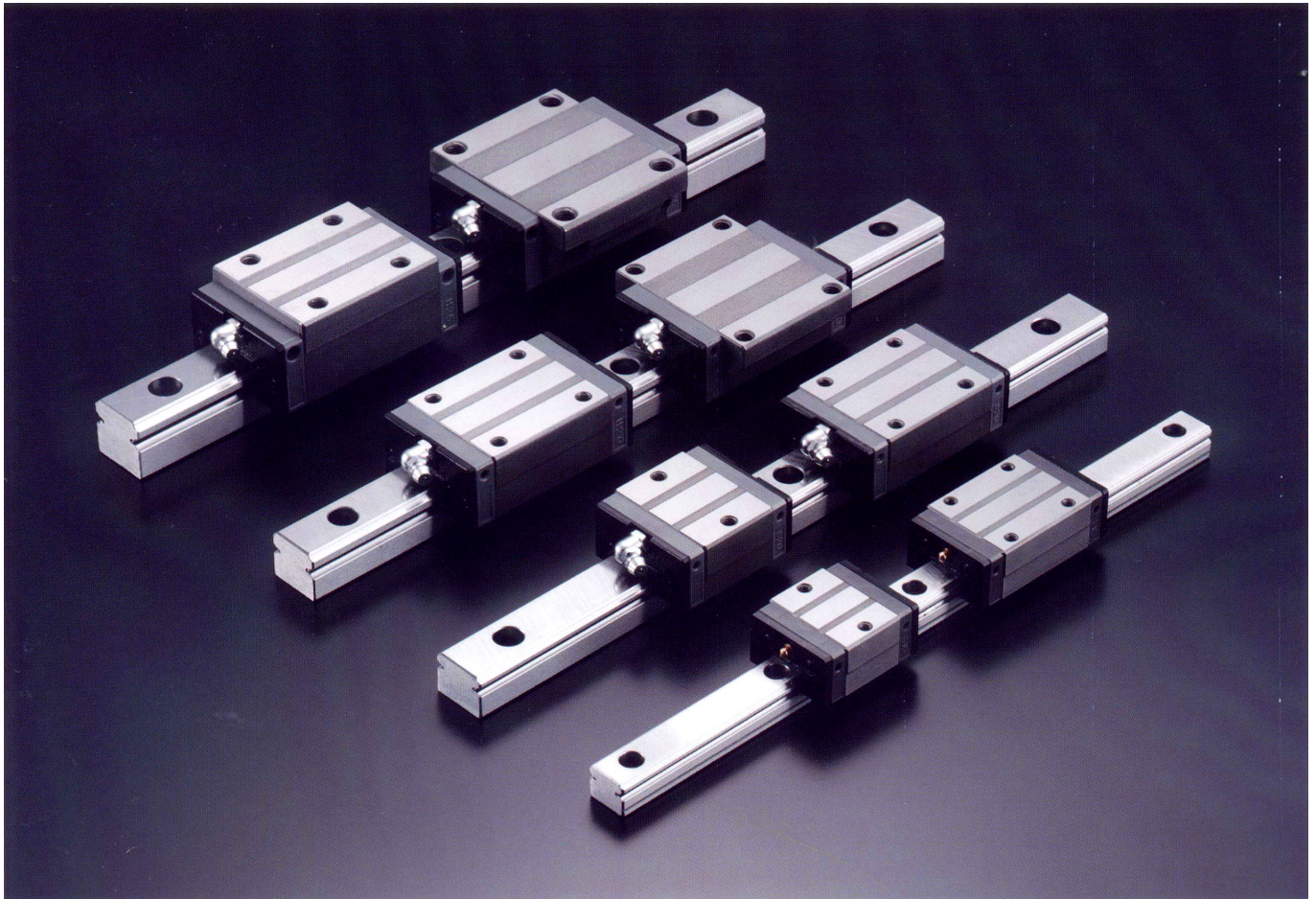
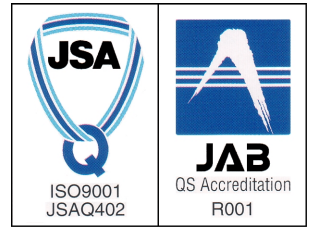


