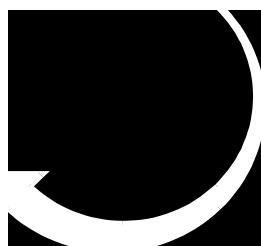
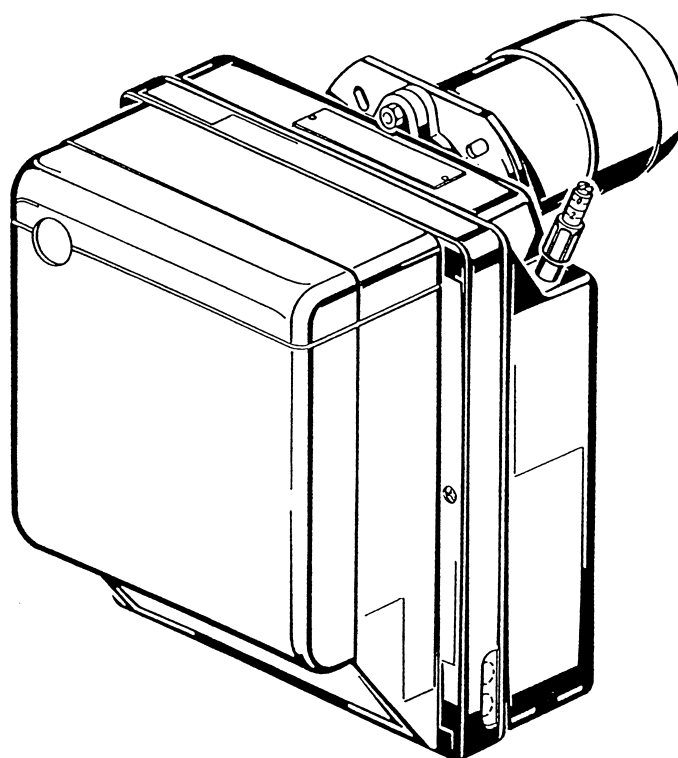


Oilburner

RG3D

Code No.: 970930



Dantherm[®]

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

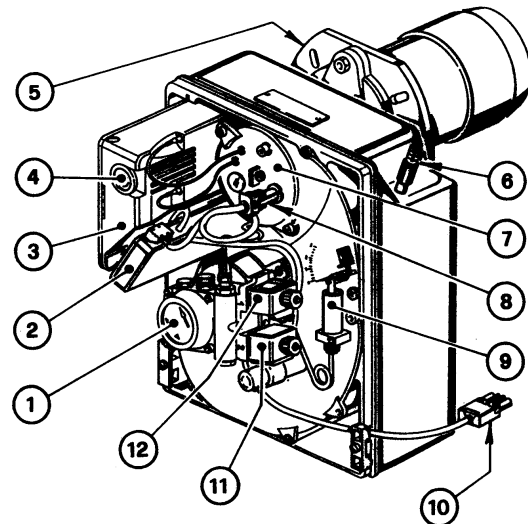
If the installation is provided with a prefilter, the filter cartridge and the o-ring should also be replaced.



