

NATURAL GAS / L.P.G. SPACE HEATER

INDEX

1. SPECIFICATIONS
2. MAINTENANCE SCHEDULE
3. MAINTENANCE PROCEDURES

JUMBO 400 – 700 - 900

L-S 105.00-BM



WARNING

The operations described in this booklet must be carried out by qualified and instructed personnel only. Incorrect maintenance may result in improper operation and serious injury.

1. SPECIFICATIONS

JUMBO MODELS		400	400/C	700	700/C	900	900/C
Heat input	[kBTU/h]	400		700		900	
Air flow	[cfm]	4.240		7.420		8.830	
Heat output	[kBTU/h]	340		595		765	
Electrical supply		1~, 120 V, 60 Hz		1~, 220 V, 60 Hz		1~, 220 V, 60 Hz	
Electric consumption	[W]	1.240	1.760	2.120	2.300	2.850	4.330
	[A]	13,5	14,5 / 5,8	7,0	14,8	13,2	13,9
GAS BURNER	Gas burner model (natural gas or propane)	Riello 40 G400		Riello 40 G750		Riello G900	
	Natural gas fuel consumption	391,4		684,9		880,6	
	Propane fuel consumption	157,0		274,7		353,2	
	Gas supply pressure: natural gas	min 4" w.c. max 10" w.c.		min 7" w.c. max 14" w.c.		min 7" w.c. max 14" w.c.	
	Gas supply pressure: propane	min 3" w.c. max 13" w.c.		min 8" w.c. max 14" w.c.		min 8" w.c. max 13" w.c.	
Static pressure	[in WC]	0,4	0,8	0,4	0,8	0,4	0,8
Flue diameter	[in]	5,9		7,9		7,9	
Compulsory flue draft	[in WC]	0,05		0,05		0,05	
Maximum air temperature	°F	250		250		250	
Dimensions, L x W x H	[in]	72x31x43	82x31x43	85x35x53	101x35x53	95x38x59	114x38x58
Weight	[lb]	353	364	550	562	793	815

2. MAINTENANCE SCHEDULE

Service Operation	Period of service			
	Daily	2 weeks	6 months	Yearly
Inspect the heater	X			
Inspect the gas hose assembly	X			
Clean the machine	X			
Clean the fan blades and the motor		X		
Check supply pressure		X		
Inspect pulleys and belt			X	
Inspect electrical connections			X	
Inspect and test the burner			X	
Check overheat thermostat / fan thermostat			X	
Clean the interior shell				X
Inspect and clean the combustion chamber and heat exchanger				X

3. MAINTENANCE PROCEDURES



WARNING

Before carrying out any maintenance operation the heater must be disconnected from power supply. Refer to instruction manual to fully stop the heater. Therefore:

- Stop the machine as instructed
- Turn off the disconnecting switch on the main electric switchboard
- Ensure gas valve supply to the heater is closed
- Wait until the heater has cooled.

Never service heater while it is plugged in, operating, hot or if gas valve supply is not closed. Severe burns or electrical shock can occur.

3.1 INSPECT THE HEATER AND GAS HOSE ASSEMBLY

Carry out the following controls:

- Ensure that heater is not installed where there may be a risk of fire or explosion
- Ensure inflammable materials are kept at safe distance
- If you smell gas:
 - Open windows
 - Do not touch electrical switches
 - Extinguish any open flame
- Do not operate heater with panels removed
- The room or building which is being heated must be sufficiently ventilated so
- Ensure air suction and/or supply pipes are not blocked in any way,
- Ensure no sheets or covers are resting on the machine or walls
- Check the unit is placed in a fixed position;
- Ensure the heater is regularly monitored during operation and checked before being started up;

3.2 CLEAN THE MACHINE

Clean the following parts to ensure proper operation:

- Burner
 - Remove all dirt and debris.
 - Ensure that the air intake area is unobstructed.
- Hoses, connectors and couplings
 - Wipe clean with cloth.
- Covers/machine exterior
 - Wipe clean with cloth.
- Air inlets/ouputs
 - Remove all dirt and debris.
 - Ensure that the air intake area is unobstructed.

