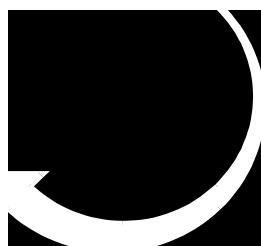
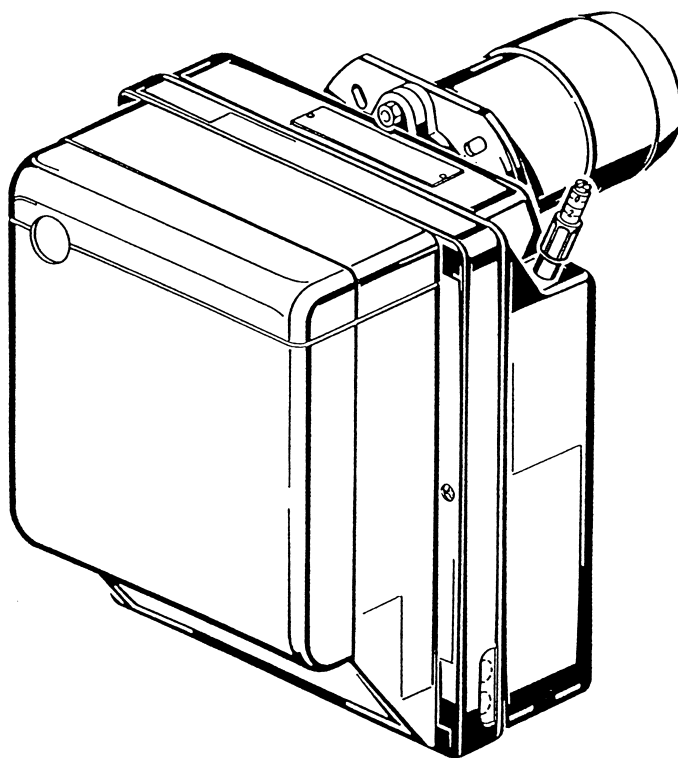


**Oilburner**

**RG3**

**Code No.: 970929**



**Dantherm<sup>®</sup>**

Environmental Air Management

**This instruction should be kept in the furnace room**

The user is responsible for the burners working order and that the following points are observed.

**Please check before ignition:**

- that the valves on the oil pipes are open
- that the flue system is clear
- that the access door and inspection eye are tight
- that the thermostats are adjusted to the right temperature.

**Interruptions:**

- PRESS THE BUTTON ON THE CONTROL BOX!
- also check:
- that the room thermostat is adjusted higher than the temperature in the room
  - that the fuses are in good order
  - that the safety thermostat have not been activated
  - that there is oil in the tank.

**Regulations:**

The furnace room and the room containing the oil tank must be clean and tidy at all times. Inflammable materials, including selfigniting and explosive materials must not be stored in these rooms.

Max. oil cons.: app. 17,8 l/h  
Control box: 550 SMD  
Type of oil: Gas oil  
Flue pipe dimens.: \_\_\_\_\_ Ømm  
Installation data: \_\_\_\_\_

**Installer:**

**Maintenance:**

The oil burner and air heater, should be inspected and adjusted once a year, to maintain good environmental and economical operation.

Because of wear and tear the following components shall always be replaced during a complete overhaul:

- Oil nozzle
- O-ring for oil pump
- Filter for oil pump

If the installation is provided with a prefilter, the filter cartridge and the o-ring should also be replaced.

