

BIOMASS BOILER DUAL THERM

PELLET/ WOOD BOILER
AUTOMATIC FUEL SWAP
BACK UP PROTECTION SYSTEM INTEGRATED IN BOILER HEAT EXCHANGER
PELLET HOPPER INCLUDED
HEAT EXCHANGER AND BURNER AUTOMATIC CLEANING SYSTEM
AUTOMATIC LOG IGNITION



The most advanced technology
at the most reasonable price

DUAL THERM

DOMUSA TEKNIK introduces into the biomass heating market an innovative solution where the use of two types of fuel can be combined into a single product, while incorporating all the comfort and performance of a fully automatic boiler, and at the same time also incorporating a pellet hopper, to gain autonomy of use according to customer's preferences. In other words, a pellet boiler, with a combustion chamber prepared for use with logs as an alternative fuel.



SAVINGS

The **DUAL THERM** boiler reduces fuel consumption by recovering the investment in a reduced time. This is based on boiler efficiency and electronic modulation.

THE FUEL

Wood is a renewable source of energy traditionally used in households, which remains an economical and ecological alternative to non-renewable fossil fuels which are subject to speculative market pressures, causing serious price fluctuations.

Furthermore, the availability of logs in some geographical areas, reduces costs taking advantage of the agricultural and forestry by products.

A + EFFICIENCY

The heat exchanger is especially designed to maximize the heat exchange of the gases to the water and subsequently to the installation.

The **DUAL THERM** boiler can significantly reduce the temperature of combustion gases, thus achieving the best performance of the market, with an A + energy rating.

ELECTRONIC MODULATION

The **DUAL THERM** boiler has an electronic board that controls the amount of fuel supplied in order to achieve the necessary temperature in the boiler. This permits unbeatable combustion even at low power levels. Being able to operate at a reduced power level, great savings in consumption can be achieved, as the power of the boiler is adjusted to the demand of the installation. Having a wide range of modulation and being able to work at low power levels reduces the boiler's on/off cycles, avoiding losses due to stops.

AUTONOMY

The indistinct use of pellet or logs automatically reduces the dependence of loads and maintains greater autonomy of operation.

FUEL SWAP

The Dual Therm boiler allows logs or pellet to be used, according to user preference. The boiler goes automatically into pellet operation mode in the event that the wood runs out in the combustion chamber and no wood is refilled, thus maintaining the comfort of the installation without worrying about reloading logs into the boiler.

LARGE COMBUSTION CHAMBER

The large combustion chamber, in which logs of up to 50 cm can be used, together with the high efficiency obtained by fan modulation, allows a longer autonomy of loading for the operation with wood logs.

PELLET HOPPER INCLUDED

The **DUAL THERM** is equipped with a pellet feed auger and a 110 kg pellet hopper.



COMFORT

With this boiler we can enjoy the advantages of using wood , with the same comfort that any other automatic pellet boiler offers.

