LINK-BELT® 200 SERIES BALL BEARING VIBRATION FREQUENCY COEFFICIENTS

BEARING SIZE		FREQUENCY COEFFICIENTS *				
BASIC BEARING BORE mm	SERIES 200 U,Y,W,S	BSF BALL SPIN	FTF FUNDAMENTAL TRAIN	BPFI INNER RING DEFECT	BPFO OUTER RING DEFECT	BDF BALL DEFECT
17	2B08-211	0.0293	0.0062	0.0738	0.0428	0.0585
20	212	0.0332	0.0063	0.0825	0.0508	0.0663
25	214-216	0.0387	0.0067	0.0905	0.0595	0.0775
30	218-2E20	0.0385	0.0067	0.0905	0.0595	0.0770
35	220-223	0.0383	0.0067	0.0905	0.0595	0.0768
40	224	0.0367	0.0065	0.0912	0.0588	0.0733
45	226-228	0.0377	0.0065	0.0908	0.0592	0.0752
50	231-2E32	0.0445	0.0068	0.0985	0.0682	0.0888
55	232-235	0.0437	0.0068	0.0987	0.0680	0.0873
60	236-239	0.0430	0.0068	0.0988	0.0678	0.0862
65	240-243	0.0447	0.0068	0.0983	0.0683	0.0895
75	244-2E48	0.0475	0.0068	0.1073	0.0760	0.0950
85	255-2E56	0.0480	0.0070	0.1072	0.0762	0.0958
100	263-2E64	0.0445	0.0068	0.0985	0.0682	0.0888

* TABLE COEFFICIENT VALUES MULTIPLIED BY SPEED = HERTZ (CPS)
or HZ VALUE X 60 = CYCLES PER MINUTE (CPM) FREQUENCY VALUE

LINK-BELT® 300 SERIES BALL BEARING VIBRATION FREQUENCY COEFFICIENTS

BEARING SIZE		FREQUENCY COEFFICIENTS *				
BASIC BEARING BORE mm	SERIES U300 & Y300	BSF BALL SPIN	FTF FUNDAMENTAL TRAIN	BPFI INNER RING DEFECT	BPFO OUTER RING DEFECT	BDF BALL DEFECT
20	312	0.0293	0.0062	0.0738	0.0428	0.0585
25	314-316	0.0305	0.0062	0.0732	0.0435	0.0610
30	318-319	0.0325	0.0063	0.0827	0.0507	0.0650
35	320-323	0.0335	0.0063	0.0823	0.0510	0.0672
40	324	0.0340	0.0063	0.0822	0.0512	0.0680
45	326-328	0.0327	0.0063	0.0827	0.0507	0.0652
50	331	0.0330	0.0063	0.0825	0.0508	0.0660
55	332-335	0.0333	0.0063	0.0823	0.0510	0.0667
60	336-339	0.0337	0.0063	0.0823	0.0510	0.0673
65	343-344	0.0342	0.0063	0.0820	0.0513	0.0683
75	347	0.0343	0.0065	0.0820	0.0513	0.0687
80	348-351	0.0345	0.0065	0.0818	0.0515	0.0692
85	355-356	0.0348	0.0065	0.0818	0.0515	0.0697
100	363	0.0340	0.0065	0.0817	0.0516	0.0680

* **TABLE COEFFICIENT VALUES MULTIPLIED BY SPEED = HERTZ (CPS)**
or HZ VALUE X 60 = CYCLES PER MINUTE (CPM) FREQUENCY VALUE

LINK-BELT® B22400, B22500 & B22600 SERIES ROLLER BEARING VIBRATION FREQUENCY COEFFICIENTS

BEARING SIZE				FREQUENCY COEFFICIENTS *				
B22400	B22500	B22600	mm	RSF ROLLER SPIN	FTF FUNDAMENTAL TRAIN	RPFI INNER RING DEFECT	RPFO OUTER RING DEFECT	RDF ROLLER DEFECT
12 - 17			25	0.0407	0.0068	0.1287	0.0880	0.0812
18 - 20			30	0.0368	0.0068	0.1280	0.0887	0.0847
21 - 24	23	23	35	0.0498	0.0070	0.1445	0.1055	0.0998
25 - 28	24 - 27	27	40	0.0467	0.0070	0.1362	0.0972	0.0932
29 - 32	28 - 31	31	50	0.0558	0.0072	0.1617	0.1217	0.1118
33 - 36	32 - 35	35	55	0.0605	0.0072	0.1790	0.1377	0.1212
37 - 40	36 - 39	39	60	0.0607	0.0072	0.1790	0.1377	0.1213
41 - 48	40 - 47	43 - 47	75	0.0592	0.0072	0.1702	0.1298	0.1182
49 - 56	48 - 55	55	85	0.0628	0.0073	0.1783	0.1383	0.1255
57 - 64	55 - 64	63	100	0.0548	0.0073	0.1717	0.1283	0.1095
	65 - 72	67 - 71	115	0.0600	0.0073	0.1982	0.1518	0.1202
	73 - 80	79	125	0.0537	0.0073	0.1722	0.1278	0.1073

