HIGH EFFICIENT BIOMASS & COAL FIRED BOILERS

DEHA HEATING SYSTEMS

www.dehaisi.com.tr





MAXIMUM HEAT WITH LESS FUEL

- Inverter Technology A++ Energy-Saving System
- Down Level Flue Outlet On Boiler For High Efficiency
- Automatic Stoker Boilers For Large Size Solid Fuels
- Internal Serpantine System For Clean & Hot Water
- Automatic Ignition
- Practical Cleaning System
- Automatic Ash Bag Up System
- Accurate Room Temperature Control
- Patented Combustion Chamber
- Boiler Fireplaces







PRODUCTION WITH ROBOT TECHNOLOGY



Design R&D



DRAWING



CNC Cutting





CNC Bending



OUR VISION IS TO ... "STAY AT TOP "

We present comfort as an answer to natural needs not as a comfortable privilege and not as a luxury to our people whose lifestyle has been changed and who adopted modern life. We do NOT want them to get tired, to get dirty, or in short to have problems of primitive methods for the basic need as warming up. We want them to be only a click away from all types of conformation and also to have them in the most economical way.

Our company "BOL-AY LTD. STİ" has founded "DEHA ISI SİSTEMLERİ" with the leap in 2000. In a very short time, it has become the followed and imitated, the leader of the sector and the pioneer brand. Our engineering team has taken each step by relying on the scientific data and proceeds by searching for the comfortability and affordability of each design. Our team has added more knowledge to their knowledge, and more experience to their experience with the TÜBİTAK project and that is why they have reached a position that cannot be reached easily. The quality of our products has been discovered by the European countries and so they have been in demand in a very short time. Our company targeted to protect its leadership in the sector and to stay at top which is the most difficult but the best success.





5 YEARS WARRANTY FOR MOTOR AND REDUCER

The motors we used on the fuel feeding system are the most long-lived asynchronous motors that do not have a capacitor, brush, or start circuit.

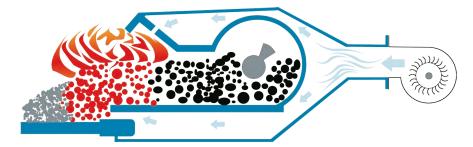
Thanks to the sensor that perceives the movement of the fuel feeding system, possible jamming in the system can be easily detected and the system is shut down automatically. So the motor and its reducer are not harmed.

5 YEARS WARRANTY FOR COMBUSTION CHAMBER AND SPECIAL AUGER

Solid fuel goes to the combustion chamber through a wide aperture. Even a piece of large coal with a 50 mm diameter coal can reach to combustion chamber without any difficulties or jamming. Because there is no jam, components such as auger, fuel feeding motor, and reducer do not be damaged.

Because of having the ability to be cooled with water it can be used for years without any problems. Moreover, giving the heat of the combustion chamber to the system provides saving on fuel. The combustion chamber has a water jacket and because of it, chamber would not break down or deformed. This specific burner system that is patented to "DEHA" converts solid fuel (up to 50 mm diameter) of which examples are given belove to heat with maximum efficient.

PATENTED COMBUSTION CHAMBER TECHNOLOGY UNIQUE TO DEHA



BURN ALL THE FUELS UP TO 50 MM DIAMETER WITH AUTOMATIC STOKER BOILER !



Pellet (5mm-50mm)



Olive Seeds



Palm Kernel Shell



Fruit Seeds



Coal up to 50 mm



Corn Cob



Coal 5 mm



Walnut Shell

DEHA TECHNOLOGY

Technology - INVERTER TECHNOLOGY (A++ ENERGY-SAVING SYSTEM)

VVERTER

"INVERTER TECHNOLOGY" term is generally used for air conditions with high productivity and white appliances are now applicated on solid fuel boilers with the difference of pioneer of the first step. The future technology Inverter Technology has great advantages such as the lowest electric and fuel consumption, more long-life fuel feeding motor, completely silent working ability (52dB), and possibility for low powered generators usage compared to standard application systems. This specification is only available on our boilers with Deha stokers.

DOWN LEVEL FLUE GAS OUTLET ON BOILER FOR HIGH EFFICIENCY

Another factor that affects the efficiency of the boiler is the location of the flue gas outlet on the boiler. On top-flue outlet boilers, burnt gas goes away from the boiler with chimney effect without conducting the heat to the boiler. The tempereture of the flue gas is high and it causes heat loss. Thanks to the down level-flue outlet efficiency system and economiser plate on all of DEHA models flue gas heat are quite low so its fuel consumption is lower compared to boilers in the market.

