

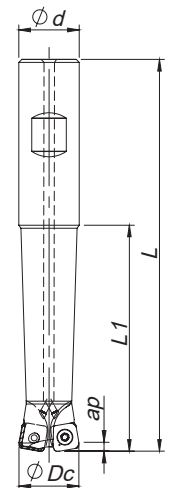
Arbor Mounting

$K_r=10^\circ$ | $\gamma_p=+2^\circ$ | $\gamma_f=+2^\circ$ | $R_p=2,0$

| Order code Código | Reference Referência Referencia | | Dimensions Dimensões Dimensiones (mm) | | | | Kg | Specifications | | Insert Pastilha Inserto | Stock |
|----------------------|---------------------------------------|--|---|-----------------|------------------|----|-------|----------------|------------|-------------------------------|-------|
| | | | $\varnothing Dc$ | $\varnothing d$ | $\varnothing dg$ | L | | Ap max (in) | Arbor Type | | |
| 181149800 | 040A06410-05-02-016040 | | 40 | 16 | 30 | 40 | 0,157 | 1,00 | A | SO...0803... | |
| 181153200 | 050A06410-06-02-022045 | | 50 | 22 | 40 | 45 | 0,312 | 1,00 | A | SO...0803... | |
| 181149900 | 052A06410-06-02-022045 | | 52 | 22 | 40 | 45 | 0,331 | 1,00 | A | SO...0803... | |

Stock item | Produto de stock | Itens de stock

Available under request (see page A-9) | Disponível sobre consulta (consulte a página A-9) | Disponible bajo consulta (mire pagina A-9)



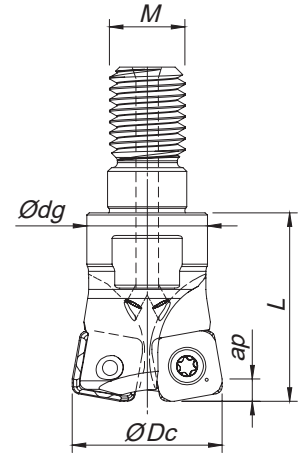
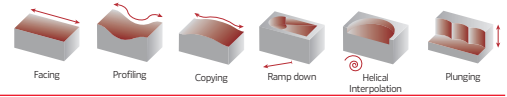
Weldon Shank

$K_r=10^\circ$ | $\gamma_p=+2^\circ$ | $\gamma_f=+2^\circ$ | $R_p=2,0$

| Order code Código | Reference Referência Referencia | | Dimensions Dimensões Dimensiones (mm) | | | | Kg | Specifications | | Insert Pastilha Inserto | Stock |
|----------------------|---------------------------------------|--|---|-----------------|-----|-----|-------|----------------|--------------|-------------------------------|-------|
| | | | $\varnothing Dc$ | $\varnothing d$ | L | L1 | | Ap max (mm) | Arbor Type | | |
| 181076300 | 020W06410-02-02-020130 | | 20 | 20 | 130 | 75 | 0,360 | 1,00 | SO...0803... | | |
| 181080900 | 020W06410-02-02-020190 | | 20 | 20 | 190 | 110 | 0,340 | 1,00 | SO...0803... | | |
| 181076400 | 025W06410-03-02-025140 | | 25 | 25 | 140 | 80 | 0,410 | 1,00 | SO...0803... | | |
| 181081100 | 025W06410-03-02-025200 | | 25 | 25 | 200 | 130 | 0,570 | 1,00 | SO...0803... | | |
| 181076500 | 032W06410-04-02-032150 | | 32 | 32 | 150 | 90 | 0,760 | 1,00 | SO...0803... | | |
| 181081300 | 032W06410-04-02-032200 | | 32 | 32 | 200 | 130 | 1,010 | 1,00 | SO...0803... | | |

Stock item | Produto de stock | Itens de stock

Available under request (see page A-9) | Disponível sobre consulta (consulte a página A-9) | Disponible bajo consulta (mire pagina A-9)



Threaded Coupling

$K_r=10^\circ$ | $\gamma_p=+2^\circ$ | $\gamma_f=+2^\circ$ | $R_p=2,0$

| Order code Código | Reference Referência Referencia | | Dimensions Dimensões Dimensiones (mm) | | | | Kg | Specifications | Insert Pastilha Inserto | Stock |
|----------------------|---------------------------------------|--|---|-----|-----|----|-------|----------------|-------------------------------|-------|
| | | | ØDc | ØM | Ødg | L | | Ap max (mm) | | |
| 181071900 | 020R06410-02-02-M10025 | | 20 | M10 | 16 | 25 | 0,040 | 1,00 | SO...0803... | |
| 181076600 | 025R06410-03-02-M12028 | | 25 | M12 | 21 | 28 | 0,070 | 1,00 | SO...0803... | |
| 181076700 | 032R06410-04-02-M16035 | | 32 | M16 | 29 | 35 | 0,160 | 1,00 | SO...0803... | |
| 181076800 | 035R06410-04-02-M16035 | | 35 | M16 | 29 | 35 | 0,180 | 1,00 | SO...0803... | |
| 181076900 | 042R06410-05-02-M16035 | | 42 | M16 | 29 | 35 | 0,220 | 1,00 | SO...0803... | |

