

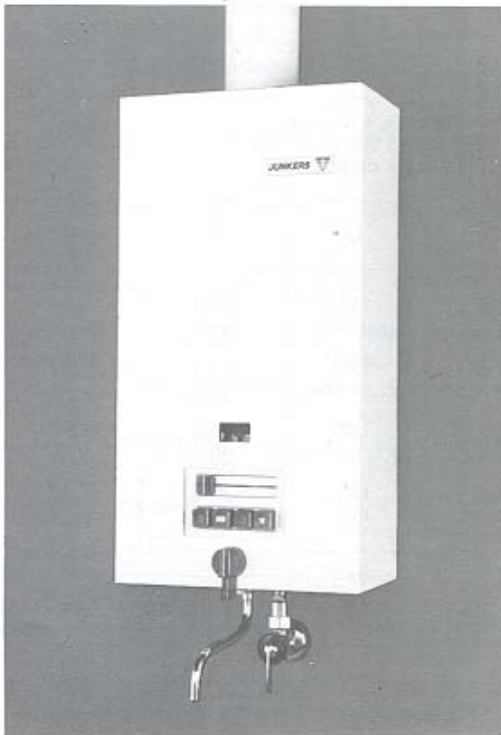
Multipoint Gas Water Heaters

W 250 K..T1

W 325 K..T1

W 400 K..T1 , W 400 K..T2

with Pushbutton Control and Piezo Igniter



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Proper functioning of these appliances is guaranteed only if the following Instructions together with the Operating Instructions are observed in every detail. – Modifications reserved.

The installation must be carried out by an authorized installer.

We request these Instructions to be handed to the user of the appliance for future reference upon completion of the installation.

Construction and Connecting Measurements

	W250..T1 W325..T1 W400..T1	W400..T2	
a	mm in.	18 3/8"	16 5/8"
b	mm in.	228 9"	334 13 5/16"
c	mm in.	40 1 1/2"	20 3/4"

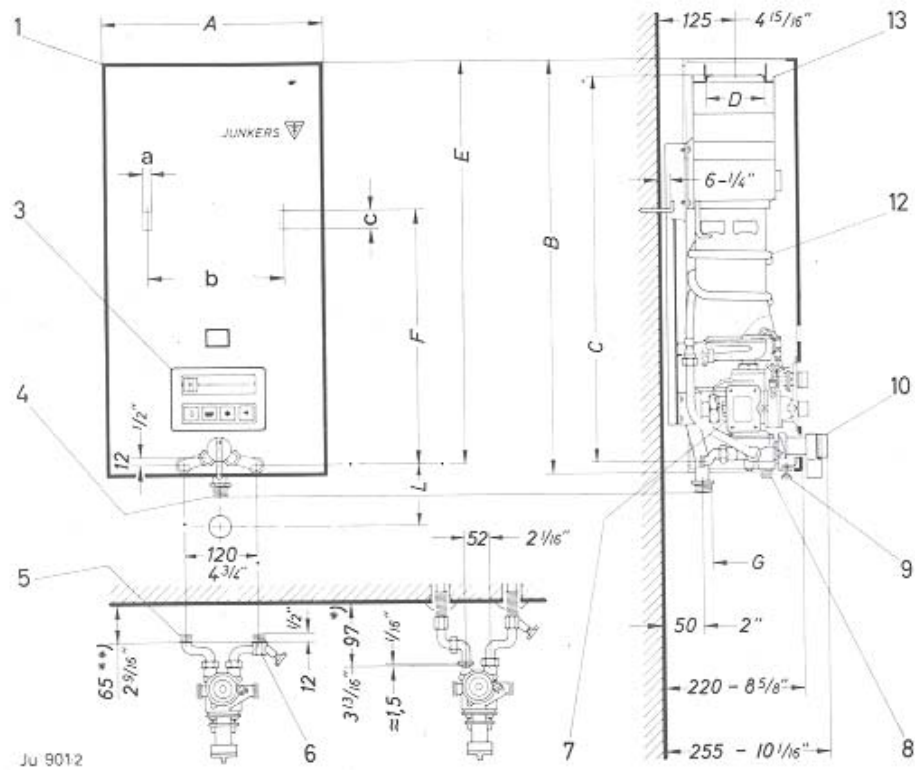


Fig. 1

- 1 Front shell
- 3 Pushbutton valve assy.
- 4 Gas connection

- 5 Hot water connection
R 1/2" (1/2" BSP)
- 6 Cold water connection
R 1/2" (1/2" BSP)
- 7 Gas valve assy.