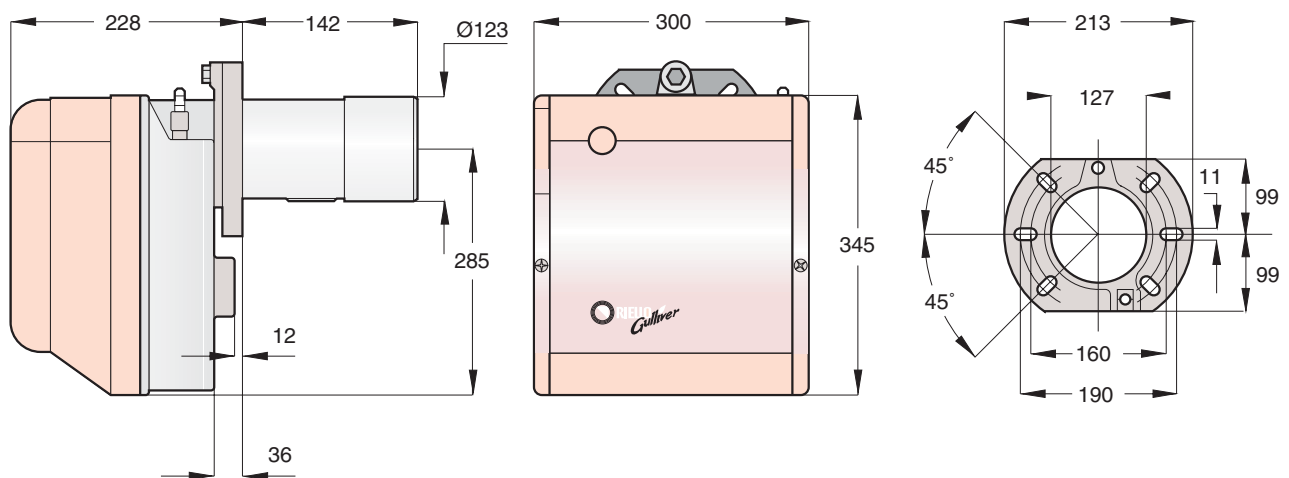
Type	394 T1
Terminal power – output	68/88 – 188,5 kW (H _i) (5,4/7,0 – 15 kg/h)
Fuel	Viscosity max. 6 mm ² /s (1,5° E) at 20° C
Electrical supply	230 V +10% -15% 50 Hz
Electrical consumption	390 W
Capasitor	6,3 µF
Ignition transformer	Secondary: 8 kV 16 mA
Control box	550 SMD
Pump capacity	Max. 30 kg/h at 10 bar
Pump pressure	8 – 15 bar
Approval	MK 10.10/1255

Main components of the oilburner:

1. Pump with pressure reducer
2. Electronic start delaying device
3. Control box
4. Reset button with lock-out lamp
5. Flange with insulating gasket
6. 2nd stage air damper adjustment assembly
7. Nozzle holder assembly
8. Photo resistance
9. Hydraulic jack
- 10 4 pole socket
11. 2nd stage valve
12. 1st stage valve

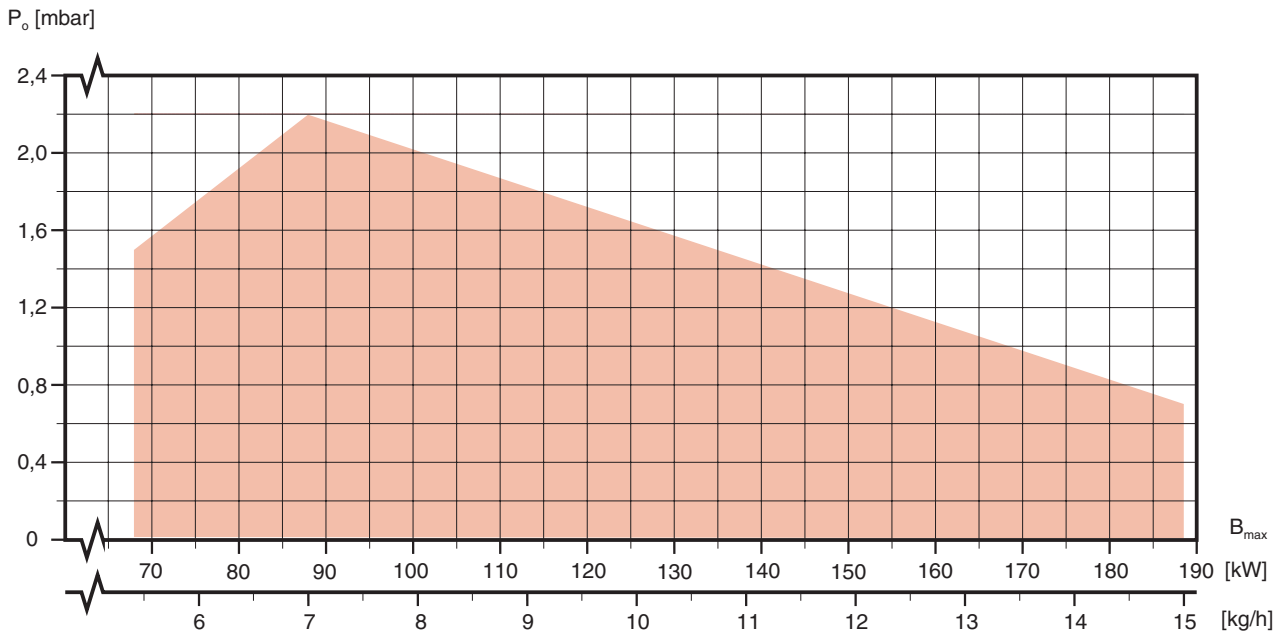


Dimensions:

