

**M3000
EVEN-LOK™
SPHERICAL
ROLLER
BEARINGS**

M3000 EVEN-LOK™ APPLICATION GUIDE CONTINUED

Lubrication Guide

Read preceding paragraphs before establishing lubrication schedule.

HOURS RUN PER DAY	SUGGESTED LUBRICATION PERIOD IN WEEKS							
	1 TO 250 RPM	251 TO 500 RPM	501 TO 750 RPM	751 TO 1000 RPM	1001 TO 1500 RPM	1501 TO 2000 RPM	2001 TO 2500 RPM	2501 TO 3000 RPM
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	2	1
24	12	5	3	2	1	1	1	1

The above table is a general guide for normal operating conditions. However, some situations may require a change in lubricating periods as dictated by experience. If the bearing is exposed to unusual operating conditions, consult a reputable grease manufacturer.

LUBRICATION GUIDE

Read preceding paragraphs before establishing lubrication schedule.

Abnormal bearing temperatures may indicate insufficient lubrication. Normal temperature may range from “cool to warm to the touch” up to the point of “too hot to touch for more than a few seconds,” depending on the bearing size and speed, and surrounding conditions. Unusually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and a slight showing of grease at the seals indicate proper lubrication.

If equipment will be idle for some time, before shutting down, add grease to the bearing until grease purges from the seals. This will ensure protection of the bearing, particularly when exposed to severe environmental conditions. After storage or idle period, add fresh grease to the bearing before starting.

SPECIAL OPERATING CONDITIONS

Refer acid, chemical, extreme or other special operating conditions to the Moline Bearing Company.

Moline spherical bearings have the capacity to carry substantial radial loads, thrust loads or a combined radial and thrust load. The maximum load that can be applied is limited by the various components in the system, and the life requirements listed in this catalog. The factory should be consulted on any application that exceeds the recommendations in the catalog.

Select a bearing from the M3000 load-rating chart having a radial load rating at the operating speed equal to or greater than the calculated Equivalent Radial Load for a desired L10 life. This simple method is all that is necessary for most general applications and provides for occasional shock loads.

L10 Hours of Life – Is the life that may be expected from at least 90% of a given group of bearings operated under identical conditions. The average life (L50) will be approximately five times the L10 life.

M3000 EVEN-LOK™ APPLICATION GUIDE

M3000 Even-Lok™ Thrust Factors and Seal Speed

SHAFT SIZE	E	LIGHT THRUST IF FA/FR ≤ E		HEAVY THRUST IF FA/FR ≥ E		DYNAMIC CAPACITY C*		STANDARD SEAL RPM
		X	Y	X	Y	LBS.	NEWTONS	
1 7/16 – 1 1/2	.28	1.0	2.4	.67	3.6	21700	96526	4000
1 11/16 – 1 3/4	.26	1.0	2.6	.67	3.9	23000	102309	3700
1 15/16 – 2	.24	1.0	2.8	.67	4.2	23400	104088	3500
2 3/16	.24	1.0	2.8	.67	4.2	28100	124995	3250
2 7/16 – 2 1/2	.24	1.0	2.8	.67	4.2	43400	193052	2900
2 11/16 – 3	.22	1.0	3.0	.67	4.6	47700	212180	2600
3 7/16 – 3 1/2	.23	1.0	2.8	.67	4.2	73100	325165	2200
3 15/16 – 4	.24	1.0	2.8	.67	4.2	95700	425695	2000

* Comparing Spherical to Tapered Roller Bearings—The dynamic capacity C (Spherical) and C90 (Tapered) are not the same base. To compare basic dynamic capacities, multiply C x .259 and compare to C90. To select and then compare, use the complete procedure for each bearing and then compare.

