

# GDRS シリーズの 特長

**大きなチップポケット**

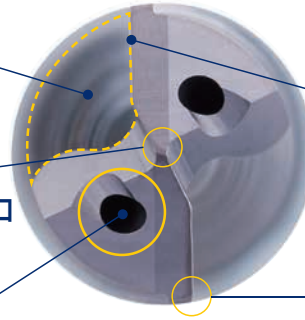
切屑排出性に優れています。

**大きな K-Value**

ドリルの耐久性を向上させます。

**ユニークなオイルホール噴出口**

クーラントを効果的に溝側に誘導します。



**ストレートな刃形状**

刃先強度が向上するとともに、切屑を小さくします。

**コーナー部の面取り**

高送り加工に資するとともに、貫通穴時の抜けバリ低減を実現します。

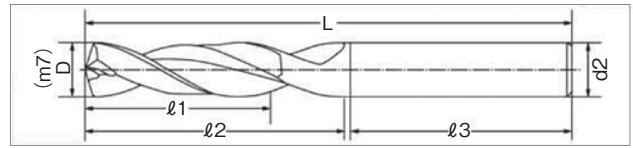
被削材を問わないオールマイティーなドリル。再研磨しやすい刃形状で、抜群のコストパフォーマンスを実現!

| 被削材                       | N (アルミ)                   |       |                |       |       |       | K (鋳鉄) |       |         |       | P (鋼) |       |                     |       | M (ステンレス)            |       |              |       | S (難削材)      |       |       |       |        |       |       |       |
|---------------------------|---------------------------|-------|----------------|-------|-------|-------|--------|-------|---------|-------|-------|-------|---------------------|-------|----------------------|-------|--------------|-------|--------------|-------|-------|-------|--------|-------|-------|-------|
|                           | 鍛造アルミ<br>Si<9%            |       | 鋳造アルミ<br>Si≥9% |       | 銅合金   |       | ねずみ鋳鉄  |       | ダクタイル鋳鉄 |       | 炭素鋼   |       | 合金鋼<br>520<Rm<1.200 |       | プレハードン鋼<br>35≤HRC<45 |       | ステンレス<br>快削材 |       | ステンレス<br>難削材 |       | チタン合金 |       | ニッケル合金 |       |       |       |
|                           | vc                        | fn    | vc             | fn    | vc    | fn    | vc     | fn    | vc      | fn    | vc    | fn    | vc                  | fn    | vc                   | fn    | vc           | fn    | vc           | fn    | vc    | fn    | vc     | fn    |       |       |
| 標準切削条件                    | GDRS<br>超硬ドリル             | 3     | 0.055          | 0.054 | 0.052 | 0.056 | 0.034  | 0.060 | 0.043   | 0.060 | 0.062 | 0.057 | 0.044               | 0.039 | 0.044                | 0.063 | 0.060        | 0.041 | 0.032        | 0.041 | 0.050 | 0.040 | 0.032  | 0.023 |       |       |
|                           |                           | 4     | 0.077          | 0.074 | 0.074 | 0.078 | 0.050  | 0.084 | 0.062   | 0.057 | 0.063 | 0.057 | 0.063               | 0.060 | 0.041                | 0.032 | 0.041        | 0.050 | 0.040        | 0.032 | 0.041 | 0.050 | 0.040  | 0.032 | 0.023 |       |
|                           |                           | 5     | 0.100          | 0.096 | 0.095 | 0.102 | 0.064  | 0.110 | 0.079   | 0.074 | 0.075 | 0.075 | 0.075               | 0.075 | 0.075                | 0.075 | 0.075        | 0.075 | 0.075        | 0.075 | 0.075 | 0.075 | 0.075  | 0.075 | 0.075 | 0.075 |
|                           |                           | 6     | 0.124          | 0.120 | 0.117 | 0.125 | 0.084  | 0.135 | 0.097   | 0.089 | 0.100 | 0.089 | 0.100               | 0.089 | 0.100                | 0.089 | 0.100        | 0.089 | 0.100        | 0.089 | 0.100 | 0.089 | 0.100  | 0.089 | 0.100 | 0.089 |
|                           |                           | 7     | 0.149          | 0.143 | 0.143 | 0.149 | 0.100  | 0.162 | 0.117   | 0.113 | 0.114 | 0.113 | 0.114               | 0.113 | 0.114                | 0.113 | 0.114        | 0.113 | 0.114        | 0.113 | 0.114 | 0.113 | 0.114  | 0.113 | 0.114 | 0.113 |
|                           |                           | 8     | 0.177          | 0.171 | 0.170 | 0.180 | 0.125  | 0.194 | 0.138   | 0.129 | 0.142 | 0.129 | 0.142               | 0.129 | 0.142                | 0.129 | 0.142        | 0.129 | 0.142        | 0.129 | 0.142 | 0.129 | 0.142  | 0.129 | 0.142 | 0.129 |
|                           |                           | 9     | 0.204          | 0.200 | 0.194 | 0.204 | 0.141  | 0.221 | 0.161   | 0.146 | 0.155 | 0.146 | 0.155               | 0.146 | 0.155                | 0.146 | 0.155        | 0.146 | 0.155        | 0.146 | 0.155 | 0.146 | 0.155  | 0.146 | 0.155 | 0.146 |
|                           |                           | 10    | 0.235          | 0.226 | 0.228 | 0.238 | 0.165  | 0.254 | 0.181   | 0.158 | 0.180 | 0.158 | 0.180               | 0.158 | 0.180                | 0.158 | 0.180        | 0.158 | 0.180        | 0.158 | 0.180 | 0.158 | 0.180  | 0.158 | 0.180 | 0.158 |
|                           |                           | 11    | 0.266          | 0.259 | 0.259 | 0.268 | 0.189  | 0.283 | 0.205   | 0.182 | 0.200 | 0.182 | 0.200               | 0.182 | 0.200                | 0.182 | 0.200        | 0.182 | 0.200        | 0.182 | 0.200 | 0.182 | 0.200  | 0.182 | 0.200 | 0.182 |
|                           |                           | 12    | 0.300          | 0.288 | 0.285 | 0.300 | 0.219  | 0.318 | 0.222   | 0.200 | 0.225 | 0.200 | 0.225               | 0.200 | 0.225                | 0.200 | 0.225        | 0.200 | 0.225        | 0.200 | 0.225 | 0.200 | 0.225  | 0.200 | 0.225 | 0.200 |
|                           | 13                        | 0.319 | 0.309          | 0.304 | 0.311 | 0.233 | 0.345  | 0.250 | 0.222   | 0.225 | 0.222 | 0.225 | 0.222               | 0.225 | 0.222                | 0.225 | 0.222        | 0.225 | 0.222        | 0.225 | 0.222 | 0.225 | 0.222  | 0.225 | 0.222 |       |
