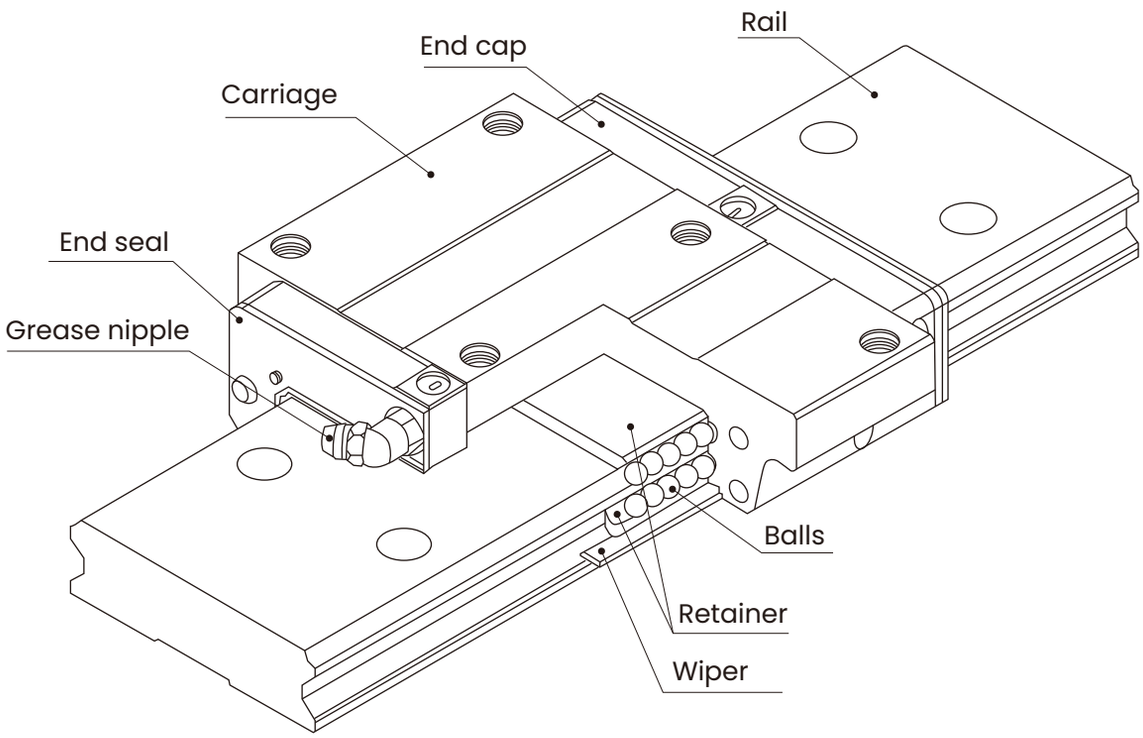
Four-row wide Linear Guide

LMGW series



Note：For reference only.

Characteristics

With its 45-degree contact angle design, this system offers equal load capacity in all four directions and self-aligning capability, effectively compensating for assembly inaccuracies on mounting surfaces to meet high-precision requirements. Moreover, the increased rail width and reduced overall height provide extremely high resistance to torsion. In applications where space is limited or high torque loads are involved, a single rail configuration can be adopted.

- **High rigidity**
- **Four-way equal load**
- **Self alignment capability**
- **High positioning accuracy**
- **Running Smoothness**
- **Low noise and high speed application**
- **Long Service Life**
- **International standard**

