

GAS VALVE (HONEYWELL)

IMPORTANT NOTE
THESE INSTRUCTIONS SUPERCEDE
THE GAS VALVE SETTING PROCEDURE CONTAINED
WITHIN THE ORIGINAL APPLIANCE LITERATURE.

MODEL

Ecosy SB 28E

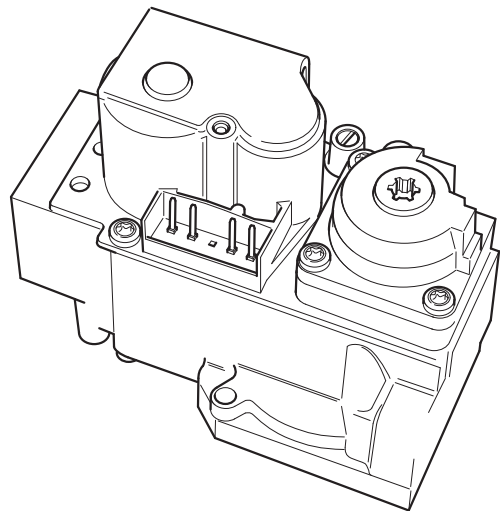
Ecosy 28E

KIT Pt. No. 05632900

incl.

1 off "O" ring

4 off screws

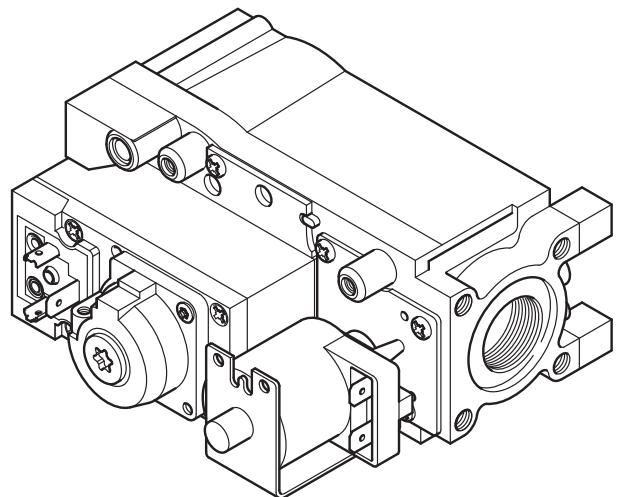


MODEL

Ecosy 24E

Ecosy SB 24E

KIT Pt. No. 05617100



Requirements

It is the Law that any replacement of parts is carried out by a competent person approved at the time by the Health and Safety Executive.

Before commencing with the replacement of a part the boiler should be isolated from the electrical supply and the gas supply should be turned off at the gas isolation valve. When replacing a part, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Saunier Duval.

After electrical connections have been made, checks to the earth continuity, polarity, short circuit and resistance to earth must be repeated using a suitable multimeter. Unless stated otherwise, parts are replaced in the reverse order to their removal.

After replacing these parts you **MUST** always test for gas soundness and carry out functional test of the controls and check the following:

General Inspection

After the replacement of a part, the following must be checked.

- The integrity of the flue system and flue seals.
 - The integrity of the appliance combustion circuit and relevant seals.
 - Electrical, gas and water connections.
 - System pressure.
 - the combustion performance, operational gas inlet pressure and gas rates.
- refer to the following procedure.