|                           | 14                        | 0.329 | 0.323          | 0.322 | 0.317 | 0.243 | 0.358  | 0.260 | 0.250   | 0.257 | 0.250 | 0.257 | 0.250               | 0.257 | 0.250                | 0.257 | 0.250        | 0.257 | 0.250        | 0.257 | 0.250 | 0.257 | 0.250  | 0.257 | 0.250 |       |
|                           | 15                        | 0.350 | 0.336          | 0.327 | 0.350 | 0.254 | 0.394  | 0.279 | 0.238   | 0.243 | 0.238 | 0.243 | 0.238               | 0.243 | 0.238                | 0.243 | 0.238        | 0.243 | 0.238        | 0.243 | 0.238 | 0.243 | 0.238  | 0.243 | 0.238 |       |
|                           | 16                        | 0.363 | 0.354          | 0.350 | 0.360 | 0.267 | 0.406  | 0.292 | 0.271   | 0.283 | 0.271 | 0.283 | 0.271               | 0.283 | 0.271                | 0.283 | 0.271        | 0.283 | 0.271        | 0.283 | 0.271 | 0.283 | 0.271  | 0.283 | 0.271 |       |
|                           | 17                        | 0.369 | 0.360          | 0.358 | 0.353 | 0.267 | 0.427  | 0.285 | 0.271   | 0.283 | 0.271 | 0.283 | 0.271               | 0.283 | 0.271                | 0.283 | 0.271        | 0.283 | 0.271        | 0.283 | 0.271 | 0.283 | 0.271  | 0.283 | 0.271 |       |
|                           | 18                        | 0.385 | 0.378          | 0.367 | 0.364 | 0.282 | 0.420  | 0.308 | 0.257   | 0.267 | 0.257 | 0.267 | 0.257               | 0.267 | 0.257                | 0.267 | 0.257        | 0.267 | 0.257        | 0.267 | 0.257 | 0.267 | 0.257  | 0.267 | 0.257 |       |
|                           | 19                        | 0.388 | 0.386          | 0.376 | 0.385 | 0.273 | 0.443  | 0.327 | 0.300   | 0.267 | 0.300 | 0.267 | 0.300               | 0.267 | 0.300                | 0.267 | 0.300        | 0.267 | 0.300        | 0.267 | 0.300 | 0.267 | 0.300  | 0.267 | 0.300 |       |
|                           | 20                        | 0.408 | 0.390          | 0.388 | 0.400 | 0.290 | 0.462  | 0.318 | 0.283   | 0.300 | 0.283 | 0.300 | 0.283               | 0.300 | 0.283                | 0.300 | 0.283        | 0.300 | 0.283        | 0.300 | 0.283 | 0.300 | 0.283  | 0.300 | 0.283 |       |
|                           | GDRSOH<br>超硬ドリル<br>オイルホール | 3     | 0.069          | 0.065 | 0.079 | 0.076 | 0.069  | 0.069 | 0.065   | 0.072 | 0.065 | 0.072 | 0.065               | 0.072 | 0.065                | 0.072 | 0.065        | 0.072 | 0.065        | 0.072 | 0.065 | 0.072 | 0.065  | 0.072 | 0.065 |       |
|                           |                           | 4     | 0.097          | 0.091 | 0.109 | 0.109 | 0.097  | 0.099 | 0.095   | 0.100 | 0.095 | 0.100 | 0.095               | 0.100 | 0.095                | 0.100 | 0.095        | 0.100 | 0.095        | 0.100 | 0.095 | 0.100 | 0.095  | 0.100 | 0.095 |       |
| 5                         |                           | 0.127 | 0.119          | 0.141 | 0.142 | 0.125 | 0.130  | 0.128 | 0.130   | 0.128 | 0.130 | 0.128 | 0.130               | 0.128 | 0.130                | 0.128 | 0.130        | 0.128 | 0.130        | 0.128 | 0.130 | 0.128 | 0.130  | 0.128 |       |       |
| 6                         |                           | 0.159 | 0.149          | 0.176 | 0.180 | 0.156 | 0.166  | 0.165 | 0.166   | 0.165 | 0.166 | 0.165 | 0.166               | 0.165 | 0.166                | 0.165 | 0.166        | 0.165 | 0.166        | 0.165 | 0.166 | 0.165 | 0.166  | 0.165 | 0.166 |       |
| 7                         |                           | 0.194 | 0.183          | 0.212 | 0.221 | 0.190 | 0.203  | 0.207 | 0.195   | 0.212 | 0.195 | 0.212 | 0.195               | 0.212 | 0.195                | 0.212 | 0.195        | 0.212 | 0.195        | 0.212 | 0.195 | 0.212 | 0.195  | 0.212 | 0.195 |       |
| 8                         |                           | 0.232 | 0.216          | 0.250 | 0.264 | 0.225 | 0.244  | 0.253 | 0.230   | 0.253 | 0.230 | 0.253 | 0.230               | 0.253 | 0.230                | 0.253 | 0.230        | 0.253 | 0.230        | 0.253 | 0.230 | 0.253 | 0.230  | 0.253 | 0.230 |       |
| 9                         |                           | 0.272 | 0.253          | 0.290 | 0.311 | 0.262 | 0.288  | 0.302 | 0.267   | 0.306 | 0.267 | 0.306 | 0.267               | 0.306 | 0.267                | 0.306 | 0.267        | 0.306 | 0.267        | 0.306 | 0.267 | 0.306 | 0.267  | 0.306 | 0.267 |       |
| 10                        |                           | 0.314 | 0.292          | 0.332 | 0.361 | 0.301 | 0.334  | 0.357 | 0.306   | 0.358 | 0.306 | 0.358 | 0.306               | 0.358 | 0.306                | 0.358 | 0.306        | 0.358 | 0.306        | 0.358 | 0.306 | 0.358 | 0.306  | 0.358 | 0.306 |       |
| 11                        |                           | 0.358 | 0.334          | 0.376 | 0.413 | 0.343 | 0.383  | 0.413 | 0.347   | 0.383 | 0.347 | 0.383 | 0.347               | 0.383 | 0.347                | 0.383 | 0.347        | 0.383 | 0.347        | 0.383 | 0.347 | 0.383 | 0.347  | 0.383 | 0.347 |       |
| 12                        |                           | 0.406 | 0.370          | 0.422 | 0.469 | 0.387 | 0.435  | 0.475 | 0.390   | 0.448 | 0.390 | 0.448 | 0.390               | 0.448 | 0.390                | 0.448 | 0.390        | 0.448 | 0.390        | 0.448 | 0.390 | 0.448 | 0.390  | 0.448 | 0.390 |       |