Applications

Conductor Manufacturing Equipment

Printing and Packaging Machinery

CNC Machine Tools

Industrial Robots

Medical Equipment

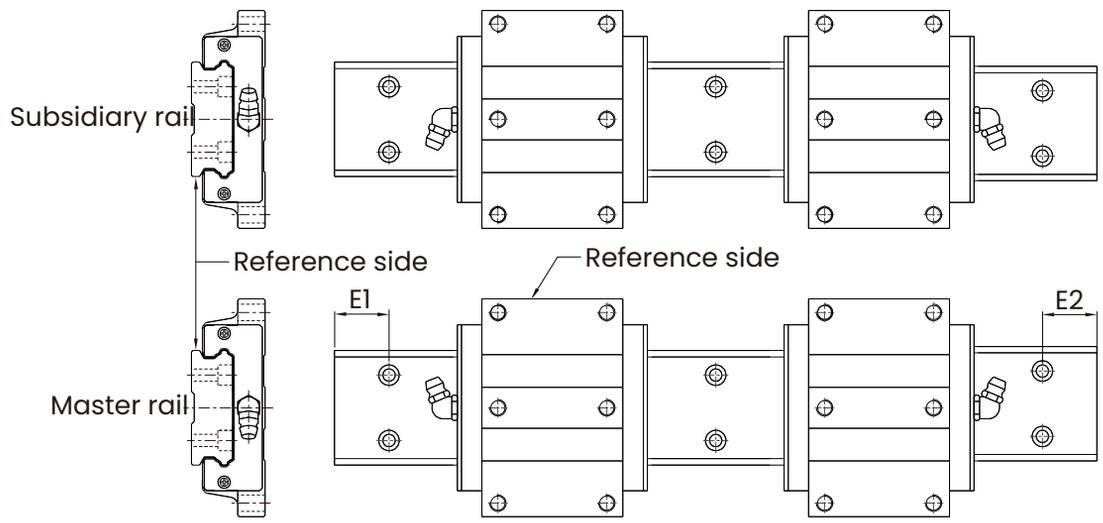
New Energy and Heavy Machiner

Specifications

(1) Non-Interchangeable type

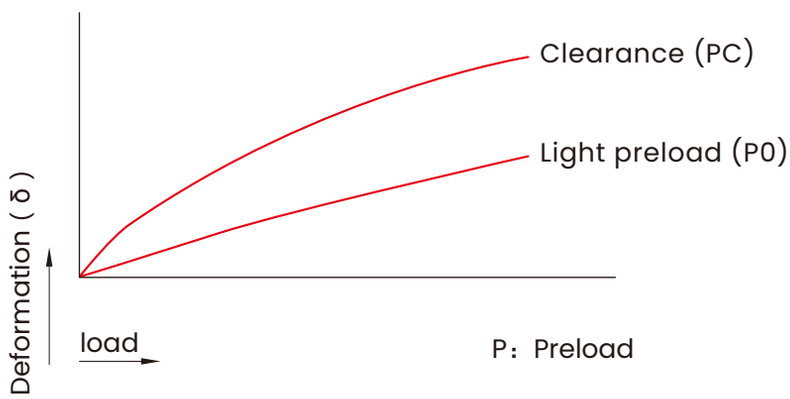
LMGW 17 T 1 UU P0 +R 300 -10 /10 N II

Series：LMGW
Size：12，14，17，21，27
Carriage type
T：Standard Type
LT：Extended Type
C：Flange Type
Number of carriages per rail：1，2，3 ...
Dust protection option：UU
Preload：PC（Clearance），P0（Light preload），
P1（Medium preload）
Rail type：R，T
Rail length（mm）
Rail hole pitch from start side （E1，see Figure below）
Rail hole pitch to the end side（E2，see Figure below）
Accuracy grade：N，H，P，SP，UP
Number of rails per axis：No symbol，II，III，IV ...



Preload Grade

Preload refers to the pre-applied force on the steel balls, achieved by increasing the ball diameter to create a negative clearance between the balls and the raceway. This enhances the rigidity of the linear guide and eliminates clearance. As shown in the figure, increasing the preload can improve the rigidity of the linear guide. However, for smaller specifications, it is recommended to use light preload or lower to avoid reducing service life due to excessive preload.

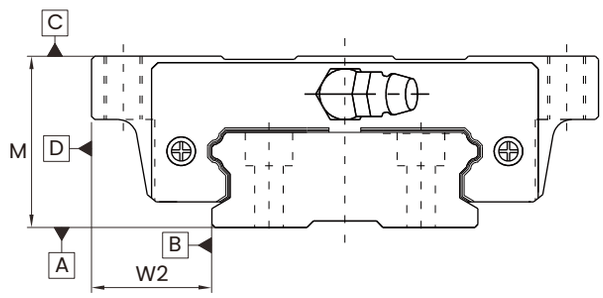


Preload grade	Code	Preload (μm)	Operating Condition
Clearance	PC	0~0.02C	● Load direction is fixed with minimal impact ● Low precision requirements
Light preload	P0	0.03~0.05C	● Light load with high precision requirements
Medium preload	P1	0.06~0.08C	● High rigidity requirements ● Operating environment with vibration and impact

*The "C" in the preload column represents the basic dynamic load rating.

