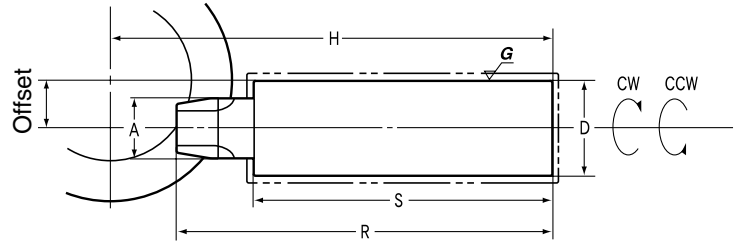




MHP High Ratio Hypoid Gears Modules 1~1.5



B8 Shape

Modules 1~1.5

Catalog No.	Direction of Spiral	Nominal module	Actual module	No. of teeth	Gear ratio	Pitch dia.	Face width	Offset	Shape	A	B	C		D	E	F
												H7	For shafts h7			
MHP1 -0453R	R	1	1.067	45	15	48	(6)	10	B9	48	35.1	12	30	14	7	
MHP1 -3045L	L	1	1.067	3	15	10.4	(6)	10	B8	10.3	—	—	22.1	—	—	
MHP1.5-0453R	R	1.5	1.733	45	15	78	(10)	18	B9	78	56.5	14	40	20	10	
MHP1.5-3045L	L	1.5	1.733	3	15	16.8	(10)	18	B8	17.6	—	—	31.1	—	—	
MHP1 -0603R	R	1	1.05	60	20	63	(8)	15	B9	63	46.4	12	34	16	8	
MHP1 -3060L	L	1	1.05	3	20	11.5	(8)	15	B8	11.7	—	—	26.1	—	—	
MHP1.5-0603R	R	1.5	1.633	60	20	98	(10)	22	B9	98	76.8	20	50	25	13	
MHP1.5-3060L	L	1.5	1.633	3	20	18.4	(10)	22	B8	15.7	—	—	36.1	—	—	
MHP1 -0602R	R	1	1.05	60	30	63	(8)	18	B9	63	46.4	12	34	16	8	
MHP1 -2060L	L	1	1.05	2	30	11.7	(8)	18	B8	12.8	—	—	22.1	—	—	
MHP1.5-0602R	R	1.5	1.633	60	30	98	(10)	28	B9	98	76.7	20	50	25	13	
MHP1.5-2060L	L	1.5	1.633	2	30	18.4	(10)	28	B8	17.7	—	—	31.1	—	—	
MHP1 -0451R	R	1	1.067	45	45	48	(6)	14	B9	48	34.9	12	30	14	7	
MHP1 -1045L	L	1	1.067	1	45	9.4	(6)	14	B8	10.1	—	—	20.1	—	—	
MHP1.5-0451R	R	1.5	1.733	45	45	78	(10)	25	B9	78	56	14	40	20	10	
MHP1.5-1045L	L	1.5	1.733	1	45	15.8	(10)	25	B8	18.3	—	—	26.1	—	—	
MHP1 -0601R	R	1	1.05	60	60	63	(8)	20	B9	63	46.3	12	34	16	8	
MHP1 -1060L	L	1	1.05	1	60	11.3	(8)	20	B8	12.9	—	—	22.1	—	—	
MHP1.5-0601R	R	1.5	1.633	60	60	98	(10)	30	B9	98	76.8	20	50	25	13	
MHP1.5-1060L	L	1.5	1.633	1	60	17.8	(10)	30	B8	17.7	—	—	31.1	—	—	
MHP1 -0901R	R	1	1.089	90	90	98	(10)	32	B9	98	76.2	20	50	25	13	
MHP1 -1090L	L	1	1.089	1	90	16.2	(10)	32	B8	15.7	—	—	31.1	—	—	
MHP1 -1201R	R	1	0.817	120	120	98	(10)	32	B9	98	76.4	20	50	25	13	
MHP1 -1120L	L	1	0.817	1	120	15.4	(10)	32	B8	13.4	—	—	31.1	—	—	
MHP1 -1801R	R	1	1	180	180	180	(15)	60	B9	180	148.2	25	70	35	18	
MHP1 -1180L	L	1	1	1	180	28.2	(15)	60	B8	22.4	—	—	42.1	—	—	
MHP1 -2001R	R	1	1	200	200	200	(18)	65	B9	200	162.4	25	70	35	18	
MHP1 -1200L	L	1	1	1	200	30.7	(18)	65	B8	21.5	—	—	42.1	—	—	

Twist direction and offset position

The hypoid-gear engagement position is dependent on the twist direction of the pinion thread.

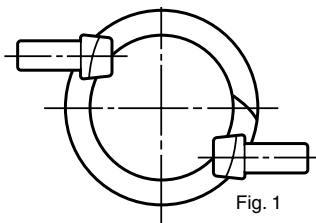


Fig. 1

Fig. 1: Below center

The engagement position with the left-hand pinion is called the below center.

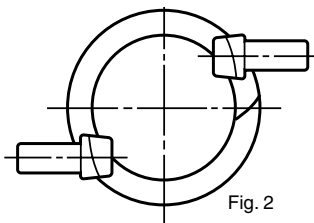
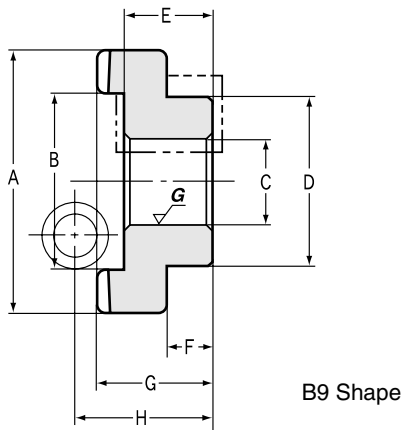


Fig. 2

Fig. 2: Above Center

The engagement position with the right-hand thread pinion is called the above center.