| 高速切削条件                    | GDRS<br>超硬ドリル             | 3     | 0.058          | 0.057 | 0.056 | 0.070 | 0.050  | 0.072 | 0.048   | 0.050 | 0.067 | 0.050 | 0.048               | 0.050 | 0.048                | 0.050 | 0.048        | 0.050 | 0.048        | 0.050 | 0.048 | 0.050 | 0.048  | 0.050 | 0.048 |       |
|                           |                           | 4     | 0.080          | 0.078 | 0.077 | 0.094 | 0.071  | 0.100 | 0.067   | 0.069 | 0.068 | 0.069 | 0.068               | 0.069 | 0.068                | 0.069 | 0.068        | 0.069 | 0.068        | 0.069 | 0.068 | 0.069 | 0.068  | 0.069 | 0.068 |       |
|                           |                           | 5     | 0.103          | 0.100 | 0.100 | 0.119 | 0.090  | 0.128 | 0.087   | 0.090 | 0.088 | 0.090 | 0.088               | 0.090 | 0.088                | 0.090 | 0.088        | 0.090 | 0.088        | 0.090 | 0.088 | 0.090 | 0.088  | 0.090 | 0.088 |       |
|                           |                           | 6     | 0.128          | 0.125 | 0.124 | 0.145 | 0.116  | 0.157 | 0.108   | 0.108 | 0.109 | 0.108 | 0.109               | 0.108 | 0.109                | 0.108 | 0.109        | 0.108 | 0.109        | 0.108 | 0.109 | 0.108 | 0.109  | 0.108 | 0.109 | 0.108 |
|                           |                           | 7     | 0.154          | 0.148 | 0.150 | 0.170 | 0.136  | 0.187 | 0.133   | 0.129 | 0.131 | 0.129 | 0.131               | 0.129 | 0.131                | 0.129 | 0.131        | 0.129 | 0.131        | 0.129 | 0.131 | 0.129 | 0.131  | 0.129 | 0.131 | 0.129 |
|                           |                           | 8     | 0.182          | 0.175 | 0.176 | 0.200 | 0.167  | 0.221 | 0.155   | 0.156 | 0.156 | 0.156 | 0.156               | 0.156 | 0.156                | 0.156 | 0.156        | 0.156 | 0.156        | 0.156 | 0.156 | 0.156 | 0.156  | 0.156 | 0.156 | 0.156 |
|                           |                           | 9     | 0.211          | 0.201 | 0.204 | 0.226 | 0.186  | 0.250 | 0.177   | 0.175 | 0.173 | 0.175 | 0.173               | 0.175 | 0.173                | 0.175 | 0.173        | 0.175 | 0.173        | 0.175 | 0.173 | 0.175 | 0.173  | 0.175 | 0.173 | 0.175 |
|                           |                           | 10    | 0.240          | 0.230 | 0.233 | 0.251 | 0.215  | 0.285 | 0.203   | 0.193 | 0.207 | 0.193 | 0.207               | 0.193 | 0.207                | 0.193 | 0.207        | 0.193 | 0.207        | 0.193 | 0.207 | 0.193 | 0.207  | 0.193 | 0.207 | 0.193 |
|                           |                           | 11    | 0.272          | 0.260 | 0.263 | 0.282 | 0.244  | 0.319 | 0.236   | 0.214 | 0.233 | 0.214 | 0.233               | 0.214 | 0.233                | 0.214 | 0.233        | 0.214 | 0.233        | 0.214 | 0.233 | 0.214 | 0.233  | 0.214 | 0.233 | 0.214 |
|                           |                           | 12    | 0.300          | 0.290 | 0.289 | 0.307 | 0.281  | 0.360 | 0.260   | 0.250 | 0.254 | 0.250 | 0.254               | 0.250 | 0.254                | 0.250 | 0.254        | 0.250 | 0.254        | 0.250 | 0.254 | 0.250 | 0.254  | 0.250 | 0.254 | 0.250 |
| GDRSOH<br>超硬ドリル<br>オイルホール | 3                         | 0.076 | 0.073          | 0.077 | 0.073 | 0.071 | 0.063  | 0.067 | 0.080   | 0.048 | 0.067 | 0.080 | 0.048               | 0.067 | 0.080                | 0.048 | 0.067        | 0.080 | 0.048        | 0.067 | 0.080 | 0.048 | 0.067  | 0.080 |       |       |
|                           | 4                         | 0.107 | 0.102          | 0.106 | 0.104 | 0.099 | 0.090  | 0.098 | 0.110   | 0.067 | 0.098 | 0.110 | 0.067               | 0.098 | 0.110                | 0.067 | 0.098        | 0.110 | 0.067        | 0.098 | 0.110 | 0.067 | 0.098  | 0.110 |       |       |
|                           | 5                         | 0.140 | 0.134          | 0.138 | 0.136 | 0.128 | 0.119  | 0.132 | 0.143   | 0.085 | 0.143 | 0.143 | 0.085               | 0.143 | 0.143                | 0.085 | 0.143        | 0.143 | 0.085        | 0.143 | 0.143 | 0.085 | 0.143  | 0.143 |       |       |
|                           | 6                         | 0.176 | 0.169          | 0.172 | 0.172 | 0.160 | 0.151  | 0.171 | 0.178   | 0.106 | 0.178 | 0.178 | 0.106               | 0.178 | 0.178                | 0.106 | 0.178        | 0.178 | 0.106        | 0.178 | 0.178 | 0.106 | 0.178  | 0.178 | 0.106 |       |
|                           | 7                         | 0.215 | 0.204          | 0.206 | 0.211 | 0.194 | 0.185  | 0.214 | 0.215   | 0.125 | 0.215 | 0.215 | 0.125               | 0.215 | 0.215                | 0.125 | 0.215        | 0.215 | 0.125        | 0.215 | 0.215 | 0.125 | 0.215  | 0.215 | 0.125 |       |
|                           | 8                         | 0.256 | 0.244          | 0.244 | 0.252 | 0.230 | 0.222  | 0.261 | 0.253   | 0.150 | 0.253 | 0.253 | 0.150               | 0.253 | 0.253                | 0.150 | 0.253        | 0.253 | 0.150        | 0.253 | 0.253 |       |        |       |       |       |

