

LBB linear ball bearings/LPB linear plain bearings

LBBR linear ball bearings

The recently developed compact LBBR linear ball bearing is of a patented design. The bearing comprises a plastic cage carrying hardened steel raceway segments and guiding the ball sets. The bearing conforms to dimension series 1 of ISO 10285 and will replace the former LBBS type. The LBBR raceway segments have been designed to maximise the length of the load carrying zone. A high load bearing capacity is therefore possible with a resulting long service life. The design of the plastic cage is entirely new and has been optimised. The key feature is that all the balls in the bearing run on the same pitch circle diameter which allows ball recirculation to take place smoothly with no

resulting cage loads. Ball diameter can be maximised with this design of cage with implications not only for load capacity and life but also on running quality.

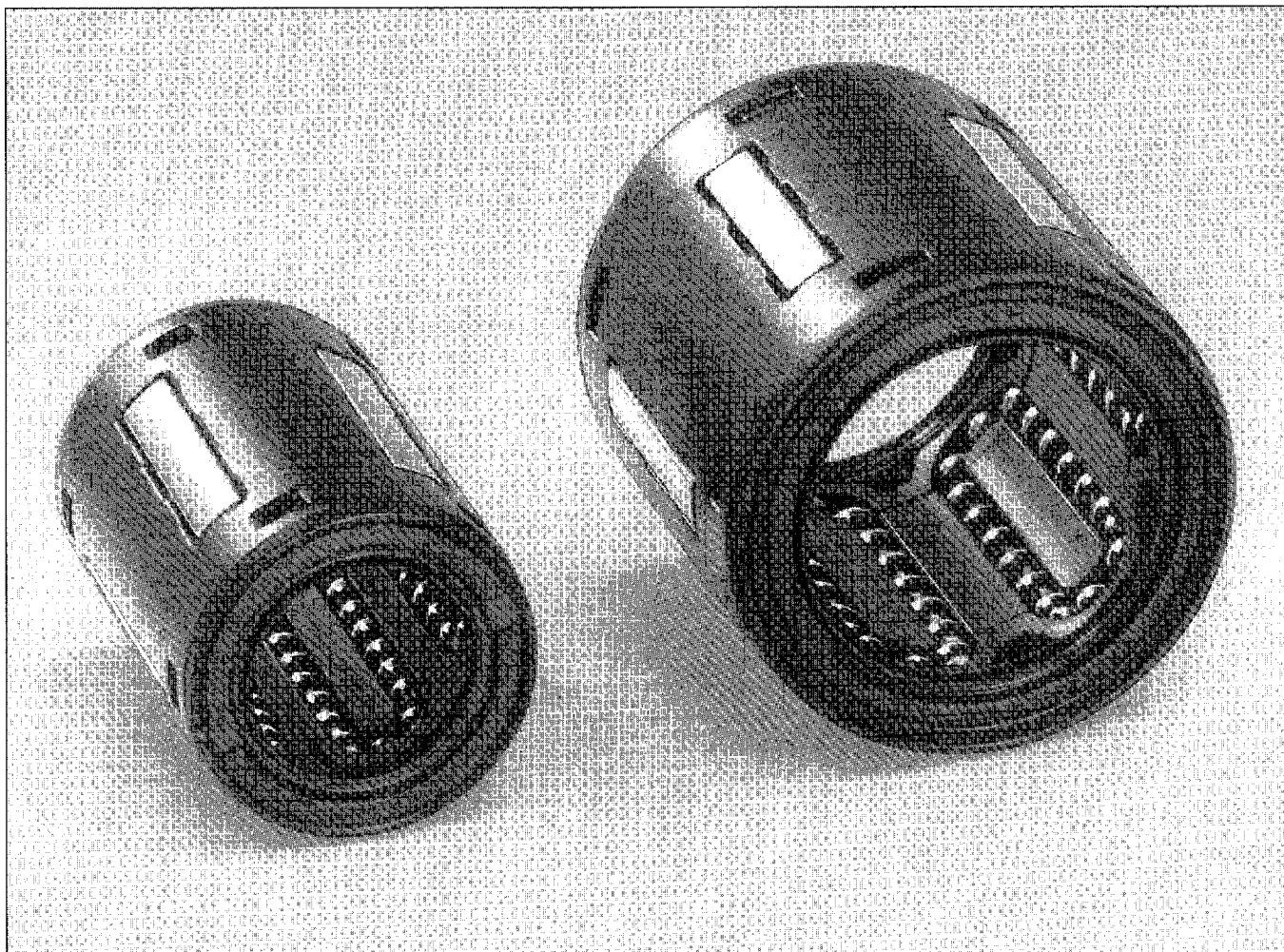
The seal design on this new bearing type has also been improved. The sealed variant is fitted with integral double lip seals. These seals have an inner lip that prevents escape of lubricant from within the bearing and an external lip to wipe the shaft surface as the bearing moves. The unsealed bearing is fitted with non-contacting shields that exclude coarser debris from the bearing. The linear ball bearings LBBR, being of the same basic dimensions as the LBBS bearings, need not be secured axially in the housing provided the housing bore is correct.

