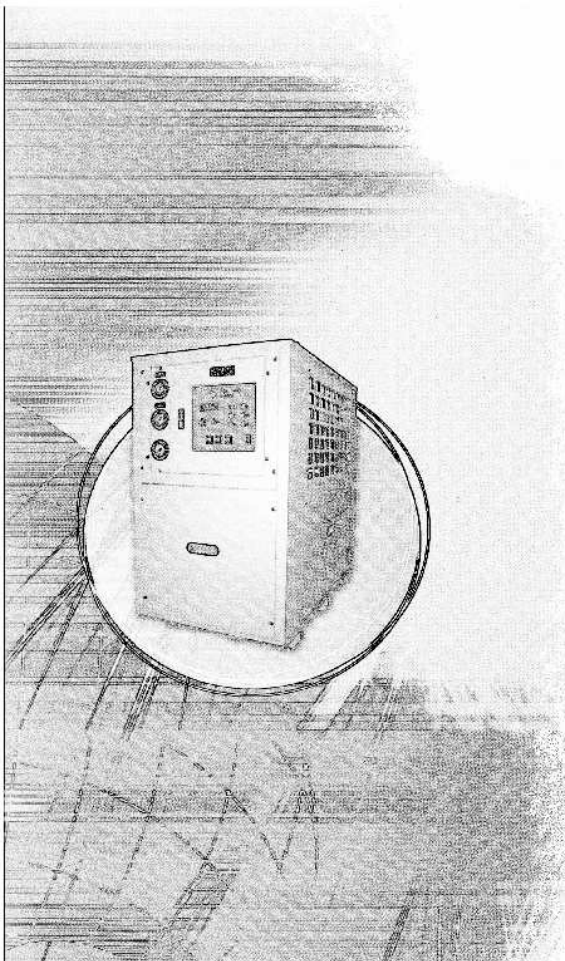
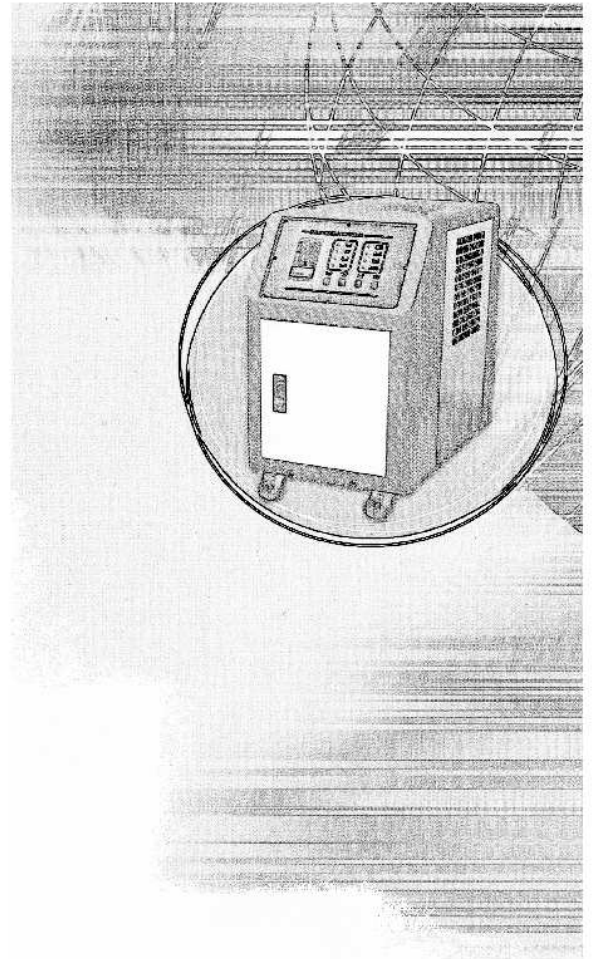


模溫機
操作手冊

Mold Temperature
Controller

OPERATION
MANUAL



宜晉企業有限公司

YI-JINN ENTERPRISE CO., LTD

一、規格表 Specifications:

水式模溫機 Water temperature controller specifications

機型 MODEL	單位 UNIT	KTC-120	KTC-120-2	KTC-120-3	KTC-120-5
適用溫度範圍 TEMP. RANGE	°C	常溫 ~ 95°C			
傳熱媒體 FLUID		水 WATER			
冷卻方式 COOLING METHOD		直接冷卻 DIRECT COOLING			
加熱能量 HEATING CAPACITY	KW	6	6	9	12
幫浦馬力 PUMP POWER	KW	0.96	1.27	2.4	4.15
最大流量 MAX. PUMP CAPACITY	L/min	150	150	200	267
最高壓力 MAX. PUMP PRESSURE	kg/cm ²	2.3	3.4	4.5	5.2
電源供應 POWER		3 φ 220 ~ 440V			
最大電力 MAX. PUMP SUPPLY	KW	7	8	11.5	16
熱媒儲量 TANK CAPACITY	L	4	4	4	4
熱媒尺寸 PROCESS FLUID PIPE	INCH	1"	1"	1 1/2"	1 1/2"
冷卻水尺寸 COOLING WATER PIPE	INCH	1/2"			3/4"
外型尺寸 DIMENSION(L*W*H)	cm	60x34x72			90x50x100
機重 WEIGHT	kg	65	70	75	85

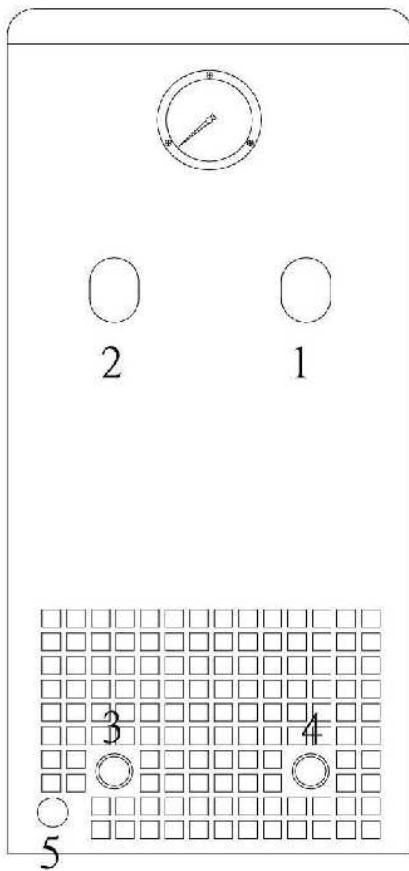
油式模溫機 Oil temperature controller specifications

機型 MODEL	單位 UNIT	KTC-150S	KTC-200S	KTC-250	KTC-350S	KTC-350S-4	KTC-350S-6
適用溫度範圍 TEMP. RANGE	°C	60°C~145°C	70°C~180°C	70°C~230°C	70°C~300°C	70°C~300°C	70°C~300°C
傳熱媒體 FLUID		油 OIL					
冷卻方式 COOLING METHOD		間接冷卻 UNDIRECT COOLING					
加熱能量 HEATING CAPACITY	KW	4.5	9	12	12	24	48
幫浦馬力 PUMP POWER	KW	0.5	0.75	0.75	1.1	2.8	4.0
最大流量 MAX. PUMP CAPACITY	L/min	45	60	135	60	100	150
最高壓力 MAX. PUMP PRESSURE	kg/cm ²	3	6	2.5	6	6	6
電源 POWER		3 φ 220 ~ 440V					
最大電力 MAX. PUMP SUPPLY	KW	5	10	12.5	14	28	52.5
熱媒儲量 TANK CAPACITY	L	20	10	10	10	50	50
熱媒尺寸 PROCESS FLUID PIPE	INCH	4/3"	1"	1"	1"	1"	1 1/4"
冷卻水尺寸 COOLING WATER PIPE	INCH	1/2"					
外型尺寸 DIMENSION(L*W*H)	cm	55×34×55	60×34×72			90×50×100	
重量 WEIGHT	kg	50	68	75	70	100	120

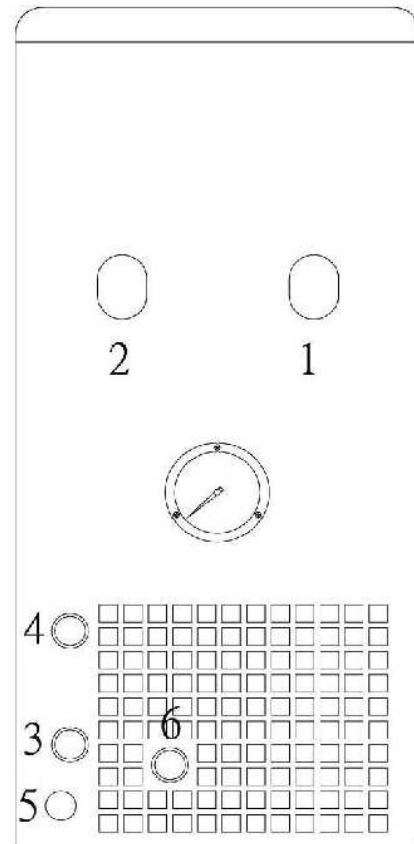
二、安裝說明 Installation procedures:

(1).背板接管說明 Back panel pipe connection :

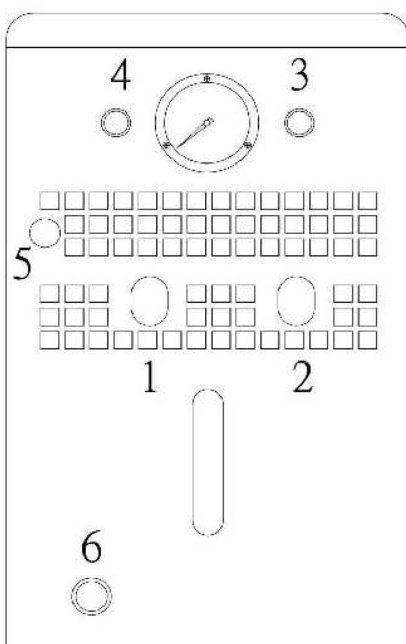
KTC-120



KTC-200S



KTC-150S



1	熱媒出口 Outlet
2	熱媒入口 Inlet
3	冷卻水入口 Cooling water inlet
4	冷卻水出口 Cooling water outlet
5	電源線 Cable
6	排油口 Oil discharge port

(2).冷卻水配管 Cooling water tubin :

- 1.將本機冷卻水出入口（後板出入口之標籤所示），配管接至貴廠冷卻水系統中。

Connect the cooling water inlet and outlet tube of this unit to the cooling water system at your plant.

- 2.冷卻水出入口之配管需使用耐溫耐壓管（需耐120°C以上及4kg以上壓力），以防管路因高溫軟化破裂。

Please employ black cotton hoses for using temperature above 100°C or PVC cotton hoses for temperature below 100°C. Make sure to avoid the use of transparent PVC hoses to softening , loosening and breaking of hoses due to discharge of hot water.

- 3.冷卻水出入口之配管尺寸請依本機所需尺寸配置，勿任意變更大小，以免影響溫控效果。冷卻水所需最小壓力為1kg，如增加冷卻水入口壓力可獲得較佳之冷卻效果。（如欲使用在較低溫度時可接用冰水，以獲得較低之溫控）。

To obtain excellent cooling effects, the pressure at cooling water inlet should be 1kg/cm² at least. Increase the pressure of cooling water can get more cooling effect.

(3).熱媒配管 Process tubing :

- 1.將本機熱水（油）出入口，配管至使用機具，並確定其成爲密閉迴路，以使熱水（油）能順利循環流動。如有多處使用，配管請接爲並聯型式以獲得較平均的溫控，勿串聯多處使用，導致溫控不穩定。

Connect the outlet and inlet tube of this unit to the working site. Make sure to engineer a loop circuit so that fluid may circulate.

- 2.如使用傳熱媒體爲水（KTC-120）時，配管請使用耐熱耐壓（120°C，8kg以上）之軟管，如使用傳熱油爲傳熱媒體（KTC-150S，200S，350S）時，請使用鐵弗龍管。

For temperature below 100°C, oil and heat resistant rubber hoses, for temp. Above 100°C, Teflon hose must be employed.

3.配管之軟管接頭請使用高壓接頭（鎖牙），勿用一般管夾，以防軟管高溫使用中脫出，發生危險。

Ensure to tighten the hose connector, and check one more time after the heating process to avoid loosening.

(4).電力需求 Power distribution:

1.本機所採用之電源規格，請參考銘牌所示。

A native of power specifications adopted, please see the nameplate is shown below.

2.本機均附電源線，請接至貴廠主電源。如所附電源線不夠長，請自行以同等級之電源線延長，勿任意換用較小之電線，以免發生危險。

Connect the power cable to the power source at your plant.