- 8 Water valve assy.
- 9 Knurled screw
- 10 Water flow selector
- 12 Heating body
- 13 Draught diverter

Appliance measurements		A	B	C	D	E	F
Model W 250 K...T1	mm in.	360 14 3/16	680 26 3/4	636 25 1/16	110 4 5/16 ****)	665 26 3/16	474 18 1/16
Model W 325 K...T1	mm in.	400 15 3/4	755 29 3/4	708 27 7/8	130 5 1/8 *****)	740 29 1/8	512 20 3/16
Model W 400 K...T1	mm in.	440 17 5/16	770 30 5/16	723 28 7/16	130 5 1/8 *****)	755 29 3/4	512 ***)
Model W 400 K...T2	mm in.	460 18 1/8	755 29 3/4	708 27 7/8	130 5 1/8	740 29 1/8	542 21 11/32

Gas connection measurements	W 250 K...T1		W 325 - W 400 K...T1		
	Metric English	G R 3/4" 3/4" BSP	L 120 mm. 19/32 in.	G R 1" 1" BSP	L 132 mm. 1 1/16 in.
Town gas gas/air mixtures and LP-gases	Metric English	R 1/2" 1/2" BSP	92 mm. 3 1/8 in.	R 1/2" 1/2" BSP	92 mm. 3 1/8 in.
Natural gas and LP-gases	Metric English	R 1/2" 1/2" BSP	92 mm. 3 1/8 in.	R 1/2" 1/2" BSP	92 mm. 3 1/8 in.

With the gas control slide 23 at left-hand stop, the output of the appliance amounts to approx. 50 pct. of the rated output.
Rated gas pressure for LP-gas models is stated on the performance badge.

The water pressures as stated are required directly ahead of the appliance with free outlet at water valve assy. 8 and draw-off valve lever 33 against right-hand stop.

- *) For concealed pipe installation
- ***) For surface pipe installation with accessories
- ****) Two additional slots at distance 544 mm. (21 7/16 in.)
- *****) 4 in. for territories requiring integral-inch dia. flue collars
- *****) 5 in. for territories requiring integral-inch dia. flue collars

Performance Data

		W 250	K.. T1	W 325	K.. T1	W 400	K.. T1	W 400	K.. T2
Rated output	kW (MJ/h)	17.4	(63)	22.7	(82)	27.9	(100)	27.9	(100)
	kcal/min. (Btu/min.)	250	(990)	325	(1290)	400	(1590)	400	(1590)
Rated input (based on gross c.v.)	kW (MJ/h)	22.0	(79)	29.0	(104)	36.7	(130)	35.3	(127)
	kcal/min. (Btu/min.)	315	(1250)	415	(1650)	528	(2100)	506	(2000)

Gas inlet pressures

Town/ grid gas	mbar (kPa)	7.5	(0.75)	7.5	(0.75)	7.5	(0.75)	7.5	(0.75)
	mm. w.g. (in. w.g.)	75	(3)	75	(3)	75	(3)	75	(3)
Natural gas	mbar (kPa)	18	(1.80)	18	(1.80)	18	(1.80)	18	(1.80)
	mm. w.g. (in. w.g.)	180	(7-1/8)	180	(7-1/8)	180	(7-1/8)	180	(7-1/8)
LP-gases	mbar (kPa)	28	(2.8)	28	(2.8)	28	(2.8)	28	(2.8)
	mm. w.g. (in. w.g.)	280	(11)	280	(11)	280	(11)	280	(11)
Injektor orifices	piece	12		14		16		18	

Gas consumption

(based on gross c.v. at 15°C / 60°F – 1013 mbar – dry)

Town/ grid gas									
	(3600 kcal/m ³ – 15.1 MJ/m ³)	m ³ /h (cu. ft/h)	4.7	(166)	6.3	(222)	8.0	(282)	7.7
Natural gas									
	(9000 kcal/m ³ – 37.8 MJ/m ³)	m ³ /h (cu. ft/h)	2.1	(74)	2.8	(99)	3.6	(127)	3.4
LP-gas									
	(12300 kcal/kg – 51.7 MJ/kg)	kg/h (lb/h; oz/h)	1.5	(3,3-53)	2.1	(4,6-74)	2.6	(5,7-92)	2.5

