BOSCH

Sink Gas Water Heaters

Models W 125..T1
Models W 125 K..T1

Model flued

FOR YOUR SAFETY

If you smell gas:

1. **Turn off gas cut-off tap**
2. **Open windows**
3. **Do not actuate any electric switches**
4. **Extinguish naked flames**
5. **Immediately contact gasworks**

Do not store use flammable materials or liquids near the unit.

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- THE UNIT MAY BE INSTALLED ONLY BY A LICENSED FITTER.
- Perfect functioning of the unit is guaranteed only by following this specification and the instruction manual.
- The customer shall be provided with these installation instructions.
- The fitter shall explain the function and operation of the unit to the customer.
- Regular maintenance is necessary for reliable and safe functioning of the unit. Maintenance may be carried out only by a licensed fitter.
- Install in accordance with AG601, AS/NZS3500.4.2, NZS5261 and all local building, water and gas fitting regulations.

6 720 601 437 PT 2000.10

1. Construction and connecting measurements

All measurements in millimetres

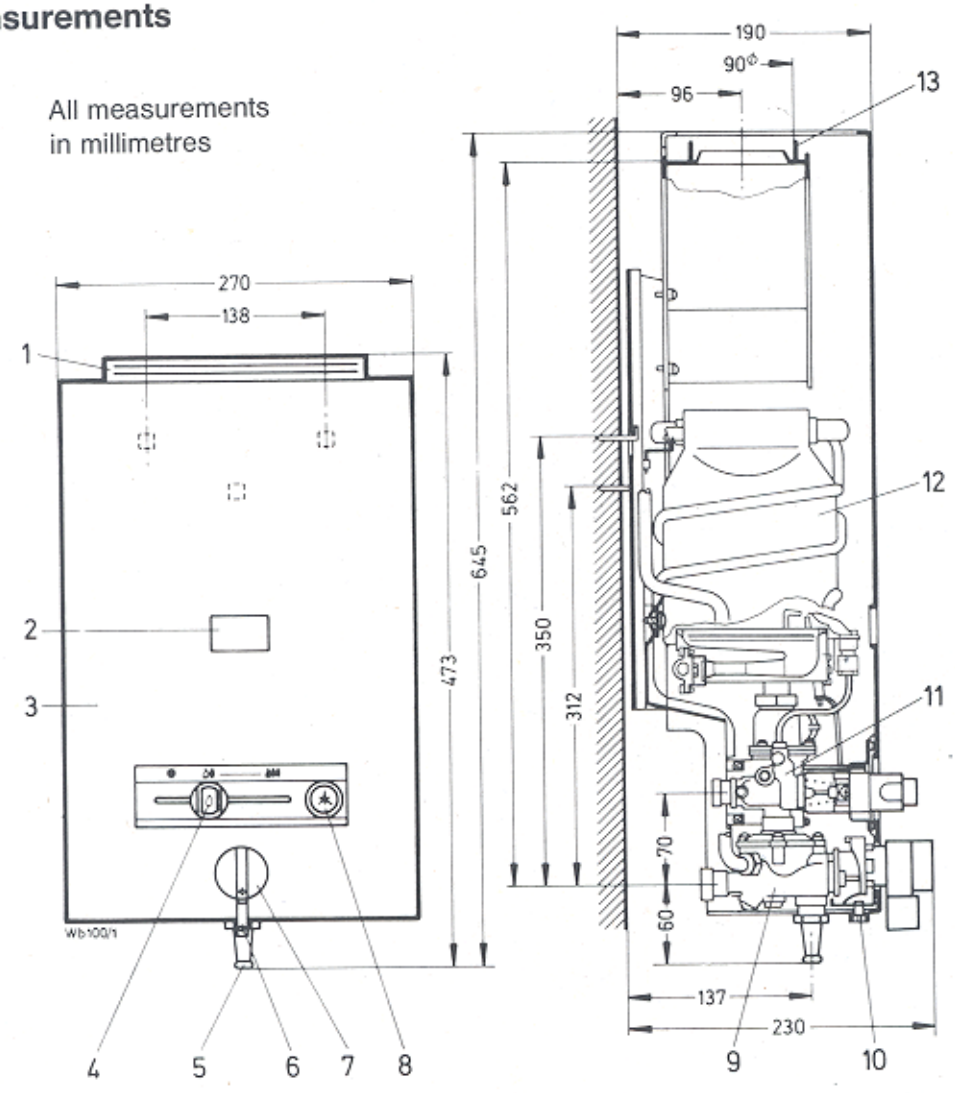


Fig. 1 left – Model W 125..T1, unflued
right – Model W 125 K..T1, flued

1 Flue gas deflector
2 Lighting aperture
3 Front shell
4 Pilot gas button
5 Water outlet nozzle
6 Draw-off valve lever
7 Water flow selector
8 Piezo ignitor (alternative)
9 Water valve assy.
10 Knurled screw
11 Gas valve assy.
12 Heating body
13 Draught diverter

With the gas control lide 23 at ◐, the output amounts to approx. 50 pct. of the rated output.

Rated pressure for LP-gas models is stated on performance badge, affixed to lower portion of inside of front shell.

The water pressures as stated are required directly ahead of the appliance with free outlet at water valve assy. 9 and draw-off valve lever 58 against right-hand stop.

