Rack Gears - L Fixed

Pressure Angle 20°, Module 0.5, 0.8, 1.0, 1.5, 2.0, 2.5, 3.0

Type: Both Ends Machined	Type: Economy	M Material	S Surface Treatment
RGEA	RGEAR	S45C Equivalent	Black Oxide
RGEAB	-	Free-Cutting Brass Bar	-
RGEAS	-	SUS304	-
RGEAM	RGEAMR	MC Nylon	-

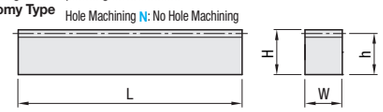
RGEAM, RGEAMR (MC Nylon) dimensions may change depending on the operating environment.

Accuracy: Accumulated Pitch Error (μm)

Module	Nominal 100	300	500	1000
0.5~1.5	54 (76)	65 (92)	72 (101)	100 (117)
2.0~3.0	62 (86)	73 (102)	80 (112)	91 (128)

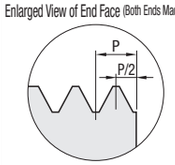
Values in ( ) are for RGEAS, RGEAM, RGEAMR.

Economy Type Hole Machining N: No Hole Machining

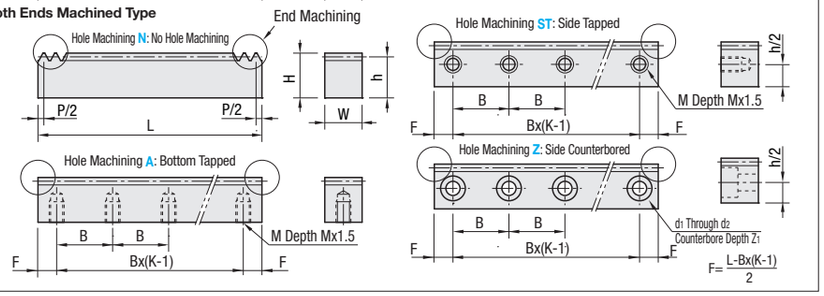


Both Ends Machined Type

Enlarged View of End Face (Both Ends Machined Type)



Module	P Tolerance
0.5~2.0	-0.1 -0.3
2.5, 3.0	-0.1 -0.4



Part Number: Type	Module	Nominal	Hole Machining	Number of Effective Teeth	L	P (Pitch)	W	H	h	B (Hole Pitch)	M (Coarse)	d1	d2	Z1	K (Number of Holes)	Unit Price: Economy Type Hole Machining N	Both Ends Machined Type Hole Machining N	Hole Machining A	Hole Machining ST	Hole Machining Z
(S45C) Both Ends Machined Type RGEA / Economy Type RGEAR	1.0	100	N (No Hole Machining) A (Bottom Tapped) ST (Side Tapped) Z (Side Counterbored)	30(29)	94.25(98)	3.142	10	12	11	180	M3	3.5	6.5	3.5	-			-	-	-
		300		95(94)	298.45(303)										2					
		500		159	499.51(505)										3					
	1.5	100		21(20)	98.96(101)	4.712	15	20	18.5	180	M4	4.5	8	4.5	-			-	-	-
		300		63(62)	296.88(303)										2					
		500		106(105)	499.51(505)										3					
	2.0	100		15(14)	94.25(98)	6.283	20	25	23	180	M5	5.5	9.5	5.5	-			-	-	-
		300		47(46)	295.31(303)										2					
		500		79	496.37(505)										3					
	2.5	100		12(11)	94.25(100)	7.854	25	30	27.5	180	M5	5.5	9.5	5.5	-			-	-	-
		300		38(37)	298.45(303)										2					
		500		63	494.8(505)										3					
	3.0	100		10(9)	94.25(101)	9.424	30	35	32	180	M5	5.5	9.5	5.5	-			-	-	-
		300		31(30)	292.17(303)										2					
		500		53(52)	499.51(505)										3					
(Free-Cutting Brass Bar) RGEAB	0.5	300	N	192	301.59	1.571	3	9	8.5	-	-	-	-	-	-	-		-	-	-
	0.8	300		120	301.59	2.513	4	10	9.2							-		-	-	-
(SUS304) RGEAS	0.5	300	N	192	301.59	1.571	3	9	8.5	-	-	-	-	-	-	-		-	-	-
	0.8	300		120	301.59	2.513	4	10	9.2							-		-	-	-
	1.0	300	N (No Hole Machining) A (Bottom Tapped) ST (Side Tapped) Z (Side Counterbored)	95	298.45	3.142	10	10	9	180	M3	3.5	6.5	3.5	2	-				
		500		159	499.51										3	-				
	1.5	300		63	296.88	4.712	15	15	13.5		M4	4.5	8	4.5	2	-				
		500		106	499.51										3	-				
	2.0	500		79	496.37	6.283	20	20	18		M5	5.5	9.5	5.5	3	-				
		1000		159	999.02										6	-				
	2.5	500		63	494.8	7.854	25	25	22.5		M6	6.5	11	6.5	3	-				
		1000		127	997.45										6	-				
	3.0	500		53	499.51	9.424	30	30	27		M8	9	14	9	3	-				
		1000		106	999.03										6	-				
(MC Nylon) Both Ends Machined Type RGEAM / Economy Type RGEAMR	0.5	300	N	192	301.59	1.571	3	9	8.5	-	-	-	-	-	-	-		-	-	-
	0.8	300		120	301.59	2.513	4	10	9.2							-		-	-	-
	1.0	300	N, A ST, Z	95	298.45	3.142	10	12	11	180	M3	3.5	6.5	3.5	2	-				
		500		159	499.51(505)										3					
	1.5	500	N	105	(505)	4.712	15	20	18.5	-	-	-	-	-	-		-	-	-	-
	2.0	500		79	(505)	6.283	20	25	23	-	-	-	-	-	-		-	-	-	-
	2.5	500		63	(505)	7.854	25	30	27.5	-	-	-	-	-	-		-	-	-	-
	3.0	500		52	(505)	9.424	30	35	32	-	-	-	-	-	-		-	-	-	-