Non-Interchangeable Accuracy Grade

The accuracy of LMGW series is divided into five classes, Normal grade (N), High accuracy grade (H), Precision grade (P), Super precision grade (SP) and Ultra precision grade (UP).

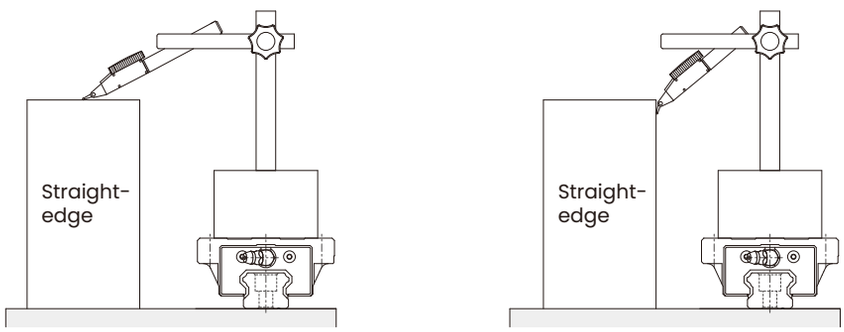


Unit (mm)

Model No.	Item	Accuracy Grade				
		Normal N	High H	Precision P	Super Precision SP	Ultra Precision UP
12 14 17 21	Tolerance for height M	±0.1	±0.03	0 -0.03	0 -0.015	0 -0.008
	Height difference ΔM	0.02	0.01	0.006	0.004	0.003
	Tolerance for distance W2	±0.1	±0.03	0 -0.03	0 -0.015	0 -0.008
	Difference in distance W2 (ΔW2)	0.02	0.01	0.006	0.004	0.003
	Running parallelism of surface C with surface A	ΔC (see Running parallelism of carriage)				
	Running parallelism of surface D with surface B	ΔD (see Running parallelism of carriage)				
27	Tolerance for height M	±0.1	±0.04	0 -0.04	0 -0.02	0 -0.01
	Height difference ΔM	0.02	0.015	0.007	0.005	0.003
	Tolerance for distance W2	±0.1	±0.04	0 -0.04	0 -0.02	0 -0.01
	Difference in distance W2 (ΔW2)	0.03	0.015	0.007	0.005	0.003
	Running parallelism of surface C with surface A	ΔC (see Running parallelism of carriage)				
	Running parallelism of surface D with surface B	ΔD (see Running parallelism of carriage)				

Running Parallelism

The running accuracy is the deviation of parallelism between the reference surface of carriage and reference surface of rail when carriage moving over the entire length of rail.

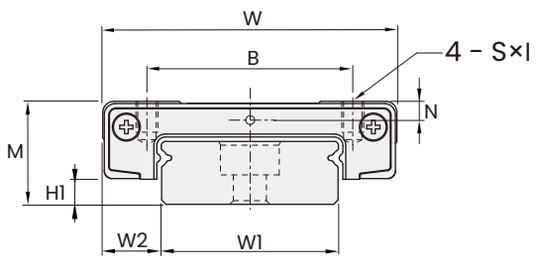


Measurement of running parallelism

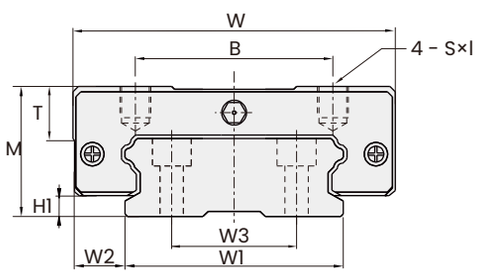
Rail length (mm)		Running Parallelism Values (μm)				
Above(incl.)	Or less	Normal N	High H	Precision P	Super Precision SP	Ultra Precision UP
0	100	12	7	3	2	2
100	200	14	9	4	2	2
200	300	15	10	5	3	2
300	500	17	12	6	3	2
500	700	20	13	7	4	2
700	900	22	15	8	5	3
900	1100	24	16	9	6	3
1100	1500	26	18	11	7	4
1500	1900	28	20	13	8	4
1900	2000	31	22	15	10	5

