

201 - 212



| | |
|-------------|-----|
| J200 | 205 |
| J205 | 205 |
| J210 | 206 |
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| J235 | 208 |
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| J260 | 211 |
| J280 | 210 |

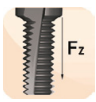
| | | | |
|---|--|--|--|
| Thread form | Tipo de rosca | Forma da Rosca | Forme de filet |
| Standard | Norma | Standard | Standard |
| Depth | Profundidad | Profundidade | Profondeur |
| Material | Material | Material | Matière |
| Helix angle | Ángulo de la hélice | Ângulo da Hélice | Angle d'hélice |
| Direction | Dirección | Direção | Direction |
| Coating | Tratamiento superficial | Revestimento | Revêtement |
| Shank standard | Mango | Encabadouro | Queue |
| Coolant | Refrigeración | Refrigeração | Lubrification |
| Excellent for Application | Excelente para la Aplicación | Excelente para a Aplicação | Excellent pour les applications |
| Good for Application | Bueno para la Aplicación | Bom para a Aplicação | Acceptable pour les applications |
| Example 10 = Peripheral speed in metres/minute +/- 10% | Ejemplo 10 = Velocidad Periférica en metros/ minuto +/- 10% | Exemplo 10 = velocidade periférica em metros / minuto + / - 10% | Exemple 10 = Vitesse périphérique en mètres/ minute +/- 10% |
| Codes | Código de producto | Código | Codes |
| Range | Rango de Medidas | Gama de medidas | Gamme |

| AMG | English | Español | Português | Français |
|------|---|--|--|---|
| 1.1 | Magnetic soft steel | Acero blando | Aço macio de baixa resistência | Acier doux magnétique |
| 1.2 | Structural steel, case carburizing steel | Acero de construcción/cementación | Aço estrutural / Aço cementado | Acier de construction, Acier de cémentation |
| 1.3 | Plain Carbon steel | Acero al carbono | Aço carbono | Acier au carbone ordinaire |
| 1.4 | Alloy steel | Acero aleado | Aço de liga | Acier allié |
| 1.5 | Alloy steel, Hardened and tempered steel | Acero aleado/temple y revenido | Aço de Liga endurecido e temperado | Acier allié/ Acier trempé et revenu |
| 1.6 | Alloy steel, Hardened and tempered steel | Acero aleado/temple y revenido | Aço de Liga endurecido e temperado | Acier allié/ Acier trempé et revenu |
| 1.7 | Alloy steel, Heat treated | Acero aleado cementado | Aço de liga temperado | Acier allié trempé |
| 1.8 | Alloy steel, Hardened & Wear resistant steel | Acero aleado cementado | Aço de liga temperado / resistente ao degaste | Acier allié trempé |
| 2.1 | Free machining, Stainless Steel | Acero inoxidable fácil mecanizado | Aço inoxidável de fácil maquinação | Acier inoxydable de décolletage |
| 2.2 | Austenitic | Austenítico | Austenítico | Austénitique |
| 2.3 | Ferritic + Austenitic, Ferritic, Martensitic | Ferrítico, Ferr. + Aust., Marten | Ferrítico + Austenítico + Martensílico | Ferritique + Austénitique, Martensitique |
| 2.4 | Precipitation Hardened | Acero Inoxidable Templado | Aço Inoxidável Temperado | Acier inoxydable Trempé |
| 3.1 | Lamellar graphite | Con grafito laminar | Grafite Lamelar | Grafite lamellaire |
| 3.2 | Lamellar graphite | Con grafito laminar | Grafite Lamelar | Graphite lamellaire |
| 3.3 | Nodular graphite, Malleable Cast Iron | Con graf. laminar, fundic. maleable | Grafite nodular / Ferro fundido maleável | Graphite nodulaire/ Fonte malléable |
| 3.4 | Nodular graphite, Malleable Cast Iron | Con graf. laminar, fundic. maleable | Grafite nodular / Ferro fundido maleável | Graphite nodulaire/ Fonte malléable |
| 4.1 | Titanium, unalloyed | Titanio no aleado | Titânio, sem liga | Titane, non-allié |
| 4.2 | Titanium, alloyed | Titanio aleado | Ligas de Titânio | Titane, allié |
| 4.3 | Titanium, alloyed | Titanio aleado | Ligas de Titânio | Titane, allié |
| 5.1 | Nickel, unalloyed | Níquel no aleado | Níquel, sem liga | Nickel, non-allié |
| 5.2 | Nickel, alloyed | Níquel aleado | Ligas de níquel | Nickel, allié |
| 5.3 | Nickel, alloyed | Níquel aleado | Ligas de níquel | Nickel, allié |
| 6.1 | Copper | Cobre | Cobre | Cuivre |
| 6.2 | β-Brass, Bronze | β-Latón, bronce | Latão beta, bronze | β-Laiton, Bronze |
| 6.3 | α-Brass | α-Latón | Latão alfa | α-Laiton |
| 6.4 | High Strength Bronze | Metal AMPCO | Ligas de Cu-Al-Fe, Bronze de alta resistência | Bronze, haute résistance |
| 7.1 | Al, Mg, unalloyed | Al, Mg, no aleado | Al, Mg, sem liga | Al, Mg, non-allié |
| 7.2 | Al alloyed, Si < 0.5% | Al aleado con Si < 0.5% | Ligas de Al, Si : Si < 0.5% | Al allié, Si < 0.5% |
| 7.3 | Al alloyed, Si > 0.5% < 10% | Al aleado con Si > 0.5% < 10% | Ligas de Al, Si : Si > 0.5% < 10% | Al allié, Si > 0.5% < 10% |
| 7.4 | Al alloyed, Si > 10% Whisker reinforced Al-alloys Mg-alloys | Al aleado, Si>10% Reforzado por filamentos, Al-aleados, Mg-aleados | Al com liga, Si>10%, reforçadas com monocristais filiformes, ligas Al/Mg | Al allié, Si>10% Alliages d'Al ou Mg, céramique renforcée |
| 8.1 | Thermoplastics | Termoplásticos | Termoplásticos | Thermoplastiques |
| 8.2 | Thermosetting plastics | Plásticos endurecidos por calor | Plásticos termoduros | Plastiques thermodurcissables |
| 8.3 | Reinforced plastic materials | Materiales plásticos reforzados | Materiais plásticos reforçados | Plastiques renforcés |
| 9.1 | Cermets (metals-ceramics) | Cermetales (metales-cerámicas) | Materiais cerâmicos (metalocerâmica) | Cermets (céramiques métalliques) |
| 10.1 | Graphite | Grafito standard | Grafite standard | Graphite standard |

| | | | | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | M | M | M | M | MF | MF | UNC | UNF | G | NPT |
| | | | | | | | | | | |
| | 2XD | 2XD | 2XD | 2XD | 1.5XD | 1.5XD | 2XD | 2XD | 1.5XD | |
| | HM | HM | HM | HM | HM | HM | HM | HM | HM | HM |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | DIN 6535HA | DIN 6535HB | DIN 6535HA | DIN 6535HA | DIN 6535HA | DIN 6535HB | DIN 6535HB | DIN 6535HB | DIN 6535HA | DIN 6535HB |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | J200 | J205 | J210 | J215 | J220 | J225 | J235 | J245 | J280 | J260 |
| | M4 - M16 | M8 - M16 | M6 - M16 | M6 - M16 | M6 - M24 | M10 - M18 | 1/4 - 3/4 | 1/4 - 3/4 | 1/8 - 3" | 1/8 - 2" |

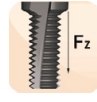
| AMG | 205 | 205 | 206 | 206 | 207 | 207 | 208 | 209 | 210 | 211 | ISO |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 1.1 | ■170B | ■170B | ■175B | ■175B | ■170B | ■170B | ■170B | ■170B | ■170B | ■170B | P 1 |
| 1.2 | ■170B | ■170B | ■175B | ■175B | ■170B | ■170B | ■170B | ■170B | ■170B | ■170B | P 1 |
| 1.3 | ■140B | ■140B | ■145B | ■145B | ■140B | ■140B | ■140B | ■140B | ■140B | ■140B | P 2 |
| 1.4 | ■130B | ■130B | ■135B | ■135B | ■130B | ■130B | ■130B | ■130B | ■130B | ■130B | P 3 |
| 1.5 | ■100B | ■100B | ■105B | ■105B | ■100B | ■100B | ■100B | ■100B | ■100B | ■100B | P 4 |
| 1.6 | ■80B | ■80B | ■85B | ■85B | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | H 1 |
| 1.7 | ●50A | ●50A | ●50A | ●50A | ●50A | ●50A | ●50A | ●50A | ●50A | ●50A | H 3 |
| 1.8 | ●30A | ●30A | ●30A | ●30A | ●30A | ●30A | ●30A | ●30A | ●30A | ●30A | H 4 |
| 2.1 | ●50A | ■50A | ●50A | ●50A | ●50A | ■50A | ■50A | ■50A | ●50A | ●50A | M 1 |
| 2.2 | ●40A | ■40A | ●40A | ●40A | ●40A | ■40A | ■40A | ■40A | ●40A | ●40A | M 3 |
| 2.3 | ●30A | ■30A | ●30A | ●30A | ●30A | ■30A | ■30A | ■30A | ●30A | ●30A | M 2 |
| 2.4 | ●25A | ■25A | ●25A | ●25A | ●25A | ■25A | ■25A | ■25A | ●25A | ●25A | S 2 |
| 3.1 | ■150B | ■150B | ■155B | ■155B | ■150B | ■150B | ■150B | ■150B | ■150B | ■150B | K 1 |
| 3.2 | ■130B | ■130B | ■135B | ■135B | ■130B | ■130B | ■130B | ■130B | ■130B | ■130B | K 2 |
| 3.3 | ■150B | ■150B | ■155B | ■155B | ■150B | ■150B | ■150B | ■150B | ■150B | ■150B | K 3 |
| 3.4 | ■120B | ■120B | ■125B | ■125B | ■120B | ■120B | ■120B | ■120B | ■120B | ■120B | K 4 |