DEHA AUTOMATIC STOKER BOILERS CAN BURN LARGE SIZE SOLID FUEL ALSO !

In DEHA boilers that can burn solid fuels up to 50 mm diameter have long-live auger is that can provide the possibility of solid fuel feeding without any jamming. DEHA boiler's auger has a special design that is different from ordinary has 5 years mechanical warranty.

On "STK SERIES" boilers which are DEHA's products an auger which is different from ordinaries can fuel feed without breaking it. On the market, boilers with stoker use high powered motors with high electric consumption, however our system uses only a 0,12 Kw powered motor which provides minimum electric consumption. With this revolutionary feature,STK SERIES boilers are unique and it signs the final point of technology.

- INTERNAL SERPANTINE SYSTEM FOR CLEAN & HOT WATER

Deha boilers with automatic stoker provide clean hot water by means of copper serpantine system inside. As different from external storage water heaters, internal serpantine system provides unlimited clean hot water by means of best heat transfer feature copper material which are 30 and 40 meter lenght. Internal serpantine does NOT take up space in your boiler room. So it doesn't cause any energy loss. Deha boilers provide clean and hot water to your taps for you to have shower by the most comfortable and cheapest way.

- AUTOMATIC IGNITION - IGNITE THE BIOMASS & COAL BY 1 CLICK IN SECONDS !

Those were the days... Comfort is as close as a click away, anymore. No need for wood, kindling, or matches to ignite the fuel. An automatic igniting system ignites the pellet, biomass and even the coal electronically. Coal is being ignited in 1,5 minutes anymore. Pellet or biomass are being ignited in seconds anyways. And then you just need to enjoy it. On all of DEHA boilers with stoker, this specification is optionally.











50 mm



DEHA TECHNOLOGY

PRACTICAL CLEANING SYSTEM

Cleaning the boiler is not a problem, anymore. On PST SERIES boilers which are the final innovation of "DEHA" you can clean the boiler only in seconds with a very simple arm movement without any ash/dust. With this marvel design, the solid fuel boiler image in your mind will change completely and you will be surprised by the simplicity

ACCURATE ROOM TEMPERATURE CONTROL

Thanks to DEHA's software which is developed as a result of our R&D room, temperature can be set by 0,1°C sensitivity and can raise and lower the boiler temperature set automatically according to stable room temperature. It does NOT work with turn on/off boiler principle like other thermostads in the market but it works by principle solid fuel burning, without putting out the solid fuel. So you don't need to go next to the boiler to set it up. This system can provide comfort with stable temperatures in the room and minimize fuel consumption. It is presented optionally.

AUTOMATIC ASH BAG UP SYSTEM

End of carrying ash pan! With an automatic ash bag up system which is the new design of "DEHA" the ash will be bagged up automatically without even touching the ash. This system is presented optionally and provides you with convenience.

- DIGITAL CONTROL PANEL WITH DIGITAL SENSOR

The Control panel is designed by using a digital sensor and is with great sensitivity (0,1°C) which cannot be seen on panels in market. And it has adjustable fonctions to burn all kinds of solid fuel without any difficulties/problems. The panel of "DEHA" is superior to ordinaries that utilize analog sensors in the market. This ability is unique to "DEHA". The digital control panel which has been completely designed and developed by DEHA's R&D provides you comfort and safety with a stably control which makes gas and liquid fuel boilers jealous.

- NO SOOT, NO SMELL, NO FUME!

Do you have an ordinary machine or a "DEHA" in your boiler room? With its final burn technology, Deha leaves the fire in the combustion chamber without pulling it to the fuel reservoir. So, no burning, no break-down, no fume in the stoker. Fireproof, a durable (up to 350 °C) packing seal that is available in all lids and can provide perfect sealing. And so there will not be soot, sediment, fume in your boiler room that you can even install the boiler in your park and can park your car with safety.

EFFICIENTLY BURN - CHIMNEY WITHOUT FUME

Thanks to the horizontal combustion chamber with 2-5 air feed canals which is patented to "Deha" the fuel meets with oxygen completely, burns, and becomes ash. There is no unburnt fuel piece. And this is one of the factors that provide high savings to the economy. Completely burning fuel also provides boiler, chimney, and pipes cleaning with long breaks. You can use DEHA boiler with minimum effort but with maximum comfort. Environmentally friend "DEHA" protects your wallet and your effort and also supports you to leave a cleaner and livable world for the next generations.













