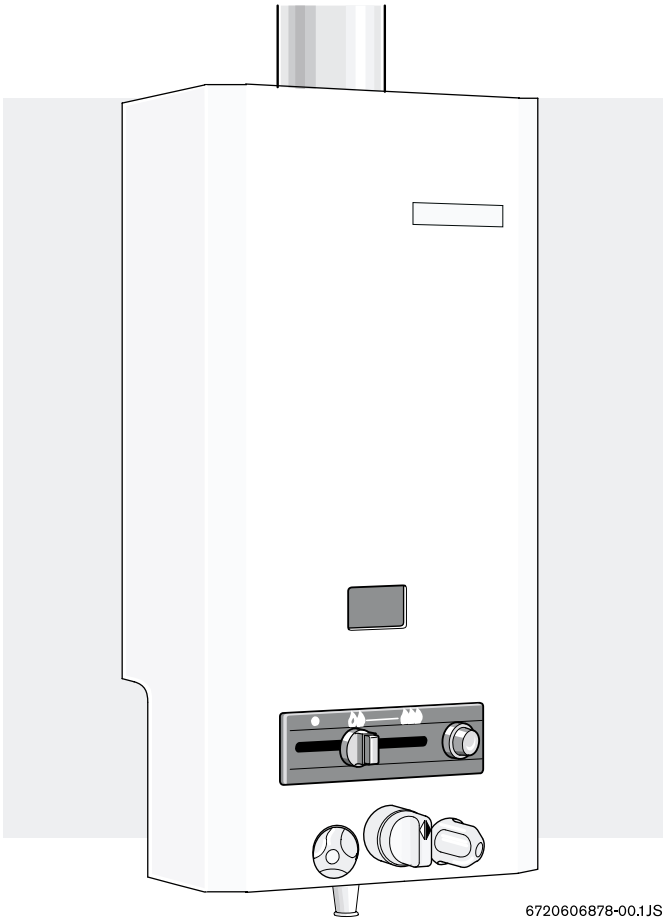
BOSCH

Sink Gas Water Heaters

Models W 125 K...



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FOR YOUR SAFETY

If you smell gas:

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

Do not store or 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 AS5601, AS/NZS3500.4.2, NZS5261 and all local building, water and gas fitting regulations.

