

Spur Gear

Pressure Angle 20°, Module 2.5 Shaft Bore Configurable Type

Type			Material	Surface Treatment	Accessory
Straight Bore	Keyway, Keyway + Tap				
GEAHB	GEAB	GEAKB	EN 1.1191 Equiv.	Black Oxide	Set Screw (EN 1.7220 Equiv., Black Oxide)
GEAHBB	GEABB	GEAKBB			

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

Gear Shape

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.

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

⚠ Tapped shaft bores are not available for Shape A.

RoHS10

For alterations on tooth width and hub dimensions, see **P.1513**.

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 EN 1.1191 Equiv.
				Straight Bore	Keyway, Keyway + Tap									
Straight Bore (Shape A, Shape B) GEAHB GEAHBB	12	2.5	A B	8-13	8N	30	35	23.75	23	37	12	6	M5	38.58
	14			8-15	8N-12N	35	40	28.75	25					49.96
	15			8-20	8N-15N	37.5	42.5	31.25	30					55.96
	16			8-22	8N-17N	40	45	33.75	32					61.98
	17			8-24	8N-19N	42.5	47.5	36.25	35					68.13
	18			8-26	8N-21N	45	50	38.75	38					74.36
	19			8-27	8N-22N	47.5	52.5	41.25	39					80.60
	20			8-28	8N-23N	50	55	43.75	40					87.09
	21			8-29	8N-25N	52.5	57.5	46.25	42					93.50
	22			8-30	8N-27N	55	60	48.75	44					100.13
	23			8-32	8N-28N	57.5	62.5	51.25	46					106.58
	24			8-33	8N-30N	60	65	53.75	48					113.19
	25			8-35	8N-31N	62.5	67.5	56.25	50					119.98
	26			8-38	8N-35N	65	70	58.75	55					126.94
	27			8-42	8N-38N	67.5	72.5	61.25	60					133.57
	28			8-44	8N-40N	70	75	63.75	65					140.86
	29			8-45	8N-41N	72.5	77.5	66.25	62					147.18
	30			8-48	8N-45N	75	80	68.75	65					154.16
	32			8-49	8N-46N	80	85	73.75	70					167.17
	34			10-49	10N-45N	85	90	78.75	75					182.65
	35			10-52	10N-48N	87.5	92.5	81.25	75					189.48
	36			10-54	10N-50N	90	95	83.75	75					195.56
	38			10-56	10N-52N	95	100	88.75	75					210.35
	40			10-58	10N-54N	100	105	93.75	80					223.66
	42			10-60	10N-56N	105	110	98.75	80					238.12
	44			10-62	10N-58N	110	115	103.75	80					252.85
	45			10-64	10N-60N	112.5	117.5	106.25	80					260.32
46	10-66	10N-62N	115	120	108.75	80	267.86							
48	10-68	10N-64N	120	125	113.75	80	281.94							
50	12-59	12N-50N	125	130	118.75	85	296.17							
52	12-61	12N-52N	130	135	123.75	85	310.53							
54	12-63	12N-54N	135	140	128.75	85	325.04							
55	15-59	15N-50N	137.5	142.5	131.25	85	333.08							
56	15-61	15N-52N	140	145	133.75	85	341.19							
58	15-63	15N-54N	145	150	138.75	85	354.50							
60	15-65	15N-56N	150	155	143.75	85	369.44							
62	15-67	15N-58N	155	160	148.75	85	382.84							
64	15-69	15N-60N	160	165	153.75	85	398.01							
65	15-71	15N-62N	162.5	167.5	156.25	85	404.75							
68	15-73	15N-64N	170	175	163.75	85	428.78							
70	15-75	15N-66N	175	180	168.75	85	442.41							
72	15-77	15N-68N	180	185	173.75	85	456.04							
75	15-79	15N-70N	187.5	192.5	181.25	85	478.65							
80	15-84	15N-75N	200	205	193.75	85	396.36							

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

Ordering Example

Part Number	Number of Teeth	B	Gears Shape	P
GEAB2.5	15	25	B	8
GEAKB2.5	30	25	A	10N

Number of Teeth	Unit Price				
	Straight Bore	Straight Bore + Tap	Keyway, Keyway + Tap		
	GEAHB	GEABB	GEAB	GEAKB	GEAKBB
12					
14					
15					
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72					
75					
80					

Alterations

Part Number	Number of Teeth	B	Gears Shape	P	(KC90, KC120, TPC, DHL, DHR, WDH, LFC, LTC, KFC, KTC, QFC, QTC)
GEAB2.5	15	25	B	8	TPC4
GEAHBB2.5	30	25	A	15	DHL - 230 - J10

Alterations Code	Set Screw KC90, KC120	Tapped Hole Dimension TPC	Stepped Hole DHL, DHR	Both Ends Stepped Bore WDH						
Spec.	<p>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.</p>	<p>Changes the tapped hole dimension. Ordering Code: TPC4 ⚠ Not applicable to Shape A. ⚠ Not applicable to Straight Bore Type.</p> <table border="1"> <tr><td>M</td><td>TPC</td></tr> <tr><td>M5</td><td>M4 M6</td></tr> <tr><td>M6</td><td>M5 M8</td></tr> </table>	M	TPC	M5	M4 M6	M6	M5 M8	<p>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.</p> <p>•DHL ⚠ Shape A: P+2<Z<G-4, 2<J<22 ⚠ Shape B: P+2<Z<H-4, 2<J<L1 ⚠ Shape B: P+2<Z<G-4, 2<J<L1-3</p>	<p>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.</p> <p>•Shape A ⚠ P+2<Q, R<G-4 ⚠ P+2<Q, R<H-4 ⚠ S+T<L-3 ⚠ Shaft Bore Dia. P is general tolerance.</p>
M	TPC									
M5	M4 M6									
M6	M5 M8									

Alterations Code	Side Slotted Hole LFC, LTC	Side Through Hole KFC, KTC	Side Tapped Hole QFC, QTC
Spec.	<p>Machines slotted holes on the side surface (30°). (LFC, LTC: 1mm Increment) ⚠ Applicable to Shape A only. ⚠ P+C+4<LFC(LTC)<G-C-4 M Selection: M3 M4 M5 M6 Ordering Code: LFC20-M3</p>	<p>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</p>	<p>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</p>