

Table 3-3, Speed and Force Tables, Horizontal Rotors (sheet 2 of 6)

CAT. ROTOR AND NO. OF PLACES	CAT. TRUN. RING AND NO. OF PLACES	CAT. SHIELD	CAT. MULTI-CARRIER AND NO. OF PLACES	CAT. ADAPTER AND NO. OF PLACES	WILL ACCEPT IEC TUBE CATALOG NO.	TUBE NOMINAL ML	TOTAL PLACES X NOMINAL ML	MIN-MAX. CAPACITY RANGE IN ML	MAX. RPM	RCF MAX. G'S	ROTATING RADIUS		WILL ACCEPT TUBE MAX. OD X MAX. LENGTH		RECOMMENDED MIN. TUBE OD X RECOMMENDED MAX. LENGTH					
											CM	INCHES	IN MM	IN MM						
221(6)		356			1629 1649 2801	10-13	6 x (10-13)	60-78	3750	2050	13.0	5.118	17.2 x 102	15.3 x 102						
		356			2850 2046 2067	10-13	6 x (10-13)	60-78	3750	2050	13.0	5.118	17.2 x 102	15.3 x 102						
		356		1125(1)	2836	10	6 x 10	60	3750	2050	13.0	5.118	13.6 x 104	11.7 x 104						
		356		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	3750	2050	13.0	5.118	11.1 x 104	9.3 x 104						
		356		1127(1)	2804 2840	4-5	6 x (4-5)	24-30	3750	2050	13.0	5.118	11.1 x 104	9.3 x 95						
		356		1128(1)	PYREX 8060 1ML	1	6 x 1	6	3750	2050	13.0	5.118	8.6 x 104	6.7 x 92						
	356		1129(1)	PYREX 8060 0.5ML	0.5	6 x 0.5	3	3750	2050	13.0	5.118	6.4 x 104	4.5 x 89							
221(6)		303			1629 1649 1648 2858 2859	13-19	6 x (13-19)	78-114	3400	1875	14.6	5.743	17.2 x 119	15.3 x 119						
		303			2859 2837 2810 (Cap)	13-19	6 x (13-19)	78-114	3400	1875	14.6	5.743	17.2 x 119	15.3 x 119						
		303		1125(1)	1698 2836 2864	8-10	6 x (8-10)	48-60	3400	1875	14.6	5.743	13.6 x 120	11.7 x 120						
		303		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	3400	1875	14.6	5.743	11.1 x 120	9.3 x 105						
		303		1127, 1128, 1129,	NOT RECOMMENDED. TOO SHORT															
221(6)		302			1648 2858 2859	15-19	6 x (15-19)	90-114	2950	1600	16.5	6.495	17.2 x 133	15.3 x 130						
		302			2837 2810	15-19	6 x (15-19)	90-114	2950	1600	16.5	6.495	17.2 x 133	15.3 x 130						
		302		1125(1)	2864 1698	8-10	6 x (8-10)	48-60	2950	1600	16.5	6.495	13.6 x 134	11.7 x 130						
		302		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	2950	1600	16.5	6.495	11.1 x 134	9.3 x 105						
		302		1127, 1128, 1129,	NOT RECOMMENDED. TOO SHORT															
221(6)		306			DO NOT USE. SHIELD HITS GUARDBOWL															
930(24)	PLACE)				HEMATOKIT 1.75x75MM	CAPILLARY TUBES			7800	6200	9.1	3.594								
957(4)		1120			100ML ASTM OIL BOTTLE	LE100	4 x 100	400	2450	1350	20.1	7.898								
					KIMAX 45243															
958(6)310(1)		356			1629 1649 2046	10-13	6 x (10-13)	60-78	2950	1575	16.1	6.322	17.2 x 119	15.3 x 104						