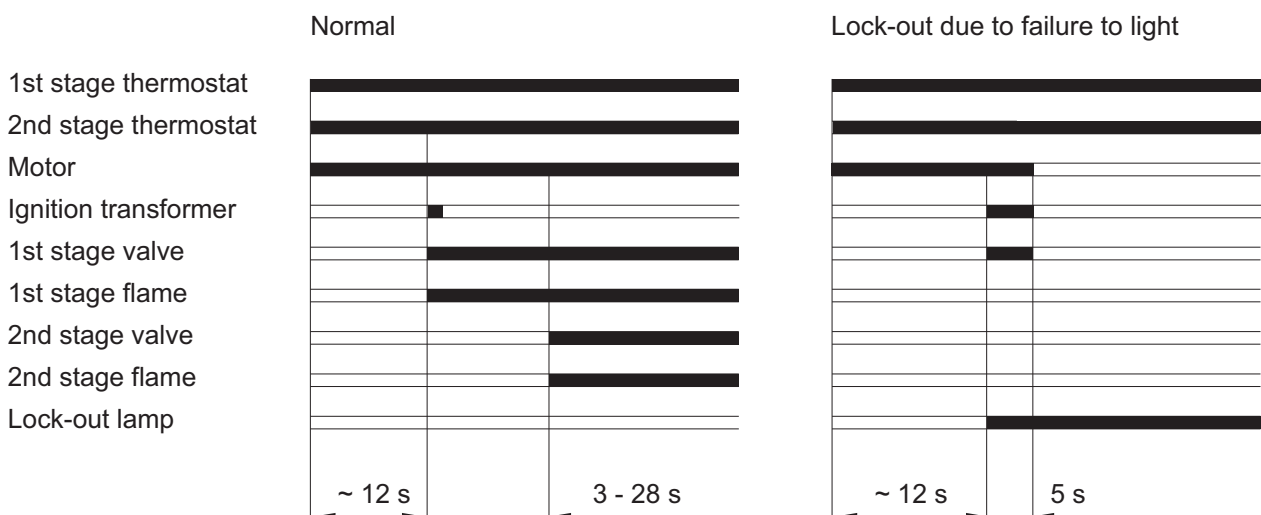


(All measurements are in mm)

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:



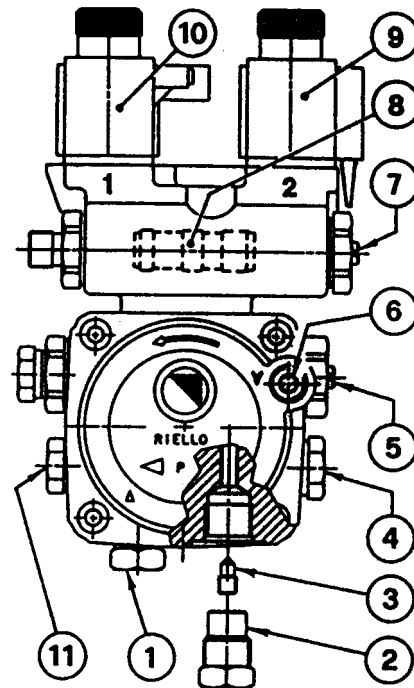
One-line system:

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).