Dimensions of LMGW···T/LT

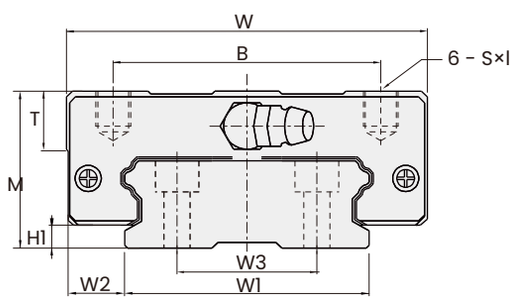
LMGW12/14T
LMGW12LT

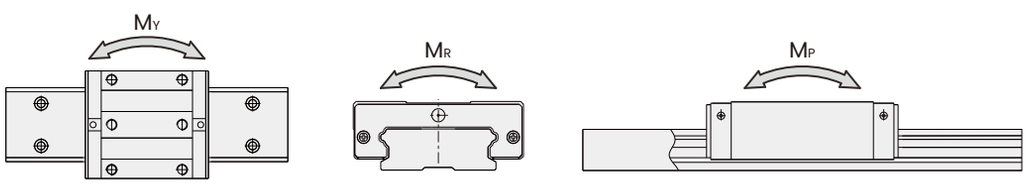


LMGW17T



LMGW21/27T

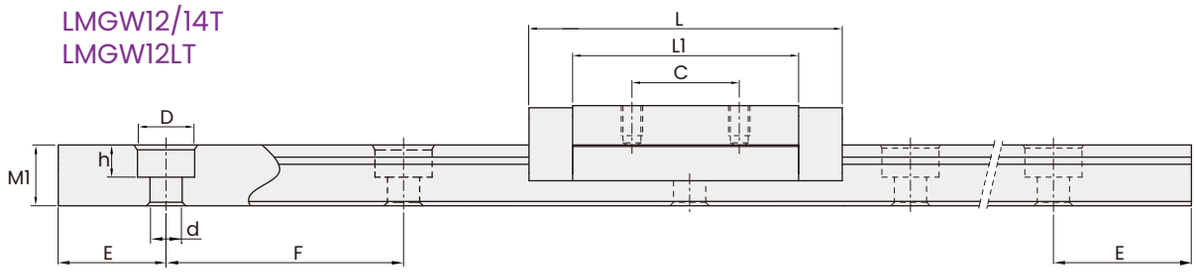




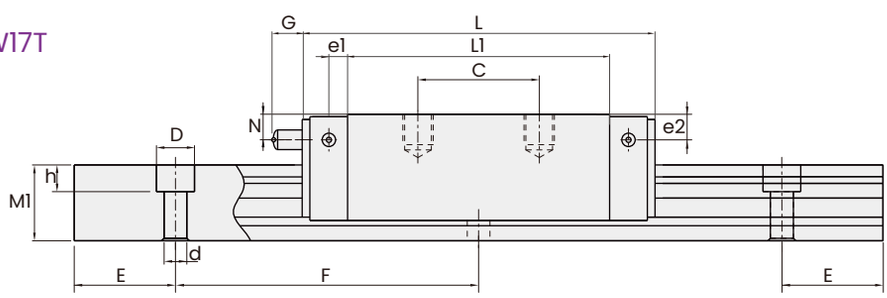
Model No.	External dimension			Carriage dimension										
	Height	Width	Length	B	C	Mounting hole S×l	L1	T	H1	N	e1	e2	G	Grease nipple
	M	W	L											
LMGW12T	12	30	39.3	21	12	M3×3	27.5	-	2.9	2.4	-	-	-	-
LMGW12LT-	12	30	50.7	21	24	M3×3	38.5	-	2.9	2.4	-	-	-	-
LMGW14T	14	40	45.5	28	15	M3×3.6	31.5	-	3.4	2.8	-	-	-	-
LMGW17T	17	50	50.6	29	15	M4×5	35	6	2.5	4	3.1	3	4	M3×0.5
LMGW21T	21	54	59	31	19	M5×6	41.7	8	3	4.5	3.65	4.2	12	M6×1.0
LMGW27T	27	62	72.8	46	32	M6×6	51.8	10	4	6	3.5	5	12	M6×1.0

