COSMOGAS®
MADE IN ITALY

Condensing commercial boilers

CO2 LOW EMISSIONS

up to 11 bar WORKING PRESSURE

AISI 316 Ti TITANIUM

up to 1:20 TURNDOWN RATIO

MYdens® T

gas fired condensing commercial boilers from 60 to 280 kW

MYdens® T

Gas fired condensing commercial boilers

MYdens T from 60 to 280 kW is the range of patented, floor standing, modulating condensing commercial boilers built entirely in Cosmogas.

Eco-friendly and already set to operate with up to 20% hydrogen blend.

MYdens T are designed to be 'space-saving'; thanks to their vertical structure they allow to save space in both new and retrofitted thermal power plants. They supply an output of up to 280 kW and, thanks to their light weight, are easy to transport, install and position in the thermal power plant.

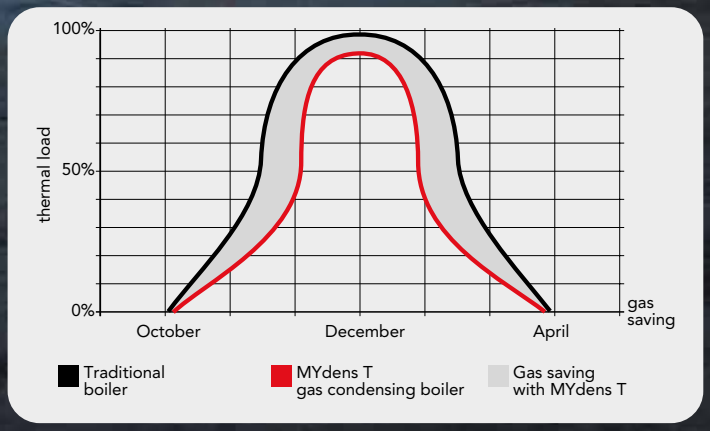
Each **MYdens T** is composed of 1 to 4 R.V.C. heat exchangers of 70 kW: a monobloc system that streamlines the supplied output according to real thermal needs ensuring maximum efficiency.

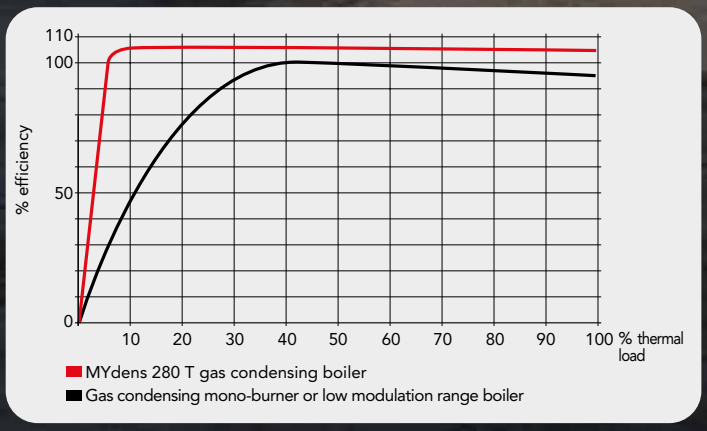
The perfect synchrony of heat exchangers cascade sequence control and 'rotation' , combined with COSMOMIX air/gas mix system, allow a wide turndown ratio of 1:20 for **MYdens 280 T** and up to 1:160 when 8 **MYdens 280 T** are connected in cascade sequence to reach an output up to 2240 kW.

Each R.V.C. heat exchanger is constructed without weld joints and is capable of working with operating pressures of up to 11 bar.
The entire range is equipped with environmentally friendly Fecralloy metal fibre premix burners.

Two-way valves are available as accessories, allowing high seasonal efficiency for systems characterised by frequent and high output variations.


MADE IN
ITALY
MADE IN



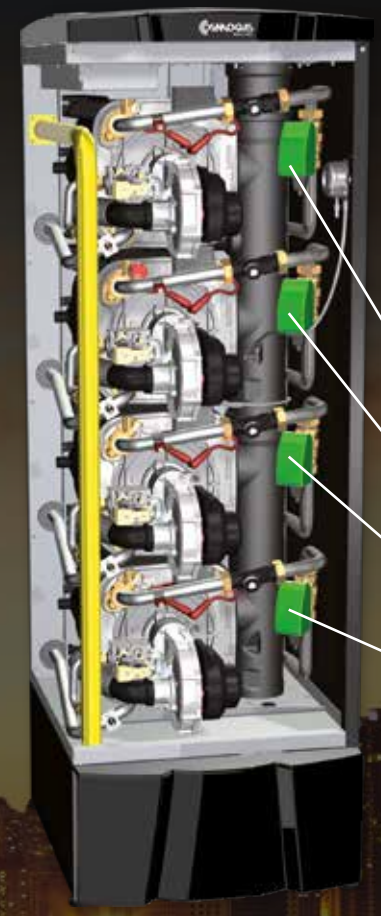


Gas savings up to 35% compared to a traditional boiler

The diagram shows the gas savings comparison between an old traditional boiler and **MYdens T**, based upon the thermal load. Ideally the gray space represents achievable gas savings that can even reach 35% on the heating of a season from october to april. With **MYdens T** it is possible to save on bills because it keeps high efficiency in mid-seasons, that represent the longest and most important energetic period on the heating of a season.

High efficiency even at low thermal loads

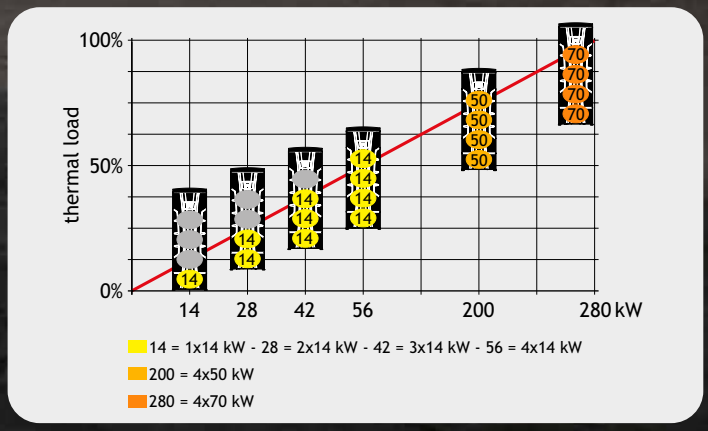
MYdens T has a high turndown ratio 1:20 (from 280 to 14 kW) and it always gives maximum efficiency even when at low thermal loads: it adjusts its heat input when thermal load decreases by turning off burners one by one, the last one supplies a 14 kW minimum power (5% of total) with a 107% output to the advantage of efficiency and gas savings.

