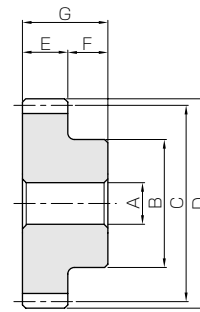




| Specifications | |
|---------------------------|---|
| Precision grade | JIS grade N8 (JIS B1702-1: 1998) JIS grade 4 (JIS B1702: 1976) |
| Reference section of gear | Normal plane |
| Gear teeth | Standard full depth |
| Transverse pressure angle | 20° |
| Helix angle | 15° |
| Material | S45C |
| Heat treatment | — |
| Tooth hardness | less than 194HB |

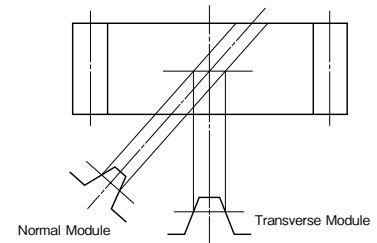


S1

| Catalog No. | Module | No. of teeth | Direction of helix | Shape | Bore | Hub dia. | Pitch dia. | Outside dia. | Face width | Hub width | Total length |
|--------------------|--------|--------------|--------------------|-------|-----------------|----------|------------|--------------|------------|-----------|--------------|
| | | | | | A _{H7} | B | C | D | E | F | G |
| SH2-15R SH2-15L | m2 | 15 | R L | S1 | 12 | 24 | 31.06 | 35.06 | 25 | 10 | 35 |
| SH2-20R SH2-20L | | 20 | R L | S1 | 12 | 32 | 41.41 | 45.41 | 25 | 10 | 35 |
| SH2-30R SH2-30L | | 30 | R L | S1 | 12 | 50 | 62.12 | 66.12 | 25 | 10 | 35 |
| SH2-40R SH2-40L | | 40 | R L | S1 | 18 | 60 | 82.82 | 86.82 | 25 | 10 | 35 |
| SH2-60R SH2-60L | | 60 | R L | S1 | 18 | 70 | 124.23 | 128.23 | 25 | 10 | 35 |
| SH2-90R SH2-90L | | 90 | R L | S1 | 18 | 120 | 186.35 | 190.35 | 25 | 10 | 35 |
| SH3-15R SH3-15L | m3 | 15 | R L | S1 | 15 | 36 | 46.59 | 52.59 | 35 | 15 | 50 |
| SH3-20R SH3-20L | | 20 | R L | S1 | 15 | 50 | 62.12 | 68.12 | 35 | 15 | 50 |
| SH3-30R SH3-30L | | 30 | R L | S1 | 20 | 70 | 93.17 | 99.17 | 35 | 15 | 50 |
| SH3-40R SH3-40L | | 40 | R L | S1 | 20 | 80 | 124.23 | 130.23 | 35 | 15 | 50 |
| SH3-60R SH3-60L | | 60 | R L | S1 | 20 | 140 | 186.35 | 192.35 | 35 | 15 | 50 |

[Caution on Product Characteristics]

- ① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 349 for more details.
- ② The backlash values shown in the table are the theoretical values for the backlash in the normal direction of a pair of identical gears in mesh.
- ③ These gears produce axial thrust forces. See page 351 for more details.
- ④ Right handed and left handed helical gears in the same module are designed to mesh as a pair, but SH gears are not interchangeable with KHG type helical gears.



* Above is for illustration purposes only and differs from actual tooth forms. To find more details, please see the section "4.3 Helical Gears" in the technical reference (Page 614).

Spur Gears
Helical Gears
Internal Gears
Racks
CP Racks & Pinions
Miter Gears
Bevel Gears
Screw Gears
Worm Gear Pair
Bevel Gearboxes
Other Products

| Allowable torque (N·m) | | Allowable torque (kgf·m) | | Backlash (mm) | Weight (kg) | Catalog No. |
|------------------------|--------------------|--------------------------|--------------------|---------------|-------------|--------------------|
| Bending strength | Surface durability | Bending strength | Surface durability | | | |
| 43.7 | 2.90 | 4.46 | 0.30 | 0.12~0.26 | 0.15 | SH2-15R SH2-15L |
| 67.1 | 5.85 | 6.84 | 0.60 | 0.12~0.26 | 0.30 | SH2-20R SH2-20L |
| 117 | 15.3 | 11.9 | 1.56 | 0.14~0.30 | 0.72 | SH2-30R SH2-30L |
| 169 | 28.9 | 17.2 | 2.95 | 0.14~0.30 | 1.21 | SH2-40R SH2-40L |
| 275 | 70.8 | 28.0 | 7.22 | 0.18~0.36 | 2.61 | SH2-60R SH2-60L |
| 437 | 173 | 44.6 | 17.6 | 0.20~0.44 | 6.17 | SH2-90R SH2-90L |
| 138 | 9.67 | 14.0 | 0.99 | 0.14~0.32 | 0.52 | SH3-15R SH3-15L |
| 211 | 19.4 | 21.6 | 1.98 | 0.14~0.32 | 0.99 | SH3-20R SH3-20L |
| 368 | 50.2 | 37.5 | 5.12 | 0.18~0.38 | 2.20 | SH3-30R SH3-30L |
| 531 | 95.5 | 54.1 | 9.73 | 0.18~0.38 | 3.80 | SH3-40R SH3-40L |
| 866 | 236 | 88.3 | 24.0 | 0.20~0.44 | 9.18 | SH3-60R SH3-60L |

- [Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 350) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's system for quick modification of KHK stock gears is also available.
- ② Avoid performing secondary operations that narrow the tooth width as it affects precision and strength.

■ SH Helical Gear Center Distance

| Catalog No. | SH2-15 ^R _L | SH2-20 ^R _L | SH2-30 ^R _L | SH2-40 ^R _L | SH2-60 ^R _L | SH2-90 ^R _L |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| SH2-15 ^R _L | 31.06 | — | — | — | — | — |
| SH2-20 ^R _L | 36.23 | 41.41 | — | — | — | — |
| SH2-30 ^R _L | 46.59 | 51.76 | 62.12 | — | — | — |
| SH2-40 ^R _L | 56.94 | 62.12 | 72.47 | 82.82 | — | — |
| SH2-60 ^R _L | 77.65 | 82.82 | 93.17 | 103.53 | 124.23 | — |
| SH2-90 ^R _L | 108.70 | 113.88 | 124.23 | 134.59 | 155.29 | 186.35 |

■ SH Helical Gear Center Distance

| Catalog No. | SH3-15 ^R _L | SH3-20 ^R _L | SH3-30 ^R _L | SH3-40 ^R _L | SH3-60 ^R _L |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| SH3-15 ^R _L | 46.59 | — | — | — | — |
| SH3-20 ^R _L | 54.35 | 62.12 | — | — | — |
| SH3-30 ^R _L | 69.88 | 77.65 | 93.17 | — | — |
| SH3-40 ^R _L | 85.41 | 93.17 | 108.70 | 124.23 | — |
| SH3-60 ^R _L | 116.47 | 124.23 | 139.76 | 155.29 | 186.35 |

Spur
GearsHelical
GearsInternal
Gears

Racks

CP Racks
& PinionsMiter
GearsBevel
GearsScrew
GearsWorm
Gear PairBevel
GearboxesOther
Products