

Bituminous Adhesive Applicator

User Manual



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DESCRIPTION

The HotMelt Adhesive Applicator is designed to enable Bituminous Adhesive to be used in the installation of Reflective Raised Pavement Markers.

The unit is comprised of three main elements; the chassis, the kettle and the heater control system. The unit is propelled by hand.

The chassis is constructed generally of RHS steel members welded together to form a carrying frame for the other main elements.

The Kettle is constructed of high grade welded aluminum plate and insulated by ceramic fibre insulation and a plain galvanized iron outer shell.

This unit incorporates a manual agitator which provides even heat distribution and a pre-melt tray.

The heater is a stainless AGA approved burner gas distribution system using LPG drawn from an appropriate AGA approved in date gas cylinder where provided, mounted on the chassis.

Burner control is achieved via the use of a thermocouple combined with an AGA approved manually adjusted thermostat control regulating the temperature displayed by the inbuilt thermometer.

The running gear consists of three pneumatic wheels mounted on integral bearings.

The bituminous adhesive is dispensed through a treacle gate spring loaded swash plate valve strategically placed for ease of operation.

SAFETY INSTRUCTIONS

General

All current OH&S instructions must still apply. these instructions are designed to enhance and not replace any existing safety instructions.

PPE

PPE should be worn at all times when the applicator is switched on or still in a "Hot" state. A dry chemical, Carbon Dioxide (Co2) or foam fire extinguisher should be kept close at hand at all times.

Recommended PPE should consist of:

- a) Safety Goggles
- b) Gloves (leather)
- c) Coveralls
- d) Safety Boots
- e) Safety Jacket

Pre-Ignition

A safety check of all equipment should be conducted prior to ignition of the unit.

All gas connections and valves should be checked for leaks and only LPG is to be used.

DO NOT

- Do not change any gas components on this unit unless they are AGA approved and fitted by a qualified Gas fitter.
- All Gas components used on this unit are AGA approved including the valves and hoses.
- Do not transport adhesive applicator while unit is alight. This is an extremely dangerous and unsafe practice.

INSTRUCTIONS FOR FILLING VAT

Use bituminous Adhesive only. Do not use any rubber based material in vat.

When adding adhesive blocks into a hot vat, the lid must be raised slowly and the block placed on the pre melt tray, not dropped in.

Place enough blocks of adhesive to $\frac{1}{4}$ fill vat. While melting stir occasionally until all has melted. **(Do not force the agitator crank)**. Continue to add adhesive 1 block at a time until vat is half full and maintain that level for best results.

Maintain the temperature at 205 – 230 Degrees C by the use of the thermostat control settings and the inbuilt thermometer indicator.

LIGHTING INSTRUCTIONS

1. Turn on the Gas Bottle and open the $\frac{1}{4}$ turn safety valve at the bottle regulator.
2. Set the knob on the thermostat to the pilot position and depress knob for about 30 seconds while igniting with the Piezo or electronic igniter button if fitted. Check that the pilot stays permanently alight after releasing the knob via the pilot inspection aperture.
3. Turn the Thermostat knob to the maximum temperature position until the adhesive has all melted and the thermometer displays 210 Deg.C
4. Turn the knob back towards the pilot position until you hear or see that the burner flame cuts out.
This position should be adjusted, monitored and recorded as the setting for the set temperature to be maintained.

METHOD OF OPERATION

The applicator is lit and the thermostat is adjusted to the appropriate temperature for the adhesive. The adhesive will reach operating temperature in approx. 30 – 45 min depending on the ambient temperature and the amount of adhesive in vat.

The adhesive is dispensed onto the road surface by positioning the outlet valve over the installation point and opening the valve slowly to allow a sufficient amount of flow out. The operator will become more familiar with the operation of the valve with experience.

The marker is then placed onto the adhesive within 30 seconds to have maximum adhesion.

Do not allow melted adhesive to come in direct contact with any part of the body as severe burning may occur.

TURNING THE APPLICATOR OFF

1. Turn thermostat control knob and depress to the **OFF** position.
2. Turn off the Emergency Shut Off Valve at Bottle Regulator.
3. Turn off Gas Bottle.

RC-1 ADHESIVE APPLICATOR ROUTINE MAINTENANCE

Daily

1. Check hose and fitting for gas leaks prior to start up procedure.
2. Check Gas bottle is secure
3. Make sure inspection cover is in place and Melt pot lid is closed while heating and during operation.
4. Make sure wheels & tyre are inflated and in good working condition.
5. Try to leave Bitumen level in pot, low at end of day for quick heat time at start up.

Monthly

1. Complete daily checks.
2. Make sure all gauges and gas equipment are functioning correctly.
3. Scrape down the walls on the inside of melting pot to ensure no crusting prevents heat transference.
4. Check the outlet Valve is not leaking due to adhesive build up around pressure plate spring.
5. Make sure all warning markings are visible.

6-12 Months

1. Have a gas fitter check all components and fittings are safe and functioning correctly.
2. Check the Gas control valve, Thermocouple, pilot assembly and thermometer are clean and operating correctly.

RC-1 ADHESIVE APPLICATOR TECHNICAL DATA SHEET

Dimensions	650mm W x 1400mm L x 930mm H to top of Handle
Weight	No Gas Bottle 62Kg.
Kettle Capacity	40 - 45Kg Adhesive
Kettle	Air Jacketed / Insulated-Aluminum / Galvanised Steel Outer
Frame	Power Coated Tubular Steel
Wheels	Front: 200 x 50mm Pneumatic Rear: 200 x 50mm Semi Pneumatic Puncture Proof x 2
Fuel	LPG. Regulated to 2.8 KPA 3.5 kg/hr
Gas Bottle	LPG. 9 Kg POL Fitting
Heating	LPG. 28 MJ S/S Burner
Temp. Control	Thermostat Control set to 210 Deg C
Ignition	Electronic Push Button AA Battery
Agitation	Manually controlled by Level / Handle
Outlet	1.1/2" Cast Steel Faucet. Lever operated