* TABLE COEFFICIENT VALUES MULTIPLIED BY SPEED = HERTZ (CPS)
or HZ VALUE X 60 = CYCLES PER MINUTE (CPM) FREQUENCY VALUE

LINK-BELT® PLB6800 & PLB6600 SERIES ROLLER BEARING VIBRATION FREQUENCY COEFFICIENTS

BEARING SIZE				FREQUENCY COEFFICIENTS *			
PLB Unit Number	Bearing Insert Number	Shaft Diameter (in.)	Shaft Dia. (mm)	RPFO OUTER RING DEFECT	RPFI INNER RING DEFECT	FTF FUNDAMENTAL TRAIN	RSF ROLLER SPIN
6823-6824	22209LBK	1-7/16 - 1-1/2	40	.1188	.1640	.0070	.0497
6827-6828	22210 LBK	1-11/16 - 1-3/4	45	.1272	.1730	.0071	.0530
6831-6832	22211 LBK	1-15/16 - 2	50	.1352	.1810	.0071	.0553
6835	22213 LBK	2-3-16	60	.1269	.1730	.0071	.0523
6839	22215 LBK	2-7/16	65	.1438	.1890	.0072	.0591
6843	22216 LBK	2-11/16	70	.1352	.1810	.0071	.0553
6847-6848	22217 LBK	2-15/16 - 3	75	.1269	.1730	.0071	.0523
6851	22218 LBK	3-3/16	80	.1269	.1730	.0071	.0524
6855-6856	22220 LBK	3-7/16 - 3-1/2	90	.1269	.1730	.0071	.0522
6859-6864	22222 LBK	3-11/16 - 4	100	.1186	.1650	.0069	.0493
6867	22224 LBK	4-3/16	110	.1269	.1730	.0071	.0522
6871-6872	22226 LBK	4-7/16 - 4-1/2	115	.1270	.1730	.0071	.0524
6879-6880	22228 LBK	4-15/16 - 5	125	.1269	.1730	.0071	.0523
6883	22230 LBK	5-3/16	135	.1269	.1730	.0071	.0522
6887	22232 LBK	5-7/16	140	.1269	.1730	.0071	.0523
6895-6896	22234 LBK	5-15/16 - 6	150	.1186	.1650	.0070	.0492
68103-68140	22236 LBK	6-7/16 - 6-1/2	160	.1269	.1730	.0071	.0523
68111-68112	22238 LBK	6-15/16 - 7	170	.1433	.1900	.0072	.0573
68115	22240 LBK	7-3/16	180	.1356	.1811	.0071	.0557
68120-68128	22244 LBK	7-1/2 - 8	200	.1349	.1818	.0071	.0540
66135-66144	23048 LBK	8-7/16 - 9	220	.2187	.2645	.0075	.0857
66B151-66168	23056 LBK	9-7/16 - 10-1/2	260	.2103	.2563	.0075	.0826

