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# **EasyMelt Benchtop Hot Melt Tank**

# OPERATING INSTRUCTIONS



# \*\*\*MENU\*\*\*

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# CHAPTER 1 SAFETY SUMMARY

#### 1.0 Introduction

This chapter, is intended as an introduction to the installation, operation and maintenance of the Infinity Bond EasyMelt Hot Melt Applicator and sets out the safety rules to be observed for preventing risk both to personnel and to the equipment.

This risk prevention rules may be classified as follow:

- 1. Safety during installation.
- 2. Safety during equipment operation.
- 3. Safety during maintenance.
- 4. Safety during use of hot melt solvents.

Failure to follow these recommendations may result in person-nel injury from burns or electrocution and/or equipment and property damage.

#### 1.1 Safety During Installation

- Establish correct and effective ground connection for entire apparatus, without such connection, every element of the apparatus even those are apparently insulated become a potential conductor and pose a risk of electrical shock.
- 2. Check that the power cords and their insulation are correctly dimensioned for the load constituted by the apparatus complate with all its accessories.
- 3. Ensure that a switch with a thermal safety cut-off is in-stalled between the apparatus and the primary generator.
- **4.** Always operate the apparatus in accordance with the recom-mended current and voltage.
  - If the apparatus is operate at voltages and currents other that recommended this may create potential fire risk.

#### 1.2 Safety During Operation

- 1. Do not operate the equipment near volatile or otherwise ex-plosive gases or materials.
- 2. Do not operate the equipment without the covers, panels and safety guards properly installed.
- 3. Do not operate the equipment at a temperature above 50 °C or below 0 °C.
- **4.** If the applicator nozzle device unshielded from the wind. Rapid heat dissipation due to air movement across the noz-zle tip may cause operational problems.
- 5. Do not use the equipment as a ladder or stepping stoo1.
- 6. Use only the metal base when attempting to lift or move an applicator. Do not use equipment covers, doors, panels, as braces or grips.

#### 1.3 Safety During The Maintenance

The main precautions to be adopted when carrying out mainten-ance are:

- 1. Disconnect the electrical power supply before maintenance the equipment.
- 2. Do not wear rings, watches, bracelets etc, when carrying out the maintenance.
- 3. Do not in any way inspect or adjust any component unless another person is present and able to ensure immediate as-sitance in event at accidence.
- 4. Employ only qualified personnel for maintenance work on the equipment.
- 5. Never touch bared connection or components without discon-necting the electrical power supply while power is on. Dan-gerous voltage exise at several point in the equipment.

- 6. Disconnect the electrical supply before removing any pro-tection case or changing any electrical component.
- 7. If possible, stand on a rubber insulating mat when carrying out maintenance on the hot melt applicator. Do not work on wet floors or in very damp surrounding.
- 8. Always use protective gloves and clothing which gives the maximum protection to parts of the body liable to be sp-lashed by hot melt or come in contact with the hot surface of components.
- 9. Before lose or install the pressure connector ensure the operating pressure of the hot melt applicator is reduce to zero.
- 10.Do not use any tools which is with flaming or sharp tip to clean a hot melt applicator to avoid a injury 1n the in-ternal surface of the equipment.
- 11. Never operate equipment with a known any from of leak (air or hot melt) in the system.

#### 1.4 Safety When Using Adhesive And Solvents

#### A. Adhesive

- 1. Use extreme care when working with molten material. They solidify rapidly at high temperature and present a hazard se-vere burns can occur if the molten materials first solidi-fied, they are still hot.
- 2. Always wear protective clothing and eye protection when handing molten material or working near taining hot equipment conmelt adhesive under pressure.
- B. Heating Solvents
- 1. Do not use a open flame or uncontrolled heating device to heat solvents.
- 2. Do not use paint-type solvents under any circumstances. These solvents are volatile and may be a fire and/or toxic-vapor hazard even at room temperature.

- 3. Always be sure that work area is adequately ventilated.
- 4. Avoid prolonged or repeated breathing of solvent vapors.

#### IF MOLTEN MATERIAL COMES IN CONTACT WITH THE SKIN:

- \* Do not try to remove molten material from the skin.
- \* Immediately immerse the affected area in cold, clean water, keep the affected area immersed until the material has cool-ed.
- \* Do not try to remove the cooled material from the skin.
- \* Cover the affected area with a clean, wet compress.
- \* In case of severe burns, look for signs of shocks. If shock is suspected, have patint lie down, use blankets to preser-ver body heat and elevate the feet several inches.
- \* Call a physician immediately.

