

D Series Cast Iron Oil - Gas Fired boiler

Installation, Operation & Maintenance Manual

English



D Series Range Of Floor Standing Oil / Gas Fired Boiler
Cast iron
Triple - Pass Design
D 03 - D 08 (29,1 kW to 78,5 kW)





D SERIES BOILER

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Certifications

Rima D Serie boilers are in compliance with the ;

EC Directives

(90/396/EEC) Gas Appliances Directive

(73/23/EEC) Low Voltage Directive

(89/336/EEC) Electromagnetic Compability Directive

92/42/EEC Efficiency Directive

Ref Standards :

EN 303-1

EN 303-2

EN 304

EN 60.335.1

EN 50165

EN 550114-1

EN 550114-2

EN 61000-6-3

EN 61000-3-2

EN 61000-3-3

Rima D Series Boiler CE approved , No: B-30-00670-07

Symbols



Caution danger



Important



Info

Introduction

First of all we'd like to thank you for choosing **Rima** cast iron boilers.

In this manual you will find the instructions for Rima three pass cast iron boilers suitable for both gas and liquid fuel. D series hot water boilers and related information for installation, operation and maintenance of the boiler. For high efficiency and proper working conditions please read this manual carefully. For more information please check the product catalog or get in touch with Rima technical services.

Please do not touch or remove any parts of the boiler for starting, adjusting or repairing the boiler except the processes written in this manual.

Please call Rima services and technical officials for installing the boiler.

Our licensed frenchisers and services will give you instructions about working principals, conditions and care instructions after installing and starting the boiler.

And our professionals will be glad to answer all your questions at any time.

Rima licensed services are in your service all kind of problems and questions. You may find the contact informations in the licensed services manual which will be given to you with the boiler.

You can call our line + 90 212 485 48 74 or send an e-mail to info@rima.com.tr when you have questions for problems.

Guarantee Items

- In the terms of obeying the instructions, warnings, points in this manual and the standards in charge (EN norms and directives must be applied if mentioned standards are not in use.) cast body is under 5 (five) and other parts are under 2 (two) years guarantee.
Rima is responsible for repairing or renewing if the following conditions are available.
- Guarantee Document must be filled by the frenchiser that you have bought the boiler and must be send to Rima.
- Assembling and installing faults and problems, problems that will be occurred because of wrong upkeeping and working are not under guarantee. Problems related to lime coating or/and any other materials coating and corrosion on the heat transfer units of the boiler are not under guarantee conditions.
- Minimum life of these kind of products is mentioned as fifteen years by the minister of industry and commerce
Manufacturer and sales companies are to supply all spare parts and services to the clients in this period.
- The problems happened by the following mentioned issues are out of guarantee conditions
- Boiler without guarantee document
- Boiler fixed, repaired or adjusted by unauthorized services
- Boilers with wrong type selection, wrong installing and assembling, boilers used wrong conditions and out of aim.
- Problems occurred while transportation, stocking or problems occurred under atmospheric conditions.
- The problems occurred by physical or chemical effects.
- Wrong fuel selection and the problems occurred by fuel conditions,
- Wrong installation or connection to the boiler to water and other plumbing systems.
- Weak flue (gas output) system
- The problems occurred by scratching, touching to control and safety systems of the boiler.
- Cold water load while the boiler is hot
- Starting the boiler without water or required water in it.

General Warnings

- D series cast iron boilers are designed for working with hot water heating and/or hot water plumbing and produced with the proper technology and materials suitable to this design. This design is restricted to use out of its aim of use.
- D series boilers are delivered completely assembled. Removing or re-assembling of the boiler should also be made by licensed Rima services, if not the risk of damage is high.
- In the assembling of the boiler; there must be a proper and safe concrete platform for to put the boiler on.
- In the assembling of the boiler, an empty space must be left from sides for safety requirements and for future repairing operations.
- Starting and first operation of the boiler must be made by authorized Rima technicians.
- Do not add or pump water to the boiler or plumbing system as it is working and hot. For adding water to the boiler or to the system please wait for water temperature to reach 40 °C. Circulation pump must surely be started while adding water to the system. If not, the sections may crack.
- If the boiler will be kept off for a long time the electric system must be shut down from the main fuse. The electric must be cut off from the main shelter/fuse as the boiler is in repair, service or cleaning.
- In summer months, when the boiler is off for a long term, for preventing probable problems with circulation pumps, must be started 1 -2 times per month for 5 minutes. (The water with chalk can cause problems if the pump is not used for long time period.)
- The periodical controls of the boiler and the burner must be done. If not, the boiler can lose efficiency and the fuel amount used can increase.
- The capacity choice of the boiler must be made according to the projects that prepared properly in the terms of related standards. If not the efficiency will be low.
- D series boilers are produced for heating only. For heating the sanitary water another equipment such as water heater or heat exchanger is needed. And for proper efficiency in this operation, correct water heater or heat exchanger must be selected.
- D series boilers are delivered without burners. For suitable burner selection please get in touch with Rima technicians. Suitable burners must be selected for taking high efficiency.
- If the boiler is stopped automatically because of overheating do not add cold water to the boiler for restarting. In this case wait for the boiler to cool down and try- restarting. If it does not start please get in contact with technical services.
- In cleaning, repair and other care operations the original spare parts which approved and manufactured by Rima must be used.
- The periodical and yearly controls of the boiler must be done properly and on time. Natural gas is a clean fuel and doesn't make a lot of dirt in the boiler. But the boilers that liquid fuels are used as fuels are much more easily get dirt. Controls and care operations of the boiler is needed for keeping high efficiency and long life of the boiler.
- Repairing and periodical controls of D series boilers require profession. In this manual the responsibilities and required information for users of the boiler is declared. Besides these declared operations, boiler must not be started by a person rather than the user or one our technicians. Please do not try to make adjustment or do not touch any parts of the boilers.

- The electric of the burner and the boiler is supplied by city electric network. In this case the electric and lighting systems of the boiler room, burner and boiler electrical connections, grounding line of control panel and boiler must be made by professionals under the required and related standards.
- In this manual you will find informations only for the boilers. Please do not forget to get the instruction manual of the burner that you purchase from the manufacturer of it. Burner is not delivered with the boiler. In this case we do not give any guarantee for the burner that you purchase. Please get the guarantee certificate for the burner from your supplier.
- Please be sure that the front door (burner door) for the boiler is strictly closed and burner connections are properly made as the boiler is working.
- Do not touch hot water connections or the flue outlet when the boiler is operating.



General Characteristics of D series Boilers

D series boilers are, blowing burner, cast iron sectioned, between the capacities 29 – 78,5 kW with proper burner connection, works with gas or liquid fuel in 6 different (3 – 8 sections) type.

D series boilers operating pressure is 4 bar maximum, and working temperature is 90 °C maximum.

In D series boilers, heat transfer surface areas are increased by the special wings in the burning room and chimney ways. This increases the high heat transfer ability of cast iron boiler to the maximum level.

D series boilers are cast iron sectioned boilers. This brings easy assembling and easy capacity increasing by adding sections to the boiler. The transportation and set up of the boiler is easy because boiler is assembled in boiler rooms. It is easily to carry or shift position without breaking walls etc.

D series boilers are casted with special alloy, which is durable for thermal expansions and changes, EN GJL 200. They are long life boilers according to this special cast iron alloy.

With the help of vertical and three pass specially designed sections burning gases pass three times in the boiler and transmits burning energy to the water inside the sections at high level.

D series boilers are high efficiency boilers. (According to the fuel bottom heating value % 91 – 93). With this high efficiency and perfect isolation more energy is gained with less fuel. Heat losses are minimized on D series boilers.

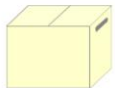
By appropriate burning room, heat transfer surface, turbulator, collector and isolation high heat transfer and optimum flue gas emission results are provided.

Delivery Conditions

Boiler sections are delivered as assembled or not assembled according to the boiler room specifications and dimensions. In not assembled deliveries, sections and assembling aparats are delivered on a pallet, cabins, isolation and other elements are delivered in a box. Rima technicians make the assembling of the boiler.



