



# GENERAL CARBIDE DRILLS

**D5407** SERIES

## CARBIDE DRILLS

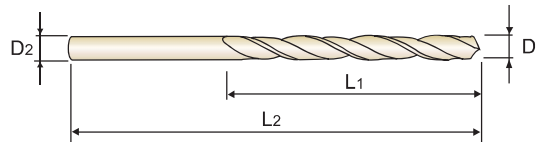
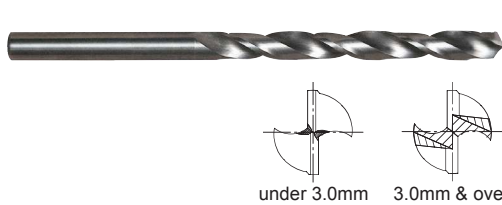
**JOBBER**

- VOLLHARTMETALL-SPIRALBOHRER
- Forets carbure, série courte
- PUNTE IN METALLO DURO

**KURZ  
COURTE  
CORTA**

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart- und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.



D<sub>1</sub>=D<sub>2</sub>

Unit : mm

| EDP No.  | Drill Diameter | Flute Length   | Overall Length |
|----------|----------------|----------------|----------------|
|          | D <sub>1</sub> | L <sub>1</sub> | L <sub>2</sub> |
| D5407010 | 1.0            | 12             | 34             |
| D5407011 | 1.1            | 14             | 36             |
| D5407012 | 1.2            | 16             | 38             |
| D5407013 | 1.3            | 16             | 38             |
| D5407014 | 1.4            | 18             | 40             |
| D5407015 | 1.5            | 18             | 40             |
| D5407016 | 1.6            | 20             | 43             |
| D5407017 | 1.7            | 20             | 43             |
| D5407018 | 1.8            | 22             | 46             |
| D5407019 | 1.9            | 22             | 46             |
| D5407020 | 2.0            | 24             | 49             |
| D5407021 | 2.1            | 24             | 49             |
| D5407022 | 2.2            | 27             | 53             |
| D5407023 | 2.3            | 27             | 53             |
| D5407024 | 2.4            | 30             | 57             |
| D5407025 | 2.5            | 30             | 57             |
| D5407026 | 2.6            | 30             | 57             |
| D5407027 | 2.7            | 33             | 61             |
| D5407028 | 2.8            | 33             | 61             |
| D5407029 | 2.9            | 33             | 61             |
| D5407030 | 3.0            | 33             | 61             |
| D5407031 | 3.1            | 36             | 65             |

| EDP No.  | Drill Diameter | Flute Length   | Overall Length |
|----------|----------------|----------------|----------------|
|          | D <sub>1</sub> | L <sub>1</sub> | L <sub>2</sub> |
| D5407032 | 3.2            | 36             | 65             |
| D5407033 | 3.3            | 36             | 65             |
| D5407034 | 3.4            | 39             | 70             |
| D5407035 | 3.5            | 39             | 70             |
| D5407036 | 3.6            | 39             | 70             |
| D5407037 | 3.7            | 39             | 70             |
| D5407038 | 3.8            | 43             | 75             |
| D5407039 | 3.9            | 43             | 75             |
| D5407040 | 4.0            | 43             | 75             |
| D5407041 | 4.1            | 43             | 75             |
| D5407042 | 4.2            | 43             | 75             |
| D5407043 | 4.3            | 47             | 80             |
| D5407044 | 4.4            | 47             | 80             |
| D5407045 | 4.5            | 47             | 80             |
| D5407046 | 4.6            | 47             | 80             |
| D5407047 | 4.7            | 47             | 80             |
| D5407048 | 4.8            | 52             | 86             |
| D5407049 | 4.9            | 52             | 86             |
| D5407050 | 5.0            | 52             | 86             |
| D5407051 | 5.1            | 52             | 86             |
| D5407052 | 5.2            | 52             | 86             |
| D5407053 | 5.3            | 52             | 86             |

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) are available on your request.