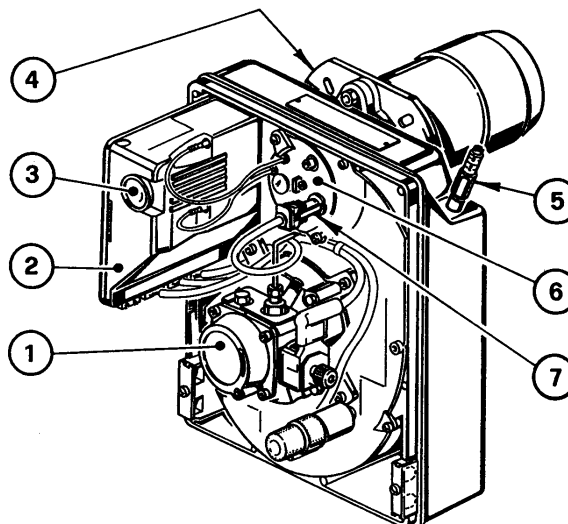
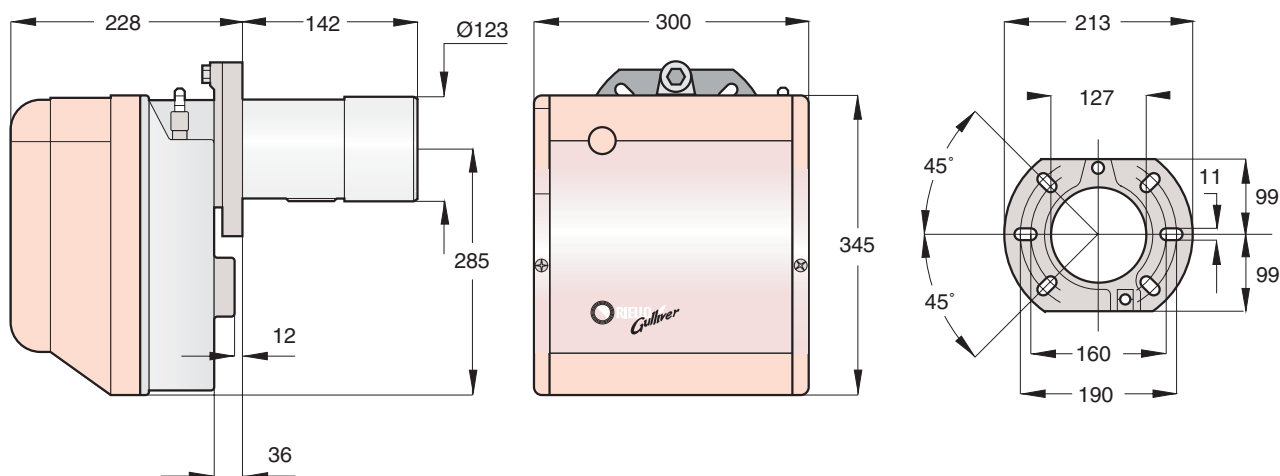




Type	393 T1
Terminal power – output	87,4 – 188,4 kW (Hi) (7 – 15 kg/h)
Fuel	Viscosity max. 6 mm <sup>2</sup> /s (1,5° E) at 20° C
Electrical supply	230 V +10% -15% 50 Hz
Electrical consumption	380 W
Capasitor	6,3 µF
Ignition transformer	Secondary: 8 kV 16 mA
Control box	550 SMD
Pump capacity	Max. 30 kg/h at 10 bar
Pump pressure	8 – 15 bar
Approval	MK 10.10/1255

