


# Spur Gear

Pressure Angle 20°, Module 3.0, Shaft Bore Configurable Type

Fixing Parts				Others		
Rotary Shaft	Cantilever Shaft	MechaLock	Parallel Key	Bearing with Housings	Bearing	Shaft Collar
P.1-837	P.1-901	P.1-1521	P.2-277	P.1-947	P.1-1017	P.1-297
P.1-900	P.1-926	P.1-1530	P.2-282	P.1-1014	P.1-1049	P.1-330

For products uncovered by the e-Catalog Standard, see P.131.

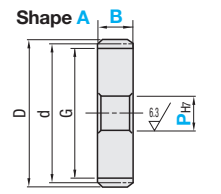


Type		Material	Surface Treatment	Accessory
Straight Bore	Keyway, Keyway + Tap			
GEAHB	GEAKB	S45C Equivalent	-	Set Screw (SCM435, Black Oxide)
GEAHBB	GEAKBB		Black Oxide	
GEAHBG	GEAKBG		Electroless Nickel Plating	
GEAHS	GEAKS	SUS304	-	Set Screw (SUS304)

Set Screw is not included in Un-tapped Type products.

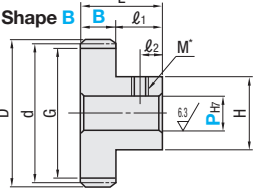
**Gear Shape**

Shape A B



**Shaft Bore Specifications (Selectable Gear Shapes)**

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



For Tap, Keyway Dimension Details, see P.1532.  
Positioning of keyway and teeth is not fixed.

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

RoHS10 Tapped shaft bores are not available for Shape A.

When desiring to fix the gear hub onto the shaft through MechaLock, see Keyless Type on P.1557. For configuring the tooth width / hub dimensions, see P.1551.

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)	Allowable Transmission Force (N * m) Bending Strength				
				Straight Bore	Keyway Keyway + Tap									S45C Equivalent	SUS304			
Straight Bore (Shape A, Shape B) GEAHB GEAHBB GEAHBG  Keyway (Shape A) Keyway + Tap (Shape B) GEAKB GEAKBB GEAKBG GEAKS	12	3	A B	8~17	8N~12N	36	42	28.5	27	48	18	9	M5	66.66	38.04			
	14					8~22	8N~16N	42	48					34.5	32	86.33	49.27	
	15					8~24	8N~19N	45	51					37.5	35	96.7	55.18	
	16					8~28	8N~23N	48	54					40.5	40	107.1	61.12	
	17							51	57					43.5	40	117.74	67.19	
	18					8~32	8N~27N	54	60					46.5	44	128.5	73.33	
	19					8~33	8N~28N	57	63					49.5	45	139.28	79.48	
	20					8~38	8N~33N	60	66					52.5	50	150.49	85.88	
	21					8~40	8N~35N	63	69					55.5	52	161.57	92.2	
	22					8~42	8N~36N	66	72					58.5	54	173.02	98.74	
	23					8~44	8N~37N	69	75					61.5	56	184.17	105.09	
	24					8~46	8N~39N	72	78					64.5	58	195.6	111.62	
	25					8~48	8N~40N	75	81					67.5	60	207.33	118.31	
	26					10~53	10N~44N	78	84					70.5	65	219.36	125.18	
	27							81	87					73.5	65	230.8	131.71	
	28					10~58	10N~47N	84	90					76.5	70	243.41	138.9	
	29							87	93					79.5	70	254.32	145.13	
	30					10~60	10N~50N	90	96					82.5	75	266.4	152.02	
	32							96	102					88.5	75	288.88	164.85	
	34					12~63	12N~50N	102	108					94.5	80	315.62	180.11	
	35							105	111					97.5	80	327.41	186.84	
	36							108	114					100.5	80	337.93	192.84	
	38					12~65	12N~50N	114	120					106.5	80	363.48	207.42	
	40							120	126					112.5	80	386.49	220.55	
	42					20~65	20N~50N	126	132					118.5	85	411.47	234.81	
	44							132	138					124.5	85	436.93	249.34	
	45					25~68	25N~50N	135	141					127.5	85	449.84	256.7	
	46							138	144					130.5	85	462.87	264.14	
	48					25~68	25N~50N	144	150					136.5	85	487.2	278.02	
	50							150	156					142.5	85	511.77	292.04	
	52					25~68	25N~50N	156	162					148.5	85	536.6	306.21	
	54							162	168					154.5	85	561.67	320.52	
	55					25~68	25N~50N	165	171					157.5	85	575.63	328.44	
	56							168	174					160.5	85	589.57	336.44	
	58					25~68	25N~50N	174	180					166.5	85	612.58	349.57	
	60							180	186					172.5	85	638.4	364.31	
	*62					25~70	25N~50N	186	192					178.5	90	661.55	-	
	*64							192	198					184.5	90	688.4	-	
	*66					25~70	25N~50N	195	201					187.5	90	709.05	-	
	*68							204	210					196.5	90	738.4	-	
	*70					210	216	202.5	90					769.95	-			
																	588.06	-

\* marked number of teeth is not available for GEAKS, GEAKS. The "-" text on the above table means that any Shaft Bore Dia. is not selectable.  
 Shaft bore diameter 9N is not available for Keyway 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 P.1532.  
 \*1. Allowable Transmission Forces in the table are reference values calculated with prescribed conditions. For conditions, see P.1534.

Ordering Example

Part Number	Number of Teeth	B	Gears Shape	P
GEAHB3.0	15	30	B	8
GEAKBG3.0	30	30	A	10N

Number of Teeth	Unit Price							
	Straight Bore				Keyway, Keyway + Tap			
	GEAHB	GEAHBB	GEAHBG	GEAHS	GEAKB	GEAKBB	GEAKBG	GEAKS
12								
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70								

Alterations

Part Number	Number of Teeth	B	Gears Shape	P
GEAHB3.0	15	30	B	8

Alterations

Code	Set Screw	Tapped Hole Dimension	Stepped Hole	Both Ends Stepped Bore
	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 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.	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) *S, T: 3 [Ordering Code] WDH-Q10-R10-S5-T5 *Applicable to Straight Bore Type Only.

Alterations

Code	Side Slotted Hole	Side Through Hole	Side Tapped Hole
	LFC, LTC	KFC, KTC	QFC, QTC
Spec.	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)