



Rack Gears (L Dimension Standard)

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

Gears

Enlarged View of End Face (Both Ends Machined Type)

Type	Material	Surface Treatment
RGEA	1045 Carbon Steel	Black Oxide
RGEAB	Free-Cutting Brass Bar	-
RGEAS	304 Stainless Steel	-
RGEAM	MC Nylon	-
RGEAP	Polyacetal	-

Accuracy: Accumulated Pitch Error (μm)

Module	Nominal Overall Length (mm)			
	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)

① Values in () are for RGEAS and RGEAM.

Both End Machine Type

Hole Machining N: No Hole

End Face Machining

Hole Machining KA: Side Thru Holes

Hole Machining ST: Side Tapped

Hole Machining A: Bottom Tapped

Hole Machining Z: Counterbore Holes

Module	P Tolerance (mm)
0.5 - 2.0	-0.1 -0.3
2.5 - 3.0	-0.1 -0.4

Type	Module	Nominal Length	Hole Machining	Number of Effective Teeth	L	P (Pitch)	W	H	h	K (Number of Hole)	Available Types					
											RGEA	RGEAB	RGEAS	RGEAM	RGEAP	
RGEA	0.5	100	N (No Hole)	63	98.96	1.571	3	9	8.5	-	•	•	•	•	•	
		300		192	301.59						•	•	•	•	•	
		500		318	499.51						•	•	•	•	•	
	RGEAB	0.8	100	KA (Side Thru Hole)	39	98.01	2.513	4	10	9.2	-	•	•	•	•	•
			300		120	301.59						•	•	•	•	•
			500		198	497.63						•	•	•	•	•
RGEAM	1.0	100	N (No Hole)	30	94.25	3.142	10	12(10)	11(9)	-	•	•	•	•	•	
		300		95	298.45						•	•	•	•	•	
		500		159	499.51						•	•	•	•	•	
	RGEAS	1.5	100	A (Bottom Tapped)	21	98.96	4.712	15	20(15)	18.5(13.5)	-	•	•	•	•	•
			300		63	296.88						•	•	•	•	•
			500		106	499.51						•	•	•	•	•
RGEAP	2.0	100	ST (Side Tapped)	15	94.25	6.283	20	25(20)	23(18)	-	•	•	•	•	•	
		300		47	295.31						•	•	•	•	•	
		500		79	496.37						•	•	•	•	•	
	RGEAM	2.5	100	Z (Counterbore Holes)	12	94.25	7.854	25	30(25)	27.5(22.5)	-	•	•	•	•	•
			300		38	298.45						•	•	•	•	•
			500		63	494.8						•	•	•	•	•
RGEAS	3.0	100	N (No Hole)	10	94.25	9.425	30	35(30)	32(27)	-	•	•	•	•	•	
		300		31	292.17						•	•	•	•	•	
		500		53	499.51						•	•	•	•	•	
RGEAP	3.0	1000	N (No Hole)	106	999.02	-	-	-	-	-	•	•	•	•	•	

① No hole machining for nominal length 100. ② H, h values in () are for 304 Stainless Steel.

Part Number Example

Type: RGEA1.0 - Nominal Length: 500 - Hole Machining: A

Type: RGEA1.0 - Nominal Length: 500 - Hole Machining: N

Part Number Alterations

Type: RGEA1.0 - Nominal Length: 500 - Hole Machining: A - (MC/WMC/TPC): MC4

Alterations	One End Tapped	Both Ends Tapped	Tapped Hole Size																				
Code	MC	WMC	TPC																				
Spec.	Ordering Code: MC5	Ordering Code: WMC5	Change Tapped Hole Size. Ordering Code: TPC4																				
	<table border="1"> <thead> <tr> <th>Module</th> <th>M Selection</th> </tr> </thead> <tbody> <tr> <td>1.0</td> <td>3 4</td> </tr> <tr> <td>1.5-3.0</td> <td>4 5 6</td> </tr> </tbody> </table>	Module	M Selection	1.0	3 4	1.5-3.0	4 5 6	<table border="1"> <thead> <tr> <th>Module</th> <th>M Selection</th> </tr> </thead> <tbody> <tr> <td>1.0</td> <td>3 4</td> </tr> <tr> <td>1.5-3.0</td> <td>4 5 6</td> </tr> </tbody> </table>	Module	M Selection	1.0	3 4	1.5-3.0	4 5 6	<table border="1"> <thead> <tr> <th>M</th> <th>TPC</th> </tr> </thead> <tbody> <tr> <td>M3</td> <td>M4</td> </tr> <tr> <td>M4</td> <td>M3 M5</td> </tr> <tr> <td>M5</td> <td>M4 M6 M8</td> </tr> </tbody> </table>	M	TPC	M3	M4	M4	M3 M5	M5	M4 M6 M8
Module	M Selection																						
1.0	3 4																						
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⊗ For RGEAS, M4 is not available for module 1.0.

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Rack Gears (L Dimension Configurable / One End Machined)

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

Gears

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

Enlarged View of End Face

Type	Material	Surface Treatment
RGEAL	1045 Carbon Steel	Black Oxide
RGEABL	Free-Cutting Brass Bar	-
RGEASL	304 Stainless Steel	-
RGEAML	MC Nylon	-
RGEAPL	Polyacetal	-

Accuracy: Accumulated Pitch Error (μm)

Module	Nominal Overall Length (mm)			
	100 or less	101 - 300	301 - 500	501 - 980
0.5 - 1.5	54(76)	65(92)	72(101)	100(117)
2.0 - 3.0	62(86)	73(102)	80(112)	91(128)

① Values in () are for RGEASL, RGEAML, RGEAS and LRGEAM.

