



PM Plastic Miter Gears

Module 1 ~ 4

PM

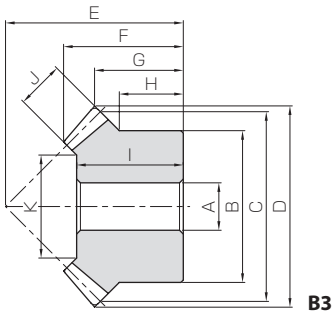
Plastic Miter Gears

Additional Products



Specifications	
Precision grade	JIS B 1704 : 1978 grade 4 *
Gear teeth	Gleason
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	(115 ~ 120HRR)

* The precision grade of this product is equivalent to the value shown in the table.



Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length	Hub width
					A	B						
PM1-20	1	m1	20	B3	6	16	20	21.41	20	13.95	10.71	8
PM1.25-20		m1.25	20	B3	8	22	25	26.77	23	15.27	11.38	9
PM1.5-20		m1.5	20	B3	8	26	30	32.12	30	21.24	16.06	13
PM2-20		m2	20	B3	10	34	40	42.83	37	24.89	18.41	14
PM2.5-20		m2.5	20	B3	12	42	50	53.54	48	32.54	24.77	19
PM3-20	1	m3	20	B3	14	50	60	64.24	58	39.84	30.12	23
PM3.5-20		m3.5	20	B3	20	60	70	74.95	65	44.13	32.47	25
PM4-20		m4	20	B3	20	64	80	85.66	75	50.78	37.83	27
PM1-25	1	m1	25	B3	6	20	25	26.41	23	15.16	11.21	8
PM1.25-25		m1.25	25	B3	8	25	31.25	33.02	28	17.88	13.26	9.25
PM1.5-25		m1.5	25	B3	8	30	37.5	39.62	34	22.25	16.31	11.5
PM2-25		m2	25	B3	10	40	50	52.83	40	24.33	16.41	10
PM2.5-25		m2.5	25	B3	14	50	62.5	66.04	50	30.41	20.52	12.5
PM3-25	1	m3	25	B3	15	60	75	79.24	60	37.81	24.62	15
PM1-30		m1	30	B3	8	24	30	31.41	28	17.71	13.71	10
PM1.5-30		m1.5			10	36	45	47.12	43	28.24	21.56	16
PM2-30		m2			12	45	60	62.83	50	29.43	21.41	12.5
PM2.5-30		m2.5			16	60	75	78.54	62	36.28	26.27	17
PM3-30		m3			20	70	90	94.24	75	45.47	32.12	20

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in our technical reference book (Page 101).
 - ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 272 for more details.
 - ③ Dimensions of the outside diameter, the overall length and crown to back length are all theoretical values, and some differences will occur due to the corner chamfering of the gear tips.
 - ④ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate them with steel gears.



DM Injection Molded Miter Gears

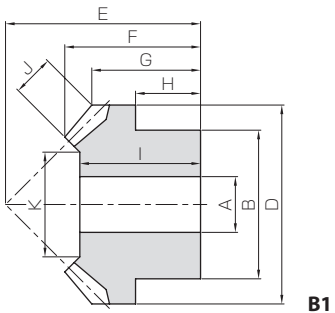
Module 0.5 ~ 1.5

DM

Injection Molded Miter Gears



Specifications	
Precision grade	JIS B 1704 : 1978 grade 6
Gear teeth	Gleason
Pressure angle	20°
Material	Duracon (M90-44)
Heat treatment	—
Tooth hardness	(110 ~ 120HRR)



Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length
					A	B					
DM0.5-20	1	m0.5	20	B1	3	8	10	10.71	11	7.97	6.35
DM0.8-20		m0.8	20	B1	5	12	16	17.13	16	10.83	8.56
DM1-20		m1	20	B1	6	16	20	21.41	21	14.62	11.71
DM1.5-20		m1.5	20	B1	8	20	30	32.12	30	20.59	16.06

- [Caution on Product Characteristics]
- ① The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 272 for more details.
 - ② The bore tolerance is generally -0.05 to -0.3 but may be + values at the central portion of the hole.
 - ③ To find the dimensional tolerances of these gears, please see the Dimensional Tolerance Table.



The table shows a series of standard metal bushings that can be pressed into standard Injection Molded Gears. They can be used as bearing metal on idler gears or to reduce the bore of the gears.