3.接電時請提供獨立電源供本機負荷使用。各機型所需無熔絲開關及電線大小請參考下表：

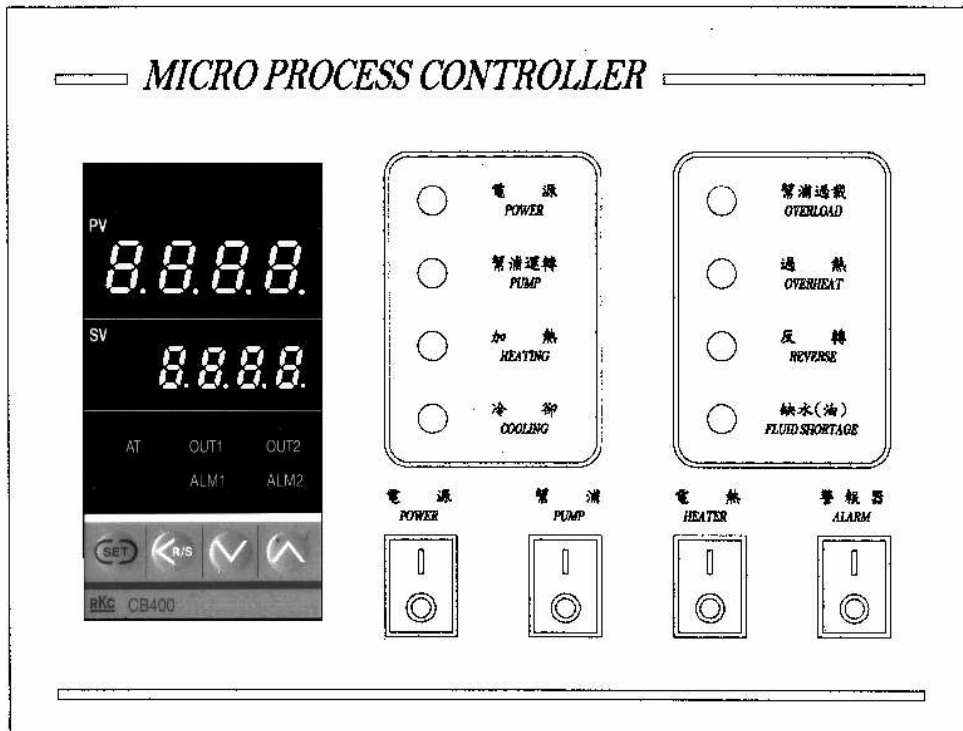
Please install individual non-fuse breaker near the machine for machine use. For the non-fuse breaker size and the wiring, please refer to the following table:

220V				
機 型 MODEL	KTC-120	KTC-120-2	KTC-120-3	KTC-120-5
無熔絲開關 BREAKER	30A	30A	40A	60A
電源線 CABLE	5.5mm ²	5.5mm ²	8.0mm ²	14.0mm ²
機 型 MODEL	KTC-150S	KTC-200S	KTC-200S-2	KTC-350S
無熔絲開關 BREAKER	20A	40A	40A	50A
電源線 CABLE	3.5mm ²	8.0mm ²	8.0mm ²	14.0mm ²

380V / 460V				
機 型 MODEL	KTC-120	KTC-120-2	KTC-120-3	KTC-120-5
無熔絲開關 BREAKER	20A	20A	30A	40A
電源線 CABLE	3.5mm ²	3.5mm ²	5.5mm ²	8.0mm ²
機 型 MODEL	KTC-150S	KTC-200S	KTC-200S-2	KTC-350S
無熔絲開關 BREAKER	20A	20A	20A	30A
電源線 CABLE	3.5mm ²	3.5mm ²	3.5mm ²	5.5mm ²

三、使用說明 Operation procedures:

(1). 控制面板說明 Control panel:



1. 溫度控制器：顯示熱媒實際溫度及設定使用溫度，使用方式請參閱後述之 “ 溫控錶使用說明 ” 。

The temperature controller: display htm actual temperature and set up for temperature, how we use it, please refer to the latter's "temperature control table usage instructions".

2. 電源燈：當 “ 電源 ” 開關被按下後，如機器無其他異常，溫控錶會開始顯示且燈會亮起。

The power lamp: when "POWER" switch is pressed, no other exceptions such as machine, temperature control table will start to display and lights.





3. 幫浦運轉燈：當 “ 幫浦 ” 開關被按下後，幫浦會開始運轉且燈會亮起。

The pump lamp: when "PUMP" switch is pressed, the pump will become operational and lights.