ALL MODELS

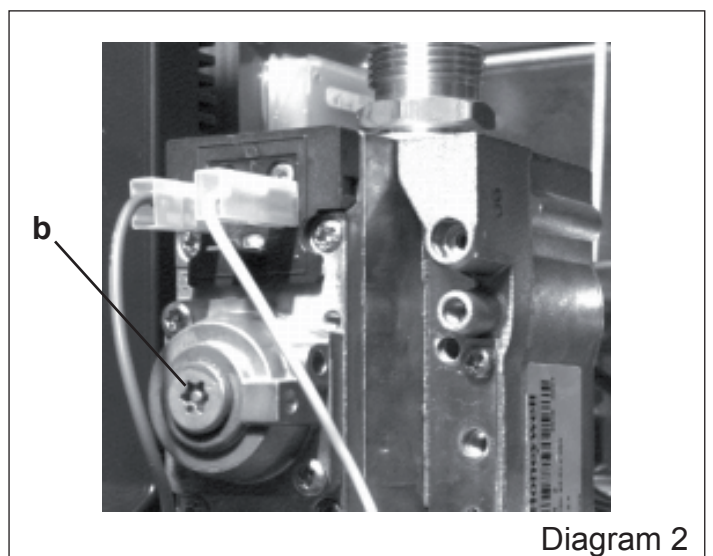
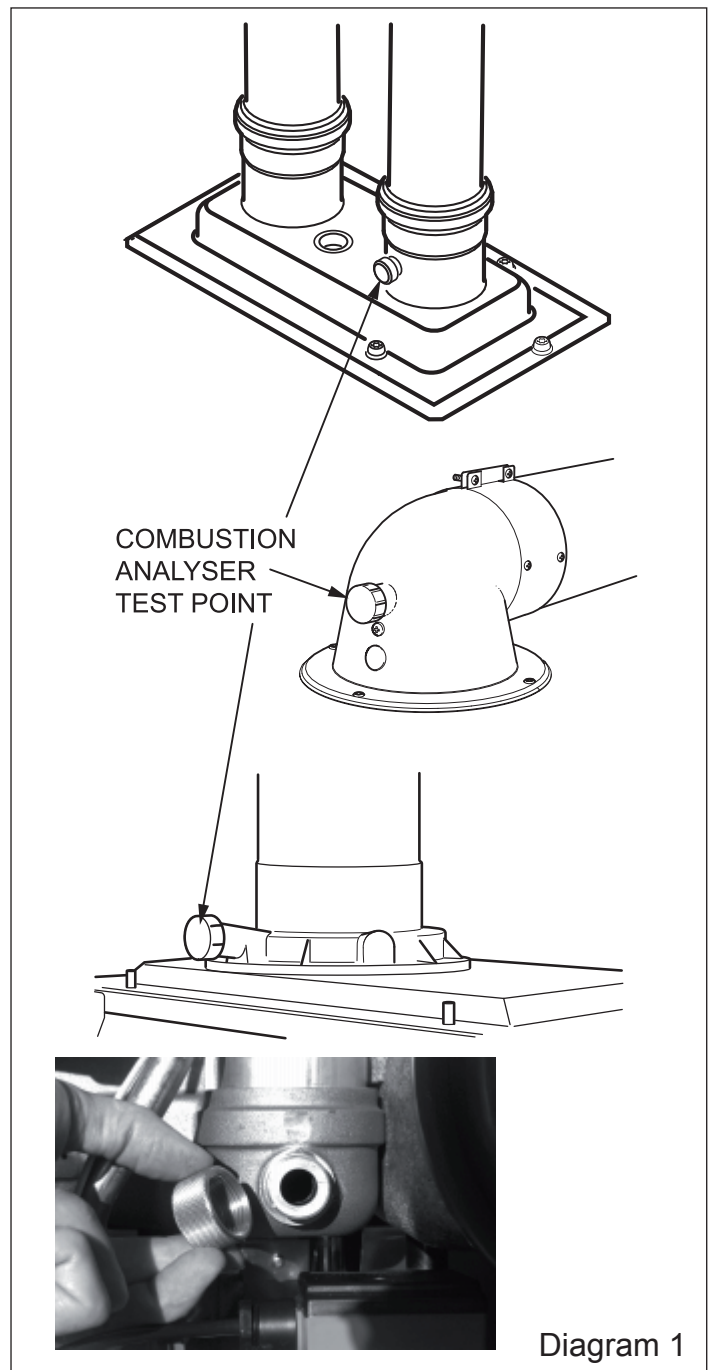
Refer to the installation and servicing instructions supplied with your boiler to fit the replacement gas valve.

After assembly, test for gas soundness and purge in accordance with the current issue of BS6891 or in IE, the current edition of I.S.813 "Domestic Gas Installations".

COMPETENCY TO CARRY OUT THE CHECK OF COMBUSTION PERFORMANCE

NOTE: BS 6798: 2009 Specification for installation and maintenance of gas-fired boilers of rated input not exceeding 70kW net advises that:

- The person carrying out a combustion measurement must be assessed as competent in the use of a flue gas analyser and the interpretation of the results.
- The flue gas analyser used should be one meeting the requirements of BS7927 or BS-EN50379-3 and be calibrated in accordance with the analyser manufacturers' requirements.
- Competence can be demonstrated by satisfactory completion of the CPA1 ACS assessment, which covers the use of electronic portable combustion gas analysers in accordance with BS 7967, parts 1 to 4.
- Ensure that the gas analyser is set to the correct fuel setting.



LPG MODELS - ONLY

Please refer to the specific instruction relating to your model and check/adjust the CO₂ value, refer to table overleaf.

Gas valve setting

All gas valves are tested and factory set during manufacture.

It should not be necessary to adjust the gas valve.

NOTE: Safe combustion can only be verified by measuring CO/CO₂ ratio. This must not exceed the value shown in the table overleaf.

- Shut down boiler.
- Connect a CO₂ analyser to the combustion test point.
- Start the boiler.
- Press the «Mode» and «-» buttons simultaneously, the letter “L” is displayed and the boiler is now running at low gas flow rate. Allow the boiler to run for a few minutes to stabilise, refer to the CO₂ setting table and check that the CO₂ value is to specification, if adjustment is required, proceed as follows.

