BioClass NG

Biomass Boiler

Electronic Modulation
Automatic Cleaning **Grinder system**
Easy Installation
Multi-fuel *(Pellets and olive stones)*
4 power levels: 10,16,25,43 kW

CLASS 5 IN EN 303|5

domusa

Innovation with meaning

BioClass NG

- Our biomass boiler is designed to burn both pellets and olive stones, giving the owner, depending on fuel availability, the choice of both.

- DOMUSA has managed to make a technologically advanced product which has been given the highest possible European Certification rating of Class 5 in EN 303-5 for everything from performance (up to 95%), to safety and low emission of gases and dust.

- Our competitive price policy along with the highest technical performance ensures that the annual savings compared to the use of other fuels, quickly offset the investment of the initial purchase.

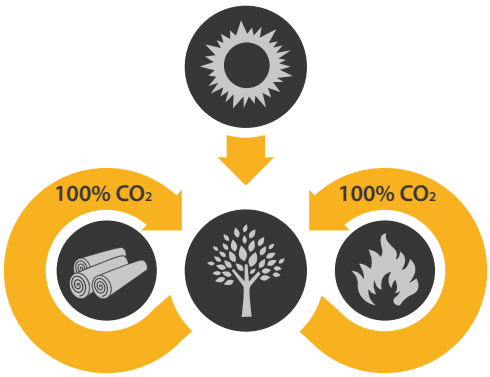
- DOMUSA´s fully automatic burner and heat exchanger cleaning system provides high comfort and convenience to the user. The cleaning of the burner **(GRINDER system)** is specially designed to treat high strength and unburned ash (silicas) to ensure both, durability and minimal maintenance of the equipment.

A natural, renewable energy source

Unlike fossil fuels, biomass is a fuel with a neutral balance of greenhouse gas emissions.

Levels of carbon dioxide emissions released during the combustion of biomass fuels, are comparable to those released during the natural cycle of decomposition. Thus, the use of biomass fuel doesn´t alter the balance of the carbon dioxide cycle and is therefore environmentally friendly.

Biomass fuels are made from waste, deforestation is not necessary for their manufacture.



Biomass
Fuel

At the forefront of existing fuel types in the biomass market, are wood pellets and olive stones.

Pellets are made from sawdust which is obtained from the waste produced in the manufacture of furniture or timber. Olive stones are obtained from the remains of the olive oil production process.

Automatic
Operation

Biomass fuels allow the automatic operation of the boilers for heating systems and domestic hot water production.

The **BioClass NG** has a fully automatic ignition and feeding system and can be used without human intervention.

Logistics

The storage space required for biomass fuels is half the amount required for wooden logs. There are different storage options for fuels depending on the space available.

Economical
fuel

Biomass is an energy source that is commonly produced with the internal resources of the country. It is not subject to major speculative pressures or to the large tax costs incurred with electrical energy or fossil fuels.

Savings

The **BioClass NG** boiler reduces operating costs by allowing a reduced investment recovery period. This is based on two factors:

Efficiency

The body of the boiler and the heat exchanger are designed for maximum efficiency in the transfer of heat from the gases to the heating system.

The **BioClass NG** boiler reduces the temperature of the combustion gases notably, thereby achieving the highest performance rates on the market.

Modulation

The **BioClass NG** boiler has an electronic control which provides the exact amount of air depending on the amount of fuel to achieve the required temperature. This creates unbeatable burning performance especially at reduced power levels.

As it can operate at a reduced power mode, major consumption savings are possible as boiler power levels can modulate according to the needs on the heating installation.

By having a wide range of modulation and the possibility of working at low power, constant on/off cycles are reduced, avoiding energy losses when the boiler stops and giving the possibility of being installed even without a buffer tank.

Easy installation

Electronic Control

The **BioClass NG** boiler has an electronic control that makes installation simple by having multiple connection solutions for the various components of the installation.

Using this electronic control, thermostats or optional room temperature sensors can be installed to control temperature in different zones.

It also allows the connexion to an automatic loading aspiration system, as well as an ignition command via telephone.

Electronic control

Direct Return

The **BioClass NG** boiler has an innovative preheated return that avoids complicated mixing processes to avoid condensation which may occur due to cold water returns.

This preheating system permits direct returns to the boiler up to 25 °, allowing direct installations with any hydraulic installation configuration.