# CHAPTER 2 EQUIPMENT FAMILARIZATION



Figure 2 .1 EasyMelt Hot Melt Applicator

#### 2.0 Introduction

This chapter provides general information on the Infinity Bond EasyMelt Pneumatic Hot Melt Applicator, also with the let out diagram (figure 2.1), equipment dimension (figure 2.2) and diagram of hydraulic system

(figure 2.3), to provides the user for equipment installation.

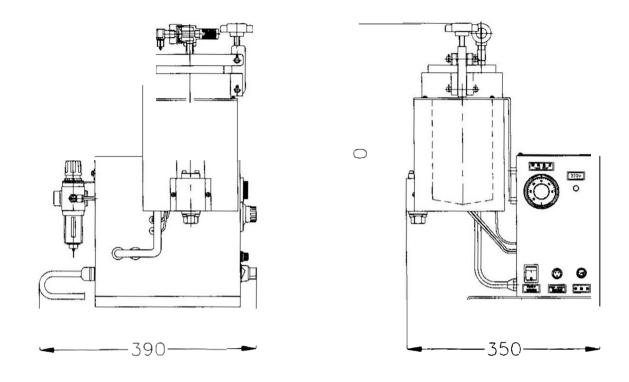


Figure 2.2 Equipment Dimension

# 2.1 Description Of The Machine Character

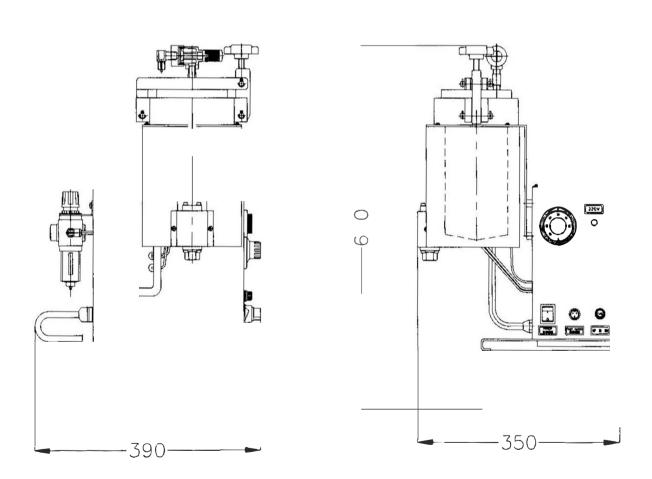
The Infinity Bond EasyMelt Hot Melt Applicator is designed to melt any type or shape of adhesive with viscosity ranging from 500 to 20000 cps suitable for manual operation.

This equipment has two main systems, the electrical control system and the heating system including hydraulic system and pneumatic system.

The solid form hot melt material is melted in a special tank, flow to bottom of the tank and transferred by com-press air, through the nozzle device for application. The features of this Hot Melt Applicator are:

- 1. Light weight, small volume, easy to move.
- 2. Open cap easily, fill materials conveniently and safety.

- 3. Pneumatic power system.
- 4. Simple construction, easy to maintain.
- 5. Pressure and flow are adjustable.
- 6. Glue melt fast.
- 7. Glue flow volume can be exactly controlled by electrical timer.
- 8. Pressure-keeping system with accurate construction of need-le valve nozzle reacts quite sensitively.
- 9. Not suitable for automatically machine system.



Equipment Dimension (High Type)

