

Spur Gear

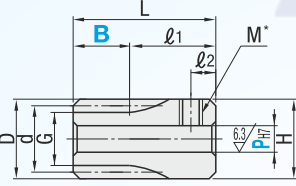
Pressure Angle 20°, Module 1.0, Shaft Bore Configurable Type



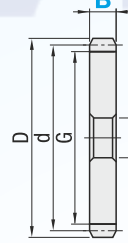
| Type | | | M | S | A |
|---------------|---------------------|----------------------|-----------------|----------------------------|---------------------------------|
| Straight Bore | Straight Bore + Tap | Keyway, Keyway + Tap | Material | Surface Treatment | Accessory |
| DGEAHB | DGEAB | DGEAKB | S45C Equivalent | — | Set Screw (SCM435, Black Oxide) |
| DGEAHBB | DGEABB | DGEAKBB | | Black Oxide | |
| DGEAHBG | DGEABG | DGEAKBG | | Electroless Nickel Plating | |
| DGEAHS | DGEAS | DGEAKS | SUS304 | — | Set Screw (SUS304) |

- Set Screw is not included in Un-tapped Type products.
- Selectable Gear Shapes differ depending on the number of teeth. Check the spec. table.

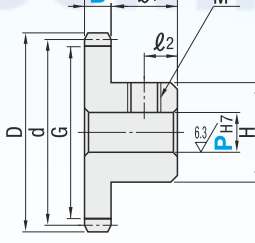
Gear Shape Shape K



Shape A



Shape B



Shaft Bore Specifications (Selectable Gear Shapes)

| Straight Bore (Shape A, Shape B, Shape K) | Straight Bore + Tap (Shape B, Shape K) |
|---|--|
| | |
| Keyway (Shape A) | Keyway + Tap (Shape B) |
| | |

Positioning of keyway and teeth is not fixed.

- Tapped shaft bores are not available for Shape A.