Automatic cleaning

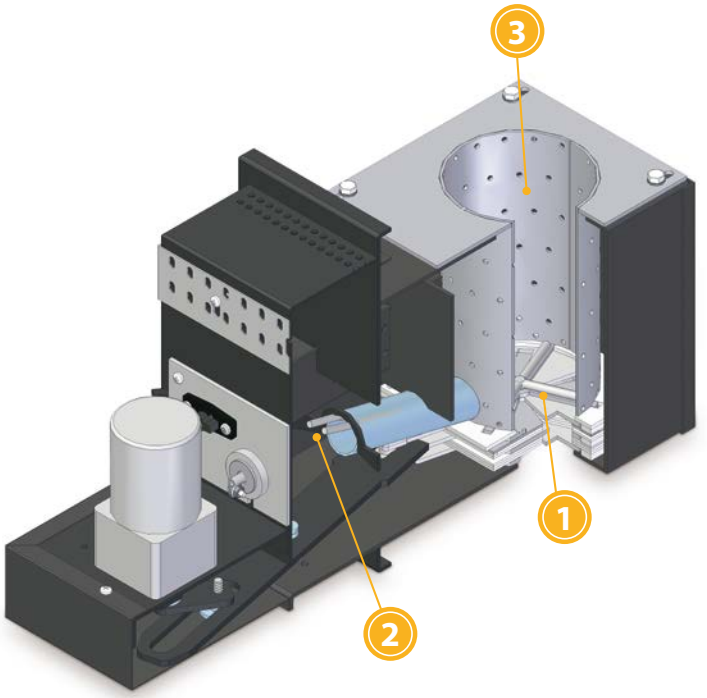
Boiler cleaning is fully automatic. It has a set of cleaning springs that retain flue gases to improve performance, while at the same time cleaning ash residues in the heat exchanger.

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.

Grinder System

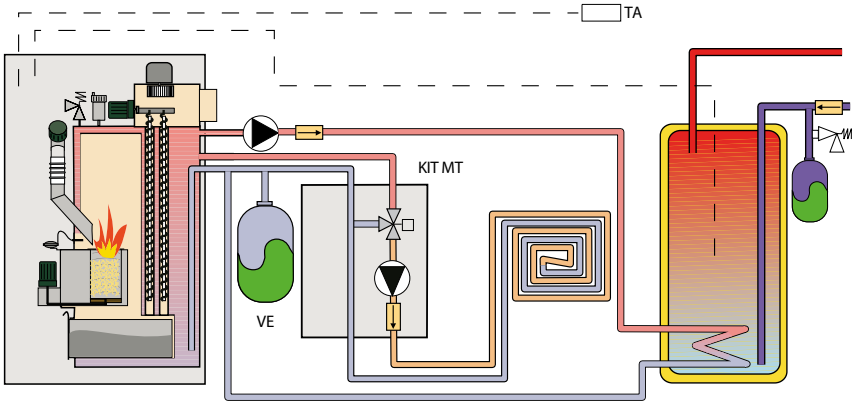
The burner has an automatic ash cleaning system. The lower part of the combustion chamber has a patented cleaning system that takes care of sending ashes generated in the combustion periodically to the ashtray.

The Grinder System cleans the ashes even when the burner is operating, which allows cleaning without having to switch off the boiler. This optimizes fuel combustion performance and maximizes the installation comfort.

