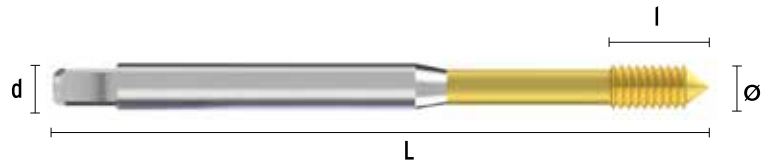
## 2188 HSSE-PM DIN 371

A>12% | M DIN 13 | Form. C | Tol. 6HX | 1,5XD | R | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | o 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M3,0 | 0,50 | *37,29* | 56 | 10 | 2,70 | 3,5 |
| M4,0 | 0,70 | *37,29* | 63 | 7 | 3,40 | 4,5 |
| M5,0 | 0,80 | *39,21* | 70 | 8 | 4,90 | 6,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M6,0 | 1,00 | *41,79* | 80 | 10 | 4,90 | 6,0 |
| M8,0 | 1,25 | *49,93* | 90 | 13 | 6,20 | 8,0 |
| M10,0 | 1,50 | *60,88* | 100 | 15 | 8,00 | 10,0 |

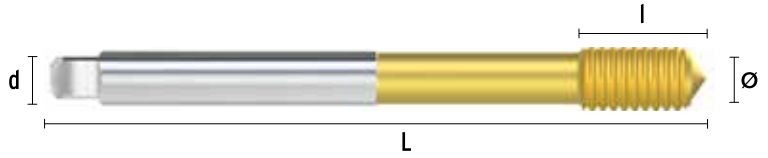
## 2187 HSSE-PM DIN 376

A>12% | M DIN 13 | Form. C | Tol. 6HX | 1,5XD | D | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | o 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M12,0 | 1,75 | *78,72* | 110 | 18 | 7,00 | 9,0 |
| M14,0 | 2,00 | *106,16* | 110 | 20 | 9,00 | 11,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M16,0 | 2,00 | *127,40* | 110 | 20 | 9,00 | 12,0 |

P Aceros / Aciers / Steels / Stähle
M Aceros Inox / Aciers Inox / Stainless Steels / Edelstahl
K Fundicion / Fonte / Cast Iron / Gusseisen
N Metales no ferrosos / Métal non Ferraux / Non Ferrous metals / NE-Metalle
S Titanio y Superaleaciones / Titanium et Supealliages / Titanium and Superalloys / Titan und Superlegierungen
H Materiales Duros / Materiels Durs / Hard materials / Hartmaterialien

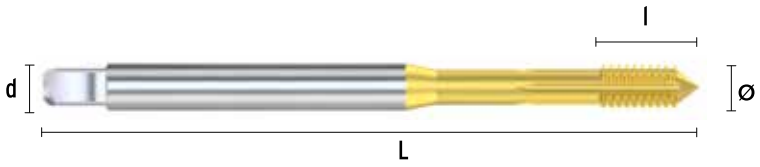
## 2214 HSSE-PM DIN 371

A>12% | M DIN 13 | Form. C | Tol. 6HX | 3XD | R | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | ○ 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M3,0 | 0,50 | *37,29* | 56 | 10 | 2,70 | 3,5 |
| M4,0 | 0,70 | *37,29* | 63 | 7 | 3,40 | 4,5 |
| M5,0 | 0,80 | *39,21* | 70 | 8 | 4,90 | 6,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M6,0 | 1,00 | *41,79* | 80 | 10 | 4,90 | 6,0 |
| M8,0 | 1,25 | *49,93* | 90 | 13 | 6,20 | 8,0 |
| M10,0 | 1,50 | *60,88* | 100 | 15 | 8,00 | 10,0 |

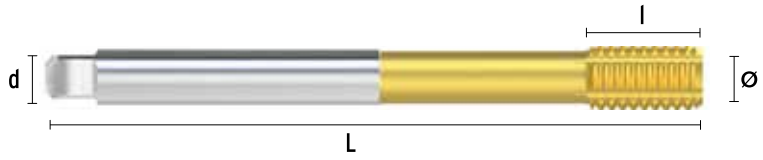
## 2213 HSSE-PM DIN 376/374

A>12% | M-MF DIN13 | Form. C | Tol. 6HX | 3XD | D | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | ○ 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M8,0 | 1,00 | *81,81* | 90 | 13 | 4,90 | 6,0 |
| M8,0 | 1,25 | *70,57* | 90 | 13 | 4,90 | 6,0 |
| M10,0 | 1,00 | *67,05* | 90 | 13 | 5,50 | 7,0 |
| M10,0 | 1,25 | *104,55* | 100 | 15 | 5,50 | 7,0 |
| M10,0 | 1,50 | *83,30* | 100 | 15 | 5,50 | 7,0 |
| M12,0 | 1,00 | *103,51* | 100 | 10 | 7,00 | 9,0 |
| M12,0 | 1,25 | *108,20* | 100 | 15 | 7,00 | 9,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M12,0 | 1,50 | *105,24* | 100 | 15 | 7,00 | 9,0 |
| M12,0 | 1,75 | *78,72* | 110 | 18 | 7,00 | 9,0 |
| M14,0 | 2,00 | *106,16* | 110 | 20 | 9,00 | 11,0 |
| M16,0 | 1,50 | *164,37* | 100 | 15 | 9,00 | 12,0 |
| M16,0 | 2,00 | *127,40* | 110 | 20 | 9,00 | 12,0 |
| M18,0 | 2,50 | *230,21* | 125 | 25 | 11,00 | 14,0 |
| M20,0 | 2,50 | *220,50* | 140 | 25 | 12,00 | 16,0 |