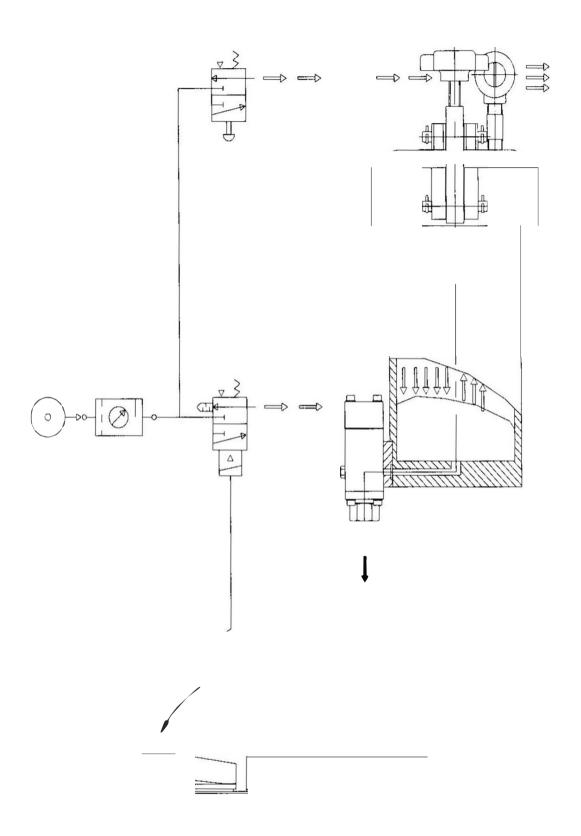


Figure 2.3 Hydraulic System Diagram

### 2.2 Specification Summary

Item Infinity Bond EasyMelt Applicator

Electrical Power 110/220V 50/60Hz

Weight 14.8Kg

Dimension 350X390X510 mm

Melting Capacity 2.5Kg/hr

Tank Capacity 1 Liter

Operation Temp. Max 250 °C

Air Pressure 2~6 Kg/cm<sup>2</sup>

Nozzle Quantity 1 Set

Nozzle Model Pneumatic needle

Wattage 800W

Viscosity Max 20000 CPS

### 2.3 Functional Description Of Standard

# 2.3.1 Power System

The power system of the Infinity Bond EasyMelt Hot Melt Applicator is pneumatic compress air system. (Refer figure 2.3) The compress air into the tank, to pressed molten material and outlet from no-zzle. The quantity of outlet can be control by mane switch or quantity timer.

2.3.2 Hydraulic System

#### 1. Hot melt tank

The applicator melts adhesives in a Teflon-coated aluminum tank, in order to avoid the hot melt adhesive adhere on the wall, become a carbon and difficult to clean the tank. This tank also able to change hot melt adhesive easily and completely in the bottom of the tank sets out a four fins to increase the heat dissipating rate.

<sup>\*</sup> The melting capacity rate will altered by the type of hot material.

Temperature control is accomplished by means of a resistance temperature detector (RTD) mounted in the tank wall.

#### 2.3.3 Electrical Power System

#### I. Heating system

The tank of the Infinity Bond EasyMelt is electrical heating system. The heat covers the surface of the tank, use a (RTD) temperature sensor to detect the temperature, then transfer temperature controller.

2. Temperature controller --- mechanical type controller Temperature sensor bar contained liquid fully, the volume of liquid will increase when heated, the additional volume will force the spring plate of temperature controller through a pressure tube, the spring plate is opened. When temperature is rising then switch off the heater and stop heating. When temperature drop down and the spring plate will contact again, the heater will be switched on and start heating.

#### **CUATION:**

The temperature sensor bar of mechanical type temperature con-trolled must following the condition as below, in order to ma-intense the properly performance of the sensor.

- 1. Do not bend or damage the surface of the bar.
- 2. Do not fold or twist the wire of the sensor.

# CHAPTER 3 OPERATION INSTRUCTIONS

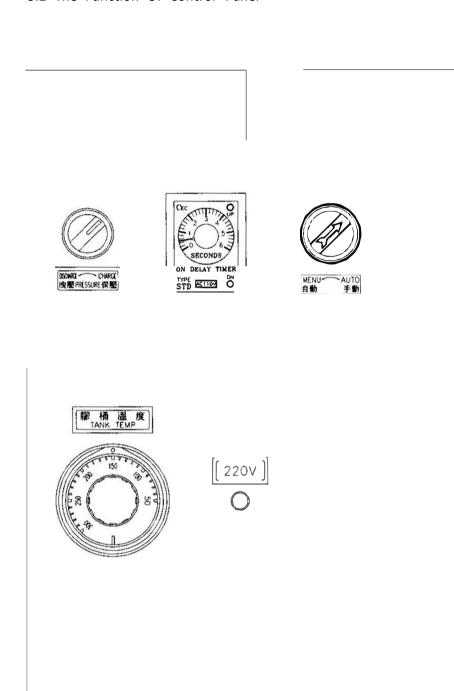
#### **3.0** Introduction

In this introduction, it contains the preparing the **Infinity Bond EasyMelter** Hot Melt Applicator for operation, loading it with adhesive, changing the adhesive used in it, and operating it on a daily basis.

# **3.1** Safety Precaution

- 1. Always wear safety glasses, safety gloves, and protective clothing to prevent injury from hot applicator parts, spla-shed hot melt adhesive material, and hot nozzle surface.
- 2. Do not touch the surface of the nozzle tip during operating this equipment, this is hot.

