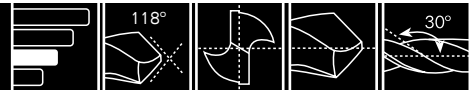
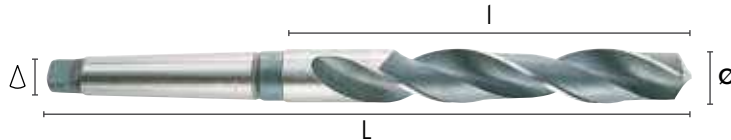


1121 HSS DIN 345 N



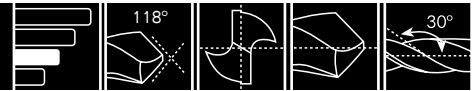
| Avance/feed | P | | | | M | | K | | | N | | | | S | | H | | |
|-------------|------------|--------|--------|--------|------|--------|------------|------------|--------|------------|------------|-------|------------|----|----|--------|--------|--------|
| | <800 | <1.000 | <1.200 | <1.400 | <950 | <1.200 | <500 | <800 | <1.400 | Al | Cu | Mg/Zn | Plastic | Ni | Ti | 50 HRC | 55 HRC | 60 HRC |
| | ● 15-35 | | | | | | ● 25-30 | ● 12-16 | | ○ 50-60 | ● 30-60 | | ○ 20-25 | | | | | |
| Ø2 | 0,02-0,06 | | | | | | 0,04-0,06 | 0,04-0,06 | | 0,02-0,05 | 0,02-0,05 | | 0,03-0,04 | | | | | |
| Ø5 | 0,08-0,12 | | | | | | 0,08-0,12 | 0,05-0,12 | | 0,05-0,12 | 0,05-0,10 | | 0,06-0,07 | | | | | |
| Ø10 | 0,12-0,30 | | | | | | 0,20-0,30 | 0,18-0,30 | | 0,18-0,24 | 0,18-0,24 | | 0,12-0,13 | | | | | |
| Ø15 | 0,18-0,40 | | | | | | 0,30-0,40 | 0,20-0,40 | | 0,20-0,32 | 0,20-0,32 | | 0,16-0,17 | | | | | |
| Ø20 | 0,22-0,46 | | | | | | 0,35-0,46 | 0,25-0,46 | | 0,25-0,37 | 0,25-0,37 | | 0,25-0,26 | | | | | |