3.3 CLEAN THE FAN BLADES AND THE MOTOR

To clean the fan blades and motors, carry out the following procedure:

- Axial fan:
 - Remove the fan guard **(a)**. There are four screws that secure the fan guard.

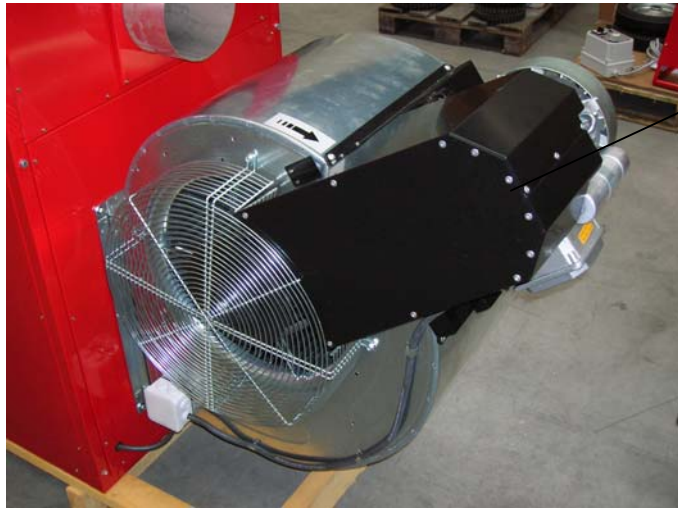


- Inspect and, if necessary, clean the motors using compressed air.
- Clean the fan blades using a stiff brush.
- Reinstall the fan guard.

- Centrifugal fan:
 - Remove the fan guard **(a)**. There are four screws that secure the fan guard.



- Inspect and, if necessary, clean the fan blades using compressed air or a stiff brush if necessary
- Remove the motor cover (b)

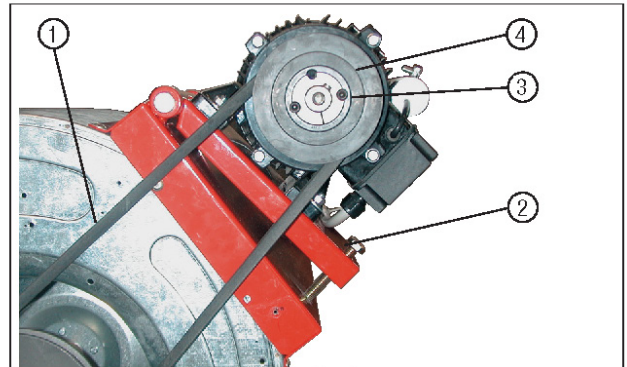
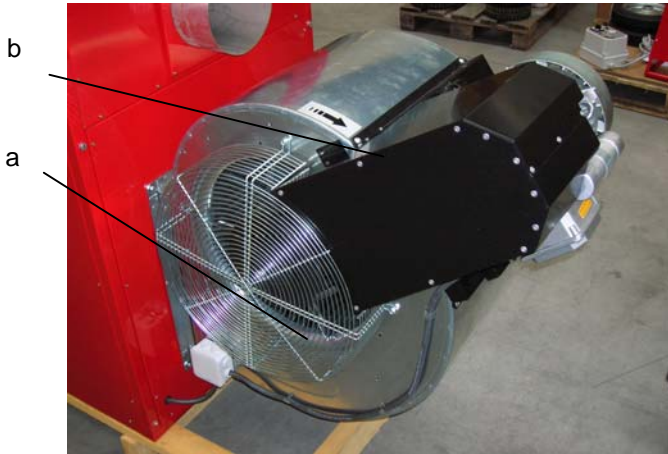


- Inspect and, if necessary, clean the motors using compressed air.
- Clean the fan blades using a stiff brush.
- Reinstall the fan guard (a) and (b).