Characteristic Data

Max. water flow	litres (Imp. gal.) / min.	10	(2.2)	13	(2.9)	16	(3.5)	16	(3.5)
Temperature rise	°C (F)	25	(45)	25	(45)	25	(45)	25	(45)
Min. inlet water pres. for mains pressure types	bar (metres w.g.)	0.9	(9)	1.0	(10)	1.5	(15)	1.5	(15)
	kPa (ft. w.g.)	90	(30)	100	(33)	150	(50)	150	(50)
for low pressure and direct draw-off types	bar (metres w.g.)	0.55	(5.5)	0.65	(6.5)	-	-	-	-
	kPa (ft. w.g.)	55	(18)	60	(21)	-	-	-	-
mini-pressure water valve	bar (metres w.g.)	0.25	(2.5)	0.3	(3)	0.4	(4)	0.4	(4)
	kPa (ft. w.g.)	25	(8)	30	(10)	40	(13)	40	(13)
Min. water flow	litres (Imp. gal.) / min.	4.5	(1)	5.9	(1.3)	7.2	(1.6)	7.2	(1.6)
Temperature rise	°C (F)	55	(100)	55	(100)	55	(100)	55	(100)
Min. inlet water pres. for mains pressure types	bar (metres w.g.)	0.3	(3)	0.4	(4)	0.5	(5)	0.5	(5)
	kPa (ft. w.g.)	30	(10)	40	(13)	50	(16)	50	(16)
for low-pressure and direct draw-off types	bar (metres w.g.)	0.1	(1)	0.12	(1.2)	0.15	(1.5)	0.15	(1.5)
	kPa (ft. w.g.)	10	(3)	12	(4)	15	(5)	15	(5)
mini-pressure water valve	bar (metres w.g.)	0.085	(0.85)	0.095	(0.95)	0.135	(1.35)	0.135	(1.35)
	kPa (ft. w.g.)	8.5	(33)	9.5	(37)	13.5	(53)	13.5	(53)
Max. inlet water pres. for mains pressure types	bar (metres w.g.)	12	(120)	12	(120)	12	(120)	12	(120)
	lbs/sq. in.	174		174		174		174	
for low-pressure types	bar (metres w.g.)	6	(60)	6	(60)	6	(60)	6	(60)
	lbs/sq. in.	87		87		87		87	

Max. inlet water pressures

for mains pressure types	bar	12		12		12		12	
	lbs/sq. in.	170		170		170		170	
for low-pressure types	bar	6		6		-		-	
	lbs/sq. in.	85		85		-		-	

Types of appliances

- .. 2 ... for mains water pressure; for drawing directly at the appliance, and for connection to distant draw-off points;
- .. 4 ... for low water pressure; for drawing directly at the appliance, and for connection to distant draw-off points.
- .. 5 ... Mini-pressure water valve assy. without volumetric water governor and water selector.

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

Index Fig.	Wobbe Index	Gas Families
.. 11 ...	5,700 to 6,500	Town gas and grid gas, Group A
.. 23 ...	11,400 to 13,300	Natural gas
.. 31 ...	19,400 to 22,000	LP-gases (propane, butane)
.. 32 ...	19,400	LP-gases (propane)

Design and construction of these appliances comply with European Standard EN 26, Category III.

Constructional Details

Schematic representation of combination gas/water valve assy. for town and natural gas (Fig. 2).

With natural gas, the volumetric gas governor is replaced by a gas throttle.

