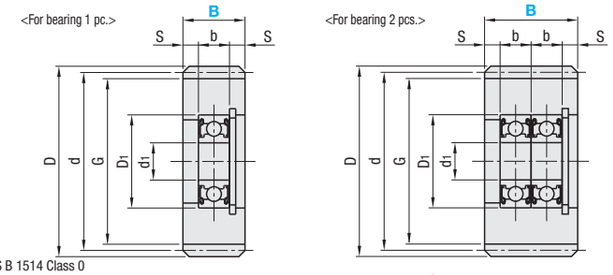
Spur Gears - Bearing Built-In

Pressure Angle 20°, Module 1.0, 1.5, 2.0

Features: Bearing built-in spur gears can be used for reversing rotations and synchronizing.

Type	Material: Main Body	Material: Bearing	Surface Treatment
GEABD	S45C Equivalent	Steel	-
GEABDB			Black Oxide
GEABDG			Electroless Nickel Plating
GEABDM	MC Nylon		-



* Bearing Accuracy: JIS B 1514 Class 0
Bearings are press-fit.

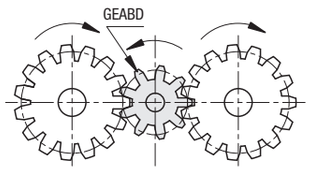
For Shafting, refer to cantilever shafts. (P. 883 ~ 906)

Part Number Type	Module	Number of Teeth	B	d1	d Reference Dia.	D Tip Dia.	G Root Dia.	GEABD, GEABDB, GEABDG Bearing Number	D1	b	S	GEABDM Bearing Number	D1	b	S	Unit Price GEABD	GEABDB	GEABDG	GEABDM
GEABD GEABDB GEABDG GEABDM	1.0	20	12	5	20	22	17.5	695ZZx1	13	4	4	-	-	-	-				-
		24		8	24	26	21.5	688ZZx1	16	5	3.5	-	-	-	-				-
		25		8	25	27	22.5	698ZZx1	19	6	3	678ZZx1	12	3.5	4.25				
		30		10	30	32	27.5	6900ZZx1	22	6	3	6700ZZx1	15	4	4				
		35		10	35	37	32.5	6900ZZx1	22	6	3	6900ZZx1	22	6	3				
		40		12	40	42	37.5	6901ZZx1	24	6	3	6901ZZx1	24	6	3				
		48		12	48	50	45.5	6901ZZx1	24	6	3	6901ZZx1	24	6	3				
		50		12	50	52	47.5	6901ZZx1	24	6	3	6901ZZx1	24	6	3				
		60		12	60	62	57.5	6901ZZx1	24	6	3	6901ZZx1	24	6	3				
	1.5	15	15	5	22.5	25.5	18.75	695ZZx2	13	4	3.5	-	-	-	-				-
		16		8	24	27	20.25	688ZZx1	16	5	5	-	-	-	-				-
		20		10	30	33	26.25	6900ZZx1	22	6	4.5	6700ZZx2	15	4	3.5				
		24		10	36	39	32.25	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5				
		25		10	37.5	40.5	33.75	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5				
		26		10	39	42	35.25	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5				
		28		12	42	45	38.25	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5				
		30		12	45	48	41.25	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5				
		40		12	60	63	56.25	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5				
		48		15	72	75	68.25	6002ZZx1	32	9	3	6002ZZx1	32	9	3				
		50		15	75	78	71.25	6002ZZx1	32	9	3	6002ZZx1	32	9	3				
		60		15	90	93	86.25	6002ZZx1	32	9	3	6002ZZx1	32	9	3				
	2.0	15	20	8	30	34	25.5	698ZZx2	19	6	4	678ZZx2	12	3.5	6.5				
		20		10	40	44	35.5	6200ZZx1	30	9	5.5	6900ZZx2	22	6	4				
		24		12	48	52	43.5	6201ZZx1	32	10	5	6201ZZx1	32	10	5				
		25		12	50	54	45.5	6201ZZx1	32	10	5	6201ZZx1	32	10	5				
		30		15	60	64	55.5	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5				
		32		15	64	68	59.5	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5				
		36		15	72	76	67.5	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5				
		40		15	80	84	75.5	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5				
		48		20	96	100	91.5	6004ZZx1	42	12	4	6004ZZx1	42	12	4				
		50		20	100	104	95.5	6004ZZx1	42	12	4	6004ZZx1	42	12	4				
		60		25	120	124	115.5	6005ZZx1	47	12	4	6005ZZx1	47	12	4				

Ordering Example

Part Number	-	Number of Teeth	-	B
GEABD1.0	-	20	-	12

Example



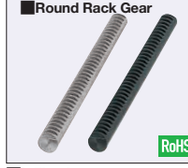
Insert the Bearing Built-in Gear between two gears to synchronize rotation direction.

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Round Rack Gears / Worm / Worm Wheel

L Fixed and Configurable, Pressure Angle 20°

Round Rack Gear



Type: L Fixed	Type: L Configurable	Material	Surface Treatment
RGMA	RGMAL	S45C Equivalent	Black Oxide
RGMAS	RGMASL	SUS303	-

Accuracy: Accumulated Pitch Error (μm)

Module	Nominal, Overall Length L ~100	101~300	301~500
0.5~1.5	54 (76)	65 (92)	72 (101)
2.0~3.0	62 (86)	73 (102)	80 (112)

Values in ( ) are for RGMAS and RGMASL.