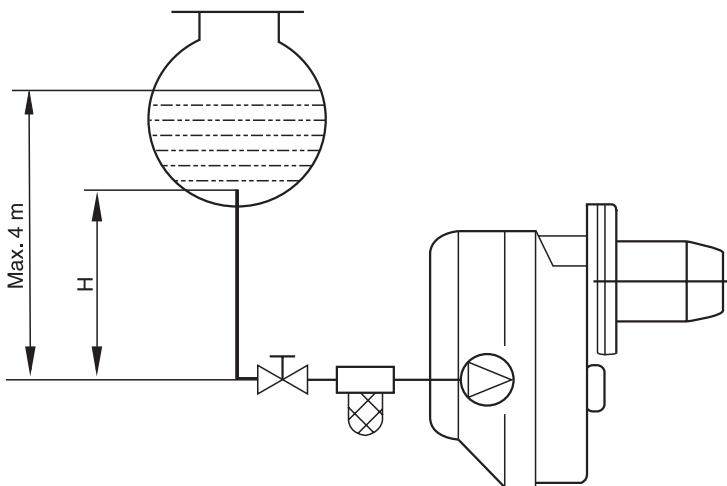
It is sufficient to loosen the suction gauge connection (5) and wait until oil flows out.

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. Gauge connection
5. 2nd stage pressure adjuster
6. Suction gauge connection
7. 1st stage pressure adjuster
8. Pressure reducer piston
9. 2nd stage valve
10. 1st stage valve
11. Auxiliary pressure test point



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:

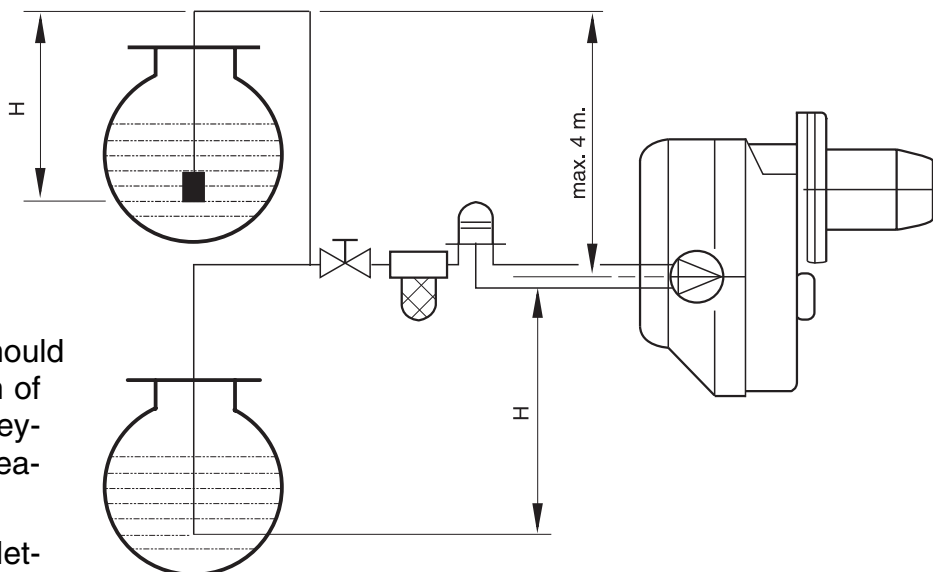
On the tank installation, where vacuum can occur in the oil tubes, you install a flow-control between the front filter and the oil burner.

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).

