | 23~24    | Aluminum-cast, alloyed | 0.15D | 1.5D ~ 2.5D | Vc        | 85           | 85    | 91    | 104   | 114   | 137   | 120   | 137   | 104   | 114   |
|     |          |                        |       |             | fz        | 0.075        | 0.096 | 0.113 | 0.122 | 0.131 | 0.163 | 0.183 | 0.200 | 0.225 | 0.238 |
|     |          |                        |       |             | RPM       | 4483         | 3865  | 3621  | 3678  | 3621  | 3621  | 2728  | 2716  | 1839  | 1810  |
|     |          |                        |       |             | FEED      | 1009         | 1113  | 1227  | 1346  | 1423  | 1771  | 1498  | 1629  | 1241  | 1293  |

※ For long flute tools, it is recommended to adjust the conditions according to the following ratios.

| Length of Cut | RPM  | FEED |
|---------------|------|------|
| Up to 3D      | 100% | 100% |
| Up to 5D      | 70%  | 70%  |
| Up to 7D      | 40%  | 70%  |
| Over 7D       | 40%  | 50%  |