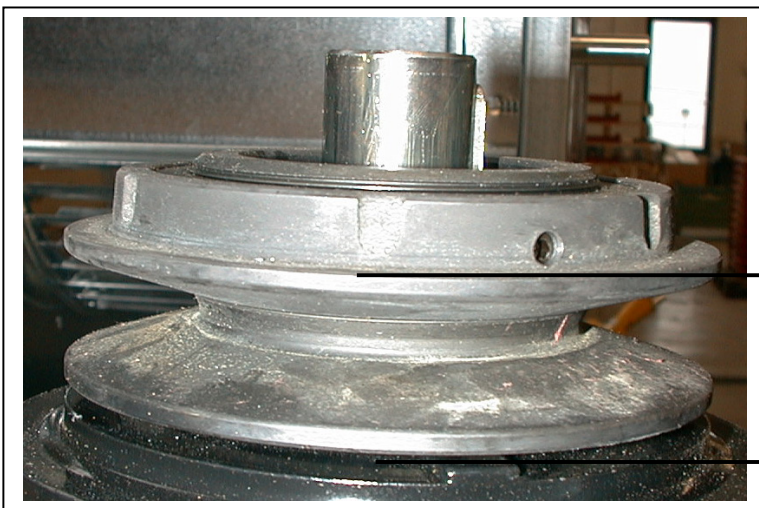
3.4 INSPECT PULLEYS AND BELT (CENTRIFUGAL FAN ONLY)

To inspect pulleys and belt, carry out the following procedure:

- Remove the motor cover (b) and fan guard (a)



- Remove the screws (2) from the motor slide.
- Remove the belt (1).
- Loosen the bolts (3).
- Check the dimension A be as follows:



Model	A [mm]
Jumbo 400/C	26
Jumbo 700/C	25
Jumbo 700/C	29

- Turn the pulley clockwise and anti-clockwise to get the right dimension A.
- Tighten the bolts (3) and fit the belt
- Put back the fan guard and motor cover

3.5 INSPECT ELECTRICAL CONNECTIONS

After disconnecting the power cord, check all electrical connections for the following:

- Proper connections.
 - Be sure that all connections are complete and tight.
- Corrosion.
 - Clean or replace if necessary.
- Damaged wires/connectors.
 - Replace if necessary.
- Proper ground.

3.6 INSPECT AND TEST THE BURNER

Refer to burner instruction /service manual

3.7 CHECK OVERHEAT THERMOSTAT / FAN THERMOSTAT

To inspect thermostats, carry out the following procedure:

- Remove outlet grille
- Clean thermostat bulbs with a dry cloth: take care not to cut nor bend the capillary tube.



- Remove the burner protection cover and access to thermostat box (a)



- Remove plastic cover of thermostat box

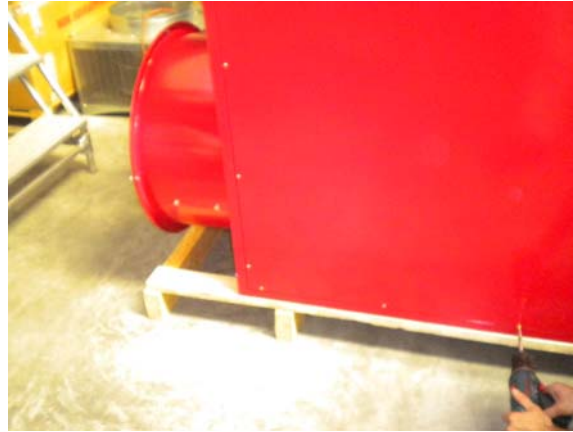


- Remove screws on side of plastic box of thermostat L1 and F
- Check adjusting be
 - Thermostat F: 30 °C
 - Thermosta L1: 90 °C

3.8 CLEAN THE INTERIOR SHELL

To clean the interior shell, carry out the following procedure:

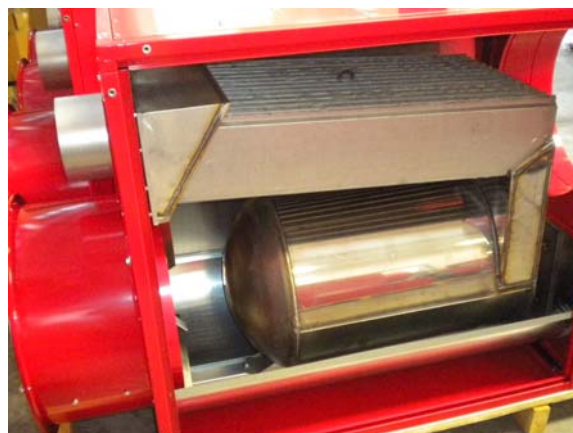
- Unscrew lateral panel (left side of burner)



- Remove external and internal panels (left side of burner)



- Inspect and clean the interior shell using compressed air.