Dimensions of LMGW···T/LT

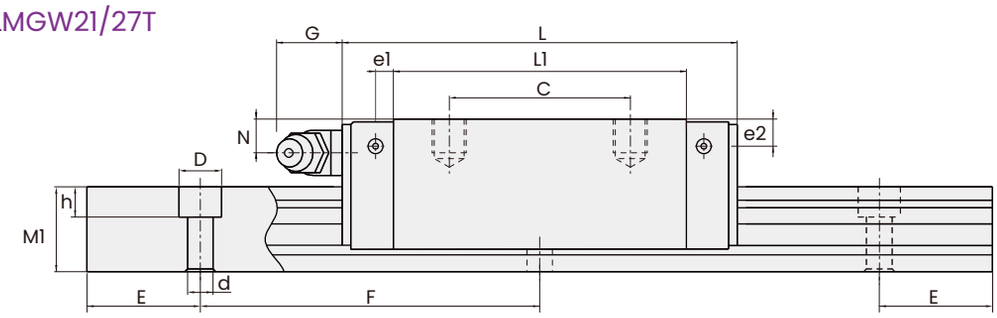
LMGW12/14T
LMGW12LT



LMGW17T



LMGW21/27T

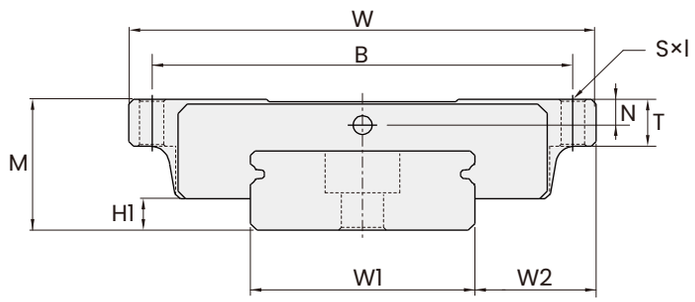


Unit (mm)

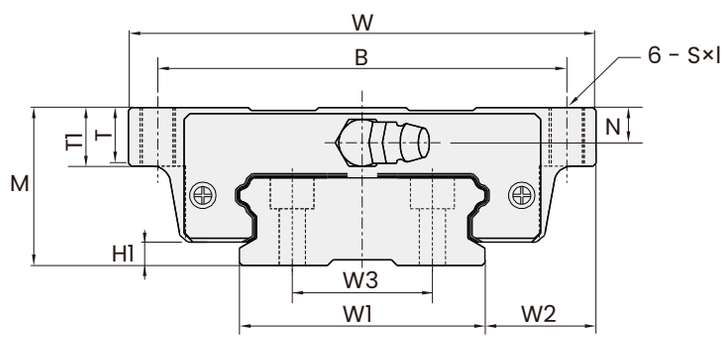
Model No.	Rail dimension							Basic load rating		Static moment rating			Weight	
	Width			Height	Pitch	End	Mounting bolt hole	Dynamic	Static					
	W1	W2	W3	M1	F	E	D×h×d	C KN	C0 KN	MP KN·m	MY KN·m	MR KN·m	Carriage Kg	Rail Kg/m
LMGW12T	18	6	-	7	40	15	7.5×5.3×4.5	2.75	4.12	18.96	18.96	40.12	0.04	0.91
LMGW12LT-	18	6	-	7	40	15	7.5×5.3×4.5	3.43	5.89	34.00	34.00	54.54	0.057	0.91
LMGW14T	24	8	-	8.5	40	15	8×4.5×4.5	3.92	5.59	27.80	27.80	70.34	0.071	1.49
LMGW17T	33	8.5	18	9.3	40	15	7.5×5.3×4.5	5.23	9.64	0.062	0.062	0.15	0.12	2.2
LMGW21T	37	8.5	22	11	50	15	7.5×5.3×4.5	7.21	13.7	0.10	0.10	0.23	0.20	3.0
LMGW27T	42	10	24	15	60	20	7.5×5.3×4.5	12.4	21.6	0.17	0.17	0.42	0.35	4.7

