

Advantages of MILLION GUIDE

1. Accuracy

Most suitable for the die mold with small clearance like thin foil punch, by its excellence in guide straightness.

2. Rigidity

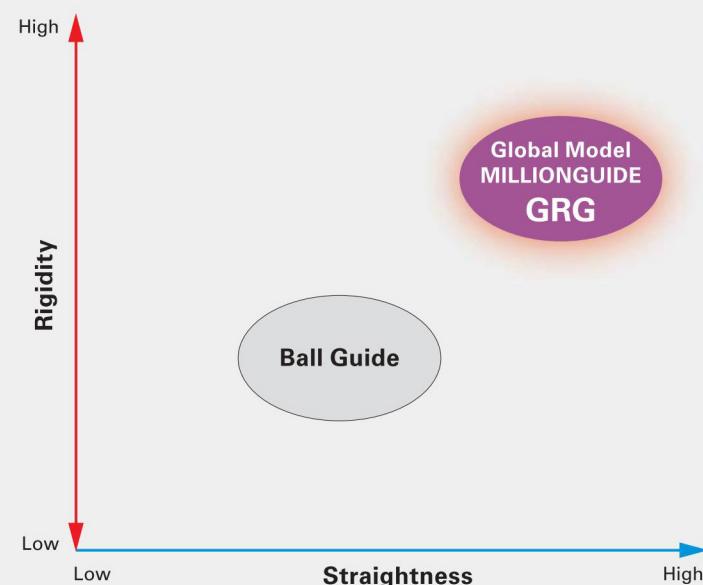
Capable to manufacture high quality products for keeping the punch-die clearance even, preventing the punching inclination, restricting burr occurrence.

3. Product Life

Smooth stroke by the rollers restricts the punch-die chipping for long term. Longer maintenance cycle.



Comparison of Guide Rigidity/Straightness



MILLION GUIDE PAT. PAT.P GRG Series

MILLION GUIDE Family

GRG Series Debut!!

Global Model



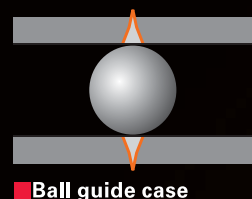
ISEL CO., LTD.

MILLION GUIDE Family **GRG Series Debut!!**

New MILLION GUIDE to pursue the high cost-performance,
supporting Japanese ultra-high precision die mold technology.
For the die mold with small clearance that cannot be achieved
by the ball guide!!

Features of MILLION GUIDE

1 Point to line contact



High rigidity
by line contact

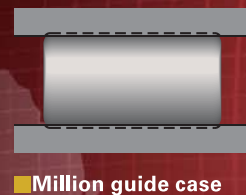


2 Low pre-load



Higher pre-load for
keeping the rigidity on
the ball guide brings
impact/vibration at the
entry, leading to
shorter product life.

Smooth motion
by low pre-load



Lower pre-load for
the roller with high
rigidity brings smaller
impact and smooth
motion at the entry,
leading to longer
product life.

High accuracy by adding a few μm pre-load on the roller for the tight fitting.

3 The needle rollers arranged in polygonal position.

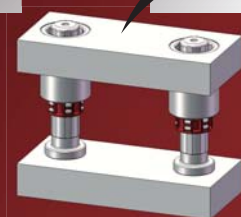
Helps to avoid assembly error.



Assembly
error
may occur.



Without
assembly
error



Global Model

MILLION GUIDE PAT. GN Series

MILLION GUIDE "GN Series" are recommended for Special shape,
customized accuracy and rigidity.