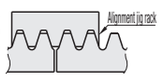
Economy Type is only available for Hole Machining N (No Hole Machining). Number of Effective Teeth ( ) and L ( ) are the value of Economy Type.

Ordering Example

Part Number	-	Nominal	-	Hole Machining
RGEA1.0	-	500	-	A
RGEAR1.0	-	500	-	N

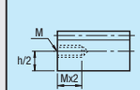
How to Connect Rack Gears (Both Ends Machined Type)

MISUMI Induction Hardened Rack Gears are end machined with negative pitch tolerance in length. When connecting the racks, use a piece of rack (rack gear in the same module) as a spacer jig as shown in the right side figure to properly adjust the pitch.



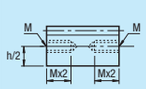
Alterations Part Number - Nominal - Hole Machining - (MC, WMC)
RGEAS1.5 - 500 - N - MC4

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



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

For RGEAS, M4 is not available for module 1.0.



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

For RGEAS, M4 is not available for module 1.0.

Rack Gears - L Configurable (One End Machined)

Pressure Angle 20°, Module 0.5, 0.8, 1.0, 1.5, 2.0, 2.5, 3.0

Features: Configurable to desired lengths. One end is machined for connecting with other rack gears.

Type: Hole Position Configurable Type	Type: Number of Holes Configurable Type	M Material	S Surface Treatment
RGEAL	LRGEA	S45C Equivalent	Black Oxide
RGEABL	-	Free-Cutting Brass Bar	-
RGEASL	LRGEAS	SUS304	-
RGEAML	-	MC Nylon	-

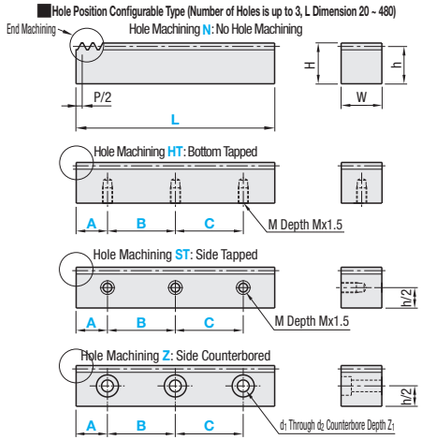
RGEAML (MC Nylon) dimensions may change depending on the operating environment.

Accuracy: Accumulated Pitch Error (μm)

Module	Overall Length L: 100 or less	101~300	301~500	501~1000	1000~1980
0.5~1.5	54 (76)	65 (92)	72 (101)	100 (117)	99 (139)
2.0~3.0	62 (86)	73 (102)	80 (112)	91 (128)	105 (148)

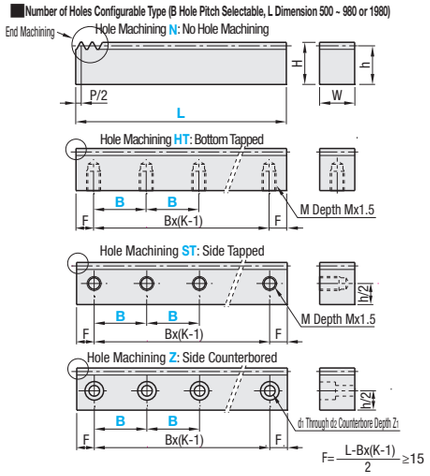
Values in ( ) are for RGEASL, RGEAML, LRGEAS.