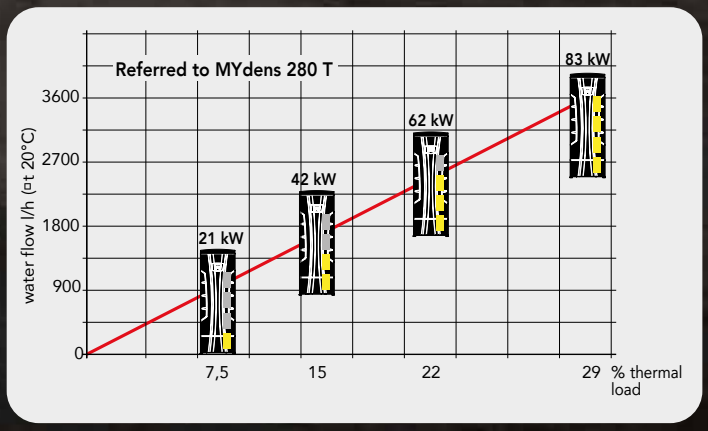


2-way motorised valves for small flows and further energy saving

MYdens T can be equipped, on demand, with 2-way motorised valves, important to adjust the water flow to lowest thermal loads. The option of 2-way motorised valves combined with a variable speed pump allows further reductions of power and gas consumption.

2-WAY MOTORISED VALVES allow to maintain very high performance also with the small flows of the system





Modulating and efficient comfort and saving in every season

One of the main features of **MYdens T** are its heat exchangers and their perfect synchrony and cascade sequence control.
Once the system reaches full speed, when thermal load varies, burners reduce the power until they turn off one after another, then they eventually increase together to reach maximum output. In this way it is possible to obtain maximum efficiency from each commercial boiler to get seasonal high efficiency and great gas saving.

Multi-burner monobloc many boilers in one

Compared to a same output commercial boiler, **MYdens T** guarantees:

- very high efficiency by streamlining the output supplied according to real needs.
- higher reliability since the eventual stop of one or more unit doesn't compromises the functionality of the system that always guarantees operating continuity.

The adva
MYd

It gets through a 65 cm wide door

MYdens T represents the best balance between power, weight and size. Being extremely compact it gets through a 65 cm wide door, allowing easy access into thermal power plant. Thanks to its light weight it is possible to easily handle it even in case of difficult installations.

Plug&Play cascade sequence compact and complete

MYdens T comes standard with a single flue gas manifold and cold water inlet and hot water outlet manifolds.
All pre-assembled and tested in Cosmogas to minimize risk and installation time, with minimal floor space requirements (0,42 sqm).

Easy electrical connections

MYdens T is equipped with a pre-wired terminal box with connectors and clear symbols, ready for an easy connection to each installation component like sensors, pumps and control boards. Next to the terminal box there is the 885IF interface that allows a 0-10V input.

Standard condensate acidity neutralizer

Condensing water produced during the combustion process react to combustion products turning into acid water. To put down acidity, each **MYdens T** is standard equipped with a condensate acidity neutralizer, sized to restore the pH to tolerable values.
Content: 10 kg of limestone.

Standard condensate blocked drain switch

A special inner condensate cup, collects condensate and makes it flow freely to the drain; in the condensate cup is connected a blocked drain switch that cuts off the commercial boiler if the level of condensate exceeds the permitted limit.

Standard air filter

MYdens T is equipped with a standard air filter to protect the burner, the combustion chamber and the heat exchanger from dust and impurities, ensuring a better efficiency of the combustion circuit.

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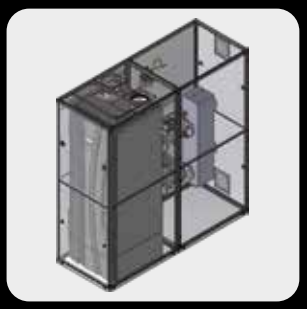
COVER-BOX T safe against bad weather on demand

The **MYdens T** is available for use outdoors with the additional COVER-BOX T, the CE certified, fireproof, weather resistant cover made of anodized aluminium that provides an IP X5D electric protection degree.
Its reduced size and elegant design make its placement easy.



Standard Vortex water flow meter to prevent small flows

Each heat exchanger inside **MYdens T** is equipped with a standard Vortex water flow meter to guarantee a more accurate management of water flow rates and to make the system operate in a more efficient way.

Standard adjustable feet for proper alignment

MYdens T is standard equipped with a series of adjustable feet for proper alignment of the commercial water heater. The height of the feet varies from 0 to 10 mm.

Standard integrated flue back preventer

Each premix burner, inside **MYdens T**, has been standard equipped with a flue back preventer, on the combustion circuit, to prevent the possible flue gas recirculation among different heat exchangers.

Unique set of spare parts for the entire range

Spare parts are the same for the entire range of **MYdens T** commercial boilers. Service Centres can service with a very limited number of spare parts: fan, gas valve, main board, display, spark generator, sensors, etc...
A case kit containing the main ones is available.

Maximum ease of maintenance

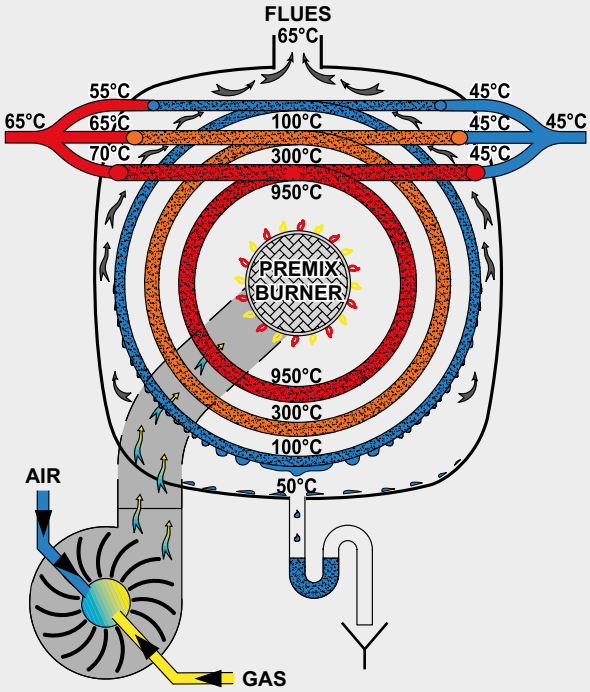
MYdens T is designed for easy maintenance with direct front access and features uniformity of functions and components. **MYdens T** is characterised by uniformity of functions and components, all to the benefit of prompt maintenance and economy of operation.