M3000 EVEN-LOK™
SPHERICALS



M3000 EVEN-LOK™ RADIAL LOAD RATINGS

NOMINAL SHAFT DIAMETER (IN)	L10 HRS LIFE	RADIAL LOAD RATINGS AT VARIOUS REVOLUTIONS PER MINUTE								
		50	200	500	1200	1800	2200	2800	3500	4000
1 7/16 1 1/2	5000	9630	6354	4827	3712	3287	3095	2879	2692	2586
	10000	7822	5161	3920	3015	2670	2514	2338	2187	2101
	20000	6354	4192	3184	2449	2168	2042	1899	1776	1706
	50000	4827	3184	2419	1860	1647	1551	1443	1349	1296
	100000	3920	2586	1965	1511	1338	1260	1172	1096	1053
1 11/16 1 3/4	5000	10207	6734	5116	3934	3483	3280	3051	2853	----
	10000	8291	5470	4155	3195	2829	2664	2478	2318	----
	20000	6734	4443	3375	2596	2298	2164	2013	1883	----
	50000	5116	3375	2564	1972	1746	1644	1529	1430	----
	100000	4155	2741	2083	1602	1418	1335	1242	1162	----
1 15/16 2	5000	10385	6851	5205	4002	3544	3337	3104	2903	----
	10000	8435	5565	4227	3251	2879	2710	2521	2358	----
	20000	6851	4520	3434	2641	2338	2202	2048	1915	----
	50000	5205	3434	2609	2006	1776	1672	1556	1455	----
	100000	4227	2789	2119	1629	1443	1358	1264	1182	----
2 3/16	5000	12470	8227	6250	4806	4256	4007	3728	----	----
	10000	10129	6683	5077	3904	3457	3255	3028	----	----
	20000	8227	5428	4123	3171	2808	2644	2459	----	----
	50000	6250	4123	3132	2409	2133	2008	1868	----	----
	100000	5077	3349	2544	1957	1733	1631	1517	----	----
2 7/16 2 1/2	5000	19260	12707	9653	7423	6573	6189	5757	----	----
	10000	15644	10321	7841	6030	5339	5027	4676	----	----
	20000	12707	8384	6369	4898	4337	4083	3798	----	----
	50000	9653	6369	4838	3721	3294	3102	2885	----	----
	100000	7841	5173	3930	3022	2676	2520	2344	----	----
2 11/16 2 3/4 2 15/16 3	5000	21169	13966	10609	8159	7224	6802	----	----	----
	10000	17194	11344	8618	6627	5868	5525	----	----	----
	20000	13966	9214	7000	5383	4766	4488	----	----	----
	50000	10609	7000	5317	4089	3621	3409	----	----	----
	100000	8618	5685	4319	3321	2941	2769	----	----	----
3 7/16 3 1/2	5000	32441	21403	16259	12503	11071	10425	----	----	----
	10000	26350	17385	13206	10156	8993	8467	----	----	----
	20000	21403	14121	10727	8249	7304	6878	----	----	----
	50000	16259	10727	8149	6267	5549	5225	----	----	----
	100000	13206	8713	6619	5090	4507	4244	----	----	----
3 15/16 4	5000	42470	28020	21286	16369	14494	13647	----	----	----
	10000	34497	22759	17289	13296	11773	11085	----	----	----
	20000	28020	18486	14043	10800	9563	9004	----	----	----
	50000	21286	14043	10668	8204	7264	6840	----	----	----
	100000	17289	11407	8665	6664	5900	5556	----	----	----

M3000 EVEN-LOK™ SPHERICALS



M3000 EVEN-LOK™ SERIES INTERCHANGE

MOLINE	SKF CONCENTRA™	SEALMASTER SLEEVLOC™	REX SHURLOK™ ADAPTOR MOUNTED	DODGE IMPERIAL
2-Bolt Pillow Block (Pages 76-77) 19621 (Expansion) 19721 (Non-Expansion)	SYR-N SYR-NH	USRB5000A USRB5000	ZA6000 ZAS6000	P2BIP <i>or</i> 0694
4-Bolt Pillow Block (Pages 78-79) 19641 (Expansion) 19741 (Non-Expansion)	FSYR-N FSYR-NH	USRBF5000A USRBF5000	ZA6000-F ZAS6000-F	P4BIP <i>or</i> 0695
4-Bolt Flange (Pages 80-81) 19611 (Expansion) 19711 (Non-Expansion)	FYR-N* FYR-NH*	USFB5000A USFB5000	ZF6000* ZFS6000*	F4SIP <i>or</i> 0697
Piloted Flange (Pages 82-83) 19631 (Expansion) 19731 (Non-Expansion)	FYRP-N FYRP-NH	USFC5000A USFC5000A	ZBR6000	FCIP <i>or</i> 0698
Wide Slot Take-Up (Pages 84-85) 19651 (Expansion) 19751 (Non-Expansion)	TBR-N TBR-NH	USTU5000A USTU5000	ZT6000	WSTUIP <i>or</i> 0693

All units have tapered adaptor style locking mechanism.

*Manufacture square and round 4-bolt flange.

Before mounting, make sure there is sufficient clearance to access dismounting set screws on back of unit.

Note: This is a general dimensional interchange.

For exact dimensions and comparison information on inserts and seals, please contact the factory.

For Nomenclature see pages 226-227

M3000 EVEN-LOK™
SPHERICALS