| 4.1 | ■170B | ■170B | ■175B | ■175B | ■170B | ■170B | ■170B | ■170B | ■170B | ■170B | S 1 |
| 4.2 | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | ■80B | S 2 |
| 4.3 | ■50B | ■50B | ■50B | ■50B | ■50B | ■50B | ■50B | ■50B | ■50B | ■50B | S 3 |
| 5.1 | ●250B | ■250B | ●250B | ●255B | ●250B | ■250B | ■250B | ■250B | ●250B | ■250B | S 1 |
| 5.2 | ●40A | ■40A | ●40A | ●40A | ●40A | ■40A | ■40A | ■40A | ●40A | ●40A | S 2 |
| 5.3 | ●25A | ■25A | ●25A | ●25A | ●25A | ■25A | ■25A | ■25A | ●25A | ●25A | S 3 |
| 6.1 | ■400B | ■400B | ■405B | ■405B | ■400B | ■400B | ■400B | ■400B | ■400B | ■400B | N 3 |
| 6.2 | ■400B | ■400B | ■405B | ■405B | ■400B | ■400B | ■400B | ■400B | ■400B | ■400B | N 4 |
| 6.3 | ■400B | ■400B | ■405B | ■405B | ■400B | ■400B | ■400B | ■400B | ■400B | ■400B | N 3 |
| 6.4 | ■60A | ■60A | ■60A | ■60A | ■60A | ■60A | ■60A | ■60A | ■60A | ■60A | N 4 |
| 7.1 | ■800C | ■800C | ■805C | ■805C | ■800C | ■800C | ■800C | ■800C | ■800C | ■800C | N 1 |
| 7.2 | ■800C | ■800C | ■805C | ■805C | ■800C | ■800C | ■800C | ■800C | ■800C | ■800C | N 1 |
| 7.3 | ■700C | ■700C | ■705C | ■705C | ■700C | ■700C | ■700C | ■700C | ■700C | ■700C | N 1 |
| 7.4 | ■340B | ■340B | ■345B | ■345B | ■340B | ■340B | ■340B | ■340B | ■340B | ■340B | N 2 |
| 8.1 | ■340C | ■340C | ■345C | ■345C | ■340C | ■340C | ■340C | ■340C | ■340C | ■340C | O |
| 8.2 | ■210C | ■210C | ■215C | ■215C | ■210C | ■210C | ■210C | ■210C | ■210C | ■210C | O |
| 8.3 | ■180C | ■180C | ■185C | ■185C | ■180C | ■180C | ■180C | ■180C | ■180C | ■180C | O |
| 9.1 | | | | | | | | | | | H |
| 10.1 | ●200C | ●200C | ●210C | ●205C | ●200C | ●200C | ●200C | ●200C | ●200C | ●200C | O |

M



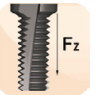
| Ø | A | | B | | C | |
|------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ |
| 3,2 | 0,010 | 0,005 | 0,011 | 0,006 | 0,017 | 0,012 |
| 4,1 | 0,009 | 0,007 | 0,012 | 0,008 | 0,014 | 0,011 |
| 4,8 | 0,012 | 0,009 | 0,015 | 0,010 | 0,017 | 0,014 |
| 6,5 | 0,017 | 0,014 | 0,027 | 0,017 | 0,030 | 0,025 |
| 8,2 | 0,021 | 0,018 | 0,034 | 0,029 | 0,040 | 0,033 |
| 9,9 | 0,024 | 0,020 | 0,039 | 0,024 | 0,048 | 0,032 |
| 11,6 | 0,031 | 0,025 | 0,050 | 0,031 | 0,059 | 0,035 |
| 13,6 | 0,039 | 0,032 | 0,062 | 0,051 | 0,071 | 0,048 |
| 16 | 0,061 | 0,033 | 0,064 | 0,036 | 0,066 | 0,033 |
| 19 | 0,085 | 0,044 | 0,089 | 0,048 | 0,095 | 0,044 |