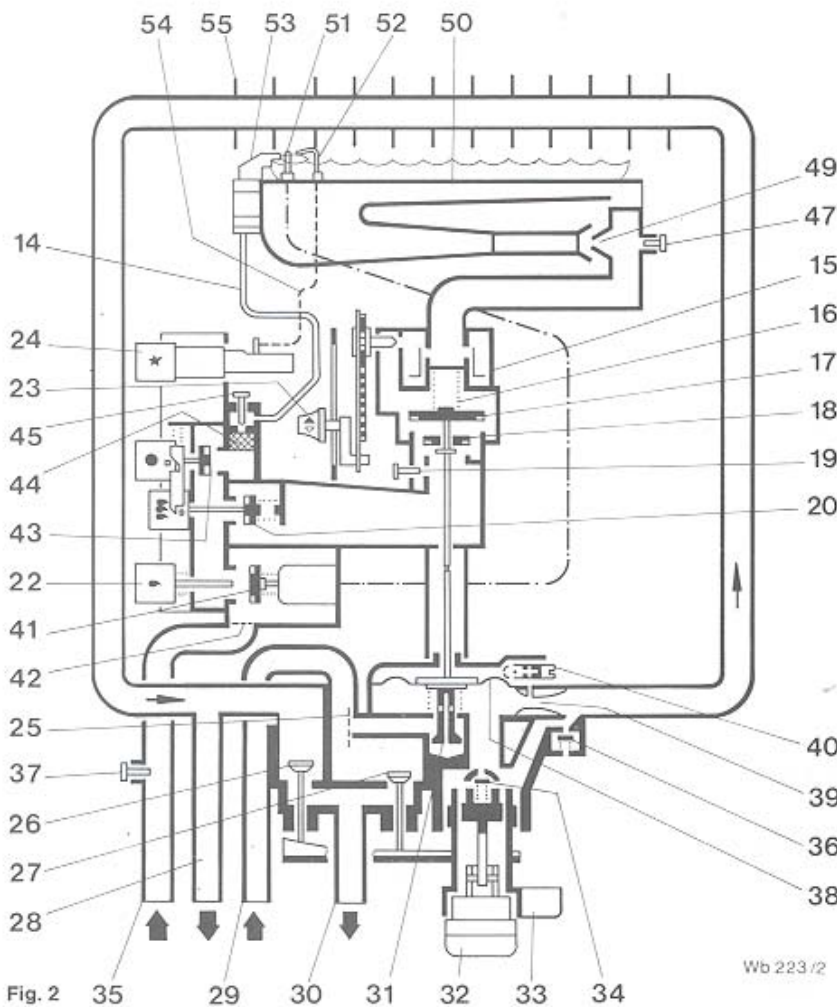


Fig. 2

Schematic representation of gas valve assy. for LP-gases

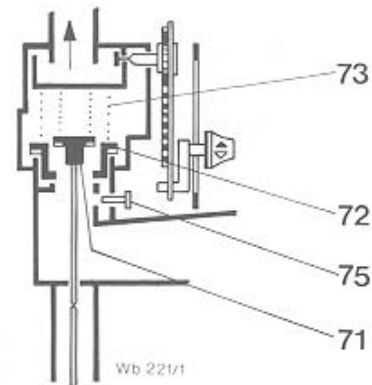


Fig. 3

Legend for Fig. 2, 3 and 4

14 Pilot gas pipe	25 Water strainer	38 Diaphragm	51 Thermocouple
15 Volumetric governor	28 Hot water connecting pipe	39 Venturi	52 Electrode
16 Gas valve spring	29 Cold water inlet	40 Slow ignition valve	53 Pilot burner
17 Large poppet valve	30 Hot water outlet	41 Magnetic unit	54 High tension lead
18 Small poppet valve	31 Water volumetric governor	42 Gas filter	55 Combustion chamber
19 Cross ignition bolt	32 Temperature selector knob	43 Pilot gas valve	71 Main gas valve
20 Main gas valve	33 Drain-off valve lever	44 Gas manifold	72 Gas valve seat
22 Push button - pilot	34 Relief valve	45 Pilot adjustment	73 Gas valve spring
23 Gas slider control	35 Gas inlet	47 Burner test point	75 Sealing screw
24 Piezo igniter	36 Drain plug and blow off valve	49 Main burner injector	83 Relief valve
	37 Pressure test point	50 Main burner	84 Throttling screw

Schematic representation of mini-pressure water valve assy. (Fig. 4)

Applicable only for operation with remote draw-off points. Heaters with this new water valve assy. have the index No. "5" in their model designation. Post-installation fitting of the new water valve assy. is possible with all "T1" and "TA1" types of the models W 250 ..., W 325 ... and W 400 ... without interfering with the gas valve assy.

The water flow is set at the Works corresponding to a temperature difference Δt of 25°C (45°F).

Recommendation for post-installation setting:

With draw-off valve fully turned on and the water pressure as available the water flow should be set to a Δt of between 20 and 25°C (36 and 45°F).

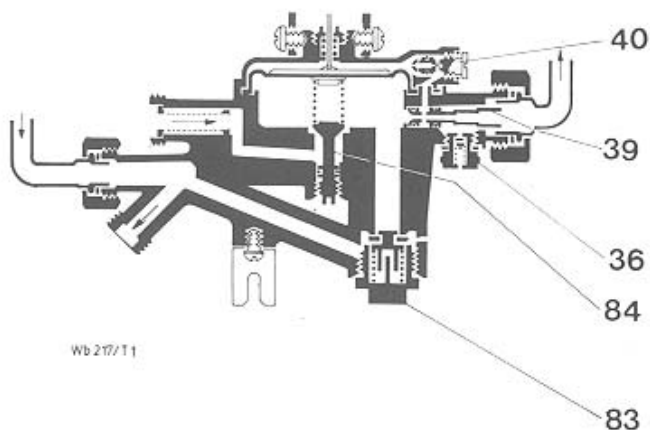


Fig. 4

Change-over to low water pressure

Complete water valve assy. 8 as well as gas poppet valves 18/71 and gas valve spring 16 to be exchanged.

Conversion from direct- to remote draw-off type

Water flow selector handle 10 to be pulled off; draw-off valve lever 33 to be turned downwards and pulled off; selector handle 10 with sleeve to be replaced, and water outlet to be sealed with washer and screw cap.