NOTE: The adjustment should be made in 1/8 of a turn increments, waiting 1 minute to allow the appliance to stabilise.

- To adjust the CO₂, remove protective cap (b) from the gas valve. Carefully turn the gas valve adjuster until the correct CO₂ value is obtained according to table minimum column.
- Press the «Mode» and «+» buttons simultaneously the letter H is displayed and the boiler is now running at high gas flow rate.
- Allow the boiler to run for a few minutes to stabilise and check the CO₂, refer to the CO₂ setting table and check that the CO₂ value is to specification.
- Check the CO/CO₂ combustion ratio does not exceed the value in the table overleaf.

If the CO₂ or CO/CO₂ combustion ratio are not as specified please refer to the “Completion” paragraph of these instructions.

Check the Gas Inlet Pressure and Gas Rate

On completion, test the gas installation for tightness using the pressure drop method and suitable leak detection fluid, purge in accordance with the above standard.

NOTE: Due to the modulating operation of the boiler and the need to check the gas inlet pressure and measure the gas rate at maximum rate, it will be necessary to force it to maximum.

Operational Gas Inlet Pressure

With ALL other gas appliances operating, check the operational supply pressure at the gas service isolation valve test point, refer to your Installation literature supplied with your appliance.

The nominal supply pressure for Natural Gas (G20) is 20mbar.

Turn the taps and appliances off, then disconnect the pressure gauge.

Additionally the safe nominal maximum heat input of the appliance can be achieved at an inlet pressure down to 15mbar.

NOTE: The BURNER PRESSURE cannot be measured and is not used to measure the gas rate.

Gas Rate

Make sure that ALL other gas burning appliances and pilot lights are off.

NOTE: Press the «Mode» and «+» buttons simultaneously the letter “H” is displayed and the boiler is now running at high gas flow rate.

Allow the boiler to run for a few minutes to stabilise and check the CO₂.

Check the gas rate using the gas meter test dial and stop watch, at least 10 minutes after the burner has lit, see table below for approximate rates.

In communal or LPG installations where the gas rate cannot be measured it is acceptable to measure the combustion rate as described in the servicing section. On completion, reset the boiler to normal operation by referring to the Installation and Servicing Instructions.

Completion

If it is not possible to achieve the required results for either the combustion or gas rates, it will be necessary to complete a full service of the appliance and then repeat the combustion check procedure. If after servicing and adjustment of the appliance the combustion values are still unacceptable and after further remedial work has been carried out, the appliance must be disconnected until the CO/CO₂ ratio is acceptable. Advice can be sought from the Saunier Duval Technical Helpline 01773 828400.



Models	SETTING - OUTPUT Nat. Gas G20 - Case Off	SETTING - OUTPUT Nat. Gas G20 - Case On	MAX. CO/CO2	GAS RATES Nat. Gas G20
OUTPUT	MIN. 8.3 kW MAX. 28.0kW	MIN. 8.3 kW MAX. 28.0kW	Ratio	MAXIMUM
Ecosy SB 28E	9.0 - 9.4%CO2	9.2 - 9.6%CO2	0.004	3.0 m3/h
Ecosy 28E	9.0 - 9.4%CO2	9.2 - 9.6%CO2	0.004	3.0 m3/h
OUTPUT	MIN. 6.8 kW MAX. 24.5kW	MIN. 8.3 kW MAX. 28.0kW	Ratio	MAXIMUM
Ecosy SB 24E	9.0 - 9.4%CO2	9.2 - 9.6%CO2	0.004	2.6 m3/h
Ecosy 24E	9.0 - 9.4%CO2	9.2 - 9.6%CO2	0.004	2.6 m3/h

Models	SETTING - OUTPUT Nat. Gas G30 - Case Off	SETTING - OUTPUT Nat. Gas G30 - Case On	MAX. CO/CO2
OUTPUT	MIN. 9.9 kW MAX. 20.4kW	MIN. 9.9 kW MAX. 20.4kW	Ratio
Ecosy SB 24E	10.0 - 10.3%CO2	10.3 - 10.6%CO2	0.004
Ecosy 24E	10.0 - 10.3%CO2	10.3 - 10.6%CO2	0.004

Models	SETTING - OUTPUT Nat. Gas G31 - Case Off	SETTING - OUTPUT Nat. Gas G31 - Case On	MAX. CO/CO2
OUTPUT	MIN. 11.4 kW MAX. 24.5kW	MIN. 11.4 kW MAX. 25.4kW	Ratio
Ecosy SB 24E	11.9 - 12.1%CO2	12.3 - 12.5%CO2	0.004
Ecosy 24E	11.9 - 12.1%CO2	12.3 - 12.5%CO2	0.004

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