Track Roller Linear Guidance System

with Guideway, Carriage and End covers

Series LFL..B

INA track roller linear guidance systems are versatile, compact and offer high load carrying capacities.
With previous guidance systems, the designer always had to decide whether to use an open or a closed carriage before development work could begin. This restricted the flexibility that is frequently required when designing the bearing arrangement. Moreover, the customer often had to maintain an expensive stock of different carriage types for varying applications.

The new generation of track roller linear guidance systems LFL..B from INA allows customers greater freedom for their development work and eliminates the need for double stockholding.

These track roller linear guidance systems combine:

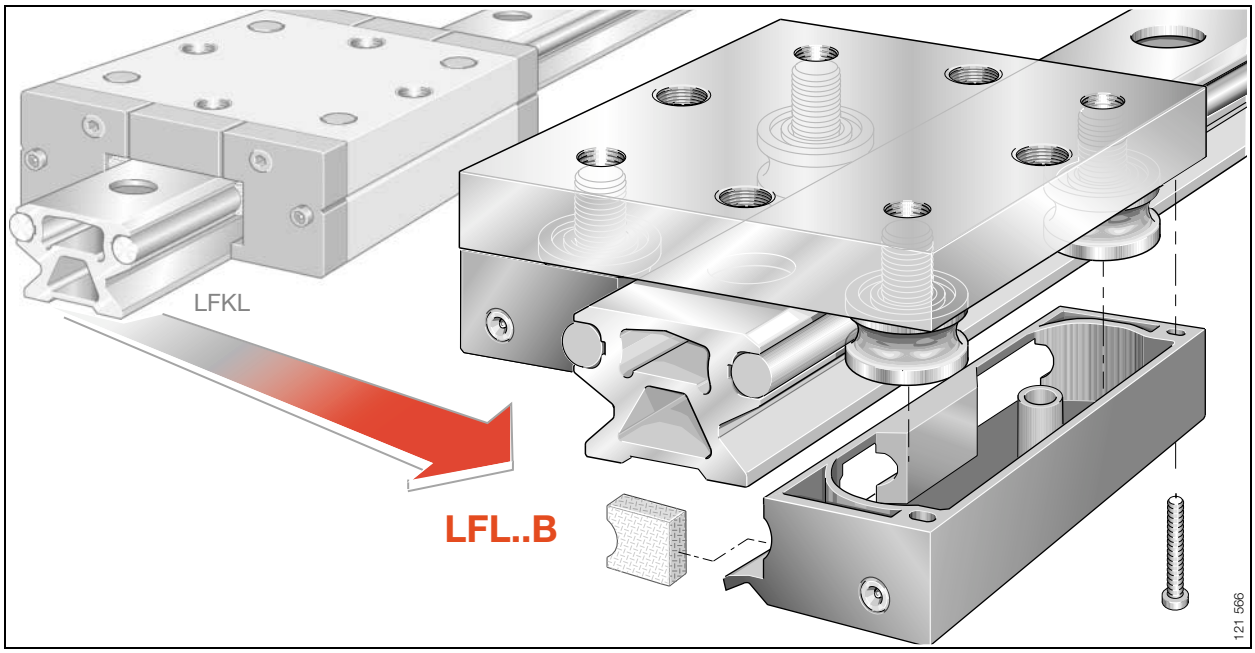
- With the **favorable sealing properties** of the proven closed carriages LFKL..SF for dirty environments.
- The **cost advantage** of the existing open carriages LFL..SF.

The new track roller linear guidance systems consist of:

- One guideway LFS.. and one saddle plate LFL..B (made of anodized aluminium) with four ball type track rollers with high load carrying capacities
- And optionally two plastic end covers AB LFL..B for sealing the raceways of the ball type track rollers.
- Suitable for temperatures from –20 °C to +80 °C
- Traverse speed up to 10 m/s

Guides of this design type:

- Possess the same load carrying capacity as those of design types LFKL..SF and LFL..SF
- Are highly precise due to the clearance-free carriage
- Save mounting space
  - the carriages are shorter and narrower than those of design type LFKL..SF; the connection holes are unchanged
- Can be combined with end covers AB LFL..B
  - the new cover shape protects the raceways of the ball type track rollers even better
- Greatly reduce stockholding costs due to variable use and to the restriction to one product
- Increase design freedom for the bearing arrangement
- Should be used for new designs
  - however, carriages of design types LFKL..SF will remain available over an extended transition period.