		356			2067 2801 2850	10-13	6 x (10-13)	60-78	2950	1575	16.1	6.322	17.2 x 119	15.3 x 104						
		356		1125(1)	1698 2836 2864	8-10	6 x (8-10)	48-60	2950	1575	16.1	6.322	13.6 x 120	11.7 x 110						
		356		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	2950	1575	16.1	6.322	11.1 x 120	9.3 x 105						
		356		1127(1)	2804 2840	4-5	6 x (4-5)	24-30	2950	1575	16.1	6.322	11.1 x 120	9.3 x 95						
		356		1128(1)	PYREX 8060 1ML	1	6 x 1	6	2950	1575	16.1	6.322	8.6 x 120	6.7 x 92						
	356		1129(1)	PYREX 8060 0.5ML	0.5	6 x 0.5	3	2950	1575	16.1	6.322	6.4 x 120	4.5 x 89							
958(6)310(1)		303			1629 1649 1648 2810	13-19	6 x (13-19)	78-114	2700	1425	17.6	6.946	17.2 x 134	15.3 x 122						
		303			2859 2858 2837	13-19	6 x (13-19)	78-114	2700	1425	17.6	6.946	17.2 x 134	15.3 x 122						
		303		1125(1)	1698 2836 2864	8-10	6 x (8-10)	48-60	2700	1425	17.6	6.946	13.6 x 135	11.7 x 122						
		303		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	2700	1425	17.6	6.946	11.1 x 135	9.3 x 105						
		303		1127, 1128, 1129,	NOT RECOMMENDED. TOO SHORT.															
958(6)310(1)		302			DO NOT USE. SHIELD HITS GUARDBOWL															
958(6)310(1)		306			DO NOT USE. SHIELD HITS GUARDBOWL															
958(6)325(1)		320			1630 2997 2048	48-52	6 x (48-52)	288-312	2800	1475	16.7	6.580	30.0 x 124	28.2 x 107						
		320			2053 2858 613SS	48-52	6 x (48-52)	288-312	2800	1475	16.7	6.580	30.0 x 124	28.2 x 107						
		320		651(1)	2805	22	6 x 22	132	2800	1475	16.7	6.580	18.8 x 127	16.9 x 125						
		320		1105(1)	1698 2864	8-10	6 x (8-10)	48-60	2800	1475	16.7	6.580	14.0 x 128	12.2 x 125						
		320		1106(1)	1648 2858 2837 2810	15-19	6 x (15-19)	90-114	2800	1475	16.7	6.580	17.4 x 127	15.5 x 125						
		320		1108(1)	2805 514 PYREX 12ML	12-22	6 x (12-22)	72-132	2800	1425	16.2	6.385	19.3 x 124	17.4 x 122						
		320		* 1113(3)	2804 2840	4-5	18 x (4-5)	72-90	2800	1225	13.9	5.490	11.3 x 95	9.4 x 95						
		320		2917(1)	2816 2842 (Omit Caps)	10-12	6 x (10-12)	60-72	2800	1450	16.5	6.486	14.4 x 122	12.5 x 120						
		320		3151(1)	2805	22	6 x 22	132	2800	1475	16.7	6.580	18.8 x 127	16.8 x 125						
		320		3152(1)	1698 2864	8-10	6 x (8-10)	48-60	2800	1450	16.5	6.508	14.2 x 127	12.3 x 125						
		320		3153(1)	1648 2837 2858	15-19	6 x (15-19)	90-114	2800	1450	16.5	6.508	16.1 x 127	14.1 x 125						
		320		REMOVE 571 CUSHION	368(5)	B x 95MM WINTROBE, FISHER	#5-668-2		2800	1500	16.9	6.670	8.3 x 120	7.1 x 117						
	958(6)325(1)	320A			312(1)	2810 CONICAL	15	6 x 15	90	2800	1475	16.8	6.608	18.0 x 124	16.0 x 124					
958(6)325(1)	320A				USE CONICAL TUBES ONLY															