► NEXT PAGE

| ISO Material Description | P                      |     |                        |     |     |   |     |     |                        |     | M                                  |     |                 |     | K              |       |                   |     |                     |                   |                    |
|--------------------------|------------------------|-----|------------------------|-----|-----|---|-----|-----|------------------------|-----|------------------------------------|-----|-----------------|-----|----------------|-------|-------------------|-----|---------------------|-------------------|--------------------|
|                          | Non-alloy steel        |     |                        |     |     | Low alloy steel                           |     |     |                        |     | High alloyed steel, and tool steel |     | Stainless steel |     | Grey cast iron |       | Nodular cast iron |     | Malleable cast iron |                   |                    |
| VDI 3323                 | 1                      | 2   | 3                      | 4   | 5   | 6   | 7   | 8   | 9                      | 10  | 11                                 | 12  | 13              | 14  | 15             | 16    | 17                | 18  | 19                  | 20                |                    |
| HRc                      | 13                     | 25  | 28                     | 32  | 30  | 10  | 29  | 32  | 38                     | 15  | 35                                 | 15  | 23              | 10  | 10             | 26    | 3                 | 25  |                     | 21                |                    |
| HB                       | 125                    | 190 | 250                    | 270 | 300 | 180                                       | 275 | 300 | 350                    | 200 | 325                                | 200 | 240             | 180 | 180            | 260   | 160               | 250 | 130                 | 230               |                    |
| Recommended              | ⊙                      | ○   |                        |     |     | ○   |     |     |                        |     |                                    | ○   |                 |     | ○              |       |                   |     |                     |                   |                    |
| ISO Material Description | N                      |     |                        |     |     |   |     |     |                        |     | S                                  |     |                 |     |                |       | H                 |     |                     |                   |                    |
|                          | Aluminum-wrought alloy |     | Aluminum-cast, alloyed |     |     | Copper and Copper Alloys (Bronze / Brass) |     |     | Non Metallic Materials |     | Heat Resistant Super Alloys        |     |                 |     |                |       | Titanium Alloys   |     | Hardened steel      | Chilled Cast Iron | Hardened Cast Iron |
| VDI 3323                 | 21                     | 22  | 23                     | 24  | 25  | 26  | 27  | 28  | 29                     | 30  | 31                                 | 32  | 33              | 34  | 35             | 36    | 37                | 38  | 39                  | 40                | 41                 |
| HRc                      |                        |     |                        |     |     |   |     |     |                        |     | 15                                 | 30  | 25              | 38  | 34             |       |                   | 55  | 60                  | 42                | 55                 |
| HB                       | 60                     | 100 | 75                     | 90  | 130 | 110                                       | 90  | 100 |                        |     | 200                                | 280 | 250             | 350 | 320            | 400Rm | 1050Rm            | 550 | 630                 | 400               | 550                |
| Recommended              | ⊙                      | ⊙   |                        | ⊙   |     |   |     |     |                        |     |                                    |     |                 |     |                | ○     |                   |     |                     |                   |                    |

⊙ : Excellent ○ : Good



CARBIDE DRILLS

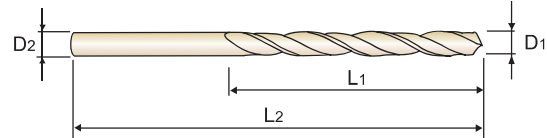
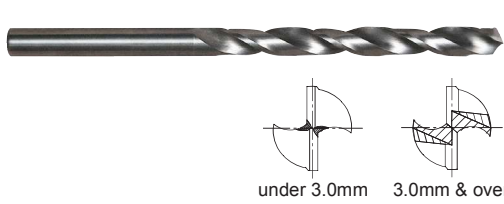
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DIN 338
CARBIDE
30°
h6
h7
118°
P.167

D<sub>1</sub>=D<sub>2</sub>

| EDP No.  | Drill Diameter | Flute Length   | Overall Length | EDP No.  | Drill Diameter | Flute Length   | Overall Length |
|----------|----------------|----------------|----------------|----------|----------------|----------------|----------------|
|          | D <sub>1</sub> | L <sub>1</sub> | L <sub>2</sub> |          | D <sub>1</sub> | L <sub>1</sub> | L <sub>2</sub> |
| D5407054 | 5.4            | 57             | 93             | D5407070 | 7.0            | 69             | 109            |
| D5407055 | 5.5            | 57             | 93             | D5407075 | 7.5            | 69             | 109            |
| D5407056 | 5.6            | 57             | 93             | D5407080 | 8.0            | 75             | 117            |
| D5407057 | 5.7            | 57             | 93             | D5407085 | 8.5            | 75             | 117            |
| D5407058 | 5.8            | 57             | 93             | D5407090 | 9.0            | 81             | 125            |
| D5407059 | 5.9            | 57             | 93             | D5407095 | 9.5            | 81             | 125            |
| D5407060 | 6.0            | 57             | 93             | D5407100 | 10.0           | 87             | 133            |
| D5407061 | 6.1            | 63             | 101            | D5407102 | 10.2           | 87             | 133            |
| D5407062 | 6.2            | 63             | 101            | D5407105 | 10.5           | 87             | 133            |
| D5407063 | 6.3            | 63             | 101            | D5407110 | 11.0           | 94             | 142            |
| D5407064 | 6.4            | 63             | 101            | D5407115 | 11.5           | 94             | 142            |
| D5407065 | 6.5            | 63             | 101            | D5407120 | 12.0           | 101            | 151            |
| D5407068 | 6.8            | 69             | 109            | D5407130 | 13.0           | 101            | 151            |

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) are available on your request.