With the aid of Conversion Set No. 89 – Ordering No. 7 709 000 242 – unflued Models W 125..T (with flue gas deflector 1) may be converted to flued Models W125 K..T1 (with draught diverter 13).

Leave a minimum clearance of 420 mm between top of draught divertor an ceiling.

2. Performance data

		W125..T1* W 125 K..T1*
Rated output	kW (MJ/h)	8,75 (31,3)
Rated input (based on gross c.v.)	kW (MJ/h)	10,8 (39)
Gas inlet pressures		
Town gas / grid gas or gas / air mixtures	mbar (kPa)	7,5 (0,75)
Natural gas	mbar (kPa)	11,1 (1,11)
LP gases	mbar (kPa)	27,5 (2,75)
Gas consumption (based on gross c.v. at 15°C / 60°F - 1013 mbar - dry		
Town gas / grid gas	-17,2 MJ/m³	2,5 m³/h
Natural gas / air	-21,0 MJ/m³	2,0 m³/h
LP gas / air	-26,1 MJ/m³	1,6 m³/h
Natural gas	-37,8 MJ/m³	1,1 m³/h
LP gas	-51,7 MJ/kg	0,8 kg/h
Water flow selector handle at left-hand stop		
Max. water flow	l/min.	5
Temperature rise	°C	30
Min. inlet water pressure	bar (kPa)	0,6 (60)
Water flow selector handle at right-hand stop		
Min. water flow	l/min.	2,3
Temperature rise	°C	55
Min. inlet water pressure	bar (metres w.g.)	0,18 (1,8)
	kPa (ft.w.g.)	18 (0,59)
Max. inlet water pressure	bar (kPa)	12 (1200)
Fluegas data		
Draught required	mbar	0,015
Fluegas load**	kg/h	23
Fluegas temperature**	°C (°F)	180

Main Burner injector Diameter		**Burner Testpilot Pressure** kPa	
NG	1.25	NG	0.80
LP Gas	0.79	LP Gas	2.24

with Throttle disc 3.3 ø

Index figure	Kind of fuel gas
11	Town gas and grid gas as well as butane/-, propane/-, and natural gas/ air mixtures
23	Natural gas
31	LP-gases (propane, butane)
32	LP-gases (propane)

*) The designation of the Models is supplemented by one of the following 2-digit index figures indicating for which kind of ful gas the appliance as supplied is factory-preset:

