

ULTRASPEED RCF CHART

These tables give the maximum RCF in g for all currently available SORVALL® rotors for ultraspeed applications up to 90,000 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									
	T-890	T-880	T-875	T-1270	T-865	T-865.1	A-1256	T-1250	T-647.5	A-641
RPM	RCF									
5,000	2,136	2,354	2,432	2,290	2,541	2,432	2,290	3,010	2,773	2,773
10,000	8,545	9,416	9,729	9,159	10,165	9,729	9,159	12,041	11,092	11,092
15,000	19,226	21,187	21,890	20,609	22,871	21,890	20,609	27,093	24,957	24,957
20,000	34,180	37,665	38,916	36,638	40,659	38,916	36,638	48,165	44,367	44,367
21,000	37,684	41,526	42,905	40,393	44,826	42,905	40,393	53,102	48,915	48,915
25,000	53,407	58,852	60,807	57,246	63,529	60,807	57,246	75,258	69,324	69,324
27,000	62,293	68,645	70,925	66,772	74,101	70,925	66,772	87,781	80,859	80,859
28,000	66,993	73,824	76,276	71,810	79,691	76,276	71,810	94,403	86,960	86,960
29,000	71,864	79,191	81,821	77,031	85,485	81,821	77,031	101,267	93,282	93,282
30,000	76,905	84,747	87,562	82,435	91,482	87,562	82,435	108,371	99,826	99,826
32,000	87,501	96,423	99,626	93,792	104,087	99,626	93,792	123,303	113,580	113,580
34,000	98,781	108,853	112,468	105,883	117,504	112,468	105,883	139,197	128,221	128,221
36,000	110,744	122,035	126,089	118,706	131,735	126,089	118,706	156,055	143,750	143,750
38,000	123,391	135,972	140,488	132,262	146,778	140,488	132,262	173,876	160,166	160,166
40,000	136,721	150,661	155,665	146,550	162,635	155,665	146,550	192,660	177,469	177,469
41,000	143,642	158,288	163,546	153,970	170,869	163,546	153,970	202,414	186,453	186,453
42,000	150,735	166,104	171,621	161,572	179,305	171,621	161,572	212,408	195,660	K = 162
44,000	165,432	182,300	188,355	177,326	196,789	188,355	177,326	233,119	214,737	
45,000	173,037	190,680	197,014	185,478	205,835	197,014	185,478	243,836	224,609	
46,000	180,813	199,249	205,867	193,813	215,085	205,867	193,813	254,793	234,703	
47,500	192,798	212,455	219,512	206,659	229,341	219,512	206,659	271,681	250,259	
48,000	196,878	216,952	224,158	211,033	234,195	224,158	211,033	277,431	K = 121	
50,000	213,626	235,408	243,227	228,985	254,118	243,227	228,985	301,032		
52,000	231,058	254,617	263,074	247,670	274,853	263,074	247,670	K = 68.7		
54,000	249,174	274,580	283,700	267,088	296,403	283,700	267,088			
56,000	267,973	295,295	305,104	287,239	318,765	305,104	287,239			
58,000	287,455	316,765	327,286	308,122	341,941	327,286	K = 56.7			
60,000	307,622	338,987	350,247	329,738	365,929	350,247				
62,000	328,472	361,963	373,985	352,087	390,731	373,985				
64,000	350,005	385,692	398,503	375,169	416,346	398,503				
65,000	361,028	397,839	411,053	386,985	429,459	411,053				
66,000	372,222	410,174	423,798	398,983	K = 51.7	K = 38.0				
67,000	383,587	422,698	436,738	411,165						
68,000	395,123	435,410	449,872	423,531						
69,000	406,830	448,311	463,201	436,079						
70,000	418,707	461,399	476,724	448,811						
72,000	442,975	488,142	504,355	K = 36.3						
74,000	467,927	515,637	532,764							
75,000	480,659	529,667	547,260							
76,000	493,562	543,886	K = 28.5							
78,000	519,881	572,888								
80,000	546,883	602,644								
82,000	574,569	K = 28.0								
84,000	602,939									
86,000	631,992									
88,000	661,729									
90,000	692,149									
	K = 25.1									

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ULTRASPEED RCF CHART (continued)