*USE PLASTIC TUBES ONLY

Table 3-3, Speed and Force Tables, Horizontal Rotors (sheet 4 of 6)

CAT. ROTOP AND NO. OF PLACES	CAT. TRUN. RING AND NO. OF PLACES	CAT. SHIELD	CAT. MULTI-CARRIER AND NO. OF PLACES	CAT. ADAPTER AND NO. OF PLACES	WILL ACCEPT IEC TUBE CATALOG NO.	TUBE NOMINAL ML	TOTAL PLACES X NOMINAL ML	MIN-MAX. CAPACITY RANGE IN ML	MAX. RPM	RCF MAX. G'S	ROTATING RADIUS CM INCHES	WILL ACCEPT TUBE MAX. OD X MAX. LENGTH IN MM	RECOMMENDED MIN. TUBE OD X RECOMMENDED MAX. LENGTH IN MM
CARRIERS WITH ADAPTERS													
958(6)			380(6)	1125(1)	DO NOT USE. ADAPTER TOO LONG.								
958(6)			380(6)	1126(1)	2804 2840	4-5	36 x (4-5)	144-180	2600	1125	15.0	5.898	11.1 x 88
			380(6)	1127(1)	2804 2840	4-5	36 x (4-5)	144-180	2600	1125	15.0	5.898	11.1 x 88
			380(6)	1128(1)	PYREX 8060 1ML	1	36 x 1	36	2600	1125	15.0	5.898	8.6 x 88
			380(6)	1129(1)	PYREX 8060 0.5ML	0.5	36 x 0.5	18	2600	1125	15.0	5.898	6.4 x 88
958(6)			398(6)	1125(1)	2836 2864 1698	8-10	36 x (8-10)	288-360	2150	875	16.8	6.598	13.6 x 109
			398(6)	1126(1)	2804 2840	4-5	36 x (4-5)	144-180	2150	875	16.8	6.598	11.1 x 109
			398(6)	1127, 1128, 1129	NOT RECOMMENDED.		TOO SHORT.						
958(6)			398A(6)		1629 1649 2859	13-19	36 x (13-19)	468-684	2150	900	17.5	6.898	17.7 x 117
			398A(6)		2858 2837 1648	13-19	36 x (13-19)	468-684	2150	900	17.5	6.898	17.7 x 117
			398A(6)	1125(1)	2836 2864 1698	8-10	36 x (8-10)	288-360	2150	900	17.5	6.898	13.6 x 120
			398A(6)	1126(1)	2804 2840	4-5	36 x (4-5)	144-180	2150	900	17.5	6.898	11.1 x 120
			398A(6)	1127, 1128, 1129	NOT RECOMMENDED.		TOO SHORT						
958(6)	326(2)	320			1630 2997 2048	48-52	12 x (48-52)	576-624	2400	1100	16.9	6.650	30.0 x 120
		320			2053 2828 613SS	48-52	12 x (48-52)	576-624	2400	1100	16.9	6.650	30.0 x 120
		320		651(1)	2805	22	12 x 22	164	2400	1100	16.9	6.650	18.6 x 126
		320		1105(1)	1698 2864	8-10	12 x (8-10)	96-120	2400	1100	16.9	6.650	14.0 x 127
		320		1106(1)	1648 2858 2837 2810	15-19	12 x (15-19)	180-228	2400	1100	16.9	6.650	17.4 x 126
		320		1108(1)	2805 514 PYREX 12ML	12-22	12 x (12-22)	144-164	2400	1050	16.4	6.455	19.3 x 121
		320	*	1113(3)	2804 2840	4-5	36 x (4-5)	144-180	2400	900	14.1	5.560	11.3 x 98
		320		2917(1)	2816 2842(Omit Caps)	10-12	12 x (10-12)	120-144	2400	1075	16.7	6.556	14.4 x 122
		320		3151(1)	2805	22	12 x 22	164	2400	1100	16.9	6.650	18.8 x 126
		320		3152(1)	1698 2864	8-10	12 x (8-10)	96-120	2400	1075	16.7	6.578	14.2 x 126
		320		3153(1)	1648 2858 2837	15-19	12 x (15-19)	180-228	2400	1075	16.7	6.578	16.1 x 125