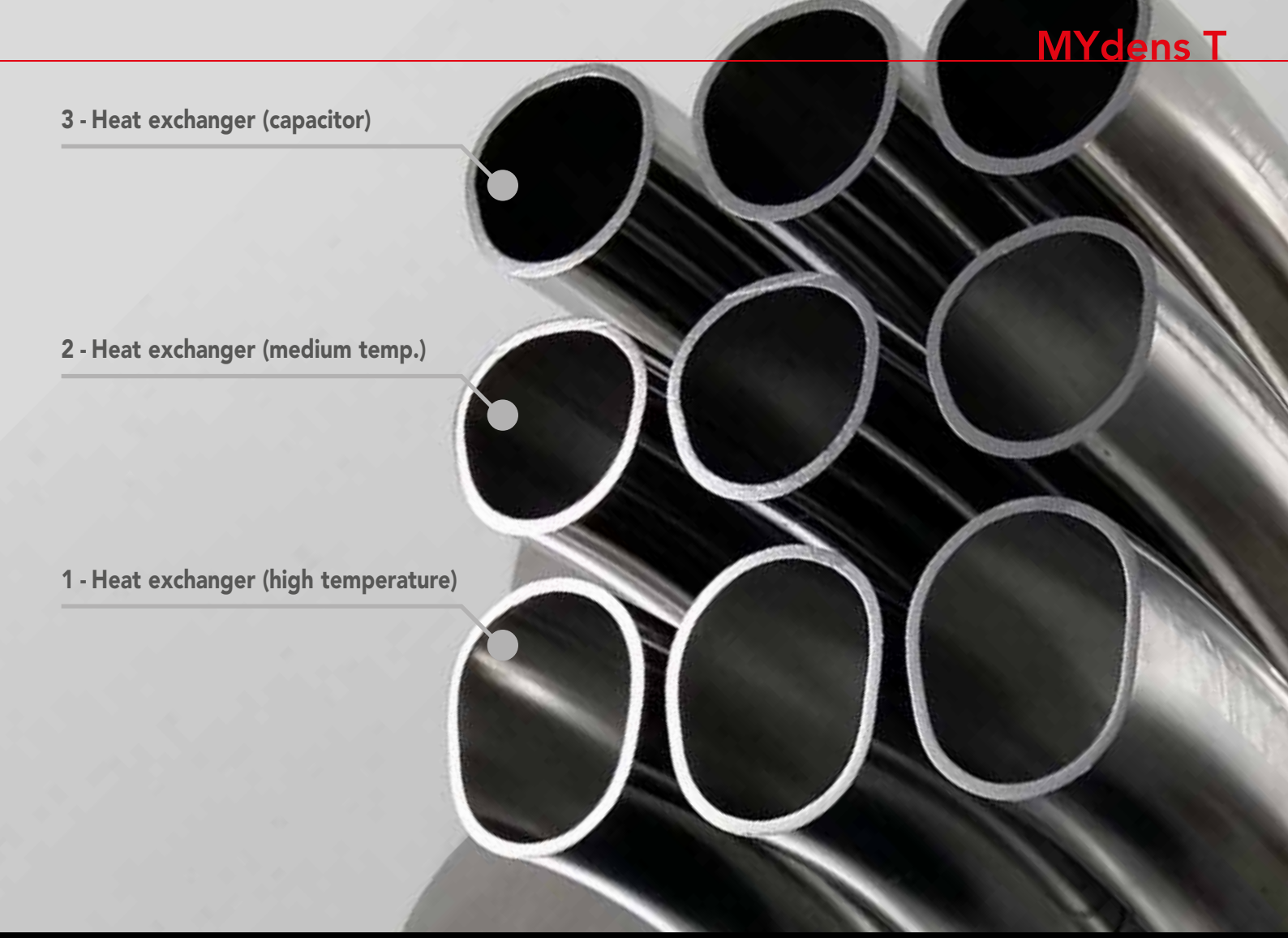
The basics of Radial Variable Circulation R.V.C.

The 'variable' circulation of the fluid allows flue gas/water heat exchange in countercurrent, resulting in high efficiency that quickly brings flue gas to condensing.

During the operating, the inlet cold water is distributed over the three heat exchangers and the series of coils, Ø16 and Ø18 mm.

The advantage of such a system is to **condense with 55/56°C temperatures of the return water** and to have excellent output of the commercial boiler even in radiator systems.





Three heat exchangers in one patented made of AISI 316 Ti (Titanium) stainless steel

