

Spur Gears

Pressure Angle 20°, Module 0.5

Feature: Spur gears with hardened teeth which provides excellent strength, abrasion resistance and high precision. For Rack Gears – Ground **P.1505**.

Spur Gears – Pressure Angle 20°, Module 0.5

Type		Material	Surface Treatment	Accessories
Straight Bore	Straight Bore + Tap			
GEAHBN	GEABN	1045 Carbon Steel or Equivalent	—	Set Screw (4137 Alloy Steel Black Oxide)
GEAHBB	GEABB		Black Oxide	
GEAHBG	GEABG		Electroless Nickel Plating	
GEAHB	GEAB	Free-Cutting Brass Bar	—	Set Screw (304 Stainless Steel)
GEAHBS	GEABS	304 Stainless Steel	—	

Gear Shape

K Shape

A Shape

B Shape

⊗ Set Screw is not included in Non-tapped Type products.

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

Shaft Bore Specifications

Straight Bore (Shape A / B / K)

Straight Bore + Tap (Shape B / K)

⊗ Shaft bores with set screws are not available for Shape A.

Part Number		Number of Teeth	B	Gears Shape	Shaft Bore Dia. P _{H7} 1 mm Inc.	d Reference Dia.	D Tip Dia.	G Root Dia.	H	L	ℓ ₁	ℓ ₂	M (Coarse)	*Allowable Transmission Force (N-m) Bending Strength									
Type	Module				Straight Bore Straight Bore + Tap									1045 Carbon Steel or Equivalent	304 Stainless Steel	Free-Cutting Brass Bar							
(Selectable Gear Shapes) Straight Bore (Shape A / Shape B / Shape K) GEAHBN GEAHBB GEAHBG GEAHB GEAHBS Straight Bore + Tap (Shape B / Shape K) GEABN GEABB GEABG GEAB GEABS	0.5	15	8	K	3-5	7.5	8.5	6.25	9	18	10	3	M3	0.72	0.41	0.16							
		16				8	9	6.75						0.79	0.45	0.17							
		17				8.5	9.5	7.25						0.87	0.50	—							
		18			9	10	7.75	0.95		0.54				0.21									
		19			3-6 / 6.35	9.5	10.5	8.25		1.03				0.59	—								
		20				10	11	8.75	11	1.11				0.64	0.24								
		21	3	A	3-6 / 6.35	10	11	8.75	8.5	8	5	2.5		0.42	0.24	0.09							
		22				10.5	11.5	9.25						0.45	0.26	—							
		23				11	12	9.75						0.48	0.27	—							
		24				11.5	12.5	10.25						0.51	0.29	—							
		25				12	13	10.75						0.54	0.31	0.12							
		26				12.5	13.5	11.25						0.57	0.33	0.13							
		27				13	14	11.75						0.61	0.35	0.13							
		28				13.5	14.5	12.25						0.64	0.36	—							
		29				14	15	12.75						0.67	0.38	0.15							
		30				14.5	15.5	13.25						0.70	0.40	—							
		31				15	16	13.75						0.74	0.42	0.16							
		32				16	17	14.75						0.80	0.46	0.17							
		33				16.5	17.5	15.25						0.84	0.48	—							
		34				17	18	15.75						0.87	0.50	—							
		35				17.5	18.5	16.25	10					0.90	0.51	0.20							
		36	2	B		18	19	16.75						0.94	0.53	0.20							
		37				19	20	17.75						0.67	0.38	—							
		38				19.5	20.5	18.25						0.69	0.39	—							
		39				20	21	18.75						0.71	0.41	0.16							
		40				21	22	19.75						0.76	0.43	0.17							
		41				22	23	20.75						0.80	0.46	—							
		42				22.5	23.5	21.25						0.83	0.47	0.18							
		43				23	24	21.75						0.85	0.49	—							
		44				24	25	22.75	7					0.90	0.51	0.20							
		45				24.5	25.5	23.25						0.92	0.52	—							
		46				25	26	23.75						0.94	0.54	0.21							
		47				25.5	26.5	24.25						0.96	0.55	—							
		48				26	27	24.75						0.99	0.56	0.22							
		49				27	28	25.75						1.03	0.59	—							
		50				27.5	28.5	26.25						1.06	0.60								
		51				28	29	26.75						1.08	0.62								
		52				28.5	29.5	27.25						1.10	0.63								
		53				29	30	27.75						1.13	0.64								
		54	2		5-16	29.5	30.5	28.25						20					1.15	0.65	—		
		55				30	31	29.25											1.17	0.67			
		56				31	32	30.25											1.20	0.70			
		57				32	33	31.25											1.24	0.74			
		58				33	34	32.25											1.27	0.77			

Ⓢ *marked number of teeth is not available for GEABS. Ⓢ Shaft Bore Diameter 6.35 is available.
* Allowable Transmission Forces in the table are reference values calculated based on conditions shown on **P.1469**.

Spur Gears

Pressure Angle 20°, Module 0.5, *continued*

Part Number		Number of Teeth	B	Gears Shape	Shaft Bore Dia. P _{H7} 1 mm Inc.	d Reference Dia.	D Tip Dia.	G Root Dia.	H	L	ℓ ₁	ℓ ₂	M (Coarse)	*Allowable Transmission Force (N-m) Bending Strength			
Type	Module													1045 Carbon Steel or Equivalent	304 Stainless Steel	Free-Cutting Brass Bar	
(Selectable Gear Shapes) Straight Bore (Shape A / Shape B / Shape K) GEAHBN GEAHBB GEAHBG GEAHB GEAHBS Straight Bore + Tap (Shape B / Shape K) GEABN GEABB GEABG GEAB GEABS	0.5	60	2	A B	5-6	30	31	28.75	20	7	5	2.5	M3	1.17	0.67	0.26	
		62				31	32	29.75						1.22	0.70	—	
		63				31.5	32.5	30.25						1.24	0.71		
		64				32	33	30.75						1.27	0.72		
		65				32.5	33.5	31.25						1.29	0.74		
		66				33	34	31.75						1.31	0.75	0.31	
		68				34	35	32.75						1.36	0.78		
		69				34.5	35.5	33.25						1.38	0.79		
		70				35	36	33.75						1.41	0.80	0.36	
		72				36	37	34.75						1.45	0.83		
		75				37.5	38.5	36.25						1.52	0.87		
		76				38	39	36.75						1.55	0.88		
		77				38.5	39.5	37.25						1.57	0.90		
		78				39	40	37.75						1.59	0.91	—	
		80				40	41	38.75						1.64	0.94		0.36
		81				40.5	41.5	39.25						1.66	0.95		—
		84				42	43	40.75						1.73	0.99		
		85				42.5	43.5	41.25						1.76	1.00		
		88				44	45	42.75						1.83	1.04		
		90				45	46	43.75						1.88	1.07		
		91				45.5	46.5	44.25						1.90	1.08		
		92				46	47	44.75						1.92	1.10		
		95				47.5	48.5	46.25						2.00	1.14		
		96				48	49	46.75						2.02	1.15		
		98				49	50	47.75						2.07	1.18		
		99				49.5	50.5	48.25						2.09	1.19	0.46	
100	50	51	48.75	2.11	1.21												
120	60	61	58.75	2.59	1.48	0.56											