

S1 Series Load Chart

Bearing Group	MAX RPM	50 RPM		100 RPM		250 RPM		500 RPM		750 RPM		1000 RPM		1250 RPM		1500 RPM		2000 RPM		2500 RPM		3000 RPM		3500 RPM		4000 RPM	
		Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa	Pr	Pa
S1-108	5,420	2,997	778	2,434	778	1,849	778	1,502	570	1,330	380	1,220	285	1,141	228	1,080	190	991	143	927	114	877	95	838	81	805	71
S1-200	4,460	3,952	1,125	3,210	1,125	2,438	1,125	1,981	652	1,754	435	1,609	326	1,505	261	1,424	217	1,307	163	1,222	130	1,157	109	1,105	93	1,061	82
S1-208	3,750	4,376	1,243	3,554	1,243	2,700	1,243	2,193	702	1,942	468	1,781	351	1,666	281	1,577	234	1,447	176	1,353	140	1,281	117	1,223	100		
S1-300	3,190	6,447	2,004	5,237	2,004	3,978	1,732	3,231	866	2,861	577	2,625	433	2,455	346	2,324	289	2,132	217	1,994	173	1,888	144				
S1-308	2,740	8,113	2,637	6,590	2,637	5,006	1,812	4,066	906	3,600	604	3,303	453	3,089	362	2,924	302	2,683	227	2,509	181						
S1-400	2,400	11,065	3,653	8,987	3,653	6,827	2,208	5,546	1,104	4,910	736	4,504	552	4,213	442	3,988	368	3,659	276								
S1-408	2,140	13,656	4,731	11,092	4,731	8,426	2,616	6,844	1,308	6,060	872	5,559	654	5,199	523	4,922	436	4,515	327								
S1-500	1,940	15,733	5,570	12,779	5,570	9,708	2,740	7,885	1,370	6,982	913	6,405	685	5,990	548	5,671	457										
S1-508	1,780	17,436	6,240	14,162	6,240	10,758	2,868	8,739	1,434	7,738	956	7,098	717	6,638	574	6,285	478										
S1-600	1,670	18,925	7,088	15,372	7,088	11,678	3,048	9,485	1,524	8,399	1,016	7,704	762	7,205	610	6,822	508										
S1-608	1,550	21,012	7,952	17,067	7,952	12,965	3,197	10,531	1,599	9,325	1,066	8,554	799	8,000	639	7,574	533										
S1-700	1,465	22,579	8,904	18,340	8,445	13,932	3,378	11,316	1,689	10,020	1,126	9,192	845	8,597	676												
S1-800	1,320	23,896	9,922	19,410	8,459	14,745	3,384	11,977	1,692	10,605	1,128	9,728	846	9,098	677												
S1-900	1,190	26,329	11,154	21,386	8,566	16,246	3,426	13,196	1,713	11,685	1,142	10,718	857														
S1-1000	1,080	29,394	13,315	23,875	9,280	18,137	3,712	14,732	1,856	13,045	1,237	11,966	928														
S1-1100	990	33,808	15,185	27,461	9,679	20,861	3,872	16,944	1,936	15,004	1,291																
S1-1200	915	35,411	16,579	28,763	9,743	21,850	3,897	17,748	1,949	15,715	1,299																
S1-1300	856	38,418	18,169	31,205	10,072	23,705	4,029	19,254	2,014	17,049	1,343																
S1-1400	805	38,183	18,381	31,014	9,510	23,560	3,804	19,137	1,902	16,945	1,268																
S1-1500	753	43,966	21,080	35,711	10,540	27,128	4,216	22,035	2,108	19,511	1,405																
S1-1600	713	44,285	21,466	35,971	10,733	27,326	4,293	22,195	2,147																		

Radial Load: $Pr \leq \frac{Cr}{fd} \times \left(\frac{16667}{n \times L10}\right)^{3/10}$ Axial Load: $Pa \leq \frac{Ca \times SF}{n}$ or $.05 \times Co$, whichever is less

SF = 1000 RPM for small bore (600 group and below)
 100 RPM for large bore (608 group and above)

The above ratings are based upon a minimum life of 30,000 hours (L10), utilization of EP grease, and a service factor of 1.2 (fd).

Cr = Dynamic Radial Load Rating
 Co = Static Radial Load Rating
 Ca = Dynamic Axial Load Rating
 L10 = Life Rating

SF = Speed Factor
 n = RPM
 fd = Service Factor