		320	REMOVE 571 CUSHION		368(5) 8 x 95MM WINTROBE FISHER #5-668-2				2400	1100	17.1	6.740	8.3 x 120
958(6)	326(2)	320A		312(1)	DO NOT USE. ADAPTER INTERFERENCE AT O.D.								
958(6)	326(2)	320A			USE CONICAL TUBES ONLY				2400	1100	16.9	6.650	30.0 x 116
958(6)	326(2)	305		312(1)	DO NOT USE. ADAPTER INTERFERENCE AT O.D.								
958(6)	326(2)	305			2809 CONICAL	50	12 x 50	600	2150	975	19.0	7.486	30.0 x 137
958(6)	326(2)	305A †			1630 2997 2048	48-52	12 x (48-52)	576-624	2150	975	18.9	7.458	30.0 x 140
		305A			2053 2828 613SS	48-52	12 x (48-52)	576-624	2150	975	18.9	7.458	30.0 x 140
		305A		651(1)	2805	22	12 x 22	164	2100	925	18.9	7.458	18.8 x 147
		305A		1105(1)	1698 2864	8-10	12 x (8-10)	96-120	2100	925	18.9	7.458	14.0 x 148
		305A		1106(1)	1648 2858 2837 2810	15-19	12 x (15-19)	180-228	2100	925	18.9	7.458	17.4 x 147
		305A		1108(1)	2805 514 PYREX 12ML	12-22	12 x (12-22)	144-164	2100	900	18.5	7.263	19.3 x 143
		305A	*	1113(3)	2804 2840	4-5	36 x (4-5)	144-180	2100	800	16.1	6.368	11.3 x 110
		305A		2917(1)	2816 2842(Omit Caps)	10-12	12 x (10-12)	120-144	2100	925	18.7	7.364	14.4 x 146
		305A		3151(1)	2805	22	12 x 22	164	2100	925	18.9	7.458	18.8 x 147
		305A		3152(1)	1698 2864	8-10	12 x (8-10)	96-120	2100	925	18.8	7.386	14.2 x 146
		305A		3153(1)	1648 2858 2837	15-19	12 x (15-19)	180-228	2100	925	18.8	7.386	16.1 x 145
		305A			368(5) 8 x 95MM WINTROBE. FISHER #5-668-2				2100	950	19.2	7.548	8.3 x 140
ANGLE ROTORS													
801(6)		320			1630 2997 2048	48-52	6 x (48-52)	288-312	4600	2550	10.8	4.250	30.0 x 115
		320			2053 2828 613SS	48-52	6 x (48-52)	288-312	4600	2550	10.8	4.250	30.0 x 115
		320		651(1)	2805	22	6 x 22	132	4600	2525	10.7	4.200	18.8 x 126
		320		1105(1)	1698 2864	8-10	6 x (8-10)	48-60	4600	2500	10.6	4.170	14.0 x 122
		320		1106(1)	1648 2858 2837 2810	15-19	6 x (15-19)	90-114	4600	2500	10.6	4.190	17.4 x 122
		320		1108(1)	2805 514 PYREX 12ML	12-22	6 x (12-22)	72-132	4600	2500	10.5	4.125	19.3 x 116
		320	*	1113(3)	2804 2840	4-5	18 x (4-5)	72-90	4600	2250	9.5	3.750	11.3 x 91
		320		2917(1)	2816 2842(Omit Caps)	12-22	6 x (10-12)	60-72	4600	2500	10.5	4.115	14.4 x 117
		320		3151(1)	2805	22	6 x 22	132	4600	2525	10.7	4.200	18.8 x 125
		320		3152(1)	1698 2864	8-10	6 x (8-10)	48-60	4600	2500	10.5	4.125	14.2 x 122
		320		3153(1)	1648 2837 2858	15-19	6 x (15-19)	90-114	4600	2500	10.5	4.150	16.1 x 122
		320			368(5) 8 x 95MM WINTROBE FISHER #5-668-2				DO NOT USE.				TUBES TOO LONG.