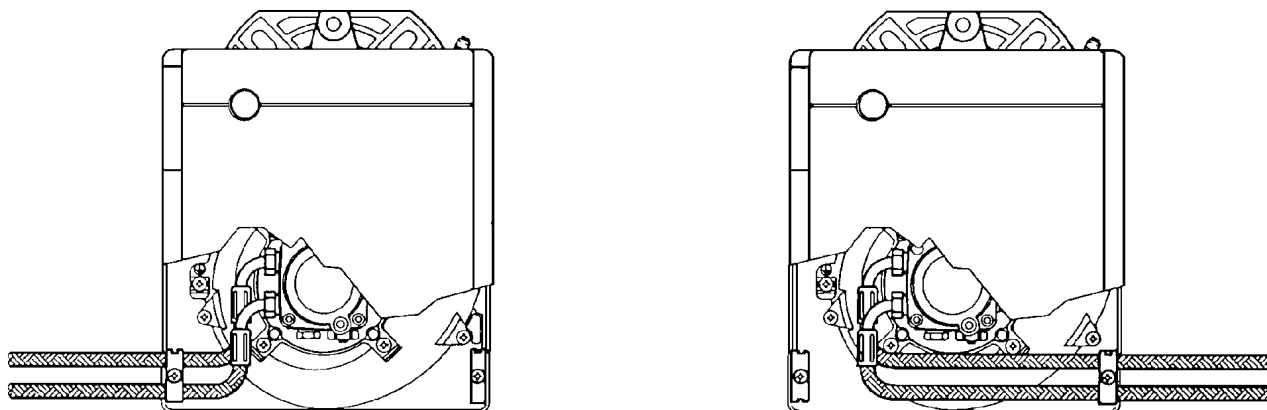


Fig. 1

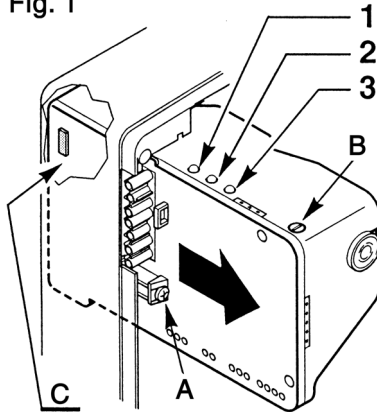
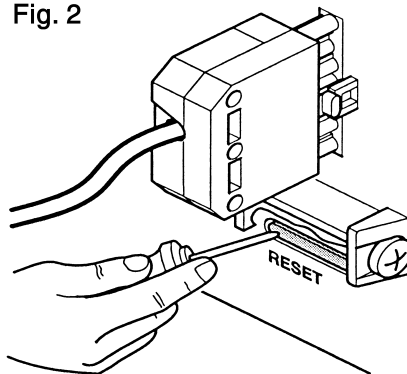


Fig. 2



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:

EI cable (min. 1 mm²) 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).

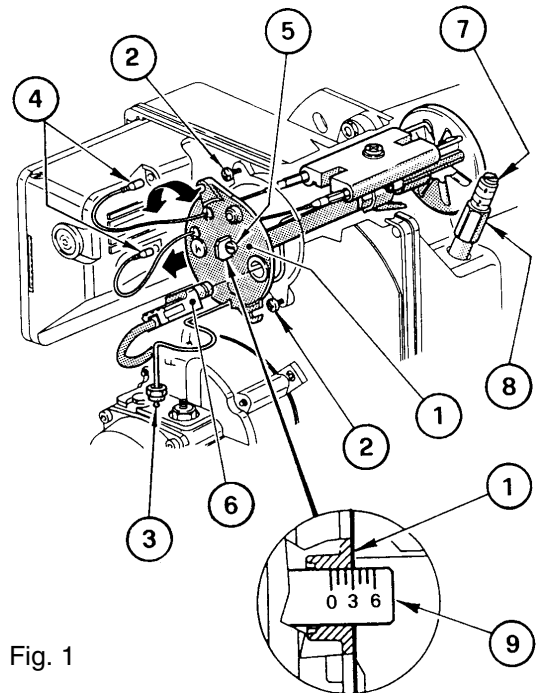


Fig. 1

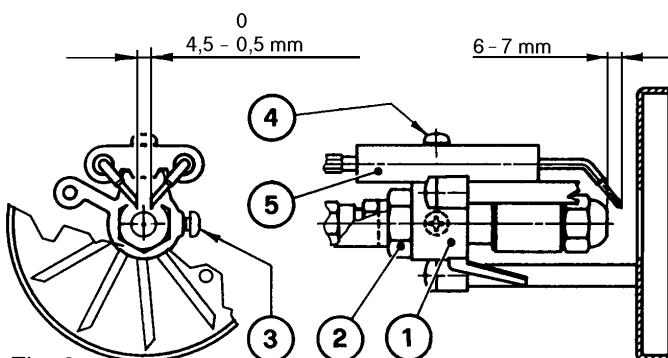


Fig. 2

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 2,25 GPH 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		Pumpetryk [bar]		Burner output [kg/h ± 4%]		combustion head adjustment Set-point	Airdamper adjustment	
[GPH]	Angle	1st stage	2nd stage	1st stage	2nd stage		1st stage	2nd stage
1,50	60°	9	15	5,3	6,8	0,0	0,2	0,5
1,75	60°	9	15	6,4	8,2	0,5	0,25	1,0
2,00	60°	9	15	7,2	9,3	1,5	0,4	1,1
2,25	60°	9	15	8,2	10,5	2,5	0,5	1,5
2,50	60°	9	15	8,7	11,2	3,5	0,6	2,0
3,00	60°	9	15	10,5	13,5	5,0	0,8	3,0
3,50	60°	9	14	12,5	15,2	6,0	1,0	3,9