- Re-install the machine shell covers.

3.9 INSPECT AND CLEAN THE COMBUSTION CHAMBER AND HEAT EXCHANGER

To clean combustion chamber, carry out the following procedure:

- Remove burner cover
- Unscrew and remove burner
- Inspect the combustion chamber with light
- Clean inside with a wire brush if necessary
- If necessary replace the burner gasket
- Re-install the burner

To clean heat exchanger, carry out the following procedure:

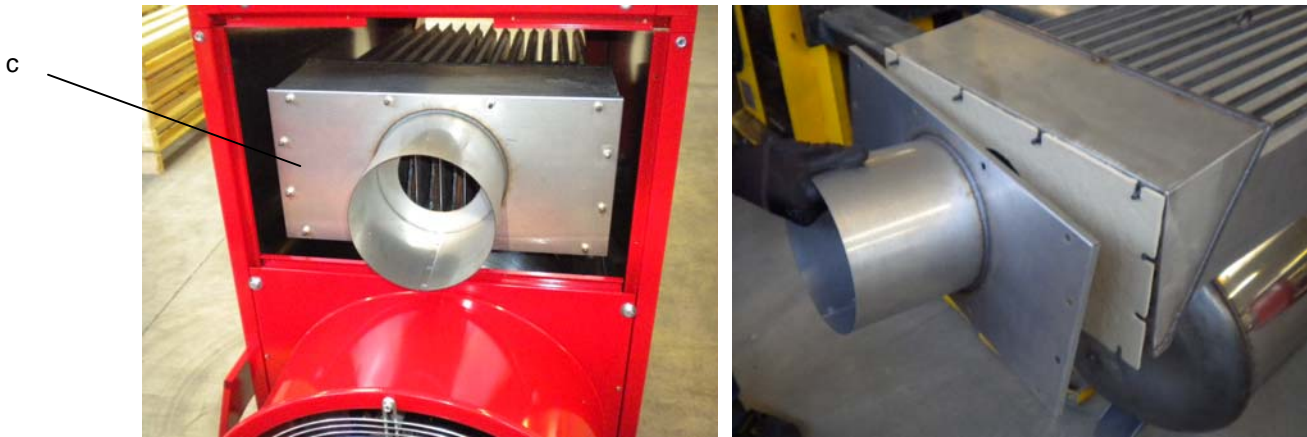
- Unscrew and remove panel (a)



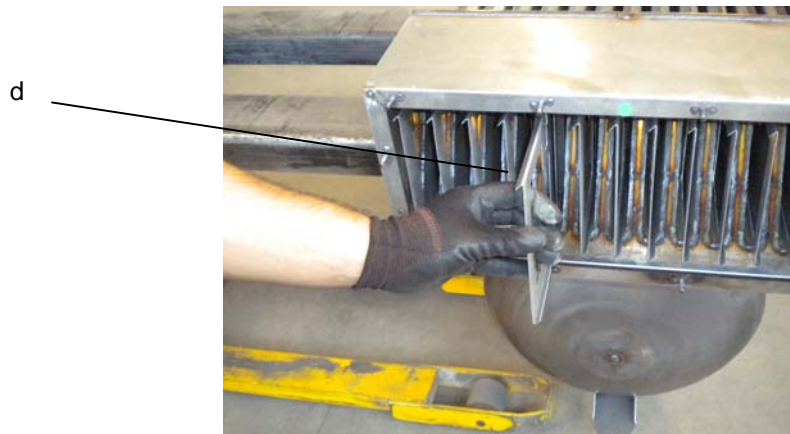
- Unscrew and remove panel (b)



- Unscrew and remove panel (c) taking care of the gasket on the rear plate



- Pull out plates (d), and clean with compressed air or wire brush



- If necessary replace plate gasket



- Reinstall cover plates of the heater