P Aceros / Aciers / Steels / Stähle
M Aceros Inox / Aciers Inox / Stainless Steels / Edelstahl
K Fundicion / Fonte / Cast Iron / Gusseisen
N Metales no ferrosos / Métal non Ferraux / Non Ferrous metals / NE-Metalle
S Titanio y Superaleaciones / Titanium et Supealliages / Titanium and Superalloys / Titan und Superlegierungen
H Materiales Duros / Materiels Durs / Hard materials / Hartmaterialien

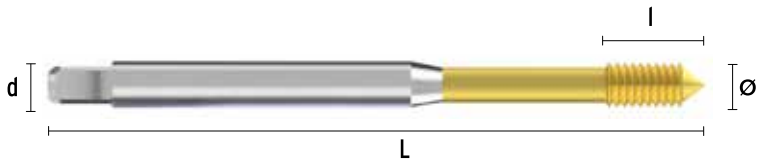
## 2216 HSSE-PM DIN 371

A>12% | M DIN 13 | Form. C | Tol. 6GX | 1,5XD | R | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | o 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M3,0 | 0,50 | *39,15* | 56 | 10 | 2,70 | 3,5 |
| M4,0 | 0,70 | *39,15* | 63 | 7 | 3,40 | 4,5 |
| M5,0 | 0,80 | *41,18* | 70 | 8 | 4,90 | 6,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M6,0 | 1,00 | *43,88* | 80 | 10 | 4,90 | 6,0 |
| M8,0 | 1,25 | *52,42* | 90 | 13 | 6,20 | 8,0 |
| M10,0 | 1,50 | *63,93* | 100 | 15 | 8,00 | 10,0 |

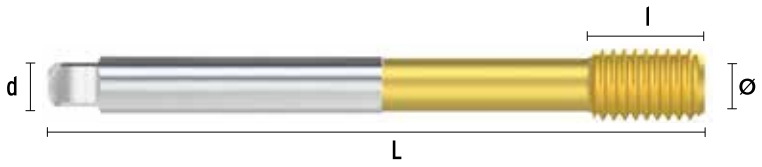
## 2215 HSSE-PM DIN 376

A>12% | M DIN 13 | Form. C | Tol. 6GX | 1,5XD | D | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | o 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M12,0 | 1,75 | *90,96* | 110 | 18 | 7,00 | 9,0 |

P Aceros Aciers Steels Stähle
M Aceros Inox Aciers Inox Stainless Steels Edelstahl
K Fundicion Fonte Cast Iron Gusseisen
N Metales no ferrosos Métal non Ferraux Non Ferrous metals NE-Metalle
S Titanio y Superaleaciones Titanium et Supealliages Titanium and Superalloys Titan und Superlegierungen
H Materiales Duros Materiels Durs Hard materials Hartmaterialien

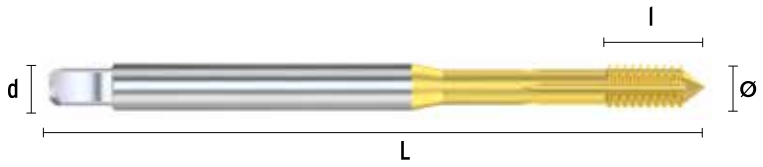
## 2218 HSSE-PM DIN 371

A>12% | M DIN 13 | Form. C | Tol. 6GX | 3XD | R | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | ○ 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M3,0 | 0,50 | *39,15* | 56 | 10 | 2,70 | 3,5 |
| M4,0 | 0,70 | *39,15* | 63 | 7 | 3,40 | 4,5 |
| M5,0 | 0,80 | *41,18* | 70 | 8 | 4,90 | 6,0 |

| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M6,0 | 1,00 | *43,88* | 80 | 10 | 4,90 | 6,0 |
| M8,0 | 1,25 | *52,42* | 90 | 13 | 6,20 | 8,0 |
| M10,0 | 1,50 | *63,93* | 100 | 15 | 8,00 | 10,0 |

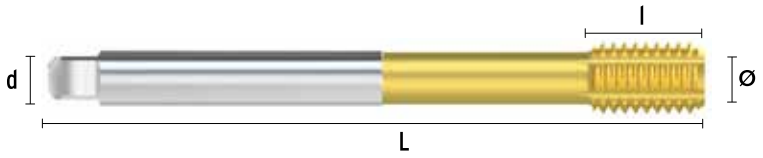
## 2217 HSSE-PM DIN 376

A>12% | M DIN 13 | Form. C | Tol. 6GX | 3XD | D | TIN

| P | | | | M | | K | | | N | | | | S | | H | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| ● 15-45 | ● 15-25 | | | ● 10-25 | | | | | ● 15-40 | ● 15-30 | ● 20-40 | | | ○ 10-20 | | | |

Vc (m/min). ● Optima / Optimun ○ Alternativo / Alternative

MICRO FINISH




| Ø | P | € | L mm | l mm | ⊠ mm | d mm |
|---|---|---|---|---|---|---|
| M12,0 | 1,75 | *90,96* | 110 | 18 | 7,00 | 9,0 |



P Aceros / Aciers / Steels / Stähle
M Aceros Inox / Aciers Inox / Stainless Steels / Edelstahl
K Fundicion / Fonte / Cast Iron / Gusseisen
N Metales no ferrosos / Métal non Ferraux / Non Ferrous metals / NE-Metalle
S Titanio y Superaleaciones / Titanium et Supealliages / Titanium and Superalloys / Titan und Superlegierungen
H Materiales Duros / Materiels Durs / Hard materials / Hartmaterialien