Stainless

The application of linear bearings has been extended by this new type with the introduction of a corrosion resistant variant Raceway segments and balls can be specified in high alloy stainless steel by adding the suffix HV6 to the designation, e.g. LBBR 16-2LS/HV6. In combination with our stainless steel shafts, the linear ball bearing LBBR thus offers the possibility of realising a design completely of stainless steel.

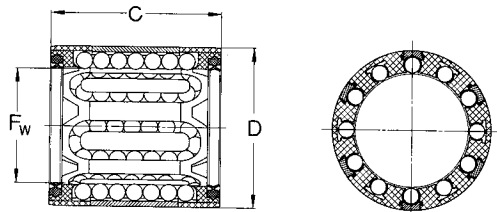
Note

The outside diameter tolerance of the linear ball bearings and linear plain bearings is such that no additional axial location is required when the bearings are fitted into a bore with a tolerance of J7 or J6.



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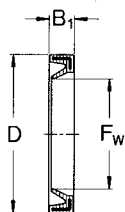
LBBR linear ball bearings
with raceway plates
F_w 8-50 mm



Linear ball bearing LBBR
with double lip seal

Dimensiones			No. of ball rows	Basic load ratings		Mass	Designations			
F _w	D	C		dyn. C	stat. C ₀		Linear ball bearings standard design	with 2 double lip seals	stainless steel standard design	with 2 double lip seals
mm			—	N	kg					
8	15	24	4	440	355	0,007	LBBR 8	LBBR 8-2LS	LBBR 8/HV6	LBBR 8-2LS/HV6
10	17	26	5	540	405	0,009	LBBR 10	LBBR 10-2LS	LBBR 10/HV6	LBBR 10-2LS/HV6
12	19	28	5	640	510	0,012	LBBR 12	LBBR 12-2LS	LBBR 12/HV6	LBBR 12-2LS/HV6
14	21	28	5	670	520	0,014	LBBR 14	LBBR 14-2LS	LBBR 14/HV6	LBBR 14-2LS/HV6
16	24	30	5	850	620	0,018	LBBR 16	LBBR 16-2LS	LBBR 16/HV6	LBBR 16-2LS/HV6
20	28	30	6	1 100	780	0,021	LBBR 20	LBBR 20-2LS	LBBR 20/HV6	LBBR 20-2LS/HV6
25	35	40	7	2 080	1 600	0,047	LBBR 25	LBBR 25-2LS	LBBR 25/HV6	LBBR 25-2LS/HV6
30	40	50	8	3 050	2 750	0,07	LBBR 30	LBBR 30-2LS	LBBR 30/HV6	LBBR 30-2LS/HV6
40	52	60	8	5 100	4 500	0,130	LBBR 40	LBBR 40-2LS	LBBR 40/HV6	LBBR 40-2LS/HV6
50	62	70	9	6 550	6 200	0,18	LBBR 50	LBBR 50-2LS	LBBR 50/HV6	LBBR 50-2LS/HV6

Appropriate special seals



Dimensions Designations

F _w	D	B ₁	Designations
mm			—
12	19	3	G 12x19x3
16	24	3	G 16x24x3
20	28	4	G 20x28x4
25	35	4	G 25x35x4
30	40	4	G 30x40x4
40	52	5	G 40x52x5
50	62	5	G 50x62x5