Stock item | Produto de stock | Itens de stock

Available under request (see page A-9) | Disponível sobre consulta (consulte a página A-9) | Disponible bajo consulta (mire pagina A-9)

SO...0803... || Inserts | Pastilhas | Plaquetas

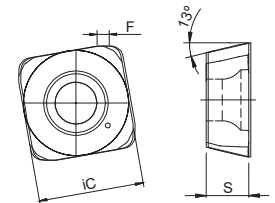
SOEW



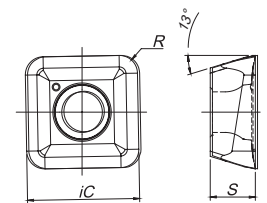
SOET



SOEW



SOET



| Geometry code | ISO Reference | P | | | M | | K | | | S | | Dimensions Dimensões Dimensiones (mm) | | | |
|---------------|----------------|-----|----|----|-----|----|-----|----|----|-----|----|---|------|-----|-----|
| | | PVD | | | PVD | | PVD | | | PVD | | iC | S | R | F |
| | | X5 | T1 | G6 | X9 | G6 | X5 | T1 | G6 | X9 | G6 | | | | |
| 1111884 | SOEW 080310 S | | | | | | | | | | | 8,60 | 3,47 | 1,0 | 1,0 |
| 1112149 | SOET 080315-MS | | | | | | | | | | | 8,60 | 3,47 | 1,5 | - |

First choice | Primeira opção | 1ª opción

Stock item | Produto de stock | Itens de stock

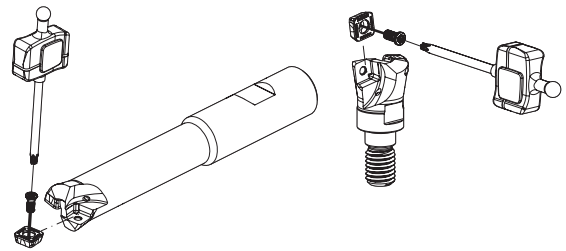
Available under request (see page A-9) | Disponível sobre consulta (consulte a página A-9) | Disponible bajo consulta (mire pagina A-9)

Insert order code = (1) Geometry Code + (2) Grade Code

HIFEED 06410

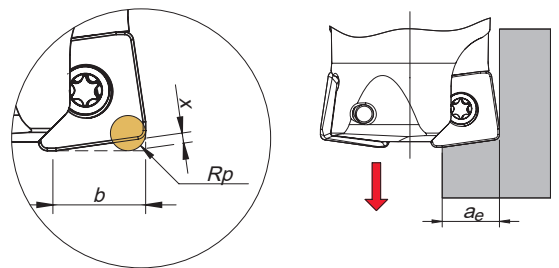
SPARE PARTS | Acessórios | Repuestos

| Cutter ØDc | Insert Screw | Key (Torx) | Order separately | |
|------------------|--------------|------------|--------------------|--------------|
| | | | Key (Torx - Nm) | Torque Value |
| A06410 - 40 - 52 | P0300800 | XT09 | DT0914 | 1,4 |
| R06410 - 20 - 42 | P0300800 | XT09 | DT0914 | 1,4 |
| W06410 - 20 - 32 | P0300800 | XT09 | DT0914 | 1,4 |



PROGRAMMING DATA | Dados para programação | Datos para la programación

| Insert | Programming Data | | | |
|--------------|------------------|-----|-----|-----|
| | Rp | X | b | ae |
| SO... 0803.. | 2,0 | 0,8 | 6,8 | 6,3 |



GRADES SELECTION GUIDE | Guia para selecção de graus | Tabla para selección de calidades

| ISO | PSM | Material | HB (Brinell) | Grades | | | |
|-----|-----|-----------------------------------|-----------------|-------------------|--------|-------------|--------|
| | | | | ← Wear Resistance | | Toughness → | |
| | | | | PHP910 | PHP920 | PHH930 | PH7740 |
| P | 1 | Unalloyed Steel | 125-220 | ● | ● | ● | ● |
| | 2 | Low-Alloyed Steel | 220-280 | ● | ● | | ● |
| | 3 | High-Alloyed Steel | 280-380 | ● | ● | | ● |
| M | 4 | SS - Ferritic / Martensitic | 200-330 | | | ● | ● |
| | 5 | SS - Austenitic | 200-330 | | | ● | ● |
| | 6 | SS - Austenitic-ferritic (Duplex) | 230-260 | | | ● | ● |
| K | 7 | Malleable Cast Iron | 130-230 | ● | ● | | |
| | 8 | Grey Cast Iron | 180-245 | ● | ● | | |
| | 9 | Nodular Cast iron | 160-250 | ● | ● | | |
| S | 11 | Heat Resistant Super Alloys | 200-320 | | | ● | ● |