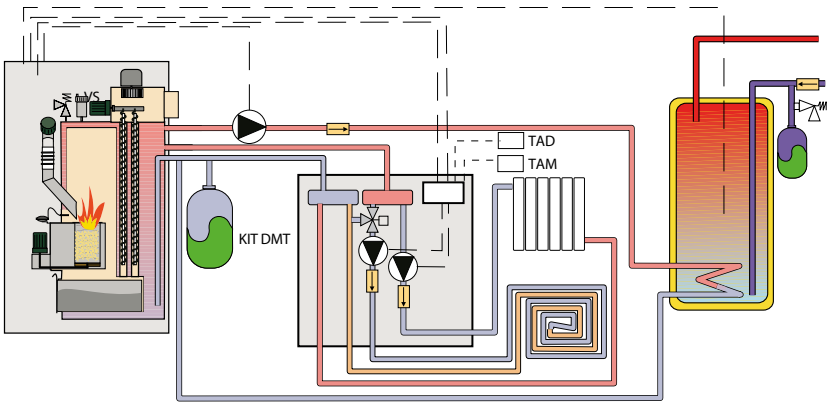


1. Grinder System
2. Automatic ignition
3. Combustion chamber

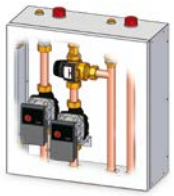
Installation
examples

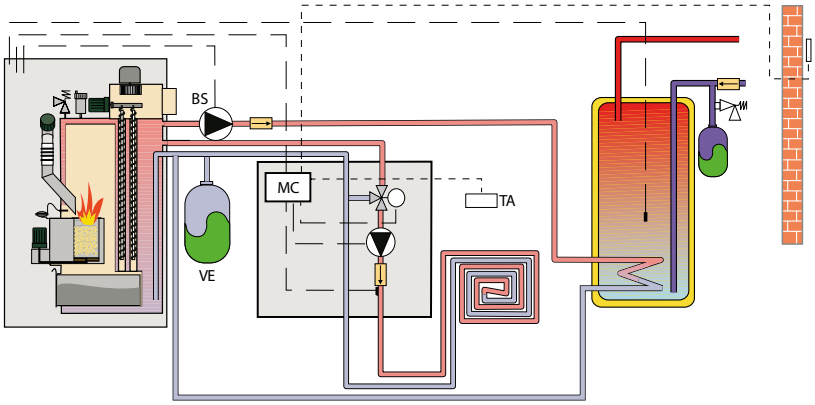


Bioclass NG boiler with MT hydraulic kit and DHW cylinder

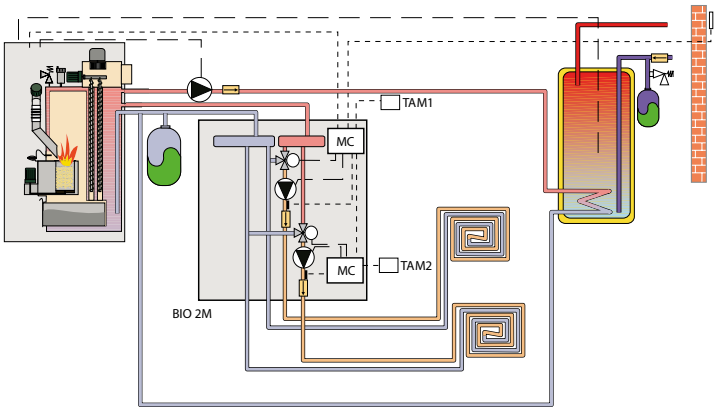


Bioclass NG boiler with DMT hydraulic kit and DHW cylinder.

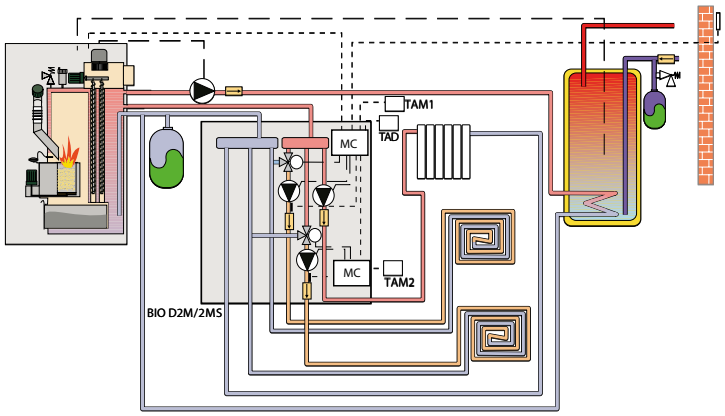




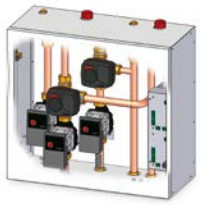
Bioclass NG boiler with BIO M hydraulic kit and DHW cylinder