AUTOMATIC CLEANING

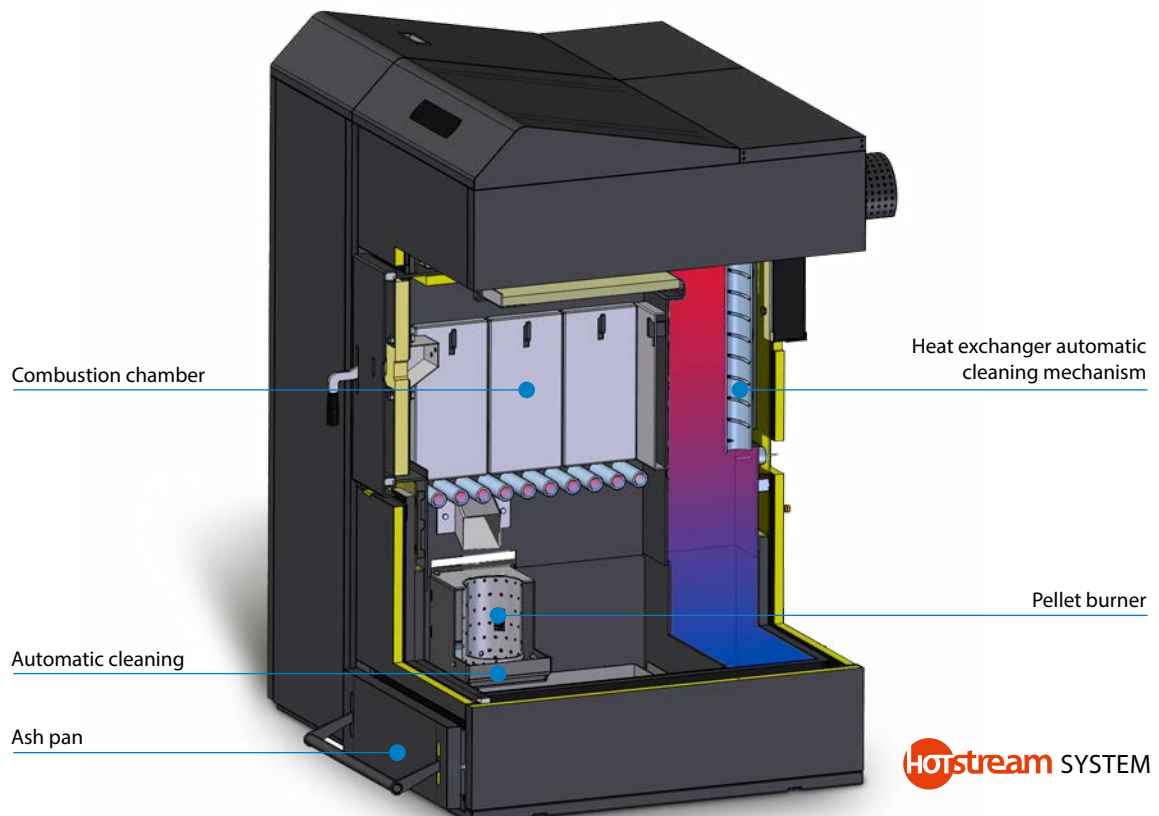
The cleaning of the heat exchanger and the burner is automatic. A set of cleaning springs that retain flue gases improve performance, while at the same time cleaning ash residues in the heat exchanger. The cleaning springs are connected to the shaft of a motor via a cam system that regularly moves them vertically, thus cleaning the heat exchanger. The burner has an automatic ash cleaning system. The lower part of the combustion chamber has a cleaning system to send ashes generated in the combustion periodically to the ashtray.

AUTOMATIC IGNITION

The placement of the pellet burner below the combustion chamber of the logs allows the automatic ignition. In the ignition process, the pellet is first ignited by an electric low consumption igniter, to later ignite the logs placed in the combustion chamber. This gives the **DUAL THERM** boiler the ability of automatically operating the heating system and domestic hot water even when using logs.

EASE OF INSTALLATION

The **DUAL THERM** features an innovative preheated return system. The Hotstream system avoids complicated mixing systems to prevent condensation that may occur as a result of cold returns. This preheating system supports direct returns to the boiler of up to 35° C, which allow to make installations without back up protection, with any type of hydraulic configuration.



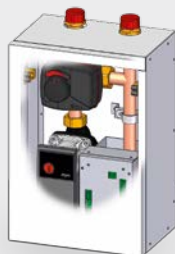
OPTIONS

HYDRAULIC KITS

Optionally a wide range of hydraulic kits are offered to give solutions to the most diverse needs of installation in the houses. All the hydraulic kits incorporate a climate regulator with control over the water flow temperature depending on the outside temperature, thus optimizing the consumption of the installation.

Among the different configurations that can be managed with these kits, is the possibility of making installations of under floor heating, even with two zones of different water flow temperatures.