For details on bushings, please see Page 300.

Hub width	Length of bore	Face width	Holding surface dia.	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (g)	Catalog No.
H	I	J	K	Bending strength	Bending strength			
4	7	2.5	4.93	0.082	0.0083	0 ~ 0.30	0.57	DM0.5-20
5	10	3.5	10.1	0.31	0.032	0 ~ 0.48	1.93	DM0.8-20
7	13	4.5	11.27	0.54	0.055	0 ~ 0.60	4.28	DM1-20
10	19	7	18.2	0.96	0.098	0 ~ 0.60	11.8	DM1.5-20

- [Caution on Secondary Operations]
- ① Avoid performing secondary operations as reworking the material may expose air bubbles (voids).

Length of bore	Face width	Holding surface dia.	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (g)	Catalog No.
			Bending strength	Surface durability	Bending strength	Surface durability			
12	5	9.86	0.22	—	0.022	—	0~0.23	2.77	PM1-20
13	6	13.03	0.42	—	0.043	—	0~0.24	5.31	PM1.25-20
19	8	15.37	0.76	—	0.077	—	0~0.25	11.0	PM1.5-20
22	10	21.72	1.74	—	0.18	—	0~0.26	22.5	PM2-20
29	12	28.06	3.34	—	0.34	—	0~0.27	45.9	PM2.5-20
35	15	31.57	5.89	—	0.60	—	0~0.28	79.8	PM3-20
40	18	39.09	9.47	—	0.97	—	0~0.30	121	PM3.5-20
45	20	43.43	14.0	—	1.42	—	0~0.32	170	PM4-20
14	6	15.03	0.36	—	0.036	—	0~0.23	5.13	PM1-25
16	7	18.7	0.67	—	0.068	—	0~0.24	9.27	PM1.25-25
19	9	19.54	1.20	—	0.12	—	0~0.25	17.0	PM1.5-25
20	12	26.06	2.84	—	0.29	—	0~0.26	32.7	PM2-25
26	15	34.57	5.55	—	0.57	—	0~0.27	63.9	PM2.5-25
32	20	37.43	10.0	—	1.02	—	0~0.28	115	PM3-25
16	6	19.03	0.48	—	0.049	—	0.13~0.23	8.44	PM1-30
25	10	25.72	1.74	—	0.18	—	0.15~0.25	30.9	PM1.5-30
25	12	36.06	3.88	—	0.40	—	0.16~0.26	54.5	PM2-30
32	15	47.57	7.57	—	0.77	—	0.17~0.27	113	PM2.5-30
40	20	53.43	13.9	—	1.42	—	0.18~0.28	196	PM3-30

- [Caution on Secondary Operations]
- ① Please read "Caution on Performing Secondary Operations" (Page 274) when performing modifications and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.
 - ② Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

■ Dimensional tolerance table (Unit : mm)

Range	Tolerance
below 3 mm	± 0.20
3 up to 6 mm	± 0.25
6 up to 10 mm	± 0.30
10 up to 18 mm	± 0.35
18 up to 30 mm	± 0.40
30 mm up	± 0.50

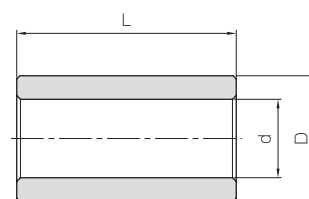
**BB**

Sintered Metal Bushings

Sintered Metal Bushings



The table shows a series of standard metal bushings that can be pressed into standard Injection Molded Gears. They can be used as bearing metal on idler gears or to reduce the bore of the gears.

**T8**

Catalog No.	I.D. of bushing	O.D. of bushing	Total Length	Products that can use the bushing
	$d \begin{smallmatrix} +0.02 \\ 0 \end{smallmatrix}$	$D \begin{smallmatrix} +0.02 \\ -0.01 \end{smallmatrix}$	$L \begin{smallmatrix} 0 \\ -0.3 \end{smallmatrix}$	
BB30507	3	5	7	DM0.8
BB30608	3	6	8	DM1
BB40609	4	6	9	DM1
BB50814	5	8	14	DM1.5

Material : Oil impregnated sintered bronze.

Spur
GearsHelical
GearsInternal
Gears

Racks

CP Racks
& PinionsMiter
GearsBevel
GearsScrew
GearsWorm
Gear PairsBevel
GearboxesOther
Products