GNG Series



GNZF Series



GNZC Series



GNS Series



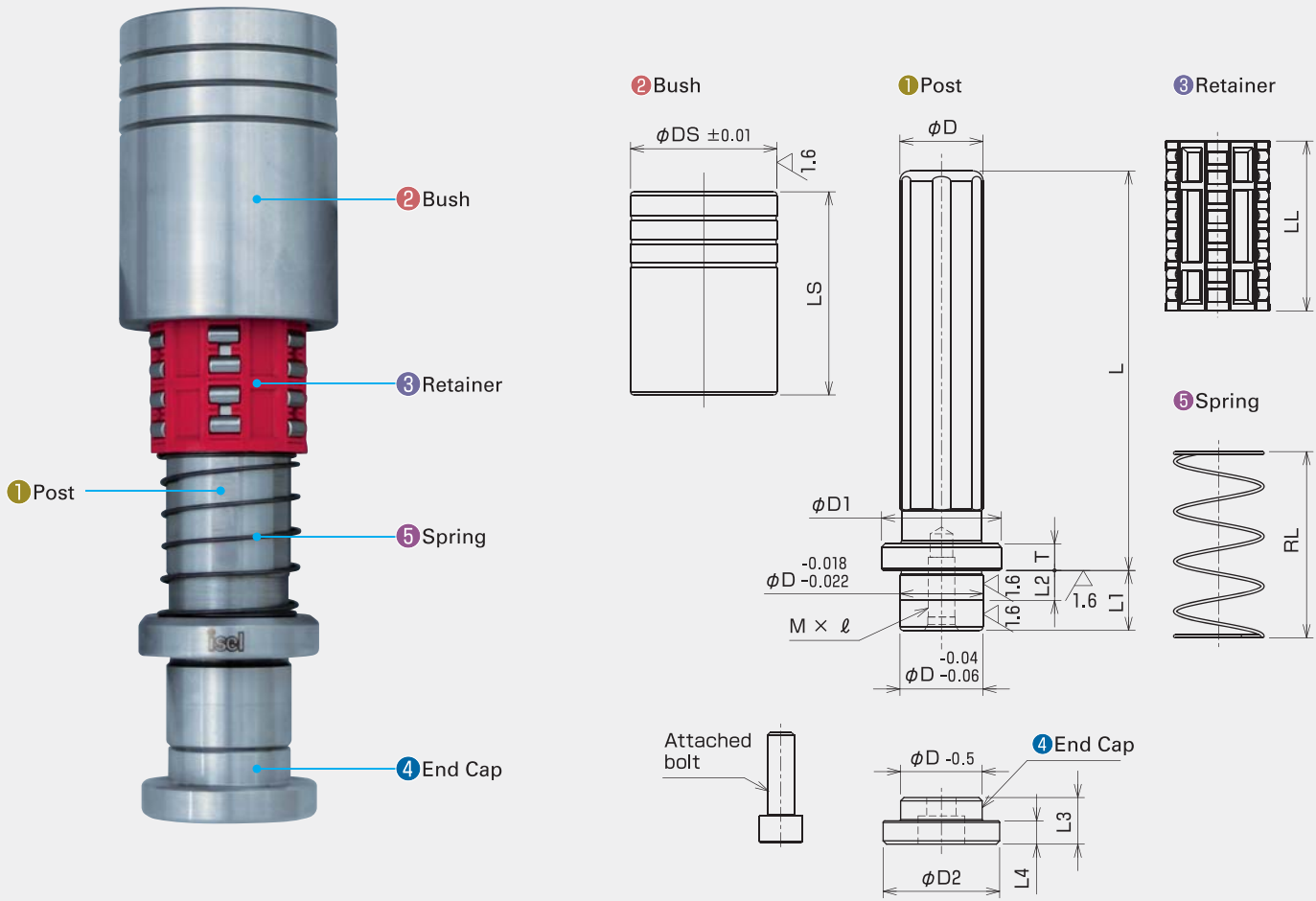
GNSB Series

GNS/GNSB Series

GNZF/GNZC Series

MILLION GUIDE PAT. GRG Series

Standard set size figure



Order type

Standard Set

GRG 20 120
Type Shaft diameter Post length (L-size)

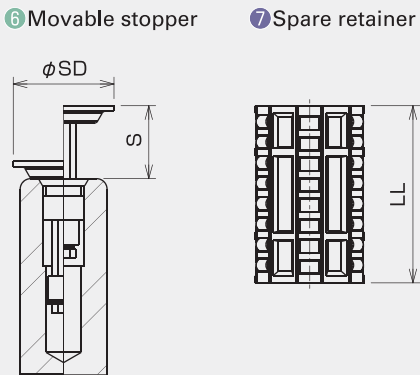
Set with movable stopper (optional)

GRG 20 120 S
Type Shaft diameter Post length (L-size) Option (In case movable stopper is equipped)

Spare Retainer (optional)

GRG 20 L
Type Shaft diameter Post length

Optional item size figure



Standard set size table

	① Post							② Bush		③ ⑦ Retainer	④ End cap				⑥ Movable stopper	
Type	ϕD	L (Choice)	ϕD1	L1	L2	T	M × ℓ	ϕDS	LS	LL	L3	L4	ϕD2	Screw size	ϕSD	S
GRG13	13	50 · 60 · 70	20	10	7	5	M6 × 15	24	30	25	8	4	17	M6 × 15	—	—
GRG16	16	50 · 60 · 80	23	10	7	5	M6 × 15	30	40	30	10	4	22	M6 × 15	—	—
GRG20	20	90 · 100 · 120	29	15	7.5	5	M8 × 18	37	50	40	14	7	28	M8 × 25	24	17
GRG25	25	100 · 120 · 130	36	18	9	8	M8 × 18	44	61	51	14	7	35	M8 × 25	29	21
GRG32	32	120 · 140 · 160	44	23	11.5	10	M10 × 22	54	73	63	16	8	40	M10 × 30	37	28