# GDRS3D



## 3D 超硬ドリル



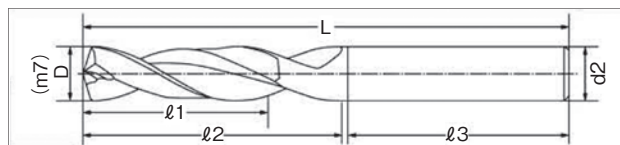
| 型番         | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格   |
|------------|-----------|----------|---------|-------|----------|------|--------|
| GDRS3D-020 | 2         | 3        | 9       | 12    | 28       | 50   | ¥5,500 |
| GDRS3D-021 | 2.1       | 3        | 9.45    | 12.6  | 28       | 50   | ¥5,500 |
| GDRS3D-022 | 2.2       | 3        | 9.9     | 13.2  | 28       | 50   | ¥5,500 |
| GDRS3D-023 | 2.3       | 3        | 10.35   | 13.8  | 28       | 50   | ¥5,500 |
| GDRS3D-024 | 2.4       | 3        | 10.8    | 14.4  | 28       | 50   | ¥5,500 |
| GDRS3D-025 | 2.5       | 3        | 11.25   | 15    | 28       | 50   | ¥5,500 |
| GDRS3D-026 | 2.6       | 3        | 11.7    | 15.6  | 28       | 50   | ¥5,500 |
| GDRS3D-027 | 2.7       | 3        | 12.15   | 16.2  | 28       | 50   | ¥5,500 |
| GDRS3D-028 | 2.8       | 3        | 12.6    | 16.8  | 28       | 50   | ¥5,500 |
| GDRS3D-029 | 2.9       | 3        | 13.05   | 17.4  | 28       | 50   | ¥5,500 |
| GDRS3D-030 | 3         | 3        | 14      | 20    | 36       | 62   | ¥5,500 |
| GDRS3D-031 | 3.1       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-032 | 3.2       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-033 | 3.3       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-034 | 3.4       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-035 | 3.5       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-036 | 3.6       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-037 | 3.7       | 4        | 14      | 20    | 36       | 62   | ¥5,750 |
| GDRS3D-038 | 3.8       | 4        | 17      | 24    | 36       | 66   | ¥5,750 |
| GDRS3D-039 | 3.9       | 4        | 17      | 24    | 36       | 66   | ¥5,750 |
| GDRS3D-040 | 4         | 4        | 17      | 24    | 36       | 66   | ¥5,750 |
| GDRS3D-041 | 4.1       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-042 | 4.2       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-043 | 4.3       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-044 | 4.4       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-045 | 4.5       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-046 | 4.6       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-047 | 4.7       | 6        | 17      | 24    | 36       | 66   | ¥6,380 |
| GDRS3D-048 | 4.8       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-049 | 4.9       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-050 | 5         | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-051 | 5.1       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-052 | 5.2       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-053 | 5.3       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-054 | 5.4       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-055 | 5.5       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-056 | 5.6       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-057 | 5.7       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-058 | 5.8       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-059 | 5.9       | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-060 | 6         | 6        | 20      | 28    | 36       | 66   | ¥6,380 |
| GDRS3D-061 | 6.1       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-062 | 6.2       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-063 | 6.3       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-064 | 6.4       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-065 | 6.5       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-066 | 6.6       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-067 | 6.7       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-068 | 6.8       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-069 | 6.9       | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-070 | 7         | 8        | 24      | 34    | 36       | 79   | ¥8,380 |
| GDRS3D-071 | 7.1       | 8        | 29      | 41    | 36       | 79   | ¥8,380 |

| 型番         | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|------------|-----------|----------|---------|-------|----------|------|---------|
| GDRS3D-072 | 7.2       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-073 | 7.3       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-074 | 7.4       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-075 | 7.5       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-076 | 7.6       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-077 | 7.7       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-078 | 7.8       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-079 | 7.9       | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-080 | 8         | 8        | 29      | 41    | 36       | 79   | ¥8,380  |
| GDRS3D-081 | 8.1       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-082 | 8.2       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-083 | 8.3       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-084 | 8.4       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-085 | 8.5       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-086 | 8.6       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-087 | 8.7       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-088 | 8.8       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-089 | 8.9       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-090 | 9         | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-091 | 9.1       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-092 | 9.2       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-093 | 9.3       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-094 | 9.4       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-095 | 9.5       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-096 | 9.6       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-097 | 9.7       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-098 | 9.8       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-099 | 9.9       | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-100 | 10        | 10       | 35      | 47    | 40       | 89   | ¥10,000 |
| GDRS3D-101 | 10.1      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-102 | 10.2      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-103 | 10.3      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-104 | 10.4      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-105 | 10.5      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-106 | 10.6      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-107 | 10.7      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-108 | 10.8      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-109 | 10.9      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-110 | 11        | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-111 | 11.1      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-112 | 11.2      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-113 | 11.3      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-114 | 11.4      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-115 | 11.5      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-116 | 11.6      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-117 | 11.7      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-118 | 11.8      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-119 | 11.9      | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-120 | 12        | 12       | 40      | 55    | 45       | 102  | ¥13,630 |
| GDRS3D-125 | 12.5      | 14       | 43      | 60    | 45       | 107  | ¥18,750 |
| GDRS3D-127 | 12.7      | 14       | 43      | 60    | 45       | 107  | ¥18,750 |
| GDRS3D-130 | 13        | 14       | 43      | 60    | 45       | 107  | ¥18,750 |