# 3.2 The Function Of Control Panel

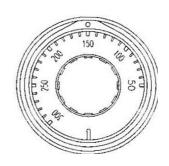


[保險絲]

POWER 理識開朝

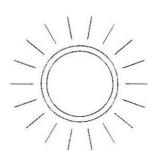
# 1. Mechanical temperature controlled

This temperature controller used to control the tank temperature. Setting the temperature by turn the knob until the red spot re-ches to required temperature.



#### 2. Indicator Lamp Of Heating

This lamp is located on the ri-ght side of the temperature con-tro 11 er. When the lamp is on, it shows that the heating system is on.



# 3. The Hot Melt Adhesive Out Let Timer

This timer is used for "AUTO" mode hot melt out1et time sett-ing. Turn the knob, until! the needle reaches the reguire val-ue to complate the time setting.



#### 4. MANU/AlITO Switch

This MANU/AUTO switch is used to select whither the equipment is on "MANU" mode or "AUTO" mode. Put this switch on "MANU" posi-tion, then the then the hot melt adhesive uotlet is controled by foot switch. Put the switch on "AUTO" position, then the hot melt adhesive outlet is control-ed by outlet timer.



#### 5."MAIN POWER" switch

This main power switch is to control the main power of the applicator.

Put the switch on "ON" posit ion and the light of this switch wi 11 on, to shows that system is on.



#### 6.Pressure-Keeping Switch

Put this switch on "CHARGE" po-sit ion to supply the compress air for the tank. Before cutoff the main power, ensure to put this s witch to "DI SCHAGE" posi-tion to relase the pressure from the quick exhaust valve.



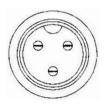
#### 7.Fuse Base

In this fuse base with in a IOA fuse in order to avoid the over-load or current shirt, to cause the damage of the equipment.



#### 8. Foot Switch Plug

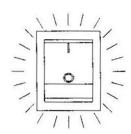
This foot switch plug is for ex-nal foot switch to send a outlet single.



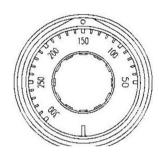
# 3.3 Daily Operation

## 3.3.1 Turn On Precedure

1. Turron the main power switch.



2. Check the temperature setting.



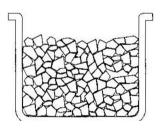
3. Check the compress air setting.



4. Check the tank level and add adhesive mater1al as necessary.

**CAUTION:** 

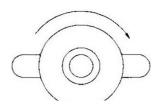
Do notloadover *415* of the ank capacity.



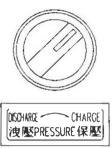
5. Manual vs Auto mode allows the Easymelter to dispense until the foot pedal is released (Manual) or a timed shot (Auto)



6. Ensure the tank lid is tight.



**7.** Put the Pressure - Keeping switch on the "CHARGE" posi-tion.



8. In the manu mode. stepping the foot-switch then the hot melt adhesive will keeping outlet, until the foot-switch is being released. In the auto mode stepping the foot switch and release it then the timer will start timing, when the time is up to stop the outlet.



#### Caution:

Reload the adhesive material during the operation. must discharge the pressure-keeping switch, for open lid easily and safety.

#### 3.3.2 Shut-Off Procedure

**1.** Put the "Pressure-Keeping" switch on discharge position.



**2.** Turn off the main power switch.



## CHAPTER 4 DISASSEMBLY AND REPAIR

#### **4.0** Introduction

In this chapter contains instructions for repaying or replac-ing various parts of Infinity Bond EasyMelt Hot MELT APPLICATOR. It de-scribe how to redisassemble the system. Some of the system de-vice, if not nesscenary, do not disassemble by operator, rec-ommend leave the devices to the qualified personnel.

#### **4.1** Safety Precaution

- 1. Disconnect and lock out input electrical power to the app-licator before removing any panels or any electrical device
  - , in order to avoid personnel injury or equipment damage.
- 2. Always wear safety glass, safety gloves, and protective clothing to prevent injury from hot applicator parts, sp-lashed hot melt adhesive material, and surface of hot de-vice.
- 3. Never heat any component with a torch or other open flame. Use a electric oven with force air circulation or a flame-less electric heat gun.
- 4. Do not wear rings, watches, bracelets, etc. When carrying out the maintenance or repair work.