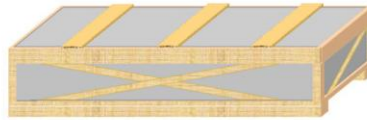
Burner Box(pallet and Cardboardbox)



Mounting Parts box
(Cardboard Box)



Control Panel box
(Cardboard Box)



Boiler Cabin Sheet Parts and
insulating jacket
(wooden box)



Cast Iron Boilers Elements
(80x120 Pallet)

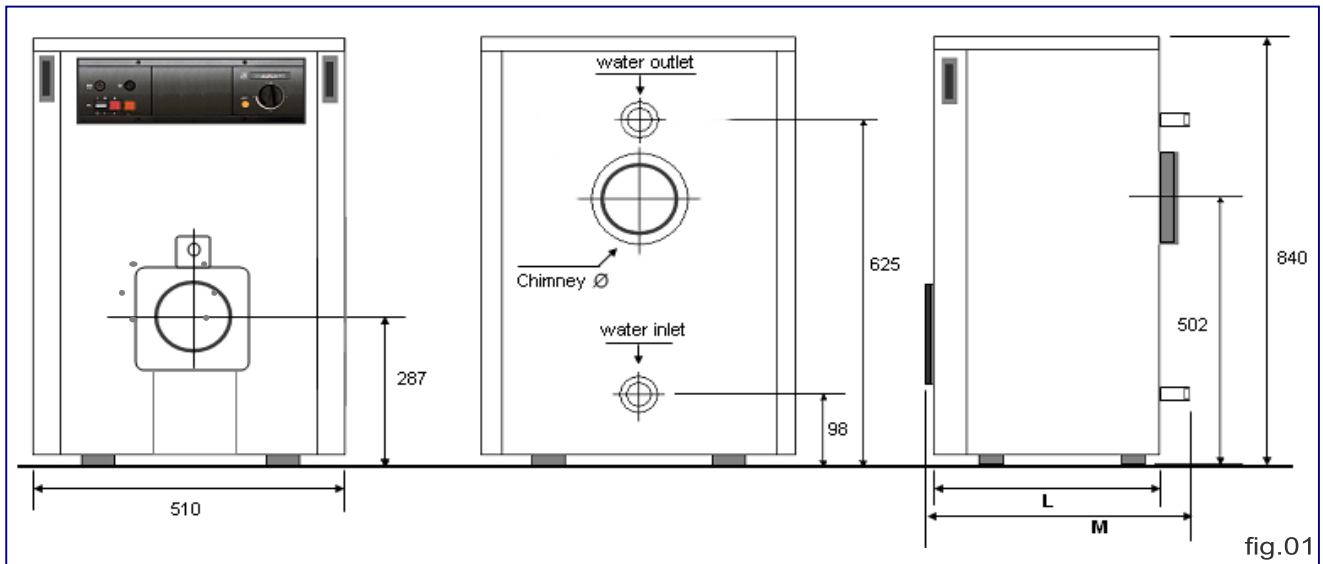
Notice: Please obey to the meanings of the symbols on packaging for healty care.



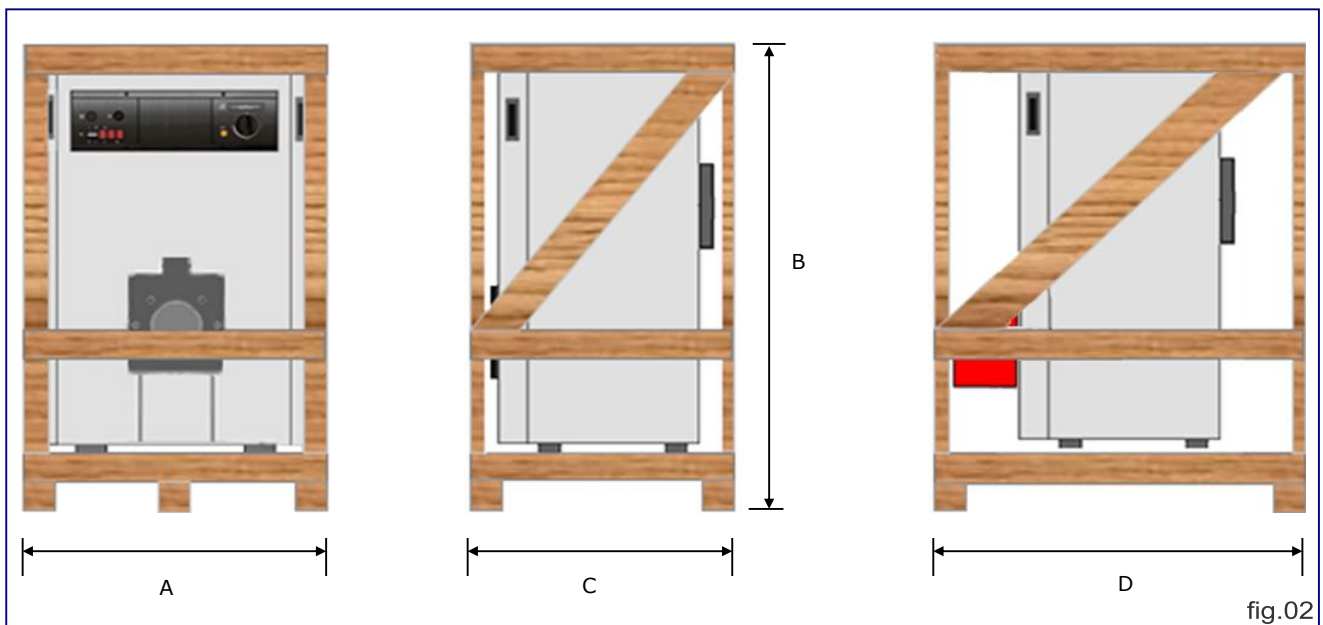
D Series Cast Iron Boiler - Technical Data

Series Name		D - 03	D - 04	D - 05	D - 06	D - 07	D - 08
Number Of Elements	Pcs.	3	4	5	6	7	8
Nominal Heat Output	kW	29,1	39,0	48,8	58,7	68,6	78,5
	kCal/h	25.000	33.500	42.000	50.500	59.000	67.500
Nominal Heat Input	kW	32	42	54	64	75	85
Maximum Operating Temperature	°C	90					
Range Of Temperature Control	°C	30-90					
Gas Side Resistance	mbar	0,31 - 0,46	0,42 - 0,59	0,61 - 0,89	0,84 - 1,25	1,02 - 1,37	1,19 - 1,56
Maximum Operating Pressure	bar	4					
Boiler Water Content	L	13,74	17,38	21,02	24,66	28,3	31,94
	m ³	0,01374	0,01738	0,02102	0,02466	0,0283	0,03194
Exit Flue Connection Diameter	mm	130			150		
Combustion Chamber Dimensions [Φ]	mm	290					
	[L]	mm	280	380	480	580	680
Water Inlet- Outlet Connection	(")	G 1 1/4 "					
Gas Volume of the Boiler	L	24,20	33,40	42,60	51,80	61,00	70,20
	m ³	0,024	0,033	0,043	0,052	0,061	0,070
Gas Volume of the Combustion Chamber	L	16,94	23,38	29,82	36,26	42,7	49,14
	m ³	0,017	0,023	0,030	0,036	0,043	0,049
Safety Temperature Limit	°C	100					
Fuel Type	N.Gas	L ₂ H					
	Liquid F.	Extra Light Heat Oil					
Country of Destination		AT, CZ, DK, EE, ES, FI, GB, GR, IE, IT, LT, LV, PT, SE, SI, SK, TR					
Flue Gas Temperature [Full Load]	°C	181 - 187	175 - 185	170 - 182	169 - 181	167 - 180	163 - 176
	[Partial Load]	°C	160 - 163	157 - 160	155 - 157	152 - 155	146 - 150
Flue Gas Mass Flow [Full Load]	kg/h	49	65	82	98	115	131
	[Partial Load]	kg/h	29	39	49	59	68
Boiler Dimensions [Width x Height]	mm	510 x 840					
	[Length]	mm	540	640	740	840	940
Standby Loss	%	0,25	0,23	0,20	0,17	0,15	0,13
	kCal/h	678	835	907	926	956	948
Burner Hole Diameter	mm	105					
Burner Type		Short Barrel					
Boiler Net Weight	kg	148	175	202	229	256	283

D Series Cast Iron Boiler - Dimensions



Serie	L (mm)	M (mm)	A (mm)	B (mm)	C (mm)	D (mm)
D - 03	455	540	600	1.055	550	850
D - 04	555	640	600	1.055	650	950
D - 05	655	740	600	1.055	750	1.050
D - 06	755	840	600	1.055	850	1.150
D - 07	855	940	600	1.055	950	1.250
D - 08	955	1.040	600	1.055	850	1.150



Notice: Please obey to the meanings of the symbols on packaging for healthy care.



