# Carbide - Drilling times

| Material thickness | Drill diameters [mm] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [mm] | up to 16 | up to 19 | up to 22 | up to 25 | up to 28 | up to 31 | up to 34 | up to 37 | up to 40 |
| **4** | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 7 |
| **5** | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 |
| **6** | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 |
| **7** | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 |
| **8** | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 |
| **9** | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 |
| **10** | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 |
| **11** | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 |
| **12** | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 |
| **13** | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |
| **14** | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 |
| **15** | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 |
| **16** | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 |
| **17** | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 |
| **18** | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 |
| **19** | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 |
| **20** | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 |
| **21** | 6 | 6 | 7 | 7 | 8 | 9 | 9 | 10 | 10 |
| **22** | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 |
| **23** | 6 | 7 | 7 | 8 | 8 | 9 | 10 | 10 | 11 |
| **24** | 6 | 7 | 7 | 8 | 9 | 9 | 10 | 10 | 11 |
| **25** | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 11 |
| **26** | 7 | 7 | 8 | 8 | 9 | 10 | 10 | 11 | 12 |
| **27** | 7 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 |
| **28** | 7 | 7 | 8 | 9 | 10 | 10 | 11 | 11 | 12 |
| **29** | 7 | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 12 |
| **30** | 7 | 8 | 8 | 9 | 10 | 11 | 11 | 12 | 13 |
| **31** | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 12 | 13 |
| **32** | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 12 | 13 |
| **33** | 8 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 13 |
| **34** | 8 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 14 |
| **35** | 8 | 8 | 9 | 10 | 11 | 12 | 13 | 13 | 14 |
| **36** | 8 | 9 | 9 | 10 | 11 | 12 | 13 | 13 | 14 |
| **37** | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 |
| **38** | 8 | 9 | 10 | 11 | 12 | 12 | 13 | 14 | 15 |
| **39** | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 14 | 15 |
| **40** | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 14 | 15 |
| **41** | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **42** | 9 | 10 | 10 | 12 | 12 | 13 | 14 | 15 | 16 |
| **43** | 9 | 10 | 11 | 12 | 13 | 13 | 15 | 15 | 16 |
| **44** | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 |
| **45** | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |

**Drilling time carbid drills**

**Formular for drilling time calculation:**

| | | |
|---|---|---|
| **Forward stroke:** | **3** | **mm** |
| **Flange:** | **???** | **mm** |
| **Top of drill:** | **0,2 x D** | **mm** |
| **Overrun:** | **2** | **mm** |
| | **=** | **path** |
| | **/** | **feed** |
| | **+** | **forward/return motion** |

**Drill time including forward stroke and overrun + drill feed + return motion in seconds**