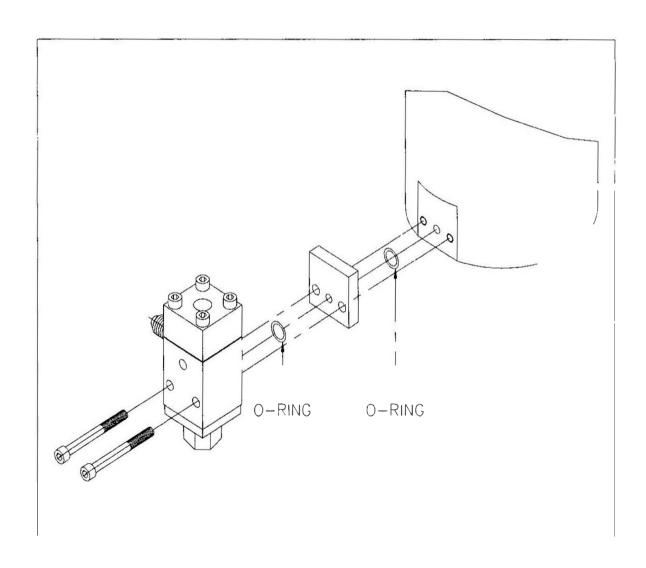
# **4.2** The Replacement Of Theo-ring Between The Nozzle Device & Adhesive Tank

This applicator, while using a certain times, some outlet tip will dropping hot melt adhesive it shows that the o-ring which is between the nozzle device and the adhesive tank should be replaced.

The o-ring replace procedure as follows:

**1.** Heat the tank, and use the foot switch to leak out all the hot melt adhesive.

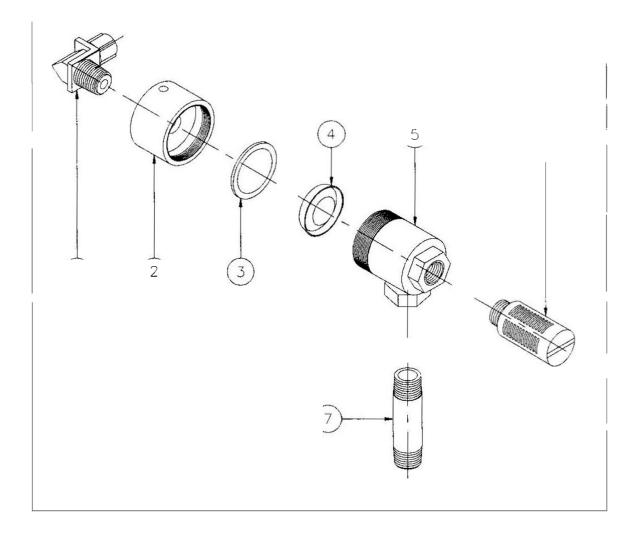
- 2. Separate the nozzle device from main body with L type reang (4 mm).
- 3. Take out the o-rings(two) from the nozzle and block.
- **4.** Examine the a-rings, if damaged then replace it for a new one, if not then clean the o-ring with solvent.
- 5. Before reinstall the o-ring, ensure the cavity and the o-ring are clean, put o-ring in the cavity properly.
- 6. Restore the nozzle and block back to the main body care-fully, do not scratch the surface of the o-r1ng.
- 7. Tighten the socket head scews properly with L-type reang (4 mm ).



# 4.3 Disassemble And Repair Of Quick Relieve Valve

When the outlet of the hot melt adhesive is not smooth or fa-il may the quick relieve valve is blocked or damage. The dis-assemble and repair of quick relieve valve as below:

- 1. Disconnect the air source.
- 2. Disassemble the aluminum 1 id with a c/J4 stick and check the if its damage.
- 3. Use a (-) type sew driver to take off the muffler(6) to ch-eck if its blocked or damage.



# CHAPTER 5 TROUBLESHOOTING

#### 5.0 Introduction

In this chapter it prevent the troubleshooting procedures for Infinity Bond EasyMelt. Some obviously prob-lem for example as damage of wire shield is general problem not including in this chapter. These general problem should be resolved in regular routine equipment maintenance.

#### 5.1 Safety Precautions

- Disconnect and lock out input electrical power to the applicator before removing any panels or any electrical device, in order to avoid personnel injury or equipment damage.
- 2. Before disconnect any part of this applicator, must ensure that the system pressure already being relieved, 1n to avoid personnel injury or equipment damage.
- 3. Always wear safety glass, safety gloves, and protecting cl-othing to prevent injury from hot melt from hot applicator parts, splashed hot melt adhesive material, and surface of hot device.
- 4. Never heat any component with a torch or other open flame, Use an electrical oven with force air circulation or a flamless electrical heat gun.

## 5.2 Troubleshooting Of Mechanical And Electrical Parts

#### Problem

Tank fail to heat or underheat (cannot reach pre-set tempera-ture)

#### Cause

- 1. The main power switch is broken.
- 2. The fuse base 1s loosed or blew out.