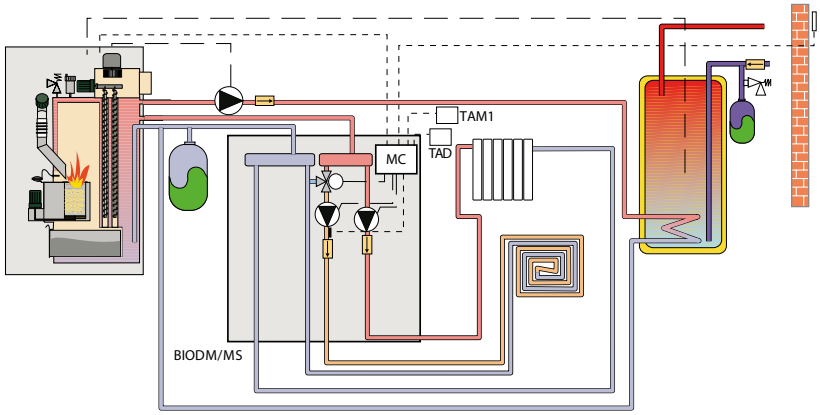


Bioclass NG boiler with BIO 2M hydraulic kit and DHW cylinder.

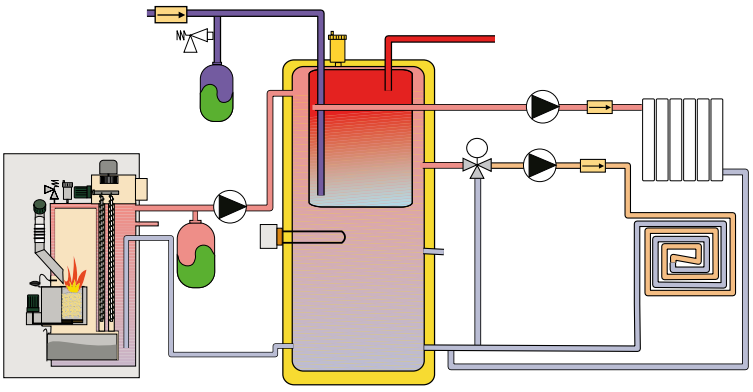


Bioclass NG boiler with BIO D2M/2MS hydraulic kit and DHW cylinder

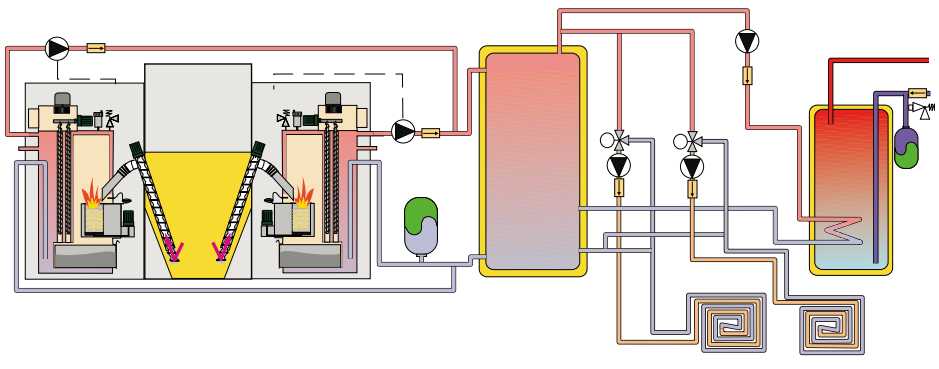




Bioclass NG boiler with BIO DM/MS hydraulic kit and DHW cylinder



Bioclass NG boiler with BT DUO buffer tank for under floor heating system, direct circuit and DHW.



Cascade installation with LCS hopper and BT buffer tank

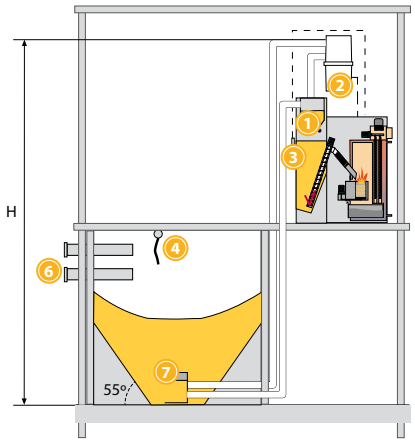
Compressor ashtray

A compressor ashtray may be incorporated to the boiler to reduce ashtray emptying frequency. It has an ash compression system to reduce the amount of ashtray maintenance required.