MF



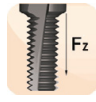
| d ₁ | P | A | | B | | C | |
|----------------|------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | ap= 3/4 x d ₁ | ap= 1,5 x d ₁ | ap= 3/4 x d ₁ | ap= 1,5 x d ₁ | ap= 3/4 x d ₁ | ap= 1,5 x d ₁ |
| 4,8 | 0,5 | 0,017 | 0,014 | 0,022 | 0,018 | 0,025 | 0,021 |
| 6 | 0,75 | 0,023 | 0,018 | 0,033 | 0,027 | 0,037 | 0,030 |
| 6 | 1 | 0,020 | 0,016 | 0,029 | 0,023 | 0,032 | 0,026 |
| 8 | 1 | 0,025 | 0,020 | 0,041 | 0,033 | 0,045 | 0,037 |
| 10 | 1 | 0,034 | 0,028 | 0,055 | 0,045 | 0,069 | 0,056 |
| 10 | 1,5 | 0,028 | 0,023 | 0,045 | 0,037 | 0,056 | 0,046 |
| 12 | 1 | 0,048 | 0,039 | 0,077 | 0,065 | 0,077 | 0,075 |
| 12 | 1,5 | 0,040 | 0,032 | 0,065 | 0,053 | 0,076 | 0,062 |
| 14 | 1 | 0,060 | 0,049 | 0,084 | 0,079 | 0,084 | 0,084 |
| 14 | 1,5 | 0,049 | 0,040 | 0,079 | 0,064 | 0,084 | 0,074 |
| 16 | 2 | 0,050 | 0,041 | 0,082 | 0,066 | 0,089 | 0,077 |
| 20 | 2 | 0,067 | 0,055 | 0,100 | 0,093 | 0,100 | 0,100 |

UNC



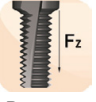
| d ₁ | P | A | | B | | C | |
|----------------|----|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ |
| 4,8 | 20 | 0,003 | 0,003 | 0,012 | 0,006 | 0,029 | 0,014 |
| 5,5 | 18 | 0,004 | 0,003 | 0,017 | 0,009 | 0,041 | 0,023 |
| 7,5 | 16 | 0,008 | 0,005 | 0,029 | 0,016 | 0,056 | 0,043 |
| 8 | 14 | 0,008 | 0,006 | 0,031 | 0,018 | 0,060 | 0,049 |
| 10 | 13 | 0,009 | 0,007 | 0,040 | 0,032 | 0,071 | 0,071 |
| 10 | 12 | 0,008 | 0,006 | 0,038 | 0,029 | 0,071 | 0,069 |
| 12 | 11 | 0,009 | 0,007 | 0,036 | 0,026 | 0,077 | 0,077 |
| 14 | 10 | 0,010 | 0,008 | 0,060 | 0,043 | 0,084 | 0,084 |

UNF



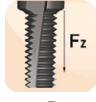
| d ₁ | P | A | | B | | C | |
|----------------|-------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ |
| 4,8 | 0,004 | 0,003 | 0,016 | 0,008 | 0,034 | 0,021 | |
| 6 | 0,006 | 0,004 | 0,028 | 0,016 | 0,055 | 0,045 | |
| 8 | 0,013 | 0,007 | 0,037 | 0,025 | 0,063 | 0,058 | |
| 10 | 0,022 | 0,011 | 0,046 | 0,038 | 0,071 | 0,071 | |
| 14 | 0,036 | 0,018 | 0,075 | 0,061 | 0,084 | 0,084 | |

G

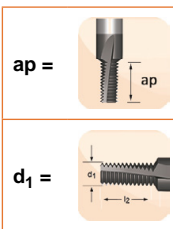


| d ₁ | A | | B | | C | |
|----------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ | ap= 1 x d ₁ | ap= 2 x d ₁ |
| 3,2 | 0,010 | 0,005 | 0,011 | 0,006 | 0,017 | 0,012 |
| 4,1 | 0,009 | 0,007 | 0,012 | 0,008 | 0,014 | 0,011 |
| 4,8 | 0,012 | 0,009 | 0,015 | 0,010 | 0,017 | 0,014 |
| 6,5 | 0,017 | 0,014 | 0,027 | 0,017 | 0,030 | 0,025 |
| 16 | 0,061 | 0,033 | 0,064 | 0,036 | 0,066 | 0,033 |
| 19 | 0,085 | 0,044 | 0,089 | 0,048 | 0,095 | 0,044 |

NPT



| d ₁ | Ap= | A | B | C |
|----------------|----------|-------|-------|-------|
| 7,9 | Standard | 0,026 | 0,044 | 0,069 |
| 9,9 | Standard | 0,029 | 0,046 | 0,070 |
| 15,9 | Standard | 0,053 | 0,087 | 0,089 |
| 19,9 | Standard | 0,064 | 0,1 | 0,1 |



J200

- M Thread Mill Spiral Flute 10°
- Fresa de roscar M con ángulo de hélice de 10°
- Fresa de Roscar M com ângulo de hélice a 10°
- Fraise à fileter M avec goujure hélice 10°