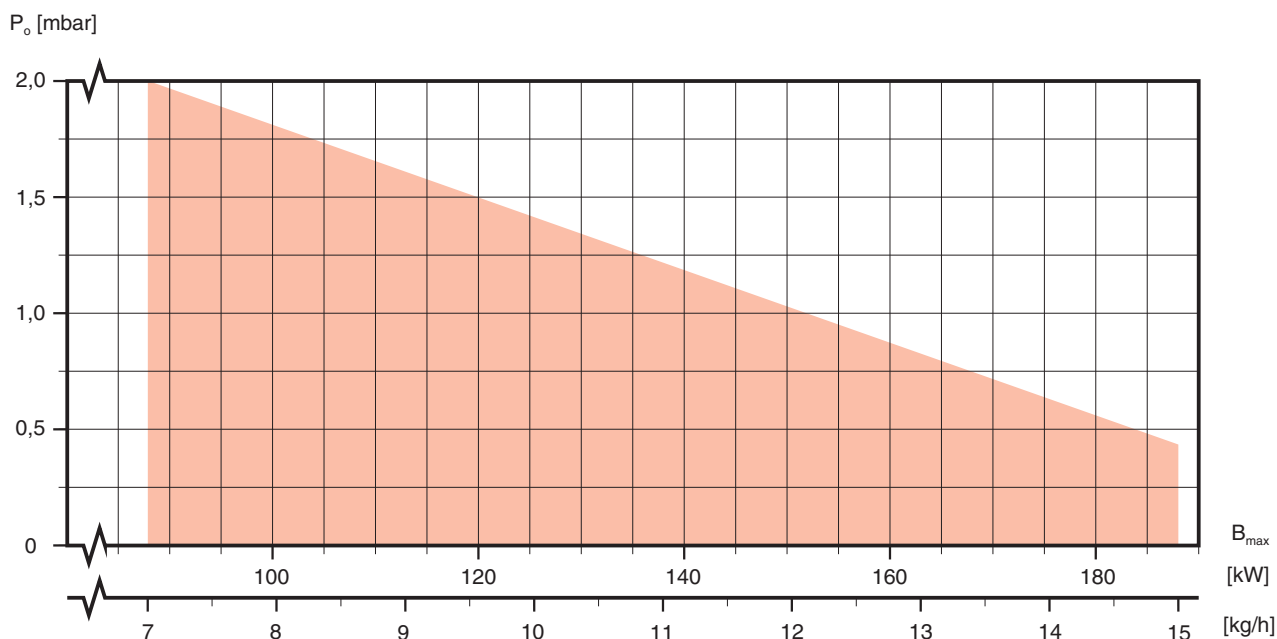
**Main components of the oilburner:**

1. Oil pump
2. Control box
3. Reset button
4. Boiler flange
5. Air-damper
6. Flange for nozzle holder
7. Photo resistance

**Dimensions:**

(All measurements are in mm)

In the capacity diagram below the burner maximum performance ( $B_{max}$ ) is in proportion to the positive pressure of the combustion chamber ( $P_o$ ).



**Burner start-up cycle:**



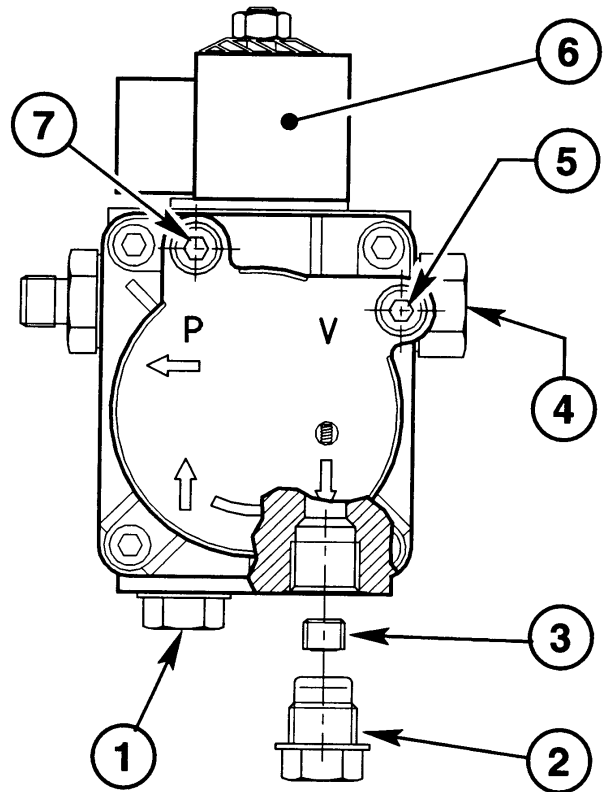
### One-line system:

The pump is designed to allow working with two pipes. In order to obtain one pipe working it is necessary to unscrew the return plug (2), remove the by-pass screw (3) and then screw again the plug (2).