◎ : Excellent ○ : Good

| ISO         | P               |     |     |     |     |                 |     |     |     |     | M                                  |     |                 |     | K              |     |                   |     |                     |     |
|-------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|----------------|-----|-------------------|-----|---------------------|-----|
|             | Non-alloy steel |     |     |     |     | Low alloy steel |     |     |     |     | High alloyed steel, and tool steel |     | Stainless steel |     | Grey cast iron |     | Nodular cast iron |     | Malleable cast iron |     |
| VDI 3323    | 1               | 2   | 3   | 4   | 5   | 6               | 7   | 8   | 9   | 10  | 11                                 | 12  | 13              | 14  | 15             | 16  | 17                | 18  | 19                  | 20  |
| HRc         | 13              | 25  | 28  | 32  | 30  | 10              | 29  | 32  | 38  | 15  | 35                                 | 15  | 23              | 10  | 10             | 26  | 3                 | 25  |                     | 21  |
| HB          | 125             | 190 | 250 | 270 | 300 | 180             | 275 | 300 | 350 | 200 | 325                                | 200 | 240             | 180 | 180            | 260 | 160               | 250 | 130                 | 230 |
| Recommended | ◎               | ○   |     |     |     | ○               |     |     |     |     |                                    | ○   |                 |     | ○              |     |                   |     |                     |     |

| ISO         | N                      |     |                        |    |     |   |    |                        |    |    | S                           |     |     |     |     |       | H               |     |                |                   |                    |
|-------------|------------------------|-----|------------------------|----|-----|---|----|------------------------|----|----|-----------------------------|-----|-----|-----|-----|-------|-----------------|-----|----------------|-------------------|--------------------|
|             | Aluminum-wrought alloy |     | Aluminum-cast, alloyed |    |     | Copper and Copper Alloys (Bronze / Brass) |    | Non Metallic Materials |    |    | Heat Resistant Super Alloys |     |     |     |     |       | Titanium Alloys |     | Hardened steel | Chilled Cast Iron | Hardened Cast Iron |
| VDI 3323    | 21                     | 22  | 23                     | 24 | 25  | 26  | 27 | 28                     | 29 | 30 | 31                          | 32  | 33  | 34  | 35  | 36    | 37              | 38  | 39             | 40                | 41                 |
| HRc         |                        |     |                        |    |     |   |    |                        |    |    | 15                          | 30  | 25  | 38  | 34  |       |                 | 55  | 60             | 42                | 55                 |
| HB          | 60                     | 100 | 75                     | 90 | 130 | 110                                       | 90 | 100                    |    |    | 200                         | 280 | 250 | 350 | 320 | 400Rm | 1050Rm          | 550 | 630            | 400               | 550                |
| Recommended | ◎                      | ◎   | ◎                      | ◎  |     |   |    |                        |    |    |                             |     |     |     |     | ○     |                 |     |                |                   |                    |



# GENERAL CARBIDE DRILLS

## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

### D5405, D5407 SERIES

### GENERAL CARBIDE DRILLS

RPM = rev./min.  
FEED = mm/rev.