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

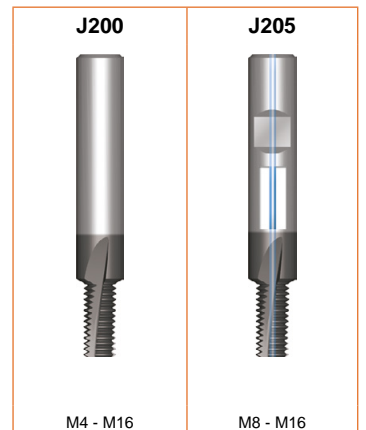
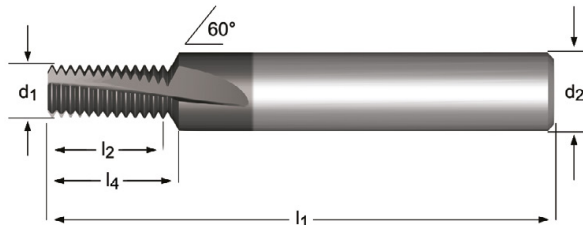
J205

- M Thread Mill Spiral Flute 10° Oil Feed
- Fresa de roscar M con ángulo de hélice de 10° - refrigeración interna
- Fresa de Roscar M com ângulo de hélice a 10° Lubrificação interna
- Fraise à fileter M avec goujure hélice 10° - à trous d'huile

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| J200 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 |
| | | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | | | | | | | |
| | • | 1.7 | 1.8 | 2.1 | 2.2 | 2.3 | 2.4 | 5.1 | 5.2 | 5.3 | 10.1 | | | | | | | | | | |
| J205 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 2.4 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 |
| | | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | |
| | • | 1.7 | 1.8 | 5.3 | 10.1 | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|------|---|--|-----|----|------|--|--|------------|--|
| J200 | M | | 2XD | HM | λ10° | | | DIN 6535HA | |
| J205 | M | | 2XD | HM | λ10° | | | DIN 6535HB | |



| ≥ | P mm | d ₁ Ø mm | l ₂ mm | l ₁ mm | d ₂ Ø mm | z | l ₄ mm | J200 | J205 |
|-----|---------|---------------------------|----------------------|----------------------|---------------------------|---|----------------------|--------------|--------------|
| M4 | 0.70 | 3.20 | 8.4 | 57 | 6 | 3 | 9.5 | J2003.2X.7 | |
| M5 | 0.80 | 4.10 | 11.2 | 57 | 6 | 3 | 12.1 | J2004.1X.8 | |
| M6 | 1.00 | 4.80 | 13.0 | 63 | 8 | 3 | 14.4 | J2004.8X1.0 | |
| M8 | 1.25 | 6.50 | 17.5 | 72 | 10 | 3 | 19.1 | J2006.5X1.25 | J2056.5X1.25 |
| M10 | 1.50 | 8.20 | 21.0 | 83 | 12 | 3 | 22.8 | J2008.2X1.5 | J2058.2X1.50 |
| M12 | 1.75 | 9.90 | 26.25 | 83 | 14 | 4 | 28.2 | J2009.9X1.75 | J2059.9X1.75 |
| M14 | 2.00 | 11.60 | 30.0 | 92 | 16 | 4 | 32.2 | J20011.6X2.0 | J20511.6X2.0 |
| M16 | 2.00 | 13.60 | 34.0 | 92 | 18 | 4 | 36.2 | J20013.6X2.0 | J20513.6X2.0 |

- ## J210
- M Thread Mill Spiral Flute 27°
 - Fresa de roscar M con ángulo de hélice de 27°
 - Fresa de Roscar M com ângulo de hélice a 27°
 - Fraise à fileter M avec goujure hélice 27°

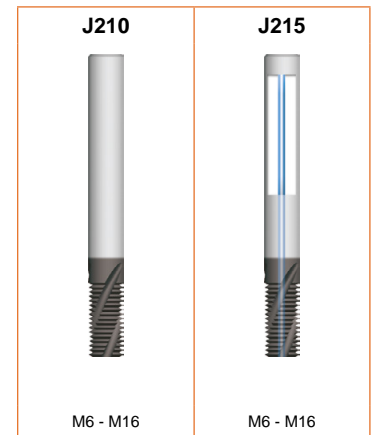
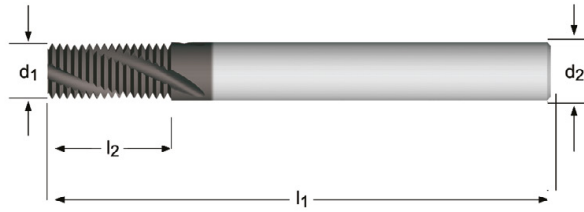
Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

- ## J215
- M Thread Mill Spiral Flute 27° Oil Feed
 - Fresa de roscar M con ángulo de hélice de 27° - refrigeración interna
 - Fresa de Roscar M com ângulo de hélice a 27° Lubrificação interna
 - Fraise à fileter M avec goujure hélice 27° - à trous d'huile

