

SUPERSPEED RCF CHART

These tables give the maximum RCF in *g* for all currently available SORVALL® rotors for superspeed applications up to 26,000 rpm.

To find the average or minimum RCF, consult your rotor instruction manual for the average or minimum radius, and use the formula given below:

$$K = [2.53 \times 10^{11} \ln (R_{max}/R_{min})] / (\text{rpm})^2 \quad \text{RCF} = 11.17r (\text{rpm}/1000)^2 \quad \text{where } r = \text{radius in centimeters}$$

ROTOR: RADIUS, max.cm	FIXED-ANGLE										
	SE-12	SA-300	SS-34	SM-24 inner	SM-24 outer	F-20/MICRO	SA-600	SLA-1000	GSA	GS-3	SLA-1500
RPM	9.33	9.67	10.70	9.10	11.07	11.51	12.96	11.77	14.56	15.13	13.59
	RCF										
500	26	27	30	25	31	32	36	33	41	42	38
1,000	104	108	120	102	124	129	145	131	163	169	152
1,500	234	243	269	229	278	289	326	296	366	380	342
2,000	417	432	478	407	495	514	579	526	651	676	607
2,500	651	675	747	635	773	804	905	822	1,016	1,056	949
3,000	938	972	1,076	915	1,113	1,157	1,303	1,183	1,464	1,521	1,366
3,500	1,277	1,323	1,464	1,245	1,515	1,575	1,773	1,611	1,992	2,070	1,860
4,000	1,667	1,728	1,912	1,626	1,978	2,057	2,316	2,104	2,602	2,704	2,429
4,500	2,110	2,187	2,420	2,058	2,504	2,603	2,931	2,662	3,293	3,422	3,074
5,000	2,605	2,700	2,988	2,541	3,091	3,214	3,619	3,287	4,066	4,225	3,795
5,500	3,153	3,267	3,615	3,075	3,740	3,889	4,379	3,977	4,920	5,112	4,592
6,000	3,752	3,889	4,303	3,659	4,451	4,628	5,211	4,733	5,855	6,084	5,465
6,500	4,403	4,564	5,050	4,295	5,224	5,432	6,116	5,555	6,871	7,140	6,414
7,000	5,107	5,293	5,856	4,981	6,059	6,300	7,093	6,442	7,969	8,281	7,438
7,500	5,862	6,076	6,723	5,718	6,955	7,232	8,143	7,395	9,148	9,506	8,539
8,000	6,670	6,913	7,649	6,505	7,914	8,228	9,265	8,414	10,409	10,816	9,715
8,500	7,530	7,804	8,635	7,344	8,934	9,289	10,459	9,499	11,750	12,210	10,968
9,000	8,442	8,749	9,681	8,233	10,016	10,414	11,726	10,649	13,173	13,689	12,296
9,500	9,406	9,748	10,787	9,174	11,160	11,603	13,065	11,865	14,678	K = 4,203	13,700
10,000	10,422	10,801	11,952	10,165	12,365	12,857	14,476	13,147	16,264		15,180
10,500	11,490	11,909	13,177	11,207	13,633	14,174	15,960	14,495	17,931		16,736
11,000	12,610	13,070	14,462	12,299	14,962	15,557	17,516	15,908	19,679		18,368
11,500	13,783	14,285	15,806	13,443	16,353	17,003	19,145	17,387	21,509		20,076
12,000	15,007	15,554	17,211	14,637	17,806	18,514	20,846	18,932	23,419		21,859
12,500	16,284	16,877	18,675	15,882	19,321	20,089	22,619	20,542	25,412		23,719
13,000	17,613	18,254	20,199	17,178	20,897	21,728	24,465	22,219	27,485		25,654
13,500	18,993	19,686	21,782	18,525	22,536	23,431	26,383	23,961	K = 2,023		27,666
14,000	20,426	21,171	23,426	19,923	24,236	25,199	28,374	25,768			29,753
14,500	21,911	22,710	25,129	21,371	25,998	27,031	30,436	27,642			31,916
15,000	23,449	24,303	26,892	22,871	27,822	28,928	32,572	29,581			34,155
15,500	25,038	25,950	28,714	24,421	29,707	30,888	34,779	31,586			K = 1,475
16,000	26,679	27,652	30,597	26,022	31,655	32,913	37,059	33,657			
16,500	28,373	29,407	32,539	27,673	33,664	35,002	39,412	35,793			
17,000	30,118	31,216	34,541	29,376	35,735	37,156	41,837	K = 1,725			
17,500	31,916	33,079	36,603	31,129	37,868	39,374	K = 747				
18,000	33,766	34,997	38,724	32,934	40,063	41,656					
18,500	35,668	36,968	40,905	34,789	42,320	44,002					
19,000	37,622	38,993	43,146	36,695	44,638	46,413					
19,500	39,628	41,072	45,447	38,651	47,019	48,887					
20,000	41,686	43,206	47,808	40,659	49,461	51,427					
20,500	43,797	45,393	50,228	42,717	51,965	K = 187					
21,000	45,959	47,634	K = 714	K = 591	K = 434						
21,500	48,174	49,929									
22,000	50,441	52,279									
22,500	52,759	54,682									
23,000	55,130	57,139									
23,500	57,553	59,651									
24,000	60,028	62,216									
24,500	62,556	64,835									
25,000	65,135	67,509									
25,500	67,767	K = 573									
26,000	70,450										
	K = 335										

