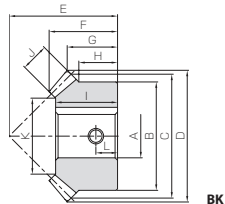
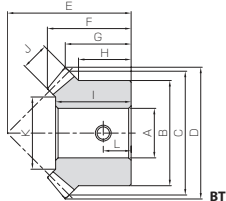




| 共通规格 |                     |
|------|---------------------|
| 精度等级 | JIS B 1704 :1978 4级 |
| 齿形   | 格里森                 |
| 压力角  | 20°                 |
| 螺旋角  | —                   |
| 材料   | S45C                |
| 热处理  | 齿面高频淬火处理            |
| 齿面硬度 | 50 ~ 60HRC          |



正齿轮

斜齿齿轮

内齿齿轮

齿条

& C P  
小齿齿条

等径锥齿轮

锥齿轮

交错斜齿齿轮

蜗杆蜗轮

齿轮箱

其他产品

| 产品型号                                | 齿数比  | 模数   | 齿数 | 形状 | 孔径              |      | 分度圆直径  |        | 齿顶圆直径 | 组装距离  | 全长    | 齿顶圆直径 | 齿顶圆直径 | 齿顶圆直径 |
|-------------------------------------|------|------|----|----|-----------------|------|--------|--------|-------|-------|-------|-------|-------|-------|
|                                     |      |      |    |    | A <sub>H7</sub> | B    | C      | D      |       |       |       |       |       |       |
| SMA1-20<br>SMB1-20                  | 1    | m1   | 20 | BT | 8               | 16   | 20     | 21.41  | 20    | 13.95 | 10.71 | 8     | 12    | 12.07 |
| SMA1.5-20<br>SMB1.5-20              |      |      |    |    | 10              | 26   | 30     | 32.12  | 30    | 21.24 | 16.06 | 13    | 19    |       |
| SMA2-20<br>SMB2-20                  |      | m2   | 20 | BK | 14              | 34   | 40     | 42.83  | 37    | 24.89 | 18.41 | 14    | 22    |       |
| SMA2.5-20<br>SMB2.5-20              |      |      |    |    | 15              | 42   | 50     | 53.54  | 48    | 32.54 | 24.77 | 19    | 29    |       |
| SMA3-20<br>SMB3-20<br>SMC3-20       |      | m3   | 20 | BK | 22              | 50   | 60     | 64.24  | 58    | 39.84 | 30.12 | 23    | 35    |       |
| SMA3.5-20<br>SMB3.5-20              |      |      |    |    | 25              | 60   | 70     | 74.95  | 65    | 44.13 | 32.47 | 25    | 40    |       |
| SMA4-20<br>SMB4-20<br>SMC4-20       |      | m4   | 20 | BK | 30              | 64   | 80     | 85.65  | 75    | 50.78 | 37.83 | 27    | 45    |       |
| SMA4.5-20<br>SMB4.5-20<br>SMC4.5-20 |      |      |    |    | 32              | 64   | 80     | 85.65  | 75    | 50.78 | 37.83 | 27    | 45    |       |
| SMA5-20<br>SMB5-20<br>SMC5-20       |      | m5   | 20 | BK | 40              | 80   | 100    | 107.07 | 90    | 60.38 | 43.54 | 30    | 54    |       |
| SMA5.5-20<br>SMB5.5-20<br>SMC5.5-20 |      |      |    |    | 30              | 80   | 100    | 107.07 | 90    | 60.38 | 43.54 | 30    | 54    |       |
| SMA6-20<br>SMB6-20<br>SMC6-20       |      | m6   | 20 | BK | 45              | 100  | 120    | 128.48 | 104   | 67.67 | 48.24 | 34    | 60    |       |
| SMA6.5-20<br>SMB6.5-20<br>SMC6.5-20 |      |      |    |    | 50              | 100  | 120    | 128.48 | 104   | 67.67 | 48.24 | 34    | 60    |       |
| SMA8-20                             |      | m8   | 20 | BK | 60              | 130  | 160    | 171.31 | 125   | 73.33 | 50.66 | 30    | 62    |       |
| SMA1-25                             |      |      |    |    | 10              | 20   | 25     | 26.41  | 23    | 15.16 | 11.21 | 8     | 14    |       |
| SMA1.5-25                           |      | m1.5 | 25 | BK | 12              | 30   | 37.5   | 39.62  | 34    | 22.25 | 16.31 | 11.5  | 19    |       |
| SMA2-25<br>SMB2-25                  |      |      |    |    | 18              | 40   | 50     | 52.83  | 40    | 24.33 | 16.41 | 10    | 20    |       |
| SMA2.5-25<br>SMB2.5-25              | m2.5 | 25   | BK | 20 | 50              | 62.5 | 66.04  | 50     | 30.41 | 20.52 | 12.5  | 26    |       |       |