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | |
|------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| J210; J215 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 |
| | | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | | | |
| | • | 1.7 | 1.8 | 2.1 | 2.2 | 2.3 | 2.4 | 5.1 | 5.2 | 5.3 | 10.1 | | | | | | | | |

| | | | | | | | | | | | |
|------|---|--|-----|----|--|--------------------|--|-------------|--|------------|--|
| J210 | M | | 2XD | HM | | $\lambda 27^\circ$ | | Alcrona Pro | | DIN 6535HA | |
| J215 | M | | 2XD | HM | | $\lambda 27^\circ$ | | Alcrona Pro | | DIN 6535HA | |



| \geq | P mm | d_1 mm | l_2 mm | l_1 mm | d_2 mm | z | J210 | J215 |
|--------|---------|-------------|-------------|-------------|-------------|---|--------------|--------------|
| M6 | 1.00 | 4.50 | 13.0 | 57 | 6 | 3 | J2104.5X1.0 | J2154.5X1.0 |
| M8 | 1.25 | 6.00 | 17.5 | 65 | 6 | 3 | J2106.0X1.25 | J2156.0X1.25 |
| M10 | 1.50 | 7.50 | 21.0 | 72 | 8 | 3 | J2107.5X1.5 | J2157.5X1.5 |
| M12 | 1.75 | 9.50 | 26.25 | 80 | 10 | 3 | J2109.5X1.75 | J2159.5X1.75 |
| M14 | 2.00 | 10.00 | 30.0 | 83 | 10 | 4 | J21010.0X2.0 | J21510.0X2.0 |
| M16 | 2.00 | 12.00 | 34.0 | 92 | 12 | 4 | J21012.0X2.0 | J21512.0X2.0 |

J220

- MF Thread Mill Spiral Flute 10°
- Fresa de roscar MF con ángulo de hélice de 10°
- Fresa de Roscar MF com ângulo de hélice a 10°
- Fraise à fileter MF avec goujure hélice 10°

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

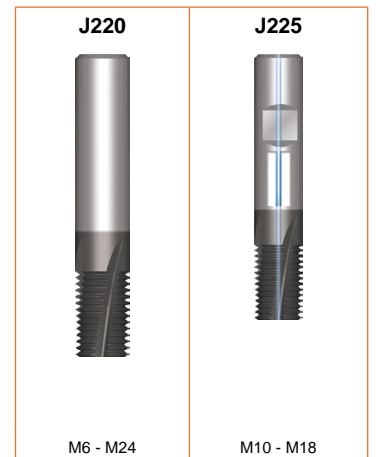
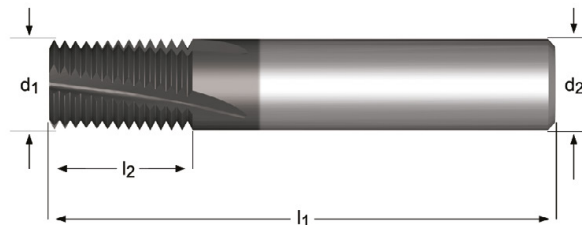
J225

- MF Thread Mill Spiral Flute 10° Oil Feed
- Fresa de roscar MF con ángulo de hélice de 10° - refrigeración interna
- Fresa de Roscar MF com ângulo de hélice a 10° Lubrificação interna
- Fraise à fileter MF avec goujure hélice 10° - à trous d'huile

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| J220 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 |
| | | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | | | | | | | |
| | • | 1.7 | 1.8 | 2.1 | 2.2 | 2.3 | 2.4 | 5.1 | 5.2 | 5.3 | 10.1 | | | | | | | | | | |
| J225 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 2.4 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 |
| | | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | |
| | • | 1.7 | 1.8 | 10.1 | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | |
|------|----|--|-------|----|--|--------------------|--|--|------------|--|
| J220 | MF | | 1.5XD | HM | | $\lambda 10^\circ$ | | | DIN 6535HA | |
| J225 | MF | | 1.5XD | HM | | $\lambda 10^\circ$ | | | DIN 6535HB | |



| \geq | P mm | d ₁ Ø mm | l ₂ mm | l ₁ mm | d ₂ Ø mm | z | J220 | J225 |
|--------|---------|---------------------------|----------------------|----------------------|---------------------------|---|--------------|--------------|
| M6 | 0.50 | 4.80 | 10.0 | 57 | 6 | 3 | J2204.8X.5 | |
| M8 | 0.75 | 6.00 | 12.0 | 57 | 6 | 3 | J2206.0X.75 | |
| M8 | 1.00 | 6.00 | 12.0 | 57 | 6 | 3 | J2206.0X1.0 | |
| M10 | 1.00 | 8.00 | 16.0 | 63 | 8 | 4 | J2208.0X1.0 | J2258.0X1.0 |
| M12 | 1.00 | 10.00 | 20.0 | 72 | 10 | 4 | J2210.0X1.0 | J22510.0X1.0 |
| M12 | 1.50 | 10.00 | 20.0 | 72 | 10 | 4 | J22010.0X1.5 | J22510.0X1.5 |
| M14 | 1.00 | 12.00 | 22.0 | 83 | 12 | 4 | J22012.0X1.0 | J22512.0X1.0 |
| M14 | 1.50 | 12.00 | 22.0 | 83 | 12 | 4 | J22012.0X1.5 | J22512.0X1.5 |
| M16 | 1.00 | 14.00 | 26.0 | 83 | 14 | 5 | J22014.0X1.0 | J22514.0X1.0 |
| M16 | 1.50 | 14.00 | 26.0 | 83 | 14 | 5 | J22014.0X1.5 | J22514.0X1.5 |
| M18 | 1.50 | 16.00 | 30.0 | 92 | 16 | 5 | J22016.0X1.5 | J22516.0X1.5 |
| M20 | 2.00 | 16.00 | 30.0 | 92 | 16 | 5 | J22016.0X2.0 | |
| M20 | 2.50 | 16.00 | 42.5 | 105 | 16 | 5 | J22016.0X2.5 | |
| M24 | 2.00 | 20.00 | 35.0 | 104 | 20 | 5 | J22020.0X2.0 | |
| M24 | 3.00 | 19.00 | 50.0 | 125 | 20 | 5 | J22019.0X3.0 | |