Standard setting table of spring length

Spring Length RL (without movable stopper)

D/L	50	60	70	80	90	100	120	130	140	160
13	30	40	50	—	—	—	—	—	—	—
16	30	40	—	60	—	—	—	—	—	—
20	—	—	—	—	70	80	100	—	—	—
25	—	—	—	—	—	70	90	100	—	—
32	—	—	—	—	—	—	85	—	105	125

Spring Length RL (with movable stopper)

D/L	90	100	120	130	140	160
20	80	90	110	—	—	—
25	—	80	100	120	—	—
32	—	—	95	—	115	145

Million Guide Lubrication

Million Guide cannot be used without lubrication; Regular lubrication is necessary. In case Million Guide is not properly lubricated, premature wear may occur, leading to the performance degradation. The following lubes are our recommendation to use.

1 Oil lubrication Million Oil MOF-3

- Lubrication and rust prevention for precision die guide and machine sliding part
- Lubrication and rust prevention for roller/ball guide
- Holds the guide lubrication by bearing effect of ultrafine fluororesin
- Rust prevention by removing water/moisture from the guide
- Semi-dry and highly retentive after application



2 Grease lubrication Million Grease MGS



- Lubrication for Million Guide and ball guide
- Urea-based, extreme pressure resistant grease of high thermal stability
- High extreme pressure resistance with molybdenum
- Highly retentive by the adhesiveness of mixed special polymer

Offering our ideas to the world

ISEL will act flexibly considering the circumstance, situation and market size of each country we move into. We will prioritize and build reliable relationships with people as well as increase their trust in our products.



isel ISEL CO., LTD.

KANSEI CO., LTD.

3300/114-115 22nd Flr., Elephant Tower (B)

Phaholyothin Rd., Chomphon, Chatuchak, Bangkok 10900

TEL : 0-2937-3381-4 Fax : 0-2937-3385-6, 0-2937-4633-34

E-mail : kansei@kansei.co.th , kansei_ssp@csloxinfo.com

URL : www.kansei.co.th

ISEL CO., LTD. (Head Office/Factory)

1-2-16, Atobe-Kitano-Cho, Yao City, Osaka 581-0068, Japan

TEL : 072-991-0450 FAX : 072-994-7593

WEBSITE >>>

<http://isel.jp>

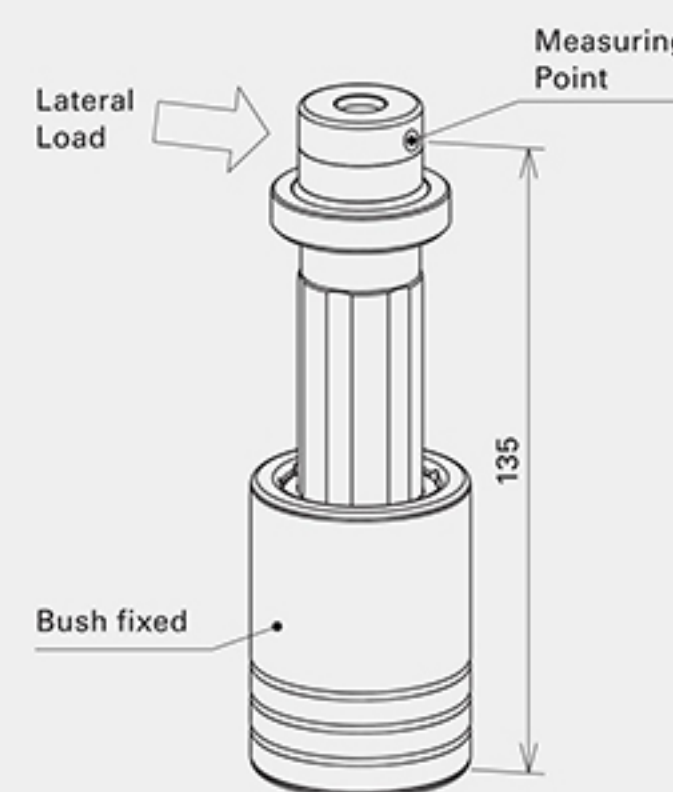
• Our products are manufactured under appropriate quality control. However, ISEL will not be liable in any way for any damages incurred by convulsions of nature or by the Customer that are caused by the Customer's error in using the products. The contents of this catalog are subject to change without prior notice.
• When you export our products, confirm the forwarding country, customer and its application. In case where they fall under objective requirements, follow necessary procedures such as application for export admission.