| SMA3-25<br>SMB3-25                  |      |      |    | 18 | 50              | 62.5 | 66.04  | 50     | 30.41 | 20.52 | 12.5  | 26    |       |       |
| SMA3.5-25<br>SMB3.5-25              | m3   | 25   | BK | 30 | 60              | 75   | 79.24  | 60     | 37.81 | 24.62 | 15    | 32    |       |       |
| SMA3.5-25<br>SMB3.5-25              |      |      |    | 25 | 60              | 75   | 79.24  | 60     | 37.81 | 24.62 | 15    | 32    |       |       |
| SMA3.5-25<br>SMB3.5-25              | m3.5 | 25   | BK | 32 | 70              | 87.5 | 92.45  | 70     | 43.23 | 28.72 | 17.5  | 37    |       |       |
| SMA4-25<br>SMB4-25                  |      |      |    | 28 | 70              | 87.5 | 92.45  | 70     | 43.23 | 28.72 | 17.5  | 37    |       |       |
| SMA4-25<br>SMB4-25                  | m4   | 25   | BK | 35 | 80              | 100  | 105.66 | 80     | 49.32 | 32.83 | 20    | 43    |       |       |
| SMA4.5-25<br>SMB4.5-25              |      |      |    | 30 | 80              | 100  | 105.66 | 80     | 49.32 | 32.83 | 20    | 43    |       |       |
| SMA5-25                             | m5   | 25   | BK | 50 | 100             | 125  | 132.07 | 100    | 60.82 | 41.04 | 25    | 50    |       |       |
| SMA6-25                             |      |      |    | 55 | 120             | 150  | 158.48 | 120    | 72.32 | 49.24 | 30    | 61    |       |       |
| SMA1-30                             | m1   | 30   | BK | 12 | 24              | 30   | 31.41  | 28     | 17.71 | 13.71 | 10    | 16    |       |       |
| SMA1.5-30                           |      |      |    | 15 | 36              | 45   | 47.12  | 43     | 28.24 | 21.56 | 16    | 25    |       |       |
| SMA2-30<br>SMB2-30                  | m2   | 30   | BK | 20 | 45              | 60   | 62.83  | 50     | 29.42 | 21.41 | 12.5  | 25    |       |       |
| SMA2.5-30<br>SMB2.5-30              |      |      |    | 15 | 45              | 60   | 62.83  | 50     | 29.42 | 21.41 | 12.5  | 25    |       |       |
| SMA2.5-30<br>SMB2.5-30              | m2.5 | 30   | BK | 25 | 60              | 75   | 78.54  | 62     | 36.28 | 26.27 | 17    | 32    |       |       |
| SMA3-30<br>SMB3-30                  |      |      |    | 20 | 60              | 75   | 78.54  | 62     | 36.28 | 26.27 | 17    | 32    |       |       |
| SMA3-30<br>SMB3-30                  | m3   | 30   | BK | 32 | 70              | 90   | 94.24  | 75     | 45.47 | 32.12 | 20    | 40    |       |       |
| SMA3.5-30<br>SMB3.5-30              |      |      |    | 25 | 70              | 90   | 94.24  | 75     | 45.47 | 32.12 | 20    | 40    |       |       |
| SMA3.5-30<br>SMB3.5-30              | m3.5 | 30   | BK | 35 | 90              | 105  | 109.95 | 85     | 49.66 | 34.97 | 25    | 45    |       |       |
| SMA4-30<br>SMB4-30                  |      |      |    | 30 | 90              | 105  | 109.95 | 85     | 49.66 | 34.97 | 25    | 45    |       |       |
| SMA4-30<br>SMB4-30                  | m4   | 30   | BK | 40 | 100             | 120  | 125.66 | 95     | 54.52 | 37.83 | 25    | 50    |       |       |
| SMA4.5-30<br>SMB4.5-30              |      |      |    | 30 | 100             | 120  | 125.66 | 95     | 54.52 | 37.83 | 25    | 50    |       |       |
| SMA5-30                             | m5   | 30   | BK | 55 | 130             | 150  | 157.07 | 120    | 68.56 | 48.54 | 35    | 62    |       |       |
| SMA5.5-30<br>SMB5.5-30              |      |      |    | 55 | 130             | 150  | 157.07 | 120    | 68.56 | 48.54 | 35    | 62    |       |       |