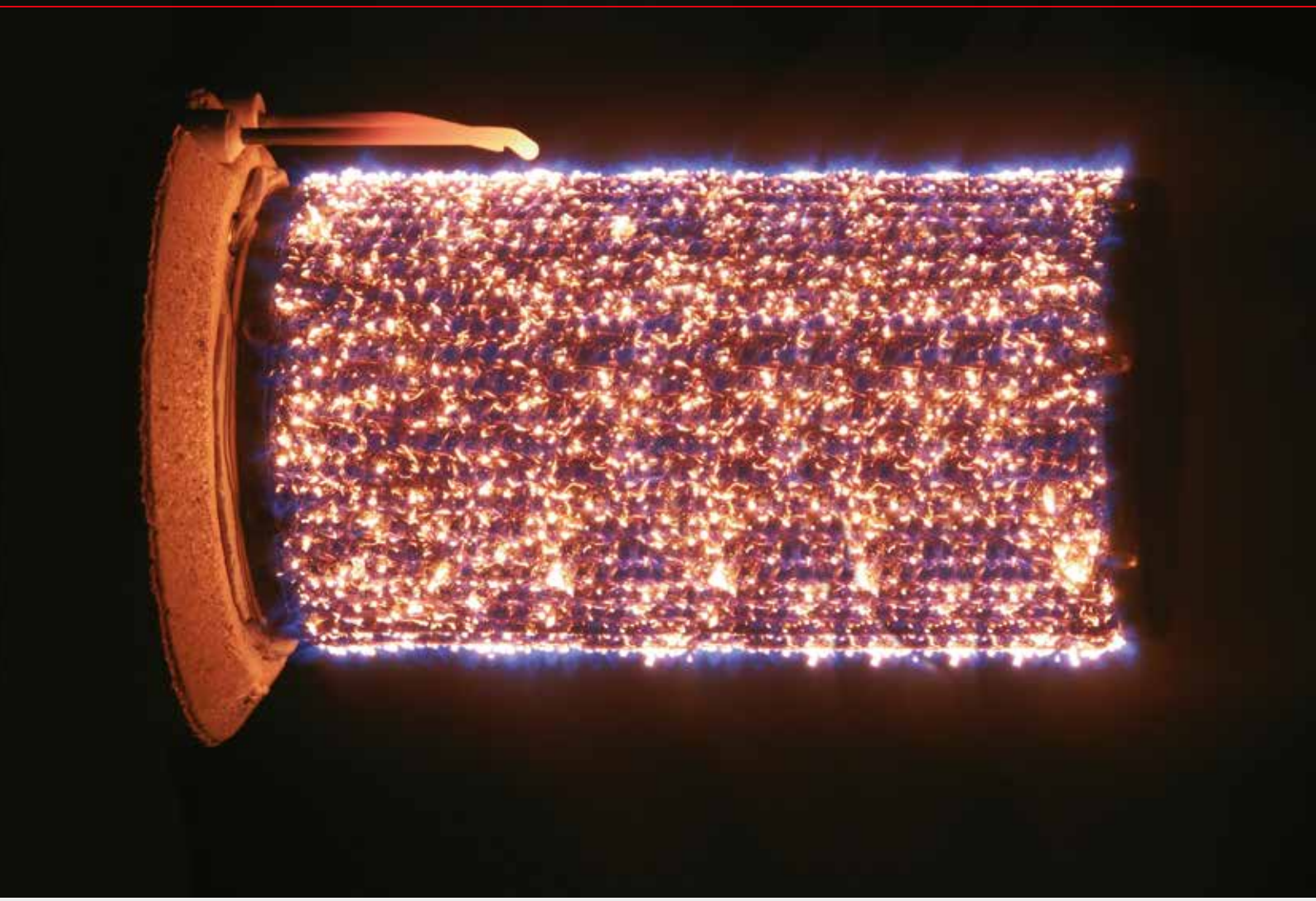
The R.V.C. (Radial Variable Circulation) heat exchanger, heart of **MYdens T** system, **is the result of research and intensive testing together with Cosmogas experience** that, for over 50 years, has been designing and patenting heating and domestic hot water production systems.

The 3 series of **AISI 316 Ti (TITANIUM)** stainless steel round tubes, which the R.V.C. heat exchanger is made of, are fasten **without weld joints** to keep Titanium stainless steel characteristics unaltered.
The R.V.C. heat exchanger is housed inside a strong, self-supporting, insulating composite monobloc casing.

Cosmogas condensing heat exchanger is designed to easily condense and recover the greatest amount of latent heat in the flue gases even when they are connected to radiator systems. The **R.V.C.** heat exchanger is actually equipped with '3 heat exchangers' hydraulically connected to each other. The No.1, with large diameter, envelops the burner to absorb a large amount of heat, the No.2 envelops the first one and further lowers the flue gas temperature and the No.3 wraps around the previous ones and acts as a capacitor.

The great exchange surface area of the '3 heat exchangers' allows for **efficiency up to 108%** with gas savings up to 35%.

- **Patented exclusive design**
- **Exceptional resistance against corrosion**
- **High efficiency**
- **Large water flow**
- **Great exchange surface**
- **Low pressure drops**
- **Working pressure up to 11 bar**