Rima D series boilers are delivered as mounted on a wooden pallet with bubble nylon protection surrounded and in wooden cross case.

Recommended Minimum Distance for Installation

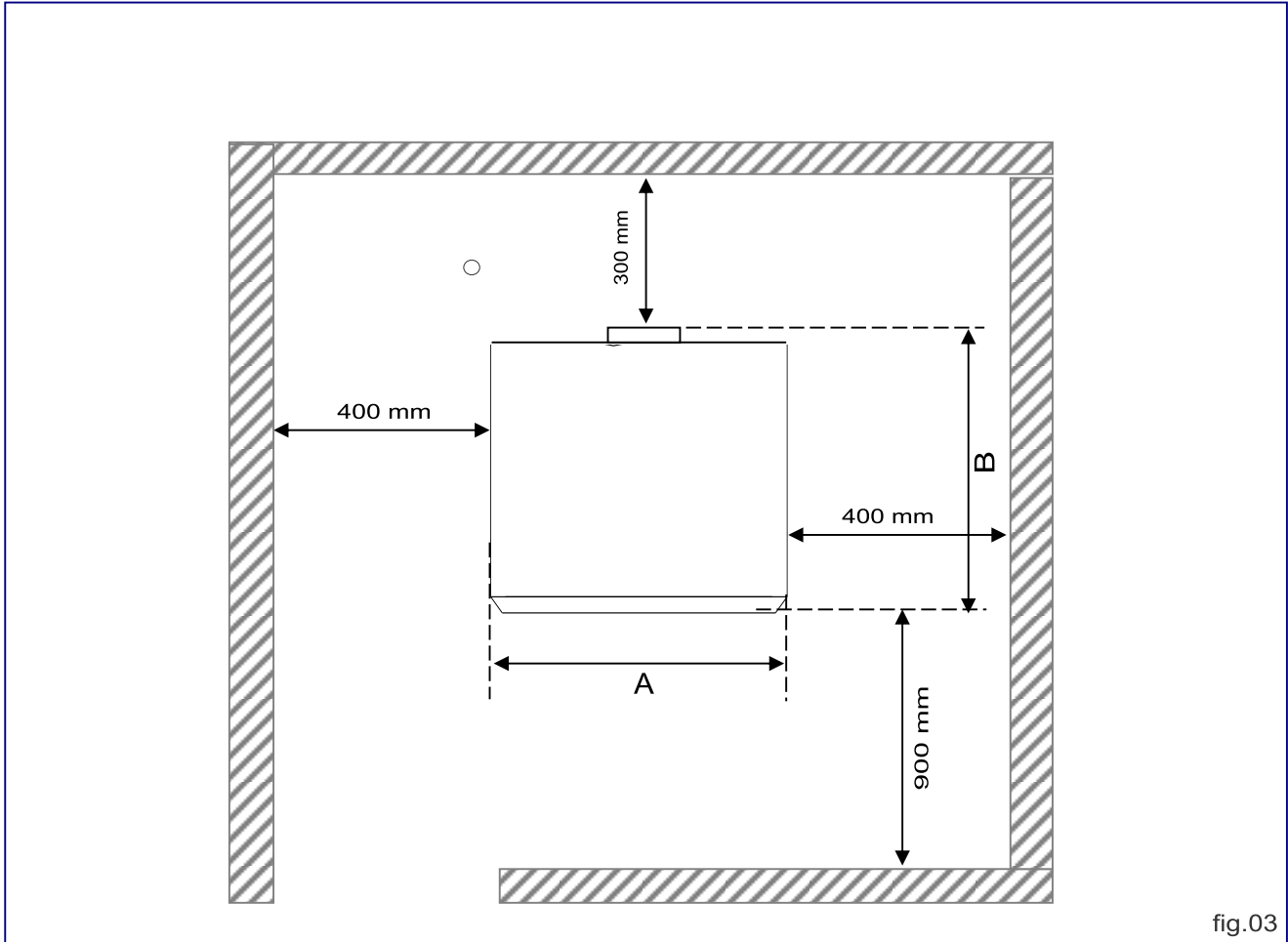


fig.03

Dimensions

Type	D - 03	D - 04	D - 05	D - 06	D - 07	D - 08
A (mm)	510	510	510	510	510	510
B (mm)	540	640	740	840	940	1040

When installing the boiler, the minimum clearances shown in Fig. 03 must be maintained to ensure unhindered access to the boiler. The height of the boiler room should be at least 2200 mm .

The side clearances and the clearance in front of the unit shown in the drawing are for maintenance purposes.

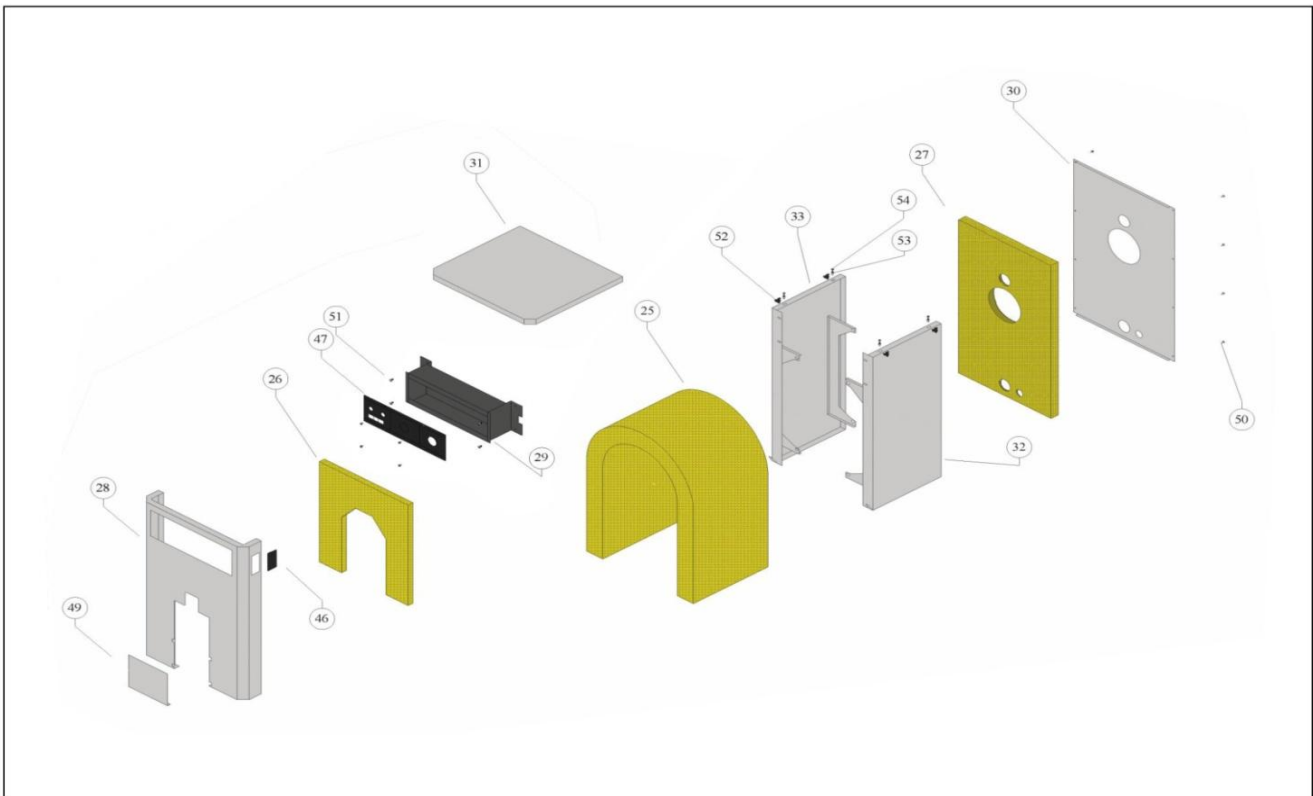
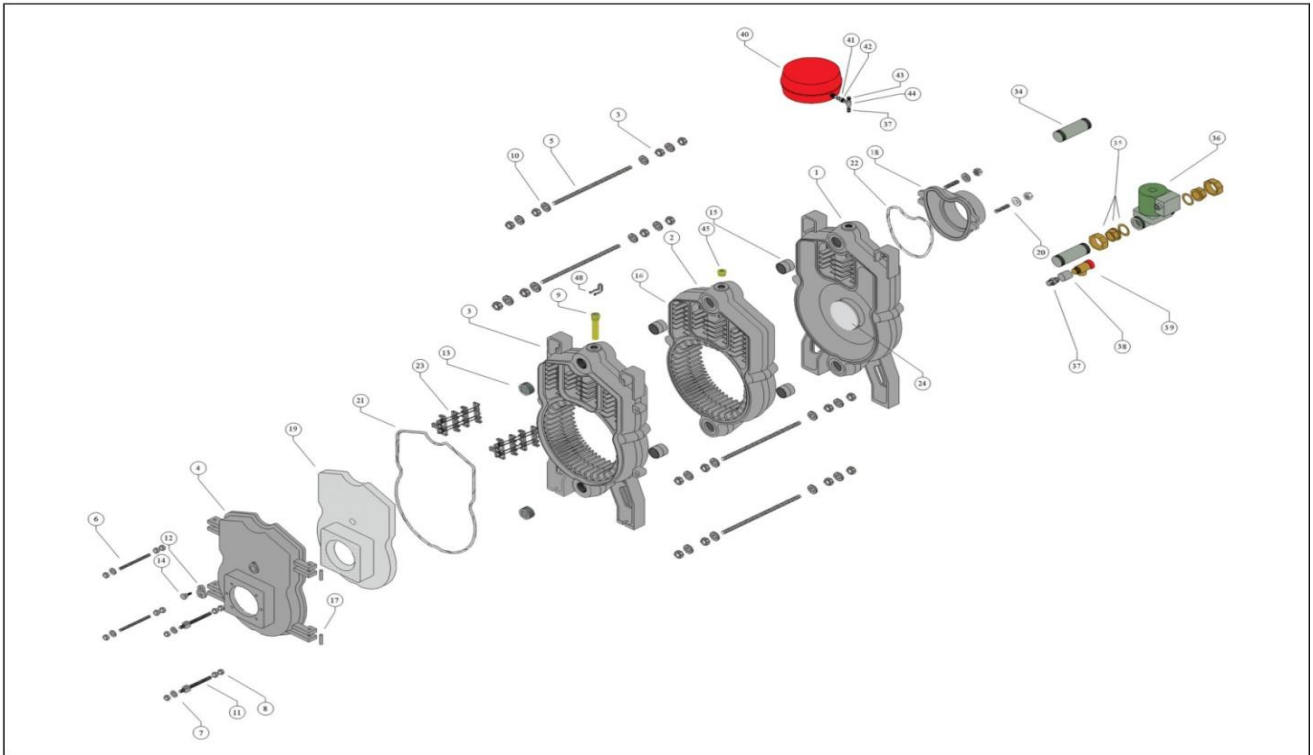