- J235**
- UNC Thread Mill Spiral Flute 10° Oil Feed
 - Fresa de roscar UNC con ángulo de hélice de 10° - refrigeración interna
 - Fresa de Roscar UNC com ângulo de hélice a 10° Lubrificação interna
 - Fraise à fileter UNC avec goujure hélice 10° - à trous d'huile

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| J235 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 2.4 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 |
| | | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | |
| | • | 1.7 | 1.8 | 5.3 | 10.1 | | | | | | | | | | | | | | | | |

J235

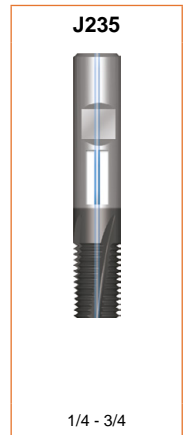
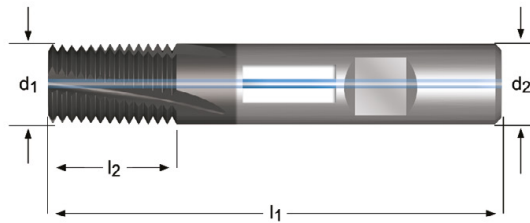
UNC

2XD

HM

10°

DIN 6535HB



| \geq | TPI | d_1 Ø mm | l_2 mm | l_1 mm | d_2 Ø mm | z | J235 |
|--------|-----|------------------|-------------|-------------|------------------|---|-------------|
| 1/4 | 20 | 4.80 | 14.0 | 57 | 6 | 3 | J2354.8-20 |
| 5/16 | 18 | 5.50 | 14.0 | 57 | 6 | 3 | J2355.5-18 |
| 3/8 | 16 | 7.50 | 19.0 | 63 | 8 | 4 | J2357.5-16 |
| 7/16 | 14 | 8.00 | 19.0 | 63 | 8 | 4 | J2358.0-14 |
| 1/2 | 13 | 10.00 | 22.0 | 72 | 10 | 4 | J23510.0-13 |
| 9/16 | 12 | 10.00 | 22.0 | 72 | 10 | 4 | J23510.0-12 |
| 5/8 | 11 | 12.00 | 26.0 | 83 | 12 | 4 | J23512.0-11 |
| 3/4 | 10 | 14.00 | 32.0 | 83 | 14 | 5 | J23514.0-10 |

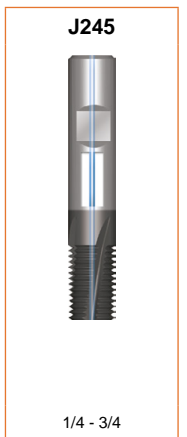
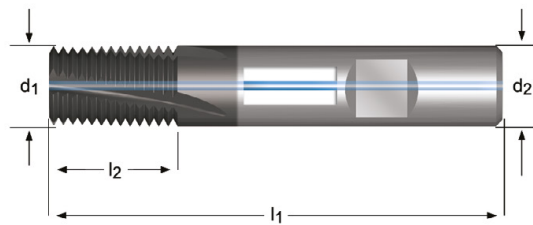
J245

- UNF Thread Mill Spiral Flute 10° Oil Feed
- Fresa de roscar UNF con ángulo de hélice de 10° - refrigeración interna
- Fresa de Roscar UNF com ângulo de hélice a 10° Lubrificação interna
- Fraise à fileter UNF avec goujure hélice 10° - à trous d'huile

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| J245 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 2.4 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 |
| | | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | |
| | • | 1.7 | 1.8 | 5.3 | 10.1 | | | | | | | | | | | | | | | | |