**) Behind draught-diverter with draught required and with nominal heat load.

3. Constructional details

3.1 Schematic representation of combination gas/water valve for natural gas direct draw-off types (Fig. 2.)

Legend for Figs. 2 and 3

14 Pilot gas pipe
16 Gas valve spring
17 Large poppet valve
18 Small poppet valve
19 Gross-ignition bolt
20 Main gas valve
21 Pilot gas valve stem
22 Pilot gas button
23 Gas control slide
24 Piezo igniter
25 Water strainer
26 Water valve (hot)
27 Water valve (cold)
28 Hot water connecting pipe
29 Cold water connecting pipe
30 Hot water outlet
31 Volumetric water governor
32 Selector screw with O-ring
33 Draw-off valve lever
34 Relief valve
35 Gas inlet
36 Sealing screw
37 Test point
38 Diaphragm
39 Venturi with O-ring
40 Slow-ignition valve with O-ring
41 Magnetic unit
42 Gas filter
43 Pilot gas valve
44 Pilot gas filter
45 Pilot adjustment (Towngas)
46 Gas setting screw with O-ring
47 Orifice pressure measuring point
49 Injector orifice
50 Main burner
51 Thermocouple
52 Sparking plug
53 Pilot burner
54 High-tension ignition lead
55 Combustion chamber

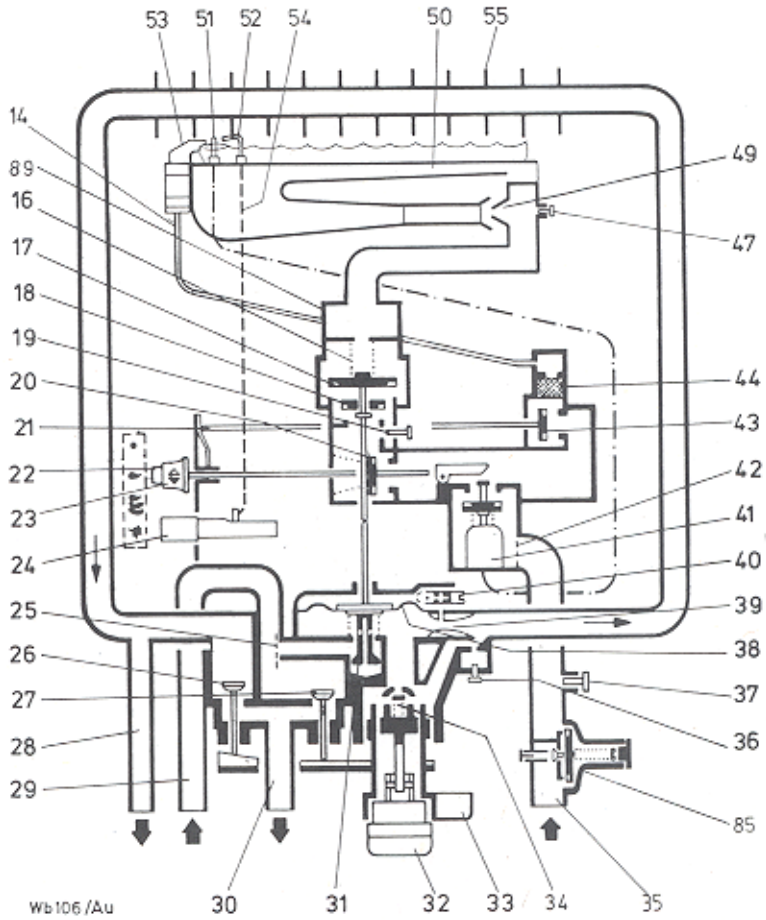


Fig. 2

3.2 Schematic representation of gas valve assy. for L.P.-gases (Fig. 3)

71 Main gas valve
72 Gas valve seat
73 Gas valve spring
75 Sealling screw
85 Pressure regulator
89 Adaptor
91 Main gas valve head
92 Main gas valve seat
93 Compression spring