QZAK

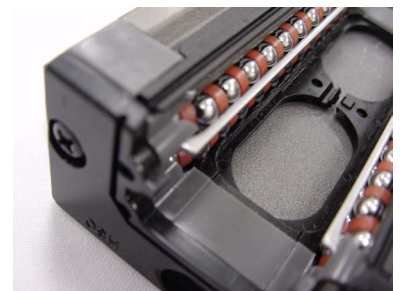
LINEAR GUIDES

with Ball Retainer

LGSR, LGSR-S Series
LGHR, LGHR-F Series



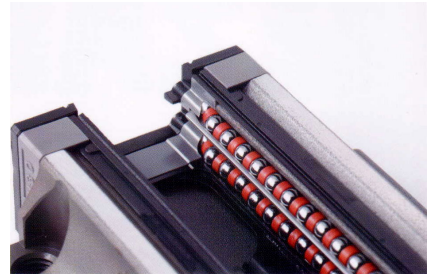
Low noise operation without collision of balls
Suitable for high precision since vibration is canceled



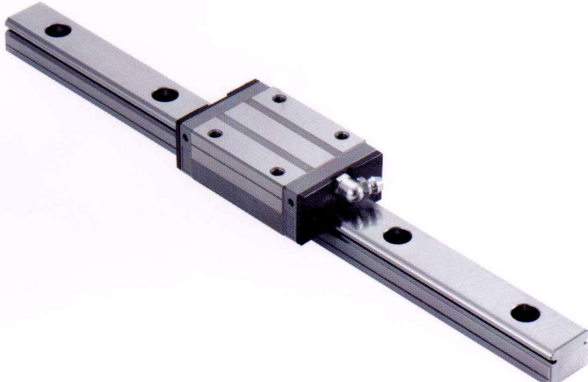
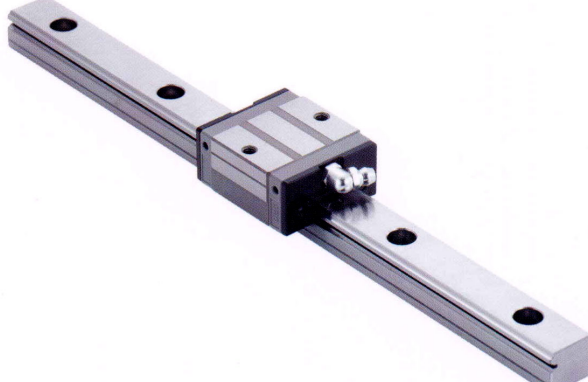
QZAK SEIKŌ CO.,LTD.

Part 2

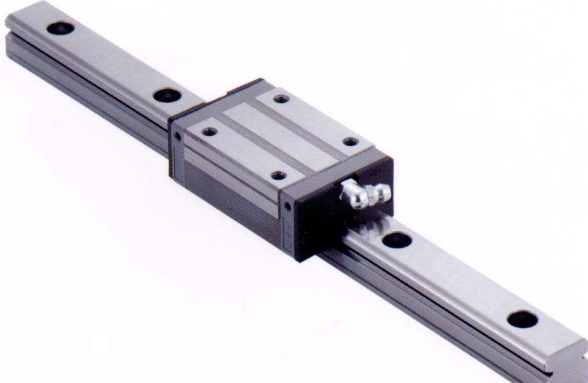
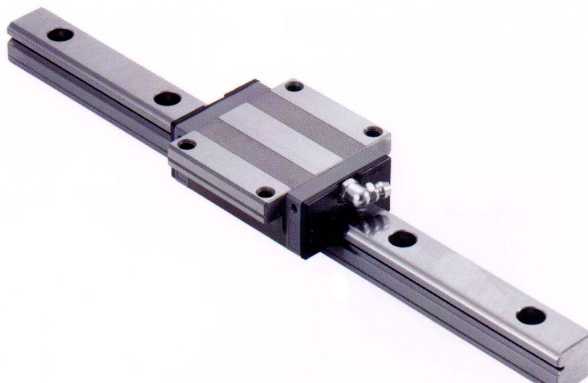
Linear Guide