These tables give the maximum RCF in g for all currently available SORVALL® rotors for ultraspeed applications up to 90,000 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						VERTICAL			
	A-841 9.10	A-621 13.60	TFT-80.4 6.55	TFT-80.2 6.01	TFT-45.6 outer 10.56	TFT-45.6 inner 9.03	70V6 8.54	65V13 13.5ml 8.49	65V13 6ml 8.33	50V39 39ml 8.66
RPM	RCF									
5,000	2,541	3,798	1,829	1,678	2,949	2,522	2,385	2,371	2,326	2,418
10,000	10,165	15,191	7,316	6,713	11,796	10,087	9,539	9,483	9,305	9,673
15,000	22,871	34,180	16,462	15,105	26,540	22,695	21,463	21,337	20,935	21,765
20,000	40,659	60,765	29,265	26,853	47,182	40,346	38,157	37,933	37,218	38,693
21,000	44,826	66,993	32,265	29,605	52,018	44,482	42,068	41,821	41,033	42,659
25,000	63,529	K = 751	45,727	41,957	73,722	63,041	59,620	59,271	58,154	60,458
27,000	74,101		53,336	48,939	85,989	73,531	69,541	69,133	67,831	70,518
28,000	79,691		57,360	52,631	92,477	79,078	74,787	74,349	72,948	75,838
29,000	85,485		61,531	56,458	99,200	84,828	80,225	79,755	78,252	81,352
30,000	91,482		65,847	60,419	106,160	90,779	85,853	85,350	83,741	87,059
32,000	104,087		74,919	68,743	120,786	103,286	97,681	97,109	95,279	99,054
34,000	117,504		84,577	77,604	136,356	116,600	110,273	109,627	107,561	111,822
36,000	131,735		94,820	87,003	152,870	130,721	123,628	122,904	120,588	125,365
38,000	146,778		105,648	96,938	170,327	145,649	137,746	136,939	134,359	139,681
40,000	162,635		117,062	107,411	188,728	161,384	152,627	151,733	148,874	154,772
41,000	170,869		122,988	112,848	198,283	169,554	160,354	159,415	156,410	162,607
42,000	K = 130		129,060	118,420	208,073	177,926	168,271	167,286	164,133	170,636
44,000			141,645	129,967	228,361	195,275	184,679	183,597	180,137	187,274
45,000			148,156	135,942	238,859	204,252	193,168	192,037	188,418	195,883
46,000			154,814	142,051	K = 41.1	K = 49.6	201,849	200,667	196,886	204,685
47,500			165,075	151,466			215,228	213,968	209,935	218,252
48,000			168,569	154,671			219,783	218,496	214,378	222,871
50,000			182,909	167,829			238,480	237,083	232,615	241,831
52,000			197,834	181,524			257,939	256,429	251,597	K = 35.8
54,000			213,345	195,756			278,162	276,534	271,322	
56,000			229,441	210,525			299,149	297,397	291,793	
58,000			246,122	225,831			320,898	319,019	313,007	
60,000			263,389	241,674			343,410	341,400	334,966	
62,000			281,240	258,054			366,686	364,539	357,669	
64,000			299,678	274,971			390,725	388,437	381,117	
65,000			309,116	283,631			403,030	400,671	393,120	
66,000			318,700	292,426			415,527	K = 12.9	K = 10.3	
67,000			328,431	301,354			428,214			
68,000			338,308	310,417			441,092			
69,000			348,331	319,614			454,160			
70,000			358,501	328,945			467,420			
72,000			379,280	348,011			K = 8.7			
74,000			400,643	367,613						
75,000			411,545	377,616						
76,000			422,592	387,753						
78,000			445,127	408,429						
80,000			468,246	429,643						
			K = 25.8	K = 22.6						