J245 UNF 2XD HM λ 10° Alcrona Pro DIN 6535 HB



| \geq | TPI | d_1 Ø mm | l_2 mm | l_1 mm | d_2 Ø mm | z | J245 |
|-----------|-----|------------------|-------------|-------------|------------------|---|-------------|
| 1/4 | 28 | 4.80 | 14.0 | 57 | 6 | 3 | J2454.8-28 |
| 5/16. 3/8 | 24 | 6.00 | 14.0 | 57 | 6 | 3 | J2456.0-24 |
| 7/16. 1/2 | 20 | 8.00 | 19.0 | 63 | 8 | 4 | J2458.0-20 |
| 9/16. 5/8 | 18 | 10.00 | 22.0 | 72 | 10 | 4 | J24510.0-18 |
| 3/4 | 16 | 14.00 | 32.0 | 83 | 14 | 5 | J24514.0-16 |

- J280**
- G(BSP) Thread Mill Spiral Flute 10°
 - Fresa de roscar G(BSP) con ángulo de hélice de 10°
 - Fresa de Roscar G(BSP) com ângulo de hélice a 10°
 - Fraise à fileter G(BSP) avec goujure hélice 10°

Internal and External Thread
Rosca exterior e interior
Rosca Exterior e Interior
Filetage intérieur et extérieur

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| J280 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 | | | | |
| | | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | | | | | | | | | | | |
| | | • | 1.7 | 1.8 | 2.1 | 2.2 | 2.3 | 2.4 | 5.1 | 5.2 | 5.3 | 10.1 | | | | | | | | | | | | | |

J280

G

DORMER

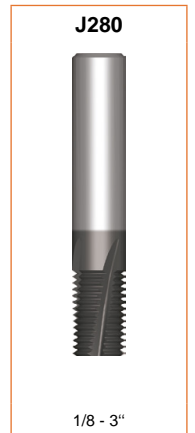
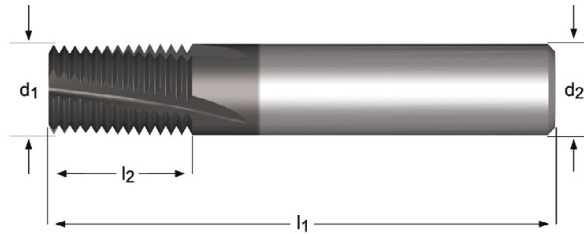
1.5XD

HM

λ 10°

Alcrona Pro

DIN 6535HA



| \geq | TPI | d_1 Ø mm | l_2 mm | l_1 mm | d_2 Ø mm | z | J280 |
|---------------|-----|------------------|-------------|-------------|------------------|---|-------------|
| 1/8 | 28 | 6.00 | 15.0 | 57 | 6 | 3 | J2806.0-28 |
| 1/4 | 19 | 10.00 | 20.0 | 72 | 10 | 4 | J28010.0-19 |
| 3/8 | 19 | 14.00 | 26.0 | 83 | 14 | 5 | J28014.0-19 |
| 1/2. 5/8 | 14 | 16.00 | 30.0 | 92 | 16 | 5 | J28016.0-14 |
| 5/8. 3/4. 7/8 | 14 | 20.00 | 35.0 | 104 | 20 | 5 | J28020.0-14 |
| 1". 3" | 11 | 25.00 | 45.0 | 121 | 25 | 6 | J28025.0-11 |

J260

- NPT Thread Mill Spiral Flute 10°
- Fresa de roscar NPT con ángulo de hélice de 10°
- Fresa de Roscar NPT com ângulo de hélice a 10°
- Fraise à fileter NPT avec goujure hélice 10°

Internal Thread
Rosca interior
Rosca interior
Filetage intérieur

| | | | | | | | | | | | | | | | | | | | | | |
|------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| J260 | ▪ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 | 7.3 |
| | | 7.4 | 8.1 | 8.2 | 8.3 | | | | | | | | | | | | | | | | |
| | • | 1.7 | 1.8 | 2.1 | 2.2 | 2.3 | 2.4 | 5.1 | 5.2 | 5.3 | 10.1 | | | | | | | | | | |

J260

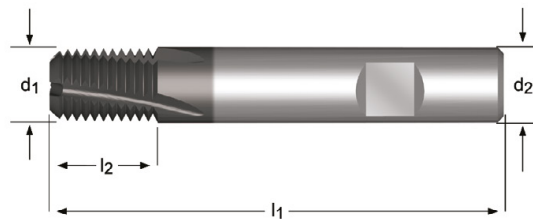
NPT

HM

λ 10°

Alcrona Pro

DIN 6535HB



| N | TPI | \varnothing_1 mm | l_2 mm | l_1 mm | \varnothing_2 mm | z | J260 |
|----------|------|-----------------------|-------------|-------------|-----------------------|---|---------------|
| 1/8 | 27 | 7.90 | 11.50 | 58 | 8 | 3 | J2607.9-27 |
| 1/4. 3/8 | 18 | 9.90 | 15.92 | 66 | 10 | 3 | J2609.9-18 |
| 1/2. 3/4 | 14 | 15.90 | 20.46 | 82 | 16 | 4 | J26015.9-14 |
| 1". 2" | 11.5 | 19.90 | 27.12 | 92 | 20 | 5 | J26019.9-11.5 |