1. Construction and connecting measurements

All measurements in millimetres

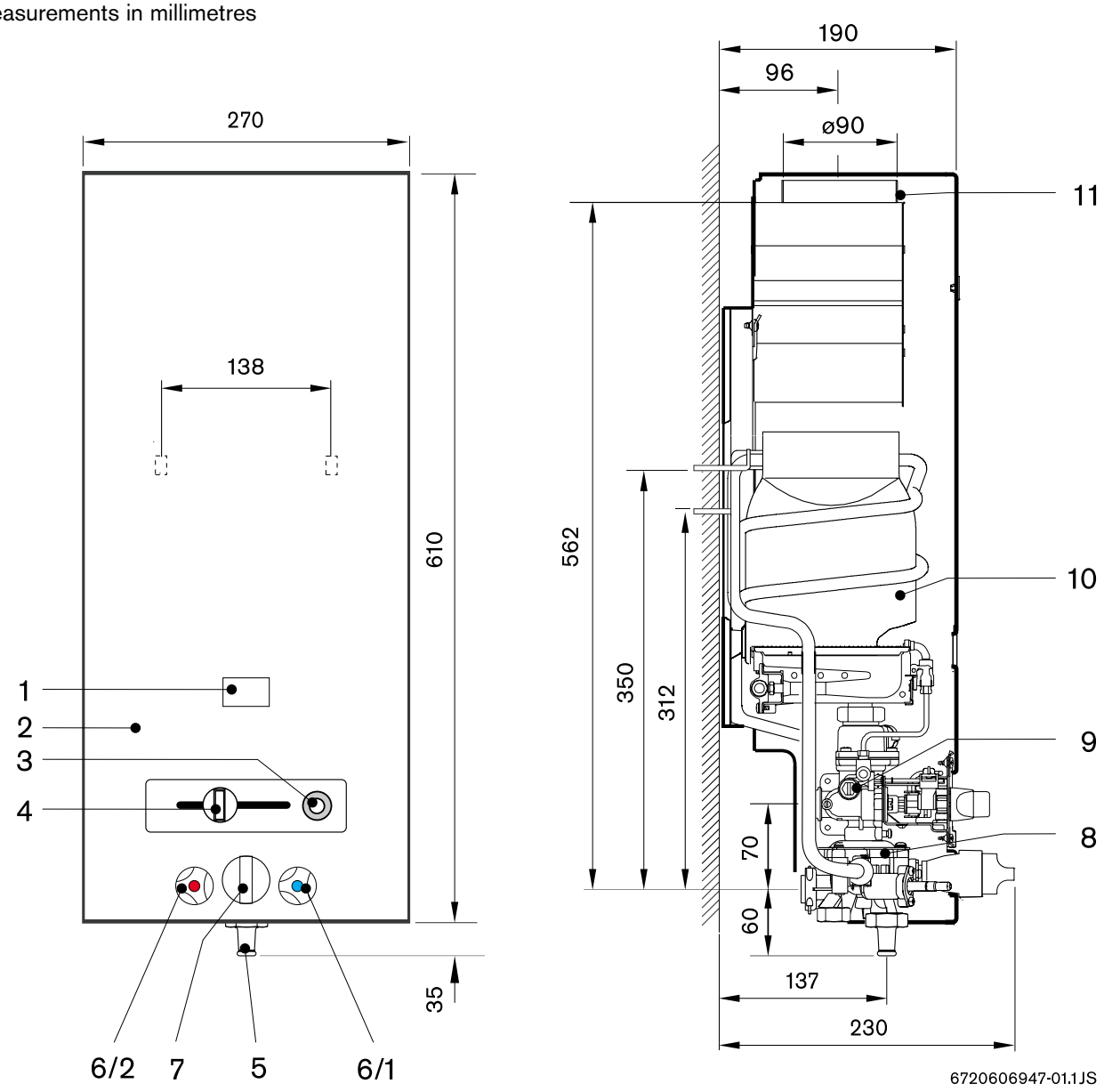


Fig. 1

1	Lighting aperture
2	Front shell
3	Piezo ignitor
4	Pilot gas button
5	Water outlet nozzle
6/1	Cold water tap
6/2	Hot water tap
7	Water flow selector
8	Water valve assy.
9	Gas valve assy.
10	Heating body
11	Draught diverter

With the gas control slide 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. 8.

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

2. Performance data

		W 125 K..T1*
Rated output	kW (MJ/h)	8,75 (31,5)
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/m^3	2,5 m^3/h
Natural gas / air	-21,0 MJ/m^3	2,0 m^3/h
LP gas / air	-26,1 MJ/m^3	1,6 m^3/h
Natural gas	-37,8 MJ/m^3	1,1 m^3/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
Flue gas load**	kg/h	23
Flue gas temperature**	°C (°F)	180