SUPERSPEED RCF CHART (continued)

These tables give the maximum RCF in *g* for all currently available SORVALL® rotors for superspeed applications up to 26,000 rpm. To find the average or minimum RCF, consult your rotor instruction manual for the average or minimum radius, and use the formula given below:
 $K = [2.53 \times 10^{11} \ln (R_{max}/R_{min})] / (rpm)^2$ $RCF = 11.17r (rpm/1000)^2$ where *r* = radius in centimeters

ROTOR: RADIUS, max. cm	FIXED-ANGLE					SWINGING-BUCKET					
	SLA-3000	SLA-600TC	SL-50T	SL-250T	ST-MICRO	SH-80	HB-6	HB-4	HS-4 ¹	SH-3000	SH-3000 MPC
	15.13	14.70	10.70	11.77	10.06	10.16	14.63	14.68	17.23	18.54	15.02
RPM	RCF										
500	42	41	30	33	28	28	41	41	48	52	42
1,000	169	164	120	131	112	113	163	164	192	207	168
1,500	380	369	269	296	253	255	368	369	433	466	377
2,000	676	657	478	526	449	454	654	656	770	828	671
2,500	1,056	1,026	747	822	702	709	1,021	1,025	1,203	1,294	1,049
3,000	1,521	1,478	1,076	1,183	1,011	1,021	1,471	1,476	1,732	1,864	1,510
3,500	2,070	2,011	1,464	1,611	1,377	1,390	2,002	2,009	2,358	2,537	2,055
4,000	2,704	2,627	1,912	2,104	1,798	1,816	2,615	2,624	3,079	3,313	2,684
4,500	3,422	3,325	2,420	2,662	2,275	2,298	3,309	3,321	3,897	4,194	3,397
5,000	4,225	4,105	2,988	3,287	2,809	2,837	4,085	4,099	4,811	K = 8,138	
5,500	5,112	4,967	3,615	3,977	3,399	3,433	4,943	4,960	5,822		
6,000	6,084	5,911	4,303	4,733	4,045	4,086	5,883	5,903	6,929		
6,500	7,140	6,937	5,050	5,555	4,748	4,795	6,904	6,928	8,131		
7,000	8,281	8,046	5,856	6,442	5,506	5,561	8,007	8,035	9,430		
7,500	9,506	9,236	6,723	7,395	6,321	6,384	9,192	9,224	10,826		
8,000	10,816	10,509	7,649	8,414	7,192	7,263	10,459	10,494	K = 3,912		
8,500	12,210	11,863	8,635	9,499	8,119	8,199	11,807	11,847			
9,000	13,689	13,300	9,681	10,649	9,102	9,192	13,237	13,282			
9,500	15,252	14,819	10,787	11,865	10,141	10,242	14,748	14,799			
10,000	16,900	16,420	11,952	13,147	11,237	11,349	16,342	16,398			
10,500	18,632	18,103	13,177	14,495	12,389	12,512	18,017	18,078			
11,000	20,449	19,868	14,462	15,908	13,597	13,732	19,773	19,841			
11,500	22,351	21,715	15,806	17,387	14,861	15,009	21,612	21,686			
12,000	24,336	23,645	17,211	18,932	16,181	16,342	23,532	23,612			
12,500	K = 2,364		25,656	18,675	20,542	17,558	17,732	25,534	25,621		
13,000		27,750	20,199	22,219	18,991	19,179	27,617	27,712			
13,500		K = 913		21,782	23,961	20,479	20,683	K = 1,765 K = 1,667			
14,000			23,426	25,768	22,025	22,243					
14,500			25,129	27,642	23,626	23,861					
15,000			26,892	K = 2,253		25,535					
15,500			28,714		26,997	27,265					
16,000			30,597		28,767	29,053					
16,500			32,539		30,593	30,897					
17,000			34,541		32,475	32,798					
17,500			36,603		34,413	34,755					
18,000			38,724		36,408	36,770					
18,500			40,905		38,459	38,841					
19,000			K = 822		40,566	40,969					
19,500					42,729	43,154					
20,000					44,948	45,395					
20,500					47,224	K = 400					
21,000					49,555						
					K = 198						

