

# SP... 08T308 Inserts | Pastilhas | Plaquetas



| (1) Geometry Code | (2) Grade Code | Grades |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Dimensions (mm) |        |        |        |      |      |
|-------------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|--------|--------|--------|------|------|
|                   |                | P      |        |        |        |        |        |        | M      |        |        | K      |        |        |        |        |        | N      |        | S      |        |                 |        | H      |        |      |      |
|                   |                | M6     | 54     | 68     | 66     | 78     | 86     | I5     | 68     | 66     | I5     | 54     | 68     | P3     | 66     | D2     | 67     | I5     | 10     | D6     | P3     | G6              | I5     | M6     | D4     | iC   | S    |
| 1111364           | SPKW 08T308-E  | PH6103 | PH6910 | PH6920 | PH6930 | PH6125 | PH6135 | PH6740 | PH6920 | PH6930 | PH6740 | PH6910 | PH6920 | PH7930 | PH6930 | PH6705 | PH6325 | PH6740 | PH0910 | PDP410 | PH7930 | PH7740          | PH6740 | PH6103 | PBH910 | 8,50 | 3,97 |
| 1121227           | SPKW 08T308-S  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |                 |        |        |        | 8,50 | 3,97 |
| 1111314           | SPKT 08T308-E  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |                 |        |        |        | 8,50 | 3,97 |

⊗ First choice / 1ª escolha / 1ª opción   ⊗ Stock items / Itens de stock   ○ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

Insert Order Code = (1) Geometry Code + (2) Grade Code

## Applicable Grades

| ISO      | Material                          | HB (Brinell) | Grade | Grades          |        |           |
|----------|-----------------------------------|--------------|-------|-----------------|--------|-----------|
|          |                                   |              |       | Wear Resistance |        | Toughness |
|          |                                   |              |       | PH6920          | PH6125 | PH6135    |
| <b>P</b> | Unalloyed steel                   | 125-220      |       | ●               | ●      | ●         |
|          | Low-alloyed steel                 | 220-280      |       | ●               | ●      | ●         |
|          | High-alloy steel                  | 280-380      |       | ●               | ●      | ●         |
| <b>M</b> | SS - Ferritic/martensitic         | 200-330      |       | ●               |        |           |
|          | SS - Austenitic                   | 200-330      |       | ●               |        |           |
|          | SS - Austenitic-ferretic (Duplex) | 230-260      |       | ●               |        |           |
| <b>K</b> | Malleable cast iron               | 130-230      |       | ●               |        |           |
|          | Grey cast iron                    | 180-245      |       | ●               |        |           |
|          | Nodular cast iron                 | 160-250      |       | ●               |        |           |

- Good Conditions
- Average Conditions
- Difficult Conditions

# HiFEED 06590 Milling Tool | Ferramenta | Herramienta

## Rec. Cutting Conditions

| ISO      | PSM | Material                  | HB<br>(Brinell)<br>Grade | V <sub>C</sub> (m/min) |         |             | Feed f <sub>z</sub> (mm/t) |
|----------|-----|---------------------------|--------------------------|------------------------|---------|-------------|----------------------------|
|          |     |                           |                          | ← Wear Resistance      |         | Toughness → |                            |
|          |     |                           |                          | PH6920                 | PH6125  | PH6135      | SP... 08T308               |
| <b>P</b> | 1   | Unalloyed steel           | 125-220                  | 150-230                | 160-190 | 150-180     | 0,30-1,50                  |
|          | 2   | Low-alloyed steel         | 220-280                  | 140-220                | 140-180 | 140-170     | 0,30-1,50                  |
|          | 3   | High-alloy steel          | 280-380                  | 130-180                | 130-160 | 120-150     | 0,30-1,30                  |
| <b>M</b> | 4   | SS - Ferritic/Martensitic | 200-330                  | 120-160                | -       | -           | 0,30-1,40                  |
|          | 5   | SS - Austenitic / Duplex  | 200-330                  | 100-150                | -       | -           | 0,30-1,40                  |
|          | 6   | SS - Duplex               | 230-260                  | 70-110                 | -       | -           | 0,30-1,20                  |
| <b>K</b> | 7   | Malleable cast iron       | 130-230                  | 150-280                | -       | -           | 0,30-1,50                  |
|          | 8   | Grey cast iron            | 180-245                  | 130-230                | -       | -           | 0,30-1,50                  |
|          | 9   | Nodular cast iron         | 160-250                  | 80-190                 | -       | -           | 0,30-1,40                  |

(Note 1) Cutting conditions a<sub>e</sub>/D<sub>c</sub>=70%.

(Note 2) The cutting speed and feed rate should be reduce 20%~30% of the value show on the above table when overhang length of tools exceed 3xD.

(Note 3) Cutting conditions should be adjusted according to the machine and work rigidity.

(Note 4) It's possible to occur vibrations in certain cases. Please reduce depth of cut and / or reduce cutting conditions in following cases:

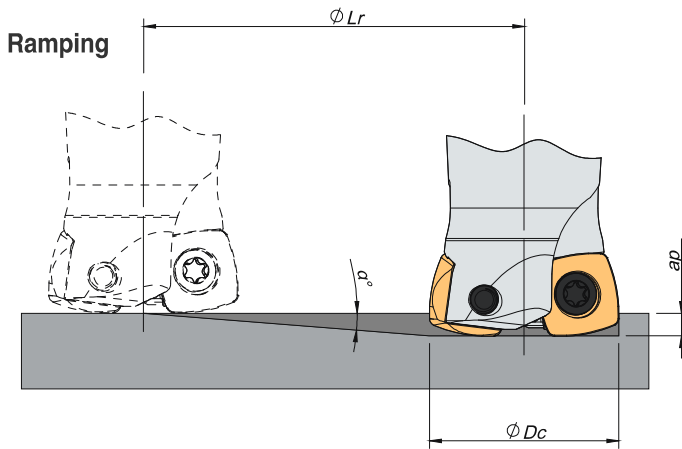
- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.