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



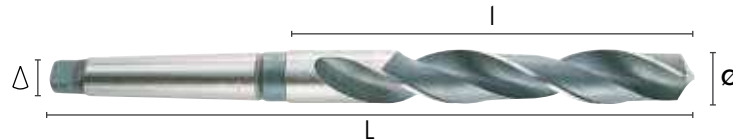
| Ø | € | L mm | l mm | Ø | € | L mm | l mm |
|-------|-------|------|------|-------|--------|------|------|
| 5,00 | 21,58 | 133 | 52 | 17,75 | 68,05 | 228 | 130 |
| 5,25 | 24,85 | 133 | 52 | 18,00 | 45,49 | 228 | 130 |
| 5,50 | 21,58 | 138 | 57 | 18,25 | 74,87 | 233 | 135 |
| 5,75 | 24,85 | 138 | 57 | 18,50 | 50,07 | 233 | 135 |
| 6,00 | 21,58 | 138 | 57 | 18,75 | 74,87 | 233 | 135 |
| 6,25 | 28,31 | 144 | 63 | 19,00 | 50,07 | 233 | 135 |
| 6,50 | 24,58 | 144 | 63 | 19,25 | 81,52 | 238 | 140 |
| 6,75 | 28,31 | 150 | 69 | 19,50 | 54,50 | 238 | 140 |
| 7,00 | 24,58 | 150 | 69 | 19,75 | 81,52 | 238 | 140 |
| 7,25 | 30,39 | 150 | 69 | 20,00 | 54,50 | 238 | 140 |
| 7,50 | 26,44 | 150 | 69 | 20,25 | 84,49 | 243 | 145 |
| 7,75 | 30,39 | 156 | 75 | 20,50 | 58,91 | 243 | 145 |
| 8,00 | 26,44 | 156 | 75 | 20,75 | 84,49 | 243 | 145 |
| 8,25 | 35,67 | 156 | 75 | 21,00 | 58,91 | 243 | 145 |
| 8,50 | 23,85 | 156 | 75 | 21,25 | 93,17 | 248 | 150 |
| 8,75 | 35,67 | 162 | 81 | 21,50 | 65,03 | 248 | 150 |
| 9,00 | 23,85 | 162 | 81 | 21,75 | 93,17 | 248 | 150 |
| 9,25 | 36,85 | 162 | 81 | 22,00 | 65,03 | 248 | 150 |
| 9,50 | 23,56 | 162 | 81 | 22,25 | 103,18 | 248 | 150 |
| 9,75 | 36,85 | 168 | 87 | 22,50 | 71,13 | 253 | 155 |
| 10,00 | 23,56 | 168 | 87 | 22,75 | 101,99 | 253 | 155 |
| 10,25 | 37,60 | 168 | 87 | 23,00 | 71,13 | 253 | 155 |
| 10,50 | 25,16 | 168 | 87 | 23,25 | 112,48 | 276 | 155 |
| 10,75 | 37,60 | 175 | 94 | 23,50 | 78,51 | 276 | 155 |
| 11,00 | 25,16 | 175 | 94 | 23,75 | 112,48 | 281 | 160 |
| 11,25 | 39,61 | 175 | 94 | 24,00 | 78,51 | 281 | 160 |
| 11,50 | 26,51 | 175 | 94 | 24,25 | 122,70 | 281 | 160 |
| 11,75 | 39,61 | 175 | 94 | 24,50 | 85,58 | 281 | 160 |
| 12,00 | 26,51 | 182 | 101 | 24,75 | 122,70 | 281 | 160 |
| 12,25 | 44,12 | 182 | 101 | 25,00 | 85,58 | 281 | 160 |
| 12,50 | 29,50 | 182 | 101 | 25,25 | 133,49 | 286 | 165 |
| 12,75 | 44,12 | 182 | 101 | 25,50 | 93,13 | 286 | 165 |
| 13,00 | 29,50 | 182 | 101 | 25,75 | 133,49 | 286 | 165 |
| 13,25 | 48,50 | 189 | 108 | 26,00 | 93,13 | 286 | 165 |
| 13,50 | 32,44 | 189 | 108 | 26,25 | 144,56 | 286 | 165 |
| 13,75 | 48,50 | 189 | 108 | 26,50 | 100,85 | 286 | 165 |
| 14,00 | 32,44 | 189 | 108 | 26,75 | 144,56 | 291 | 170 |
| 14,25 | 52,48 | 212 | 114 | 27,00 | 103,54 | 291 | 170 |
| 14,50 | 35,12 | 212 | 114 | 27,25 | 154,73 | 291 | 170 |
| 14,75 | 52,48 | 212 | 114 | 27,50 | 107,98 | 291 | 170 |
| 15,00 | 35,12 | 212 | 114 | 27,75 | 154,73 | 291 | 170 |
| 15,25 | 54,38 | 218 | 120 | 28,00 | 107,98 | 291 | 170 |
| 15,50 | 36,33 | 218 | 120 | 28,25 | 165,95 | 296 | 175 |
| 15,75 | 54,38 | 218 | 120 | 28,50 | 115,77 | 296 | 175 |
| 16,00 | 36,33 | 218 | 120 | 28,75 | 165,95 | 296 | 175 |
| 16,25 | 61,47 | 223 | 125 | 29,00 | 115,77 | 296 | 175 |
| 16,50 | 41,11 | 223 | 125 | 29,25 | 182,47 | 296 | 175 |
| 16,75 | 61,47 | 223 | 125 | 29,50 | 127,10 | 296 | 175 |
| 17,00 | 41,11 | 223 | 125 | 29,75 | 182,47 | 296 | 175 |
| 17,25 | 68,05 | 228 | 130 | 30,00 | 127,29 | 296 | 175 |
| 17,50 | 45,49 | 228 | 130 | 30,25 | 203,04 | 301 | 180 |

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| Avance/feed | 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 |
| | ● 15-35 | | | | | | ● 25-30 | ● 12-16 | | ○ 50-60 | ● 30-60 | | ○ 20-25 | | | | | |
| Ø2 | 0,02-0,06 | | | | | | 0,04-0,06 | 0,04-0,06 | | 0,02-0,05 | 0,02-0,05 | | 0,03-0,04 | | | | | |
| Ø5 | 0,08-0,12 | | | | | | 0,08-0,12 | 0,05-0,12 | | 0,05-0,12 | 0,05-0,10 | | 0,06-0,07 | | | | | |
| Ø10 | 0,12-0,30 | | | | | | 0,20-0,30 | 0,18-0,30 | | 0,18-0,24 | 0,18-0,24 | | 0,12-0,13 | | | | | |
| Ø15 | 0,18-0,40 | | | | | | 0,30-0,40 | 0,20-0,40 | | 0,20-0,32 | 0,20-0,32 | | 0,16-0,17 | | | | | |
| Ø20 | 0,22-0,46 | | | | | | 0,35-0,46 | 0,25-0,46 | | 0,25-0,37 | 0,25-0,37 | | 0,25-0,26 | | | | | |