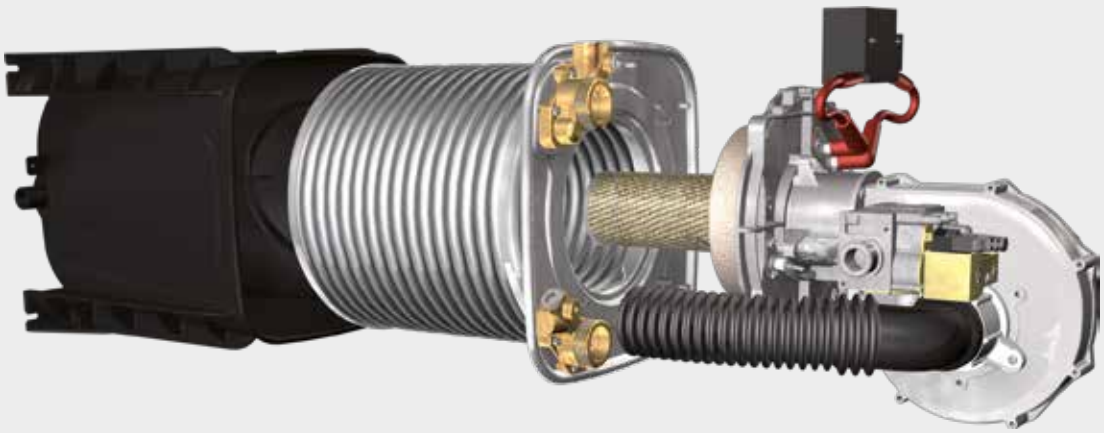


Eco-friendly premix burner made of Fecralloy metal fiber

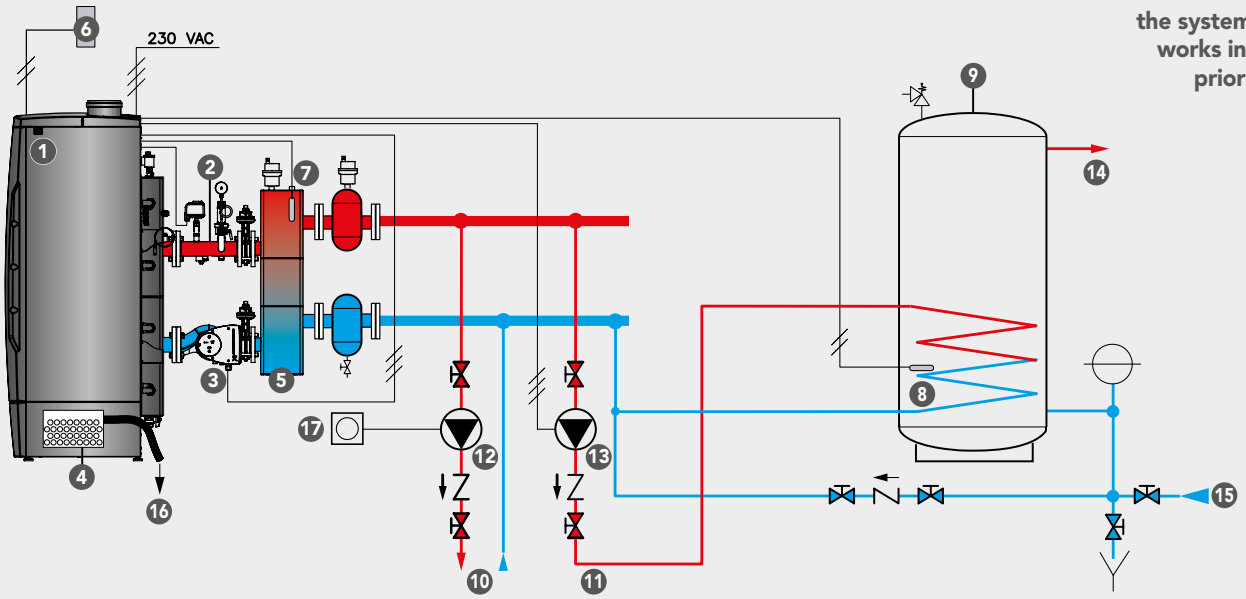
Eco-friendly premix commercial boilers have a constant air/gas ratio in each point of the turndown range of the burner, decreasing polluting emissions and optimising efficiency. The premix burner is made of "Fecralloy" a special metal fibre and has a round shape.
Cosmogas eco-friendly premix burner spreads short and perfectly nourished flames and offers:

- **Constant air/gas ratio**
- **High-efficiency combustion**
- **It adapts to variations in the thermal load of systems**
- **NOx low polluting emissions and CO_2 low greenhouse effect**
- **Natural gas, LP gas and Natural gas/20% Hydrogen blend operating**

The innovating premix system employed in **MYdens T** gas condensing commercial boilers allows an exceptional turndown ratio up to 1:20 (MYdens 280 T).



Possible arrangement



1 · MYdens T commercial boiler
2 · Safety kit
3 · Primary circuit pump
4 · Condensate acidity neutralizer
5 · Low loss header
6 · Outdoor temperature sensor
7 · Low loss header temp. sensor
8 · Hot water tank temperature sensor
9 · Hot water storage tank
10 · Heating circuit
11 · Hot water storage tank circuit
12 · Heating circuit pump
13 · Hot water storage tank circuit pump
14 · Domestic hot water supply
15 · Cold water inlet
16 · Condensate drain
17 · Room thermostat or timer

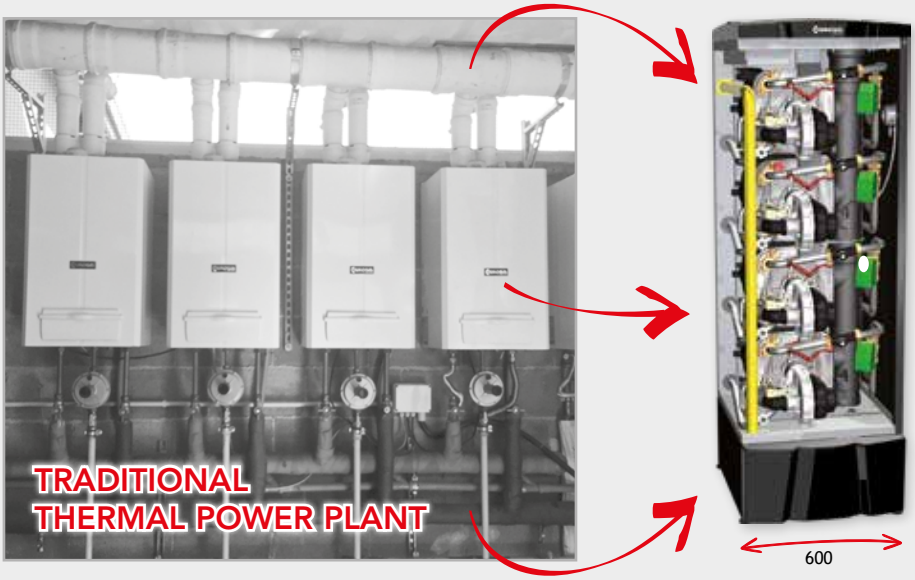
The examples reported are merely indicative

Standard control device for perfect operating of the installation

The control boards of the commercial boiler allow the management of:
- Main circuit pump
- Heating circuit pump
- Sanitary circuit pump

The on-board control boards also manage:
- Output proper modulation
- Pump unlock system
- Antifreeze device
- Outdoor temperature sensor connection
- Low water flow protection
- Low water pressure protection
- Flue blocked pressure switch
- Condensate blocked drain switch
- Auto diagnostic via control display, with automatic switch-off (Save Energy) after 5 minutes of inactivity, of all components and functions: visualization of errors and lockouts, temperature sensors, ionisation current, fan rotation speed, water flow rate, water pressure.

Suitable for new and retrofitted
thermal power plants



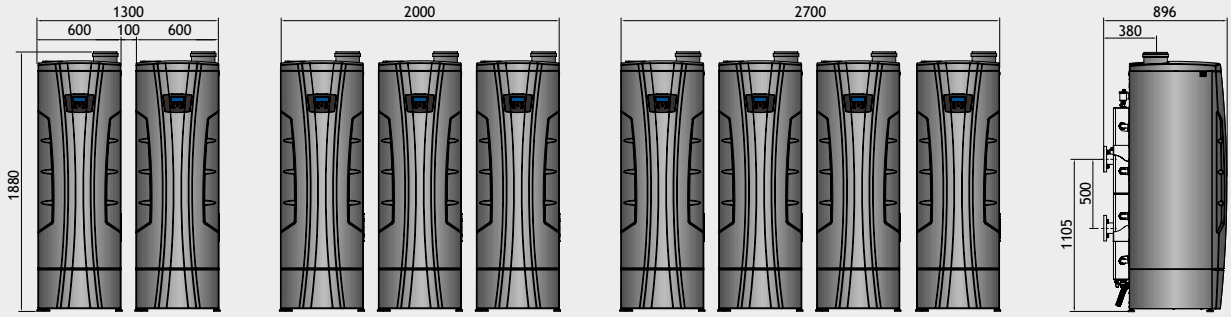
Many commercial boilers
in only 0,42 sqm

MYdens T is ideal for new and retrofittings works in thermal power plants with limited space and represents the best ratio between output, weight and footprint (600x700 mm footprint), allowing easy manoeuvrability even with difficult installations.