*398A IS 398 USING A 668 CUSHION

*USE PLASTIC TUBES ONLY

† 305A IS A 305 USING A 571 CUSHION FOR ROUND BOTTOM TUBES

Table 3-3, Speed and Force Tables, Angle Rotors (sheet 5 of 6)

CAT. ROTOR AND NO OF PLACES	CAT. TRUN. RING AND NO OF PLACES	CAT. SHIELD	CAT. MULTI-CARRIER AND NO. OF PLACES	CAT. ADAPTER AND NO. OF PLACES	WILL ACCEPT IEC TUBE CATALOG NO.	TUBE NOMINAL ML	TOTAL PLACES X NOMINAL ML	MIN-MAX CAPACITY RANGE IN ML	MAX. RPM	RCF MAX. G'S	ROTATING RADIUS CM INCHES	WILL ACCEPT TUBE MAX. OD X MAX. LENGTH IN MM	RECOMMENDED MIN. TUBE OD X RECOMMENDED MAX. LENGTH IN MM
801(6)		320A		312(1)	USE CONICAL TUBES ONLY				4600	2550	10.8 4.250	18.0 x 114	16.0 x 114
		320A			USE CONICAL TUBES ONLY				4600	2550	10.8 4.250	30.0 x 111	28.2 x 111
801(6)		305		312(1)	DO NOT USE. ADAPTER O.D. INTERFERES IN ROTOR								
		305			USE CONICAL TUBES ONLY				4000	2150	12.1 4.750	30.0 x 114	28.2 x 114
801(6)		305A †			1630 2997 2048	48-52	6 x (48-52)	288-312	4000	2150	12.1 4.750	30.0 x 115	28.2 x 107
		305A			2053 2828 613SS	48-52	6 x (48-52)	288-312	4000	2150	12.1 4.750	30.0 x 115	28.2 x 107
		305A		651(1)	2805	22	6 x 22	132	4000	2125	11.9 4.700	18.8 x 126	16.8 x 116
		305A		1105(1)	1698 2864	8-10	6 x (8-10)	48-60	4000	2125	11.9 4.670	14.0 x 125	12.2 x 116
		305A		1106(1)	1648 2858 2837 2810	15-19	6 x (15-19)	90-114	4000	2125	11.9 4.690	17.4 x 124	15.5 x 122
		305A		1108(1)	2805 514 PYREX 12ML	12-22	6 x (12-22)	72-132	4000	2100	11.8 4.625	19.3 x 116	17.4 x 116
		305A		*1113(3)	2804 2840	4-5	18 x (4-5)	72-90	4000	1950	10.9 4.300	11.3 x 91	9.4 x 85
		305A		2917(1)	2816 2842(Omit Caps)	10-12	6 x (10-12)	60-72	4000	2100	11.7 4.615	14.4 x 117	12.5 x 110
		305A		3151(1)	2805	22	6 x 22	132	4000	2125	11.9 4.700	18.8 x 125	16.8 x 125
		305A		3152(1)	1698 2864	8-10	6 x (8-10)	48-60	4000	2100	11.8 4.625	14.2 x 122	12.3 x 122
		305A		3153(1)	1648 2837 2858	15-19	6 x (15-19)	90-114	4000	2100	11.8 4.650	16.1 x 122	14.1 x 122
		305A	REMOVE 571 CUSHION	368(5)	8. 95MM WINDROBE FISHER #5		6-68-2		4000	2300	12.8 5.050	8.3 x 117	7.1 x 117
803(6)		356			2046 2067 2801 2850	10-12	6 x (10-12)	60-72	4900	2750	10.2 4.000	17.2 x 88	15.3 x 88
		356		1125(1)	NOT RECOMMENDED. ADAPTER TOO LONG.								
		356		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	4900	2700	10.1 3.975	11.1 x 88	9.3 x 88
		356		1127(1)	2804 2840	4-5	6 x (4-5)	24-30	4900	2700	10.1 3.975	11.1 x 80	9.3 x 80