1st stage adjustment

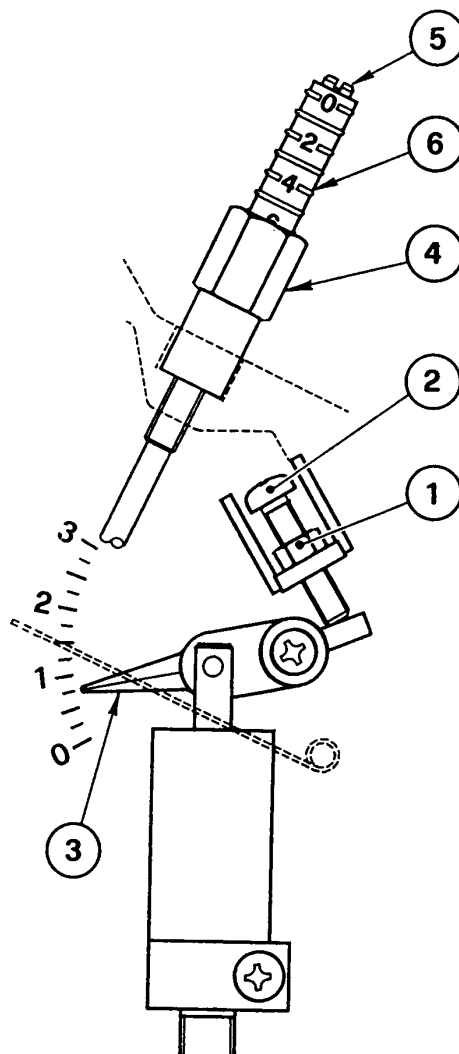
Adjustment of air shutter:

Unloosen the nut (1), turn the screw (2) until the indicator (3) reaches the position desired. Then lock the nut (1).

Pressure regulation:

This is set at 9 bar at the factory. Should it be necessary to re-set or alter such pressure, this can be done, by adjusting screw (7).

The pressure gauge must be mounted in place of cap (8).



2nd stage adjustment:

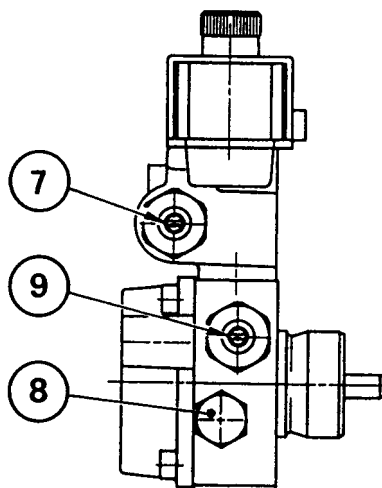
Adjustment of air shutter:

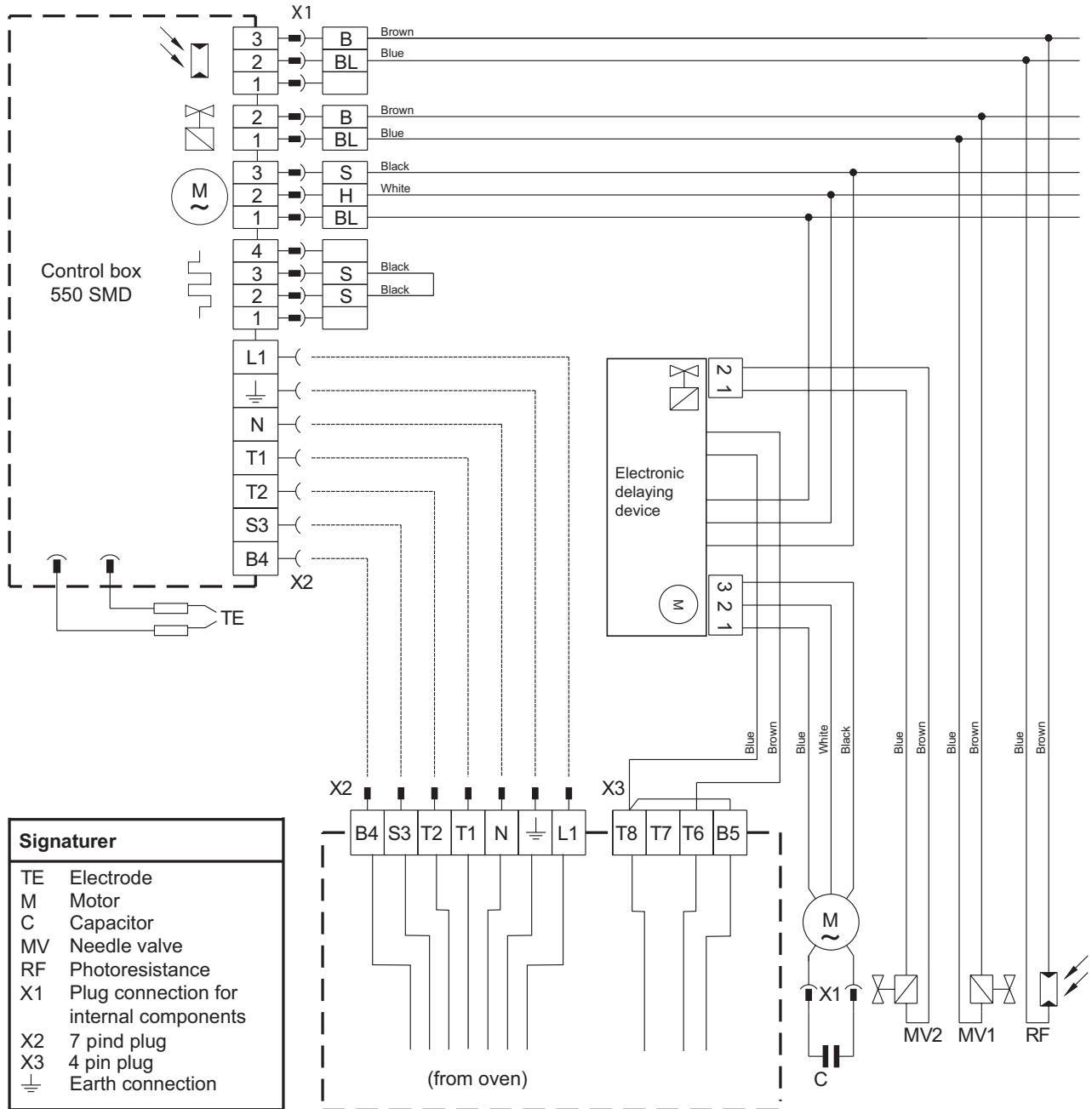
Unloosen the nut (4), turn the screw (5) until the indicator (3) reaches the position desired. Then lock the nut (4).

Pressure:

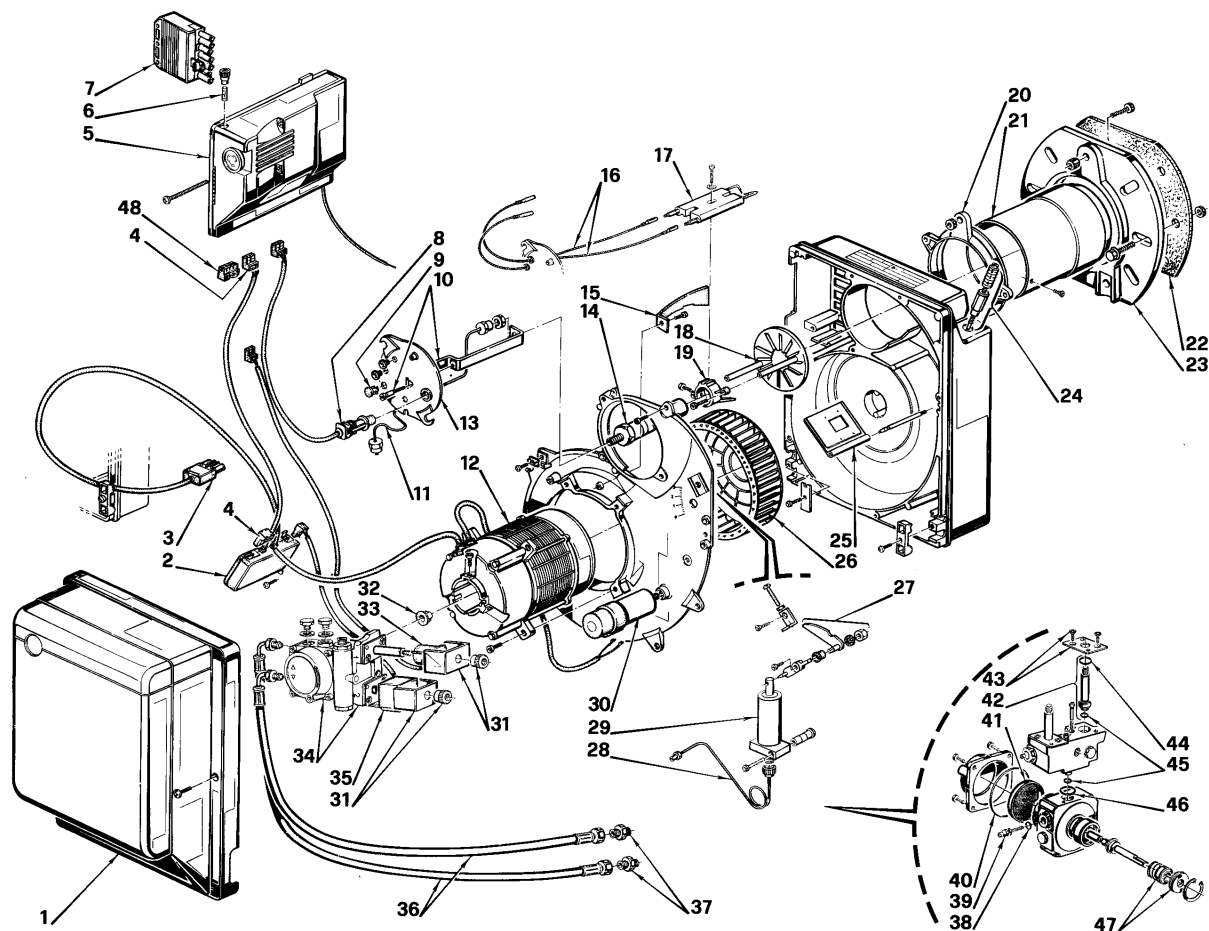
This is set at 15 bar at the factory. Should it be necessary to re-set or alter such pressure, this can be done, by adjusting screw (9). The pressure gauge must be mounted in place of cap (8).

When burner shuts down the air damper automatically closes till a max. chimney depressure of 0,5 bar.





Signaturer	
TE	Electrode
M	Motor
C	Capacitor
MV	Needle valve
RF	Photoresistance
X1	Plug connection for internal components
X2	7 pind plug
X3	4 pin plug
⊕	Earth connection



Pos.	Code No	Description	Pos.	Code No	Description
1	80002702	Cover	25	80007650	Air damper
2	80008983	Electrical start delaying device	26	80007652	Fan
3	80006949	4 pin plug socket	27	80007785	1st stage air damper reg.
4	80007454	Motor socket	28	80007867	Tube
5	80001168	Control box 550 SMD	29	80007784	Hydraulic jack
6	80007792	Fuse	30	80007655	Capacitor 6.3 µF
7	80006937	7 pin plug socket	31	80006553	Shell and knob
8	80007492	P.E. cell	32	80000443	Joint
9	80007458	Viewing port	33	80007481	Coil 1
11	80007866	Tube	34	80007854	Speed gear pump
12	80007654	Motor	35	80007858	Coil 2
13	80007642	Cover	36	80006934	Flexible oil line
14	80007496	Nozzle holder	37	80009046	Connector
15	80007651	Suction duct	38	80007028	O-ring
16	80007465	High voltage lead	39	80007202	Regulator
17	80007495	Electrode assembly	40	80007162	O-ring
18	80007645	Diffuser disc	41	80005719	Filter
19	80007466	Support	42	80006925	Needle valve
20	80007646	Collar	44	80007029	O-ring
21	80007647	Blast tube	45	80007156	O-ring
22	80005813	Gasket	46	80007167	O-ring
23	80005814	Flange	47	80000439	Pumpe seal
24	80007648	2nd stage air damper reg.	48	80007792	4 pin plug