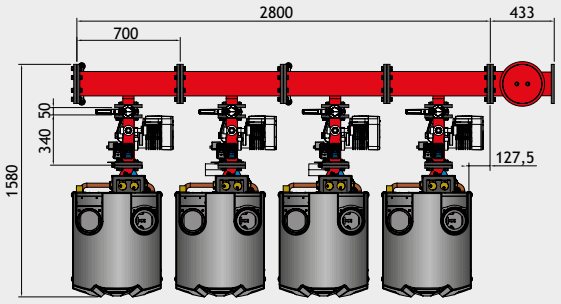
- **Easily gets into the lift**
- **It gets through a 65 cm wide door**
- **Built-in single flue gas manifold**
- **Built-in supply/return manifold**

NEW SPACE SAVER
MYdens T
THERMAL POWER PLANT

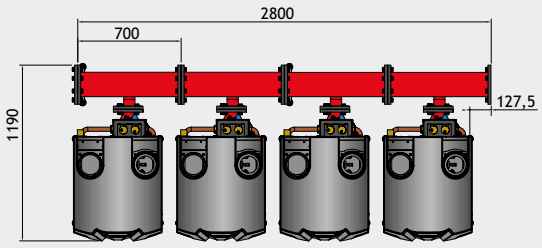
Cascade sequence
possible arrangements

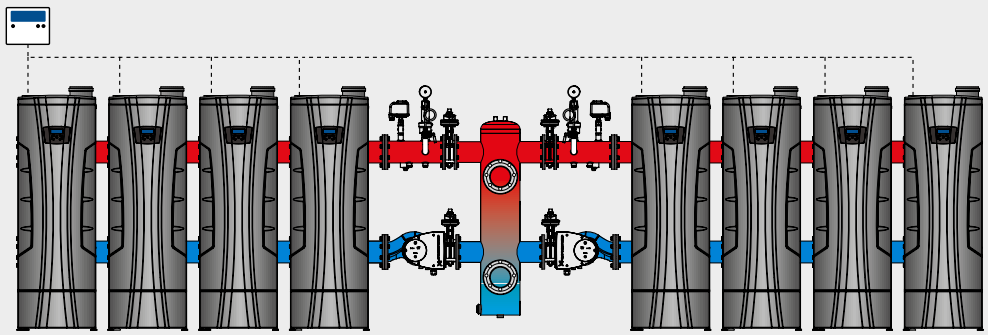


Upper view of 4 units with safety kit and pumps



Upper view of 4 units without safety kit and pumps





Cascade sequence control 885HC (on demand)

MYdens T cascade sequence is controlled by a 885HC sequencer that manages the rotation and the sequence of the burners.
Up to 8 **MYdens 280 T** commercial boilers can be sequenced with a 885HC sequencer.
For total management of the primary and secondary system, the TUTORbit temperature controller is available (see next page).

MYdens T cascade sequence turndown ratio up to 1:160 output up to 2240 kW

MYdens T commercial boilers can be connected in cascade sequence up to 8 units to achieve a maximum output of 2240 kW. One unit operates as "Manager" and the others as "Dependents" modulating to get the requested output.

Units can be connected to each other in cascade sequence with a minimum distance of 10 cm.
They have been conceived to have access to both front and rear side, to facilitate any type of maintenance.

Cascade sequence is recommended in all installations where it is necessary to ensure continuity of operation and where it is necessary to get high output for starting and low output for operation.

Each commercial boiler is equipped with a 0-10V MODBUS 885IF interface.
MYdens T cascade sequence is possible through a simple daisy-chain wiring connection.

MYdens T in cascade sequence can be connected to remote management systems with communication protocols such as LonWorks, BACnet and MODBUS.

TUTORbit: thermoregulator to remotely control
and cascade sequence management

Cascade sequence control - TUTORbit regulates the operating up to 4 **MYdens T** commercial boilers in cascade sequence, managing a sequenced lighting and modulating from the lowest output of one single boiler to the highest output of 4 boilers working at full speed, guaranteeing the rotation for an equal aging.

Multi circuit heating adjustment - TUTORbit gives the opportunity of controlling 3 separate circuits, each one independent from the others:
- 2 heating circuits with the temperature controlled by 3-way mixing valve
- 1 circuit for domestic hot water production
- Antifreeze function

Sanitary adjustment - In sanitary mode, **TUTORbit** gives the opportunity to set:
- 2 operating modes (water storage tank sensor and water storage tank thermostat)
- Manage the anti-Legionella function
- Storage minimum and maximum temperature
- DHW circulating pump

Solar adjustment - **TUTORbit,** via special expansion on demand, can even manage simultaneously a solar circuit with the possibility to set the following parameters:
- Storage minimum/maximum temperature
- Solar panel temperature
- Water storage tank load pump Δt function
- Anti stagnation function
- Anti freeze function
- Heat transferring pump/anti-Legionella

