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# SYBRON | Thermolyne

THERMOLYNE CORPORATION  
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## LT306X1


# OPERATING INSTRUCTIONS

and

# PARTS LIST

for

# NUOVA II STIR PLATE

Model SP18424	Series 306	100 V
Model SP18425	Series 306	120 V  LISTED
Model SP18420	Series 306	240 V
Model SP18420-26	Series 306	240 V
Model SP18425-13 CSA	Series 306	120 V

The type 18400 Nuova II Stir Plate is a magnetic stirring hot plate designed to provide a uniform source of heat from ambient temperature to 371°C and stirring capability from 60 to 1000 rpm. A bimetal control keeps the surface temperature constant to  $\pm 3^{\circ}\text{C}$  over most of the operating range. ( $\pm 6^{\circ}\text{C}$  at a setting of 1) Excellent speed control, especially at low speeds, is achieved by a unique system of eddy current braking.

#### ELECTRICAL RATINGS

SP18424	100 Volts	8.9 Amps	880 Watts	50/60 Hz
SP18425 UL	120 Volts	7.3 Amps	865 Watts	60 Hz
SP18420	240 Volts	3.6 Amps	857 Watts	50 Hz
SP18420-26	240 Volts	3.6 Amps	857 Watts	50 Hz
SP18425-13 CSA	120 Volts	7.3 Amps	865 Watts	60 Hz

#### **CAUTION:**

SPACE UNIT 2.5 INCHES FROM COMBUSTIBLE WALLS UNDER ANY CONDITION.

#### OPERATION

Both the "TEMPERATURE" and "SPEED" controls are combination "ON-OFF" switches and setting selectors. The fully counterclockwise positions are "OFF". To select a temperature, turn the control clockwise to the desired number. The numbers correspond to increments of approximately  $40^{\circ}\text{C}$ ; e.g. 5 gives approximately  $200^{\circ}\text{C}$ . The lighted "HEAT" indicator shows when the unit is heating. To select a speed, turn the "SPEED" control clockwise until the desired mixing action is achieved. The lighted "STIR" indicator shows when the unit is stirring.

position, recalibration is necessary. With the adjustment shaft turn clockwise to the point at which the "Heat" light goes on, loosen the knob set screw, carefully turn the knob so that the pointer points to the first mark above "OFF". (Be sure that the shaft does not turn while the knob is being re-positioned). Tighten the set screw and turn the knob fully counterclockwise. Leave the unit off for a couple of minutes to insure no heat was generated while the knob was being repositioned.