- 4.加熱燈：當“電熱”開關被按下後，溫控錶有輸出加熱訊號時，電熱會動作，此燈會亮起。
The heating lamp: when "HEATER" switch is pressed, the heating temperature control table has output signal, heater will action, this light is lit.
- 5.冷卻燈：當溫控錶有輸出冷卻訊號時，電磁閥會動作，此燈會亮。
The cooling lamp: when temperature table has output signal from the cooling, the solenoid valve will action, this light is lit.
- 6.幫浦過載燈：幫浦過電流跳脫指示。
The overload lamp: pump over current trip.
- 7.過熱燈：熱媒溫度超過使用最高值。
The overheat lamp: htm temperature exceeds the highest value.
- 8.反轉燈：幫浦反轉。
Reverse lamp: pump reversed.
- 9.缺水（油）燈：熱媒不足
Fluid shortage lamp: insufficient htm.
- 10.電源開關：按下後啓動控制電源。
Power switch: press start controlling power.
- 11.幫浦開關：按下後啓動幫浦。
Pump switch: press start pumping.
- 12.電熱開關：按下後啓動電熱控制電源。
Heater switch: press start heater power.
- 13.警報開關：按下後啓動警報蜂鳴器。
Alarm switch: press start alert buzzer.


(2). 溫控錶使用說明 Temperature control table usage instructions :

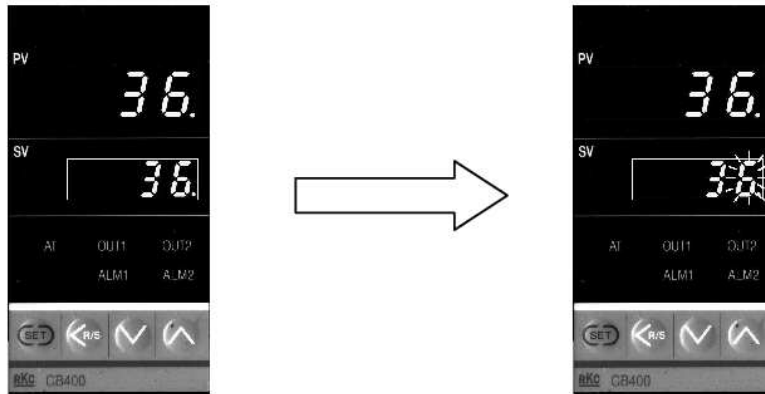


PV	顯示量測實際溫度及各類參數名稱。 Display measurement of the actual temperature and various types of parameter names.
SV	顯示設定溫度及各類參數值。 Shows the set temperature and parameter values.
	設定鍵：變更各種設定時使用。設定值及參數值輸入時使用。 Set key: change setting. Set the value and the value of a parameter input.
	移位鍵：變更設定時，移位用。 SHIFT key: change setting, shift.
	減少鍵：減少值時使用。 Reduction keys: reduce value.
	增加鍵：增加值時使用。 Added key: value added.


設定溫度說明 Temperature setting description

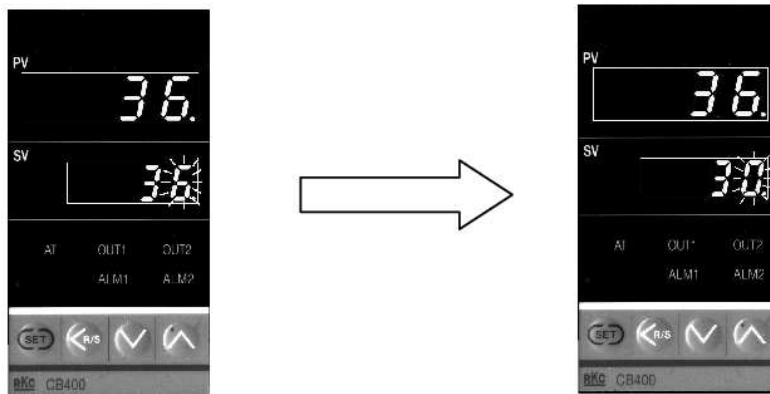
1. 目前顯示溫度為36°C，按下  SV值的“6”會變亮。



Currently displays temperature of 36°C, press the  SV of "6" will lighten.