PST SERIES AUTOMATIC STOKER BOILERS





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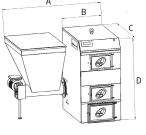
A++	S YEARS MECHANICAL WARRANTY
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DEHA 45 PST

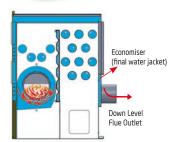


HEATING POWER	53 KW
FUEL TYPE	Solid fuel up to 50 mm diameter
FUEL CAPACITY	120 Kg pellet ~ 175 Kg coal
CONTROL PANEL	Digital control panel with digital sensor
ELECTRONIC SYSTEM	Inverter Technlogy - 0,25 Kw stoker motor
CLEAN HOT WATER	Internal serpantine system for clean & hot water. 40 mt copper pipe serpantine in water jacket (Optional)
AUTOMATIC IGNITE	Solid fuel electronic igniter (Optional)
ROOM THERMOSTAD	Controls and fixes temperature of room with 0,1 C° sensibilty (Optional)
HEAT TRANSFER SURFACES	5 Cross pass + 2 vertical pass+ 1 horizontal pass between water tubes + economiser
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler

VARIETY		PST-45
Heating Power	Kw	53
Operation Pressure	bar	2
Electric Voltage (AC)	Volt	220
Boiler Hot Outlet	inch	1 - 1/4"
Boiler Cold Inlet	inch	1 - 1/4"
Serpantine Inlet/Outlet	inch	1/2"
Fill / Drain	inch	1/2"
Weight	kg	600
Dimensions	-	
Flue Diameter	cm	19,4
A	cm	145
В	cm	65
С	cm	110
D	cm	140







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60

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cm

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PST SERIES AUTOMATIC STOKER BOILERS

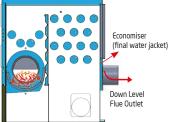




CLICK

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DEHA 60 PST	(Smm - SUmm)
HEATING POWER	70 KW
FUEL TYPE	Solid fuel up to 50 mm diameter
FUEL CAPACITY	120 Kg pellet ~ 175 Kg coal
CONTROL PANEL	Digital control panel with digital sensor
ELECTRONIC SYSTEM	Inverter Technlogy - 0,25 Kw stoker motor
CLEAN HOT WATER	Internal serpantine system for clean & hot water. 40 mt copper pipe serpantine in water jacket (Optional)
AUTOMATIC IGNITE	Solid fuel electronic igniter (Optional)
ROOM THERMOSTAD	Controls and fixes temperature of room with 0,1 C° sensibilty (Optional)
HEAT TRANSFER SURFACES	5 Cross pass + 2 vertical pass+ 1 horizontal pass between water tubes + economiser
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler



A++

FUEL TYPE

FUEL CAPACITY

CONTROL PANEL

ELECTRONIC SYSTEM

CLEAN HOT WATER

AUTOMATIC IGNITE

HEAT TRANSFER

VARIETIES Heating Power

Operation Pressure

Boiler Hot Outlet

Boiler Cold Inlet

. Fill / Drain

Dimensions

Flue Diameter

Weight

A

C

В

D

Electric Voltage (AC)

Serpantine Inlet/Outlet

SURFACES

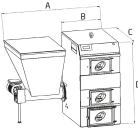
LOCATION

FLUE OUTLET

ROOM THERMOSTAD

DEHA 75 PST HEATING POWER

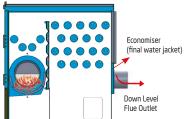


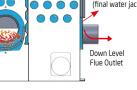


VARIETY		PST-60
Heating Power	Kw	70
Operation Pressure	bar	2
Electric Voltage (AC)	Volt	220
Boiler Hot Outlet	inch	1-1/2""
Boiler Cold Inlet	inch	1-1/2""
Serpantine Inlet/Outlet	inch	1/2"
Fill / Drain	inch	1/2″
Weight	kg	660
Dimensions		
Flue Diameter	cm	22,0
A	cm	145
В	cm	65
C	cm	125
D	cm	140









INVERTER

87 KW

(Optional)

Kw

bar

Volt

inch

inch

inch

inch

kg

cm

cm

cm

cm

cm

Solid fuel up to 50 mm diameter

Digital control panel with digital sensor

Solid fuel electronic igniter (Optional)

between water tubes + economiser

Down level flue gas outlet on boiler

PST-75

87

2

220

2" 2"

