# SLIDE ROTARY BUSH

NB's RK type slide rotary bush is a highly accurate rigid component providing smooth continuous linear and rotational motion. Its structure imposes no constraints on either motion. It is much more compact than a standard slide bush with separate rotational bearing.

## STRUCTURE AND ADVANTAGES

The RK type slide rotary bush uses a retainer similar to that used in the SR type stroke bush. This retainer provides the results of smooth rotational motion. The SM type slide bush is also used providing the smooth linear motion. Large ball elements are used enabling the bushing to withstand high loads.

**1.A smooth unlimited linear and rotational motion is obtained.**

**2.There is no need to machine separate housing.**

**3.High accuracy is ensured for extended period of usage.**

**4.Its high compatibility eliminates replacement problems.**

**5.High rigidity enables it to withstand an unbalanced load and high load capacity.**

※ For best performance, please select tolerance of h5 for the shaft.
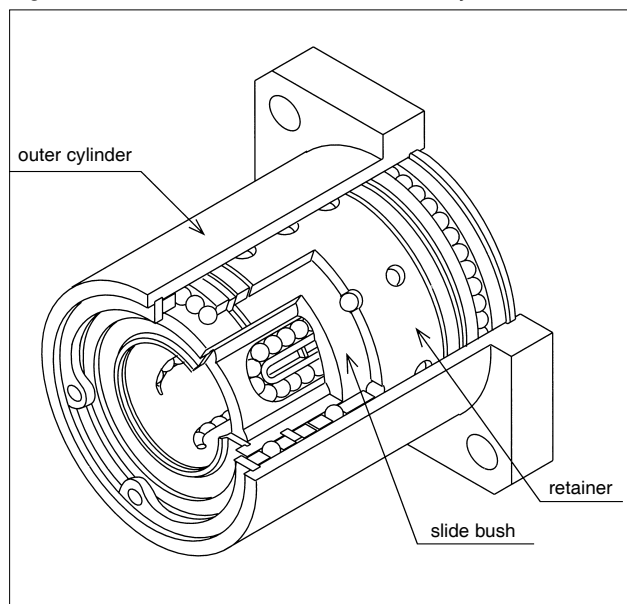
**Calculation of Life:**

$$L = \left( \frac{f_H \cdot f_T \cdot f_C}{f_W} \cdot \frac{C}{P} \right)^3 \times 50$$

L : travel life (km)   $f_H$ : hardness coefficient   $f_T$ : temperature coefficient
$f_C$ : contact coefficient   $f_W$ : the loafficient
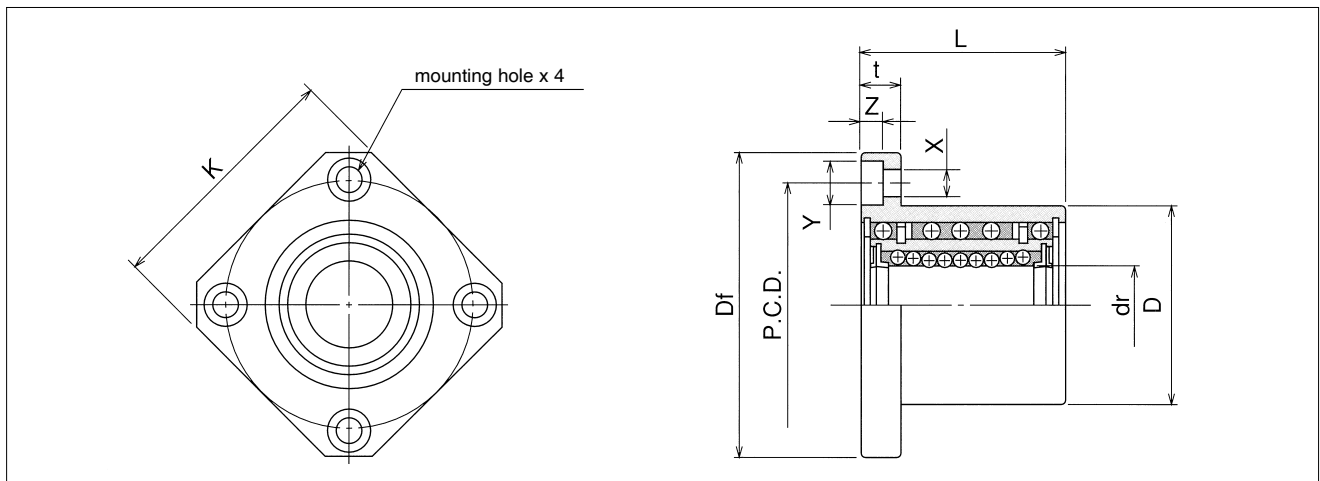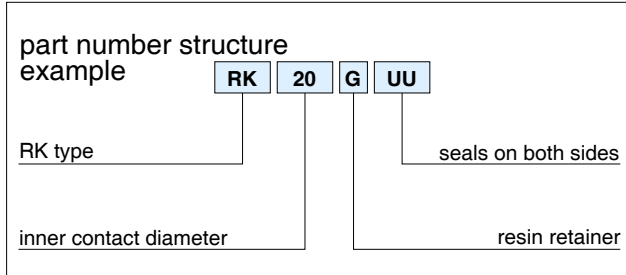C : basic dynamic load rating (N)  P : load (N)

※Refer to page Eng. 5 for the coefficients.
※The contact coefficient is used when two or more bushings are used in close contact with each other on the same shaft.

Figure F-6 Basic Structure of NB Slide Rotary Bush



outer cylinder

retainer

slide bush

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SLIDE GUIDE

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ROTARY BALL SPLINE

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GONIO WAY

ACTUATOR

SLIDE SCREW

# SLIDE ROTARY BUSH

## RK TYPE

part number structure example

| RK | 20 | G | UU |

RK type

seals on both sides

inner contact diameter

resin retainer



mounting hole x 4

| part number | major dimensions | | | | | | | | | | | | basic load rating | | allowable rotational speed | mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | dr | | D | | L | | flange | | | | | | dynamic | static | | |
| | | tolerance | | tolerance | | tolerance | Df | K | t | P.C.D. | X × Y × Z | | C | Co | | |
| | mm | μm | mm | μm | mm | mm | mm | mm | mm | mm | mm | | N | N | rpm | g |
| RK12GUU | 12 | 0 | 32 | 0 | 36 | | 54 | 42 | 8 | 43 | 5.5×9×5.1 | | 510 | 784 | 500 | 180 |
| RK16GUU | 16 | −9 | 40 | | 45 | | 62 | 50 | 8 | 51 | 5.5×9×5.1 | | 774 | 1,180 | 500 | 280 |
| RK20GUU | 20 | | 45 | −25 | 50 | ±0.3 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | | 882 | 1,370 | 400 | 420 |
| RK25GUU | 25 | 0 | 52 | 0 | 67 | | 82 | 64 | 10 | 67 | 6.6×11×6.1 | | 980 | 1,570 | 400 | 680 |
| RK30GUU | 30 | −10 | 60 | −30 | 74 | | 96 | 75 | 13 | 78 | 9×14×8.1 | | 1,570 | 2,740 | 400 | 990 |

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