Main Burner injector Diameter	
NG	1.25
LP Gas	0.79

with Trottle disc 3.3 Ø

Burner Testpilot Pressure kPa	
NG	0.80
LP Gas	2.24

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

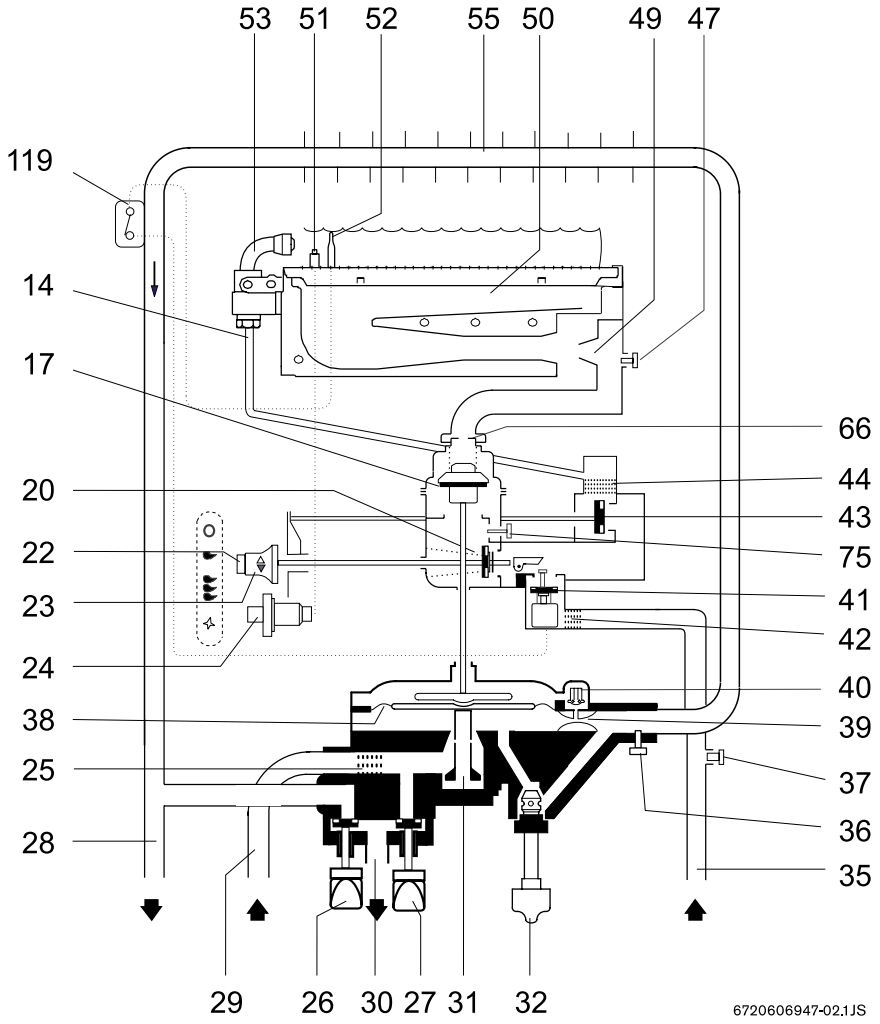


Fig. 2

14	Pilot gas pipe
16	Gas valve spring
17	Large poppet valve
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
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
47	Orifice pressure measuring point
49	Injector orifice
50	Main burner
51	Thermocouple
52	Sparking plug
53	Pilot burner
55	Combustion chamber
66	Throttle disc
75	Sealling screw
119	Temperature limiter

4. Installation

Install in accordance with AS5601, AS/NZ3500.4.2, NZS5261 and all local building, water and gas fitting regulations.
Only to be installed in applications with cold water temperature of not more than 40°C.

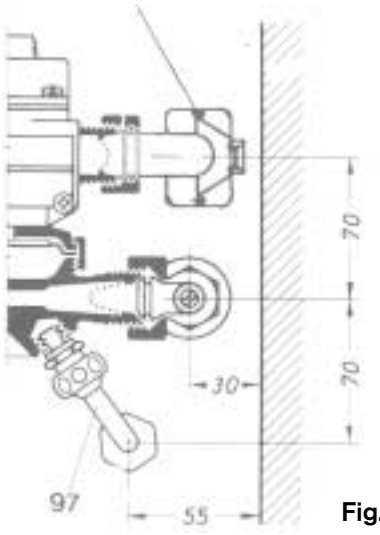
4.1 General remarks

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 2 to be removed: to this end, handless to be pulled off and knurled screw 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 1/2/15 male
LP-gases	R 3/8/10 male
Cold water	R 1/2/15 male
Hot water	R 3/8/10 male
Flue pipe for draught diverter	90 mm. O. D.

4.3 Surface pipe fitting



Surface pipe fitting for town gas/grid mixtures, and natural gas appliances: with R 1/2/15 angletype gas cock, R 1/2/15 angle-type cold water shutt-off valve, and R 3/8/10 hot water connector for distant draw-off points.

Fig. 3

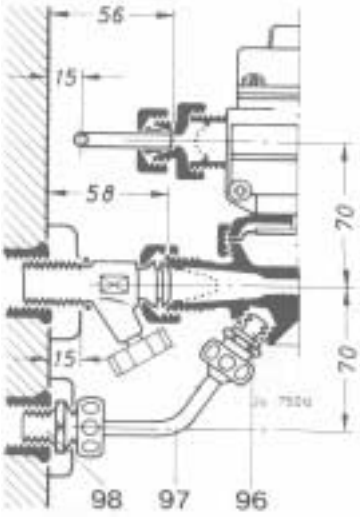
Gas connection for town gas/grid gas, gas/air mixtures and natural gas (Fig. 3)

R1/2/15 angletype gas cock to be screwed tight into the R1/2/15 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 AS5601.

Cold water (Fig. 3)

R1/2/15 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 off 30 cm, off the plastered wall.
Refer to max. and minimum water pressure required, as listed on page 3.

Hot water (for distant draw-off points) (Fig. 3)
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.



Gas connection for LP-gas appliances; with (3/8"/10), and concealed pipe fitting for cold water with 1/2"/15 water shut-off valve; for distant hot water draw-off points with 3/8"/10 connector.