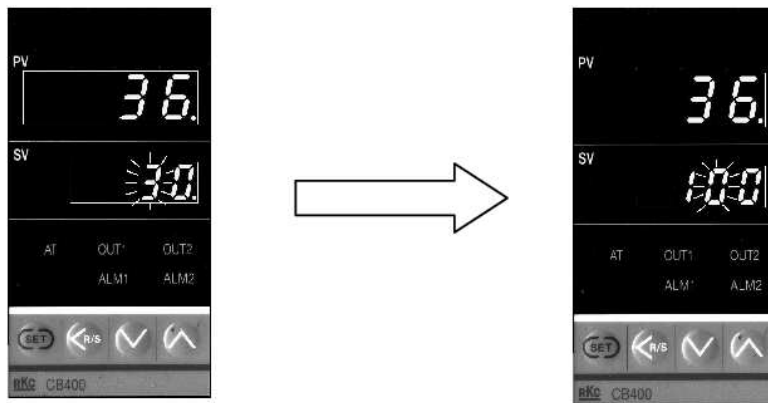
2. 按下  6次，將 6 改為 0。


Press  6 times, the 6 to 0.




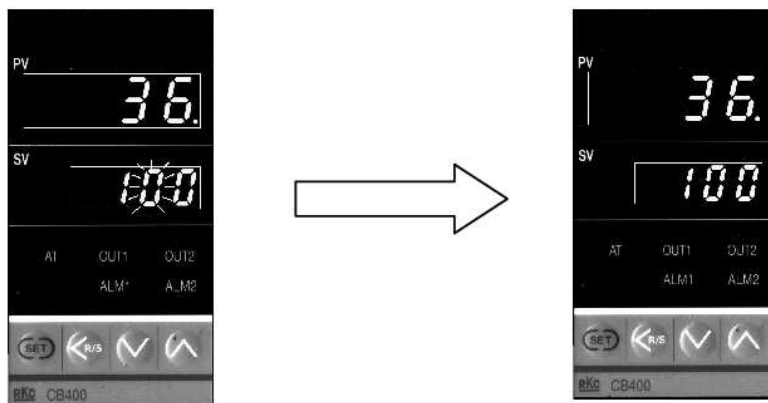
3. 按下  移位鍵，3 會變亮，再按  增加鍵將 3 增加至 10。

Press the  SHIFT key, 3 will lighten, and then press the  add key will increase to 10-3.



4. 再按一下  設定鍵，設定溫度即從36°C變為100°C。

And then click the  set button, set the temperature of 36°C, that is, from the 100°C becomes.



(3).開機 Starting:

1.將控制面板上之警報開關設定在ON的位置。其它開關請保持在OFF的位置。
Make sure the “alarm” is switched “ON”.

2.打開冷卻水出入口閥門。
Turn on cooling water and oil valve.

3.請由補充口補充傳熱媒體至補充油箱中（水式KTC-120除外），補充至視窗中線及即可。
Please by the supplement mouth supplement heat transfer media to the auxiliary tanks in (the water type KTC-120 exception), supplement to the Windows median line and then.

4.打開貴廠電源供應側之開關，將電送出。
Open your power supply side of the switch, the electric sent.

5.打開本機前方電氣箱門，將電氣箱內之無熔絲斷路器撥至ON的位置，此時請確認本機之各項警報項目是否有動作？（如有，請詳閱故障排除內容說明），排除各項警報項目後再進行後續動作。
Open the front door, no fuse breaker turns on, and then make sure that the native of various alert project or action? (If any, please read the troubleshooting content description), exclude various alert items for follow-up action.

6.按下“電源”開關，“電源”燈亮。
Depress the “POWER” switch, the “power lamp” light on.

7.按下“幫浦運轉”開關，“幫浦運轉”燈亮。
Depress the “PUMP” switch, the “pump lamp” light on and pump running.

8.注意“缺水（油）”警報是否有動作？如有，請再添加傳熱媒體至警報消除為止。
Note the lack of water (oil) "have action alert? if any, please add heat transfer media to the alert.

9.設定需用溫度。

Set the required temperature.

10.按下“電熱”開關。

Press the "HEATER" switch.

11.檢查管路有否洩漏。

Check any leak in the tube.

(4).停機 Stop:

1.將運轉溫度降至70°C以下。

Lower the temperature to 70°C or less.

2.關掉“電熱”開關。

Switch off the "HEATER" switch.

3.關掉“幫浦運轉”開關。

Switch off the "PUMP" switch.

4.關掉“警報器”開關。

Switch off the "ALARM" switch.

5.關掉“電源”開關。

Switch off the "POWER" switch.

6.關閉冷卻水。

Close the cooling water and oil valve.

