

Linear Bushings with Grease Fitting / Mini-flanged Linear Bushings

-Double- -Female Thread Hole Type (For Space Saving)-

CAD Data

Features: Easy maintenance with Grease Fitting for lubrication.

Linear Bushings with Grease Fitting

Type	Outer Cylinder			Steel balls	Retainer	Ambient Operating Temp.	Accessory
	Round Flange	Compact Flange	Material				
LHQRW	LHCQW	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Plastic (Duracon M90 equivalent)	-20~80°C	Seals Material: Nitrile Rubber (-20~120°C)

Part Number	Type	dr	D	L	H	T	T1	T2	d1	t	P.C.D.	F	A	Eccentricity	Perpendicularity	Basic Load Rating		Allowable Static Moment (Nm)	Mass(g)	
																C (Dynamic)	Co (Static)		Round Flange	Compact Flange
10	LHQRW	10	21	60	40	11	4.6	6.4	4.5	7.5	4.1	29	29	0.015	0.015	588	1100	7.24	139	120
13	LHQRW	13	28	66	43	11	4.7	6.3	5.5	9	5.1	32	32	0.020	0.020	657	1200	10.9	154	134
16	LHQRW	16	35	72	48	13	5.5	7.5	6.6	11	6.1	33	33	0.015	0.015	813	1570	11.6	175	157
20	LHQRW	20	40	85	54	13	5.7	7.3	5.5	9	5.1	43	24	0.020	0.020	1230	2350	19.7	245	225
25	LHQRW	25	45	95	62	13	6.0	7.0	6.6	11	6.1	51	32	0.020	0.020	1400	2740	26.8	318	290
30	LHQRW	30	50	105	70	13	6.0	7.0	6.6	11	6.1	60	35	0.020	0.020	1560	3140	43.4	626	594
																2490	5490	82.8	758	705

For linear bushings, hardened shafts with g6 tolerance are recommended. P107-195 After greasing, retul grease by stroking bushings. *Perpendicularity of D to flange mounting surface kgf=Nx0.101972

Features: Outer diameter of these bushing is designed to be 5 to 8mm smaller than those of conventional flanged linear bushings to save space.

Mini-Flanged Linear Bushings

Type	Outer Cylinder			Steel balls	Retainer	Ambient Operating Temp.	Accessory
	Round Flange	Square Flange	Compact Flange				
LHTR	LHTSF	LHTC	1.3505/100Cr6	58HRC~	1.3505/100Cr6	-20~80°C	Seals Material: Nitrile Rubber (-20~120°C)
SLHTR	SLHTS	SLHTC	1.4125/105CrMo17	56HRC~	1.4125/105CrMo17	-20~80°C	Seals Material: Nitrile Rubber (-20~120°C)
SLHTR	SLHTS	SLHTC	1.4125/105CrMo17	56HRC~	1.4125/105CrMo17	-20~120°C	Seals Material: Nitrile Rubber (-20~120°C)

Part Number	Type	dr	D	L	H	T	M	P.C.D.	W	F	A	Eccentricity	Perpendicularity	Steel balls Rows of Balls	Basic Load Rating		Mass(g)
															C (Dynamic)	Co (Static)	
6	LHTR	6	12	19	23	5	M3	17	18	-	17	206	265	19	15	17	
8	LHTR	8	15	24	27	5	M3	21	21	-	21	265	380	30	25	27	
10	LHTR	10	19	29	34	6	M4	26	26	-	26	372	549	61	50	53	
12	LHTR	12	21	30	37	6	M4	29	28	-	29	412	598	66	52	57	
13	LHTR	13	23	32	38	6	M4	30	30	-	30	510	784	78	66	70	
16	LHTR	16	28	37	43	8	M5	35	33	20	29	775	1180	108	90	99	
20	LHTR	20	32	40	48	8	M5	39	37	22	32	882	1370	159	130	145	
25	LHTR	25	40	49	56	8	M5	47	45	27	39	980	1570	314	283	298	
30	LHTR	30	45	64	66	10	M6	55	51	32	45	1570	2740	417	350	380	