L Fixed

Part Number Type	Module	Nominal	Effective Number of Teeth (Z)	D (h9)	(L)	h	Unit Price
RGMA (S45C)	0.5	300	192	8	301.59	7.5	
	0.8	300	120			7.2	
	1.0	300	95	10	298.45	9	
		500	159		499.51		
	1.5	300	63	15	296.88	13.5	
		500	106		499.51		
	2.0	300	47	20	295.31	18	
		500	79		496.37		
	2.5	300	38	25	298.45	22.5	
		500	63		494.80		
	3.0	300	31	30	292.17	27	
		500	53		499.51		
RGMAS (SUS303)	0.5	300	192	8	301.59	7.5	
	0.8	300	120			7.2	
	1.0	300	95	10	298.45	9	
		500	159		499.51		
	1.5	300	63	15	296.88	13.5	
		500	106		499.51		
	2.0	300	47	20	295.31	18	
		500	79		496.37		
	2.5	300	38	25	298.45	22.5	
		500	63		494.80		
	3.0	300	31	30	292.17	27	
		500	53		499.51		

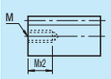
L Configurable

Part Number Type	Module	Overall Length L 1mm Increment	D (h9)	h	Unit Price L50~99	L100~199	L200~300	L301~500
RGMAL (S45C)	0.5	50~300	8	7.5				-
	0.8			7.2				
	1.0	50~500	10	9				
	1.5		15	13.5				
	2.0		20	18				
	2.5		25	22.5				
	3.0		30	27				
RGMASL (SUS303)	0.5	50~300	8	7.5				-
	0.8			7.2				
	1.0	50~500	10	9				
	1.5		15	13.5				
	2.0		20	18				
	2.5		25	22.5				
	3.0		30	27				

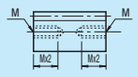
Ordering Example

Part Number	-	Nominal Length L
RGMA1.0	-	500
RGMAL0.8	-	205

Alterations	One End Tapped	Both Ends Tapped
Code	MC	WMC
Spec.	Ordering Code MC5	Ordering Code WMC5



Module	M Selection
0.5	3 4 5
0.8	3
1.0	4 5
1.5~3.0	4 5 6



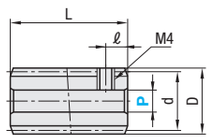
Module	M Selection
0.5	3 4 5
0.8	3
1.0	4 5
1.5~3.0	4 5 6

Alterations

Part Number	-	Nominal Length L	-	(MC, WMC)
RGMA1.0	-	500	-	MC5

Worm

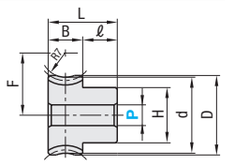
WGEAU



M Material: S45C Equivalent
H Tooth Surface Hardness: 12HRC or less
S Surface Treatment: Black Oxide
A Accessory: Set Screw M4
Accuracy Grade: JIS B 1702 Class 4 Equivalent (Tooth Surface Finish: Rolled)

Worm Wheel

WGEAH



M Material: Phosphor Bronze (CAC502)
Accuracy Grade: JIS B 1702 Class 4 Equivalent (Tooth Surface Finish: Machined)

Worm

Part Number Type	Module	Number of Starts	Shaft Bore Dia. PH7 Straight Bore + Tap	Twisting Direction	Advance Angle	d	D	L	ℓ	Unit Price 1 ~ 5 pc(s).
WGEAU	0.8	1	6	R (Right)	3°17′	14	15.6	30	5	
		2	6		6°34′					
	1.0	1	6		3°35′	16	18	32	5	
		2	6		7°11′					

Worm Wheel

For orders larger than indicated quantity, please request a quotation.

Part Number Type	Module	Number of Teeth	Number of Starts	Shaft Bore Dia. PH7 Straight Bore	Twisting Direction	d	D	B	H	L	ℓ	F Engagement Center Distance	Allowable Torque (N·m) Tooth Surface Strength	Backlash (mm)	Reduction Ratio	Unit Price 1 ~ 5 pc(s).
WGEAH	0.8	20	2	5	R (Right)	16.11	17.6	9	12	18	9	15	0.86	0.04~022	1/10	
		30	1	5		24.04	25.6		18			19	1.89		1/30	
			2			24.16	25.6		18			19	1.87		1/15	
		40	1	6		32.05	33.6		20			23	3.24		1/40	
		50	1	8		40.06	41.6		25			27	4.90		1/50	
	1.0	20	1	6		20.05	23	10	16	20	10	18	1.58	0.06~0.24	1/20	
			2			20.16	23		16			18	1.54		1/10	
		30	1	6		30.07	33		20			23	3.38		1/30	
			2			30.24	33		20			23	3.35		1/15	
		40	1	8		40.08	43		26			28	5.79		1/40	
		50	1	8		50.10	53		30			33	8.76		1/50	

For orders larger than indicated quantity, please request a quotation.

Ordering Example

Part Number	-	Number of Teeth	-	Number of Starts	-	Shaft Bore Dia. P	-	Twisting Direction
WGEAU1.0			-	1	-	6	-	R
WGEAH1.0	-	20	-	2	-	6	-	R

Datum Section of Gears: Normal to tooth / **Datum Plane for Gear Cutting:** Bore

Cautions

- As high thrust load is applied to worm, be sure to fix it tightly when attaching to shaft.
- Avoid using with the worm gear pushed against the wheel or axially offset condition.

As worm wheels are modified according to F (engagement center distance), spiral bevel gears from different manufacturers may not mesh correctly.