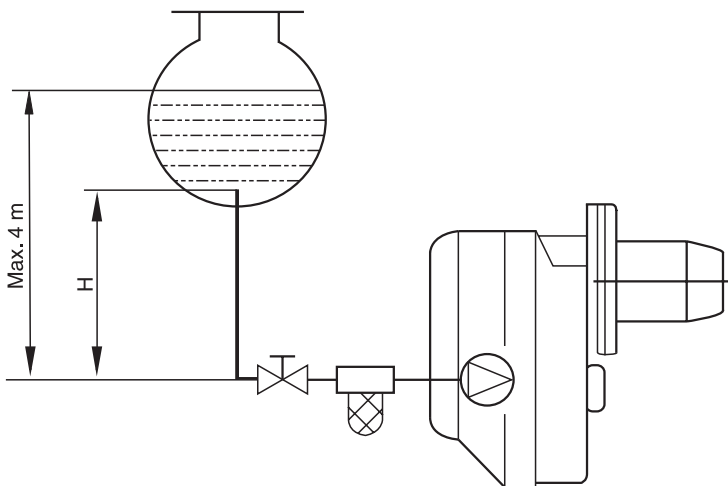
It is sufficient to loosen the suction gauge connection (5) and wait until oil flows out.

It is necessary to install a filter on the fuel supply line.

**Attention:** Do not start the burner before oil flows out.



1. Suction line
2. Return line
3. By-pass screw
4. Pressure adjuster
5. Suction gauge connection
6. Oil valve
7. Gauge connection



Max lenght of suction line		
H	Dimensioning	
	8/10 mm	10/12 mm
0,5 m	10 m	20 m
1,0 m	20 m	40 m
1,5 m	40 m	80 m
2,0 m	60 m	100 m

**One-line system:**

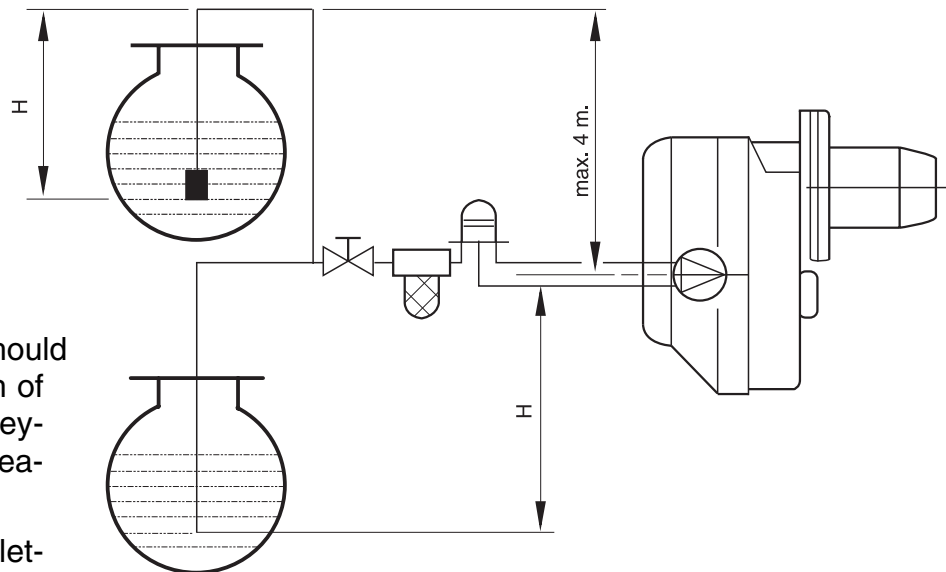
On the tank installation, where vacuum can occur in the oil tubes, you install a flow-control between the front filter and the oil burner.

The pump suction should not exceed a maximum of 0.4 bar (30 cm Hg). Beyond this limit gas is realised from the oil.

Oil lines must be completely air tight.

It is necessary to install a filter on the fuel supply line.

Start the burner and wait for the priming. Should lock-out occur prior to the arrival of the fuel, await at least 20 seconds before repeating the operation.



Max length of suction line		
H	Dimensioning	
	8/10 mm	10/12 mm
0 m	35 m	100 m
0,5 m	30 m	100 m
1,0 m	25 m	100 m
1,5 m	20 m	90 m
2,0 m	15 m	70 m
3,0 m	8 m	30 m
3,5 m	6 m	20 m

The burner is designed to allow entry of the oil supply pipes on either side. Depending on the oil supply pipes position (to the right or to the left hand side of the burner).