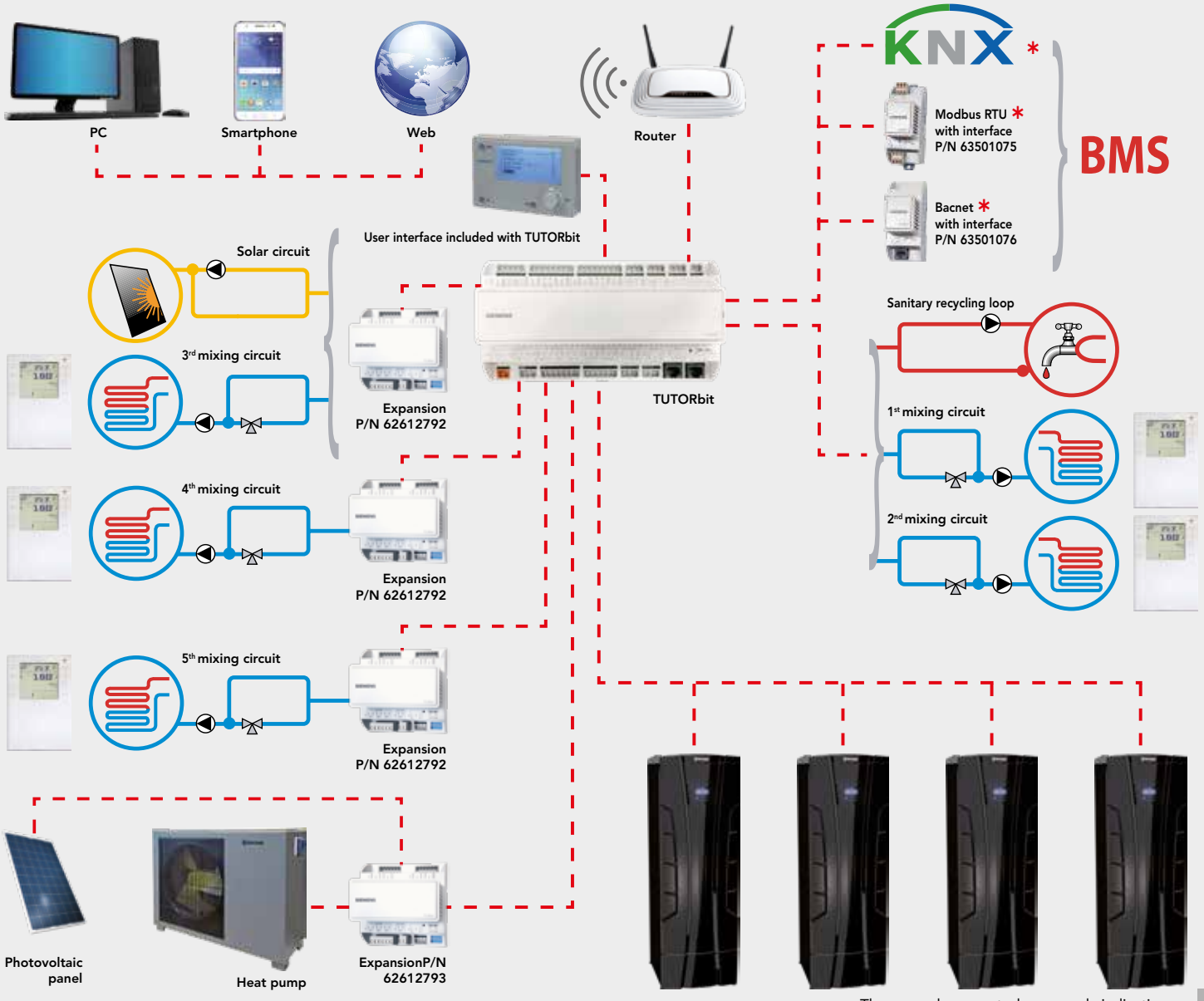
Photovoltaic solar control - Integration system with photovoltaic systems, allowing self-consumption of electricity produced from renewable sources. Thermal energy can be stored by automatically raising the temperature of domestic hot water or heating.

Heat pump control - **TUTORbit**, can control a heat pump in heating and/or cooling and domestic hot water production. **TUTORbit** streamlines the efficiency of the system by running the heat pump and calling the boilers to supplement the energy required.

Web-based remote service system - TUTORbit is compatible with main browsers and allows cloud remote control of the system via PC, tablet and smartphone, offering the following possibilities:
- Management of user-customized settings
- Forcing of inputs and outputs
- Alarms visualization
- Control input from 0-10V signal
- Monitoring through the synoptic panel of parameters and operating temperatures

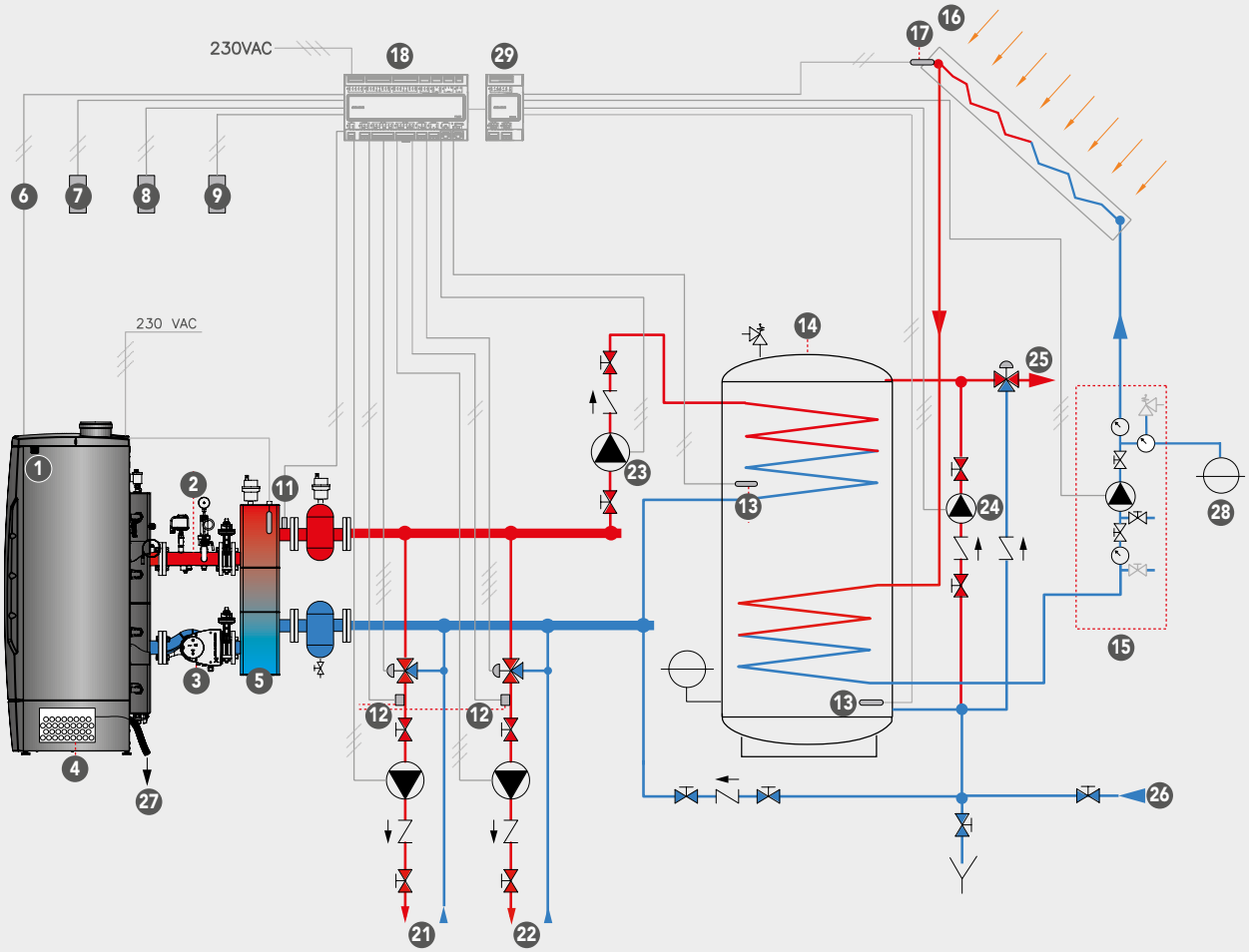
Expansions for the control of other circuits is available.