1/2"

1/2'

775

22,0

150

70

135

140

Controls and fixes temperature of room with 0,1 $\ensuremath{\mathsf{C}^\circ}$ sensibilty (Optional)

Inverter Technlogy - 0,25 Kw stoker motor

Internal serpantine system for clean & hot water. 40 mt copper pipe serpantine in water jacket

5 Cross pass + 2 vertical pass + 1 horizontal pass

120 Kg pellet ~ 175 Kg coal



Level

COAL (5mm - 50mm)

В

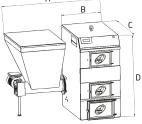
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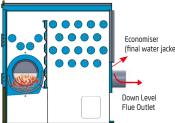
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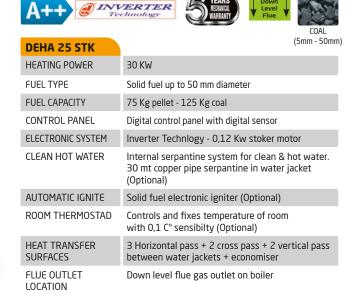
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STK SERIES AUTOMATIC STOKER BOILERS









DEHA 45 STK

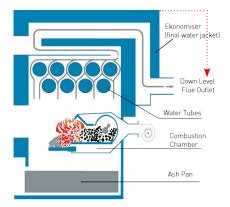
S YEARS MEXANIAN WARRANTY

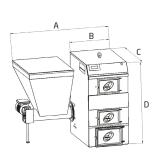


(5mm - 50mm)

HEATING POWER	53 KW
FUEL TYPE	Solid fuel up to 50 mm diameter
FUEL CAPACITY	75 Kg pellet - 125 Kg coal
CONTROL PANEL	Digital control panel with digital sensor
ELECTRONIC SYSTEM	Inverter Technlogy - 0,12 Kw stoker motor
CLEAN HOT WATER	Internal serpantine system for clean & hot water. 40 mt copper pipe serpantine in water jacket (Optional)
AUTOMATIC IGNITE	Solid fuel electronic igniter (Optional)
ROOM THERMOSTAD	Controls and fixes temperature of room with 0,1 C° sensibilty (Optional)
HEAT TRANSFER SURFACES	3 Horizontal pass + 2 cross pass + 2 vertical pass between water jackets + economiser
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler







VARIETIES		STK-25	STK-45	STK-60	STK-75
Heating Power	Kw	30	53	70	87
Operation Pressure	bar	2	2	2	2
Electric Voltage (AC)	Volt	220	220	220	220
Boiler Hot Outlet	inch	1″	1 1/4"	1 1/2"	2″
Boiler Cold Inlet	inch	1″	1 1/4"	1 1/2"	2″
Serpantine Inlet/Outlet	inch	1/2"	1/2"	1/2"	1/2"
Fill / Drain	inch	1/2"	1/2"	1/2"	1/2"
Weight	kg	405	450	535	635
DIMENSIONS					
Flue Diameter	cm	16,5	16,5	16,5	19,4
A	cm	127	132	138	145
В	cm	54	57	63	70
С	cm	110	115	127	135
D	cm	118	120	121	140

FND SERIES AUTOMATIC STOKER BOILERS





BIOMASS & COAL FND 25-45-60-75-90



- WITH AN INDEPENDED INNER TUBE

- WITH BOTH OUT OF CYLINDER AND INNER SIDE OF PIPE

- FND Series boiler provides 5 years mechanical warranty
- With Inverter technology, electric consumption is at the minimum level.
- With its automatic ignition feature, fuel is being ignited in seconds

- With its unique design (with an independent inner tube), it provides minimum fuel consumption.

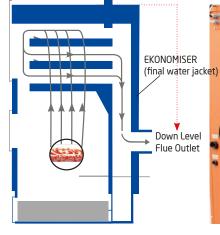




VARIETIES		FND-25	FND-45	FND-60	FND-75	FND-90
Heating Power	Kw	30	53	70	87	105
Operation Pressure	bar	2,5	2,5	2,5	2,5	2,5
Electric Voltage (AC)	Volt	220	220	220	220	220
Boiler Hot Outlet	inch	1″	1 1/4"	1 1/2"	2″	2″
Boiler Cold Inlet	inch	1″	1 1/4"	1 1/2"	2″	2″
Fill /Drain	inch	1/2"	1/2"	1/2"	1/2"	1/2"
Weight	kg	420	525	640	740	925
Flue Diameter	cm	16,5	16,5	19,4	19,4	23,5
A	cm	125	135	145	155	157
В	cm	60	70	80	90	92
C	cm	112	105	110	115	145
D	cm	120	135	145	150	171