* TABLE COEFFICIENT VALUES MULTIPLIED BY SPEED = HERTZ (CPS)
HZ VALUE X 60 = CYCLES PER MINUTE (CPM) FREQUENCY VALUE

VIBRATION FREQUENCY COEFFICIENTS

MB® 25/35/45/55 SERIES NORMAL and MEDIUM DUTY BALL BEARING UNITS

Shaft Diameter (in)		Frequency Coefficients *				
Series 25/45 Normal Duty	Series 35/55 Medium Duty	BSF Ball Spin	FTF Fundamental Train	BPFI Inner Ring Defect	BPFO Outer Ring Defect	BDF Ball Defect
1/2 - 11/16		.0293	.0062	.0738	.0428	.0585
3/4 - 13/16		.0332	.0063	.0825	.0508	.0663
13/16L - 1		.0387	.0067	.0905	.0595	.0775
1-1/16 - 1-1/4S	15/16 - 1	.0385	.0067	.0905	.0595	.0770
1-1/4 - 1-7/16	1-3/16 - 1-1/4S	.0383	.0067	.0905	.0595	.0768
1-1/2 - 1-5/8	1-7/16	.0367	.0065	.0912	.0588	.0733
1-5/8L - 1-13/16	1-1/2	.0377	.0065	.0908	.0592	.0752
1-13/16L - 2	1-11/16 - 1-3/4	.0445	.0068	.0985	.0682	.0888
2L - 2-1/4	1-15/16 - 2	.0437	.0068	.0987	.0680	.0873
2-1/4L - 2-7/16	2-3/16 - 2-1/4	.0430	.0068	.0988	.0678	.0862
2-5/8 - 2-11/16	2-7/16 - 2-1/2	.0451	.0068	.0982	.0684	.0903
2-3/4 - 2-15/16	2-11/16	.0476	.0069	.0975	.0692	.0952
I	2-15/16 - 3	.0470	.0069	.1074	.0759	.0941
	3-3/16 - 3-1/2	.0454	.0069	.0981	.0685	.0908

MB® ER / ER-K and MSL / MSLN SERIES BALL BEARINGS

Shaft Diameter (in)		Frequency Coefficients *				
Series ER / ER-K	Series MSL / MSLN	BSF Ball Spin	FTF Fundamental Train	BPFI Inner Ring Defect	BPFO Outer Ring Defect	BDF Ball Defect
	1/2 - 5/8	.0293	.0062	.0738	.0428	.0585
1/2 - 3/4	3/4	.0332	.0063	.0825	.0508	.0663
7/8 - 1	1	.0387	.0067	.0905	.0595	.0775
1-1/16 - 1-1/45		.0385	.0067	.0905	.0595	.0770
1-1/4 - 1-7/16	1-1/4 - 1-7/16	.0383	.0067	.0905	.0595	.0768
1-1/2 - 1-9/16		.0367	.0065	.0912	.0588	.0733
1-5/8 - 1-3/4		.0377	.0065	.0908	.0592	.0752
1-7/8 -1-15/16		.0445	.0068	.0985	.0682	.0888
2 - 2-3/16		.0437	.0068	.0987	.0680	.0873
2-1/4 - 2-7/16		.0430	.0068	.0988	.0678	.0862
2-1/2 - 2-11/16		.0451	.0068	.0982	.0684	.0903
2-7/8 - 2-15/16		.0476	.0069	.0975	.0692	.0952
3 - 3-3/16		.0470	.0069	.1074	.0759	.0941

TABLE COEFFICIENT V ALUES MULTIPLIED BY SPEED = HERTZ (CPS)
or HZ VALUE X 60 = CYCLES PER MINUTE (CPM) FREQUENCY VALUE

Rex® 2000, 3000, 5000 & 9000 SERIES ROLLER BEARING VIBRATION DEFECT FREQUENCY CONSTANTS (Cdf)

BEARING SIZE					DEFECT FREQUENCY CONSTANTS *			
Size Code	2000 Series	3000 Series	5000 Series	9000 Series	RPFO OUTER RING DEFECT	RPFI INNER RING DEFECT	RDF ROLLER DEFECT	FTF FUNDAMENTAL TRAIN
2	2012-2100				0.0865	0.1135	0.1150	0.0072
3	2102-2104				0.0940	0.1226	0.1185	0.0072
4	2107-2108	3107	5107		0.0945	0.1222	0.1233	0.0073
5	2111-2112	3111	5108-5111		0.1024	0.1309	0.1290	0.0073
6	2115-2200	3115	5115		0.1182	0.1484	0.1402	0.0074
7	2203-2204	3203	5200-5203	9115-9200	0.1192	0.1475	0.1499	0.0074
8	2206-2208	3207-3208	5207	9203	0.1186	0.1480	0.1442	0.0074
9	2211-2300	3211-3215	5208-5215	9207-9208	0.1183	0.1483	0.1412	0.0074
10	2303-2308	3307-3308	5303-5307	9211-9300	0.1345	0.1655	0.1543	0.0075
11	2311-2400	3315	5311-5400	9303-9307	0.1167	0.1499	0.1278	0.0073
12			5403Y-5408Y	9311Y-9400Y	0.1238	0.1595	0.1269	0.0073
13			5415-5500	9403-9407	0.1158	0.1509	0.1212	0.0072
14			5507	9415-9500	0.1080	0.1420	0.1171	0.0072
15			5515-5600	9503-9507	0.1158	0.1509	0.1213	0.0072
16			5607-5700	9515-9607	0.1162	0.1505	0.1248	0.0073

- **Cdf x (RPM) = Defect frequency in HERTZ (CPS) and HZ VALUE X 60 = CPM FREQUENCY VALUE**
  (Cdf = value found in table and RPM is bearing operating speed in revolutions per minute)