Thin Type

| Part Number | Number of Teeth | B | Gear Shape | Shaft Bore Dia. PH7 (1mm Increment) | | d Reference Dia. | D Tip Dia | G Root Dia | H | L | l1 | l2 | M (Coarse) | *1 Allowable Transmission Force (N · m) Bending Strength | | | | | |
|---|-----------------|---------|------------|-------------------------------------|----------------------|------------------|-----------|------------|-------|---------|-----------------------|------|------------|--|--------|------|-------|-------|------|
| | | | | Straight Bore | Keyway, Keyway + Tap | | | | | | | | | S45C Equivalent | SUS304 | | | | |
| Straight Bore (Shape A, Shape B, Shape K) DGEAHB DGEAHBB DGEAHBG DGEAHS | 12 | 10 | K | 6~8 | - | 12 | 14 | 9.5 | 14 | 30 | 20 (B=10) 18 (B=1) | 5 | M4 | 1.41 | - | | | | |
| | *13 | | | | | 13 | 15 | 10.5 | 15 | | | | | 2.83 | - | | | | |
| | 14 | | | | | 6~10 | 14 | 16 | 11.5 | | | | | 16 | 3.2 | 1.83 | | | |
| | *15 | | | | | | 15 | 17 | 12.5 | | | | | 17 | 3.58 | 2.04 | | | |
| | *16 | | | | | A | - | - | - | | | | | 16 | 18 | 13.5 | 18 | 3.97 | - |
| | *17 | | | | | | | | | | | | | 17 | 19 | 14.5 | 19 | 4.36 | - |
| | *18 | | 18 | 20 | 15.5 | | | | | | | | 20 | 4.76 | - | | | | |
| | *19 | | K | 6~12 | - | | | | | | | | - | 19 | 21 | 16.5 | 16 | 5.16 | - |
| | *20 | | | | | | | | | | | | | 20 | 22 | 17.5 | 16 | 5.57 | 3.18 |
| | 21 | | | | | | | | | | | | | 21 | 23 | 18.5 | 18 | 5.98 | 3.41 |
| | *22 | | | | | 22 | 24 | 19.5 | 18 | | | | | 6.41 | - | | | | |
| | *23 | | | | | 12 | 6~12 | 8N | - | | | | | 23 | 25 | 20.5 | 10 | 6.82 | - |
| | 24 | 24 | | | | | | | | 26 | 21.5 | 8 | | 7.24 | 4.13 | | | | |
| | *25 | 25 | 27 | 22.5 | 8 | | | | | 7.68 | - | | | | | | | | |
| | 26 | 26 | 28 | 23.5 | 22 | | | | | 8.12 | 4.64 | | | | | | | | |
| | *27 | 27 | 29 | 24.5 | 22 | | | | | 8.55 | - | | | | | | | | |
| | 28 | 28 | 30 | 25.5 | 24 | | | | | 9.02 | 5.14 | | | | | | | | |
| | *29 | 10 | 6~15 | 8N~12N | - | 29 | 31 | 26.5 | 26 | 9.42 | - | | | | | | | | |
| | 30 | | | | | 30 | 32 | 27.5 | 27 | 9.87 | 5.63 | | | | | | | | |
| | *32 | | | | | 8~18 | 10N~15N | - | - | 32 | 34 | 29.5 | 28 | 10.7 | 6.11 | | | | |
| | *34 | | | | | | | | | 34 | 36 | 31.5 | 28 | 11.69 | - | | | | |
| | 35 | | | | | | | | | 35 | 37 | 32.5 | 30 | 12.13 | 6.92 | | | | |
| | 36 | | | | | | | | | 36 | 38 | 33.5 | 30 | 12.52 | 7.14 | | | | |
| | 38 | | | | | | | | | 38 | 40 | 35.5 | 30 | 13.46 | 7.68 | | | | |
| | 40 | | | | | | | | | 40 | 42 | 37.5 | 30 | 14.31 | 8.17 | | | | |
| | *42 | | | | | A | 8~22 | 10N~17N | - | 42 | 44 | 39.5 | 44 | 15.24 | 8.7 | | | | |
| | 44 | | | | | | | | | 44 | 46 | 41.5 | 44 | 16.18 | - | | | | |
| | *45 | | | | | | | | | 45 | 47 | 42.5 | 44 | 16.66 | 9.51 | | | | |
| | *46 | | | | | | | | | 46 | 48 | 43.5 | 44 | 17.14 | - | | | | |
| | 48 | 48 | 50 | 45.5 | 44 | | | | | 18.04 | 10.3 | | | | | | | | |
| | 50 | 50 | 52 | 47.5 | 20 | | | | | 18.95 | 10.82 | | | | | | | | |
| | 52 | B | 8~34 | 10N~32N | - | 52 | 54 | 49.5 | 46 | 19.87 | 11.34 | | | | | | | | |
| 54 | 54 | | | | | 56 | 51.5 | 46 | 20.8 | 11.87 | | | | | | | | | |
| 55 | 55 | | | | | 57 | 52.5 | 46 | 21.32 | 12.16 | | | | | | | | | |
| 56 | 56 | | | | | 58 | 53.5 | 46 | 21.84 | 12.46 | | | | | | | | | |
| 58 | 58 | | | | | 60 | 55.5 | 46 | 22.69 | 12.95 | | | | | | | | | |
| 60 | 10 | | | | | 6~20 | 10N~32N | - | 60 | 62 | 57.5 | 10 | 23.64 | 13.49 | | | | | |
| 62 | | | | | | | | | 62 | 64 | 59.5 | 10 | 24.5 | 13.98 | | | | | |
| *64 | | | | | | | | | 10~38 | 10N~36N | - | - | 64 | 66 | 61.5 | 50 | 25.47 | 14.54 | |
| 65 | | | | | | | | | | | | | 65 | 67 | 62.5 | 50 | 25.9 | 14.78 | |
| 66 | | | | | | | | | | | | | 66 | 68 | 63.5 | 50 | 26.45 | 15.1 | |
| 68 | | | | | | | | | | | | | 68 | 70 | 65.5 | 50 | 27.44 | 15.66 | |
| 70 | | | | | | | | | | | | | 70 | 72 | 67.5 | 50 | 28.31 | 16.16 | |
| 72 | | 72 | 74 | 69.5 | 56 | | | | | | | | 29.19 | 16.66 | | | | | |
| *75 | | 10~44 | 10N~36N | - | - | | | | 75 | 77 | 72.5 | 60 | 30.63 | 17.48 | | | | | |
| 80 | | | | | | | | | 80 | 82 | 77.5 | 60 | 32.98 | 18.82 | | | | | |
| 84 | | | | | | | | | 10~48 | 12N~46N | - | - | 84 | 86 | 81.5 | 60 | 34.9 | 19.92 | |
| 85 | | | | | | | | | | | | | 85 | 87 | 82.5 | 60 | 35.35 | 20.17 | |
| 90 | 90 | | | | | 92 | 87.5 | 60 | | | | | 37.74 | 21.53 | | | | | |
| 95 | 95 | | | | | 97 | 92.5 | 60 | | | | | 40.15 | 22.91 | | | | | |
| 96 | 96 | 98 | 93.5 | 60 | 40.6 | 23.17 | | | | | | | | | | | | | |
| 100 | 100 | 102 | 97.5 | 70 | 42.59 | 24.31 | | | | | | | | | | | | | |
| *110 | 17~50 | 17N~48N | - | - | 110 | 112 | 107.5 | 70 | 47.11 | 26.88 | | | | | | | | | |
| 120 | | | | | 120 | 122 | 117.5 | 70 | 51.87 | 29.6 | | | | | | | | | |