Conversion to simple-purpose direct-control types

Hot water outlet at water valve housing to be sealed with washer and screw cap.

Installation

General remarks

Any local by-laws, regulations, etc. pertaining to installation and use of gas-heated appliances must be strictly observed.

Location

The appliance should be installed in a frost-protected, well ventilated room, as near as possible to a flue gas chimney. Rooms containing corrosive vapours (e.g., sprays) must definitely be avoided.

Cupboard-like enclosures (Fig. 5)

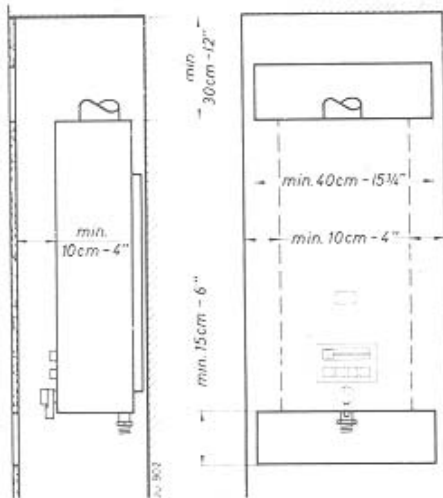


Fig. 5

Removal of front shell

Water flow selector handle 10 and draw-off valve lever 33 to be pulled off first; knurled screw 9 to be undone. Then the front shell is swung to the front and pushed upwards.

Mounting gauge

Connections for gas and water supply to be marked out as per Fig. 1 or with the aid of mounting gauge EWZ 236/1 (8 709 918 061).

Gas supply

Pipe bores to suit local conditions; gas shut-off means to be provided. Gas pipe must be clean inside.

Water supply

Pipes of suitable bore according to local conditions and in compliance with pertinent regulations to be used.

Cold water inlet (right) and hot water outlet (left) are marked by arrows on water valve housing. Restrictions in the water ways (angle valves, perlators, etc.) must be avoided.

Connecting

After application of the 2 wall hooks, which are supplied (see Fig. 1), the heater is connected to the service lines with the aid of the installation accessories as per Special List.

Flue installation

Flue pipe to be leakage-tight in accordance with pertinent requirements. Flue dampers, if used, must be of an approved type, and the makers' instructions for their installation must definitely be observed.

Setting

There is no need for setting the water flow. As regards setting of gas rate, see setting of gas rate.

Commissioning and operation

See commissioning and operation.


Leakage test

Appliance together with all gas and water connections to be tested for leakages. Proper working of flue installation and draught diverter to be checked by means of a dew plate.

Commissioning and Operation

Operating Instructions

Starting

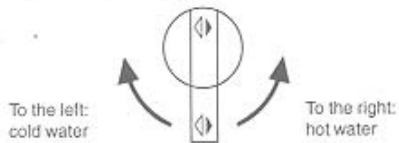
- 1 Depress button fully, and keep depressed

- 2 After a few seconds, depress ignitor button
- 3 Release button after 10 seconds

If pilot flame is not alight, repeat ignition procedure

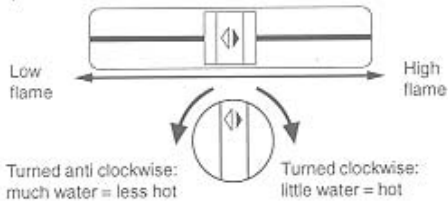
Operation



Drawing water at appliance



Temperature control



Shutting off

(if no hot water is to be drawn for a longer period of time)



Front shell and handles, initially pulled off, to be replaced. Gas shut-off means to be turned on. Water flow selector handle 10 to be turned to the left against stop, and all draw-off points to be turned on for a short period of time for venting the water pipes.

Setting of Gas Rate

Junkers Multipoints are fitted for use with the fuel gas as stated on the performance badge. Different fuel gases will require the heater to be converted in accordance with conversion to other fuel gases.

The setting of the gas rate may be effected either by the orifice pressure method, or by the volumetric method. For both methods a U-pipe manometer is required.

Note: The orifice pressure method is time-saving and therefore to be preferred.

Pilot flame

Only appliances for use with town gas and gas/air mixtures contain the throttling screw "B" as per Fig. 6 Adjustment with town gas and inlet pressures below 8 mbar (80 mm. / 3 in. w.g.) by turning in anti-clock-wise, with butane/air mixtures in clockwise direction.