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



| Ø mm | € | L mm | l mm | Icon | Ø mm | € | L mm | l mm | Icon |
|-------|--------|------|------|------|--------|----------|------|------|------|
| 30,50 | 176,57 | 301 | 180 | 1 | 51,00 | 532,53 | 412 | 225 | 1 |
| 30,75 | 203,04 | 301 | 180 | 1 | 52,00 | 565,28 | 412 | 225 | 1 |
| 31,00 | 141,68 | 301 | 180 | 1 | 53,00 | 612,35 | 412 | 225 | 1 |
| 31,25 | 215,04 | 301 | 180 | 1 | 54,00 | 628,99 | 417 | 230 | 1 |
| 31,50 | 176,66 | 301 | 180 | 1 | 55,00 | 630,40 | 417 | 230 | 1 |
| 31,75 | 215,04 | 306 | 185 | 1 | 56,00 | 742,81 | 417 | 230 | 1 |
| 32,00 | 150,02 | 334 | 185 | 1 | 57,00 | 792,99 | 422 | 235 | 1 |
| 32,50 | 213,53 | 334 | 185 | 1 | 58,00 | 792,99 | 422 | 235 | 1 |
| 33,00 | 171,32 | 334 | 185 | 1 | 59,00 | 811,07 | 422 | 235 | 1 |
| 33,50 | 232,18 | 334 | 185 | 1 | 60,00 | 780,27 | 422 | 235 | 1 |
| 34,00 | 186,34 | 339 | 190 | 1 | 61,00 | 869,21 | 427 | 240 | 1 |
| 34,50 | 253,75 | 339 | 190 | 1 | 62,00 | 889,47 | 427 | 240 | 1 |
| 35,00 | 203,65 | 339 | 190 | 1 | 63,00 | 955,64 | 427 | 240 | 1 |
| 35,50 | 272,30 | 339 | 190 | 1 | 64,00 | 995,77 | 432 | 245 | 1 |
| 36,00 | 218,42 | 344 | 195 | 1 | 65,00 | 952,59 | 432 | 245 | 1 |
| 36,50 | 287,03 | 344 | 195 | 1 | 66,00 | 1.085,50 | 432 | 245 | 1 |
| 37,00 | 230,28 | 344 | 195 | 1 | 67,00 | 1.117,64 | 432 | 245 | 1 |
| 37,50 | 301,92 | 344 | 195 | 1 | 68,00 | 1.152,08 | 437 | 250 | 1 |
| 38,00 | 242,28 | 349 | 200 | 1 | 69,00 | 1.182,00 | 437 | 250 | 1 |
| 38,50 | 321,94 | 349 | 200 | 1 | 70,00 | 1.218,74 | 437 | 250 | 1 |
| 39,00 | 258,35 | 349 | 200 | 1 | 71,00 | 1.155,52 | 437 | 250 | 1 |
| 39,50 | 339,98 | 349 | 200 | 1 | 72,00 | 1.334,17 | 442 | 255 | 1 |
| 40,00 | 272,79 | 349 | 200 | 1 | 73,00 | 1.361,76 | 442 | 255 | 1 |
| 40,50 | 357,44 | 354 | 205 | 1 | 74,00 | 1.397,41 | 442 | 255 | 1 |
| 41,00 | 286,81 | 354 | 205 | 1 | 75,00 | 1.438,28 | 442 | 255 | 1 |
| 41,50 | 379,34 | 354 | 205 | 1 | 76,00 | 1.354,82 | 447 | 260 | 1 |
| 42,00 | 304,33 | 354 | 205 | 1 | 77,00 | 1.595,31 | 514 | 260 | 1 |
| 42,50 | 397,82 | 354 | 205 | 1 | 78,00 | 1.712,00 | 514 | 260 | 1 |
| 43,00 | 319,21 | 359 | 210 | 1 | 79,00 | 1.745,42 | 514 | 260 | 1 |
| 43,50 | 416,55 | 359 | 210 | 1 | *80,00 | 1.780,58 | 514 | 260 | 1 |
| 44,00 | 334,19 | 359 | 210 | 1 | *81,00 | 1.907,38 | 519 | 265 | 1 |
| 44,50 | 434,88 | 359 | 210 | 1 | *82,00 | 1.955,04 | 519 | 265 | 1 |
| 45,00 | 347,07 | 359 | 210 | 1 | *83,00 | 1.992,54 | 519 | 265 | 1 |
| 45,50 | 453,28 | 364 | 215 | 1 | *84,00 | 2.034,83 | 519 | 265 | 1 |
| 46,00 | 363,65 | 364 | 215 | 1 | *85,00 | 2.085,09 | 519 | 265 | 1 |
| 46,50 | 471,72 | 364 | 215 | 1 | *86,00 | 2.130,61 | 524 | 270 | 1 |
| 47,00 | 378,52 | 364 | 215 | 1 | *87,00 | 2.175,86 | 524 | 270 | 1 |
| 47,50 | 487,59 | 364 | 215 | 1 | *88,00 | 2.231,78 | 524 | 270 | 1 |
| 48,00 | 391,21 | 369 | 220 | 1 | *89,00 | 2.275,00 | 524 | 270 | 1 |
| 48,50 | 506,29 | 369 | 220 | 1 | *90,00 | 2.340,10 | 524 | 270 | 1 |
| 49,00 | 406,24 | 369 | 220 | 1 | | | | | |
| 49,50 | 524,73 | 369 | 220 | 1 | | | | | |
| 50,00 | 409,74 | 369 | 220 | 1 | | | | | |

* (Hasta fin de existencias / Jusqu'à épuisement des stocks / While supplies last)