**Carbide GR Internal Grooving Inserts**

**Coating properties: PVD carbide coating**

**Processing use: Mainly used for steel and stainless steel processing**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GER1.0/1.5/2.0----A** | | | **Unilateral effective cutting depth 1.8** | | | | **Insert tip arc 0.05** | |
| **GER1.0/1.5/2.0/2.5/3.0----B** | | | **Unilateral effective cutting depth 2.6** | | | | **Insert tip arc 0.1** | |
| **GER1.0/1.5/2.0/2.5/3.0----C** | | | **Unilateral effective cutting depth 2.8** | | | | **Insert tip arc 0.1** | |
| **GER1.0/1.5/2.0/3.5/4.0-2.5/3.0 / D** | | | **Unilateral effective cutting depth 2.8-4.5** | | | | **Insert tip arc 0.1** | |
| **Full-grinded Carbide Grooving Inserts** | | | | | | | | | |
|
| **No.** | | **Reference Photo** | **Type** | | **Grade** | **Material** | **Coating** | | **Work-piece Materials** |
| 1 | |  | GER100-005A | | MS3015 | Carbide | PVD | | Steel, S.S |
| 2 | | GER120-005A | | MS3015 | Carbide | PVD | | Steel, S.S |
| 3 | | GER125-005A | | MS3015 | Carbide | PVD | | Steel, S.S |
| 4 | | GER150-010A | | MS3015 | Carbide | PVD | | Steel, S.S |
| 5 | | GER200-010A | | MS3015 | Carbide | PVD | | Steel, S.S |
| 6 | |  | GER100-A-R050 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 7 | | GER150-A-R075 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 8 | | GER200-A-R100 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 9 | | GER250-A-R125 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 10 | | GER300-A-R150 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 11 | |  | GER080-005B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 12 | | GER090-005B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 13 | | GER100-005B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 14 | | GER110-005B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 15 | | GER120-005B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 16 | | GER150-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 17 | | GER170-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 18 | | GER180-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 19 | | GER190-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 20 | | GER200-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 21 | | GER210-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 22 | | GER220-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 23 | | GER230-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 24 | | GER240-010B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 25 | | GER250-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 26 | | GER260-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 27 | | GER270-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 28 | | GER280-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 29 | | GER290-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 30 | | GER300-020B | | MS3015 | Carbide | PVD | | Steel, S.S |
| 31 | |  | GER100-B-R050 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 32 | | GER150-B-R075 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 33 | | GER200-B-R100 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 34 | | GER250-B-R125 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 35 | | GER300-B-R150 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 36 | |  | GER100-005C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 37 | | GER125-005C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 38 | | GER150-010C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 39 | | GER170-010C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 40 | | GER200-010C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 41 | | GER250-020C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 42 | | GER300-020C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 43 | | GER350-020C | | MS3015 | Carbide | PVD | | Steel, S.S |
| 44 | |  | GER100-C-R050 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 45 | |  | GER150-C-R075 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 46 | |  | GER200-C-R100 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 47 | |  | GER250-C-R125 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 48 | |  | GER300-C-R150 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 49 | |  | GER090-005D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 50 | | GER100-005D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 51 | | GER110-005D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 52 | | GER125-005D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 53 | | GER150-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 54 | | GER170-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 55 | | GER180-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 56 | | GER190-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 57 | | GER200-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 58 | | GER210-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 59 | | GER220-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 60 | | GER230-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 61 | | GER240-010D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 62 | | GER250-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 63 | | GER260-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 64 | | GER270-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 65 | | GER280-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 66 | | GER290-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 67 | | GER300-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 68 | | GER350D-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 69 | | GER400D-020D | | MS3015 | Carbide | PVD | | Steel, S.S |
| 70 | | GER090D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 71 | | GER100D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 72 | | GER110D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 73 | | GER125D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 74 | | GER150D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 75 | | GER170D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 76 | | GER180D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 77 | | GER190D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 78 | | GER200D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 79 | | GER210D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 80 | | GER220D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 81 | | GER230D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 82 | | GER240D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 83 | | GER250D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 84 | | GER260D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 85 | | GER270D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 86 | | GER280D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 87 | | GER290D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 88 | | GER300D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 89 | | GER350D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 90 | | GER400D-16 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 91 | |  | GER100-D-R050 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 92 | | GER150-D-R075 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 93 | | GER200-D-R100 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 94 | | GER250-D-R125 | | MS3015 | Carbide | PVD | | Steel, S.S |
| 95 | | GER300-D-R150 | | MS3015 | Carbide | PVD | | Steel, S.S |

**Grade: MS3015**

**PVD (TiAIN) coating, Suitable for low-speed cutting and interrupted cutting of steel parts and stainless steel, with good wear resistance and high temperature oxidation resistance.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Recommended Cutting Parameters** | | | |
| **Chip-breaker** | **Ap** | **F** | **Vc** |
| **GER-D** | **4.5** | **0.03-0.12** | **60-130** |