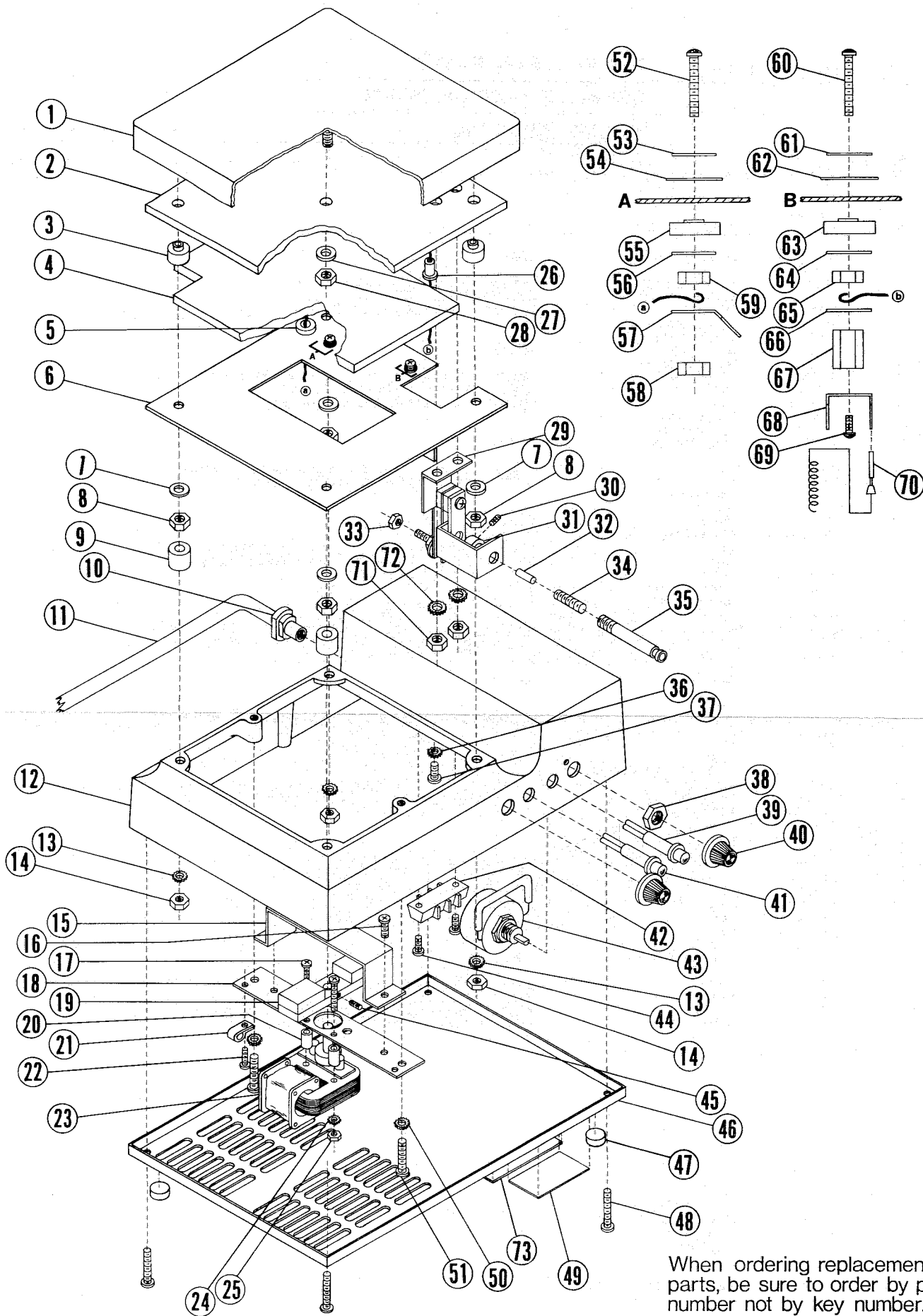
Turn knob clockwise and observe the point at which the "Heat" light goes on. If it complies with the above requirements, recalibration is complete, if not, again follow the above instructions.

#### RECALIBRATION OF CONTROL UNIT:

As the contacts wear or because of other repairs to the stir plate, it may be necessary to recalibrate the control. This must be done with the hot plate and the control both at room temperature. Be sure the heat control knob is fully counterclockwise. To Check: Turn the heat control knob clockwise and note the position at which the "Heat" light turns on. If this point is not at or near the first mark above the "OFF"

#### NOTE:

When removing bottom cover of the stir plate for service, insure that the louvered side of the cover is installed under the motor when it is reattached. Failure to do so could result in motor overheat and damage to the unit.



When ordering replacement parts, be sure to order by part number not by key number.

