




Spur Gears Bearing Built-in Type

-Pressure Angle 20° Module 1.0/1.5/2.0-

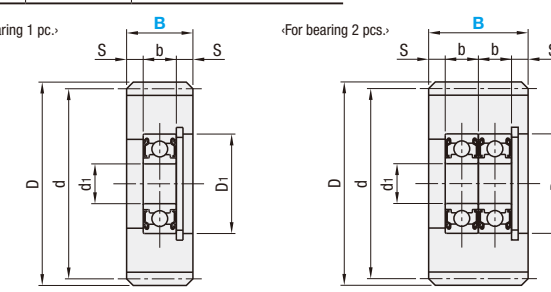
CAD Data

Features: Bearing integrated spur gears can be used for reversing rotations and synchronizing.

RoHS



Type	Material		Surface Treatment
	Main Body	Bearings	
GEABD	EN 1.1191	Steel	-
GEABDB	Equivalent		Black Oxide
GEABDG			Electroless Nickel Plating
GEABDM	MC Nylon		-



-For bearing 1 pc.-

-For bearing 2 pcs.-

*Bearing Accuracy ABEC 1
ⓈBearings are press-fit

ⓈFor shafts for idler gears, refer to cantilever shafts. (P.795-818)

Part Number	Module	No. of Teeth	B	d _t	d	D	GEABD / GEABDB / GEABDG			GEABDM				€ Unit Price					
							Bearing No.	D ₁	b	S	Bearing No.	D ₁	b	S	GEABD	GEABDB	GEABDG	GEABDM	
1.0	12	15	3	15	17	693ZZx1	8	4	4	-	-	-	-	18,60	20,10	21,50	-		
		20	5	20	22	695ZZx1	13	4	4	-	-	-	-	20,60	22,50	24,40	-		
		24	8	24	26	688ZZx1	16	5	3.5	-	-	-	-	21,00	23,00	25,00	-		
		25	8	25	27	698ZZx1	19	6	3	678ZZx1	12	3.5	4.25	21,20	23,10	25,10	15,40		
		30	10	30	32	690ZZx1	22	6	3	6700ZZx1	15	4	4	27,10	29,40	31,60	18,50		
		35	10	35	37	690ZZx1	22	6	3	6900ZZx1	22	6	3	27,70	30,40	33,10	19,80		
		40	12	40	42	690ZZx1	24	6	3	6901ZZx1	24	6	3	31,50	34,50	37,60	24,00		
		48	12	48	50	6901ZZx1	24	6	3	6901ZZx1	24	6	3	33,90	37,10	40,40	26,30		
		50	12	50	52	6901ZZx1	24	6	3	6901ZZx1	24	6	3	34,40	37,70	41,10	26,70		
		60	12	60	62	6901ZZx1	24	6	3	6901ZZx1	24	6	3	45,70	50,20	54,60	35,40		
		1.5	15	15	5	22.5	25.5	695ZZx2	13	4	3.5	675ZZx2	8	2.5	5	18,30	20,00	21,60	15,20
				16	8	24	27	688ZZx1	16	5	5	-	-	-	-	19,50	21,40	23,20	-
20	10			30	33	6900ZZx1	22	6	4.5	6700ZZx2	15	4	3.5	24,90	26,90	28,90	26,20		
24	10			36	39	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5	25,00	27,00	29,00	19,90		
25	10			37.5	40.5	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5	25,00	27,00	29,00	22,30		
26	10			39	42	6000ZZx1	26	8	3.5	6900ZZx1	22	6	4.5	25,10	27,10	29,10	23,80		
28	12			42	45	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5	25,20	27,20	29,20	24,00		
30	12			45	48	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5	25,80	28,00	30,30	24,50		
40	12			60	63	6001ZZx1	28	8	3.5	6001ZZx1	28	8	3.5	32,90	35,80	38,80	32,20		
48	15			72	75	6002ZZx1	32	9	3	6002ZZx1	32	9	3	40,60	44,50	47,70	32,40		
50	15			75	78	6002ZZx1	32	9	3	6002ZZx1	32	9	3	41,70	45,50	49,40	33,30		
60	15			90	93	6002ZZx1	32	9	3	6002ZZx1	32	9	3	52,50	57,40	62,30	41,90		
2.0	20	15	8	30	34	698ZZx2	19	6	4	678ZZx2	12	3.5	6.5	22,50	24,50	26,60	20,00		
		20	10	40	44	6200ZZx1	30	9	5.5	6900ZZx2	22	6	4	27,50	29,90	32,30	26,20		
		24	12	48	52	6201ZZx1	32	10	5	6201ZZx1	32	10	5	32,20	35,30	38,50	29,10		
		25	12	50	54	6201ZZx1	32	10	5	6201ZZx1	32	10	5	33,40	36,50	39,50	30,30		
		30	15	60	64	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5	38,30	41,80	45,30	33,80		
		36	15	64	68	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5	39,80	45,80	49,80	37,80		
		40	15	72	76	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5	45,90	50,30	54,80	35,00		
		48	15	80	84	6202ZZx1	35	11	4.5	6202ZZx1	35	11	4.5	51,60	56,40	61,20	43,10		
		50	20	96	100	6004ZZx1	42	12	4	6004ZZx1	42	12	4	67,10	73,70	80,30	53,70		
		60	20	100	104	6004ZZx1	42	12	4	6004ZZx1	42	12	4	69,00	75,50	82,00	55,20		
		60	25	120	124	6005ZZx1	47	12	4	6005ZZx1	47	12	4	77,20	84,50	91,80	61,70		