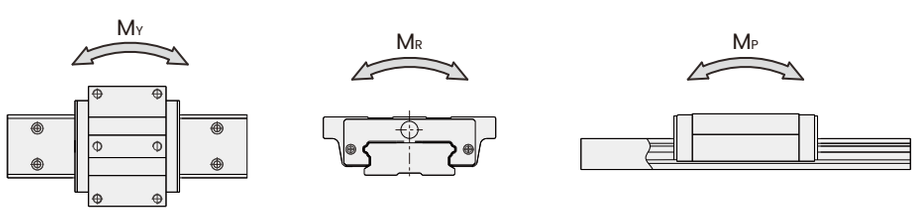
Dimensions of LMGW···C

LMGW12/14C



LMGW17/21/27C

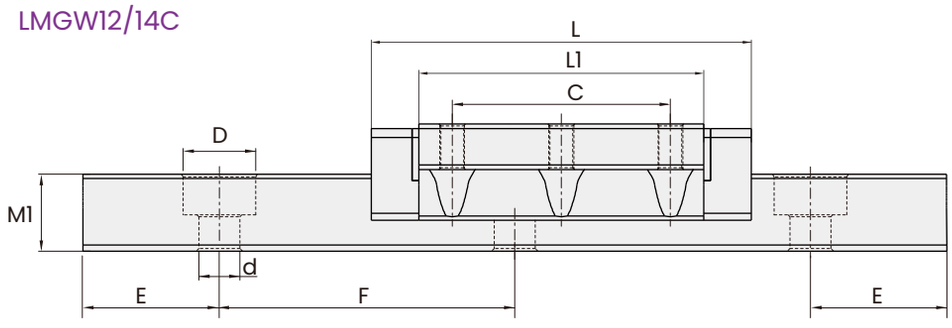




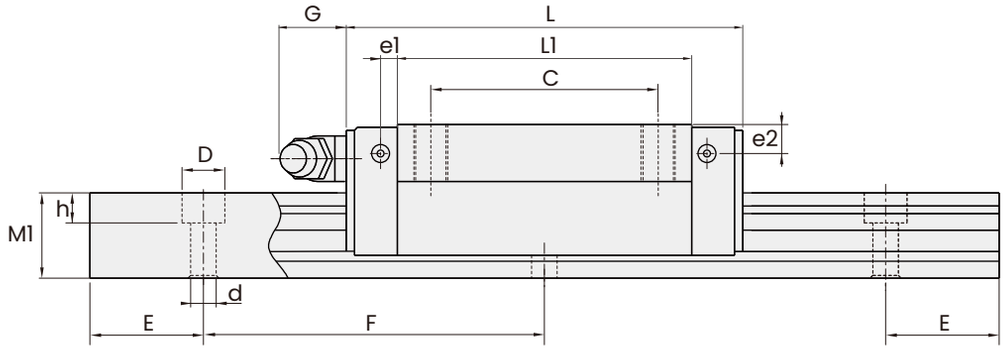
Model No.	External dimension			Carriage dimension											
	Height	Width	Length	B	C	Mounting hole S×l	L1	T	T1	H1	N	e1	e2	G	Grease nipple
	M	W	L												
LMGW12C	12	40	37	35	18	M3	26.2	4	-	2.9	2.4	-	-	-	-
LMGW14C	141	50	45.5	45	24	M3	31.3	5	-	3.4	2.8	-	-	-	-
LMGW17C	7	60	50.6	53	26	M4	35	5.3	6	2.5	4	3.1	3	4	M3×0.5
LMGW21C	21	68	59	60	29	M5	41.7	7.3	8	3	4.5	3.65	4.2	12	M6×1.0
LMGW27C	27	80	72.8	70	40	M6	51.8	8	10	4	6	3.5	5	12	M6×1.0

Dimensions of LMGW···C

LMGW12/14C



LMGW17/21/27C



Unit (mm)

Model No.	Rail dimension							Basic load rating		Static moment rating			Weight	
	Width			Height	Pitch	End	Mounting bolt hole	Dynamic	Static					
	W1	W2	W3	M1	F	E	D×h×d	C KN	C_0 KN	M_P KN·m	M_Y KN·m	M_R KN·m	Carriage Kg	Rail Kg/m
LMGW12C	18	11	-	7	40	15	7.5×5.3×4.5	2.75	4.12	18.962	18.962	40.12	0.050	0.91
LMGW14C	24	13	-	8.5	40	15	8×4.5×4.5	3.92	5.59	7.80	7.80	70.340	0.100	1.49
LMGW17C	33	13.5	18	9.3	40	15	7.5×5.3×4.5	5.23	9.64	0.062	0.062	.15	0.13	2.2
LMGW21C	37	15	22	11	50	15	7.5×5.3×4.5	7.21	13.7	0.10	0.10	0.23	0.23	3.0
LMGW27C	42	19	24	15	60	20	7.5×5.3×4.5	12.4	21.6	0.17	0.17	0.42	0.43	4.7