For linear bushings, hardened shafts with g6 tolerance are recommended. P107-195 *Perpendicularity of D to flange mounting surface kgf=Nx0.101972

Quantity Discount Price (Round down to one Cent.) P.87

Quantity	1-19	20-34	35-49	50-99
Rate	€ Unit Price	5%	10%	18%
Days to Ship	Standard	Quotation	Quotation	Quotation

Others

Quantity	1-19	20-34	35-49	50-99
Rate	€ Unit Price	5%	10%	18%
Days to Ship	Standard	Quotation	Quotation	Quotation

dr	Flanged Linear Bushings with Grease Fitting				Mini-Flanged									
	Round Flange	Compact Flange	Round Flange	Compact Flange	LHTR	LHTSF	SLHTR	SLHTS	LHTC	LHTCF	SLHTC	SLHTCS		
6	-	-	7.00	10.40	16.50	20.60	7.70	11.80	19.40	24.20	8.00	11.50	18.70	23.40
8	-	-	7.00	10.40	16.50	20.60	7.70	11.80	19.40	24.20	8.00	11.50	18.70	23.40
10	17.10	17.40	7.00	10.40	16.50	20.60	7.70	11.80	19.40	24.20	8.00	11.50	18.70	23.40
12	18.00	18.20	7.80	11.40	18.20	22.80	8.50	13.10	21.30	26.70	8.80	12.60	20.50	25.70
13	19.20	19.40	8.60	12.50	19.90	24.90	9.30	14.30	23.30	29.20	9.60	13.80	22.60	28.10
16	22.90	23.10	9.90	14.20	22.70	28.30	10.80	16.30	26.60	33.20	11.00	15.70	25.60	32.00
20	26.40	26.60	12.00	17.00	27.10	33.70	13.00	19.50	31.90	39.70	13.00	18.70	30.50	38.10
25	34.90	35.10	16.80	23.60	37.90	47.30	18.50	27.20	44.90	55.90	18.30	26.20	43.10	53.80
30	46.40	46.60	23.60	32.70	52.40	65.40	25.80	37.70	62.20	77.60	25.30	36.30	59.80	74.60

Order Example Part Number LHQRW16 LHTR16 LHQRW10L LHQRW10G LHQCW10H (L Type Greased) Alternative grease types available. (G Type Greased) For Days to Ship, Price and Performance, refer to P.272 (H Type Greased)

[Strength of Mini-Flanged Linear Bushings] Housing strength test has proven that these bushings are as capable of maintaining strength under moment load as conventional flanged linear bushings, or better.

Height-adjusting Spacers for Flanged Bushings / Spacers for Linear Bushings / Stoppers for Linear Bushings

CAD Data

Features: Bushing position can be adjusted in axial direction (ex. when space is insufficient in thrust direction)

Flanged Type Height Adjusting Spacers

Type	Type			Material
	Round Flange	Square Flange	Compact Flange	
LCSR	LCSS	LCSC	1.4301/X5CrNi18-10	