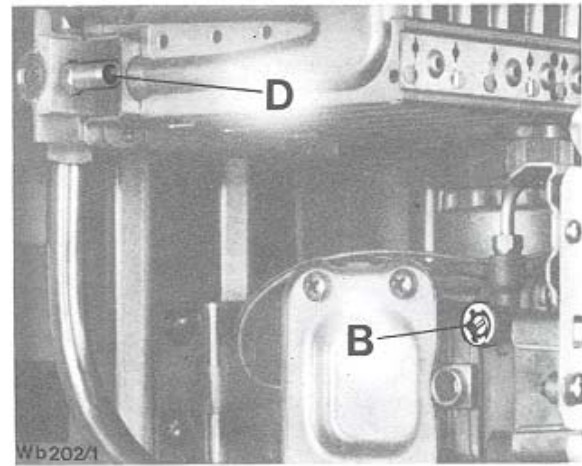


Fig. 6

Orifice pressure method

Wobbe index and operational c.v. of the fuel gas available to be ascertained from local gas works.

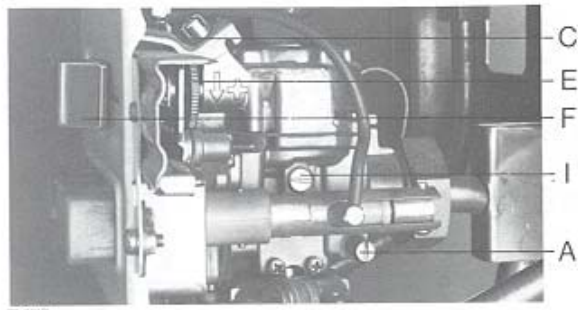


Fig. 7

1. Sealing screw "D" (Fig. 7) to be removed and U-pipe manometer to be connected to measuring point.
2. Gas shut-off cock to be turned on and appliance to be started in accordance with instructions as per Sec. 5. Gas control slide "F" (Fig. 7) and water flow selector handle 10 must be at right-hand stop.
3. Screw "C" (Fig. 7) to be undone and gas rate according to orifice pressure (mbar) as per Table, see Sec. 9.1, to be set by adjusting toothed disc "E" (Fig. 7). Direction of rotation to be noted, see Fig. 7.
4. Gas shut-off cock to be turned off, U-pipe manometer removed, and sealing screw "D" replaced and tightened.
5. Sealing screw "A" (Fig. 7) to be removed and U-pipe manometer to be connected to measuring point.
6. Gas shut-off cock to be turned on and appliance to be started.
7. Gas inlet flowing pressures required for:
 - Town gas – between 7.5 and 15 mbar (75 and 150 mm. / 3 and 6 in. w.g.)
 - Natural gas – between 18 and 25 mbar (180 and 250 mm. / 7 and 10 in. w.g.)
 - LP-gases – see page 9.
8. If inlet pressure differs from the above values, causes therefor to be found out and shortcomings to be remedied. Should this not be possible, then gas works have to be notified.
9. With gas pressures between 5 and 7.5 mbar (50 and 75 mm. / 2 and 3 in. w.g.) for town gas, and between 15 and 18 mbar (150 and 180 mm. / 6 and 7 in. w.g.) for natural gas, only 85% of the rated output to be set. With pressures below 5 mbar (50 mm. / 2 in. w.g.) and above 15 mbar (150 mm. / 6 in. w.g.) for town gas; and below 15 mbar (150 mm. / 6 in. w.g.) and above 25 mbar (250 mm. / 10 in. w.g.) for natural gas, the appliance must neither be set, nor started.
10. With extraordinary flame picture, orifices to be checked.
11. Gas shut-off cock to be turned off, U-pipe manometer removed, and sealing screw "A" replaced and tightened.
12. Screw "C" to be tightened and lead-sealed.
13. User of appliance to be informed on its operation.

Volumetric method

This method is applicable only if during peak hours no fuel gases of different characteristics are fed into supply network.

Wobbe index and operational c.v. to be ascertained from gas works.

