



# Induction Hardened Spur Gears - Ground

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

■ **Features:** Spur gears with hardened teeth which provide excellent strength, abrasion resistance and high precision. For Rack Gears - Ground, see  **P.1529.**




Type			Material	Surface Treatment	Hardness	Accessory
Straight Bore	Straight Bore + Tap	Keyway, Keyway + Tap				
GEAHBH	GEABH	GEAKBH	S45C Equivalent	Black Oxide	Tooth Induction Hardened 51 - 55HRC (Depth 1mm or more)	Set Screw (SCM435 Black Oxide)

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

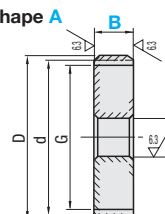
**Shaft Bore Specifications (Selectable Gear Shapes)**

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

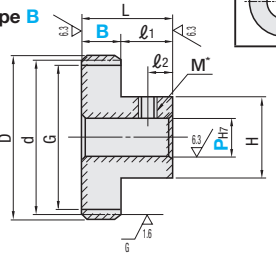
⚠ Keyway Dimension Details  **P.1498**  
⚠ Positioning of keyway and teeth is not fixed.

**Gear Shape**

**Shape A**



**Shape B**



⚠ Tapped shaft bores are not available for Shape A.

/// [shaded] part has no surface treatment.

⚠ End surface of Shape A may not be surface treated as Shape A is made by cutting the hub of Shape B.

**⚠ Tapped Hole Dimension List**

Shaft Bore Dia. P <sub>H7</sub>	M (Coarse)	Accessory Set Screw
6-12	M4	M4x3
13-17	M5	M5x4
18-30	M6	M6x5
31-45	M8	M8x6
46-56	M10	M10x8


Accuracy Previous JIS B 1702 Class 2  
(New JIS B 1702-1 Class 6 Equivalent)


⚠ Accuracy before shaft bore machining.

**RoHS 10**

Part Number	Type	Module	Number of Teeth	B	Gear Shape	Shaft Hole Dia P <sub>H7</sub> (1mm Increment)		d Reference Dia.	D Tip Dia.	G Root Dia.	H	L	ℓ <sub>1</sub>	ℓ <sub>2</sub>	*1. Allowable Transmission Force (N, m) Bending Strength	Unit Price 1 ~ 10 pc(s).		
						Straight Bore	Keyway Keyway + Tap									Straight Bore	Straight Bore + Tap	Keyway Keyway + Tap
						GEAHBH	GEABH									GEAKBH	GEABH	GEAKBH
Straight Bore (Shape A, Shape B) <b>GEAHBH</b>	1.0	8	18	A	B	6-10	-	18	20	15.5	15	18	10	5	4.76			
			20			6-11	8N, 10N	20	22	17.5	17				5.57			
			22			8-14	8N~12N	22	24	19.5	18				6.42			
			24					24	26	21.5	7.27							
			25					25	27	22.5	7.69							
			26					26	28	23.5	8.12							
			28			10-17	10N~15N	28	30	25.5	20				9.02			
			30					30	32	27.5	9.87							
			32					32	34	29.5	10.79							
			35					35	37	32.5	12.13							
			36			10-21	10N~18N	36	38	33.5	25				12.52			
			40					40	42	37.5	13.07							
			45					45	47	42.5	15.18							
			48					48	50	45.5	16.44							
			50			12-24	12N~18N	50	52	47.5	35				17.23			
			60					60	62	57.5	21.50							
70	70	72	67.5	25.74														
80	80	82	77.5	29.98														
100	100	102	97.5	38.72														
Straight Bore + Tap (Shape B) <b>GEABH</b>	1.5	15	15	A	B	10-12	10N	22.5	25.5	18.75	18	29	14	7	15.11			
			16			10-13	10N, 11N	24	27	20.25	19.5				16.74			
			18			10-15	10N~13N	27	30	23.25	22				20.08			
			20			10-16	10N~14N	30	33	26.25	24				23.51			
			24			12-19	12N~17N	36	39	32.25	28				30.56			
			25			12-21	12N~18N	37.5	40.5	33.75	30				32.39			
			26			12-22	12N~19N	39	42	35.25	32				31.16			
			28			15-25	15N~19N	42	45	38.25	36				34.58			
			30			15-26	15N~23N	45	48	41.25	38				37.84			
			32			15-28	15N~24N	48	51	44.25	40				41.03			
			35			15-29	15N~26N	52.5	55.5	48.75	42				46.51			
			36			15-31	15N~28N	54	57	50.25	45				48.00			
			40			15-35	15N~31N	60	63	56.25	50				54.90			
			45			18-35	18N~31N	67.5	70.5	63.75	50				63.90			
			48					72	75	68.25	50				69.20			
			50					75	78	71.25	50				72.69			
60	90	93	86.25	60	90.68													
70	105	108	101.25	60	108.59													

⚠ Shaft bore diameter 6.35 is available for Straight Bore and Straight Bore + Tap. ⚠ Shaft bore diameter 9N is not available for Keyway Bore + Tap. ⚠ For orders larger than indicated quantity, please request a quotation.

⚠ Specify 10K as P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired.  **P.1498**

\*1 Allowable Transmission Forces in the table are reference values calculated with prescribed conditions. For conditions, see  **P.1498.**