Order Example

Part Number: GEABD1.0 - No. of Teeth: 20 - B: 12

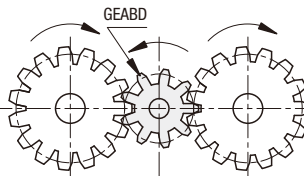
Days to Ship: 8 Days

Price

Quantity	1-9	10-14	15-19
Rate	€ Unit Price	5%	10%

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

Example



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




Round Rack Gears · Worm · Worm Wheel

-L Dimension Standard · L Configurable Pressure Angle 20°-


CAD Data

Round Rack Gears



RoHS

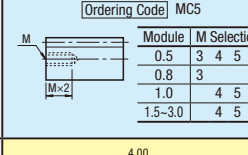
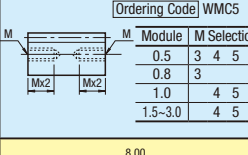
Type		Material	Surface Treatment
L Dimension Fixed	L Dimension Configurable		
RGMA	RGMAL	1.1191/C45E	Black Oxide
RGMAS	RGMASL	1.4305/ X10CrNiS18-9	-




Precision RGMA / RGMAL JIS B1702 Class 4
RGMAS / RGMASL JIS B1702 Class 5

L Dimension Fixed							L Dimension Configurable											
Part Number	Type	Module	Number	# of Effective Teeth (Z)	D (h9)	€ Unit Price	Part Number	Type	Module	Full Length L (mm Increment)	D (h9)	h	€ Unit Price					
													L50-99	L100-199	L200-300	L301-500		
RGMA (1.1191/C45E)	0.5	300	192	120	8	301.6	7.5	56.50	RGMAL (1.1191/C45E)	50-300	8	7.5	46,60	52,50	60,50	-		
			120	10	298.4	9	46,10	46,90					52,80	60,80				
		1.0	95	159	10	499.5	73,90	38,10			42,90	50,10	77,90					
			63	106	15	300	48,00	15			13.5	43,20	48,00	52,80	82,80			
		1.5	47	79	20	500	51,20	20			18	47,20	51,20	55,20	89,00			
			38	53	25	500	85,00	25			22.5	57,20	61,20	65,20	105,20			
	2.0	31	31	30	300	61,20	30	27		68,50	72,50	76,50	122,70					
		53	53	30	500	101,20	30	27		102,20	106,20	110,20	172,70					
	RGMAS (1.4305/X10CrNiS18-9)	0.5	300	192	120	8	301.6	7.5		106,50	RGMASL (1.4305/X10CrNiS18-9)	50-300	8	7.5	88,00	99,00	110,50	-
				120	10	298.4	9	88,70		73,30					82,50	92,40		
			1.0	95	159	10	499.5	68,70		10			9	56,80	63,90	72,70	109,80	
				63	106	15	300	74,70		15			13.5	66,70	70,90	75,00	120,50	
1.5			47	79	20	500	112,50	20	18	74,80			78,80	82,80	129,00			
			38	53	25	500	78,80	25	22.5	78,50			82,50	86,50	135,20			