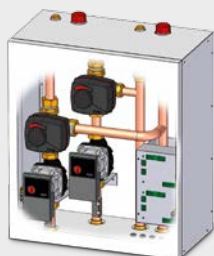
Hydraulic kit **BIO M**



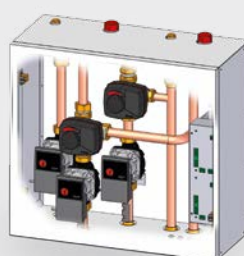
Hydraulic kit **BIO DM/MS**



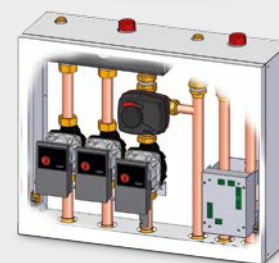
Hydraulic kit **BIO 2M**



Hydraulic kit **BIO D2M/2MS**



Hydraulic kit **BIO DMS**



INSTALLATION EXAMPLES

NOMENCLATURE

| | Description |
|------|-----------------------------|
| Vfas | Output sensor |
| Kfs | Boiler sensor |
| Sext | Weather compensation sensor |
| Mc | Control unit |
| Bc | Circulation pump |
| SS | Dhw tank sensor |
| Ac | DHW Cylinder |
| E26 | Climatic control |
| BT | BT Buffer Tank |

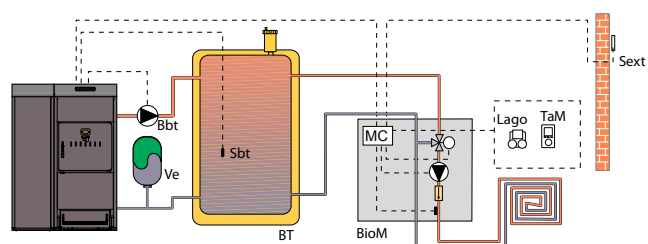
| | Description |
|------|------------------------------------|
| Btd | BT DUO Buffer Tank |
| Lago | LAGO OT + Remote Control |
| TaD | Room Thermostat |
| VA | Thermostatic Anti condensing valve |
| Vm | DHW mixing valve |
| Vs | DHW safety valve |
| Vee | DHW expansion vessel |
| Ve | Heating expansion vessel |
| R | Electric heating element |

| | Description |
|------|--------------------------------|
| Vr | Retaining Valve |
| Sbt | Buffer Tank Sensor |
| BBt | Buffer tank pump |
| Tacs | DHW thermostat |
| FBR2 | FBR2 room sensor |
| TA | Room thermostat |
| TaD | Direct circuit room thermostat |
| TaM | Mixed Circuit Room Thermostat |

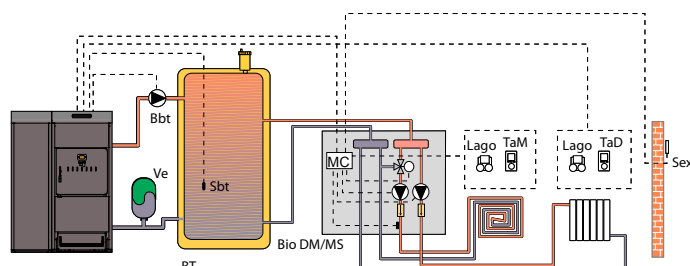


DUAL THERM WITH BIO HYDRAULIC KIT AND WEATHER COMPENSATION SENSOR

KIT BIO M + BT



KIT BIO DM/MS + BT



BIOMASS BOILER



Mixed Circuit



D.H.W.