Do not put flammable materials on top of the boiler or near the boiler than specified safety distance.

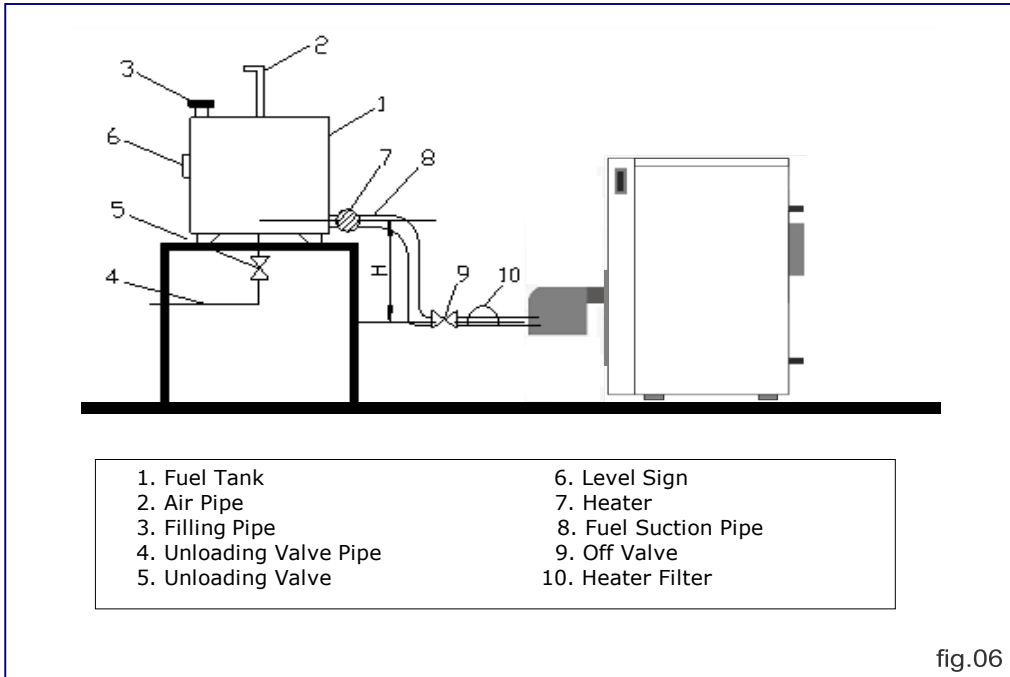
Plumbing Instructions

- Fresh water must be added periodically to the plumbing. The chalk and other chemicals will connect with the system and become solid. For avoiding this closed expansion tank must be used in the system. In the systems that closed expansion tanks are used, water will flow in closed system so it will not evaporate and lost. So in this kind of systems the water level will stay same and fresh water addition will not be necessary. This will prevent chalk and dust and the life of the system will be long.
- The water in the radiator or heating system is not healthy. Do not use this water as drinking or cleaning water. Do not take water from the system. If the water level is low water addition is needed.
- For avoiding chalk and other chemical dust problems soft water must be used in the system. Plumbing system water quality : $Ph \geq 7,2$ $Th \leq 25$ °Fr
- If the city sanitary water is not in requested quality water addition from wells or other sources must be made after testing it. For reaching the requested quality additional processes must be applied to the water if needed.
- For avoiding the chalk and other dust to get in to the boiler, or from boiler to plumbing system dust holders must be placed in and out line of the system.
- Circulation pump must be connected to the water output of the boiler and the capacity of the pump must be suitable to the boiler capacity. If not, problems may occur in flowing of the water and heating efficiency of the boiler.
- For working the system properly 4 way mixture valve or thermostatic control by-pass pump must be used for increasing return water temperature.
- By connecting a three way motor valve between the forward and return line of heating system, the water that flows to the system can be controlled in ratios.
- There must be water inside of the boiler every time. If not corrosion can occur in the boiler and the plumbing system. If the boiler will not be used in winter season, for avoid freezing anti-freeze solution must be used.

