

IKO Compact Linear Bushing

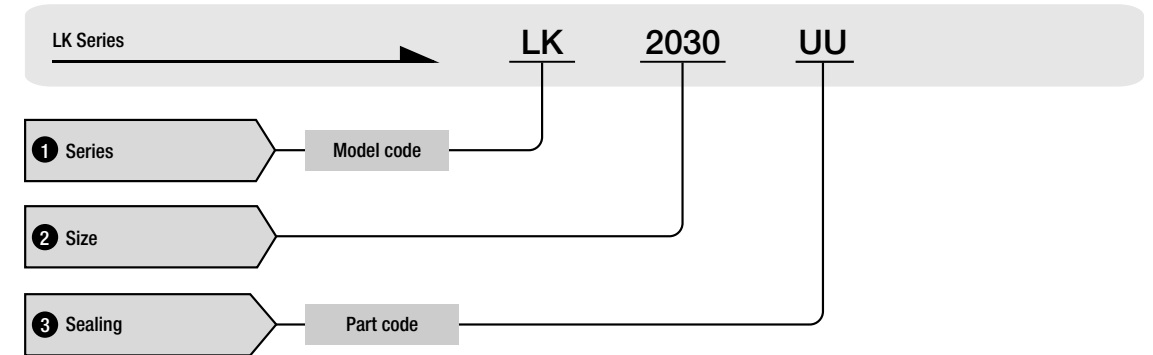
LK

IKO Compact Linear Bushing is a linear motion rolling guide, incorporating steel balls and a retainer compactly in an external cylinder which is made from a thin special-steel plate by precision drawing, carburizing and quenching.

IKO Compact Linear Bushing can be used to greatly reduce the size and weight of linear motion part of machines, because its sectional height is as small as 4 to 5mm and it is mounted directly on the shaft which is used as the raceway. Steel balls are guided accurately by the retainer, so frictional resistance is small and a highly accurate linear motion can be obtained.

IKO Compact Linear Bushing is tightly fitted in the housing bore with an interference, so it is not necessary to fix it axially and handling is easy.

● Identification Number



Raceway surface

Since the shaft surface is used as a raceway for Compact Linear Bushing, the shaft must be heat-treated and ground. Recommended surface hardness and roughness of the shaft are shown in Table 1.

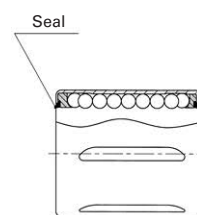
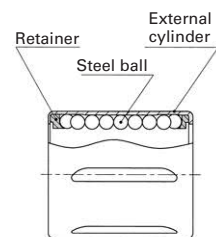
Table 1 Surface hardness and roughness of shaft

Item	Recommended value
Surface hardness	HRC58~64
Surface roughness ⁽¹⁾	0.2 μ mRa or less (0.8 μ mRy or less)

Note⁽¹⁾ : In case high accuracy is not required , 0.8 μ mRa(3.2 μ mRy) can be used.

Standard type : LK

Standard type : LK...UU



Structure of Compact Linear Bushing

IKO Compact Linear Bushing

Fit

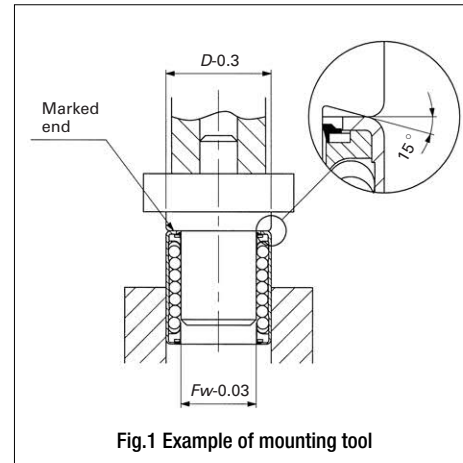
The correct dimensions and accuracy **IKO** Compact Linear Bushing are obtained only after it has been press-fitted into the housing bore. As the external cylinder is thin, accuracy is directly affected by the dimensions, shape and rigidity of housing, so these factors must be examined carefully. The recommended fit is shown in Table 2.

Table 2 Recommended fit

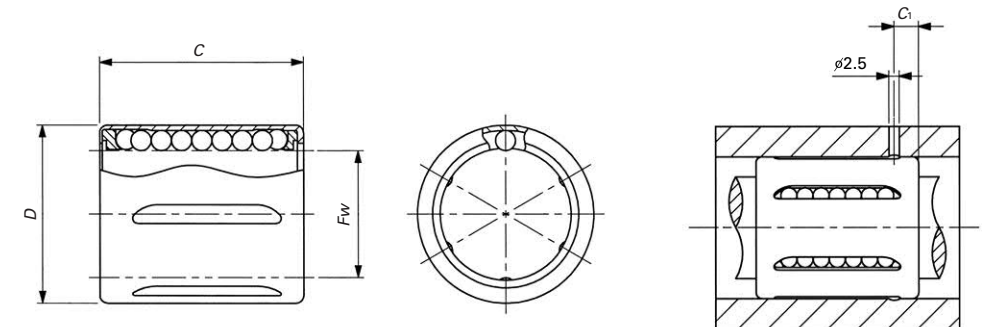
Housing material	Tolerance class of shaft		Tolerance class of housing bore	
	Normal clearance	Closer clearance	Normal clearance	Closer clearance
Steel, Cast iron	h 6	j 5	H 7	H 6
Light alloy	h 6	j 5	K 7	K 6

Mounting

IKO Compact Linear Bushing should be press-fitted into the housing gently, using an appropriate tool as shown in Fig.1 with its marked end face up. As the external cylinder is thin, it must never be stuck directly with a hammer. Since the external cylinder of **IKO** Compact Linear Bushing is firmly press-fitted into the housing bore, it is not necessary to fix it axially.



Standard type : LK
With seals : LK...UU



Oil hole in the housing

Shaft dia- mm	Identification Number mm						Boundary dimensions mm				Basic dynamic load rating ^(?)		Basic static load rating ^(?)	
	Standard type	Number of ball circuits	Weight (Reference) g	Sealed type	Number of ball circuits	Weight (Reference) g	Fw	D	C ⁽¹⁾	C ₁	Load direction A N	Load direction B N	Load direction A N	Load direction B N
16	LK 1630	5	24.4	LK 1630 UU	5	25.2	16	24	30	6	855	1 020	690	1 010
20	LK 2030	6	29.5	LK 2030 UU	6	30.4	20	28	30	6	1 060	1 120	874	1 120
25	LK 2540	6	61.4	LK 2540 UU	6	62.8	25	35	40	8	1 940	2 050	1 640	2 100
30	LK 3050	7	88.2	LK 3050 UU	7	89.8	30	40	50	8	2 790	2 750	2 670	3 070

Note⁽¹⁾ : The seal end of sealed type slightly protrudes from the end face of external cylinder.
^(?) : The load directions A and B are shown in the sketches below.