■ * marked number of teeth is not available for stainless steel type (DGEAHS, DGEAS and DGEAKS).

Basic Specifications

- Heat Treatment - Not Provided
- Backlash - Provided
- Ground Tooth - Not Provided
- Shaft Bore Tolerance - H7
- Bearing - Not Provided
- Accuracy (Old JIS) - JIS B 1702 (Class 4)



As the Feed Mechanisms for thin workpieces



Spur Gear

Pressure Angle 20°, Module 1.0,

Shaft Bore Configurable Type



Standard Type

| Standard Type | | Number of Teeth | B | Gear Shape | Shaft Bore Dia. PH7 (1mm Increment) | | d Reference Dia. | D Tip Dia | G Root Dia | H | L | ℓ1 | ℓ2 | M (Coarse) | *1 Allowable Transmission Force (N · m) Bending Strength | | | |
|--|--------|--|------|------------|--------------------------------------|-------------------------|------------------|-----------|------------|-------|------|----------------------------|-------|---------------------------|--|--------|-------|------|
| Type | Module | | | | Straight Bore Straight Bore + Tap | Keyway, Keyway + Tap | | | | | | | | | S45C Equivalent | SUS304 | | |
| Straight Bore (Shape A, Shape B, Shape K) DGEAHB DGEAHBB DGEAHBG DGEAHS | 1 | *14 | 6 | K | 6~10 | - | 14 | 16 | 11.5 | 16 | 25 | 19 (B=6) 17 (B=8) | 4 | M4 | 1.92 | - | | |
| | | 15 | | | | | 15 | 17 | 12.5 | 17 | | | | | 2.15 | 1.23 | | |
| | | 16 | | | | | 16 | 18 | 13.5 | 18 | | | | | 2.38 | 1.36 | | |
| | | *17 | | | | | 17 | 19 | 14.5 | 19 | | | | | 2.62 | - | | |
| | | 18 | | 18 | 20 | 15.5 | 20 | 2.86 | 1.63 | | | | | | | | | |
| | | 19 | | 19 | 21 | 16.5 | 21 | 3.09 | 1.77 | | | | | | | | | |
| | | 20 | | 20 | 22 | 17.5 | 22 | 3.34 | 1.91 | | | | | | | | | |
| | | 21 | | 21 | 23 | 18.5 | 23 | 3.59 | 2.05 | | | | | | | | | |
| | | 22 | | 22 | 24 | 19.5 | 24 | 3.85 | 2.19 | | | | | | | | | |
| | | *23 | | 23 | 25 | 20.5 | 25 | 4.09 | - | | | | | | | | | |
| | | 24 | | 24 | 26 | 21.5 | 26 | 4.35 | 2.48 | | | | | | | | | |
| | | 25 | | 25 | 27 | 22.5 | 27 | 4.61 | 2.63 | | | | | | | | | |
| | | 26 | | 26 | 28 | 23.5 | 28 | 4.87 | 2.78 | | | | | | | | | |
| | | *27 | | 27 | 29 | 24.5 | 29 | 5.13 | - | | | | | | | | | |
| | | 28 | | 28 | 30 | 25.5 | 30 | 5.41 | 3.09 | | | | | | | | | |
| | | 29 | | 29 | 31 | 26.5 | 31 | 5.65 | 3.23 | | | | | | | | | |
| | | 30 | | 30 | 32 | 27.5 | 32 | 5.92 | 3.38 | | | | | | | | | |
| | | 32 | | 32 | 34 | 29.5 | 34 | 6.42 | 3.66 | | | | | | | | | |