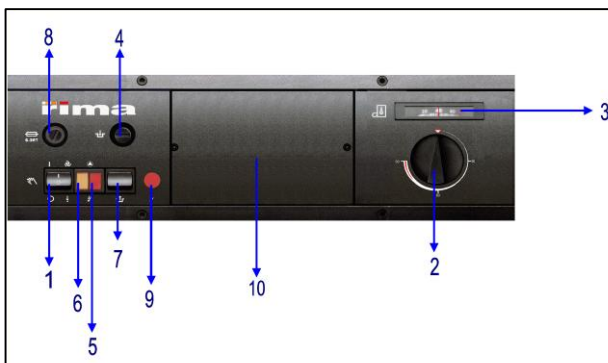
D Series Cast Iron Boiler & Cabin Parts



Instructions For connecting The Fuel Tank

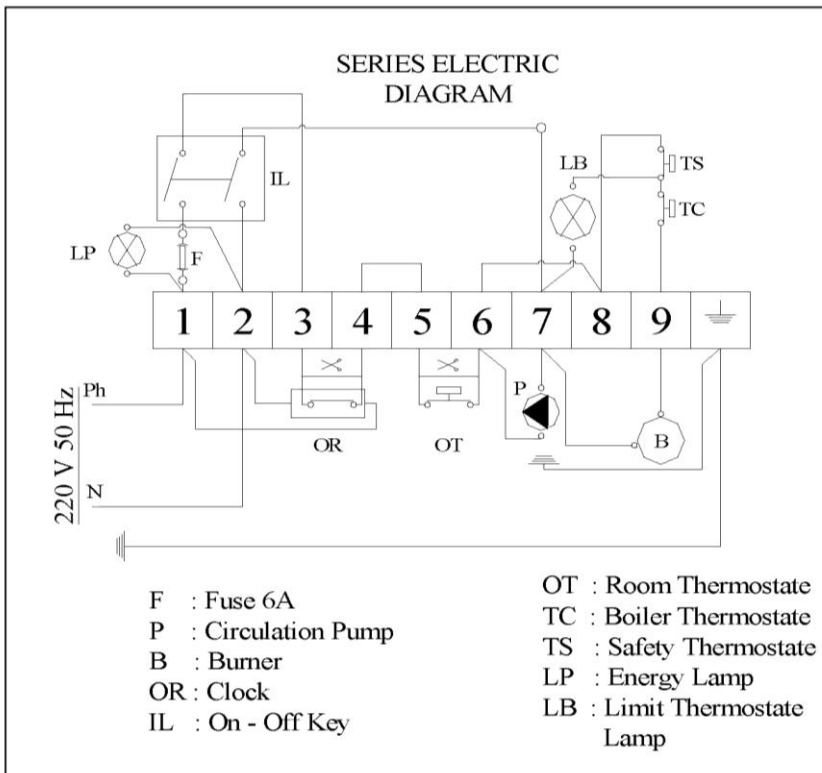


The platform of the fuel tank must be strong to carry the tank. If the fuel tank is outside tank and connection pipes must be isolated. Fuel tank must be positioned in higher level than the burner. The height difference between the burner and fuel tank (H) must be more than 4 m. In the seasons that the boiler is not used, fuel tank must be empty for avoiding corrosion.



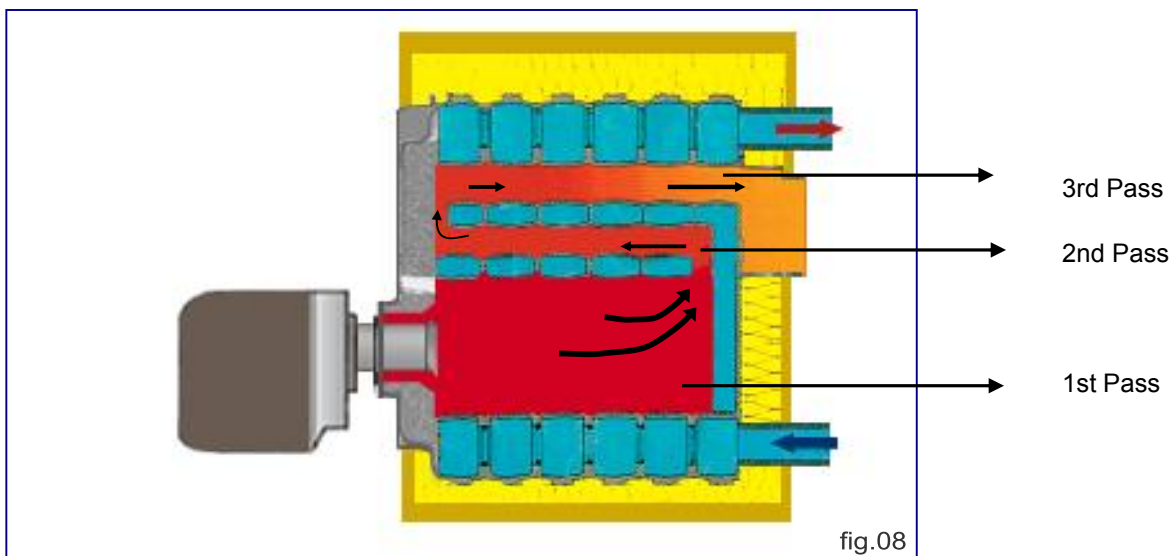
- 1- Main ON/OFF Switch
- 2- Boiler Thermostat (30 to 90 °C)
- 3- Boiler Thermometer
- 4- Safety Thermostat with manual reset (set to 100 °C)
- 5- Defect Indicator
- 6- Working Indicator
- 7- Reset Button
- 8- Fuse
- 9- Water pressure defect indicator
- 10- Ecopanel mounting place

Electric feeding is 220 V. 50 Hz. Monophase



Cast Iron Sections with High Efficiency Three Draught Design

Three draught design forces the flue gas to circulate inside the body of the boiler three times before the chimney exit, transferring all useful energy to the water inside the sections. The optimized combustion chamber combined with perfect heat insulation provides maximum fuel efficiency.



The combustion room of the boiler is positive pressure. Boiler is working under vertical three pass principal.

Operating Instructions

Heating System

In the system the difference between direct flow temperature and the return temperature of the water must not be over 20 °C. The return water temperature must be over 50-55 °C. Boiler protection pump must be used for increasing the return water temperature. The water level of the system must be measured every day (if it is open system by hydrometer, if it is closed system by manometer) and water must be added if the level is measured low. But this water addition must not be made while the system is hot. If there are problems that cause water leakages they must be fixed as soon as possible.

Plumbing system must be made by certificated professionals, under the terms of EN standards. EN approved materials must be used in the system.

Fuel and Electrical Connections

These connections must be made by certified professionals under the terms of EN standards. EN approved materials must be used in the system.

Burner, control panel, ecopanel etc. Manufacturers' or distributors warnings, instruction manuals must be read. Burner must not be started before boiler circulation starts. If circulation or protection pump has a failure burner must be switched off. This system must work coordinarily. Turning the pumps on when the water heat gets over 40 °C is completely wrong. Circulation pump and burner must work simultaneously.

Protection pump must be chosen properly according to the capacity of the boiler. The connection of the pump to the collectors must correctly made with valve and thermostat connection. This way, system can stop in adjusted temperature. In any failure situation (contactor, thermic failure, electric cut, other failures). When the pumps are not working (heating and protection pumps etc.) burner must not start. Must be switched off. System must do this automatically.

Electrical system must be made according to all above information.

Loading and Unloading Boiler Water

Unloading Water Of The Boiler

- Plumbing and all radiator valves must be opened if the boilers water will be unloaded.
- All the systems water can be unloaded by boilers drainage as if the boiler is in the bottom of the system.
- If some part of heating system is under the boiler room, unloading the water process can be made at a point at the bottom of the system.

Loading Water To The Boiler

- Water must be loaded from the tap over the plumbing system to the boiler.
- During the loading process all valves of the plumbing system and the radiators must be opened.
- For preventing air fill to the system this operation must be made slowly and the stopper in the top must be opened. When water comes from this stopper it means that the process is finished. Air must be taken from every radiator.
- Boiler must not be filled up with water when it is hot. This can cause cracks in sections.



Water must be in quality which mentioned on page 11, "Plumbing Instructions".

Water Circulation

For healthy working conditions of the boiler, temperature difference between water forward and water return must not be more than 20 °C

And boiler must not be started or work under the water volumes which is mentioned in the above table.

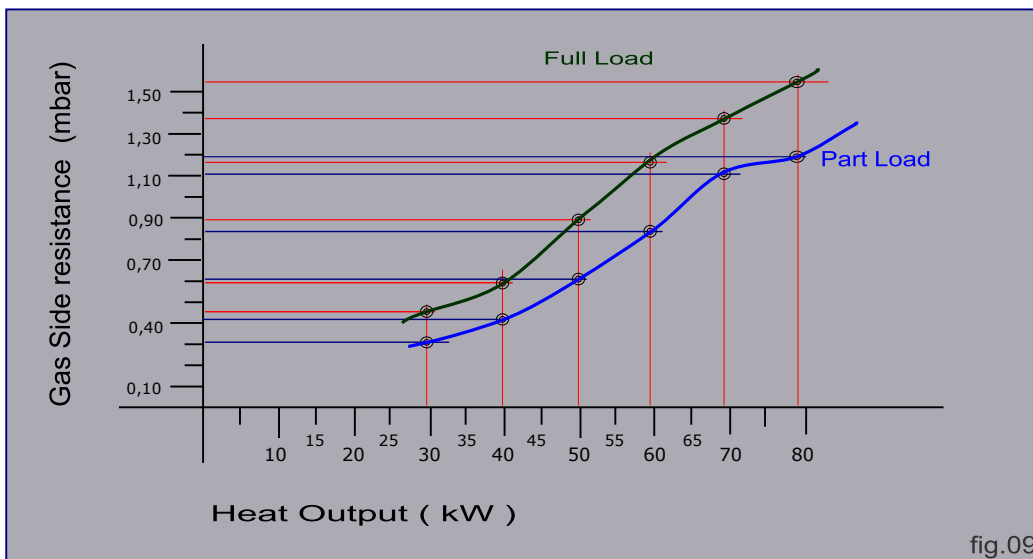
Boiler Type	Capacity		$\Delta t = 10 \text{ K}$		$\Delta t = 20 \text{ K}$	
	kCal/h	kW	Water Volume	Water Part Resistance	Water Volume	Water Part resistance
			m ³ /h	mbar	m ³ /h	mbar
D - 03	25.000	29,1	2,5	14	1,3	4
D - 04	33.500	39,0	3,4	21	1,7	5
D - 05	42.000	48,8	4,2	29	2,1	8
D - 06	50.500	58,7	5,1	41	2,5	12
D - 07	59.000	68,6	5,9	78	3,0	23
D - 08	67.500	78,5	6,8	114	3,4	31