- Good Conditions
- Average Conditions
- Difficult Conditions

RECOMMENDED CUTTING CONDITIONS | Condições de corte recomendadas | Condiciones de corte recomendables

| ISO | PSM | Material | HB (Brinell) | Vc (m/min) | | | | Feed fz (mm/t) | |
|-----|-----|-----------------------------------|-----------------|-------------------|---------|-------------|---------|----------------|------------|
| | | | | ← Wear Resistance | | Toughness → | | SOEW 08... | SOET 08... |
| | | | | PHP910 | PHP920 | PHH930 | PH7740 | | |
| P | 1 | Unalloyed Steel | 125-220 | 180-250 | 180-250 | - | 140-200 | 0,40-1,80 | 0,40-1,80 |
| | 2 | Low-Alloyed Steel | 220-280 | 160-240 | 160-230 | - | 130-180 | 0,40-1,80 | - |
| | 3 | High-Alloyed Steel | 280-380 | 140-230 | 140-220 | - | 100-170 | 0,40-1,50 | - |
| M | 4 | SS - Ferritic / Martensitic | 200-330 | - | - | 140-210 | 130-180 | - | 0,40-1,30 |
| | 5 | SS - Austenitic | 200-330 | - | - | 120-170 | 110-160 | - | 0,40-1,30 |
| | 6 | SS - Austenitic-ferritic (Duplex) | 230-260 | - | - | 100-150 | 90-150 | - | 0,10-1,00 |
| K | 7 | Malleable Cast Iron | 130-230 | 180-300 | 160-270 | - | - | 0,40-1,80 | 0,40-1,80 |
| | 8 | Grey Cast Iron | 180-245 | 160-250 | 140-250 | - | - | 0,40-1,80 | - |
| | 9 | Nodular Cast iron | 160-250 | 150-210 | 120-210 | - | - | 0,40-1,80 | - |
| S | 11 | Heat Resistant Super Alloys | 200-320 | | | 30-110 | 30-100 | - | 0,40-1,00 |

(Note 1) Cutting conditions $a_e/D_c=70\%$.

(Note 2) 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.

(Note 3) PH5... and PH8... can be used wet or dry. PH7... use only air.

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

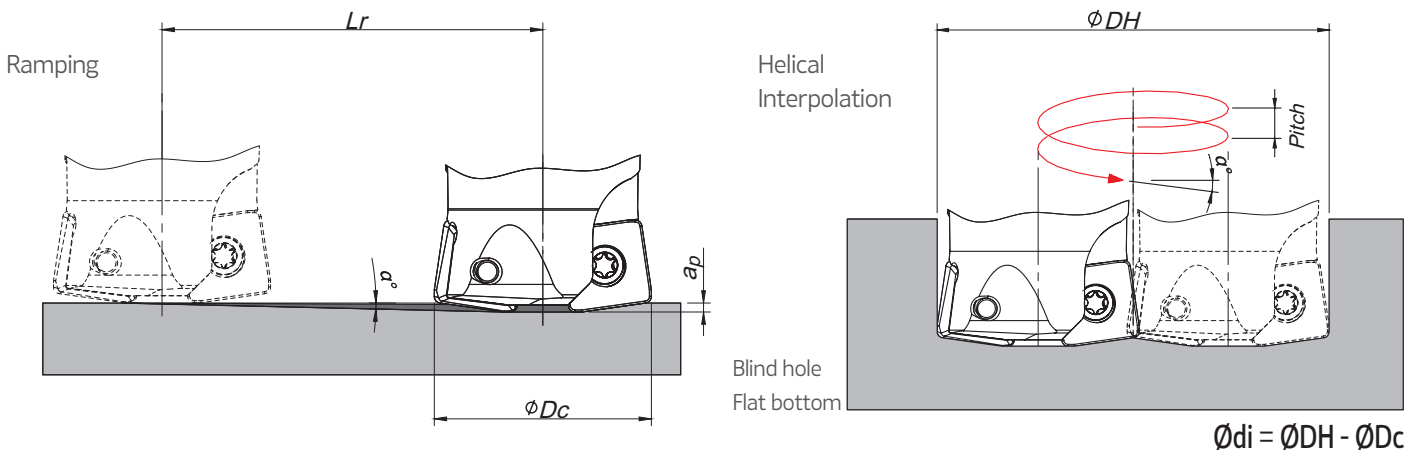
- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.