#### Repair

- 1. Replace for a new one.
- 2. Find out the cause of blew out and replace it for a new fuse.

3. Heater ring 1s broken.

3. Check the connection point of the heater ring or replace a new one.

#### Problem

The hot melt adhesive outlet 1s fail or not smooth.

#### Cause

- 1. The outlet tip is block-ed.
- 2. The compress air is fail ed.
- 3. The quick relieve valve is blocked.
- 4. The solenoid valve is bro-ken.
- 5. Quick exhaust valve clogg-ed.

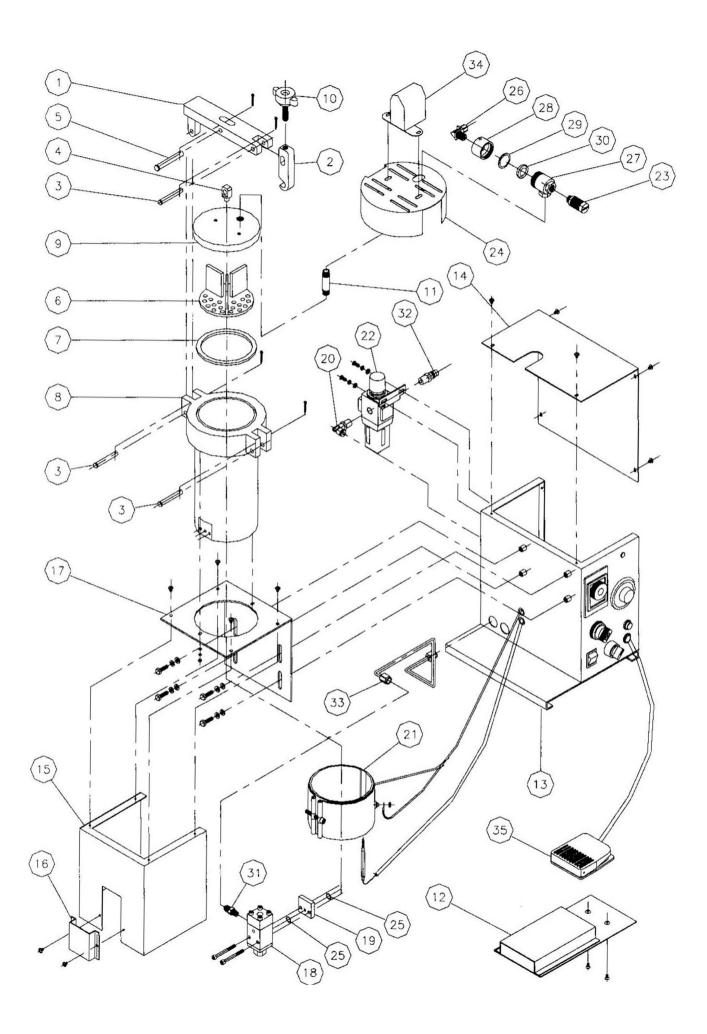
#### Repair

- 1. Clean the tip.
- 2. Adjust the air pres-sure.
- 3. Clean the valve or re-place a new cap.
- 4. Replace a new one.
- 5. Clean valve and replace new valve cap.

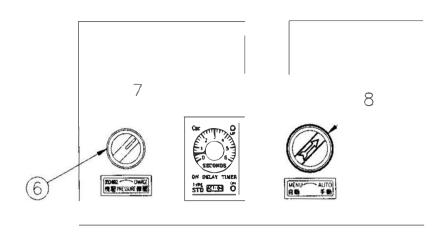
# CHAPTER 6 THE PARTS FIGURE COLLECTION

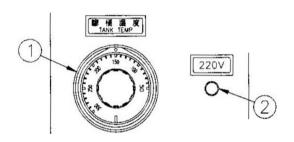
#### 6.0 Introduction

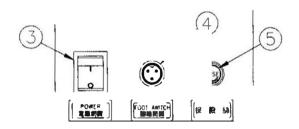
In this chapter prevent the detail drawing of YT-DJ102 all parts assembly and electrical diagram, also with the parts item and names, for user can easily identify all difference parts. According these item number to replace the damage parts.