ULTRASPEED 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

	VERTICAL					SWINGING-BUCKET				
ROTOR: RADIUS, max. cm:	50V39 13.5ml 8.19	TV-1665 8.78	TV-865 8.49	TV-865B 8.47	TV-860 8.47	TH-660 12.15	AH-650 10.60	TH-641 15.32	AH-629 17 ml 16.59	AH-629 20 ml 12.93
RPM	RCF									
5,000	2,287	2,452	2,371	2,365	2,365	3,393	2,960	4,278	4,633	3,611
10,000	9,148	9,807	9,483	9,461	9,461	13,572	11,840	17,112	18,531	14,443
15,000	20,584	22,066	21,337	21,287	21,287	30,536	26,640	38,503	41,695	32,496
20,000	36,593	39,229	37,933	37,844	37,844	54,286	47,361	68,450	74,124	57,771
21,000	40,344	43,250	41,821	41,723	41,723	59,851	52,215	75,466	81,722	63,693
25,000	57,176	61,295	59,271	59,131	59,131	84,822	74,001	106,953	115,819	90,268
27,000	66,691	71,495	69,133	68,971	68,971	98,937	86,315	124,750	135,091	105,288
28,000	71,722	76,889	74,349	74,174	74,174	106,401	92,827	134,162	145,283	113,232
29,000	76,937	82,479	79,755	79,567	79,567	114,137	99,576	143,916	155,846	121,464
30,000	82,334	88,265	85,350	85,149	85,149	122,144	106,562	154,012	K = 284	K = 176
32,000	93,678	100,426	97,109	96,881	96,881	138,973	121,244	175,231		
34,000	105,754	113,372	109,627	109,369	109,369	156,887	136,873	197,820		
36,000	118,561	127,102	122,904	122,614	122,614	175,887	153,449	221,777		
38,000	132,100	141,617	136,939	136,617	136,617	195,973	170,972	247,104		
40,000	146,372	156,916	151,733	151,376	151,376	217,145	189,443	273,799		
41,000	153,782	164,860	159,415	159,039	159,039	228,138	199,034	287,660		
42,000	161,375	173,000	167,286	166,892	166,892	239,402	208,861	K = 114		
44,000	177,110	189,869	183,597	183,165	183,165	262,745	229,226			
45,000	185,252	198,597	192,037	191,585	191,585	274,824	239,764			
46,000	193,577	207,522	200,667	200,195	200,195	287,174	250,539			
47,500	206,407	221,276	213,968	213,464	213,464	306,208	267,145			
48,000	210,775	225,959	218,496	217,981	217,981	312,689	272,798			
50,000	228,706	245,182	237,083	236,525	236,525	339,289	296,005			
52,000	K = 22.6	265,188	256,429	255,825	255,825	366,975	K = 53.0			
54,000		285,980	276,534	275,882	275,882	395,746				
56,000		307,556	297,397	296,697	296,697	425,604				
58,000		329,916	319,019	318,268	318,268	456,547				
60,000		353,061	341,400	340,596	340,596	488,576				
62,000		376,991	364,539	363,680	K = 25.2	K = 44.4				
64,000		401,705	388,437	387,522						
65,000		414,357	400,671	399,727						
		K = 9.8	K = 10.1	K = 21.4						



ULTRASPEED RCF CHART (continued)

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	SWINGING-BUCKET			ZONAL
ROTOR: RADIUS, max. cm:	AH-629 36 ml 16.10	SURESPIN™ 630/17 ml 16.60	SURESPIN™ 630/36 ml 16.60	TZ-28 9.53
RPM	RCF			
5,000	4,496	4,636	4,636	2,661
6,000	6,474	6,675	6,675	3,832
7,000	8,812	9,086	9,086	5,216
8,000	11,510	11,867	11,867	6,813
9,000	14,567	15,019	15,019	8,622
10,000	17,984	18,542	18,542	10,645
11,000	21,760	22,436	22,436	12,880
12,000	25,897	26,701	26,701	15,329
13,000	30,392	31,336	31,336	17,990
14,000	35,248	36,343	36,343	20,864
15,000	40,463	41,720	41,720	23,951
16,000	46,038	47,468	47,468	27,251
17,000	51,973	53,587	53,587	30,764
18,000	58,267	60,077	60,077	34,490
19,000	64,921	66,937	66,937	38,428
20,000	71,935	74,169	74,169	42,580
21,000	79,308	81,771	81,771	46,944
22,000	87,041	89,744	89,744	51,522
23,000	95,134	98,088	98,088	56,312
24,000	103,586	106,803	106,803	61,315
25,000	112,398	115,889	115,889	66,531
26,000	121,570	125,345	125,345	71,960
27,000	131,101	135,173	135,173	77,602
28,000	140,992	145,371	145,371	83,457
29,000	151,243	155,940	155,940	K = 312
30,000	K = 242	166,880	166,880	
		K = 255	K = 216	

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