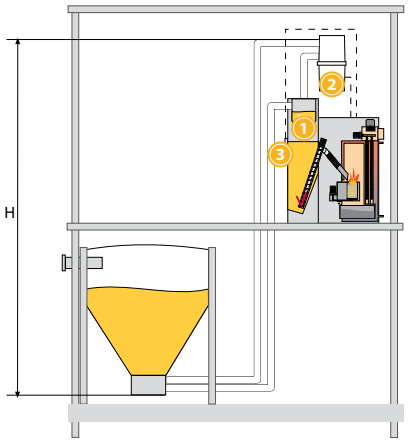
Model	MANUAL ASHTRAY CAPACITY per kg of pellets	COMPRESSOR ASHTRAY CAPACITY per kg of pellets
10 kW	650	2.000
16 kW	730	2.200
25 kW	900	2.800
43 kW	1.380	4.000

Automatic loading system

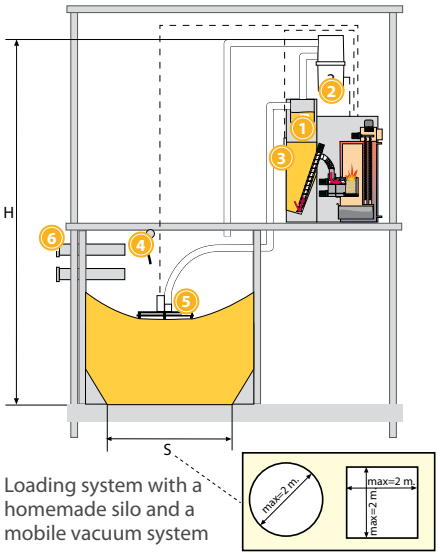
An optional automatic loading system is available. This system automatically fills the hopper from three different kinds of central tanks:



Loading system with a homemade silo and a fixed vacuum system



Loading system with a canvas silo



Loading system with a homemade silo and a mobile vacuum system

Description

1. Hopper loading mechanism
2. Suction system
3. Level control
4. Impact protection canvas
5. Spider
6. Storz filling connection pipe
7. Suction nozzle

The maximum permitted length is 30 m, bearing in mind that the height (H) must not exceed 6 m.

Composition of pellet transfer kit ASPIRATION

1. Hopper loading mechanism
2. Suction system
3. Level control

Fixed vacuum system

Suction nozzle for homemade silo.

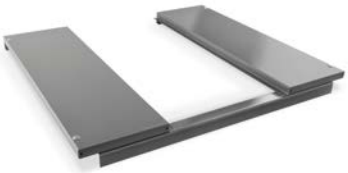
Mobile vacuum system

The Spider Kit can be connected to the Aspiration Kit in order to transfer pellets from a homemade silo to the hopper.

Options

HOMEMADE SILO EQUIPMENT

Olive stone kit



Connection kit for L hopper

Hose

Storz filling connection pipe

Impact protection canvas

Silo

There is a wide range of canvas silos available as an additional extra for the ASPIRATION automatic loading system.
These silos are quick and easy to assemble: no bolts or specific tools are required and assembly takes just 30 minutes using an Allen key. Their galvanised steel structure with cast parts, set screws and intermediate supports make them both visually attractive and long-lasting.
They are made of a heavy duty technical fabric which allows static electricity to be discharged to the building's or the boiler´s earth. The canvas allows ventilation of the pellets inside but prevents dust from escaping, so its filling systems do not require two Storz connectors.

They are made of heavy duty canvas with reinforced seams, preventing condensation caused by temperature variations.
They can be installed outdoors if protected from rain and direct sunlight.

Model	CAPACITY t	DIMENSIONS	
		Surface m²	Height m
Silo 2.2	1.5 / 2.2	2.89 (1.7 x 1.7)	2 / 2.5
Silo 3.2	2.2 / 3.2	4.00 (2.0 x 2.0)	2 / 2.5
Silo 5.0	3.4 / 5.0	6.25 (2.5 x 2.5)	2 / 2.5

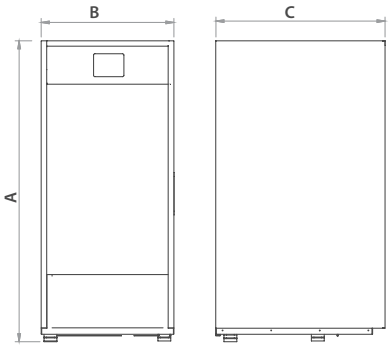
Manually loaded hoppers

The **BioClass NG** boiler is equipped with an auger to which different hoppers can be incorporated.