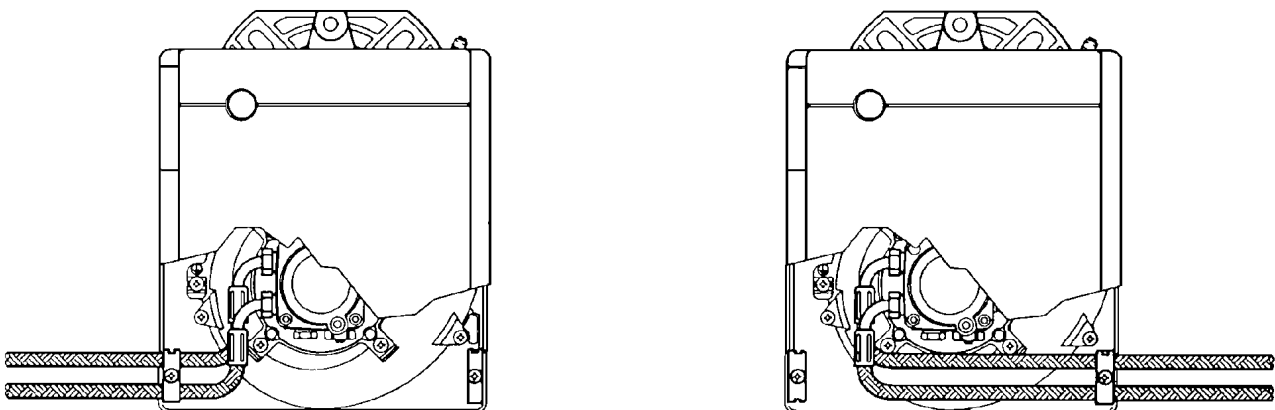


Fig. 1

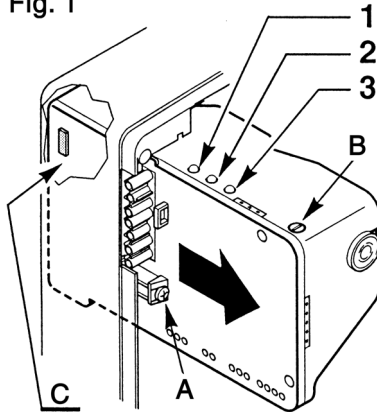
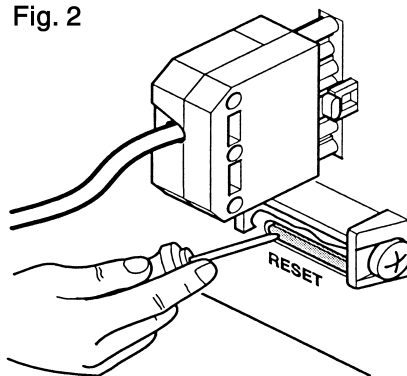


Fig. 2



### **Led indication:**

- 1: Green (fan)
- 2: Yellow (heater)
- 3: Red (lock-out signal)

If the control box has to be changed remember to remove the bridge "C".

### **Electrical wiring:**

El cable (min. 1 mm<sup>2</sup>) with 7-pin plug Wieland plug on the burners control box. The control box has intern 230 V/5 Amp. fuse (B). If the fuse should be defect the oil burner will not start eventhough you messure 230 V between L1 and 0 in the 7-pin plug (check the fuse).

All internal components are connected via plug to the control boxes print circuit board.

To remove the control box from the burner, loosen screw (A, fig. 1) and pull to the arrow direction, after removing all components, the 7 pin plug and earth wire.

### **Ignition transformer:**

The ignition transformer is build in in the control box. The ignition cables are connected to the plug connector on the cover of the control box.

### **Lock-out:**

By lock-out the reset button on the control box will turn on. The user can try to lock-in by pushing on the reset button three times maximum.

If the red LED (3) lights up, call the service agent. To restore normal operation, the authorized service agent must move the control box backwards, without disconnecting the power supply, and press the reset tab (see fig. 2) with an appropriate tool.

### Accessibility to the nozzle:

Remove nozzle-holder assembly (1) after loosening screws (2) and nut (3), remove the small cables (4) from the control box, the photoresistance (6).

Withdraw the small cables (4) from the electrodes, remove the diffuser disc-holder assembly from the nozzle-holder assembly (1) after loosening screw (3, fig. 2).