<For General Use>

S-Model Linear Guide with Ball Retainer	Compact S-Model Linear Guide with Ball Retainer
 <p>LGSR15,20,25,30</p>	 <p>LGSR15S,20S,25S,30S</p>

<For Heavy Use>

H-Model Linear Guide with Ball Retainer	Flanged H-Model Linear Guide with Ball Retainer
 <p>LGHR15,20,25,30,35</p>	 <p>LGHR15F,20F,25F,30F,35F</p>

Noise reduction (especially high frequency band)

Fig.1 Noise level comparison with LGS20 and LGSR20

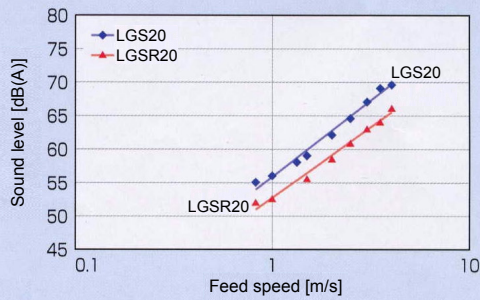


Fig.2 Noise level comparison with LGH30 and LGHR30

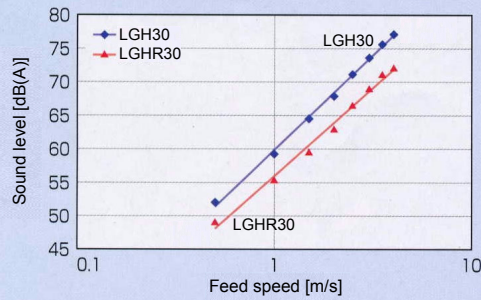
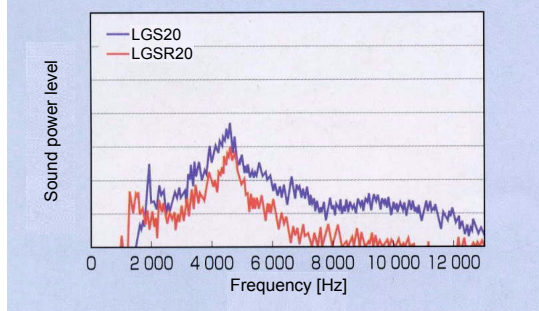
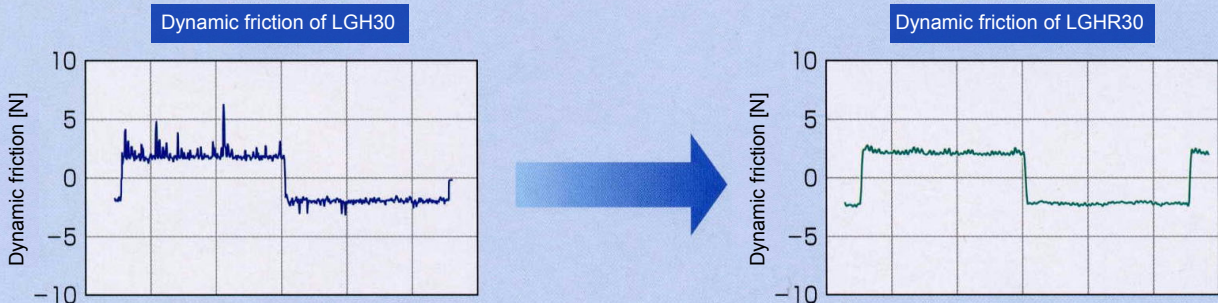


Fig.3 Noise level comparison with LGS20 and LGSR20 (about frequency)