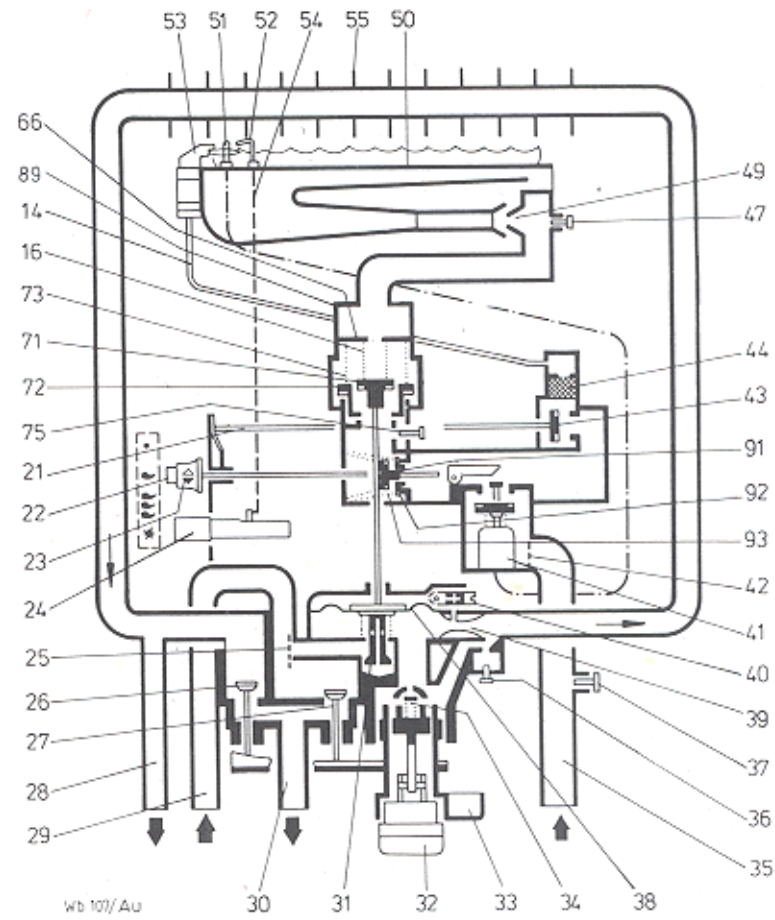


Fig. 3

4. Installation

Install in accordance with AG601, AS/NZS3500.4.2, NZS5261 and all local building, water and gas fitting regulations.

4.1 General remarks

Installation measurements to be taken from Fig. 1

Any local by-laws and regulation pertaining to installation and use of gas-heated apparatus must be strictly observed, particular in regard to flueing.

In order to prevent corrosion, make sure that the combustion air is kept free of aggressive substances. Substances that especially contribue to corrosion are halogenated hydrocarbons (e. g. chlorine and fluorine), which are contained in solvents, paint, adhesives, propellant gases, various household cleaners, etc. Take precautionary measures as necessary.

Front shell 3 to be removed: to this end, handless to be pulled off and knurled screw 10 to be undone first. Front shell is then swung to be front and lifted.

If plastic pipes are used, a 1,5 m metal connection must be provided on the cold and hot water sides.

4.2 Connections

Town gas / grid gas, gas/air mixtures, and natural gas	R ½ / 15 male
LP-gases	R ⅜ / 10 male
Cold water	R ½ / 15 male
Hot water	R ⅜ / 10 male
Flue pipe for draught diverter	90 mm. O. D.