| ISO | VDI 3323            | Material Description                      | Vc (m/min)      | Parameter | Drill Diameter (mm) |           | Vc (m/min) | Parameter | Drill Diameter (mm) |           |           |           |           |           |           |           |           |           |
|-----|---------------------|---|-----------------|-----------|---------------------|-----------|------------|-----------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|     |                     |   |                 |           | 1.0                 | 2.0       |            |           | 3.0                 | 4.0       | 5.0       | 6.0       | 8.0       | 10.0      | 12.0      | 13.0      |           |           |
| P   | 1                   | Non-alloy steel                           | 55              | RPM       | 17510               | 8750      | 70         | RPM       | 7430                | 5570      | 4460      | 3710      | 2790      | 2230      | 1860      | 1710      |           |           |
|     | 2                   |   |                 | FEED      | 0.02-0.03           | 0.02-0.04 |            | FEED      | 0.03-0.05           | 0.03-0.06 | 0.04-0.07 | 0.05-0.08 | 0.07-0.10 | 0.08-0.12 | 0.10-0.14 | 0.12-0.16 |           |           |
|     | 3                   |   | Low alloy steel | 45        | RPM                 | 14320     | 7160       | RPM       | 6370                | 4770      | 3820      | 3180      | 2390      | 1910      | 1590      | 1470      |           |           |
|     | 4                   |   |                 |           | FEED                | 0.02-0.03 | 0.02-0.04  | FEED      | 0.03-0.05           | 0.03-0.06 | 0.04-0.07 | 0.05-0.08 | 0.07-0.10 | 0.08-0.12 | 0.10-0.14 | 0.12-0.16 |           |           |
|     | 5                   |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 6                   | High alloyed steel, and tool steel        | 35              | RPM       | 11140               | 5570      | 50         | RPM       | 5310                | 3980      | 3180      | 2650      | 1990      | 1590      | 1330      | 1220      |           |           |
|     | 7                   |   |                 |           | FEED                | 0.02-0.03 |            |           | 0.02-0.04           | FEED      | 0.03-0.05 | 0.03-0.06 | 0.04-0.07 | 0.05-0.08 | 0.07-0.10 | 0.08-0.12 | 0.10-0.14 | 0.12-0.16 |
|     | 8                   |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 9                   |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | M                   | 12  | Stainless steel | 15        | RPM                 | 4770      | 2390       | 25        | RPM                 | 2650      | 1990      | 1590      | 1330      | 990       | 800       | 660       | 610       |           |
|     |                     | 13  |                 |           |                     | FEED      | 0.01-0.02  |           |                     | 0.01-0.03 | FEED      | 0.02-0.04 | 0.02-0.05 | 0.03-0.06 | 0.04-0.07 | 0.06-0.09 | 0.07-0.11 | 0.08-0.12 |
| 14  |                     |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
| K   | 15                  | Grey cast iron                            | 25              | RPM       | 7960                | 3980      | 45         | RPM       | 4770                | 3580      | 2860      | 2390      | 1790      | 1430      | 1190      | 1100      |           |           |
|     | 16                  |   |                 |           | FEED                | 0.03-0.04 |            |           | 0.03-0.05           | FEED      | 0.04-0.06 | 0.04-0.07 | 0.05-0.08 | 0.06-0.09 | 0.09-0.12 | 0.12-0.16 | 0.14-0.18 | 0.16-0.20 |
|     | 17                  | Nodular cast iron                         |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 18                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 19                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
| 20  | Malleable cast iron |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
| N   | 21                  | Aluminum-wrought alloy                    | 100             | RPM       | 31830               | 15920     | 140        | RPM       | 14850               | 11140     | 8910      | 7430      | 5570      | 4460      | 3710      | 3430      |           |           |
|     | 22                  |   |                 |           | FEED                | 0.04-0.05 |            |           | 0.04-0.06           | FEED      | 0.05-0.07 | 0.05-0.08 | 0.06-0.09 | 0.08-0.11 | 0.12-0.15 | 0.15-0.19 | 0.19-0.23 | 0.21-0.25 |
|     | 23                  | Aluminum-cast, alloyed                    | 70              | RPM       | 28650               | 14320     | 120        | RPM       | 12730               | 9550      | 7640      | 6370      | 4770      | 3820      | 3180      | 2940      |           |           |
|     | 24                  |   |                 |           | FEED                | 0.04-0.05 |            |           | 0.04-0.06           | FEED      | 0.05-0.07 | 0.05-0.08 | 0.06-0.09 | 0.08-0.11 | 0.12-0.15 | 0.15-0.19 | 0.19-0.23 | 0.21-0.25 |
|     | 25                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 26                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 27                  | Copper and Copper Alloys (Bronze / Brass) |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 28                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 29                  | Non Metallic Materials                    |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 30                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
| S   | 31                  | Heat Resistant Super Alloys               |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 32                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 33                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 34                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 35                  | Titanium Alloys                           | 10              | RPM       | 3180                | 1590      | 20         | RPM       | 2120                | 1590      | 1270      | 1060      | 800       | 640       | 530       | 490       |           |           |
|     | 36                  |   |                 |           | FEED                | 0.01-0.02 |            |           | 0.01-0.03           | FEED      | 0.02-0.04 | 0.02-0.05 | 0.03-0.06 | 0.04-0.07 | 0.06-0.09 | 0.07-0.11 | 0.08-0.12 | 0.09-0.13 |
|     | 37                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
| H   | 38                  | Hardened steel                            |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 39                  |   |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 40                  | Chilled Cast Iron                         |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |
|     | 41                  | Hardened Cast Iron                        |                 |           |                     |           |            |           |                     |           |           |           |           |           |           |           |           |           |