Hole Position Configurable Type (4 Holes Max)

End Face Machining

Hole Machining N: No Hole

Hole Machining KA: Side Thru Holes

Hole Machining HT: Bottom Tapped

Hole Machining ST: Side Tapped

Hole Machining Z: Counterbore Holes

Number of Hole Configurable Type

Module	M (Coarse)	d1	d2	Z1
0.5	-	3.5	-	-
0.8	-	3.5	-	-
1.0	M3	3.5	6.5	3.5
1.5	M4	4.5	8	4.5
2.0	M5	5.5	9.5	5.5
2.5	M6	6.5	11	6.5
3.0	M8	9	14	9

① Cut and machines surfaces are without surface treatment.

② RGEAML and LRGEAM (MC Nylon) dimensions may change depending on the operating environment.

③ Max 4 holes can be specified. ④ A+B+C+D≤L-5

Hole Position Configurable Type

Type	Module	Hole Machining	Total Length L 1mm Increment	Hole Position ABC 1mm Increment	p (Pitch)	W	H	h
(1045 Carbon Steel Equiv.) RGEAL	0.5	N (No Hole)	20 - 480	5 - 475	1.571	3	9	8.5
	0.8	KA (Side Thru Holes)			2.513	4	10	9.2
	1.0	-			3.142	10	12(10)	11(9)
(304 Stainless Steel) RGEASL	1.5	N (No Hole)	20 - 980	5 - 975	4.712	15	20(15)	18.5(13.5)
	2.0	HT (Bottom Tapped)			6.283	20	25(20)	23(18)
	2.5	ST (Side Tapped)			7.854	25	30(25)	27.5(22.5)
	3.0	Z (Counterbore Holes)			9.425	30	35(30)	32(27)
(Free-Cutting Brass) LRGEAB	0.5	N (No Hole)	20 - 280	5 - 275	1.571	3	9	8.5
	0.8	KA (Side Thru Holes)			2.513	4	10	9.2
	1.0	N, HT, ST, Z			3.142	10	12	11

① H, h values in () are for 304 Stainless Steel.

Number of Hole Configurable Type

Type	Module	Hole Machining	Total Length L 1mm Increment	Number of Holes K	Hole Position B 1mm Increment	p (Pitch)	W	H	h
(1045 Carbon Steel Equiv.) LRGEA	0.5	N (No Hole)	20 - 480	2 - 8	50 - 450	1.571	3	9	8.5
	0.8	KA (Side Thru Holes)				2.513	4	10	9.2
	1.0	-				3.142	10	12(10)	11(9)
(304 Stainless Steel) LRGEAS	1.5	N (No Hole)	20 - 980	2 - 12	50 - 500	4.712	15	20(15)	18.5(13.5)
	2.0	HT (Bottom Tapped)				6.283	20	25(20)	23(18)
	2.5	ST (Side Tapped)				7.854	25	30(25)	27.5(22.5)
	3.0	Z (Counterbore Holes)				9.425	30	35(30)	32(27)
(Free-Cutting Brass) LRGEAM	0.5	N (No Hole)	20 - 280	2 - 5	50 - 280	1.571	3	9	8.5
	0.8	KA (Side Thru Holes)				2.513	4	10	9.2
	1.0	N, HT, ST, Z				3.142	10	12	11

① H, h values in () are for 304 Stainless Steel.

Part Number Example

Type: LRGEAM1.0Z - L (Total Length): 450 - 1st Hole Position: A50 - 2nd Hole Position: B150 - 3rd Hole Position: C150

Type: LRGEA2.0ST - L (Total Length): 900 - K (Number of Hole): K8 - B (Hole Pitch): B80

Part Number Alterations

Type: RGEAL2.0Z - L (Total Length): 300 - 1st Hole Position: A50 - 2nd Hole Position: B100 - 3rd Hole Position: C100 - (MC/WMC/TPC): MC4

Available Types

Product Type	Module	Availability			
		L=20 - 80	L=81 - 280	L=281 - 480	L=481 - 980
(1045 Carbon Steel Equiv.) RGEAL LRGEA	0.5	•	•	•	•
	0.8	•	•	•	•
	1.0	•	•	•	•
	1.5	•	•	•	•
	2.0	•	•	•	•
	2.5	•	•	•	•
(304 Stainless Steel) RGEASL LRGEAS	0.5	•	•	•	•
	0.8	•	•	•	•
	1.0	•	•	•	•
	1.5	•	•	•	•
	2.0	•	•	•	•
	2.5	•	•	•	•
(Free-Cutting Brass Bar) LRGEABL LRGEAB	0.5	•	•	•	•
	0.8	•	•	•	•
	1.0	•	•	•	•
	1.5	•	•	•	•
	2.0	•	•	•	•
	2.5	•	•	•	•
(MC Nylon) RGEAML LRGEAM	0.5	•	•	•	•
	0.8	•	•	•	•
	1.0	•	•	•	•
	1.5	•	•	•	•
	2.0	•	•	•	•
	2.5	•	•	•	•
(Polyacetal) RGEAPL LRGEAP	0.5	•	•	•	•
	0.8	•	•	•	•
	1.0	•	•	•	•
	1.5	•	•	•	•
	2.0	•	•	•	•
	2.5	•	•	•	•