4.3 Surface pipe fitting

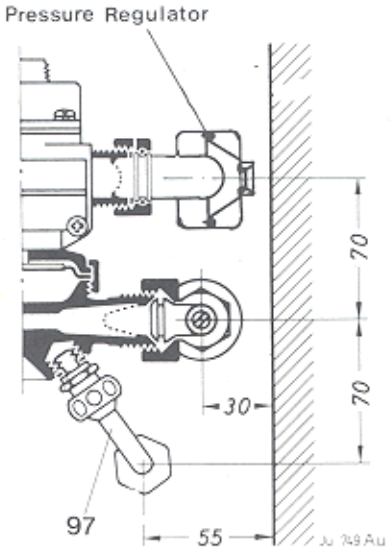


Fig. 4

Surface pipe fitting for town gas / grid gas, gas / air mixtures, and natural gas appliances: with R ½/15 angle-type gas cock, R ½/15 angle-type cold water shut-off valve, and R ⅜/10 hot water connector for distant draw-off points.

Gas connection for town gas / grid gas, gas/air mixtures and natural gas (Fig. 4)

R ½/15 angle-type gas cock to be screwed tight into the R ½/15 coupling of the gas supply pipe fitted sideways at 25 mm. Centre distance above the plaster of the wall. Pipe size to AGA Installation code AG 601.

Cold water (Fig. 4)

R ½/15 angle-type water shut-off valve is screwed tight, perpendicularly below the gas connection, into the cold water supply pipe fitted at a centre distance of 30 mm, off the plastered wall.

Refer to max. and minimum water pressure requiren, as listed on page 3.

Hot water (for distant draw-off points) (Fig. 4)

Sealing screw is replaced with reducing nipple 96; washer to be taken care off! Connecting pipe 97 is then fitted to heater and its free end, after removal of union nipple; bent to the left or to the right parallel to the wall.

LP-gases (Fig. 5)

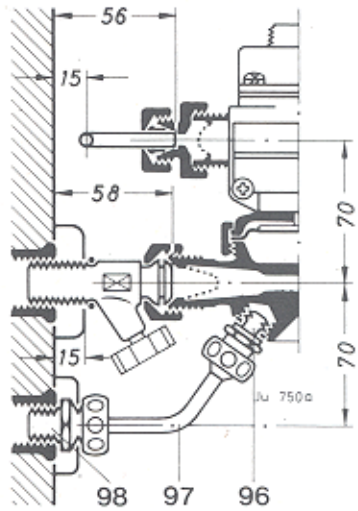


Fig. 5

Gas connection for LP-gas appliances; with (⅜"/10), and concealed pipe fitting for cold water with ½"/15 water shut-off valve; for distant hot water draw-off points with ⅜"/10 connector.

4.4 Connecting-up

Protective caps from gas and water inlets are removed, and connecting pipe 97 for remote hot water draw-off point is inserted. Gas supply connection to be tightened with washer, water supply connection has metallic seal which has to be greased first with compound HFt 1 **v. 5.**

4.5 Flue installation

If hot water requirements above normal kitchen needs are to be anticipated, then the heater must be provided with a draught diverter and flued.

Flue pipe of 90 mm. O.D. to be gas-tight; its vertical portion should be as long, and the horizontal runs as short as possible, the latter having a slight pitch toward the chimney.

Flue pipe installation to meet local requirements.

4.6 Fixing heater on wall

Fix the two wall hooks provided securely to the wall (see fig. 1) than hang heater on hooks by the two slots in the rear of the heater back plate.

4.7 Leakage test

Upon completion of the installation all gas and water connections to be leakagetested. There must be no escape of flue gases at draught diverter or at the flue pipe joints; dew plate to be applied.

The front shell is then replaced and the handles pushed on again.

5. Commissioning and operation

Gas shut-off cock turned on first; then water flow selector handle 7 to be turned to the left against stop and all draw-off points turned on for a short period of time to allow all air to escape from the water pipes and from the heater itself.

Operating Instructions

Commissioning

Depress button fully, and keep depressed

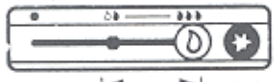
After a few seconds, depress ignitor button

Release button after 10 seconds

If pilot flame ist not alight then, repeat igniton procedure.