DEHA 25-45-60-75-90 FND

HEATING POWER	30-53-70-87-105 Kw heating capacity varieties
FUEL TYPE	Solid fuel up to 30 mm diameter
FUEL CAPACITY	75 Kg pellet - 125 Kg coal
CONTROL PANEL	Digital control panel with digital sensor
ELECTRONIC SYSTEM	Inverter Technlogy - 0,37 Kw stoker motor
AUTOMATIC IGNITE	Solid fuel electronic igniter (Optional)
HEAT TRANSFER SURFACES	Out of cylnder, inner side of smoke pipes + economiser
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler







PLT SERIES AUTOMATIC STOKER BOILERS









ANAMAGES

DEHA 25 / 45 / 60 PLT HEATING POWER 30 Kw / 53 Kw / 70 Kw heating capacity varieties FUEL TYPE

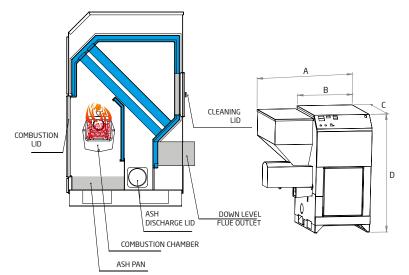
FUEL TYPE	Biomass solid fuel up to 30 mm diameter
FUEL CAPACITY	100 Kg pellet
CONTROL PANEL	Digital control panel with digital sensor
ELECTRONIC SYSTEM	Inverter Technlogy - 0,25 Kw stoker motor
AUTOMATIC IGNITE	Solid fuel electronic igniter (Optional)
HEAT TRANSFER SURFACES	7 Cross pass between tubes + economiser
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler











VARIETIES		PLT-25	PLT-45	PLT-60
Heating Power	Kw	30	53	70
Operation Pressure	bar	2	2	2
Electric Voltage (AC)	Volt	220	220	220
Boiler Hot Outlet	inch	1″	1 1/4"	1 1/2"
Boiler Cold Inlet	inch	1″	1 1/4"	1 1/2"
Fill / Drain	inch	1/2"	1/2"	1/2″
Weight	kg	365	430	490
DIMENSIONS				
Flue Diameter	cm	16,8	16,8	16,8
A	cm	107	117	123
В	cm	51	61	68
C	cm	99	104	107
D	cm	137	137	139

MANUAL FUEL FEEDING BOILERS









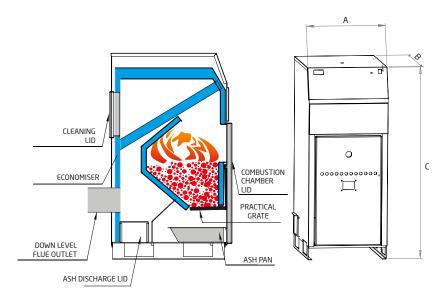
DEHA 30 / 45 / 60 PK	
HEATING POWER	35 Kw / 53 Kw / 70 Kw heating capacity varieties
FUEL TYPE	Solid fuel
FUEL CAPACITY	40 / 50 / 60 kg coal
FLUE OUTLET LOCATION	Down level flue gas outlet on boiler
CONTROL PANEL	Digital control panel with digital sensor
HEAT TRANSFER SURFACES	4 Cross pass between tubes + economiser
CLEAN & HOT WATER	Internal serpantine system for clean & hot water. 30 / 40 mt copper pipe serpantine in water jacket (Optional)





PRACTICAL GRATE SYSTEM





VARIETIES		PK-30	PK-45
Heating Power	Kw	35	53
Operation Pressure	bar	1,5	1,5
Electric Voltage (AC)	Volt	220	220
Boiler Hot Outlet	inch	1″	1 1/4"
Boiler Cold Inlet	inch	1″	1 1/4"
Serpantine Inlet/Outlet	inch	1/2"	1/2″
Fill / Drain	inch	1/2"	1/2"
Weight	kg	290	325
DIMENSIONS			
Flue Diameter	cm	16,8	16,8
A	cm	56	56
В	cm	85	91
С	cm	134	140



