

# PLB LINEAR BALL GUIDES

Linear bearings guarantee accurate and precise operation, perform reciprocating motions, and are used in technical devices, instruments, and machine parts that perform linear motion.

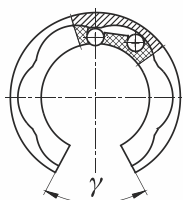
Linear Ball Bearings PLB consist of an outer sleeve, cage, ball circuits, and wiper rings.



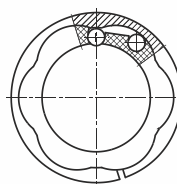
Manufacturing tolerance of housing seat diameter dimension	D H7
Manufacturing tolerance of the shaft diameter dimension	F <sub>k</sub> h6
Maximum inequality of shaft and linear guide	±30'
Roughness of roller surface	R <sub>a</sub> 0,32
Hardness of the roller surface	min. 58 HRC
Nominal service life $L_{10}=(C/P)^3$	[5 x 10 <sup>4</sup> m]

- L<sub>10</sub>** Nominal service life is expressed as a multiple of 5x10<sup>4</sup> m (50km) of travel distance of a roller or a guide, or of mutual travels. This is durability corresponding to 90% reliability, which is possible achievable with the material and manufacturing quality currently used and under conventional operating conditions.
- C** The running resistance in [N] is the load that can be carried by the slides, with a nominal life of 5x10<sup>4</sup> m.
- P** Equivalent motion load of the guide in [N]; it is an average value of the force acting on the guide in real working conditions.

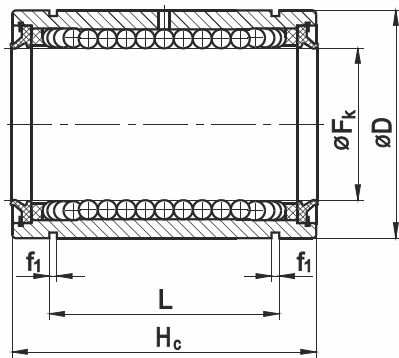
In addition to the full wrap angle closed slides shown, they are also made:



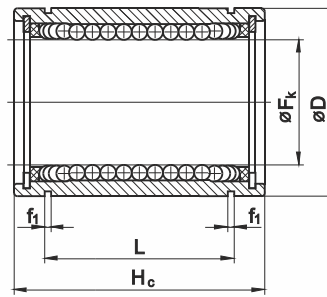
Open guides PLBO, opening angle  $\gamma=60^\circ$  and bore diameter  $\varnothing F_k= 16; 20; 25; 30; 35$  and 40 mm and other dimensions as in the table.



PLBR linear slides with bore diameter  $\varnothing F_k= 16; 20; 25; 30; 35$  and 40 mm and other dimensions as in the table.



**Type PLB PP**



**Type PLB**



Designation	Dimensions					Number of ball rows	Load capacity	
	$F_k$	D	$H_c$	L	$f_1$		C movement	$C_o$ resting
	mm	mm	mm	mm	mm		N	N
PLB 10	10	19	29	22	1,3	4	320	240
PLB 13	13	23	32	23	1,3	4	420	280
PLB 16 PP	16	28	37	26,5	1,6	4	580	440
PLB 20 PP	20	32	42	30,5	1,6	5	1170	860
PLB 25 PP	25	40	59	41	1,85	5	2080	1560
PLB 30 PP	30	45	64	44,5	1,85	6	2820	2230
PLB 35 PP	35	52	70	49,5	2,1	6	3950	3100
PLB 40 PP	40	60	80	60,5	2,1	6	5170	3810
PLB 50 PP	50	75	100	77,5	2,65	7	16000	12200
PLB 60 PP	60	90	125	101,5	3,15	7	23500	18700

For  $F_k$  diameter from 16mm the guides are sealed (PP).

**We manufacture three types of linear guides:**

- closed PLB
- segment cut-out PLBO
- slotted PLBR

**Characteristics:**

Linear ball guides perform reciprocating and sliding movements.

**Application:**

Technical devices, instruments and machine parts performing linear motion.

**Delivery status:**

Ready-to-install, filled with operating grease, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.