Operation

Move slide against stop



Low flame ⟷ High flame

Drawing water at appliance

To the left: cold water

To the right: hot water

Temperature control

Turn anti-clockwise: more water – warm

Turn clockwise: less water – hot

Shutting-off

Move slide against stop

6. Setting the gas rate

6.1 Checking the **Gas inlet flowing pressure**

6.1.1 Sealing screw "A" to be undone and U-tube pressure gauge to be connected.

6.1.2 Gas shut-off cock to be turned on and heater to be started in accordance with Operating Instructions.

6.1.3 Gas inlet flowing pressures required:
Town gas: 0.75 kPa
Natural gas: 1.13 kPa
LP Gas: 2.7 kPa

6.1.4 Gas shut-off cock to be turned off and sealing screw "A" turned in tight again.

6.2 Heater to be started in accordance with Operating Instructions; output slide must be at right-hand stop.

6.2.1 Sealing cap above setting screw "E" is then removed; gas rate according to burner pressure as per Table page 3. Then to be set by adjusting screw in pressure regulator.

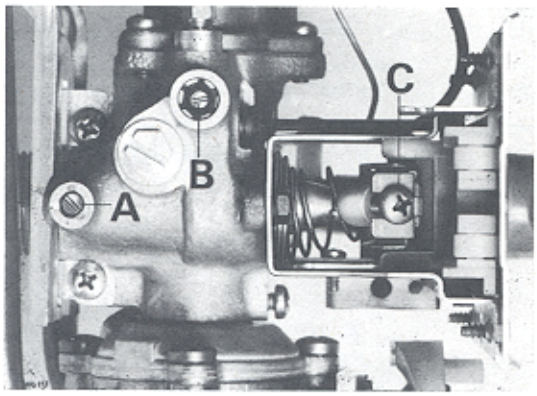


Fig. 6

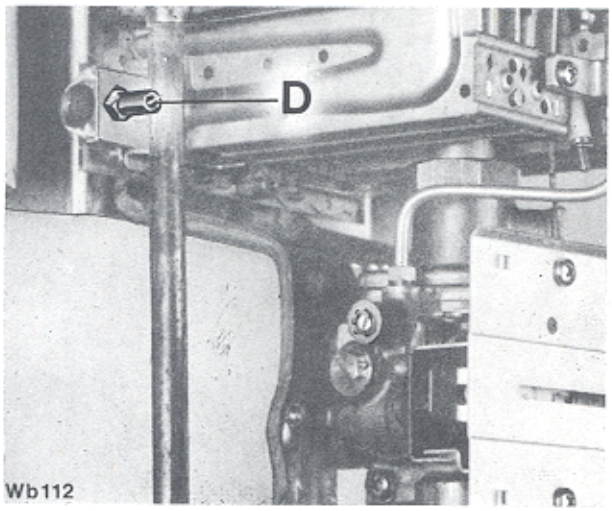


Fig. 7

6.3 **Setting by way of the rise in water temperature**
New or freshly descaled and cleaned heaters may be set by the rise in water outlet temperature.

6.3.1 Heater to be started, output slide and water flow selector brought to right-hand stop, and sealing cap removed.

6.3.2 Cold water inlet temperature is then measured and the gas rate set so that a temperature rise of 55° C results.

6.3.3 Sealing cap to be replaced and lead-sealed.

6.4 **Setting the pilot flame**
The pilot orifice is rated to suit the pertinent fuel gas. Applicances for town gas or LP-gas/air mixtures are provided with a throttling screw "B" (Fig. 7). On town gas appliances and with gas inlet pressures below 0.8 kPa, throttling screw "B" to be turned in anti-clock-wise direction for opening.

6.5 **LP-gas appliances**
Factory-set to rated output and lead-sealed. Pressure stated on performance badge may be checked at measuring point 47.