⁽¹⁾Values given for 1 place carrier

SUPERSPEED RCF CHART (continued)

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$K = [2.53 \times 10^{11} \ln (R_{max}/R_{min})] / (rpm)^2$ $RCF = 11.17r (rpm/1000)^2$ where *r* = radius in centimeters

	SWINGING-BUCKET			VERTICAL		ZONAL
ROTOR: RADIUS, max. cm:	ST-H50	ST-H750	ST-H750 MPC	SV-288	SV-80	TZ-28
	14.63	18.54	15.02	9.02	10.16	9.53
RPM	RCF					
500	41	52	42	25	28	27
1,000	163	207	168	101	113	106
1,500	368	466	377	227	255	240
2,000	654	828	671	403	454	426
2,500	1,021	1,294	1,049	630	709	665
3,000	1,471	1,864	1,510	907	1,021	958
3,500	2,002	2,537	2,055	1,234	1,390	1,304
4,000	2,615	3,313	2,684	1,612	1,816	1,703
4,500	3,309	K = 11,246		2,040	2,298	2,156
5,000	4,085			2,519	2,837	2,661
5,500	4,943			3,048	3,433	3,220
6,000	5,883			3,627	4,086	3,832
6,500	6,904			4,257	4,795	4,498
7,000	8,007			4,937	5,561	5,216
7,500	9,192			5,667	6,384	5,988
8,000	10,459			6,448	7,263	6,813
8,500	11,807			7,279	8,199	7,691
9,000	13,237			8,161	9,192	8,622
9,500	14,748			9,093	10,242	9,607
10,000	16,342			10,075	11,349	10,645
10,500	18,017			11,108	12,512	11,736
11,000	19,773			12,191	13,732	12,880
11,500	K = 2,465			13,325	15,009	14,078
12,000				14,508	16,342	15,329
12,500				15,743	17,732	16,633
13,000				17,027	19,179	17,990
13,500				18,362	20,683	19,401
14,000				19,748	22,243	20,864
14,500				21,183	23,861	22,381
15,000				22,670	25,535	23,951
15,500				24,206	27,265	25,575
16,000				25,793	29,053	27,251
16,500				27,430	30,897	28,981
17,000				29,118	32,798	30,764
17,500				30,856	34,755	32,600
18,000				32,644	36,770	34,490
18,500				34,483	38,841	36,433
19,000				36,372	40,969	38,428
19,500				38,311	K = 98	40,478
20,000				40,301		42,580
				K = 210		K = 612

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