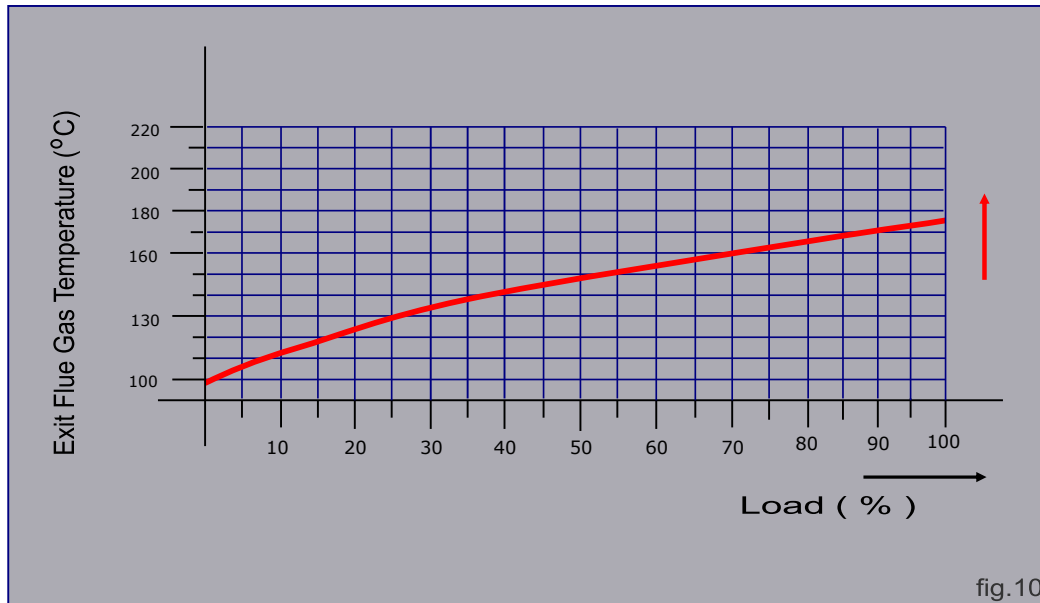
* Δt = temperature difference



Rima D series boiler is designed, forced circulation hot water heating systems only.

Gas Side Resistance , Exit Flue Gas Temperature





Important Instructions About Boiler Room

- ! There must not be any other equipments such as aspirator, air condition central etc. in the boiler rooms. These kind of equipments can make vacuum effect and defect boilers pull force. This can cause burner failures.
- ! The ceiling of the boiler room can be isolated for sound and heat isolation. The position and place of the boiler is important for sound isolation of the boiler.
- ! Boiler room must have a good lighting and control switches of lighting must be outside of the boiler room.
- ! There must not be equipments like water pump, contactor etc.. In the boiler room.
- ! Gas alarm equipments must be placed to the proper highth as mentioned on standards.
- ! No one except the responsible person should get in to the boiler room. Children must not enter to the boiler room. A second key must be kept in safe place for urgent matters.
- ! Fuel tanks must be put in another place which is rounded by walls. Natural air conditioning is needed for this place. Boiler room must be air conditioned by natural or other ways.
- ! Humidity must be prevented in boiler room.
- ! Boiler room must have the requested dimensions .
- ! There must not be any kind of explosive , burning and flammable materials in the boiler room.
- ! There must not be any kind of explosive , burning and flammable gases in the boiler room atmosphere.
- ! For the efficiency of the burner and the boiler, boiler room must be kept clean and dry.
- ! For feeding water to the boiler, water line must be arranged near the boiler. And for filling out the water of the boiler in necessary conditions, there must be a connection to drainage in the system.

- ! If there are any electric keys, cables etc. Which can cause short circuits must be fixed, renewed as soon as possible.
- ! In LPG or liquid fuel use; boiler room, flue, system and plumbing issues must be under parameters of EN standards and gas offices orders. Rima is not responsible for any failure or problems that will be occurred because of inadequate or not sufficiently qualified conditions of boiler room, plumbing and other systems.
- ! The instructions of local gas delivery must be applied.
- ! Before painting keep flammable materials out.
- ! Before any welding operation in boiler room, boiler must be stopped and the gas flow must be stopped by turning of the gas valve.
- ! Do not touch the boiler when it is hot.
- ! Boiler must not be installed on carpet.



Switch off the boiler immediately if there is danger of burning or explosion (electricity problem, gas leakage, liquid gas and liquid fuel leakage etc.).

Boiler Room Ventilation

There are three reasons for fresh air in boiler rooms.

1. The air needed for the burning in the boiler
2. The air needed for prevention of dirt and dust, for releasing the gases and fuel to put out
3. The air needed for overheating in the boiler room.

Airing for first two reasons are continuously needed. The third one is needed especially for the boilers which are working on summer time.

Maximum temperature for the boiler room must be 32 °C

Boiler room must be protected against freezing.

Boiler Type	D - 03	D - 04	D - 05	D - 06	D - 07	D - 08
Boiler Chimney Dimension(mm)	130	130	150	150	150	150
Chimney Height (Natural Gas) (m)	3,41 4,91	6,00 8,63	5,25 7,56	7,53 10,85	10,22 14,72	12,91 18,59
Chimney Height (Liquid Fuel) (m)	7,67 18,85	13,49 33,17	11,82 29,06	16,95 41,67	23,00 56,55	29,05 71,43

If the fuel is **natural gas**

Boiler Type	*Net Cross Section of Open for Natural Airing (cm ²)		**Volume of Air Needed for Force Airing (m ³ /h)	
	Bottom	Up	Bottom	Up

D - 03	398	199	92	62
D - 04	440	220	122	82
D - 05	482	241	153	102
D - 06	524	262	183	122
D - 07	566	283	213	142
D - 08	608	304	243	162

* If natural airing system is used. ** Ventilating airing system is used

***Bottom value shows the clean air input up shows the air output.

Instructions For Product Disposal

Cast iron heating boilers are used for long years according to the specifications of its materials and they are long term equipments.

Life time period for these equipments which is declared in the legal documents is 15 years .

According to this situation renewing of these items are generally done because of technological reasons.

Cast iron boilers, which are produced with human-kind materials can be disposed of as follows .

Cast Iron Body (Gray Cast Iron)	Through iron scrap dealers and cast iron melting companies
Pipes and Cabin Steels	Through iron scrap dealers
Other Metal Parts	Through iron scrap dealers
Thermal Ceramic and other Isolation Materials	Through common waste system

***For more information please get in contact with **Rima** licensed services.

Positioning the Boiler

Rima boilers must be positioned and placed in the terms of fire protection laws with caution.

When installing and operating the boilers it is necessary to keep a safe 200 mm distance from combustible materials with combustibility degrees B,C1,C2

For easily flammable materials with combustibility degree C3 ,which burn quickly and by themselves also after the ignition source removal the safe distance is doubled it means 400 mm.

The safe distance is to be doubled also in case that the combustibility degree of building material wasn't proved.