7. Conversion to other fuel gases

From town gas to **natural gas.**

1. Gas shut-off is turned off and front shell removed.
2. Injector orifice 45 screwed out.
3. Deflector to be unscrewed from pilot burner 53 and pilot orifice to be exchanged.
4. Cross-ignition bolt 19 to be exchanged.
5. Setting of gas rate as per Sec. 6. Reduded output setting to be corrected at setting screw "C" while output slide is in lighting position. For gas rates, see Setting Table, Sec. 9 (p. 8).
6. New kind of fuel gas to be noted on performance badge, or stick-on label supplied with conversion kit to be applied.

   For conversion to LP-Gases or from LP-Gases to other fuel gases suitable conversion sets are available upon request.

8. Maintenance and servicing

After 12 to 24 months of service, depending on frequency of use and hardness of water on the district, the heater should be looked over, thoroughly cleaned and descaled, and repaired if necessary.
The following operations will most likely have to be carried out by the serviceman. –

Pilot flame
If, in the course of the ignition procedure, the pilot flame goes out upon release of the button marked, this may be due to insufficient contact at the thermocouple leas connections. Threaded bushings at magnetic unit 41 and at main burner should be tightened. If necessary, new magnetic unit to be fitted. To this end the gas shut-off cock ahead of the heater has to be turned off.
The pilot flame must fully surround the thermocouple approx. 5 mm belof its tip.
If the pilot flame burns too small, then pilot burner 53 or pilot gas throttle 45 will have to be cleaned.

Main burner flames
If the draw-off valve lever 6 is swung to the right, or if – with water flow selector handle at right-hand stop – a distant hot water draw-off point is turned on, then the main burner flames must develop fully within 3 to 5 seconds.
If this draw-off points is turned off, or the draw-off valve lever turned down to perpendicular position, then the flames must go out within approx. 1 sec., otherwise water strainer 25 and slow-ignition valve 40 have to be cleaned.
After the pilot flame has gone out, the magnetic unit must shut off the gas supply within 45 seconds.

Leakage test of main gas and pilot gas valves
Burning pilot flame to be blown out. Output slide to be shifted from OFF position ● to FULLY-ON position.
Draw-off valve lever to be swung to the right against stop, or a water draw-off point to be turned on. Simultanously main burner and pilot burner are flame-tested: There must be no cross-ignition.
Leakages at main or pilot burner must be remedied by clearing main gas valve 20 and/or pilot gas valve 43.

Insufficient rise in temperature
Output to be checked as per Sec. 6. Gas filter 42 and main burner to be cleaned, or relief valve 34 within selector screw 32 to be checked.

Water valves of direct-controlled types,
after removal of selector screw 32, to be pulled out with the aid of retaining bracket and cleaned if necessary.

Disassembly and re-assembly of water flow selector
Water shuth-off valve to be turned off, the heater drained, and the selector screw 32 removed. When re-assembling, care to be taken that the selector screw is at the left-hand-stop. Prior to restarting the heater has to be vented.

For greasing,
only special Junkers Compounds must be used.
Water valve assy.: Unisilkon L 641
Gas valve assy. incl. burner: HFt 1 v 5

Replacement and spare parts
These may be ordered from authorised sales and service agents or gas utilites.

9. Gas setting tables

Gas consumption and gross c. v. at 15°C/60°F, 1013 mbar, dry

Town gas, Groups Gas/air mixtures, index Fig. 11	MJ/m^3	16.0	17.2	18.5	19.8	21.0	22.3	23.9	26.1
	MJ/m^3	14.3	15.3	16.4	17.3	18.7	19.7	21.4	23.3
Gas rates for 100% output	litres/min.	44	41	38.5	36	34	32	29.5	27
	Cu. ft/min.	1.6	1.4	1.35	1.3	1.2	1.15	1.05	0.95
Natural gas, Index Fig. 23	MJ/m^3	31.9	33.6	35.3	37.0	38.7	39.9	41.6	43.3
	MJ/m^3	28.6	30.0	31.5	33.0	34.2	35.7	37.2	38.7
Gas rates for 100% output	litres/min.	22	21	20	19	18.5	17.5	17	16.5
	cu. ft/min.	0.8	0.75	0.7	0.65	0.65	0.6	0.6	0.6