(产品特性注意事项) ①键槽加工采用了 JIS B 1301 标准的普通级 (Js9)。经攻丝加工的产品配有螺钉附件。  
 ②容许转矩数值是在任意使用条件下计算的参考值。详细内容请参考第 253 页。  
 ③表中所记载的齿顶圆直径、全长及齿顶距离均为理论数值。为齿顶部施行了倒角加工, 所以与实物有所不同。  
 ④带有 ※ 标记的键槽尺寸与 JIS 标准的规定尺寸不同。

正齿轮

斜齿齿轮

内齿齿轮

齿条

& C P  
小齿齿条

等径锥齿轮

锥齿轮

交错斜齿齿轮

蜗杆蜗轮

齿轮箱

其他产品

| 齿宽 | 支撑面直径                   | 键槽                                | 螺孔             | 容许转矩 (N·m) |      | 容许转矩 (kgf·m) |       | 侧隙 (mm) | 质量 (kg)              | 产品型号                          |
|----|-------------------------|-----------------------------------|----------------|------------|------|--------------|-------|---------|----------------------|-------------------------------|
|    |                         |                                   |                | 弯曲强度       | 齿面强度 | 弯曲强度         | 齿面强度  |         |                      |                               |
| 5  | 9.86<br>10              | —                                 | M4<br>M4       | 4          | 0.90 | 0.37         | 0.091 | 0.038   | 0.016<br>0.014       | SMA1-20<br>SMB1-20            |
| 8  | 15.37<br>15.37          | —<br>4 x 1.8                      | M4<br>M5       | 6.5        | 3.13 | 1.31         | 0.32  | 0.13    | 0.069<br>0.06        | SMA1.5-20<br>SMB1.5-20        |
| 10 | 21.72<br>21.72          | 5 x 2.3<br>5 x 2.3                | M5<br>M5       | 7          | 7.17 | 3.05         | 0.73  | 0.31    | 0.14<br>0.13         | SMA2-20<br>SMB2-20            |
| 12 | 28.06<br>28.06          | 5 x 2.3*<br>6 x 2.8               | M6<br>M6       | 9.5        | 13.7 | 5.90         | 1.39  | 0.60    | 0.27<br>0.26         | SMA2.5-20<br>SMB2.5-20        |
| 15 | 31.57<br>31.57<br>31.57 | 7 x 3*<br>7 x 3*<br>6 x 2.8       | M6<br>M8<br>M6 | 11.5       | 24.2 | 10.5         | 2.47  | 1.08    | 0.47<br>0.44<br>0.49 | SMA3-20<br>SMB3-20<br>SMC3-20 |
| 18 | 39.09<br>39.09          | 7 x 3*<br>8 x 3.3                 | M8<br>M8       | 12.5       | 39.0 | 17.2         | 3.98  | 1.75    | 0.71<br>0.68         | SMA3.5-20<br>SMB3.5-20        |
| 20 | 43.43<br>43.43<br>43.43 | 7 x 3*<br>10 x 3.3<br>8 x 3.3     | M8<br>M8<br>M8 | 13.5       | 57.3 | 25.4         | 5.85  | 2.59    | 1.00<br>0.96<br>1.07 | SMA4-20<br>SMB4-20<br>SMC4-20 |
| 26 | 54.46<br>54.46<br>54.46 | 10 x 3.3*<br>8 x 3.3<br>10 x 3.3  | M8<br>M8<br>M8 | 15         | 114  | 51.3         | 11.7  | 5.23    | 1.80<br>2.04<br>1.93 | SMA5-20<br>SMB5-20<br>SMC5-20 |
| 30 | 67.15<br>67.15<br>67.15 | 12 x 3.3*<br>14 x 3.8<br>12 x 3.3 | M8<br>M8<br>M8 | 17         | 190  | 87.5         | 19.3  | 8.92    | 3.19<br>3.01<br>3.35 | SMA6-20<br>SMB6-20<br>SMC6-20 |
| 35 | 95                      | 18 x 4.4                          | M10            | 15         | 406  | 194          | 41.4  | 19.8    | 5.96                 | SMA8-20                       |
| 6  | 15.03                   | —                                 | M4             | 4          | 1.48 | 0.71         | 0.15  | 0.072   | 0.03~0.13            | SMA1-25                       |
| 9  | 19.54                   | 4 x 1.8                           | M5             | 5.75       | 4.98 | 2.44         | 0.51  | 0.25    | 0.05~0.15            | SMA1.5-25                     |