## GDRS5D



## 5D 超硬ドリル



| 型番         | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格   |
|------------|-----------|----------|---------|-------|----------|------|--------|
| GDRS5D-020 | 2         | 3        | 13      | 16    | 28       | 55   | ¥6,000 |
| GDRS5D-021 | 2.1       | 3        | 13.7    | 16.85 | 28       | 55   | ¥6,000 |
| GDRS5D-022 | 2.2       | 3        | 14.3    | 17.6  | 28       | 55   | ¥6,000 |
| GDRS5D-023 | 2.3       | 3        | 15      | 18.45 | 28       | 55   | ¥6,000 |
| GDRS5D-024 | 2.4       | 3        | 15.6    | 19.2  | 28       | 55   | ¥6,000 |
| GDRS5D-025 | 2.5       | 3        | 16.3    | 20.05 | 28       | 55   | ¥6,000 |
| GDRS5D-026 | 2.6       | 3        | 16.9    | 20.8  | 28       | 55   | ¥6,000 |
| GDRS5D-027 | 2.7       | 3        | 17.6    | 21.65 | 28       | 55   | ¥6,000 |
| GDRS5D-028 | 2.8       | 3        | 18.2    | 22.4  | 28       | 55   | ¥6,000 |
| GDRS5D-029 | 2.9       | 3        | 18.9    | 23.35 | 28       | 55   | ¥6,000 |
| GDRS5D-030 | 3         | 3        | 23      | 28    | 36       | 66   | ¥6,000 |
| GDRS5D-031 | 3.1       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-032 | 3.2       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-033 | 3.3       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-034 | 3.4       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-035 | 3.5       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-036 | 3.6       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-037 | 3.7       | 4        | 23      | 28    | 36       | 66   | ¥6,250 |
| GDRS5D-038 | 3.8       | 4        | 29      | 36    | 36       | 74   | ¥6,250 |
| GDRS5D-039 | 3.9       | 4        | 29      | 36    | 36       | 74   | ¥6,250 |
| GDRS5D-040 | 4         | 4        | 29      | 36    | 36       | 74   | ¥6,250 |
| GDRS5D-041 | 4.1       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-042 | 4.2       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-043 | 4.3       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-044 | 4.4       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-045 | 4.5       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-046 | 4.6       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-047 | 4.7       | 6        | 29      | 36    | 36       | 74   | ¥7,380 |
| GDRS5D-048 | 4.8       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-049 | 4.9       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-050 | 5         | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-051 | 5.1       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-052 | 5.2       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-053 | 5.3       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-054 | 5.4       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-055 | 5.5       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-056 | 5.6       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-057 | 5.7       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-058 | 5.8       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-059 | 5.9       | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-060 | 6         | 6        | 35      | 44    | 36       | 82   | ¥7,380 |
| GDRS5D-061 | 6.1       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-062 | 6.2       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-063 | 6.3       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-064 | 6.4       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-065 | 6.5       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-066 | 6.6       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-067 | 6.7       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |
| GDRS5D-068 | 6.8       | 8        | 43      | 53    | 36       | 91   | ¥8,750 |

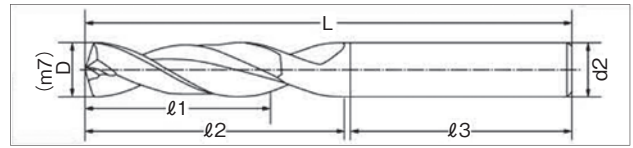
| 型番         | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|------------|-----------|----------|---------|-------|----------|------|---------|
| GDRS5D-069 | 6.9       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-070 | 7         | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-071 | 7.1       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-072 | 7.2       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-073 | 7.3       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-074 | 7.4       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-075 | 7.5       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-076 | 7.6       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-077 | 7.7       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-078 | 7.8       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-079 | 7.9       | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-080 | 8         | 8        | 43      | 53    | 36       | 91   | ¥8,750  |
| GDRS5D-081 | 8.1       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-082 | 8.2       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-083 | 8.3       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-084 | 8.4       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-085 | 8.5       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-086 | 8.6       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-087 | 8.7       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-088 | 8.8       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-089 | 8.9       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-090 | 9         | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-091 | 9.1       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-092 | 9.2       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-093 | 9.3       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-094 | 9.4       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-095 | 9.5       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-096 | 9.6       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-097 | 9.7       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-098 | 9.8       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-099 | 9.9       | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-100 | 10        | 10       | 49      | 61    | 40       | 103  | ¥11,500 |
| GDRS5D-102 | 10.2      | 10       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-103 | 10.3      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-104 | 10.4      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-105 | 10.5      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-108 | 10.8      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-110 | 11        | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-112 | 11.2      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-113 | 11.3      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-115 | 11.5      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-118 | 11.8      | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-120 | 12        | 12       | 56      | 71    | 45       | 118  | ¥16,880 |
| GDRS5D-122 | 12.2      | 14       | 60      | 77    | 45       | 124  | ¥21,500 |
| GDRS5D-125 | 12.5      | 14       | 60      | 77    | 45       | 124  | ¥21,500 |
| GDRS5D-127 | 12.7      | 14       | 60      | 77    | 45       | 124  | ¥21,500 |
| GDRS5D-128 | 12.8      | 14       | 60      | 77    | 45       | 124  | ¥21,500 |
| GDRS5D-130 | 13        | 14       | 60      | 77    | 45       | 124  | ¥21,500 |