NOTE 3: KHK stock Hypoid Gears are available in Below Center type (Fig. 1) only. Above Center type (Fig. 2) is unavailable.



Specifications

Precision grade	JIS B 1704 grade 3	Tooth hardness	60~63HRC
Gear teeth	Gleason	Surface treatment	—
Pressure angle	20°	Tooth surface finish	Cut
Material	SCM415	Datum reference surface for gear cutting	Bore (Shaft if pinion)
Heat treatment	Carburizing <small>NOTE 4</small>	Secondary Operations	Possible except tooth area

NOTE 4: The areas marked with ---- on the diagram are masked during the carburizing and can be modified, even though the hardness is somewhat higher.

G	H	S	R	Radial load coefficient <small>NOTE 1</small>		Thrust load coefficient <small>NOTE 1</small>		Allowable torque (N·m) <small>NOTE 2</small>	Allowable torque (kgf·m)	Backlash (mm)	Weight (kgf)	Catalog No.
				CW	CCW	CW	CCW					
16.3	19	—	—	48.48	- 37.67	13	31.74	10.3	(1.05)	0.05~0.15	0.15	MHP1 -0453R MHP1 -3045L
—	127	94	113	147.3	523.74	969.92	- 831.16					
23.7	28	—	—	26.78	- 18.67	8.98	21.19	41.19	(4.2)	0.1 ~0.2	0.5	MHP1.5-0453R MHP1.5-3045L
—	170	116	148	100.09	338.45	566.72	- 466.63					
18.1	21	—	—	33.88	- 26.2	10.11	23.73	23.34	(2.38)	0.05~0.15	0.29	MHP1 -0603R MHP1 -3060L
—	142	102	125	159.43	502.91	956.55	- 829.74					
28.7	33	—	—	20.44	- 16.54	7.15	13.95	82.38	(8.4)	0.1 ~0.2	0.94	MHP1.5-0603R MHP1.5-3060L
—	199	135	168	119.32	194.45	577.56	- 511.77					
17.8	21	—	—	33.59	- 24.15	8.21	24.77	24.12	(2.46)	0.05~0.15	0.29	MHP1 -0602R MHP1 -2060L
—	134	94	120	186.59	784.31	1461.23	- 1248.6					
28.2	33	—	—	20.39	- 15.29	5.96	14.75	87.28	(8.9)	0.1 ~0.2	0.94	MHP1.5-0602R MHP1.5-2060L
—	175	116	149	142.71	466.2	899.1	- 782.21					
16.5	19	—	—	48.04	- 35.58	11.13	34.11	11.28	(1.15)	0.05~0.15	0.16	MHP1 -0451R MHP1 -1045L
—	115	85	104	400.81	1579.79	3014.6	- 2605.26					
23.9	28	—	—	26.36	- 16.04	6.88	22.02	46.58	(4.75)	0.1 ~0.2	0.5	MHP1.5-0451R MHP1.5-1045L
—	152	102	138	233.59	1034.08	1755.84	- 1439.58					
17.9	21	—	—	33.34	- 23.12	7.41	25.14	25.3	(2.58)	0.05~0.15	0.29	MHP1 -0601R MHP1 -1060L
—	134	94	122	357.61	1564.81	2936.72	- 2514.09					
28.2	33	—	—	22.63	- 17.19	5.82	15.81	93.95	(9.58)	0.1 ~0.2	0.94	MHP1.5-0601R MHP1.5-1060L
—	175	116	151	303.06	974.4	1912.11	- 1675.65					
28.8	33	—	—	21.08	- 15.72	5.71	15.17	71.39	(7.28)	0.05~0.15	0.94	MHP1 -0901R MHP1 -1090L
—	170	116	149	464.7	1404.28	2777.98	- 2443.73					
29.3	33	—	—	21.17	- 16.46	6.39	14.76	51.78	(5.28)	0.03~0.1	0.94	MHP1 -1201R MHP1 -1120L
—	170	116	149	720.78	1811.47	3718.13	- 3326.46					
40.1	47	—	—	11.69	- 9.25	3.53	7.96	259.88	(26.5)	0.05~0.15	3.99	MHP1 -1801R MHP1 -1180L
—	242	154	200	614.04	1458.9	3026.67	- 2721.83					
40.6	47	—	—	10.77	- 8.9	3.58	7.05	333.43	(34)	0.05~0.15	4.76	MHP1 -2001R MHP1 -1200L
—	252	154	205	695.62	1430.75	3074.35	- 2808.83					

NOTE 1: Factors to be used for calculating radial and thrust loads, CW and CCW stand for clockwise and counterclockwise rotation, respectively. See B8 Shape above. A plus sign means that two gears in a set are apart from each other when load is applied. A minus sign means that they approach each other when load is applied. For the method of calculation, see "How to determine the radial and thrust loads" on page 232.

NOTE 2: The allowable torques are obtained from the results of experimentation with the pinion at 600 min⁻¹ lubricated with Kingstar SG-O (NIHON GREASE).