| 12 | 26.06                   | 6 x 2.8<br>5 x 2.3                | M6<br>M5       | 5          | 11.8 | 5.90         | 1.20  | 0.60    | 0.19<br>0.20         | SMA2-25<br>SMB2-25            |
| 15 | 34.57                   | 5 x 2.3*<br>6 x 2.8               | M6<br>M6       | 6          | 23.1 | 11.7         | 2.35  | 1.19    | 0.39<br>0.40         | SMA2.5-25<br>SMB2.5-25        |
| 20 | 37.43                   | 7 x 3*<br>8 x 3.3                 | M8<br>M8       | 7.5        | 42.3 | 21.6         | 4.31  | 2.20    | 0.63<br>0.69         | SMA3-25<br>SMB3-25            |
| 22 | 46.77                   | 10 x 3.3<br>8 x 3.3               | M8<br>M8       | 8.5        | 65.0 | 33.5         | 6.63  | 3.42    | 1.04<br>1.09         | SMA3.5-25<br>SMB3.5-25        |
| 25 | 55.29                   | 10 x 3.3<br>8 x 3.3               | M8<br>M8       | 10         | 96.8 | 50.2         | 9.87  | 5.12    | 1.59<br>1.68         | SMA4-25<br>SMB4-25            |
| 30 | 65.15                   | 12 x 3.3*<br>8 x 3.3              | M8<br>M8       | 12.5       | 185  | 96.8         | 18.8  | 9.87    | 2.86                 | SMA5-25                       |
| 35 | 83                      | 16 x 4.3                          | M10            | 15         | 307  | 166          | 31.3  | 16.9    | 0.16~0.36            | SMA6-25                       |
| 6  | 19.03                   | 4 x 1.8                           | M5             | 5          | 2.00 | 1.11         | 0.20  | 0.11    | 0.03~0.13            | SMA1-30                       |
| 10 | 25.71                   | 5 x 2.3                           | M5             | 8          | 7.22 | 4.08         | 0.74  | 0.42    | 0.05~0.15            | SMA1.5-30                     |
| 12 | 36.06                   | 6 x 2.8<br>5 x 2.3                | M6<br>M5       | 6.25       | 16.0 | 9.20         | 1.63  | 0.94    | 0.32<br>0.35         | SMA2-30<br>SMB2-30            |
| 15 | 47.57                   | 8 x 3.3<br>6 x 2.8                | M8<br>M6       | 8.5        | 31.2 | 18.2         | 3.19  | 1.86    | 0.68<br>0.73         | SMA2.5-30<br>SMB2.5-30        |
| 20 | 53.43                   | 10 x 3.3<br>8 x 3.3               | M8<br>M8       | 10         | 57.8 | 34.0         | 5.89  | 3.46    | 1.15<br>1.25         | SMA3-30<br>SMB3-30            |
| 22 | 67.77                   | 10 x 3.3<br>8 x 3.3               | M8<br>M8       | 12.5       | 88.4 | 52.3         | 9.01  | 5.34    | 2.01<br>2.10         | SMA3.5-30<br>SMB3.5-30        |
| 25 | 79.29                   | 12 x 3.3<br>8 x 3.3               | M8<br>M8       | 12.5       | 131  | 78.3         | 13.4  | 7.99    | 2.81<br>3.03         | SMA4-30<br>SMB4-30            |
| 30 | 99.15                   | 16 x 4.3                          | M10            | 17.5       | 250  | 150          | 25.5  | 15.3    | 0.14~0.34            | SMA5-30                       |

(追加加工注意事项) ①对产品做追加加工前, 请首先阅读第 254 页的「追加加工注意事项」, 注意安全。本公司的「齿轮工房」承接追加加工业务。  
 ②因为齿面经高频淬火处理, 轮齿及齿根附近 (2 ~ 3 mm 左右) 不能进行追加加工。