Part Number	Type	Nominal	T	D	ToL.	d	H	P.C.D.	W	F	A	€ Unit Price								
												Round Flange		Square Flange		Compact Flange				
												LCSR	LCSS	LCSC	LCSR	LCSS	LCSC	LCSR	LCSS	LCSC
6	LCSR	6	12.1	12.1	0	3.5	28	20	22	-	20	4.00	4.30	4.70	5.00	5.30	5.70	4.70	5.00	5.30
8	LCSR	8	15.1	15.1	0	4.5	32	24	25	-	24	4.30	4.60	5.00	5.30	5.60	6.00	5.00	5.30	5.60
10	LCSR	10	19.1	19.1	0	5.5	40	29	30	-	29	4.30	4.60	5.00	5.30	5.60	6.00	5.00	5.30	5.60
12	LCSR	12	21.1	21.1	0	6.6	42	32	32	-	32	4.70	5.00	5.40	5.70	6.00	6.40	5.40	5.70	6.00
13	LCSR	13	23.1	23.1	0	6.6	43	33	34	-	33	4.70	5.00	5.40	5.70	6.00	6.40	5.40	5.70	6.00
16	LCSR	16	28.1	28.1	0	7.7	48	38	37	22	31	6.00	6.30	6.70	7.00	7.30	7.70	6.70	7.00	7.30
20	LCSR	20	32.1	32.1	0	8.8	54	43	42	24	36	6.70	7.00	7.40	7.70	8.00	8.40	7.40	7.70	8.00
25	LCSR	25	40.1	40.1	0	9.9	62	51	50	32	40	8.00	8.30	8.60	8.90	9.10	9.40	8.60	8.90	9.10
30	LCSR	30	45.1	45.1	0	11.0	66	58	58	35	49	8.60	8.90	9.20	9.40	9.70	9.90	9.20	9.40	9.70

Linear Bushing Compact Type P.284, 286, 290, 292, 294 are not applicable.

Order Example Part Number LCSR12 LCSC25 Days to Ship 6 Days P.87

Spacers for Linear Bushings

Part Number	Type	No.	L	D	LBS						LBSA					
					Min. L-40	L41-100	L101-150	Min. L-40	L41-100	L101-150						
3	LBS	3	7	4	2.30	2.00	2.30	2.00	-	2.60	2.30	2.60	2.30	-		
4	LBS	4	8	5	2.30	2.00	2.30	2.00	-	2.60	2.30	2.60	2.30	-		
5	LBS	5	10	6	2.30	2.00	2.30	2.00	-	2.60	2.30	2.60	2.30	-		
6	LBS	6	12	7	2.90	2.50	2.90	2.50	-	3.30	2.90	3.30	2.90	-		
8	LBS	8	15	9	2.90	2.50	2.90	2.50	-	3.30	2.90	3.30	2.90	-		
10	LBS	10	19	11	2.90	2.50	3.20	2.80	-	3.30	2.90	3.60	3.20	-		
12	LBS	12	21	13	3.20	2.80	4.10	3.60	-	3.60	3.20	4.70	4.10	-		
13	LBS	13	23	14	3.20	2.80	4.10	3.60	-	3.60	3.20	4.70	4.10	-		
16	LBS	16	28	17	3.40	3.00	4.30	3.80	-	4.00	3.50	5.00	4.40	-		
20	LBS	20	32	22	3.40	3.00	4.30	3.80	-	4.00	3.50	5.00	4.40	-		
25	LBS	25	40	27	3.70	3.30	5.10	4.50	-	4.30	3.80	5.80	5.20	-		
30	LBS	30	45	32	4.00	3.50	5.50	4.80	8.60	7.50	4.50	4.00	6.40	5.50	9.90	8.60
35	LBS	35	52	37	4.20	3.70	5.70	5.10	8.80	7.90	4.80	4.30	6.60	5.90	10.10	9.10
40	LBS	40	62	42	4.50	4.00	6.20	5.50	9.00	8.10	5.20	4.60	7.00	6.30	10.30	9.30
50	LBS	50	80	52	4.50	4.00	6.20	5.50	9.00	8.10	5.20	4.60	7.00	6.30	10.30	9.30

Linear Bushing Compact Type P.280 are not applicable. For orders larger than indicated quantity, please request a quotation.

Alterations Part Number LBSA12 - 55 - MC

Alteration	Code	Spec.	Price Adder
Oil Groove Machining	MC	Oil groove is added. No. A B dr 3-4 1.5 0.3 1 5-8 2.5 0.5 2 10-50 5 1 3	4,00

Fixing Plates for Linear Bushings