

A LINEAR/ROTARY STROKE BEARING

METRIC

The stroke bearing is a linear and rotational motion mechanism utilizing the rotational motion of ball elements between an outer cylinder and a shaft. It is compact and can with stand high loading. The retainer is made of a light metal alloy with high wear resistance. Smooth motion is achieved under high-speed and high-acceleration conditions. Although the linear motion is limited to a predetermined stroke distance, the smooth combination of linear and rotational motions is achieved with very little frictional resistance. The stroke bearing may be conveniently used in a variety of applications.

STRUCTURE AND ADVANTAGES

The retainer in the stroke bearing positions the ball elements in a zigzag arrangement. The inner surface of the outer cylinder is finished by grinding, resulting in the smooth motion of the ball elements. Each of the ball elements is held in a separate hole and smooth motion is achieved for both rotational motion and linear motion. The retainer moves half the distance of the linear motion, therefore, the stroke distance is limited to approximately twice the distance the retainer can travel within the outer cylinder. The actual travel distance

should be limited to 80% of the travel distances as listed in the dimensional tables.

High Precision

High-carbon, chromium-bearing steel is used for the outer cylinder. It is heat treated and ground to achieve high rigidity and accuracy.

Ease of Mounting/Replacement

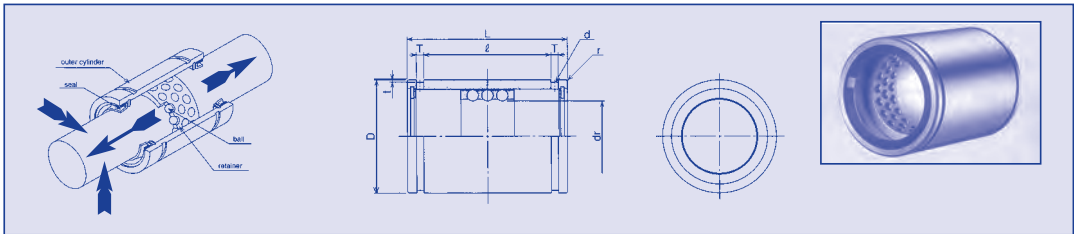
The highly accurate fabrication of the stroke bearing results in uniform dimensions, facilitating parts replacement and housing fabrication.

Light Weight/ Saving of Space

The use of an aluminum alloy for the retainer and the thin-wall outer cylinder make the stroke bearing light weight and compact.

Lubrication

Lubrication holes are provided on the oil grooves of the outer cylinder, making it easy to lubricate the stroke bearing



Material: Outer Cylinder- High Carbon, Chromium Bearing Steel, Retainer- Aluminum Alloy

ORDER BY CATALOG NUMBER

Catalog No.	Max Stroke	# of Rows	dr mm	dr Tol. μ m	Dimensions										Basic Load Rating		Mass g
					D mm	D Tol. μ m	L mm	L Tol. μ m	T mm	t mm	d mm	r mm	Dynamic C mm	Static CO mm			
ABX-G1-1	20	3	6	+22	12	0	20	-0.2	11.3	1.1	0.5	1	0.5	216	147	8.9	
ABX-G1-2	24	3	8	+13	15	-11	24		0	17.1	1.5	0.5	1.2	0.5	343	245	15.6
ABX-G1-3	30	3	10		19		30		22.7	1.5	0.5	1.2	0.5	637	416	28.8	
ABX-G1-4	32	3	12	+27	23	0	32		24.5	1.5	0.5	1.2	0.5	1,070	813	42	
ABX-G1-5	40	3	16	+16	28	-13	37		29.1	1.5	0.7	1.3	0.5	1,180	990	71	

Add uu to P/N for seals (-2 to -5 only)

Add R to P/N for double retainer (-2 to -5 only)