Direct circuit



Buffer tank with hot water



Buffer tank

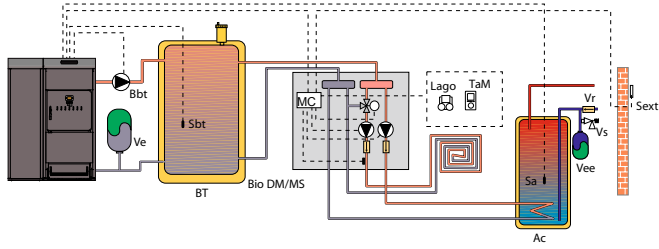


Hydraulic separator

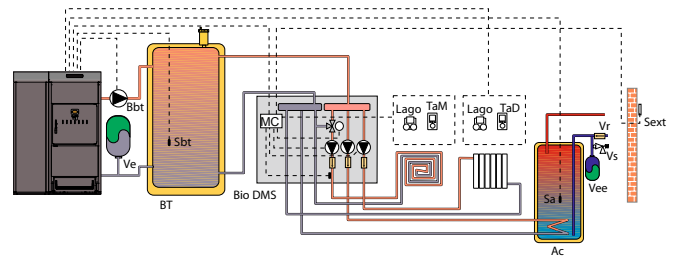


Outdoor compensation Unit

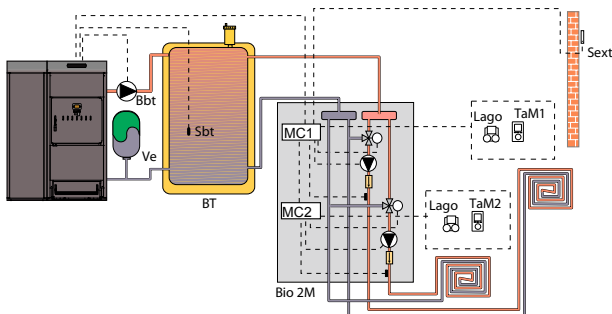
KIT BIO DM/MS + BT



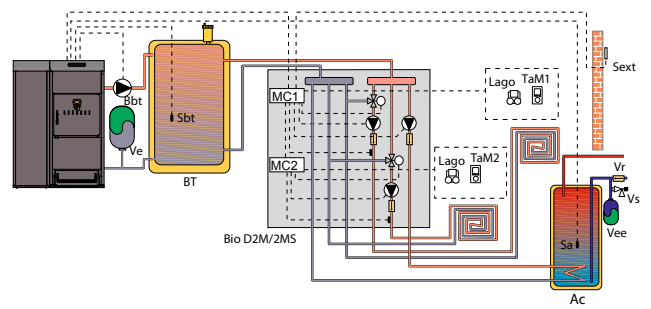
KIT BIO DMS + BT



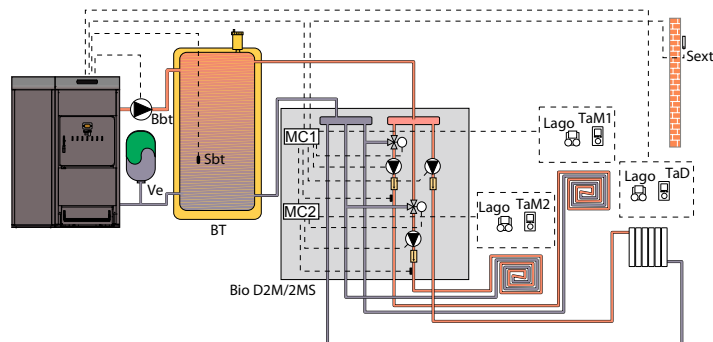
KIT BIO 2M + BT



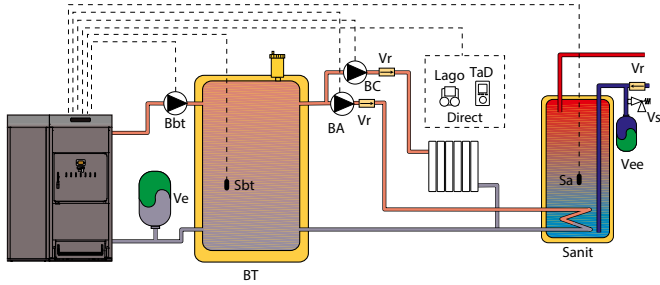
KIT BIO D2M/2MS + BT



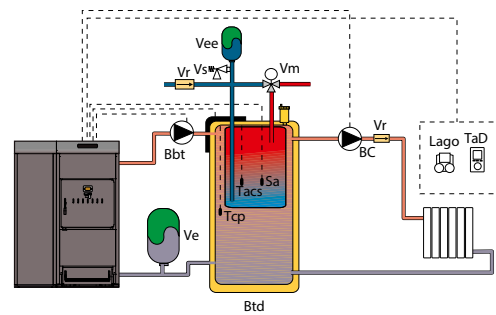
KIT BIO D2M/2MS + BT



DUAL THERM WITH BT

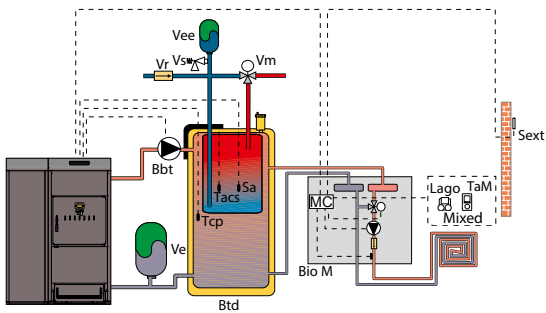


DUAL THERM WITH BT DUO

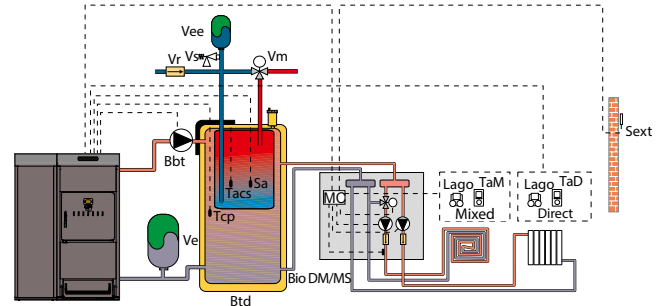


DUAL THERM WITH BIO HYDRAULIC KIT AND WEATHER COMPENSATION SENSOR