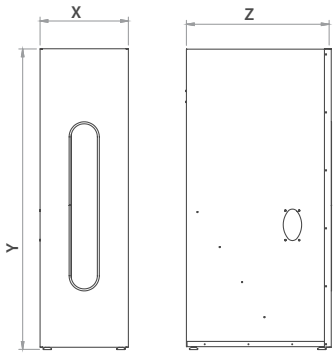
Hoppers of different sizes are delivered fully assembled with a loading grate.

- The S hopper's capacity is 195 kg / 300 L
- The L hopper's capacity is 350 kg / 544 L
- The LCS hopper's capacity is 350 kg / 544 L (for cascade flueing)

BioClass NG



Hopper



Dimensions (mm)

	A	B	C	Ø Chimney	X	Y	Z
BioClass NG 10	1.310	543	730	125	-	-	-
BioClass NG 16	1.310	543	730	125	-	-	-
BioClass NG 25	1.340	670	794	150	-	-	-
BioClass NG 43	1.340	670	960	150	-	-	-
S Hopper	-	-	-	-	404	1.525	730
L Hopper	-	-	-	-	800	1.525	730
LCS Hopper	–	-	-	–	800	1.525	730

Characteristics with pellet

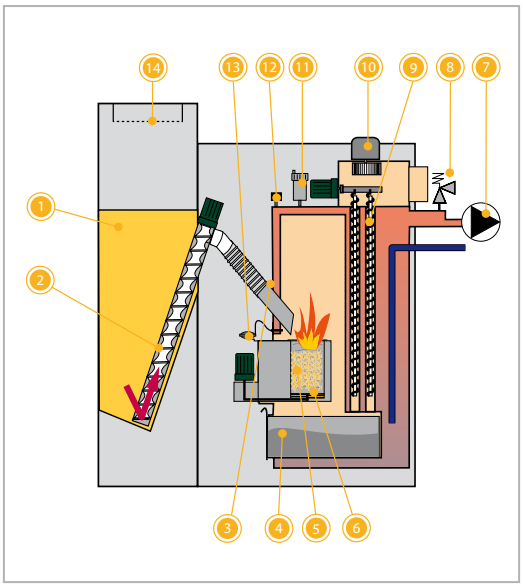
	BioClass NG 10	BioClass NG 16	BioClass NG 25	BioClass NG 43
Rated output (kW)	10,1	15,6	25,3	42,7
Efficiency rated output (%)	93,5	93,5	95	94
Lowest output (kW)	2,9	4,2	6,9	11,4
Electrical supply	485 W			
Minimum return temperature	25º C	25º C	25º C	25º C
Minimum chimney draft (Pa)	10	10	10	10
Maximum chimney draft (Pa)	20	20	20	20
Water content (L)	46	55	73	104
Fuel at 100% (kg/h)	2,3	3,4	5	9
Weight (kg)	190	211	284	368

Options

- D.H.W. tank sensor
- Compressor ashtray 10
- Compressor ashtray 16
- Compressor ashtray 25
- Compressor ashtray 43
- 1: L hopper
- 1: S hopper
- LCS Hopper
- Hydraulic kit
- BT 100 M buffer tank (100 L wall-mounted)
- BT buffer tank (100 L, 150 L, 200 L, 250 L)
- ASPIRATION Kit
- Silo 2.2
- Silo 3.2
- Silo 5.0
- Connection kit for L hopper
- Hose (15 m)
- Suction nozzle for homemade silo
- Storz filling connection pipe
- Impact protection canvas
- Olive stone S kit
- Olive stone L kit

Equipment

- 2: Auger
- 3: Anti flash-back system
- 4: Ashtray
- 5: Burner
- 6: Burner self-cleaning system
- 7: Circulation pump
- 8: Safety valve
- 9: Fume pass self-cleaning system
- 10: Fan motor
- 11: Air vent
- 12: Photocell sensor
- 13: Flow switch
- 14: Loading grate



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MONDRAGON
HUMANITY AT WORK
Finanzas Industria Distribución Conocimiento

Certification
ISO - 9001
ISO - 14001

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