## Chip-Breaker Application

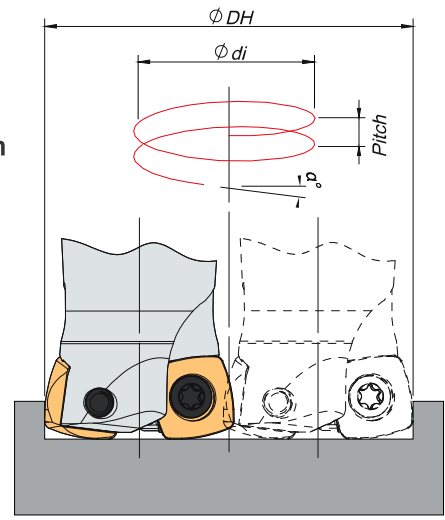
| ISO      | PSM | Material                          | HB<br>(Brinell) | Chip Breaker Application |                      |
|----------|-----|-----------------------------------|-----------------|--------------------------|----------------------|
|          |     |                                   |                 | 1st choice               | Difficult Operations |
| <b>P</b> | 1   | Unalloyed steel                   | 125-220         | SPKT 08...               | SPKW 08...           |
|          | 2   | Low-alloyed steel                 | 220-280         | SPKW 08...               | -                    |
|          | 3   | High-alloy steel                  | 280-380         | SPKW 08...               | -                    |
| <b>M</b> | 4   | SS - Ferritic/martensitic         | 200-330         | SPKT 08...               | -                    |
|          | 5   | SS - Austenitic                   | 200-330         | SPKT 08...               | -                    |
|          | 6   | SS - Austenitic-ferretic (Duplex) | 230-260         | SPKT 08...               | SPKW 08...           |
| <b>K</b> | 7   | Malleable cast iron               | 130-230         | SPKT 08...               | SPKW 08...           |
|          | 8   | Grey cast iron                    | 180-245         | SPKW 08...               | -                    |
|          | 9   | Nodular cast iron                 | 160-250         | SPKW 08...               | -                    |

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## Ramping and Helical Interpolation



## Helical Interpolation



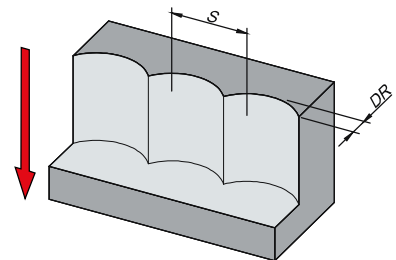
$$\phi di = \phi DH - \phi Dc$$

| $\phi Dc$ | Ramping                 |           |        | Helical Interpolation |                 |                |
|-----------|-------------------------|-----------|--------|-----------------------|-----------------|----------------|
|           | Max Ramp $\alpha^\circ$ | Max $a_p$ | Min Lr | $\phi DH_{min}$       | $\phi DH_{max}$ | Max Pitch/Rev. |
| 20        | 0,5                     | 1,2       | 137,5  | 27,8<br>-             | -<br>38,0       | 0,2<br>0,5     |
| 25        | 1                       | 1,2       | 68,7   | 37,8<br>-             | -<br>48,0       | 0,7<br>1,2     |
| 32        | 1,4                     | 1,2       | 49,1   | 51,8<br>-             | -<br>62,0       | 1,5<br>2,3     |
| 35        | 1,1                     | 1,2       | 62,5   | 57,8<br>-             | -<br>68,0       | 1,3<br>2,0     |
| 42        | 0,9                     | 1,2       | 76,4   | 71,8<br>-             | -<br>82,0       | 1,4<br>1,9     |

Note: During helical interpolation do not exceed max Pitch.

## Plunging

| $L \leq 3Dc$ | $L > 3Dc$ | S max.                                  |
|--------------|-----------|---|
| $f_z$ (mm/t) |           |   |
| 0,08-0,15    | 0,05-0,10 | $S_{max} = \sqrt{Dc \cdot a_e - a_e^2}$ |



| S max and DR corresponding cutting diameter Dc (mm) |         |      |      |      |      |
|---|---------|------|------|------|------|
| DR (mm)   | Dc (mm) |      |      |      |      |
|   | 20      | 25   | 32   | 35   | 42   |
| 1,0   | 4,4     | 4,9  | 5,6  | 5,8  | 6,4  |
| 2,0   | 6,0     | 6,8  | 7,7  | 8,1  | 8,9  |
| 3,0   | 7,1     | 8,1  | 9,3  | 9,8  | 10,8 |
| 4,0   | 8,0     | 9,2  | 10,6 | 11,1 | 12,3 |
| 5,0   | 8,7     | 10,0 | 11,6 | 12,2 | 13,6 |
| 6,0   | 9,2     | 10,7 | 12,5 | 13,2 | 14,7 |

Note: Recommended for  $L \leq 4Dc$ . For  $L > 4Dc$  steps must be reduced to 40%.