Y-0134 MA 20121005/01

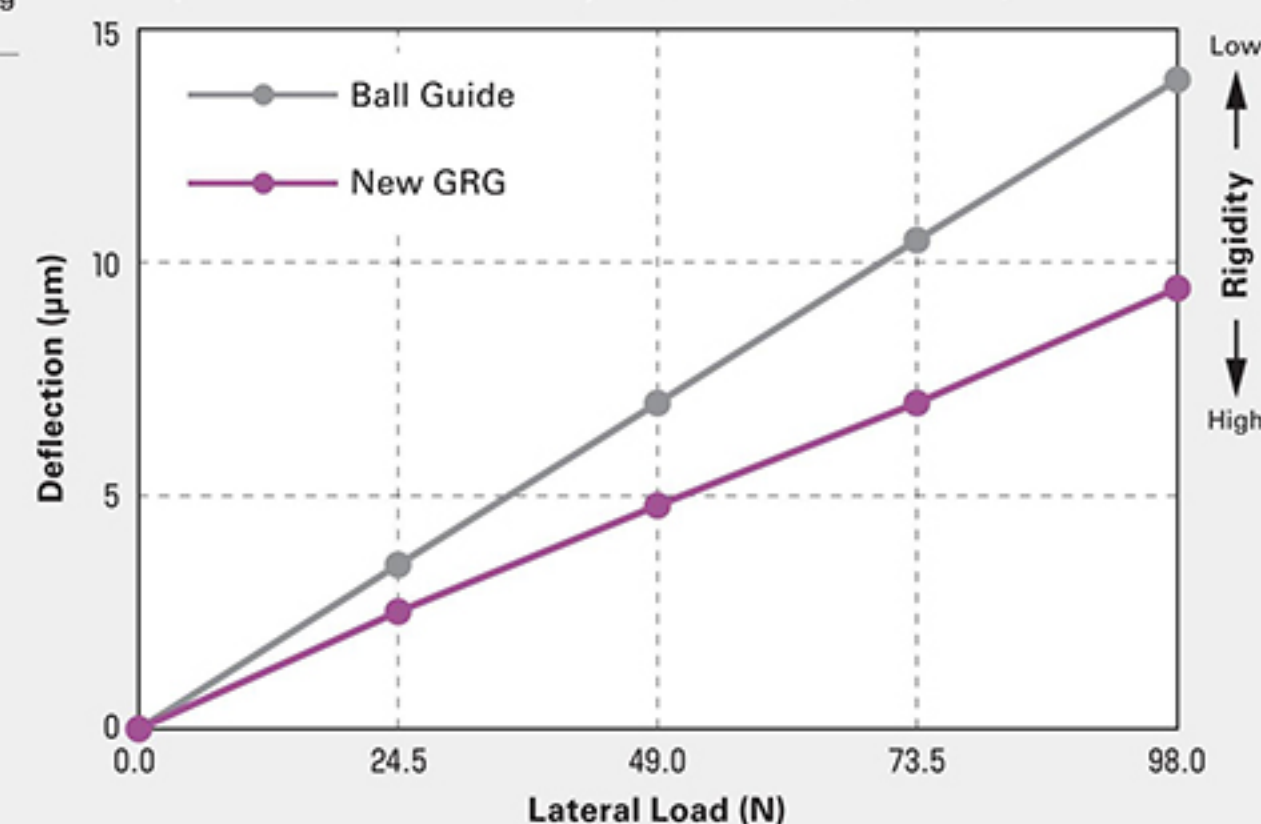
Comparison of Guide

Guide Type	Features	Rigidity	Rotational Restraint	Entry Impact	Rated Load
Global Model MILLION GUIDE GRG	<ul style="list-style-type: none"> • High rigidity, High accuracy • Special shape not applied 	◎	○	○	◎
Ball Guide	<ul style="list-style-type: none"> • Low price • Easy assembly 	△	×	△	△

Comparison of Guide Deflection by Lateral Load



Comparison of Deflection by Lateral Load (ø25 size)



Notes

- Select the post length so that the post keeps the bush at the top dead center during the press process.
- Make sure there is no rotational moment between the post and the bush at installation.
- Design so that the retainer does not come out from the bush during operation.
- Million Guide cannot be used without any lubrication.
- Use the Million Guide in 0 – 80°C environment.
- Do not modify the Million Guide. (may affect the accuracy and specification.)