Advancement of operation stability since friction change was restrained

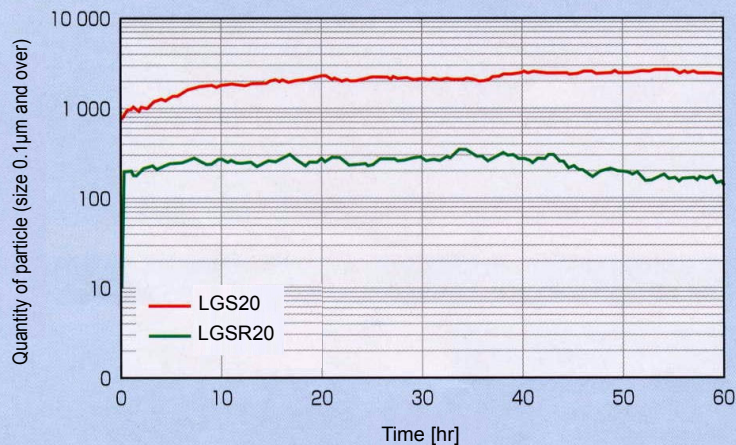
Fig.4 Dynamic friction comparison with LGH30 and LGHR30



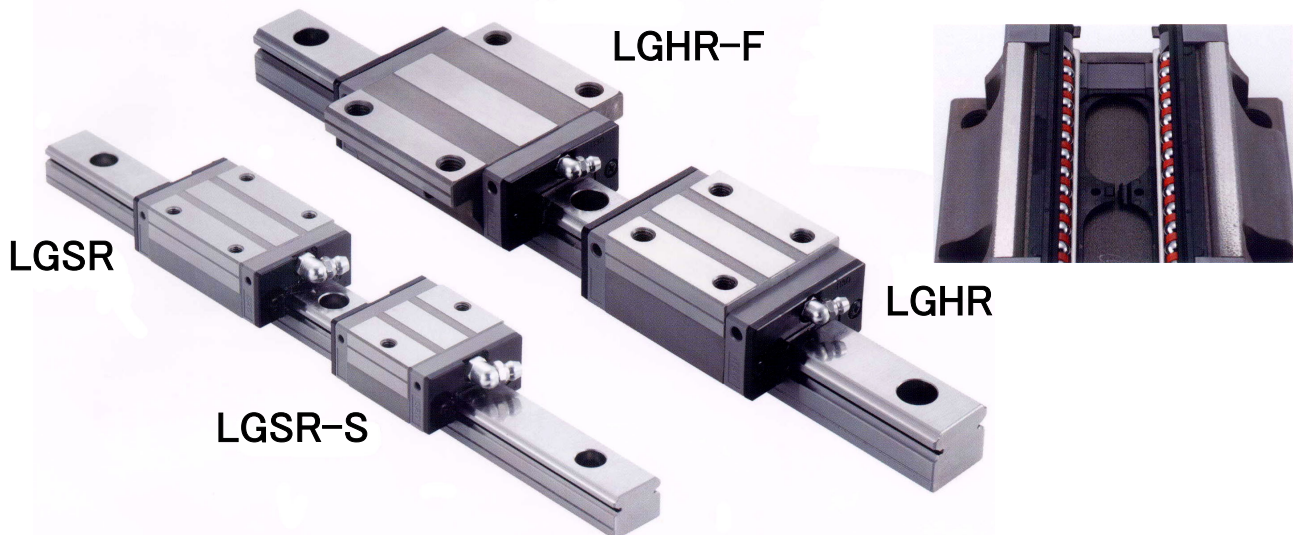
Test procedure: grease lubrication, feed speed 1m/min

Reduction of particle generation

Fig.5 Comparison about particle generation



OZAK Linear Guide with Ball Retainer



Features



■ Low friction/Low noise operation

This bearing is equipped with ball retainers of plastic to prevent collision of each ball. Smooth and stable operation can be attained, since we suppress balls collision noise and friction drag to have designed optimally ball re-circulation circuit.

■ Compatibility

Since tolerance between bearings and rails is compatibility, gauging mark between a bearing and a rail is unnecessary. Laborsaving of parts management and shortening of assembly time can be achieved.