		356		1128(1)	PYREX 8060 1ML	1	6 x 1	6	4900	2700	10.1 3.960	8.6 x 80	6.7 x 75
		356		1129(1)	PYREX 8060 0.5ML	0.5	6 x 0.5	3	4900	2675	10.0 3.945	6.4 x 80	4.5 x 70
803(6)		303			1629 1649	12-13	6 x (12-13)	72-78	4450	2500	11.3 4.440	17.2 x 102	15.3 x 102
		303		1125(1)	1698 2836 2864	8-10	6 x (8-10)	48-60	4450	2475	11.2 4.400	13.6 x 111	11.7 x 111
		303		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	4450	2450	11.1 4.370	11.1 x 88	9.3 x 88
					1127, 1128, 1129, NOT RECOMMENDED, TOO SHORT.								
803(6)		302			1648 2858 2837 2810	13-19	6 x (13-19)	78-114	4000	2275	12.7 5.000	17.2 x 122	15.3 x 122
		302		1125(1)	1698 2864	8-10	6 x (8-10)	48-60	4000	2250	12.6 4.960	13.6 x 115	11.7 x 111
		302		1126(1)	2804 2840	4-5	6 x (4-5)	24-30	4000	2225	12.5 4.930	11.1 x 88	9.3 x 88
		302			1127, 1128, 1129, NOT RECOMMENDED TOO SHORT.								
803(6)		306							3150	1700	15.4 6.080	17.2 x 158	15.3 x 150
		306			ADAPTERS 1125, 1126, 1127, 1128, 1129 TOO SHORT NOT RECOMMENDED FOR USE.								
809(12)		356			2046 2067 2801 2850	10-12	12 x (10-12)	120-144	4550	2350	10.2 4.000	17.2 x 88	15.3 x 88
		356		1125(1)	NOT RECOMMENDED. ADAPTER TOO LONG.								
		356		1126(1)	2804 2840	4-5	12 x (4-5)	48-60	4550	2350	10.1 3.975	11.1 x 88	9.3 x 88
		356		1127(1)	2804 2840	4-5	12 x (4-5)	48-60	4550	2350	10.1 3.975	11.1 x 80	9.3 x 80
		356		1128(1)	PYREX 8060 1ML	1	12 x 1	12	4550	2350	10.1 3.960	8.6 x 80	6.7 x 75
		356		1129(1)	PYREX 8060 0.5ML	0.5	12 x 0.5	6	4550	2300	10.0 3.945	6.4 x 80	4.5 x 70
809(12)		303			1629 1649	12-13	12 x (12-13)	144-156	4100	2125	11.3 4.440	17.2 x 102	15.3 x 102
		303		1125(1)	1698 2836 2864	8-10	12 x (8-10)	96-120	4100	2100	11.2 4.400	13.6 x 111	11.7 x 111
		303		1126(1)	2804 2840	4-5	12 x (4-5)	48-60	4100	2100	11.1 4.370	11.1 x 88	9.3 x 88
		303			1127, 1128, 1129, NOT RECOMMENDED, TOO SHORT								
809(12)		302			1648 2837 2810	15-19	12 x (15-19)	180-228	3650	1900	12.7 5.000	17.2 x 122	15.3 x 122
		302		1125(1)	1698 2864	8-10	12 x (8-10)	96-120	3650	1875	12.6 4.960	13.6 x 115	11.7 x 115
		302		1126(1)	2804 2840	4-5	12 x (4-5)	48-60	3650	1850	12.5 4.930	11.1 x 88	9.3 x 88
		302			1127, 1128, 1129 NOT RECOMMENDED. TOO SHORT.								
809(12)		306							2900	1450	15.4 6.080	17.2 x 158	15.3 x 150
		306			1125, 1126, 1127, 1128, 1129 ADAPTERS TOO SHORT, NOT RECOMMENDED FOR USE								