CHIP-BREAKER SELECTION GUIDE | Guia para aplicações do quebra-apanas | Guía para aplicación del rompevirutas

| ISO | PSM | Material | HB (Brinell) | Chip-Breaker Application | |
|-----|-----|-----------------------------------|-----------------|--------------------------|----------------------|
| | | | | 1st choice | Difficult Operations |
| P | 1 | Unalloyed Steel | 125-220 | SOET 08... | SOEW 08... |
| | 2 | Low-Alloyed Steel | 220-280 | SOEW 08... | - |
| | 3 | High-Alloyed Steel | 280-380 | SOEW 08... | - |
| M | 4 | SS - Ferritic / Martensitic | 200-330 | SOET 08... | - |
| | 5 | SS - Austenitic | 200-330 | SOET 08... | - |
| | 6 | SS - Austenitic-ferritic (Duplex) | 230-260 | SOET 08... | - |
| K | 7 | Malleable Cast Iron | 130-230 | SOET 08... | SOEW 08... |
| | 8 | Grey Cast Iron | 180-245 | SOEW 08... | - |
| | 9 | Nodular Cast iron | 160-250 | SOEW 08... | - |
| S | 11 | Heat Resistant Super Alloys | 200-320 | SOET 08... | - |

RAMPING AND HELICAL INTERPOLATION

Descida em rampa e interpolação helicoidal | Bajada en rampa e interpolación circular

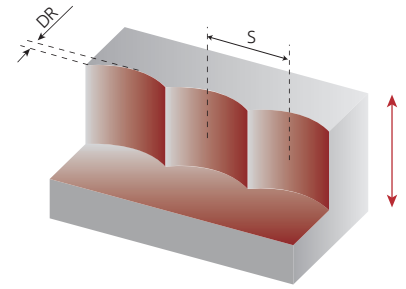


| ØDc | Ramping | | | Helical Interpolation | | |
|-----|-------------|--------|--------|-----------------------|------------|----------------|
| | Max Ramp a° | Max ap | Min Lr | ØDHmin | ØDHmax | Max Pitch/Rev. |
| 20 | 15 | 1,0 | 3,2 | 26,4 - | - 38,0 | 6 17 |
| 25 | 9,5 | 1,0 | 6,0 | 36,4 - | - 48,0 | 5 12 |
| 32 | 5,5 | 1,0 | 10,4 | 50,4 - | - 62,0 | 5 9 |
| 35 | 4,5 | 1,0 | 12,7 | 56,4 - | - 68,0 | 5 8 |
| 40 | 3,5 | 1,0 | 16,3 | 66,4 - | - 80,0 | 5 7 |
| 42 | 3,5 | 1,0 | 16,3 | 70,4 - | - 82,0 | 5 7 |
| 50 | 3,5 | 1,0 | 16,3 | 86,4 - | - 100,0 | 6 9 |
| 52 | 3,5 | 1,0 | 16,3 | 90,4 - | - 104,0 | 7 9 |

Note: During helical interpolation do not exceed max ap.

PLUNGING || Mergulho | Plunge

| | | |
|-----------------------|-----------|--|
| L ≤ 3Dc | L > 3Dc | S max. |
| f _z (mm/t) | | |
| 0,08-0,15 | 0,05-0,10 | $S_{max} = \sqrt{D_c \cdot DR - DR^2}$ |



| S max and DR corresponding cutting diameter Dc (mm) | | | | | | | | |
|---|---------|------|------|------|------|------|------|------|
| DR (mm) | Dc (mm) | | | | | | | |
| | 20 | 25 | 32 | 35 | 40 | 42 | 50 | 52 |
| 1,0 | 4,4 | 4,9 | 5,6 | 5,8 | 6,2 | 6,4 | 7,0 | 7,1 |
| 2,0 | 6,0 | 6,8 | 7,7 | 8,1 | 8,7 | 8,9 | 9,8 | 10,0 |
| 3,0 | 7,1 | 8,1 | 9,3 | 9,8 | 10,5 | 10,8 | 11,9 | 12,1 |
| 4,0 | 8,0 | 9,2 | 10,6 | 11,1 | 12,0 | 12,3 | 13,6 | 13,9 |
| 5,0 | 8,7 | 10,0 | 11,6 | 12,2 | 13,2 | 13,6 | 15,0 | 15,3 |
| 6,0 | 9,2 | 10,7 | 12,5 | 13,2 | 14,3 | 14,7 | 16,2 | 16,6 |

Note: Recommended for L ≤ 4 Dc for extra long tool this step and side cut must be reduced.