| | | Straight Bore + Tap (Shape B, Shape K) DGEAB DGEABB DGEABG DGEAS | | 1 | *34 | 8 | A | 6~10 | 8N | 19 | 21 | 16.5 | 16 | 10 (B=6) 8 (B=8) | 4 | M4 | 6.42 | 3.66 |
| | | | | | 35 | | | | | 20 | 21.5 | 20 | 7.01 | | | | - | |
| 36 | 21 | | 22.5 | | 21 | | | | | 7.28 | 4.15 | | | | | | | |
| *38 | 22 | | 23.5 | | 22 | | | | | 7.51 | 4.29 | | | | | | | |
| 40 | 23 | | 24.5 | | 23 | | 8.08 | - | | | | | | | | | | |
| 42 | 24 | | 25.5 | | 24 | | 8.59 | 4.9 | | | | | | | | | | |
| *44 | 25 | | 26.5 | | 25 | | 9.14 | 5.22 | | | | | | | | | | |
| *45 | 26 | | 27.5 | | 26 | | 9.71 | - | | | | | | | | | | |
| *46 | 27 | | 28.5 | | 27 | | 10 | - | | | | | | | | | | |
| 48 | 28 | | 29.5 | | 28 | | 10.29 | - | | | | | | | | | | |
| 50 | 29 | | 30.5 | | 29 | | 10.83 | 6.18 | | | | | | | | | | |
| *52 | 30 | | 31.5 | | 30 | | 11.37 | 6.49 | | | | | | | | | | |
| 54 | 31 | | 32.5 | | 31 | | 11.92 | - | | | | | | | | | | |
| 55 | 32 | | 33.5 | | 32 | | 12.48 | 7.12 | | | | | | | | | | |
| 56 | 33 | | 34.5 | | 33 | | 12.79 | 7.3 | | | | | | | | | | |
| 58 | 34 | | 35.5 | | 34 | | 13.1 | 7.48 | | | | | | | | | | |
| 60 | 35 | | 36.5 | | 35 | | 13.61 | 7.77 | | | | | | | | | | |
| Keyway (Shape A) (●teeth or more) Keyway + Tap (Shape B) (●teeth or more) DGEAKB DGEAKBB DGEAKBG DGEAKS | 1 | | 62 | | 6 | | A | 8~20 | 8N~17N | 46 | 48 | 43.5 | 30 | 10 | 5 | M5 | 14.19 | 8.1 |
| | | | 64 | | | | | | | 48 | 45.5 | 30 | 14.7 | | | | 8.39 | |
| | | | 66 | | | | | | | 50 | 47.5 | 30 | 15.28 | | | | 8.72 | |
| | | 68 | 52 | 49.5 | | 30 | | | | 15.54 | 8.87 | | | | | | | |
| | | 70 | 54 | 51.5 | | 30 | 15.87 | 9.06 | | | | | | | | | | |
| | | 72 | 56 | 53.5 | | 30 | 16.47 | 9.4 | | | | | | | | | | |
| | | 75 | 58 | 55.5 | | 30 | 16.99 | 9.69 | | | | | | | | | | |
| | | 80 | 60 | 57.5 | | 30 | 17.51 | 9.99 | | | | | | | | | | |
| | | 84 | 62 | 59.5 | | 30 | 18.38 | 10.49 | | | | | | | | | | |
| | | 85 | 64 | 61.5 | | 30 | 19.79 | 11.29 | | | | | | | | | | |
| | | 90 | 66 | 63.5 | | 30 | 20.94 | 11.95 | | | | | | | | | | |
| | | 95 | 68 | 65.5 | | 30 | 22.21 | 12.1 | | | | | | | | | | |
| | | 96 | 70 | 67.5 | | 30 | 22.64 | 12.92 | | | | | | | | | | |
| | | 100 | 72 | 69.5 | | 30 | 24.09 | 13.75 | | | | | | | | | | |
| | | 110 | 75 | 72.5 | | 30 | 24.36 | 13.9 | | | | | | | | | | |
| | | 120 | 80 | 77.5 | | 30 | 25.56 | 14.58 | | | | | | | | | | |
| | | | 84 | 81.5 | | 30 | 28.27 | 16.13 | | | | | | | | | | |
| | | | 85 | 82.5 | | 30 | 31.12 | 17.76 | | | | | | | | | | |