1. Gas shut-off cock to be turned on and appliance to be started in accordance see page 5. Gas control slide "F" (see Fig. 7) and water flow selector handle 10 must be at right-hand stop.
2. Screw "C" (Fig. 7) to be undone; gas rate in litres (cu.ft) per min. to be taken from Table on page 11 and to be set by adjusting toothed disc "E" via gas meter. Direction of rotation to be noted, see Fig. 7.
3. Gas shut-off cock to be turned off, sealing screw "A" (Fig. 7) to be removed, and U-pipe manometer to be connected to measuring point.
4. Gas shut-off cock to be turned on again, and appliance to be started in the usual way.
5. Gas inlet flowing pressures required for:
Town gas – between 7.5 and 15 mbar (75 and 150 mm. / 3 and 6 in. w.g.);
Natural gas – between 18 and 25 mbar (180 and 250 mm. / 7 and 10 in. w.g.);
LP-gases – see page 9.
6. If inlet pressure differs from the above values, causes therefor to be found out and shortcomings to be remedied. Should this not be possible, then gas works have to be notified.
7. With gas pressures between 5 and 7.5 mbar (50 and 75 mm. / 2 and 3 in. w.g.) for town gas, and between 15 and 18 mbar (150 and 180 mm. / 6 and 7 in. w.g.) for natural gas, only 85% of the rated output to be set. With pressures below 5 mbar (50 mm. / 2 in. w.g.) and above 15 mbar (150 mm. / 6 in. w.g.) for town gas; and below 15 mbar (150 mm. / 6 in. w.g.) and above 25 mbar (250 mm. / 10 in. w.g.) for natural gas, the appliance must neither be set, nor started.
8. Gas shut-off cock to be turned off, U-pipe manometer removed, and sealing screw "A" replaced and tightened.
9. Screw "C" to be tightened and lead-sealed.
10. Rough check of the orifice pressure to be carried out; see Table on page 11 and Instructions under orifice pressure method, paras, 1, 2 and 11 to 13.

Reduced input

No setting necessary. In case of conversion the reduced input results of necessity as it is set at the Works to approx. 50 pct. of the rated input.

LP-gas models

These are set at the Works to rated input and lead-sealed. The pressure stated on the performance badge may be checked at measuring point "A" (Fig. 7).

Conversion to Other Fuel Gases

Conversion kit for new fuel gas to be ordered from Works; model designation and kind of fuel gas must be stated with order.

From town gas to natural gas

1. Gas shut-off cock to be turned off and front shell to be taken down.
2. Injector orifices to be screwed out.
3. Pilot burner to be removed and deflector to be screwed off. Pilot orifice, which is placed underneath, to be exchanged. Following this, the deflector is replaced and the pilot burner fitted again.
4. Cross-ignition bolt "I" (Fig. 7), to be exchanged.
5. New kind of fuel gas to be noted on performance badge, or by applying the stick-on badge supplied with the conversion kit.
6. Gas rate to be set in accordance with "Setting of gas rate".

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

With a properly burning pilot flame the valve of magnetic unit 41 should remain open approx. 5 seconds after the start.

If, upon release of the button marked "D", the pilot flame goes out, this may be due to insufficient contact at the thermocouple lead connections. The threaded bushings at magnetic unit and main burner should then be tightened. If necessary, thermocouple and/or magnetic unit to be exchanged. The pilot flame must fully surround the thermocouple 51 approx. 5 mm ($\frac{3}{16}$ in.) below its tip.

If the pilot flame burns too small, then pilot burner 53 and throttling screw 45 to be cleaned; in the case of LP-gas appliances, the pilot orifice may have to be exchanged.

Main burner flames

The main burner flames must develop within 2 to 5 seconds if lever has been turned to stop on the right-hand side, or a distant hot water draw-off point has been turned on, and if the gas control slide 23 is at the right-hand stop.

Upon closing this draw-off point, or after the draw-off valve lever has been turned back to vertical-down position, the main burner flames must extinguish within approx. 1 second, otherwise water strainer 25 and slow-ignition valve 40 should be cleaned.

After the pilot flame has gone out, the magnetic unit 41 should shut off the gas supply within 45 seconds.

Proper working of the burner and of the flue gas installation to be checked. If necessary, the burner may be blown through with compressed air, or thoroughly washed in soapy water and rinsed afterwards.

Water-actuated gas valve

If the main burner flames do not go out completely after hot water has been drawn, then the gas valve 59 inclusive of stem to be cleaned; O-ring is greased with compound HFT 1 v5.

Valves of the pushbutton-controlled automatic valve assy.

For a leakage test, the heater has to be started with the gas control slide 23 against right-hand stop; draw-off valve lever likewise at right-hand stop, or distant hot water draw-off point to be turned on.

Upon pushing the button marked "●", main and pilot burner must go out, at the latest after the valve within magnetic unit 41 has snapped shut. Leaky valves to be cleaned; washers to be exchanged if necessary.

Insufficient rise in water temperature

Output to be checked according to Sec. 6, "Setting of Gas Rate". With LP-gas appliances, gas inlet pressure at measuring point 47 to be checked. Gas filter 42 and main burner 50 to be cleaned, and relief valve at selector crew to be checked.

Heating body

Finned heat exchanger to be cleaned and, if necessary, heating body 12 to be descaled with conventional means (suppliers' instructions for use to be observed). Prior to removal of heating body, pilot burner 53 has to be taken off.

Max. test pressure, 20 bar (285 lbs/sq.in.).

