## List HP453

4 Flute, Super Tough Mills

| SPEED <br> FEED | CARBIDE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P1243 |  | TiAIN |  | $50^{\circ}$ | h6 Shavk |

Milling Diameter Tolerance
$4 \leq \mathrm{D} \leq 20+0 /-0.038 \mathrm{~mm}$


| EDP <br> Number | Mill <br> Diameter | Overall <br> Length | Length <br> of Cut | Neck <br> Length | Neck <br> Diameter | Shank <br> Diameter |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TiAIN | D | L | Lc | L1 | d2 | d |
| HP453-1575 | 4 | 60 | 6 | 12 | 3.9 | 6 |
| HP453-2362 | 6 | 60 | 9 | 18 | 5.9 | 6 |
| HP453-3150 | 8 | 75 | 12 | 24 | 7.9 | 8 |
| HP453-3937 | 10 | 80 | 15 | 30 | 9.9 | 10 |
| HP453-4724 | 12 | 102 | 18 | 36 | 11.9 | 12 |
| HP453-6299 | 16 | 110 | 24 | 15 | 16 |  |
| HP453-7874 | 20 | 125 | 60 | 19.9 |  |  |

Packed: 1 pc.
Available TiAIN coating only.
List HP456
4 Flute, Super Tough Mills, Corner Radius


| Milling Diameter Tolerance |  |
| :---: | ---: |
| $6 \leq \mathrm{D} \leq 12$ | $+0 /-0.038 \mathrm{~mm}$ | $6 \leq \mathrm{D} \leq 12+0 /-0.038 \mathrm{~mm}$ 



| EDP <br> Number | Mill <br> Diameter | Corner <br> Radius | Overall <br> Length | Length <br> of Cut | Neck <br> Length | Neck <br> Diameter | Shank <br> Diameter |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TiAIN | D | R | L | Lc | L1 | d2 | d |
| HP456-2363 | 6 | 0.5 | 60 | 9 | 18 | 5.9 |  |
| HP456-2364 | 6 | 1.0 | 60 | 9 | 18 | 6 |  |
| HP456-3151 | 8 | 0.5 | 75 | 12 | 24 | 7.9 | 6 |
| HP456-3152 | 8 | 1.0 | 75 | 12 | 24 | 7.9 | 8 |
| HP456-3938 | 10 | 0.5 | 80 | 15 | 30 | 9.9 | 10 |
| HP456-3939 | 10 | 1.0 | 80 | 15 | 30 | 9.9 | 10 |
| HP456-4725 | 12 | 0.5 | 102 | 18 | 36 | 11.9 | 12 |
| HP456-4726 | 12 | 1.0 | 102 | 18 | 36 | 11.9 | 12 |
| HP456-4727 | 12 | 1.5 | 102 | 18 | 36 | 11.9 | 12 |

Packed: 1 pc.
Available TiAIN coating only.

| Work Material |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | P |  |  |  |  | M |  |  | K | N |  | 5 |  | H |  |  |  |
| Chart applies | Carbon Steels |  |  | AlloySteels | Die Steels | Stainless Steels |  |  | Cast Iron | Aluminum |  | Nickel Alloy | Titanium | Hardened Steels |  |  |  |
| applies | Low | Med. | High |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| numbers above | $\begin{array}{r} 1010 \\ 1018 \\ \hline \end{array}$ | $\begin{array}{r} 1035 \\ 1045 \\ \hline \end{array}$ | 1065 | $\begin{aligned} & 4140 \\ & 4340 \end{aligned}$ |  | 300 | 400 | 17-4 PH |  | $\begin{aligned} & 6061 \\ & 7075 \end{aligned}$ | Casting | Inconel | $\begin{array}{\|c\|} \hline 6 \mathrm{Al4V} \\ (30 \mathrm{HRC}) \\ \hline \end{array}$ | $\begin{aligned} & \sim 35 \\ & \text { HRC } \end{aligned}$ | $\begin{aligned} & 35-45 \\ & \text { HRC } \end{aligned}$ | $\begin{aligned} & \hline 45-50 \\ & \text { HRC } \\ & \hline \end{aligned}$ | $\begin{gathered} 50-70 \\ \text { HRC } \\ \hline \end{gathered}$ |
| - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | O | $\bigcirc$ | O | $\bigcirc$ | ○ | O |  |  |  |  | $\bigcirc$ | $\bigcirc$ | ( |  |

good (0) best

HY-PRO ${ }^{\circ}$ CARB Square End