■ Prevention of balls omission

Since this item has structure with prevention of balls omission and has ball retainers of plastic between each ball, there are no bothers about balls omission in assembly. However, when you insert a bearing into a rail, slide a bearing carefully in parallel.

■ Extensive standardization of rail length

To be applicable to most of rail length and to become a symmetrical attachment hole pitch in 2 axis parallel use, we standardized rail length. It is the easiest to use, and shortening of time for delivery was realized.

■ Maintenance is simple

Bearings are delivered in the state which Li-soap based

grease is beforehand enclosed with. However, please supply grease periodically from oil hole of both sides.

Types



1.LGSR:

This is the standard size series currently most generally used. This is suitable for electricity, an electron, and a semiconductor process industry.

2.LGSR-S:

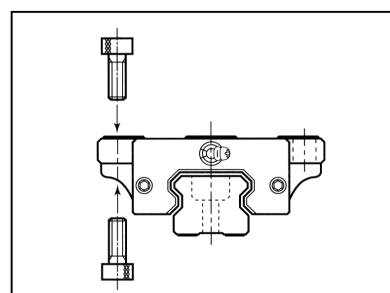
This is designed compactly by shortening the length of bearings LGSR series. And this is suitable to the machine equipment aiming at a narrow place.

3.LGHR:

This is the heavy size series widely used for the middle weight or heavy weight type machine. This is suitable for auto industry, machine tools, and other special industrial machine equipment.

4.LGHR-F:

This is a high rigidity type of LGHR prepared a flange. It has the structure which can set a bolt from the top or the bottom.



Precision Standards

The following table1 shows precision standards for the LGSR and LGHR series.

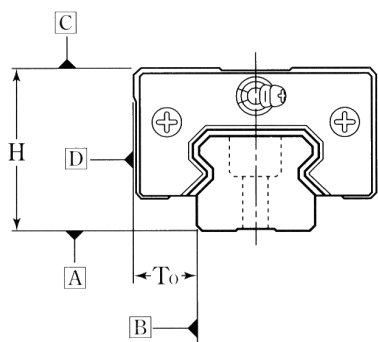
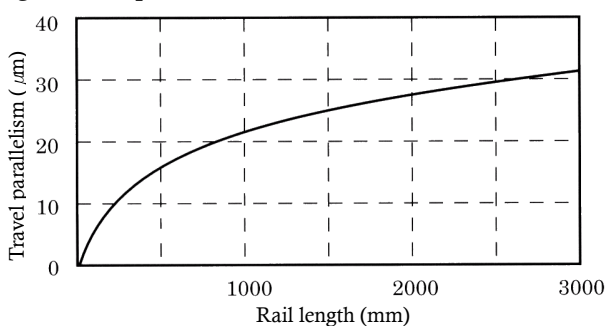


Table1: Precision standards unit:mm

Item	accuracy
H tolerance	±0.020
H deviation between paired rails	0.030
T ₀ tolerance	±0.030
T ₀ deviation between paired rails	0.025
C-face travel parallelism against A-face D-face travel parallelism against B-face	See Fig6.
Radial clearance	0~+0.015

Fig6: Travel parallelism



Applicable temperature: 0°C~+50°C
 Highest instantaneous temperature: +80°C

Rated Life

The rated life of the LGSR and LGHR series can be calculated by the following formula.

$$L_{10} = \left(\frac{C}{f_s \cdot P} \right)^3 \cdot 50km \quad (1)$$

L₁₀: Rated Life km

C: Basic dynamic load rating N

P: Acting radial load N

f_s: Impulse, vibration and/or speed factor; see table2

Table2: Impulse, vibration and speed factor

Conditions	f _s
When the reciprocating motion speed is V=300mm/sec or less without impact or vibration	1~1.5
When the reciprocating motion speed is V=1000mm/sec or less with slight impact or vibration	1.5~2.0
When the reciprocating motion speed is V=1000mm/sec or more with heavy impact or vibration	2.0~4.0