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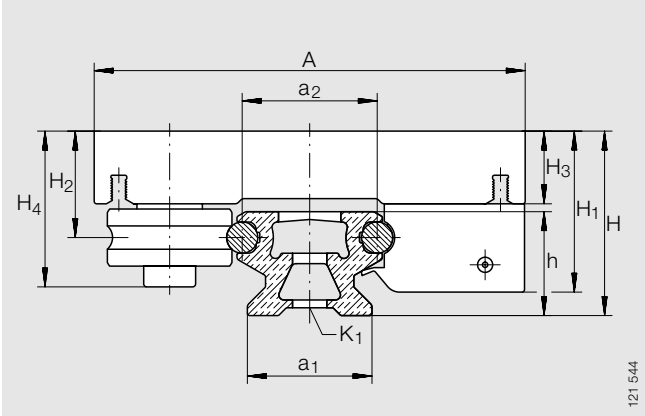
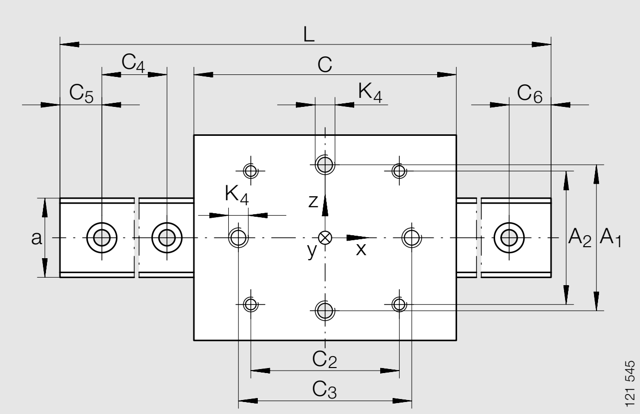


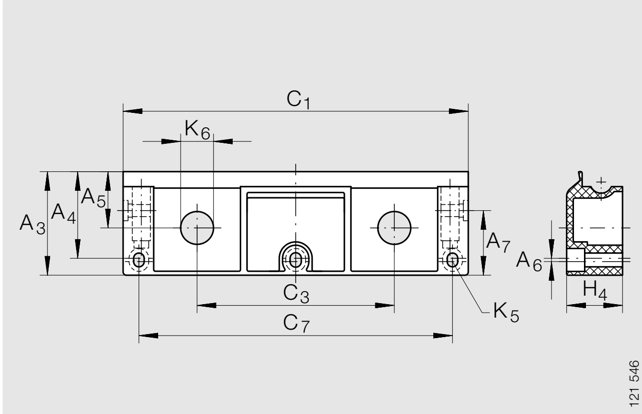
LFL..B with LFS..
LFL..B with LFS and AB LFL..B

Dimension table · Dimensions in mm

Carriage	Mass	Includes ball type track roller	Guideway	Mass	Dimensions						Mounting dimensions						
					Carriage			Guideway									
					H	A	C	h	a	L_{max})	a_1	a_2	A_1 ±0,2	A_2	C_2	C_3 ±0,2	C_4
	≈kg			≈kg/m													
LFL 20 B	0,16	**LFR 50/5-4 KDD**	LFS 20	0,6	22	55	50	12,2	20	2 000	17	16	40	34	24	38	62,5
LFL 25 B	0,3	**LFR 50/5 KDD**	LFS 25	1,1	25	65	85	15	25	2 000	21	19	50	40	45	60	62,5
	0,3	**LFR 50/5 KDD**	LFS 25 N	1	25	65	85	15	25	2 000	21	19	50	40	45	60	–
LFL 32 B	0,5	**LFR 50/8 KDD AH 06**	LFS 32	1,6	35,5	83	106	20	32	6 000	24	26	59	54	60	70	125
	0,5	**LFR 50/8 KDD AH 06**	LFS 32 C	1,1	35,5	83	106	20	32	6 000	24	26	59	54	60	70	125
	0,5	**LFR 50/8 KDD AH 06**	LFS 32 F	1	25,5	83	106	10	32	4 000	24	26	59	54	60	70	125
	0,5	**LFR 50/8 KDD AH 06**	LFS 32 N	1,4	35,5	83	106	20	32	6 000	–	26	59	54	60	70	–
LFL 52 B	1,1	**LFR 5201 KDD AH 07**	LFS 52	4,4	54,3	124	117	34	52	8 000	40	42	90	83,2	60	70	250
	1,1	**LFR 5201 KDD AH 07**	LFS 52 C	3	54,3	124	117	34	52	8 000	40	42	90	83,2	60	70	250
	1,1	**LFR 5201 KDD AH 07**	LFS 52 F	3	38,2	124	117	18	52	4 000	–	42	90	83,2	60	70	250
	1,1	**LFR 5201 KDD AH 07**	LFS 52 NZZ	3,9	54,3	124	117	34	52	8 000	46,5	42	90	83,2	60	70	–