Learn the diffuser disc-holder assembly (1) on the nozzle-holder (2) and lock it by screw (3).

For prospective adjustments of the electrodes assembly, loosen screw (4).

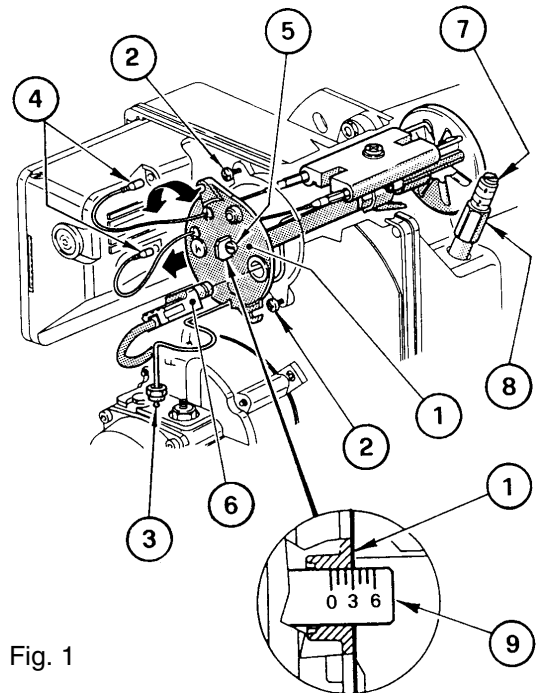


Fig. 1

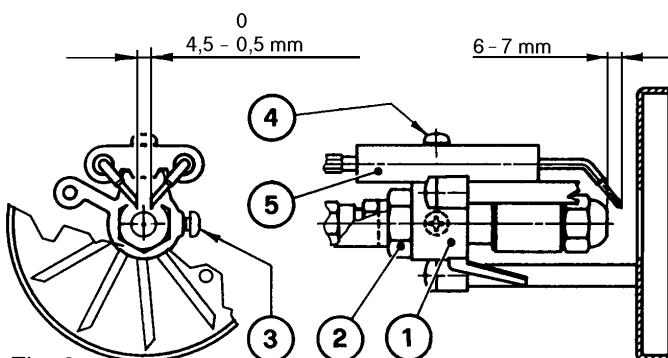


Fig. 2

### Combustion head setting:

It depends on the output of the burner and is carried out by rotating clockwise or counterclockwise the setting screw (5) until the set-point marked on the regulating rod (9) is level with the outside plane of the nozzle-holder assembly (1).

In the sketch the combustion head is set for an output of 2,25GPH at 12 bar. The set-point 3 of the regulating rod (9) is at the same level with the outside plane of the nozzle-holder assembly (1) as shown in the schedule.

### Air damper adjustment

To vary the setting adjust the screw (7) after loosening the nut (8).