■ * marked number of teeth is not available for stainless steel type (DGEAHS, DGEAS and DGEAKS).

ORDERING GUIDE

Part Number: **DGEAB1.0** - **25** - **12** - **B** - **8**
DGEAKB1.0 - **38** - **10** - **A** - **10N**
DGEAS1.0 - **18** - **6** - **K** - **10**

| Alterations Code | Set Screw KC90, KC120 | Tapped Hole Dimension TPC | Stepped Hole DHL, DHR | Both Ends Stepped Bore WDH |
|------------------|--|--|---|--|
| Spec. | KC90: Adds another set screw at 90° position. KC120: Adds another set screw at 120° position. ⊗ Not applicable to Shape A. ⊗ Not applicable to Straight Bore Type. | Changes the tapped hole dimension. Ordering Code: TPC4 ⊗ Not applicable to Shape A. ⊗ Not applicable to Straight Bore Type. ℓ1, ℓ2 > TPC/2 | Changes shaft bores to stepped bores. ⊗ Not applicable to Shape K. (Z: 1mm Increment, J: 0.1mm Increment) Ordering Code: DHL-Z20-J4.0 ⊗ Applicable to Straight Bore Type Only | Changes shaft bores to both ends stepped bore. ⊗ Not applicable to Shape K. (Q, R, S, T: 1mm Increment) Ordering Code: WDH-Q10-R10-S3-T3 ⊗ S, T ≥ 3 ⊗ Applicable to Straight Bore Type Only. |

| Alterations Code | Side Counterbored ZFC, ZTC | Side Slotted Hole LFC, LTC | Side Through Hole KFC, KTC | Side Tapped Hole QFC, QTC |
|------------------|--|--|--|--|
| Spec. | Machines counterbored holes on the side surface. (ZFC, ZTC: 1mm Increment) ⊗ P+U1+3≤ZFC(ZTC)≤G-U1-4 ⊗ Applicable to Shape A only. ⊗ Applicable to Standard Type only. [U Selection] U3, U4, U5, U6 Ordering Code: ZFC20-U3 | Machines slotted holes on the side surface (30°). (LFC, LTC: 1mm Increment) ⊗ P+C+4≤LFC(LTC)≤G-C-4 ⊗ Applicable to Shape A only. [M Selection] M3, M4, M5, M6 Ordering Code: LFC20-M3 | Machines through holes on the side surface. (KFC, KTC: 1mm Increment) K: 0.5mm Increment ⊗ Applicable to Shape A only. ⊗ P+K+4≤KFC(KTC)≤G-K-4 [K Selection] K3.0~K6.0 Ordering Code: KFC20-K3.5 | Machines tapped holes on the side surface of the gear. (QFC, QTC: 1mm Increment) ⊗ Applicable to Shape A only. ⊗ P+M+4≤QFC(QTC)≤G-M-4 [M Selection] M3, M4 [Ordering Code] QFC25-M3 ⊗ Tapped Hole Depth Mx1.5 (When B<Mx1.5, through) |

ORDERING GUIDE

Part Number: **DGEAB1.0** - **25** - **12** - **B** - **8** - **KC120**
DGEAHB1.0 - **40** - **6** - **A** - **10** - **KTC20-K4.0**