切削条件表▶ P.2

# GDRSOH3D



## 3D 超硬ドリル オイルホール



| 型番           | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|--------------|-----------|----------|---------|-------|----------|------|---------|
| GDRSOH3D-030 | 3         | 3        | 14      | 20    | 36       | 62   | ¥7,500  |
| GDRSOH3D-031 | 3.1       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-032 | 3.2       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-033 | 3.3       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-034 | 3.4       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-035 | 3.5       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-036 | 3.6       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-037 | 3.7       | 4        | 14      | 20    | 36       | 62   | ¥8,250  |
| GDRSOH3D-038 | 3.8       | 4        | 17      | 24    | 36       | 66   | ¥8,250  |
| GDRSOH3D-039 | 3.9       | 4        | 17      | 24    | 36       | 66   | ¥8,250  |
| GDRSOH3D-040 | 4         | 4        | 17      | 24    | 36       | 66   | ¥8,250  |
| GDRSOH3D-041 | 4.1       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-042 | 4.2       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-043 | 4.3       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-044 | 4.4       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-045 | 4.5       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-046 | 4.6       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-047 | 4.7       | 6        | 17      | 24    | 36       | 66   | ¥8,880  |
| GDRSOH3D-048 | 4.8       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-049 | 4.9       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-050 | 5         | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-051 | 5.1       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-052 | 5.2       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-053 | 5.3       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-054 | 5.4       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-055 | 5.5       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-056 | 5.6       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-057 | 5.7       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-058 | 5.8       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-059 | 5.9       | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-060 | 6         | 6        | 20      | 28    | 36       | 66   | ¥8,880  |
| GDRSOH3D-061 | 6.1       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-062 | 6.2       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-063 | 6.3       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-064 | 6.4       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-065 | 6.5       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-066 | 6.6       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-067 | 6.7       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-068 | 6.8       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-069 | 6.9       | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-070 | 7         | 8        | 24      | 34    | 36       | 79   | ¥12,000 |
| GDRSOH3D-071 | 7.1       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-072 | 7.2       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-073 | 7.3       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |

| 型番           | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|--------------|-----------|----------|---------|-------|----------|------|---------|
| GDRSOH3D-074 | 7.4       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-075 | 7.5       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-076 | 7.6       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-077 | 7.7       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-078 | 7.8       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-079 | 7.9       | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-080 | 8         | 8        | 29      | 41    | 36       | 79   | ¥12,000 |
| GDRSOH3D-081 | 8.1       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-082 | 8.2       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-083 | 8.3       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-084 | 8.4       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-085 | 8.5       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-086 | 8.6       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-087 | 8.7       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-088 | 8.8       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-089 | 8.9       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-090 | 9         | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-091 | 9.1       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-092 | 9.2       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-093 | 9.3       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-094 | 9.4       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-095 | 9.5       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-096 | 9.6       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-097 | 9.7       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-098 | 9.8       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-099 | 9.9       | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-100 | 10        | 10       | 35      | 47    | 40       | 89   | ¥13,500 |
| GDRSOH3D-102 | 10.2      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-103 | 10.3      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-104 | 10.4      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-105 | 10.5      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-108 | 10.8      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-110 | 11        | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-112 | 11.2      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-113 | 11.3      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-115 | 11.5      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-118 | 11.8      | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-120 | 12        | 12       | 40      | 55    | 45       | 102  | ¥19,380 |
| GDRSOH3D-122 | 12.2      | 14       | 43      | 60    | 45       | 107  | ¥27,000 |
| GDRSOH3D-125 | 12.5      | 14       | 43      | 60    | 45       | 107  | ¥27,000 |
| GDRSOH3D-127 | 12.7      | 14       | 43      | 60    | 45       | 107  | ¥27,000 |
| GDRSOH3D-128 | 12.8      | 14       | 43      | 60    | 45       | 107  | ¥27,000 |
| GDRSOH3D-130 | 13        | 14       | 43      | 60    | 45       | 107  | ¥27,000 |

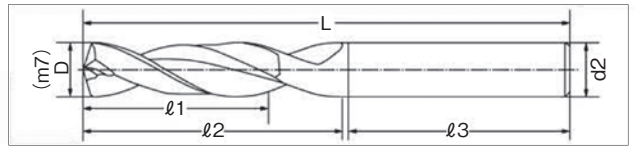
切削条件表▶ P.2



# GDRSOH5D



## 5D 超硬ドリル オイルホール



| 型番           | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|--------------|-----------|----------|---------|-------|----------|------|---------|
| GDRSOH5D-030 | 3         | 3        | 23      | 28    | 36       | 66   | ¥8,750  |
| GDRSOH5D-031 | 3.1       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-032 | 3.2       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-033 | 3.3       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-034 | 3.4       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-035 | 3.5       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-036 | 3.6       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-037 | 3.7       | 4        | 23      | 28    | 36       | 66   | ¥10,130 |
| GDRSOH5D-038 | 3.8       | 4        | 29      | 36    | 36       | 74   | ¥10,130 |
| GDRSOH5D-039 | 3.9       | 4        | 29      | 36    | 36       | 74   | ¥10,130 |
| GDRSOH5D-040 | 4         | 4        | 29      | 36    | 36       | 74   | ¥10,130 |
| GDRSOH5D-041 | 4.1       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-042 | 4.2       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-043 | 4.3       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-044 | 4.4       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-045 | 4.5       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-046 | 4.6       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-047 | 4.7       | 6        | 29      | 36    | 36       | 74   | ¥11,380 |
| GDRSOH5D-048 | 4.8       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-049 | 4.9       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-050 | 5         | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-051 | 5.1       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-052 | 5.2       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-053 | 5.3       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-054 | 5.4       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-055 | 5.5       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-056 | 5.6       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-057 | 5.7       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-058 | 5.8       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-059 | 5.9       | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-060 | 6         | 6        | 35      | 44    | 36       | 82   | ¥11,380 |
| GDRSOH5D-061 | 6.1       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-062 | 6.2       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-063 | 6.3       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-064 | 6.4       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-065 | 6.5       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-066 | 6.6       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-067 | 6.7       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-068 | 6.8       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-069 | 6.9       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-070 | 7         | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-071 | 7.1       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-072 | 7.2       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-073 | 7.3       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |

| 型番           | 刃径 D (m7) | シャンク径 d2 | 有効溝長 l1 | 溝長 l2 | シャンク長 l3 | 全長 L | 標準価格    |
|--------------|-----------|----------|---------|-------|----------|------|---------|
| GDRSOH5D-074 | 7.4       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-075 | 7.5       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-076 | 7.6       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-077 | 7.7       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-078 | 7.8       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-079 | 7.9       | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-080 | 8         | 8        | 43      | 53    | 36       | 91   | ¥12,500 |
| GDRSOH5D-081 | 8.1       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-082 | 8.2       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-083 | 8.3       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-084 | 8.4       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-085 | 8.5       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-086 | 8.6       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-087 | 8.7       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-088 | 8.8       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-089 | 8.9       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-090 | 9         | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-091 | 9.1       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-092 | 9.2       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-093 | 9.3       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-094 | 9.4       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-095 | 9.5       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-096 | 9.6       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-097 | 9.7       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-098 | 9.8       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-099 | 9.9       | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-100 | 10        | 10       | 49      | 61    | 40       | 103  | ¥14,880 |
| GDRSOH5D-102 | 10.2      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-103 | 10.3      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-104 | 10.4      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-105 | 10.5      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-108 | 10.8      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-110 | 11        | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-112 | 11.2      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-113 | 11.3      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-115 | 11.5      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-118 | 11.8      | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-120 | 12        | 12       | 56      | 71    | 45       | 118  | ¥21,880 |
| GDRSOH5D-122 | 12.2      | 14       | 60      | 77    | 45       | 124  | ¥29,380 |
| GDRSOH5D-125 | 12.5      | 14       | 60      | 77    | 45       | 124  | ¥29,380 |
| GDRSOH5D-127 | 12.7      | 14       | 60      | 77    | 45       | 124  | ¥29,380 |
| GDRSOH5D-128 | 12.8      | 14       | 60      | 77    | 45       | 124  | ¥29,380 |
| GDRSOH5D-130 | 13        | 14       | 60      | 77    | 45       | 124  | ¥29,380 |

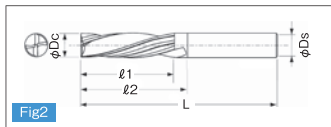
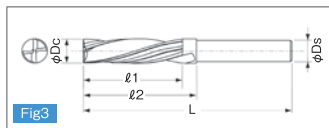
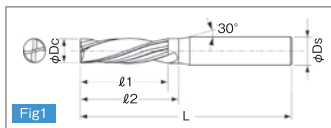
切削条件表▶ P.2

# FDG



## 超硬フラットドリル

- 座ぐり加工を1工程で実現
- 斜面への穴加工や偏心穴の矯正など従来のドリルでは不可能だった加工が可能
- バリ低減が期待できる



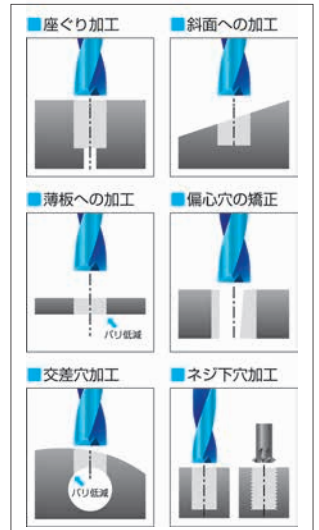
| 低炭素鋼<br>軟鋼<br>SS400,S10C<br>~150HB | 炭素鋼<br>合金鋼<br>S45C,SCM440<br>~225HB | プレハドン鋼<br>高合金鋼<br>SUJ,NAK<br>~275HB | 調質鋼<br>SKD,SKH<br>30~40HRC | 焼入鋼<br>Hardened Steel |             |
|------------------------------------|-------------------------------------|-------------------------------------|----------------------------|-----------------------|-------------|
|                                    |                                     |                                     |                            | 40~50HRC              | 50~60HRC    |
| ◎                                  | ◎                                   | ◎                                   | ◎                          | ○                     | ○           |
| ステンレス鋼<br>SUS304,316               | 耐熱合金<br>チタン合金<br>Ti/Ni Alloys       | 鋳鉄<br>FC/FCD                        | アルミ合金<br>AC/ADC            | 銅・銅合金<br>Cu           | 樹脂<br>Resin |
| ○                                  | ○                                   | ◎                                   | ○                          | ○                     | ○           |