NO.	PART NO.	NAME	ĊTY.
1	0752C01-l	FIX SHAFT	1
2	0752C02	SHAFT	1
3	0752C03	PIN	3
4	0752C04-2	BOLT FOR LID	1
5	0752C05	PIN	1
6	<b>0750</b> G	HEAT DISSIPATING	1
7	07501-1	GLUE SEAL	1
8	<b>0753</b> ⊤	HOT MELT TANK	1
9	<b>0753</b> ⊤06-l	TANK LID	1
10	W04	HANDLE	1
11	NP <b>0202</b>	CONNECTOR	1
12	0750K05	FOOT SWITCH SETTING	1
13	0751K01	BODY	1
14	0751K02	REAR COVER	1
15	0751K04	HEAT INSULATION	1
16	0751K <b>0</b> 5	COVER	1
17	0753K03	BLOCK	1
18	<b>0751</b> EE-A	TIP VALVE	1
19	0753⊺03	BLOCK	1
20	! CIL <b>602</b>	NIPPLE	1
21	HETIV- I/HET2V-I	HEATING RING	1
22	JAW <b>09</b>	FILTER	1
23	KOIDL	MUFFLER	2
24	<b>7001</b> AK <b>13</b>	COVER FOR TANK	1
25	OP <b>9</b> V	<b>0</b> -RING	2
26	PUL <b>602</b>	CONNECTOR	1
27	(WI-1	BODY FOR (WI	1
28	@1-2	LID FOR <b>0001</b>	1
29	@ -3	SEAL FOR @1CAP	1
30	@1-4	FOR <b>0001</b>	1
31	T0 <b>0102</b> AO	CONNECTOR	1
32	TW <b>02</b> AO	CONNECTOR	1
33	UCBI <b>/4</b> @	COPPER TIJBE	1
34	0753K06	COVER FOR MUFFLER	1
35	EHF@	FOOT SWITCH	1