Installation

1. Wipe off the rust prevention oil applied on this guiderail.
2. Do not remove the grease contained (Albania No.2 of Shell Petroleum) in the housing.
3. Please assemble them in a state to which a bearing is inserted in a guiderail. Even if you extract a bearing from a guiderail, balls don't fall from the bearing with structure of prevention of balls omission. But if you insert a bearing into guiderail by force, balls may fall.
4. When you insert a bearing into a rail, slide a bearing carefully in parallel.
5. A reference plane of a bearing is one flank (grinding side). Reference plane of a guiderail is one flank (groove side).
6. If the greased nipple inlet is required to be shifted in the opposite direction, follow the instructions below.
 - ① Remove the grease nipple with a hexagon socket spanner.
 - ② Remove the filling plug in the grease nipple installation hole on the opposite side with a hexagon socket wrench. Then attach a grease nipple.
 - ③ Install the removed filling plug into the greased nipple installation hole on the other side.

OZAK Lubrication Unit OZAK JU series

Features



■ Less exertion of maintenance

Lubrication unit OZAK JU combines oil and resin in a single unit. The resin contains a large amount of lubrication oil. Equipped to the rail, oil film is formed enough. Thus used with grease, maintenance is required infrequently.

■ Applicable to various environment

OZAK JU with very small amount of grease can provide sufficient lubrication in the environment where grease is undesirable and high cleanliness is required. And in environment where foreign bodies are generated, efficiency in lubrication and prevention from foreign inclusions are maintained by using OZAK JU in combination with grease.

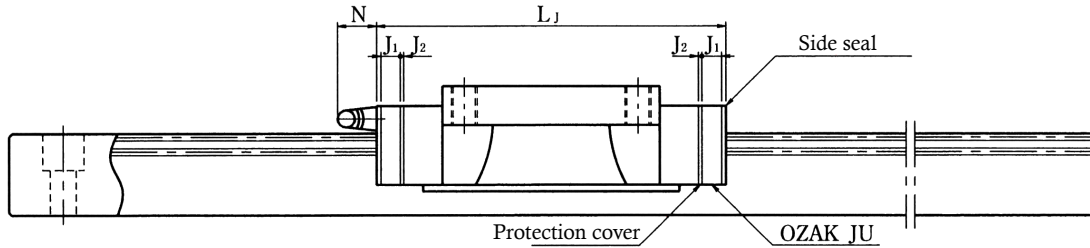


Table11: Lubrication unit OZAK JU series dimensions table

unit:mm

Model No.	L	L ₁	J ₁	J ₂	N	Model No.	L	L ₁	J ₁	J ₂	N
LGSR15-JU	56.8	66.4	4.0	0.8	5	LGSR15S-JU	40.4	50	4.0	0.8	5
LGSR20-JU	65.2	75.8	4.5	0.8	14	LGSR20S-JU	47.2	57.8	4.5	0.8	14
LGSR25-JU	81.6	92.2	4.5	0.8	14	LGSR25S-JU	59.6	70.2	4.5	0.8	14
LGSR30-JU	96.4	108.4	5.0	1.0	14	LGSR30S-JU	67.4	79.4	5.0	1.0	14
LGHR15-JU	55	65.6	4.5	0.8	5	LGHR15F-JU	55	65.6	4.5	0.8	5
LGHR20-JU	69.8	80.4	4.5	0.8	14	LGHR20F-JU	69.8	80.4	4.5	0.8	14
LGHR25-JU	79	90.6	5.0	0.8	14	LGHR25F-JU	79	90.6	5.0	0.8	14
LGHR30-JU	85.6	97.6	5.0	1.0	14	LGHR30F-JU	98.6	110.6	5.0	1.0	14
LGHR35-JU	109	122	5.5	1.0	14	LGHR35F-JU	109	122	5.5	1.0	14

Numbering

LGHR25F

Type

-JU

with Lubrication unit

-2

Number of bearings for one rail

× 1300

Rail length