Combustibility degrees of building materials and products	Building materials and products ranked in combustibility degrees
A- incombustible	Granite,sandstone,bricks,ceramic tiles,mortars,fireproof plasters,...
B- hardly combustible	acumin,izumin,heraklit,lignos,boards and basalt felt, fiberglass boards,.....
C1-combustible with difficulties	Beech and oak wood, hobrex board, plywood,werzalit,.....
C2-medium combustible	Pine wood,larch,white wood, chipboard and cork boards, rubber flooring,.....
C3-easily combustible	Asphalt board,fireboards,polyurethane,polystyrene,polyethylene , PVC ,

***For more information please get in contact with **Rima** licensed services.

Checkings And Starting The Boiler

Pre Controls

- Following controls must be done before starting the boiler. If there are any problems or failure, boiler must not be started.
- Water level of the boiler must be controlled. Water must be added to the boiler if the water level is low.
- Please call Rima technicians if there is a water leakage. Leakage must be prevented before starting the boiler. If there is a leakage in the plumbing system, boiler must be started after repair.
- Flue connections must be controlled. Boiler must not be started before repairing the connection if there is a problem.
- Area must be properly air conditioned.
- Gas valves must be checked as if they are on if gas fuel is used in the boiler.
- Liquid fuel level of the tank must be controlled and fuel valve must be opened if liquid fuel is used in the boiler. Fuel - burner connection must be controlled. If there are any problems filters must be cleaned.
- Working and the directions of the pumps must be controlled.
- Electric system of the control panel must be controlled.
- All water and gas valves of the boiler must be opened.

All other connections must be controlled according to the system options.

Starting The Boiler

- Turn the main electric switch of the boiler room on. Working lamp will be on.
- Start the circulation pump
- Turn the "ON/OFF" switch of the burner to the mode "ON" (Check the burner instructions manual.) The indicator light will be on.
- Adjust the boiler temperature between 30 - 90 °C. If the burner is dual level, adjust the second level temperature 5- 10°C lower than the first one. This will turn second level light on.
- If the burner does not start follow the instructions written on the manual of the burner. If the burner does not start after applying the written operations in the manual, call the technical service of the burner.

Stopping The Boiler

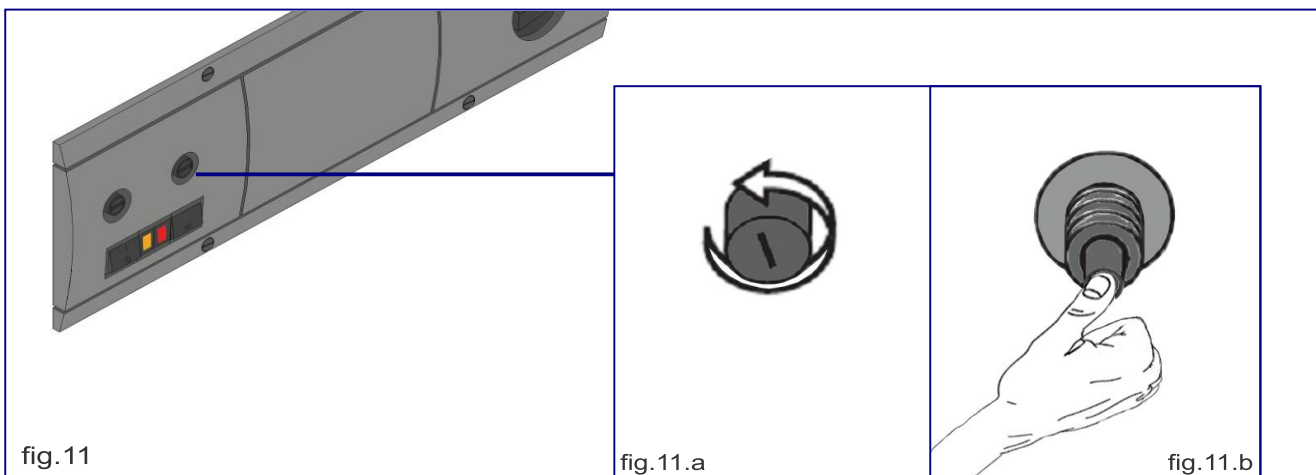
- Turn the "ON / OFF" switch of the burner to the " OFF " position.
- Turn the "ON / OFF" switch of the control panel to the " OFF " position.
- Turn of the circulation pump.
- Turn of the fuel valves.
- Turn off the main fuse switch of the boiler room

Failure First Control

When a problem or failure occurs in the boiler or the burner, please make the following first controls before calling technical services. Don't do anything rather than mentioned controls. After these controls call Rima technical services.

- If boiler stops working and doesn't start again ; Safety thermostate may have stopped the boiler because of overheating at boiler water. In this case wait for the boiler to cool down and please make the following controls.
 - Check if fuel is coming to the burner or not. If not make fuel to come to the burner.
 - Check if pump is working or not. If not this could be the reason of overheating. Please get in touch with pump manufacturer or distributor.
 - Check if the valves are on or off. Open the valves if they are closed.
 - Please push the safety thermostate switch after the boiler is cold enough.
 - Burner must start.
-
- If the boiler doesn't start or if the safety thermostat stop the boiler again please call Rima technical services.
-
- If the burner safety light is on ; Please check the burner instruction manual or get in contact with the burner manufacturer / distributor services.

Checking the Safety Temperature Limiter



- 1- Release button with cover cap (fig.11.a)
- 2- Button fault reset (fig.11.b)

Care Instructions

Boiler and burner controls are made in three programs. Daily (in everyday use), periodic and yearly.

Daily Controls

These are the processes that the user must apply every day in season of everyday use. Please read and apply the instructions and controls mentioned in "Pre Control" section of the manual for daily controls.

Periodic Controls

For efficient use, preventing the possible failures and optimum life of the boiler periodic controls are important. It is recommended that periodical controls for the boiler must be made by once in every three months. These periodical controls are made by Rima technicians by applying following processes.

- Boilers burning room and smoke channels check and cleaning if needed.
- Leakage controls of water input water output of the boiler and flue connections
- Valves check
- Pumps check
- Fuel filter control and cleaning if needed
- Burning control (with eye). Burning and flame adjustments if needed.
- Control of the liquid fuel sensor. Cleaning if needed.
- Working and safety controls of burner and the boiler.

Yearly Controls

Yearly controls of the boiler must be made by Rima technicians before the season starts. Flue and flue lines must be cleaned before calling technicians for yearly controls. In yearly controls Rima technicians apply the following processes.

- Situation and the leakproof of the sections and rope isolations controls.
- Working pressure test for burning adjustment with the flue gas measurement system if needed.
- Sensors and connection of the sensors test.
- Boiler burning room and possible soot layers on smoke channels are checks and cleanings.
- Connection and the leakproof of the boilers doors test.
- Leakproof of the connections of the boiler test.
- Valves tests for proper opening and closing.
- Fuel filter test. cleaning if needed.
- Sensor of the burner liquids tests. Cleaning or renewing If needed .
- Working and safety controls of burner and the boiler.

Cleaning The Boiler

Before applying mentioned services to the boiler, electric must be cut off from the main switch, fuel valves must be closed, control panel and the burner must be protected for avoiding any possible damage.

Smoke Channels Cleaning

Because of the soot layer on heating surfaces, 100 °C increase on flue temperature brings out a % 5 decrease on efficiency.

By pulling out the M10 screws and stamps on the 4 hinges which connects door to the front section, open the burner door. Clean the burning room, take turbulators out and clean horizontal smoke channels (2nd and 3rd pass). Then clean the turbulator and put them in to the channels. Close the burner door strictly. In this cleaning operation soot layer may occur in flue area. This soot particules can be cleaned by separating horizontal smoke channels from boiler flue. After this operation these two must be connected again and must be tested for leakage.

The time period for cleaning service is variable according to the fuel type of the boiler and period of use.

In boiler cleaning operation ceramic ropes that isolate front door with front section and flue with back section must be controlled and must be renewed if needed.

Painted Surfaces Cleaning

The painted surfaces can be cleaned with tepid or cold soapy water. Wipe the painted surfaces with a soft cloth or a damp sponge.

Other Surfaces and Parts Cleaning

The other surfaces and parts can be cleaned with a soft cloth or a damp sponge.

Burner Door And Burner Connection

Burner Door

In burner connection process there must not be any empty space left between the front door and the burner barrel. All connection points must be covered with isolation material for avoiding any air leakage possibility.