### ◆在庫型番

| 型番           | 刃径<br>φDc | 溝長<br>ℓ1 | 首下長<br>ℓ2 | 全長<br>L | シャン径<br>Ds | タイプ  | 標準価格    |
|--------------|-----------|----------|-----------|---------|------------|------|---------|
| FDG02504KN   | 2.5       | 12       | 15        | 50      | 4          | Fig1 | ¥6,300  |
| FDG02704KN   | 2.7       | 12       | 15        | 50      | 4          | Fig1 | ¥6,300  |
| FDG03004KN   | 3         | 15       | 18        | 55      | 4          | Fig1 | ¥6,300  |
| FDG03304KN   | 3.3       | 15       | 18        | 60      | 4          | Fig1 | ¥6,300  |
| ● FDG03404KN | 3.4       | 15       | 18        | 60      | 4          | Fig1 | ¥6,300  |
| FDG03504KN   | 3.5       | 15       | 18        | 60      | 4          | Fig1 | ¥6,300  |
| FDG04004KN   | 4         | 18       | 21        | 60      | 4          | Fig2 | ¥6,300  |
| FDG04206KN   | 4.2       | 18       | 21        | 60      | 6          | Fig1 | ¥6,600  |
| ● FDG04306KN | 4.3       | 18       | 21        | 60      | 6          | Fig1 | ¥6,600  |
| FDG04506KN   | 4.5       | 18       | 21        | 60      | 6          | Fig1 | ¥6,600  |
| FDG05006KN   | 5         | 20       | 23        | 60      | 6          | Fig1 | ¥6,600  |
| ● FDG05106KN | 5.1       | 20       | 23        | 60      | 6          | Fig1 | ¥6,600  |
| FDG05306KN   | 5.3       | 20       | 23        | 60      | 6          | Fig1 | ¥6,600  |
| FDG05506KN   | 5.5       | 20       | 23        | 60      | 6          | Fig1 | ¥6,600  |
| FDG06006KN   | 6         | 28       | 31        | 60      | 6          | Fig2 | ¥7,000  |
| FDG06508KN   | 6.5       | 28       | 33        | 70      | 8          | Fig1 | ¥9,500  |
| FDG06808KN   | 6.8       | 28       | 33        | 70      | 8          | Fig1 | ¥9,500  |
| FDG07008KN   | 7         | 30       | 35        | 70      | 8          | Fig1 | ¥9,500  |
| FDG07308KN   | 7.3       | 30       | 35        | 70      | 8          | Fig1 | ¥9,500  |
| FDG07508KN   | 7.5       | 30       | 35        | 70      | 8          | Fig1 | ¥9,500  |
| FDG08008KN   | 8         | 35       | 40        | 70      | 8          | Fig2 | ¥10,100 |
| FDG08510KN   | 8.5       | 35       | 40        | 80      | 10         | Fig1 | ¥12,600 |
| FDG08810KN   | 8.8       | 35       | 40        | 80      | 10         | Fig1 | ¥12,600 |
| FDG09010KN   | 9         | 40       | 45        | 80      | 10         | Fig1 | ¥12,900 |
| FDG09310KN   | 9.3       | 40       | 45        | 80      | 10         | Fig1 | ¥12,900 |
| FDG09510KN   | 9.5       | 40       | 45        | 80      | 10         | Fig1 | ¥12,900 |
| FDG10010KN   | 10        | 40       | 45        | 90      | 10         | Fig2 | ¥14,200 |
| FDG10310KN   | 10.3      | 40       | 45        | 90      | 10         | Fig3 | ¥18,000 |
| FDG10510KN   | 10.5      | 45       | 50        | 90      | 10         | Fig3 | ¥18,000 |
| FDG10810KN   | 10.8      | 45       | 50        | 90      | 10         | Fig3 | ¥18,000 |
| FDG11010KN   | 11        | 45       | 50        | 90      | 10         | Fig3 | ¥18,000 |
| FDG11512KN   | 11.5      | 50       | 55        | 90      | 12         | Fig1 | ¥21,000 |
| FDG12012KN   | 12        | 50       | 55        | 100     | 12         | Fig2 | ¥21,400 |
| FDG12512KN   | 12.5      | 50       | 57        | 100     | 12         | Fig3 | ¥24,000 |
| FDG13012KN   | 13        | 50       | 57        | 100     | 12         | Fig3 | ¥24,000 |
| FDG14012KN   | 14        | 58       | 61        | 100     | 12         | Fig3 | ¥24,000 |

● 新規追加型番

### ◆主な用途



切削条件表▶ P.20

# NCSDR

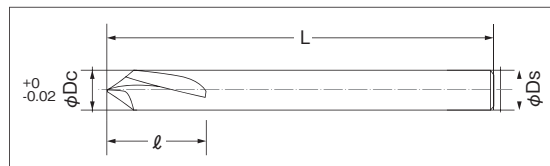
## 超硬リーディングドリル

- ドリル穴加工前のもみつけ加工および面取りの2つの加工が可能
- 径はφ3～φ12、面取り角度 60° 90° 120°を全て標準在庫



### ◆在庫型番

| 型番            | 直径×先端角   | 溝長 ℓ | 全長 L | シャンク径 Ds | 標準価格    |
|---------------|----------|------|------|----------|---------|
| NCSDR3 × 60   | 3 × 60   | 9    | 48   | 3        | ¥4,000  |
| NCSDR3 × 90   | 3 × 90   |      |      |          |         |
| NCSDR3 × 120  | 3 × 120  |      |      |          |         |
| NCSDR4 × 60   | 4 × 60   | 12   | 54   | 4        | ¥4,800  |
| NCSDR4 × 90   | 4 × 90   |      |      |          |         |
| NCSDR4 × 120  | 4 × 120  |      |      |          |         |
| NCSDR6 × 60   | 6 × 60   | 19   | 72   | 6        | ¥6,600  |
| NCSDR6 × 90   | 6 × 90   |      |      |          |         |
| NCSDR6 × 120  | 6 × 120  |      |      |          |         |
| NCSDR8 × 60   | 8 × 60   | 20   | 81   | 8        | ¥10,200 |
| NCSDR8 × 90   | 8 × 90   |      |      |          |         |
| NCSDR8 × 120  | 8 × 120  |      |      |          |         |
| NCSDR10 × 60  | 10 × 60  | 24   | 93   | 10       | ¥13,800 |
| NCSDR10 × 90  | 10 × 90  |      |      |          |         |
| NCSDR10 × 120 | 10 × 120 |      |      |          |         |
| NCSDR12 × 60  | 12 × 60  | 28   | 108  | 12       | ¥16,000 |
| NCSDR12 × 90  | 12 × 90  |      |      |          |         |
| NCSDR12 × 120 | 12 × 120 |      |      |          |         |



| 低炭素鋼<br>軟鋼           | 炭素鋼<br>合金鋼            | プレハードン鋼<br>高合金鋼   | 調質鋼                 | 焼入鋼<br>Hardened Steel |          |
|----------------------|-----------------------|-------------------|---------------------|-----------------------|----------|
| SS400,S10C<br>~150HB | S45C,SCM440<br>~225HB | SUJ,NAK<br>~275HB | SKD,SKH<br>30~40HRC | 40~50HRC              | 50~60HRC |
| ◎                    | ◎                     | ◎                 | ◎                   | ◎                     | ○        |
| ステンレス鋼               | 耐熱合金<br>チタン合金         | 鋳鉄                | アルミ合金               | 銅・銅合金                 | 樹脂       |
| SUS304,316           | Ti/Ni Alloys          | FC/FCD            | AC/ADC              | Cu                    | Resin    |
| ○                    | ○                     | ◎                 | ○                   | ○                     | ○        |