7.如長時間不用，請將電氣箱內無熔絲斷路器關掉。

As a long-unused, no fuse breaker turns off.

(5). 注意事項 Precautions:

1. 運轉前及運轉中需確定水（油）箱中之水（油）位是否足夠，否則易引起電熱燒毀。

Before running needs to sure water (oil) in water (oil) bit is sufficient, otherwise easily cause heater over burning.

2. 添加水或傳熱油時，請添加至油位視窗中線即可，勿添加太滿以免加熱後溢出。

Maintain the Heat-conductive oil in the mid-level point in the oil gauge as it is filled in, because oil will expand upon heating.

3. 水油兩用機型，如一開始已使用水為傳熱媒體，除非能將機器管路內水分完全去除，否則切勿更換傳熱媒體為油，並將使用溫度升至 100°C 以上，以免產生油爆。

Water and oil soluble model, such as a start has been to use water as the heat transfer medium, unless the machine in water from, do not replace the heat transfer media to oil, and will use the temperature rose to 100°C above, avoid fried.

4. 油式機種請使用本公司所提供之“高溫用傳熱油”或使用市售之同等級油品，切勿用一般潤滑油、機油、液壓油等代替，以免機器燒毀。

The oil type aircraft type please use this company to provide "The high temperature uses heat transfer oil" or the use market same rank oil quality, is sure not with the common lubricating oil, the machine oil, the hydraulic fluid and so on to replace, in order to avoid machine over burning.

5. 凡出入口有加裝過濾器者，需定時清理，以防過濾器堵塞，影響流動，導致電熱燒毀。

Every access has the addition filter, must fixed time clean up, by against filter stoppage, affects the flowing, and causes the heater over burning.

四、故障排除 Trouble removal :

徵 狀 Condition	檢 查 方 式 Examine	排 除 方 法 Malfunction analysis	
不運轉 Out-of-operation	警 報 不 響 Alarm can not ring	* 電源未送上。 * No power.	
		* 無熔絲斷路器跳脫。 * No fuse breaker trip.	
		* 保險絲燒斷。 * Blowout.	
		* 蜂鳴器故障。 * Buzzer trouble.	
不運轉 Out-of-operation	警 報 響 Alarm sounded.	反轉 Reverse	* 電源接線相位相反，請將電源接線任兩條交換即可。 * Power connection phase contrast, the power connector as two Exchange.
		幫浦過載 Overload	* 打開電氣箱將幫浦過載保護開關復歸，並檢查幫浦運轉情況。 * Open the electrical box will pump overload protection switch reversion, and check the pumps operating conditions.
		過熱 Overheat	* 媒體溫度超過上限，請檢查油路循環是否順暢及溫控錶動作是否正常。 * Media temperature exceeded the maximum size, check the oil circulation is smooth and temperature control table actions correctly.
		缺油(水) Fluid shortage	* 油箱油位不足需加油。 * Oil shortfall required refueling. * 冷卻水未接，或壓力過低。 * Cooling water is not received, or pressure is too low.
加熱不良 Warmed unhealthy tendencies	加熱指示燈亮 Heating the indicator light	* 油管未接成循環。 * Tubing is not attached to the loop.	
		* 油管或模具水孔堵塞。 * Tubing or die water hole plug.	
		* 電熱燒毀。 * Heater over burning.	
		* 能量不足。 * Under capacity.	

加熱不良 Warmed unhealthy tendencies	加熱指示燈不亮 Heating the led is not lit	* 電熱電磁開關故障。 * Electric solenoid switch failure.
		* 溫控錶故障。 * Temperature control table failed.
冷卻不良 Cooling unhealthy tendencies	冷卻指示燈亮 Cooling the indicator light	* 不運轉。 * Out-of-operation.
		* 油管未接成循環。 * Tubing is not attached to the loop.
		* 油管或模具水孔堵塞。 * Tubing or die water hole plug.
		* 冷卻水溫度太高或設定溫度太低。 * Cooling water temperature is too high or too low temperatures.
	冷卻指示燈不亮 Cooling the led is not lit	* 電磁閥堵塞。 * Solenoid valve plug.
		* 電磁閥損壞。 * Solenoid valve damaged.
		* 電磁閥保險絲燒毀。 * Solenoid valve fuse burned down.
		* 溫控器故障。 * Temperature control table failed.
		* 不運轉。 * Out-of-operation.