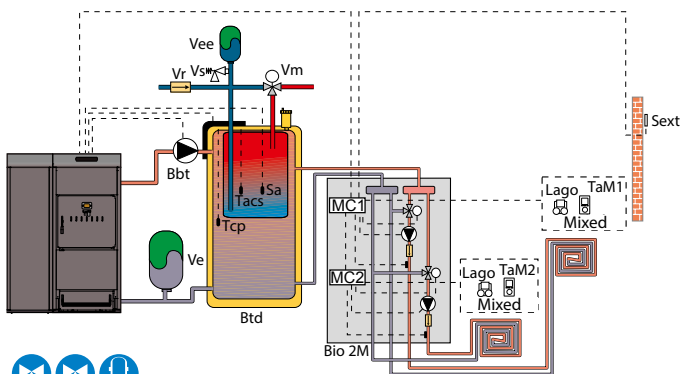
KIT BIO M + BT DUO



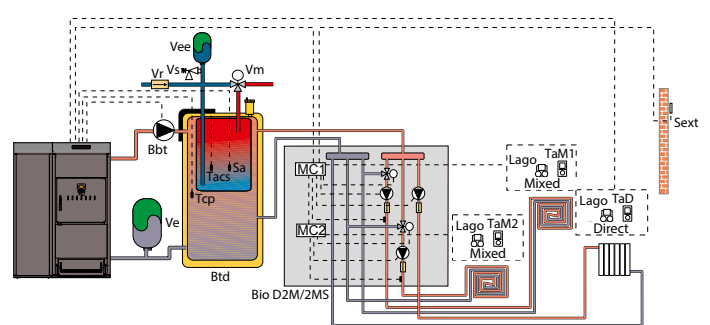
KIT BIO DM/MS+ BT DUO



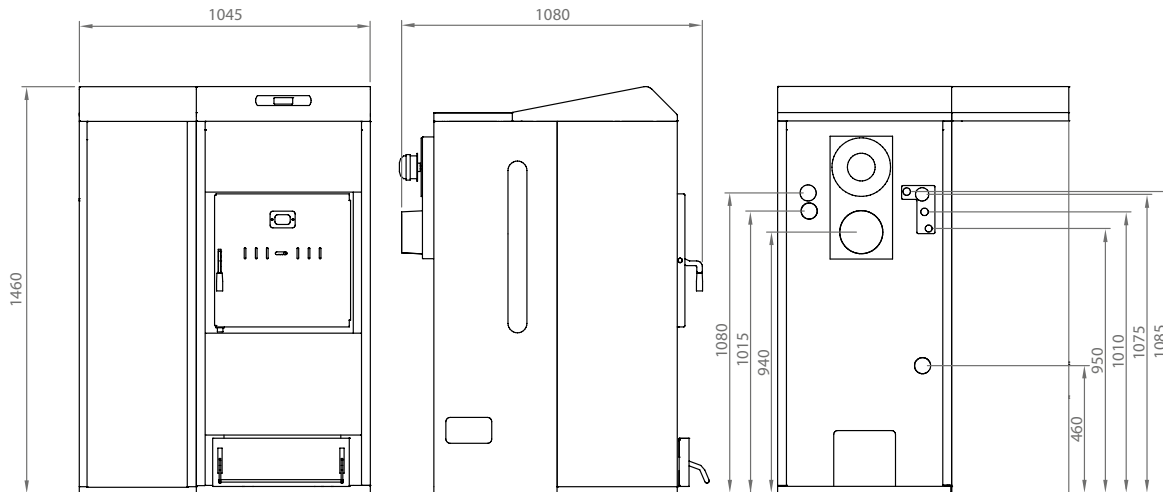
KIT BIO 2M + BT DUO



KIT BIO D2M / 2MS + BT DUO



DIMENSIONS

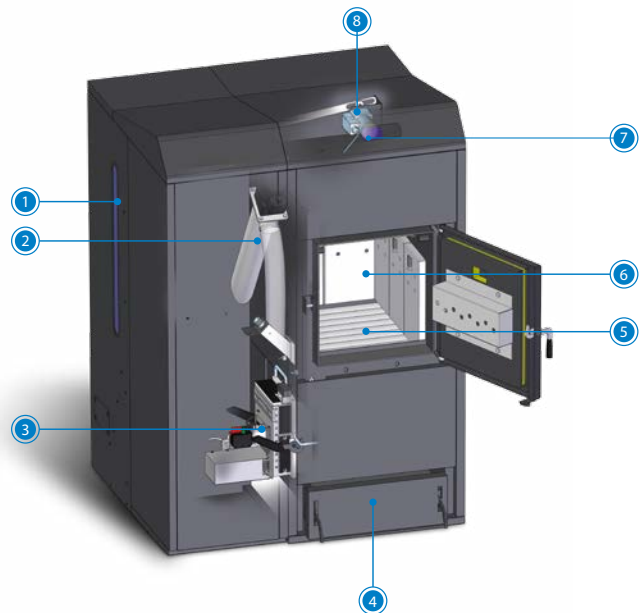


EQUIPMENT

- 1. Pellet hopper
- 2. Pellet Auger
- 3. Pellet burner with automatic cleaning
- 4. Ash pan
- 5. Water cooled grate tubes
- 6. Combustion chamber
- 7. Electronic control
- 8. Heat exchanger automatic cleaning mechanism
 - a) Safety cooler coil
 - b) Back up protection system

OPTIONS

- DHW tank sensor
- Buffer tank sensor
- High efficiency pump
- Overheating safety discharge valve
- LAGO FB OT + room sensor
- Hydraulic kits
- BT DUO buffer tank
- BT buffer tank



| Model | Fuel | Nominal Power kW | | Efficiency with pellet at nominal power % | Water content in the boiler L | Fuel capacity kg. pellet | Wood log maximum length cm |
|---------------|---------------|------------------|------|---|-------------------------------|--------------------------|----------------------------|
| | | Pellet | Wood | | | | |
| DUAL THERM 25 | Pellet + Wood | 25 | 23 | 91 | 73 | 110 | 50 |



HEADQUARTERS & FACTORY
 Bº San Esteban, s/n.
 20737 ERREZIL (Gipuzkoa) Spain
 Tel.: +34 943 813 899
 domusateknik@domusateknik.com
 www.domusateknik.com

WAREHOUSE
 Atxubiaga, 13
 Bº Landeta
 20730 AZPEITIA
 (Gipuzkoa) Spain