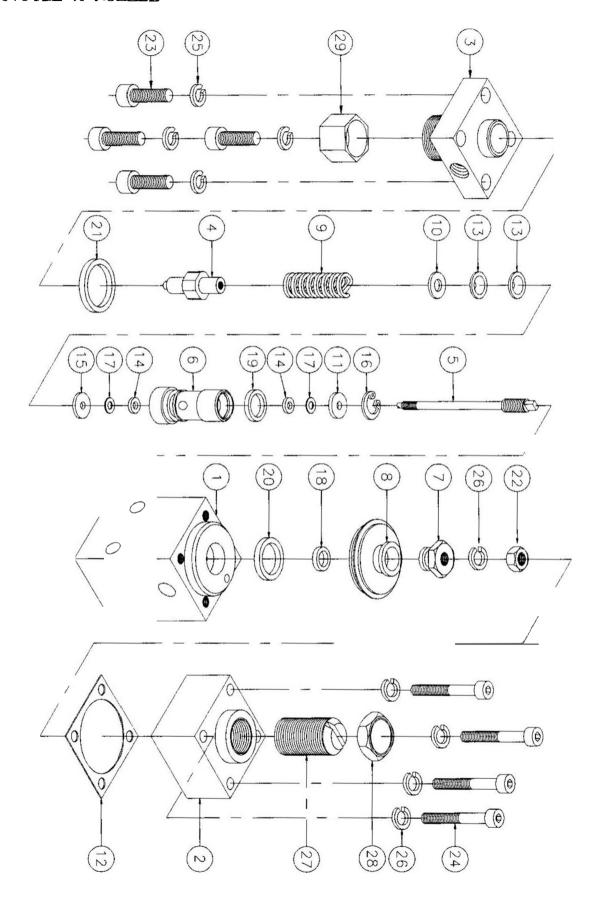




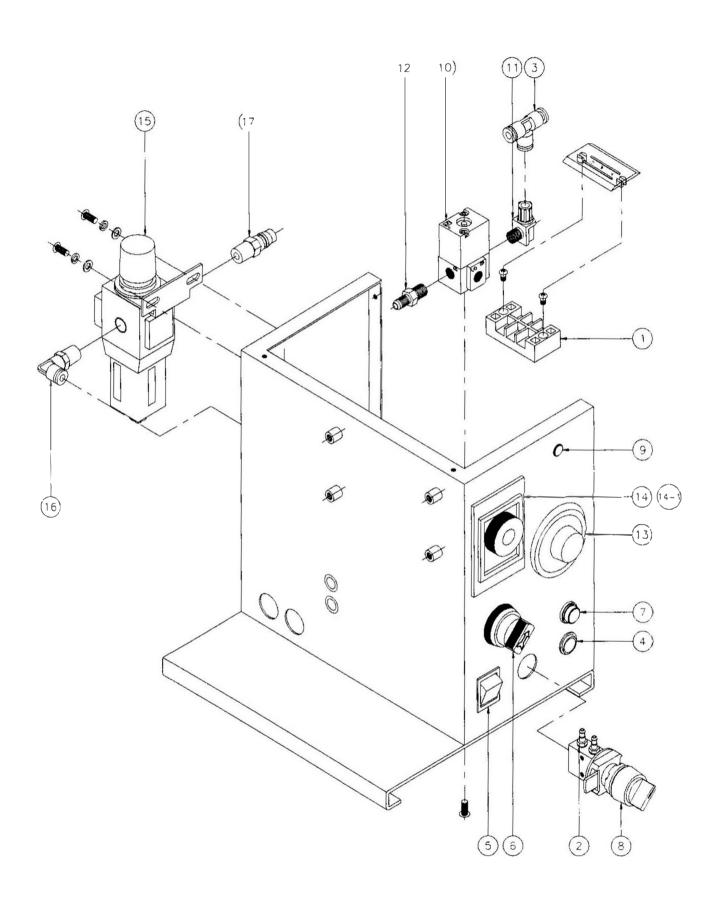


NO.	PART NO.	NAME	QTY.
	TI3	TEMP.SWITCH	I
2	HIVR	LAMP	1
3	EPOIR	POWER SWITCH	1
4	D07AO	PLUG	1
5	FA16	FUSE BASE SELECT	1
6	H3M5S2	SWITCH	1
7	1M2VM6	TIMER	1
8	EVIAIB	SELECT SWITCH	1

# 0751EE-A NOZZLE



NO.	PART NO.	NAME	QTY.
1	0751E01	BODY	1
2	1103E02-1	COVER	1
3	1103E03+	COVER	1
4	1103E05-1D	NEEDLE VALVE	1
5	1103E06	SHAFT	1
6	1103E04-1	VALVE	1
7	1103E07	NUT	1
8	1103E080910	PISTON WASHER	1
9	Q6.59.32608V	SPRING	1
10	1103E20	WASHER	1
11	1103E14	WASHER	1
12	1103E13	SEAL	1
13	1103E21	SEAL	2
14	1103E22	SEAL	1
15	1103E23	SEAL	1
16	C10B	C-TYPE SNAP	1
17	OP3V	O-RING	2
18	OP6V	O-RING	1
19	OP9V	O-RING	1
20	OP12V	O-RING	1
21	OP16V	O-RING	1
22	U05Z	NUT	1
23	SC051673B	SCREW	4
24	SC043073B	SCREW	4
25	W0512Z	SPRING WASHER	4
26	W0412Z	SPRING WASHER	4
27	1102E02-1U	SHAFT	1
28	1102E02-2U	NUT	1
29	SC1614	NUT	1
	I .		



T		
PART NO.	NAME	QTY.
B3P	TERMINAL BASE	1
C6M5	c'ONNECTOR	2
CTE6	CONNECTOR	1
D07BI	PLUG	1
EPOIR	POWER SWITCH	1
EVIAIB	SELECT SWITCH	1
FA16	FUSE BASE	1
H3M5S2	SELECT SWITCH	1
HIVR	LAMP	1
NIV3MIN(IIOV)	SOLENOID VALVE	1
N2V3MIN(220V)	SOLENOID VALVE	1
PUL601	CONNECTOR	1
TD0102AO	HYDRULIC CONNECTOR	1
TI3	TRMP. SWITCH	1
TM1V6S(110V)	TIMER	1
TM2V6S(220V)	TIMER	1
JAW09	FILTER	1
CTL602	C'ONNECTOR	1
1W02AO	QUICK CONNECTOR	1
	B3P C6M5 CTE6 D07BI EPOIR EVIAIB FA16 H3M5S2 HIVR NIV3MIN(IIOV) N2V3MIN(220V) PUL601 TD0102AO TI3 TM1V6S(110V) TM2V6S(220V) JAW09 CTL602	B3P TERMINAL BASE  C6M5 C'ONNECTOR  CTE6 CONNECTOR  D07BI PLUG  EPOIR POWER SWITCH  EVIAIB SELECT SWITCH  FA16 FUSE BASE  H3M5S2 SELECT SWITCH  HIVR LAMP  NIV3MIN(IIOV) SOLENOID VALVE  N2V3MIN(220V) SOLENOID VALVE  PUL601 CONNECTOR  TD0102AO HYDRULIC CONNECTOR  TM13 TRMP. SWITCH  TM1V6S(110V) TIMER  TM2V6S(220V) TIMER  JAW09 FILTER  CTL602 C'ONNECTOR