


# Spur Gears - Tooth Width, Hub Dimensions Configurable

Pressure Angle 20°, Module 0.5, 0.8, 1.0, 1.5, 2.0, 2.5, 3.0

Fixing Parts				Others		
Rotary Shaft	Cantilever Shaft	MechaLock	Parallel Key	Bearing with Housings	Bearing	Shaft Collar
P1-837	P1-901	P1-1521	P2-277	P1-947	P1-1017	P1-297
P1-900	P1-926	P1-1530	P2-282	P1-1014	P1-1049	P1-330

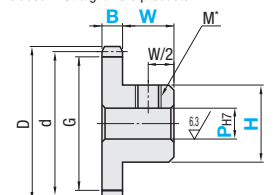
For products uncovered by the e-Catalog Standard, see P131.



RoHS 10

Type	Material	Surface Treatment	Accessory
Straight Bore GEFHB GEFBB GEFKB	S45C Equivalent	Black Oxide	Set Screw (SCM435, Black Oxide)
GEFHBG GEFBG GEFKBG		Electroless Nickel Plating	
GEFHS GEFBS GEFKBS	SUS304		Set Screw (SUS304)

Set Screw is not included in Straight Bore products.



Shaft Bore Specifications

Keyway Dimension Details P.1532  
Positioning of keyway and teeth is not fixed.

Tapped Hole Dimension List

Shaft Bore Dia. Ph7	M (Coarse)	Accessory: Set Screw
3-5	M3	M3x3
6-12	M4	M4x3
13-17	M5	M5x4
18-30	M6	M6x5
31-40	M8	M8x6

Accuracy Previous JIS B 1702 Class 4 (New JIS B 1702-1 Class 8 Equivalent)

## Module 0.5, 0.8, 1.0, 1.5

Part Number	Number of Teeth	B 1mm Increment	Shaft Bore Dia. Ph7 (1mm Increment)		Hub Increment		d Reference Dia.	D Tip Dia.	G Root Dia.	Unit Price											
			Straight Bore	Keyway + Tap	W	H				Straight Bore			Straight Bore + Tap			Keyway + Tap					
										GEFHB	GEFBB	GEFGB	GEFBS	GEFHBG	GEFBBG	GEFGBG	GEFBSG	GEFKB	GEFBBB	GEFKBG	GEFBSB
Straight Bore GEFHB GEFBB GEFHBG GEFBS	20	2-5	3-4	5	0-10	8-15	10	11	8.75												
Straight Bore + Tap GEFB GEFBB GEFBG GEFBS	20	2-5	3-6	5	0-10	8-15	12	13.5	10.75												
Keyway + Tap GEFKB GEFKBB GEFKBG GEFKBS	20	2-5	3-12	5	0-10	8-15	15	16	13.75												
Straight Bore	20	3-10	5-8	6	0-10	8-15	12	13.6	10												
Straight Bore + Tap	20	3-10	5-8	6.35	0-10	8-15	12.8	14.4	10.8												
Keyway + Tap	20	3-10	5-8	6.35	0-10	8-15	16	17.6	14												
Straight Bore	20	5-15	8N	8	0-15	8-15	20	22	17.5												
Straight Bore + Tap	20	5-15	8N-10N	8	0-15	8-15	22	24	19.5												
Keyway + Tap	20	5-15	8N-12N	8	0-15	8-15	30	32	27.5												
Straight Bore	20	10-20	6-12	8N-12N	0-20	8-15	24	27	20.25												
Straight Bore + Tap	20	10-20	6-12	8N-15N	0-20	8-15	37.5	40.5	33.75												
Keyway + Tap	20	10-20	6-12	8N-30N	0-20	8-15	54	57	50.25												
Straight Bore	20	10-20	12-40	12N-35N	0-20	8-15	90	93	86.25												
Straight Bore + Tap	20	10-20	12-40	12N-35N	0-20	8-15	105	108	101.25												
Keyway + Tap	20	10-20	12-40	12N-35N	0-20	8-15	120	123	116.25												