SP18420, SP18420-26, SP18424, SP18425, SP18425-13 Series 306

**Product Name :** NUOVA II STIR PLATE

**Model No's. :** SP18424, SP18425, SP18425-13,

SP18420, SP18420-26

**Series No. :** 306

KEY PART  
NO. NO. DESCRIPTION

KEY NO.	PART NO.	DESCRIPTION	
1	PT184X1B	Plate Assembly	<b>Table A</b>
2	See Table A	Element	
3	JSX72	Insulator (4 req'd)	EL306X1 Heating element, 120V, for Model SP18425
4	JC306X1	Insulation	EL306X2 Heating element, 240V, for Model SP18420, SP18420-26
5	JSX72	Insulator	EL306X3 Heating element, 100V, for Model SP18424
6	PT306X2A	Plate Assembly	
7	FWX2	Washer (4 req'd)	
8	FNX2	Nut (4 req'd)	<b>Table B</b>
9	JSX5	Insulator (4 req'd)	CR163X1 Cord Set, 100V and 120V, for Models SP18424, SP18425
10	SRX22	Strain Relief	CR163X2 Cord Set, 240V, for Model SP18420
	SRX24-26	Strain Relief	CR260X1 Cord Set, 240V, for Model SP18420-26
11	See Table B	Cord	
12	DL306X1	Case Nameplate	
	DL306X6-26	Case Nameplate	
13	FWX12	Washer (4 req'd)	<b>Table C</b>
14	FNX2	Nut (4 req'd)	
15	BC306X2	Bracket	MTX37 Motor, 100V and 120V, for Models SP18424, SP18425
16	FSX15	Screw (2 req'd)	MTX38 Motor, 240V, for Models SP18420-26, SP18420
17	FSX216	Screw (2 req'd)	
18	BC306X3	Bracket	
19	MG306X1	Magnet	<b>Table D</b>
20	FW306X1	Washer (2 req'd)	
21	FCX10	Clip	PL184X1 Pilot Light, 100V and 120V, for Models SP18424, SP18425
22	FSX15	Screw	PL184X2 Pilot Light, 240V, for Models SP18420, SP18420-26
23	See Table C	Motor	
24	FWX11	Washer (2 req'd)	
25	FNX2	Nut (2 req'd)	<b>Table E</b>
26	JSX4	Insulator	
27	FWX4	Washer	PLX48 Pilot Light, 100V and 120V, for Models SP18424, SP18425
28	FNX2	Nut	PLX49 Pilot Light, 240V, for Models SP18420, SP18420-26
29	CN305X1	Control	
30	FSX53	Screw	<b>Table F</b>
31	CU64X1	Coupling	
32	JSX8	Insulator	
33	FNX1	Nut	RS306X1A Rheostat Assbly., 100V and 120V, for Models SP18424, SP18425
34	FSX153	Screw	RS306X2A Rheostat Assbly., 240V, for Models SP18420, SP18420-26
35	SF306X1	Shaft	
36	FWX12	Washer	
37	FSX15	Screw	<b>Table G</b>
38		Nut Supplied with Rheostat	
39	See Table D	Pilot Light (Stir)	HT306X1A Heater Coil Assbly., 100V and 120V, for Models SP18424, SP18425
40	KBX40	Knob (2 req'd)	HT306X2A Heater Coil Assbly., 240V, for Models SP18420, SP18420-26
41	See Table E	Pilot Light (Heat)	
42	TRX74	Terminal	
43	See Table F	Rheostat Assembly	<b>Table H</b>
44	FSX31	Screw (2 req'd)	
45	FSX224	Screw	DL306X2 Spec Plate, 240V, SP18420
46	CV306X1A	Cover Assembly	DL306X3 Spec Plate, 100V, SP18424
	CV306X2A-13 CSA	Cover Assembly	DL306X4 Spec Plate, 120V, SP18425
47	FTX12	Foot	DL306X5 Spec Plate, 240V, SP18420-26
48	FSX113	Screw	DL306X7 Spec Plate, 120V, SP18425-13
49	See Table H	Spec Plate	
50	FWX12	Washer (2 req'd)	<b>Table I</b>
51	FSX19	Screw (2 req'd)	
52	FSX48	Screw	DL271X8 Warning Plate, 100V and 240V, for Models SP18420, SP18420-26, SP18424
53	FWX2	Washer	DL271X6 Warning Plate, UL 120V, for Model SP18425
54	JSX36	Insulator	DL306X8 Warning Plate, Caution 120V, for Model SP18425-13
55	JSX75	Insulator	DL306X9 Warning Plate, CSA 120V, for Model SP18425-13
56	FWX2	Washer	
57	TRX73	Terminal	
58	FNX2	Nut	
59	FNX2	Nut	
60	FSX48	Screw	
61	FWX2	Washer	
62	JSX36	Insulator	
63	JSX75	Insulator	
64	FWX2	Washer	
65	FNX2	Nut	
66	FWX1	Washer	
67	FN92X1	Nut	
68	TRX72	Terminal	
69	FSX46	Screw	
70	See Table G	Heater Coil Assembly	
71	FWX11	Washer (2 req'd)	
72	FNX2	Nut (2 req'd)	
73	See Table I	Spec Plate	

Not  
Shown CEX42 Adapter Plug SP18424 100V

Parts should be ordered from the dealer where the stirplate was purchased. If not in dealer's stock, it may be ordered from the manufacturer. When ordering, please give Model Numbers, Series Number and Serial Number. Prices F.O.B. shipping point, subject to change without notice.

Minimum Invoice: \$25.00