LP-gases (Fig. 4)

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

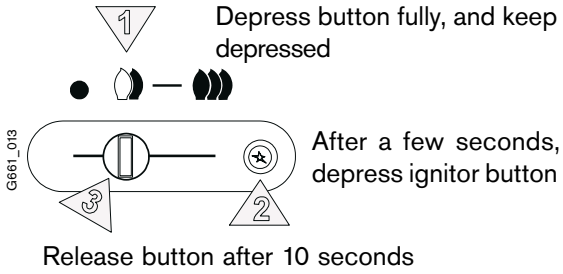
Upon completion of the installation all gas and water connections to be leakage tested. There must be no escape of flue gases at draught diverter or at the flue pipe joints; dew plate to be applied.
The front shell is then replaced and the handles pushed on again.

5. Commissioning and operation

Gas shut-off cock turned on first; then water flow selector handle 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.

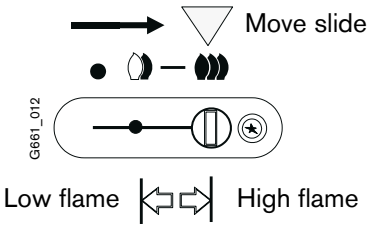
Operating Instructions

Commissioning

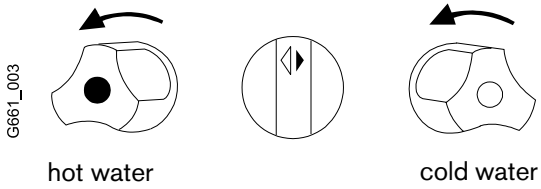


If pilot flame ist not alight then, repeat ignition procedure.

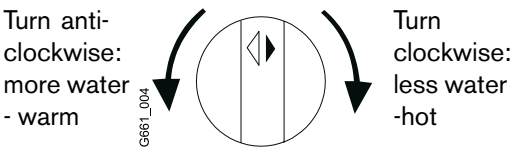
Operation



Drawing water at appliance



Temperature control



Shutting-off

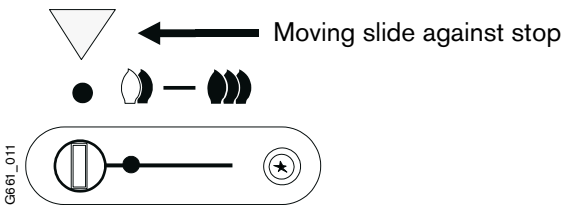


Fig. 5

6. Setting the gas rate

6.1 Checking lhe **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 is then removed; gas rate according to burner pressure as per Table in page 3. Then to be set by adjusting screw in pressure regulator.

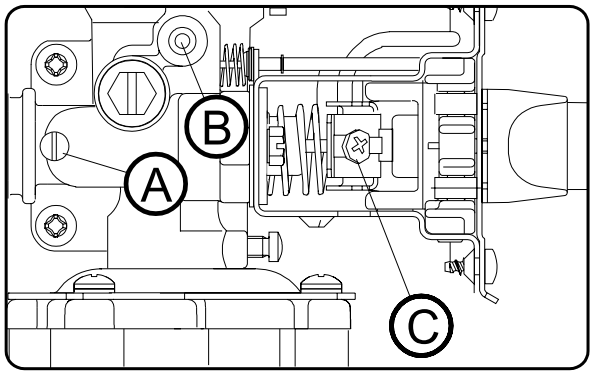


Fig. 6

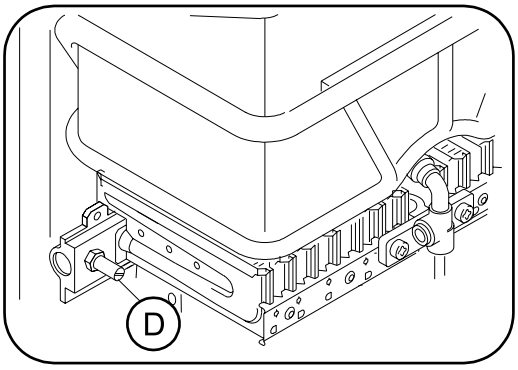


Fig. 7

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. 6). 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 49 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. Reduced 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 lead 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 will have to be cleaned.

Main burner flames
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 these draw-off points are turned off, then the flames must go out within approx.1 sec., otherwise water strainer 25 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.
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 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 Bosch 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 ar gas utilites.

9. Gas setting tables

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

Town gas, Groups	MJ/m^3	16.0	17.2	18.5	19.8	21.0	22.3	23.9	26.1
Gas/air mixtures, index Fig. 11	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.	44.0	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.

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Product manufactured in Portugal