## Module 2.0, 2.5, 3.0

Part Number	Number of Teeth	B 1mm Increment	Shaft Bore Dia. Ph7 (1mm Increment)		Hub Increment		d Reference Dia.	D Tip Dia.	G Root Dia.	Unit Price											
			Straight Bore	Keyway + Tap	W	H				Straight Bore			Straight Bore + Tap			Keyway + Tap					
										GEFHB	GEFBB	GEFGB	GEFBS	GEFHBG	GEFBBG	GEFGBG	GEFBSG	GEFKB	GEFKBB	GEFKBG	GEFKBS
Straight Bore GEFHB GEFBB GEFHBG GEFBS	20	15-25	8-15	8N-12N	0-25	8-15	30	34	25												
Straight Bore + Tap GEFB GEFBB GEFBG GEFBS	20	15-25	8-20	8N-17N	0-25	8-20	32	36	27												
Keyway + Tap GEFKB GEFKBB GEFKBG GEFKBS	20	15-25	8-25	8N-20N	0-30	8-25	36	40	31												
Straight Bore	20	20-30	8-15	8N-12N	0-30	8-15	45	50	38.75												
Straight Bore + Tap	20	20-30	8-20	8N-17N	0-30	8-20	50	55	43.75												
Keyway + Tap	20	20-30	8-25	8N-20N	0-30	8-25	62.5	67.5	56.25												
Straight Bore	20	25-35	8-15	8N-12N	0-35	8-15	70	75	63.75												
Straight Bore + Tap	20	25-35	8-20	8N-20N	0-35	8-20	90	95	83.75												
Keyway + Tap	20	25-35	8-25	8N-25N	0-35	8-25	100	105	93.75												
Straight Bore	20	25-35	10-30	10N-30N	0-35	10-30	125	130	118.75												
Straight Bore + Tap	20	25-35	12-40	12N-35N	0-35	12-40	120	126	112.5												
Keyway + Tap	20	25-35	12-40	12N-35N	0-35	12-40	120	126	112.5												

- Shaft bore diameter 9N is not available for Keyway Bore + Tap. When specifying "Straight Bore + Tap" or "Keyway + Tap," make sure that the hub length satisfies the condition of "(W)-M>3."
- When the tooth width is smaller, the transmitting torque is smaller. Shaft bore diameter 6.35 is available for Straight Bore and Straight Bore + Tap.
- Specify 10K as the P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired. P1532.
- When requesting Shape A (no hub), specify W=0.
- When W=0, specification for H is not required. The "-" text on the above table means that any Shaft Bore Dia. is not selectable.
- For WH alterations, the H range requirements considered as Q and R = P must satisfy the condition of "Q + O ≤ H ≤ G - O, R + O ≤ H ≤ G - O." (O: Refer to the value in the specification table)
- For DHL/DHR alterations, the H range requirements considered as Z = P must satisfy the condition of "Z + O ≤ H ≤ G - O." (O: Refer to the value in the specification table)

Ordering Example

Part Number - Number of Teeth - B - P - W - H

GEFHB1.0 - 30 - 8 - 15 - W10 - H26

GEFKBG2.0 - 32 - 15 - 20N - W0

Alterations

Part Number - Number of Teeth - B - P - W - H - (KC90, KC120...etc.)

GEFBB1.5 - 30 - 20 - 8 - W15 - KC90

GEFHB1.0 - 40 - 8 - 10 - W0 - KTC20-K5.0

Alterations	Set Screw	Tapped Hole Dimension	Stepped Hole	Both Ends Stepped Bore
	Code	Code	Code	Code
	KC90, KC120	TPC	DHL, DHR	WDH
Spec.	KC90: Adds another set screw at 90° position. KC120: Adds another set screw at 120° position. Not applicable to Straight Bore Type.	Changes the tapped hole dimension. Ordering Code: TPC4 Only when W>0 Not applicable to Straight Bore Type.	Changes shaft bores to stepped bores. (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 hole. (Q, R, S, T: 1mm Increment) Ordering Code: WDH-Q10-R10-S5-T5 Applicable to Straight Bore Type Only.
		M3 M4 M4 M3 M5 M5 M4 M6 M6 M5 M8 M8 M6	• DHL P+2≤Z≤G-4 2≤J≤B-W-3	• Shape A (W=0) P+2≤Q, R≤G-4 S+T≤B-3 Shaft Bore Dia. P is general tolerance.

Alterations	Side Counterbored	Side Slotted Hole	Side Through Hole	Side Tapped Hole
	Code	Code	Code	Code
	ZFC, ZTC	LFC, LTC	KFC, KTC	QFC, QTC
Spec.	Machines counterbored holes on the side surface. (ZFC, ZTC: 1mm Increment) P+U+3≤ZFC(ZTC)≤G-U-4 Applicable only when W=0. Applicable to Module 1.0, 1.5, 2.0 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. Applicable to Module 1.0, 1.5, 2.0 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. Applicable to Module 1.0, 1.5, 2.0 only. 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)