*USE PLASTIC TUBES ONLY

† 305A IS A 305 USING A 571 CUSHION FOR ROUND BOTTOM TUBES

Table 3-3, Speed and Force Tables, Angle Rotors (sheet 6 of 6)

CAT. ROTOR AND NO. OF PLACES	CAT. TRUN. RING AND NO. OF PLACES	CAT. SHIELD	CAT. MULTI-CARRIER AND NO. OF PLACES	CAT. ADAPTER AND NO. OF PLACES	WILL ACCEPT IEC TUBE CATALOG NO.	TUBE NOMINAL ML	TOTAL PLACES X NOMINAL ML	MIN-MAX. CAPACITY RANGE IN ML	MAX. RPM	RCF MAX. G'S	ROTATING RADIUS CM INCHES	WILL ACCEPT TUBE MAX. OD X MAX. LENGTH IN MM	RECOMMENDED MIN. TUBE OD X RECOMMENDED MAX. LENGTH IN MM
815(24)	356				2046 2067 2301 2850	10-12	24 x (10-12)	240-288	4200	1800 2200	9.1 11.24	3.600 4.10	17.2 x 88 15.3 x 88
	356				1125(1) NOT RECOMMENDED, TOO LONG								
	356				1126(1) 2804 2840	4-5	24 x (4-5)	96-120	4200	1750 2175	8.9 11.04	3.500 3.12	11.1 x 88 9.3 x 88
	356				1127(1) 2804 2840	4-5	24 x (4-5)	96-120	4200	1750 2175	8.9 11.04	3.500 3.12	11.1 x 80 9.3 x 80
	356				1128(1) PYREX 8060 1ML	1	24 x 1	24	4200	1725 2150	8.8 10.94	3.470 2.81	8.6 x 80 6.7 x 75
	356				1129(1) PYREX 8060 1ML	0.5	24 x 0.5	12	4200	1725 2125	8.8 10.84	3.450 2.60	6.4 x 80 4.5 x 70
815(24)	303				1629 1649	12-13	24 x (12-13)	288-312	3900	1675 2025	9.9 11.94	3.906 3.700	17.2 x 102 15.3 x 102
	303				1125(1) 1698 2836 2864	8-10	24 x (8-10)	192-240	3900	1675 2025	9.8 11.94	3.875 3.687	13.6 x 111 11.7 x 111
	303				1126(1) 2804 2840	4-5	24 x (4-5)	96-120	3900	1650 2000	9.7 11.84	3.830 3.670	11.1 x 88 9.3 x 88
	303				1127, 1128, 1129 NOT RECOMMENDED, TOO SHORT.								
815(24)	302				1648 2858 2837 2810	13-19	24 x (13-19)	312-456	3500	1525 1800	11.24 13.5	3.360 3.160	17.2 x 122 15.3 x 122
	302				1125(1) 1698 2864	8-10	24 x (8-10)	192-240	3500	1500 1775	11.04 13.05	3.312 3.125	13.6 x 115 11.7 x 111
	302				1126(1) 2804 2840	4-5	24 x (4-5)	96-120	3500	1475 1750	10.84 12.95	3.250 3.062	11.1 x 88 9.3 x 88
	302				1127, 1128, 1129 NOT RECOMMENDED, TOO SHORT.								
815(24)	306								2950	1300 1475	13.5 15.26	5.200 6.000	17.2 x 158 15.3 x 150
815(24)	306				1125, 1126, 1127, 1128, 1129, NOT RECOMMENDED, TOO SHORT.								