LFL..B



AB LFL..B

C_5		C_6		H_1	H_2	H_3	H_4	K_1	K_4	End cap	Mass	Mounting dimensions									
										Designation		A_3	A_4	A_5	A_6	A_7	C_1	C_7	H_4	K_5	K_6
min.	max.	min.	max.	max.							≈g										
9	54	9	54	20,5	13	9	20,5	M4	M5	**AB LFL 20 B**	9	21,3	16,5	10,8	1	8,5	50	42,5	11,5	M3	10
10	54	10	54	23,5	14,4	9	21,2	M5	M5	**AB LFL 25 B**	10	24,5	19,9	12,2	1	14,1	84	61	14,1	M3	10,5
–	–	–	–	23,5	14,4	9	21,2	–	M5	**AB LFL 25 B**	10	24,5	19,9	12,2	1	14,1	84	61	14,1	M3	10,5
11	116	11	116	31	20,5	14,5	30	M6	M8	**AB LFL 32 B**	10	31	25,9	16,7	1	19,7	104,5	95,4	16,5	M3	10
11	116	11	116	31	20,5	14,5	30	M6	M8	**AB LFL 32 B**	10	31	25,9	16,7	1	19,7	104,5	95,4	16,5	M3	10
11	116	11	116	31	20,5	14,5	30	M6	M8	**AB LFL 32 B**	10	31	25,9	16,7	1	19,7	104,5	95,4	16,5	M3	10
–	–	–	–	31	20,5	14,5	30	–	M8	**AB LFL 32 B**	10	31	25,9	16,7	1	19,7	104,5	95,4	16,5	M3	10
17	235	17	235	45,8	29,2	19,8	43,2	M10	M10	**AB LFL 52 B**	20	42,3	33,8	–	3,2	27,2	116	100	26	M3	–
17	235	17	235	45,8	29,2	19,8	43,2	M10	M10	**AB LFL 52 B**	20	42,3	33,8	–	3,2	27,2	116	100	26	M3	–
17	235	17	235	45,8	29,2	19,8	43,2	M10	M10	**AB LFL 52 B**	20	42,3	33,8	–	3,2	27,2	116	100	26	M3	–
–	–	–	–	45,8	29,2	19,8	43,2	M10	M10	**AB LFL 52 B**	20	42,3	33,8	–	3,2	27,2	116	100	26	M3	–

Load carrying capacity table

Designation	Forces				Torques					
	$F_{y\,max}$	$F_{0y\,max}$	$F_{z\,max}$	$F_{0z\,max}$	$M_{x\,max}$	$M_{0x\,max}$	$M_{y\,max}$	$M_{0y\,max}$	$M_{z\,max}$	$M_{0z\,max}$
	N	N	N	N	Nm	Nm	Nm	Nm	Nm	Nm
LFL 20 B with LFS 20	400	660	700	700	4	6	12	12	6,8	11,4
LFL 25 B with LFS 25	400	660	700	700	4	6	16	16	9	15
LFL 32 B with LFS 32	850	1400	1000	1000	11	18	30	30	26	43
LFL 32 B with LFS 32 E	850	1400	1400	1400	11	18	42	42	26	43
LFL 32 B with LFS 32 C	850	1400	930	930	11	18	27	27	26	43
LFL 32 B with LFS 32 CE	850	1400	1300	1300	11	18	39	39	26	43
LFL 52 B with LFS 52	1500	2500	2500	2500	33	52	75	75	47	78
LFL 52 B with LFS 52 B	1500	2500	3500	3500	33	52	105	105	47	78
LFL 52 B with LFS 52 C	1500	2500	2000	2000	33	52	60	60	47	78
LFL 52 B with LFS 52 CE	1500	2500	3500	3500	33	52	105	105	47	78

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