STOKER SIEVE WITH LARGE GAPS (50 mm) FOR SOLID FUEL

CENTRAL HEATING CYLINDRICAL TYPE AUTOMATIC STOKER BOILERS

Capacity range of varieties

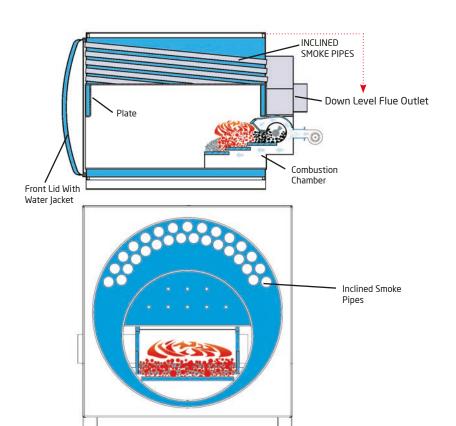
230 KW - 2.300 KW

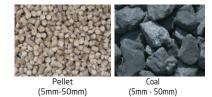


DEHA 200-2000 SLD

- FRONT LID WITH WATER JACKET
- DIGITAL CONTROL PANEL WITH DIGITAL SENSOR
- INCLINED SMOKE PIPES AND ECONOMISER FOR
- HIGH EFFICIENCY
- EFFICIENTLY BURN
- CHIMNEY WITHOUT FUME
- NO SOOT, NO SMELL, NO FUME!









DIGITAL CONTROL PANEL



STOKER SIEVE WITH LARGE GAPS (50 mm) FOR SOLID FUEL



BOILER FIREPLACE (1 SIDED)

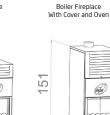




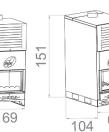
Without Cover



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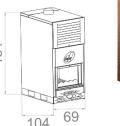


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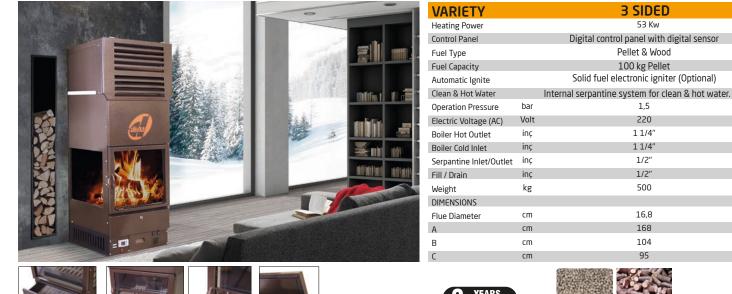
Pellet Boiler Fireplace With Cover and Oven



Fireplace With Authentic Cover



BOILER FIREPLACE (3 SIDED)





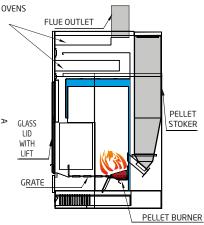




Pellet Wood



(5mm-30mm)



HOT AIR GENERATORS (THERMOBLOCKS) WITH AUTOMATIC STOKER

TERMO 90-2.400







Digital Control Panel

DEHA THERMO 90-2.400 HOT AIR GENERATORS				
HEATING POWER	Capacity range of varieties is 105 Kw - 2.800 Kw			
CONTROL PANEL	Digital Control Panel With Digital Sensor			
FUEL TYPE	Solid fuel up to 50 mm diameter			
ROOM THERMOSTAD	Controls and fixes temperature of indoor place with 0,1 \mbox{C}° sensibilty			

MANUAL FEEDING HOT AIR GENERATORS (THERMOBLOCKS)









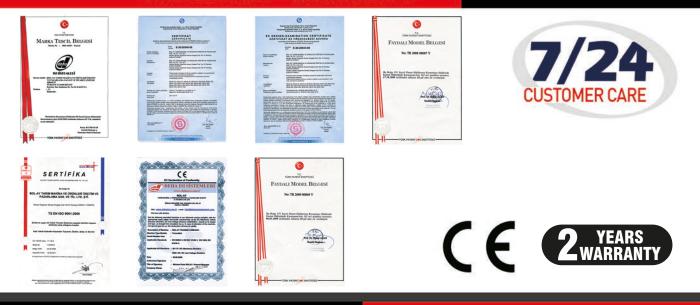
Соа

Hot air generators provide the most economical heating process by blowing hot air to indoor places such as, greenhouses, chicken farms, factories, workshops, dryer plants, drying ovens, cooking ovens.

Wood

BIOMASS FIRED HOT AIR GENERATORS (THERMOBLOCKS) WITH AUTOMATIC STOKER

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