○ INNER ROW △ OUTER ROW

CAT. ROTOR AND NO. OF PLACES	CAT. TRUN. RING AND NO. OF PLACES	CAT. SHIELD	CAT. MULTI-CARRIER AND NO. OF PLACES	CAT. ADAPTER AND NO. OF PLACES	WILL ACCEPT IEC TUBE CATALOG NO.	TUBE NOMINAL ML	TOTAL PLACES X NOMINAL ML	MIN-MAX. CAPACITY RANGE IN ML	MAX. RPM	RCF MAX. G'S	ROTATING RADIUS CM INCHES	WILL ACCEPT TUBE MAX. OD X MAX. LENGTH IN MM	RECOMMENDED MIN. TUBE OD X RECOMMENDED MAX. LENGTH IN MM
816(8)	320				1630 2997 2048	48-52	8 x (48-52)	384-416	4250	2350	11.6 4.562	30.0 x 115	28.2 x 107
	320				2053 2828 613SS	48-52	8 x (48-52)	384-416	4250	2350	11.6 4.562	30.0 x 115	28.2 x 107
	320				651(1) 2805	22	8 x 22	176	4150	2200	11.4 4.500	18.8 x 126	16.8 x 116
	320				1105(1) 1698 2864	8-10	8 x (8-10)	64-80	4150	2175	11.3 4.437	14.0 x 122	12.2 x 116
	320				1106(1) 1648 2858 2837 2810	15-19	8 x (15-19)	120-152	4150	2200	11.4 4.468	17.4 x 122	15.5 x 122
	320				1108(1) 2805 514 PYREX 12ML	12-22	8 x (12-22)	96-176	4150	2150	11.1 4.375	19.3 x 116	17.4 x 116
	320		*		1113(3) 2804 2840	4-5	24 x (4-5)	96-120	4150	2050	10.6 4.187	11.3 x 91	9.4 x 85
	320				2917(1) 2816 2842 (Omit Caps)	10-12	8 x (10-12)	80-96	4150	2150	11.2 4.406	14.4 x 117	12.5 x 110
	320				3151(1) 2805	22	8 x 22	176	4150	2200	11.4 4.500	18.8 x 125	16.8 x 125
	320				3152(1) 1698 2864	8-10	8 x (8-10)	64-80	4150	2175	11.3 4.437	14.2 x 122	12.3 x 122
	320				3153(1) 1648 2858 2837	15-19	8 x (15-19)	120-152	4150	2175	11.3 4.445	16.1 x 122	14.1 x 122
	320	REMOVE 571 CUSHION			368(5) 8 x 95MM WINTROBE FISHER #5-668-2	45-668-2			4150	2325	12.1 4.781	8.3 x 117	7.1 x 117
816(8)	320A				312(1) USE CONICAL TUBES ONLY				4250	2350	11.6 4.562	18.0 x 114	16.0 x 114
	320A				USE CONICAL TUBES ONLY				4250	2350	11.6 4.562	30.0 x 111	28.2 x 111
816(8)	305				312(1) DO NOT USE, ADAPTER OD INTERFERES IN ROTOR								
	305				USE CONICAL TUBES ONLY				3750	2000	12.7 5.000	30.0 x 114	28.2 x 114
816(8)	305A	†			1630 2997 2048	48-52	8 x (48-52)	384-416	3750	2000	12.7 5.000	30.0 x 115	28.2 x 107
	305A				2053 2828 613SS	48-52	8 x (48-52)	384-416	3750	2000	12.7 5.000	30.0 x 115	28.2 x 107
	305A				651(1) 2805	22	8 x 22	176	3750	1975	12.5 4.937	18.8 x 126	16.8 x 116
	305A				1105(1) 1698 2864	8-10	8 x (8-10)	64-80	3750	1950	12.4 4.875	14.0 x 122	12.2 x 116
	305A				1106(1) 1648 2858 2837 2810	15-19	8 x (15-19)	120-152	3750	1975	12.5 4.906	17.4 x 122	15.5 x 122
816(8)	305A	†			1108(1) 2805 514 PYREX 12ML	12-22	8 x (12-22)	96-176	3750	1925	12.2 4.812	19.3 x 116	17.4 x 116
	305A		*		1113(3) 2804 2840	4-5	24 x (4-5)	96-120	3750	1850	11.7 4.625	11.3 x 91	9.4 x 85
	305A				2917(1) 2816 2842 (Omit Caps)	10-12	8 x (10-12)	80-96	3750	1925	12.3 4.843	14.4 x 117	12.5 x 110
	305A				3151(1) 2805	22	8 x 22	176	3750	1975	12.5 4.937	18.8 x 125	16.8 x 125
	305A				3152(1) 1698 2864	8-10	8 x (8-10)	64-80	3750	1950	12.4 4.875	14.2 x 122	12.3 x 122
	305A				3153(1) 1648 2837 2858	15-19	8 x (15-19)	120-152	3750	1950	12.4 4.882	16.1 x 122	14.1 x 122
	305A	REMOVE 571 CUSHION			368(5) 8 x 95MM WINTROBE, FISHER #5-668-2				3750	2075	13.2 5.187	8.3 x 117	7.1 x 117

*USE PLASTIC TUBES ONLY

† 305A IS A 305 USING A 571 CUSHION FOR ROUND BOTTOM TUBES