



Anderson Thermal Solutions (Suzhou) Co., LTD

FHA97 Gas Injector Operation Manual

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This manual has been written for those who are already familiar with all aspects of nozzle mix burner and its add-on components. Main contents of the manual including safety rules, burner installation, commissioning, operation parameters, maintenance and troubleshooting, spare parts, etc.

1. Disclaimer Notice

Anderson Thermal Solutions (Suzhou) Co., Ltd. reserves the right to change the construction and/or configuration of our product at any time without informing customers.

If the product or its individual modules are used for purposes other than the designated purpose, their effectiveness and suitability must be confirmed.

Anderson warrants that the product itself will not infringe any patents. Every effort has been made to make this manual as accurate and complete as possible. If you find errors or omissions, please contact us so we can correct them.

2. Liability And Warranty

Due to negligence, breach of warranty or other reasons, Anderson's liability for its products is limited to the provision of such replacement parts and will not be liable for any other injury, loss or expense, whether direct or indirect, including but not limited to Loss of or damage to the use of materials that sell, install, use, fail to use or repair or replace Anderson related products.

The warranty is void if: any operation explicitly prohibited in this manual, any adjustment or assembly process not recommended or authorized.

3. Safety Guide

Only those who were trained and qualified person can follow the manual to operate or adjust the combustion system. The fire was prohibited within a radius of 5 meters of the combustion system. Flame, non-covered light sources or heat sources shall not be brought to the combustion area unless it is related to the process. Welding in combustion control area shall be approved to ensure the safety in the area and also preventive measures should be taken into consideration.



Before starting, the operator must confirm whether the burner and gas pipeline are in normal working condition, and there is no flammable substance around the burner. The burner must be operated with fuel and oxygen or air. The ignition and operation of the burner must be performed at the specified position. The burner has been correctly and safely installed before ignition. The ignition of the burner needs to be performed after the combustion chamber is purged. If it is ignited at a low temperature, it needs to be replaced with 5 times the volume of the combustion chamber to avoid explosion.

However, it is not necessary to purge when the temperature is higher than 750°C. Air pipe or gas pipe connected with burner should be tight enough with no leakage, also the periodically check air or fuel nozzles of the burners to prevent to be blocked by dust, slag or other materials.

ATTENTION: DANGER OF BEEN BURNT

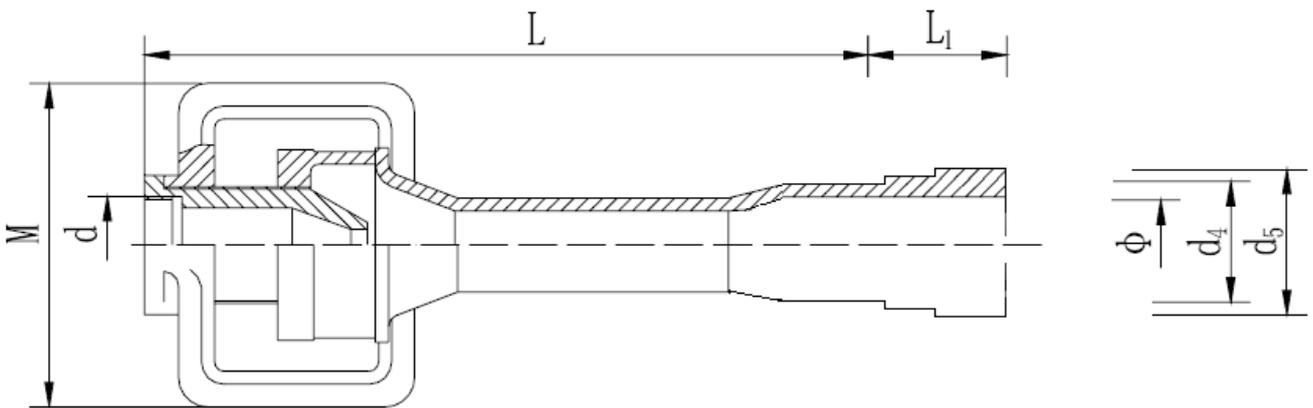


When burner in operation, combustion is severe, so the burner must be fixed. Hoses or cables in area of the combustion system must be suitable for high temperature, to prevent high temperature failure or cause safety accidents. Burners should be periodically inspected and cleaned. Copper wire brush may be used, if necessary, to clean burner head. The burner system should be checked twice a year for safety operation.

Burner commissioning shall take care of ignition position, minimum and maximum output position. Following interlocks will cause emergency stop, including gas low pressure, high pressure or low combustion air pressure, as well as emergency stop is trigged, the main power is out, UV signal failure or kiln safety conditions (such as high temperature limit, flue system opening, etc.) will cause the burner lockout. Users need to know the maintenance interval recommended by the manufacturer and the interval specified by national laws, whichever is shorter.

4. Brief introduction

The FHA97 Series Gas Injector is the product of Anderson Thermal Energy Technology (Suzhou) Co., Ltd. The FHA97 Series Air-Gas ignition burner is made of steel for combustion systems with an operating temperature not above 800 ° C. This burner is designed without spark plugs and to be ignited by external flame.



Burner type	M(mm)	L(mm)	L1(mm)	Gas Inlet(d)	Nozzle Φ(mm)
97G50	125	360	50	Rc1/2"	22

Figure 1: FHA97 Series air burner

4.1 Burner Data

Burner type	Input KW	Burner OD (mm)	Burner length(mm)	Gas Flow (Nm ³ /h)		Gas Pressure (mbar)	
				min	max	min	max
97G50	10-50	38	300-600	1	5	0.1	1

Fuel	Natural gas
Lower Calorific value	$H_U=35,900$ [kJ/m ³]
Composition	>98% CH ₄
Reference conditions	1,013.25 mbar, 0°C

4.2 Burner Adjust

The air-fuel ratio is adjusted by the air shutter.

- Open the air shutter, the opening can be larger. Open the natural gas ball valve at the inlet of the injector;
- The burner is ignited with an external flame, which can be ignited towards the injector nozzle when required;
- Adjust the opening of the ball valve to achieve the appropriate natural gas flow;
- Depending on the flame color, turn the air shutter open or close to fine-tune the flame.

5. Burner maintenance

This burners requires very little maintenance. Just check the flame color, make sure there is enough air for combustion.

6. Spare part

For normal use and regular maintenance of the burner, we recommend preparing the following parts:
None

If you have any questions. Please call us or send an e-mail to get more information

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Meanwhile, you can also visit our website www.andtecs.com to get more product information.