Water valves at direct-control types

Soiled water valves, after removal of selector screw, to be pulled out with the aid of front shell retaining bracket, and cleaned; leaky valves to be exchanged if need be.

Water flow selector

After the water shut-off valve has been turned off, the appliance is drained and the selector screw removed. When re-assembling, care to be taken that the selector screw is at the left-hand stop and that the heater is vented prior the re-starting.

Greasing compounds

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 by Special Lists, quoting description and part No.

Gas Tables

Gas rates, litres (cu.ft) per min.

Fuel gas	Calorific values				W 250 ... T1 Input rating				W 325 ... T1 Input rating				W 400 ... T1 Input rating			
	gross ¹⁾		net/ operational ²⁾		100%		85%		100%		85%		100%		85%	
	kcal/m ³	Btu/ cu.ft	kcal/m ³	Btu/ cu.ft	litres	cu.ft	litres	cu.ft	litres	cu.ft	litres	cu.ft	litres	cu.ft	litres	cu.ft
Town gas A and B	4.000	420	3.350	350	86	3.04	73	2.6	113	4.0	96	3.4	142	5.0	121	4.3
	4.300	450	3.600	380	80	2.8	68	2.4	105	3.7	89	3.15	132	4.7	112	4.0
	4.600	485	3.900	410	74	2.6	63	2.2	97	3.4	82	2.9	122	4.3	104	3.7
	4.900	515	4.200	440	68	2.4	58	2.05	90	3.2	76	2.7	113	4.0	96	3.4
	5.200	555	4.500	470	64	2.25	54	1.9	84	3.0	71	2.5	105	3.7	89	3.1
	5.500	580	4.750	500	60	2.1	51	1.8	79	2.8	67	2.35	100	3.5	85	3.0
	6.000	630	5.150	540	56	1.95	47	1.65	73	2.6	62	2.2	92	3.2	78	2.8
	6.500	680	5.550	585	52	1.85	44	1.55	69	2.45	58	2.05	85	3.0	72	2.5
Natural gas L and H	8.000	840	6.800	715	42	1.5	36	1.3	55	1.95	47	1.65	70	2.45	60	2.1
	8.400	880	7.100	750	40	1.4	34	1.2	53	1.9	45	1.6	67	2.35	57	2.0
	8.800	925	7.450	785	39	1.35	33	1.15	51	1.8	43	1.5	64	2.25	54	1.9
	9.200	965	7.750	815	37	1.3	31	1.1	49	1.7	41	1.45	61	2.15	52	1.85
	9.600	1.010	8.100	850	35	1.25	30	1.05	47	1.65	40	1.4	59	2.1	50	1.75
	10.000	1.050	8.500	892	34	1.2	29	1.0	44	1.55	38	1.35	56	2.0	48	1.7
	10.400	1.095	8.800	925	33	1.15	28	1.0	43	1.5	36	1.3	54	1.9	46	1.6
	10.800	1.140	9.100	955	32	1.1	27	0.95	41	1.45	35	1.25	52	1.85	44	1.55

¹⁾ at 0°C, 1013 mbar, dry

²⁾ at 15°C, 1013 mbar, dry

Gas Tables

Gas rates, litres (cu.ft) per min.

Fuel gas	Calorific values				W 400 ... T2 Input rating			
	gross ¹⁾		net/ operational ²⁾		100%		85%	
	kcal/m ³	Btu/ cu.ft	kcal/m ³	Btu/ cu.ft	litres	cu.ft	litres	cu.ft
Town gas A and B	4.000	420	3.350	350	137	4.85	116	4.1
	4.300	450	3.600	380	128	4.5	109	3.85
	4.600	485	3.900	410	118	4.15	100	3.55
	4.900	515	4.200	440	110	3.9	93	3.4
	5.200	555	4.500	470	102	3.6	87	3.1
	5.500	580	4.750	500	97	3.4	82	2.9
	6.000	630	5.150	540	89	3.15	76	2.7
	6.500	680	5.550	585	84	3.0	71	2.5
Natural gas L and H	8.000	840	6.800	715	68	2.4	58	2.05
	8.400	880	7.100	750	65	2.3	55	1.95
	8.800	925	7.450	785	62	2.2	52	1.85
	9.200	965	7.750	815	59	2.1	50	1.75
	9.600	1.010	8.100	850	57	2.0	48	1.7
	10.000	1.050	8.500	892	54	1.9	46	1.6
	10.400	1.095	8.800	925	52	1.85	44	1.55
	10.800	1.140	9.100	955	51	1.8	43	1.5

¹⁾ at 0°C, 1013 mbar, dry

²⁾ at 15°C, 1013 mbar, dry



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