

# CIRCULATORS



## TIME TO TEMPERATURE

These times are intended to give approximate reactor Cooling/Heating times from room temperature. Please contact Chemglass to select the best circulator for your application.

2 L I T E R	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C	
	Model					Model			
	<b>Ministat 125</b>	35				<b>Ministat 125</b>	30	35	
	<b>Ministat 230</b>	20	60			<b>Ministat 230</b>	20	36	
	<b>Tango</b>	10	31			<b>Tango</b>	18	28	
	<b>Unistat 705</b>	10	21	31	83	<b>Unistat 705</b>	18	28	
5 L I T E R	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C	
	Model					Model			
		<b>Ministat 230</b>	34	96			<b>Ministat 230</b>	32	52
		<b>Ministat 240</b>	25	72			<b>Ministat 240</b>	25	43
		<b>Tango</b>	16	55			<b>Tango</b>	30	50
		<b>Unistat 405</b>	11	36			<b>Unistat 405</b>	30	50
		<b>Unistat 705</b>	18	36	55	145	<b>Unistat 705</b>	29	50
		<b>Unistat 815</b>	9	17	26	50	<b>Unistat 815</b>	22	37
	<b>Unistat 825</b>	5	10	17	38	<b>Unistat 825</b>	15	24	
1 0 L I T E R	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C	
	Model					Model			
		<b>Unistat 405</b>	20	100			<b>Unistat 405</b>	54	87
		<b>Unistat 425</b>	8	22			<b>Unistat 425</b>	40	65
		<b>Unistat 510w</b>	4	14			<b>Unistat 510w</b>	13	22
		<b>Unistat 815</b>	15	31	46	89	<b>Unistat 815</b>	40	65
		<b>Unistat 825</b>	9	17	30	67	<b>Unistat 825</b>	27	43
	<b>Unistat 910w</b>	4	9	15	28	<b>Unistat 910w</b>	10	14	

**Note:**

1) "Time to Cool" estimates based on Silicone Oil Bath Medium, 1.45 kJ/(kg\*°C).

2) Estimate will increase with ambient conditions >+20°C and lack of insulation.

\* Times may double (x2), due to Reactor constraints, such as low heat transfer rate, limited dT/dt, no insulation.

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	Model					Model		
	<b>Unistat 425</b>	14	40			<b>Unistat 425</b>	72	116
	<b>Unistat 510w</b>	2	27			<b>Unistat 510w</b>	29	47
	<b>Unistat 610w</b>	5	12	34		<b>Unistat 610w</b>	24	39
	<b>Unistat 615w</b>	4	11	22		<b>Unistat 615w</b>	12	19
	<b>Unistat 620w</b>	3	6	16		<b>Unistat 620w</b>	12	19
	<b>Unistat 625w</b>	2	6	13		<b>Unistat 625w</b>	12	19
	<b>Unistat 825w</b>	16	31	54	119	<b>Unistat 825w</b>	48	78
	<b>Unistat 830w</b>	10	20	36	72	<b>Unistat 830w</b>	48	78
	<b>Unistat 910w</b>	7	14	26	46	<b>Unistat 910w</b>	24	39
	<b>Unistat 925w</b>	2	5	7	15	<b>Unistat 925w</b>	12	19

3 0 L I T E R	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C
	Model					Model		
	<b>Unistat 425</b>	21	58			<b>Unistat 425</b>	105	171
	<b>Unistat 510w</b>	11	38			<b>Unistat 510w</b>	42	69
	<b>Unistat 610w</b>	8	18	49		<b>Unistat 610w</b>	35	57
	<b>Unistat 615w</b>	6	15	32		<b>Unistat 615w</b>	18	29
	<b>Unistat 620w</b>	4	9	23		<b>Unistat 620w</b>	18	29
	<b>Unistat 625w</b>	3	8	19		<b>Unistat 625w</b>	18	29
	<b>Unistat 825w</b>	23	46	79	175	<b>Unistat 825w</b>	70	114
	<b>Unistat 830w</b>	15	30	53	105	<b>Unistat 830w</b>	70	114
	<b>Unistat 910w</b>	10	21	38	68	<b>Unistat 910w</b>	35	57
	<b>Unistat 925w</b>	3	7	11	16	<b>Unistat 925w</b>	18	29

**Note:**

- 1) "Time to Cool" estimates based on Silicone Oil Bath Medium, 1.45 kJ/(kg\*°C).
- 2) Estimate will increase with ambient conditions >+20°C and lack of insulation.

\* Times may double (x2), due to Reactor constraints, such as low heat transfer rate, limited dT/dt, no insulation.

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5 O L I T E R	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C
	Model					Model		
	<b>Unistat 510w</b>	12	42			<b>Unistat 510w</b>	68	111
	<b>Unistat 610w</b>	8	20	54		<b>Unistat 610w</b>	57	92
	<b>Unistat 615w</b>	7	17	36		<b>Unistat 615w</b>	28	46
	<b>Unistat 620w</b>	5	10	25		<b>Unistat 620w</b>	28	46
	<b>Unistat 625w</b>	4	9	21		<b>Unistat 625w</b>	28	46
	<b>Unistat 630w</b>	3	7	12		<b>Unistat 630w</b>	14	23
	<b>Unistat 910w</b>	11	23	41	74	<b>Unistat 910w</b>	57	92
	<b>Unistat 925w</b>	4	7	12	18	<b>Unistat 925w</b>	28	46
<b>Unistat 930w</b>	3	6	10	16	<b>Unistat 930w</b>	14	23	

5 O L I T E R  S H O R T	Minutes to:	0°C	-20°C	-40°C	-60°C	Minutes to:	100°C	150°C
	Model					Model		
	<b>Unistat 510w</b>	17	60			<b>Unistat 510w</b>	56	92
	<b>Unistat 520w</b>	14	40			<b>Unistat 520w</b>	42	46
	<b>Unistat 610w</b>	12	28	77		<b>Unistat 610w</b>	39	92
	<b>Unistat 615w</b>	11	24	53		<b>Unistat 615w</b>	39	46
	<b>Unistat 620w</b>	7	14	36		<b>Unistat 620w</b>	23	46
	<b>Unistat 625w</b>	5	13	30		<b>Unistat 625w</b>	23	46
	<b>Unistat 910w</b>	16	33	60	108	<b>Unistat 910w</b>	38	92
	<b>Unistat 925w</b>	5	11	17	25	<b>Unistat 925w</b>	23	46
<b>Unistat 930w</b>	4	9	15	22	<b>Unistat 930w</b>	16	23	

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