Warranty Details

Your Bosch Hot Water Unit is guaranteed as follows:
For appliances used in domestic applications, ie. normal hot water drawn from household outlets, the warranty period is One (1) years parts and labour. Additionally, the heat exchanger is covered for a period of ten (10) years (parts only). For appliances used in commercial applications the warranty period is Six (6) months parts and labour including the heat exchanger.

The warranty period commences from the purchase date. Claims for warranty will only be accepted upon suitable proof of purchase submitted to Robert Bosch (Australia) Pty. Ltd. or an approved Bosch Service Agent authorised to carry out warranty repairs.

PURCHASER'S STATUTORY RIGHTS

The warranty terms set out below do not exclude any conditions or warranties which may be mandatory implied by law, and your attention is drawn to the provisions of the Trade Practices Act, 1974, and State legislation which confers certain rights upon consumers. The ROBERT BOSCH (AUSTRALIA) PTY. LTD. Warranty supplements these.

EXTRACT OF TERMS OF DELIVERY AND SALE:

Warranty of products marketed by Robert Bosch (Australia) Pty. Ltd. herein referred to as RBAU.

a) RBAU warrants products marketed by it as free from faults and defects and having the specified qualities according to the respective state of technology. Notwithstanding that the products may have been sold by description or sample the products shall be accepted by the Buyer even though alterations in design or construction have been generally introduced between the date of contract and the delivery of the products.

b) The warranty shall be limited to the replacement or repair at the option of RBAU of any defective products and of such parts of RBAU's products as have been damaged in consequence of the defect despite proper treatment. Parts replaced will not be returned.

c) i) Repairs and maintenance shall not extend the warranty period of the appliance.
   ii) If the product is located outside of the service agent's area, the consumer shall be responsible for the service agent's travelling costs, and if necessary the expenses of freight, packing and charges of a similar nature.

Without limiting the generality of these terms of delivery this warranty shall not apply to products sold in the following cases :—

i) if the products sold are repaired or altered by any third party without RBAU's consent.
ii) where parts not manufactured or sold by RBAU are used in and replacement or repair.
iii) if products are not used with proper care and for the purpose for which they are sold and in accordance with any specified instruction for use.
iv) if changes occur in the condition or operational qualities of the products due to incorrect storage or mounting or due to climatic or other influences.
v) in respect of faulty construction or defects due to the use of unsuitable materials if such method of construction or use of material has been specified by the Buyer.
vi) in respect of surface coating and glass damage.
vii) in respect of the replacement of parts when such replacements are part of the normal maintenance, service or normal wear and tear.

No servant or authorised service agent has authority to add to or alter the terms of this warranty.

PLEASE NOTE:- If a service call is requested and it is found that it is not a manufacturing fault, you may be charged for the call even during the warranty period.

ROBERT BOSCH (AUSTRALIA) PTY LTD
(Incorporated in Victoria) Phone 1300 30 70 37

Victoria	Cnr. Centre Road & McNaughton Roads, Clayton, Vic. 3168 Ph: 03 9541 5555
New South Wales	Unit 11, 148-300 James Ruse Drive, Rosehill, NSW. 2142 Ph: 02 9891 4388
South Australia	128 Main North Road, Prospect, SA, 5082 Ph: 08 8344 6888
Queensland	36 Turbo Drive, Coorparoo, Qld. 4151 Ph: 03 3891 1855
Western Australia	150 Abernethy Road, Belmont, W.A. 6104 Ph: 08 9479 1166
New Zealand	14 - 16 Constellations Drive, Mairangi Bay, Auckland. N.Z. Ph: 09 478 6158