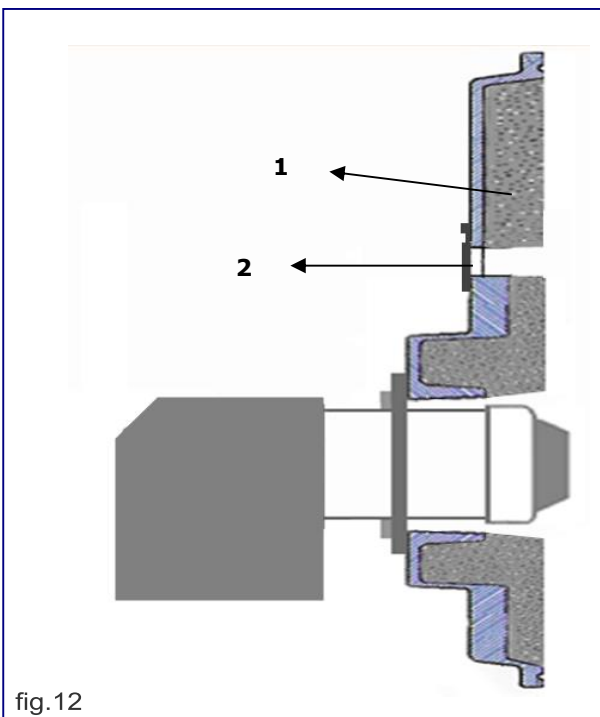


fig.12

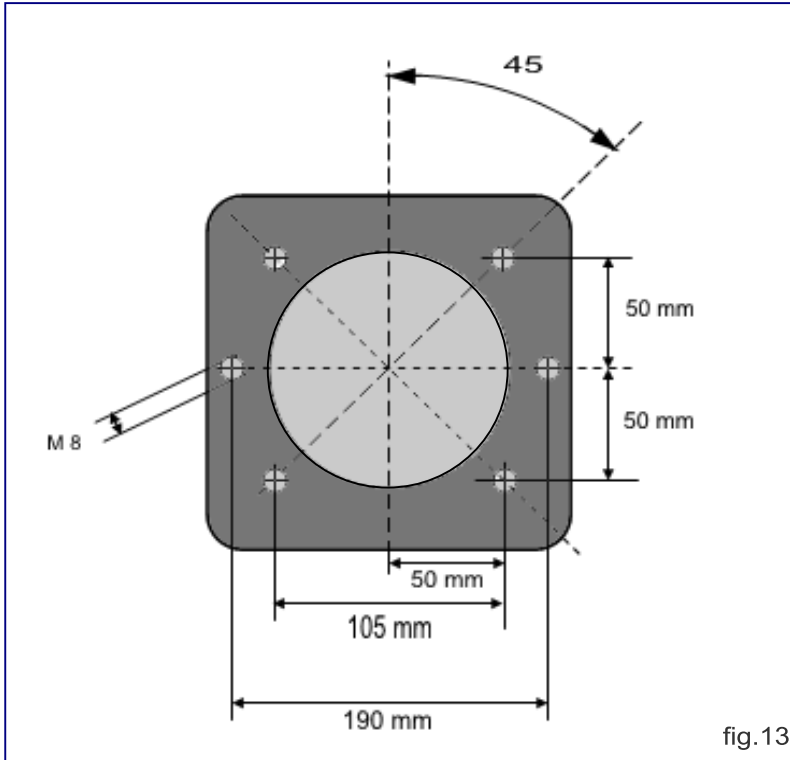
The isolation of the burner door is made of a special thermal ceramic which is durable up to 1250 °C and has no deflections on human health (1). Please be sure that this isolation plate is carried carefully and intensively during transportation.

There is a glaswool rope fit in to the channels of isolation door. This prevents leakages between isolation door and front section of the boiler. After repairing or cleaning service the doors connection with the front section must be done properly, strictly.

D series boilers doors are available for opening to both sides. This brings advantages of assembling, repairing and other operations.

A cast iron is placed on to the burning door for watching flame inside (2).

Burner Connection Flange Size



Correct,proper burner must be chosen according to gas to gas side resistance values of the boiler.



"Önmetal Company" is not responsible for any possible problem if not certificated or out of standard burner is used with the boiler.

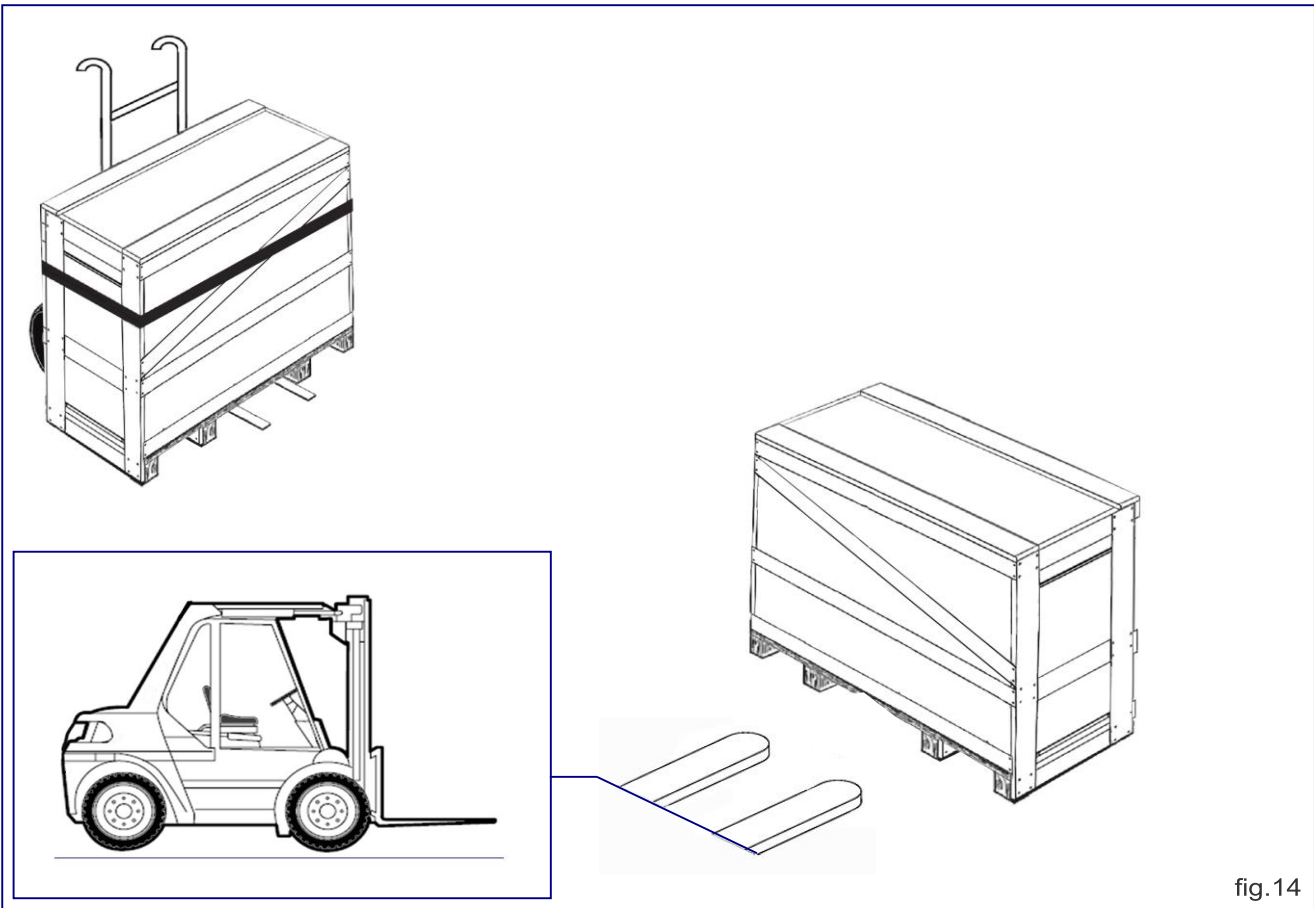
Transportation and Storage

The manufacturer handles the boiler that is on a pallet and secured against shifting (with screws). The boiler may not be transported in a different position than on its base.

At least regular storage conditions shall be ensured during boiler storage and transportation (non aggressive environment, air humidity lower than 75 %, temperature range from 5 °C to 55 °C, low dustiness and preventing influence of biological factors).

The force may not be applied on the boiler coverings and panel during storage and transportation.

 **Boiler must not be carried or transported without using forklifts, transpalletes or other wheeled carrying vehicles.**





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