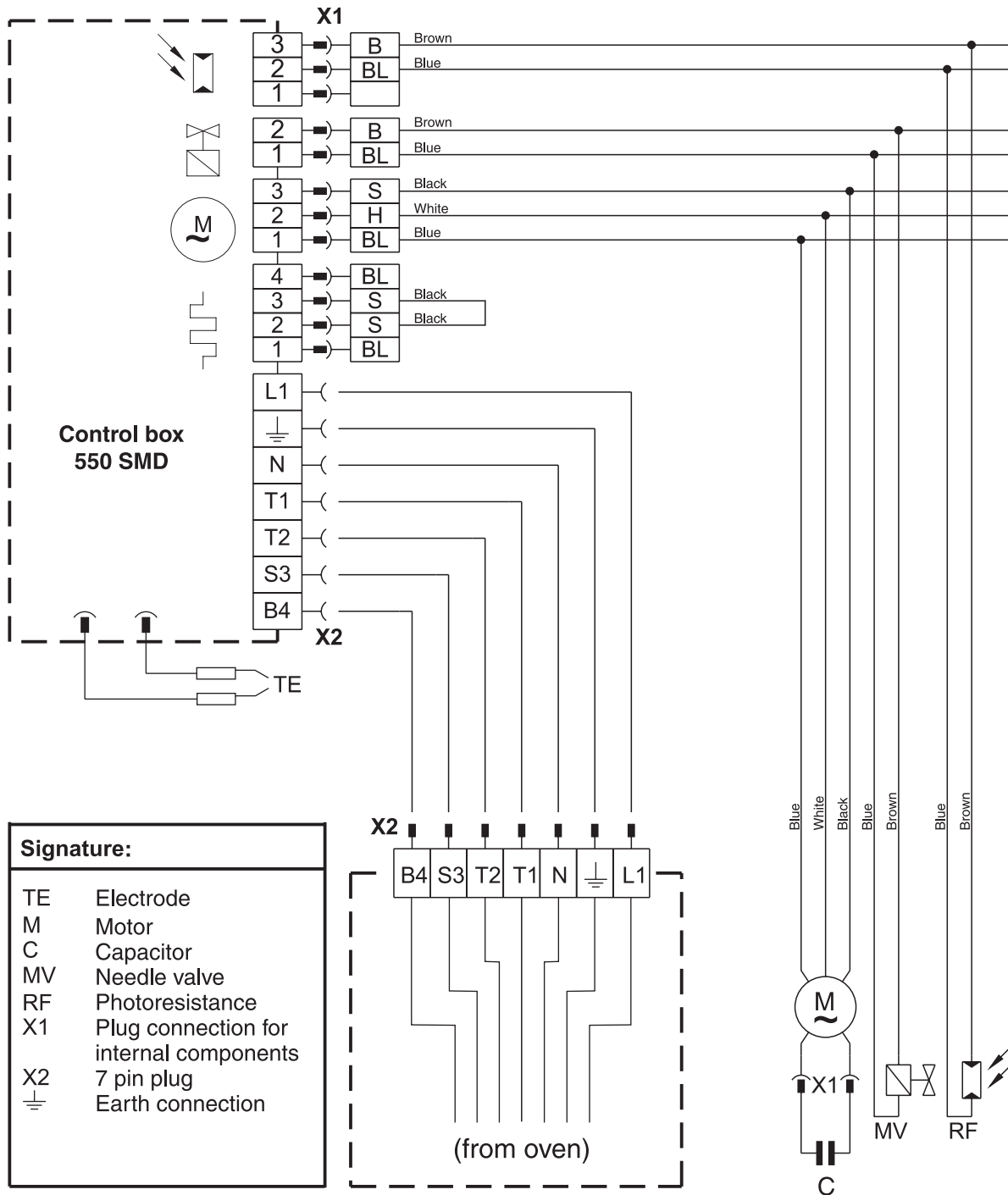
## Combustion adjustment:

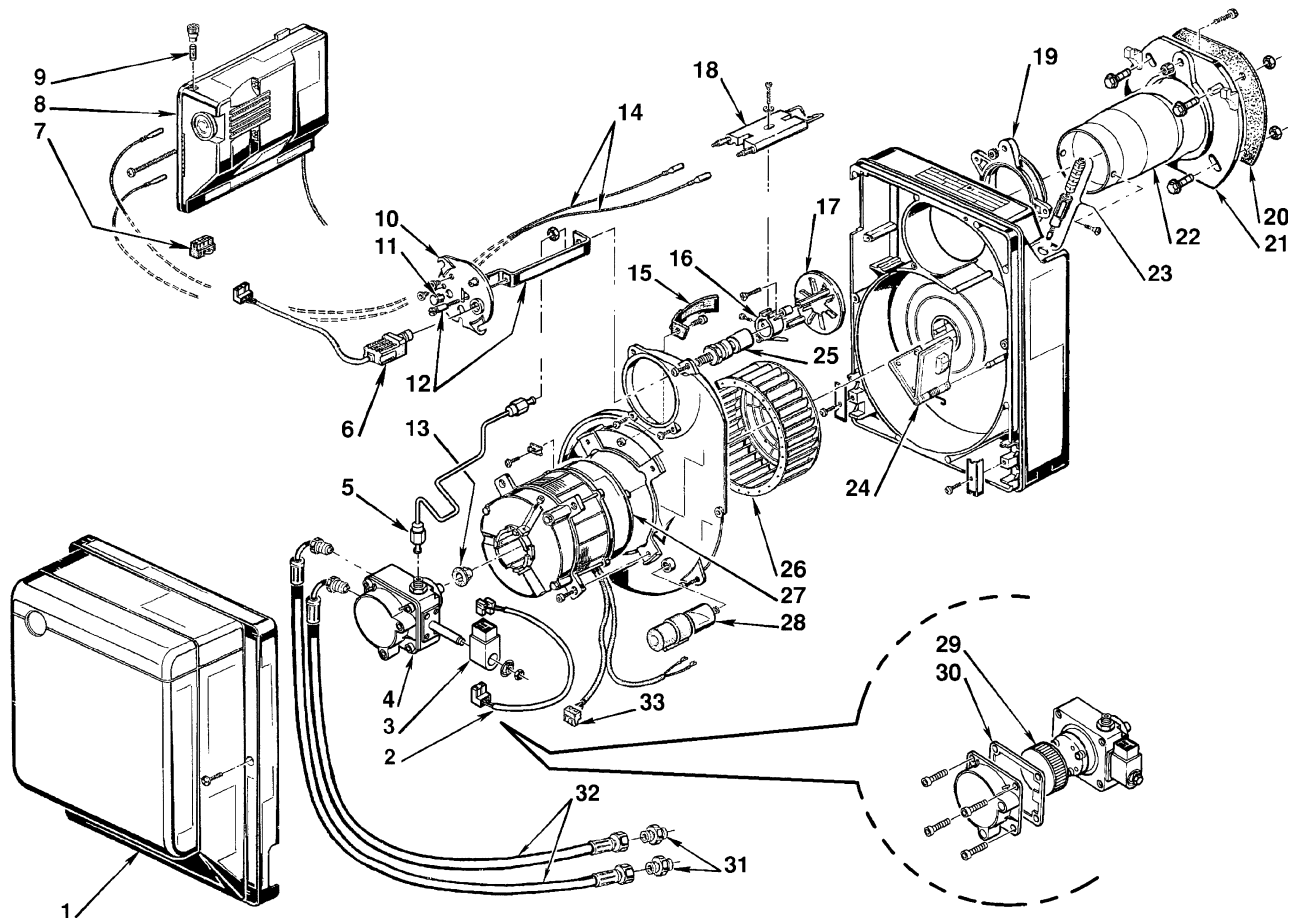
To suit the required appliance output, fit the nozzle then adjust the pump pressure, and the air damper opening in accordance with the following schedule.

Nozzles recommended:

Delavan: Type W – B  
Danfoss: Type S – B  
Monarch: Type R  
Steinen: Type S – Q

Nozzle		Pump pressure [bar]	Burner output [kg/h $\pm$ 4%]	Combustion head adjustment	Air damper adjustment
[GPH]	angle [°]				
1,75	60	10,5	6,9	0	0,5
1,75	60	12	7,3	0	0,6
2,00	60	12	7,9	1	0,8
2,25	60	12	9,5	3	1,1
2,50	60	12	10,2	3,5	1,2
3,00	60	12	12,5	5	2,0
3,50	60	12	14,4	6	2,5
3,50	60	14	15,2	6	2,9





Pos.	Code No	Description
1	80002702	Cover
2	80002496	Lead coil
3	80002451	Coil
4	80002495	Suntec pump
5	80007663	Tube
6	80007492	P.e. cell
7	80007792	Short circuit plug
8	80001168	Control box 550 SMD
9	80007396	Fuse
10	80007642	Cover
11	80007458	Viewing port
12	80007644	Bracket and screw
13	80000443	Joint
14	80007465	High voltage lead
15	80007651	Suction duct
16	80007466	Support
17	80007645	Diffuser disc

Pos.	Code No	Description
18	80007495	Electrode assembly
19	80007646	Collar
20	80005813	Gasket
21	80005814	Flange
22	80007647	Blast tube
23	80002395	Air damper regulator
24	80002394	Air damper
25	80007496	Nozzle holder
26	80007652	Fan
27	80007654	Motor
28	80007655	Capacitor 6,3 $\mu$ F
29	80003082	Filter
30	80003081	Seal
31	80009046	Connector
32	80005720	Flexible oil line
33	80007454	Motor socket