## Ball Nose End Mills For Aluminium



## DIN 6527 Standard Length

| $\begin{gathered} \text { Dc } \\ 0 \\ -0.02 \\ \hline \end{gathered}$ | $\begin{gathered} \mathbf{R} \\ \pm 0.005 \end{gathered}$ | Lc mm | $\underset{\mathrm{L}}{\mathrm{~L}}$ | $\begin{aligned} & \mathrm{Lc} \\ & \mathrm{~mm} \end{aligned}$ | $\begin{gathered} \mathrm{L} 1 \\ \mathrm{~mm} \end{gathered}$ | $\begin{aligned} & \text { D1 } \\ & \text { h5 } \end{aligned}$ | $\begin{gathered} \text { F618ZX } \\ \text { ZrN } \end{gathered}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 1.5R | 6 | 57 | 6 | 9 | 2.8 | - |  |  |  |  |  |
| 4 | 2R | 8 | 57 | 6 | 12 | 3.7 | - |  |  |  |  |  |
| 5 | 2.5R | 10 | 57 | 6 | 15 | 4.6 | - |  |  |  |  |  |
| 6 | 3R | 12 | 57 | 6 | 20 | 5.5 | - |  |  |  |  |  |
| 8 | 4R | 16 | 63 | 8 | 26 | 7.4 | - |  |  |  |  |  |
| 10 | 5R | 20 | 72 | 10 | 31 | 9.2 | - |  |  |  |  |  |
| 12 | 6 R | 24 | 83 | 12 | 37 | 11.0 | - |  |  |  |  |  |

Long Length

| $\begin{aligned} & \text { Dc } \\ & 0 \\ & -0.02 \end{aligned}$ | $\begin{gathered} \mathbf{R} \\ \pm 0.005 \end{gathered}$ | Lc $\mathrm{mm}$ | $\begin{gathered} \mathbf{L} \\ \mathrm{mm} \end{gathered}$ | $\begin{aligned} & \mathrm{Lc} \\ & \mathrm{~mm} \end{aligned}$ | $\begin{gathered} \mathrm{L} 1 \\ \mathrm{~mm} \end{gathered}$ | $\begin{aligned} & \text { D1 } \\ & \text { h5 } \end{aligned}$ | $\begin{gathered} \text { F620ZX } \\ \text { ZrN } \end{gathered}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 1.5R | 6 | 70 | 6 | 9 | 2.8 | - |  |  |  |  |
| 4 | 2R | 8 | 70 | 6 | 12 | 3.7 | - |  |  |  |  |
| 5 | 2.5R | 10 | 80 | 6 | 15 | 4.6 | - |  |  |  |  |
| 6 | 3R | 12 | 80 | 6 | 20 | 5.5 | - |  |  |  |  |
| 8 | 4R | 16 | 100 | 8 | 26 | 7.4 | - |  |  |  |  |
| 10 | 5R | 20 | 100 | 10 | 31 | 9.2 | - |  |  |  |  |
| 12 | 6 R | 24 | 110 | 12 | 37 | 11.0 | - |  |  |  |  |

Cutting Conditions

| $\begin{aligned} & \text { F618ZX } \\ & \text { F620ZX } \end{aligned}$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | cutting speed Vc ( $\mathrm{m} / \mathrm{min}$ ) | feed per tooth fz(mm) | ae | ap | cutting speed Vc (m/min) | feed per tooth fz(mm) | ap |
| Aluminium Steel Materials |  |  |  |  |  |  |  |  |
| N | GRIO-1 Wrought Aluminium | 800 | $0.021 \times$ Dc | $0.2 x$ Dc | 0.05xDc | 900 | 0.016xDc | 0.02xDc |
|  | GRIO-2 Aluminium cast alloys | 800 | $0.021 \times$ Dc | $0.2 x$ Dc | 0.05xDc | 900 | $0.014 x$ Dc | 0.02xDc |
|  | GRIO-3 Aluminium cast alloys | 700 | $0.020 \times$ Dc | $0.2 \times$ Dc | 0.05xDc | 800 | $0.012 x$ Dc | 0.02xDc |

All cutting data serve for orientation only and should be adapted individually to the technical conditions on location

1. Please work with good rigidity / high precision facilities and collet chuck.
2. Please choose proper cutting fluid.
3. The cutting data is reference value only. Please adjust it according to your real working conditions.
4. If RPM is lower the reference value, the Feed rate (fz) and RPM should be reduced by the same proportion.
5. If vibration occurs during cutting, please reduce cutting parameter.