Hole Position Configurable Type (Number of Holes is up to 3, L Dimension 20 ~ 480)

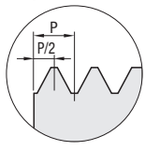


Up to three holes can be specified. A+B+C≤L-5

Number of Holes Configurable Type (B Hole Pitch Selectable, L Dimension 500 ~ 980 or 1980)



Enlarged View of End Face



Module	P Tolerance
0.5~2.0	-0.1 -0.3
2.5, 3.0	-0.1 -0.4

Hole Position Configurable Type (Number of Holes is up to 3, L Dimension 20 ~ 480)

Part Number: Type	Module	Hole Machining	Overall Length L 1mm Increment	Hole Position ABC 1mm Increment	P (Pitch)	W	H	h	d1	d2	Z1	M (Coarse)	Body Price: L=20~100	L=101~200	L=201~300	L=301~400	L=401~480	Hole Machining Charge (+ Body Price): Tapped Hole (HT, ST)	Counterbored Hole (Z)
(S45C) RGEAL	1.0	N (No Hole Machining) HT (Back side Tapped) ST (Side Tapped) Z (Side Counterbored)	20~480	5~475	3.142	10	12	11	3.5	6.5	3.5	M3							
	1.5				4.712	15	20	18.5	4.5	8	4.5	M4							
	2.0				6.283	20	25	23	5.5	9.5	5.5	M5							
	2.5				7.854	25	30	27.5	6.5	11	6.5	M6							
	3.0				9.424	30	35	32	9.0	14	9	M8							
(Free-Cutting Brass Bar) RGEABL	0.5	N	20~280	-	1.571	3	9	8.5	-	-	-	-				-	-		
	0.8				2.513	4	10	9.2								-	-		
(SUS304) RGEASL	0.5	N	20~280	-	1.571	3	9	8.5	-	-	-	-				-	-		
	0.8				2.513	4	10	9.2								-	-		
	1.0	N, HT, ST	20~480	5~475	3.142	10	10	9	-	-	-	M3							
	1.5	N (No Hole Machining) HT (Back side Tapped) ST (Side Tapped) Z (Side Counterbored)			4.712	15	15	13.5	4.5	8	4.5	M4							
	2.0				6.283	20	20	18	5.5	9.5	5.5	M5							
	2.5				7.854	25	25	22.5	6.5	11	6.5	M6							
	3.0				9.424	30	30	27	9.0	14	9	M8							
(MC Nylon) RGEAML	0.5	N	20~280	-	1.571	3	9	8.5	-	-	-	-				-	-		
	0.8				2.513	4	10	9.2								-	-		
	1.0	N, HT, ST, Z	20~480	5~475	3.142	10	12	11	3.5	6.5	3.5	M3							

Number of Holes Configurable Type (B Hole Pitch Selectable, L Dimension 500 ~ 980)

Part Number: Type	Module	Hole Machining	Overall Length L 1mm Increment	K (Number of Holes)	B (Hole Pitch) 1mm Increment	P (Pitch)	W	H	h	d1	d2	Z1	M (Coarse)	Body Price: L=500~750	L=751~1000	L=1001~1500	L=1501~1980	Hole Machining Charge (+ Body Price): Tapped Hole (HT, ST)	Counterbored Hole (Z)
(S45C) LRGEA	1.0	N (No Hole Machining) HT (Back side Tapped) ST (Side Tapped) Z (Side Counterbored)	500~980	2~6	50~500	3.142	10	12	11	3.5	6.5	3.5	M3			-	-		
	1.5		500~980	2~12		4.712	15	20	18.5	5.5	9.5	5.5	M5						
	2.0					6.283	20	25	23	6.5	11	6.5	M6						
	2.5					7.854	25	30	27.5	9	14	9	M8						
	3.0					9.424	30	35	32	11	17.5	11	M10						
(SUS304) LRGEAS	1.5		500~980	2~12		4.712	15	15	13.5	5.5	9.5	5.5	M5			-	-		
	2.0					6.283	20	20	18	6.5	11	6.5	M6			-	-		
	2.5					7.854	25	25	22.5	9	14	9	M8			-	-		
	3.0					9.424	30	30	27	11	17.5	11	M10			-	-		

Ordering Example

Part Number	-	L (Overall Length)	-	Hole Position (First)	-	Hole Position (Second)	-	Hole Position (Third)
RGEAML1.0Z	-	450	-	A50	-	B150	-	C150

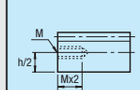
Part Number	-	L (Overall Length)	-	K (Number of Holes)	-	B (Hole Pitch)
LRGEA2.0ST	-	1800	-	K8	-	B200

Unit Price = Body Price + Hole Machining Charge
Unit Price equals Body Price when N (No Hole) is specified.
(Calculation Example) RGEAL1.0HT-450-A50-B150-C150

Body Price + Hole Machining Charge (Hole Machining Unit Price × Number of Holes) = Unit Price

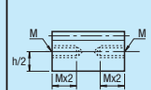
Alterations Part Number - L (Overall Length) - Hole Position (First) - Hole Position (Second) - Hole Position (Third) - (MC, WMC)
RGEAL2.0Z - 300 - A50 - B100 - C100 - MC4

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



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

A≥30, F≥30
For RGEASL, M4 is not available for module 1.0.



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

A≥30, L-A-B-C≥30, F≥30
For RGEASL, M4 is not available for module 1.0.