2.0		31	31	30	300	82,50	30	27	102,20	106,20		110,20	172,70					
		53	53	30	500	131,20	30	27	102,20	106,20		110,20	172,70					

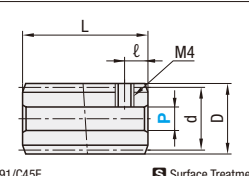
Alterations

Code	One End Female Thread		Both Ends Female Thread	
	MC	WMC	MC5	WMC5
Spec.				
Price Adder	4,00		8,00	

Worm




WGEAU

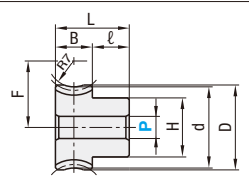


Material: 1.1191/C45E
Tooth Surface Hardness: 12HRC or less
Accuracy Class JIS B 1702 Class 4 or equivalent (Tooth Surface Finish: Rolled)

Worm Wheel



WGEAH



Material: Phosphor Bronze (CC 480K/CuSn10-C)
Accuracy Class JIS B 1702 Class 4 or equivalent (Tooth Surface: Machined)

Part Number	Module	Number of Starts	Shaft Bore Dia. Ph7	Twisting Direction	Advance Angle	d	D	L	ℓ	€ Unit Price	
										1 - 5 pcs.	1 - 5 pcs.
WGEAU	0.8	1	6	R (Right)	3°17	14	15.6	30	5	5,20	-
		2	6		6°34	5,80	-				
	1.0	1	6		3°35	16	18	32	5	5,30	-
		2	6		7°11	5,40	-				

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

Part Number	Module	No. of Teeth	Number of Starts	Shaft Bore Dia. Ph7	Twisting Direction	d	D	B	H	L	ℓ	F Engagement Center Distance	Allowable Torque (Nm) Tooth Surface Strength	Backlash (mm)	Reduction Ratio	€ Unit Price	
																1 - 5 pcs.	1 - 5 pcs.
WGEAH	0.8	20	2	5	R (Right)	16.11	17.6	12	9	18	18	15	0.86	1/10	7,30		
		30	1	5		24.04	25.6	19				1.89	1/30	12,40			
		40	1	6		24.16	25.6	19				1.87	1/15	12,40			
		50	1	8		32.05	33.6	20				3.24	1/40	16,90			
		60	1	8		40.06	41.6	25				4.90	1/50	23,90			
	1.0	20	1	6		10	20	20	18	1.58	1/20	10,00					
		30	1	6					20.16	23	16	1.54	1/10	10,00			
		40	1	8					30.07	33	23	3.38	1/30	16,20			
		50	1	8					30.24	33	23	3.35	1/15	16,20			
		60	1	8					40.08	43	26	5.79	1/40	16,50			
60	1	8	50.10	53	30	8.76	1/50	22,80									

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

Order Example

Part Number: WGEAH1.0 - No. of Teeth: 20 - Number of Starts: 2 - Shaft Bore Dia. Ph7: 6 - Handedness: R

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