* The connection to possible BMS system can be chosen from one of the three proposed solutions: 1) KNX direct, 2) Modbus RTU via interface P/N 63501075, 3) Bacnet via interface P/N 63501076.



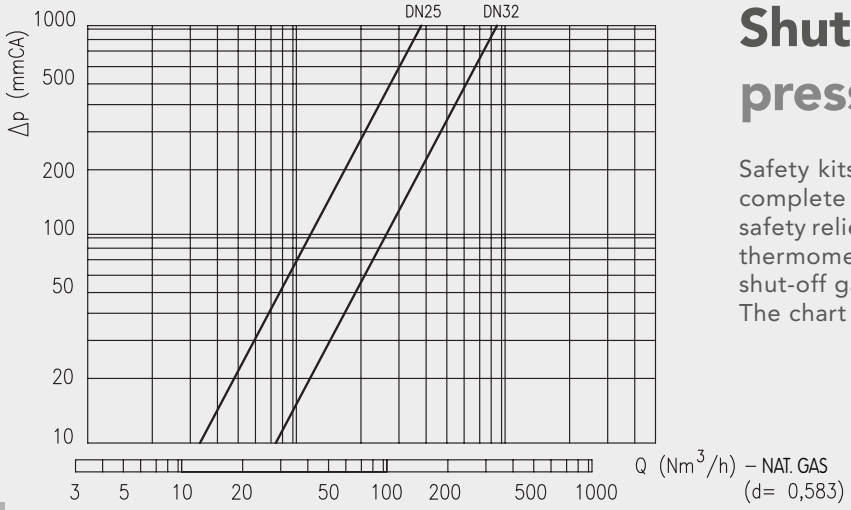
The examples reported are merely indicative

Possible arrangement
complete with TUTORbit



1 · MYdens 180 T - 210 T - 280 T commercial boilers
2 · Safety kit
3 · Main circuit pump
4 · Condensate acidity neutralizer
5 · Low loss header
6 · 0-10V input
7 · Outdoor temperature sensor
8 · Room thermostat mix heating circuit No. 1
9 · Room thermostat mix heating circuit No. 2
11 · Manifold temperature sensor
12 · Mix circuit temperature sensor
13 · Hot water storage tank temperature sensor
14 · MULTItank series hot water storage tank
15 · Filling and safety group of the solar circuit
16 · Solar panel
17 · Solar panel temperature sensor
18 · TUTORbit thermoregulator
19 · DN 65, PN 16 90° flanged elbows kit
20 · DN 65, PN 16 isolation valve
21 · Mix heating circuit No. 1
22 · Mix heating circuit No. 2
23 · Hot water storage tank pump
24 · Anti Legionella pump
25 · Domestic hot water supply
26 · Cold water inlet
27 · Condensate drain
28 · Solar circuit expansion vessel
29 · Expansion for TUTORbit

The examples reported are merely indicative



Shut off gas valve (VIC)
pressure drops

Safety kits supplied by Cosmogas include standard: manifold complete with connections, high and low pressure switches, safety relief valve, high limit temperature switch, thermometer, thermometer test connection, pressure gauge, faucet test and shut-off gas valve (VIC), brand Watts, DN 25 and DN 32.
The chart shows related pressure drops.

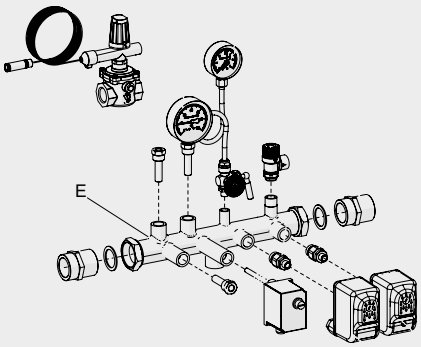
Safety
kit

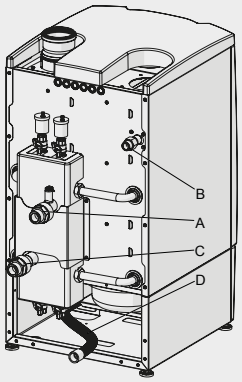
Depending on local code, it is useful to install a safety kit on each unit, in order to ensure continuity of operation.

Wide range of accessories
on demand

Each **MYdens T** gas fired condensing commercial boiler can be complete with:
- Safety kit
- Variable speed electronic inverter pump
- Plate heat exchanger or low loss header, complete with flanged bends for positioning
- Polypropylene flue pipes

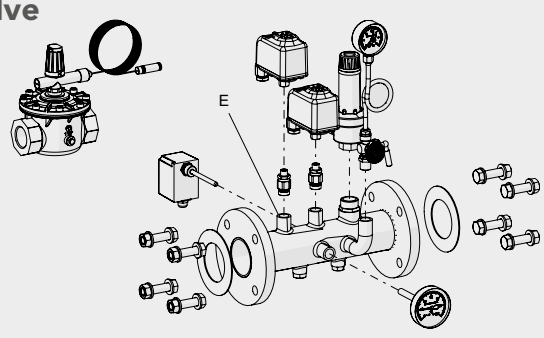
Safety kit complete with shut-off gas valve
up to 140 kW

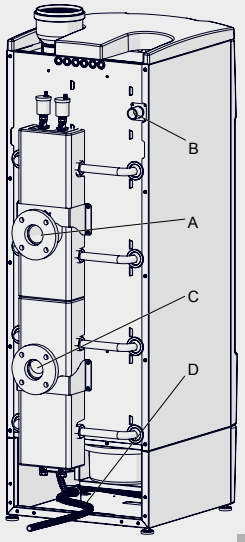




A · Supply 1"1/2
B · Gas inlet 1"
C · Return 1"1/2
D · Condensate drain Ø28 mm
E · Safety kit complete with shut-off gas valve (on demand)

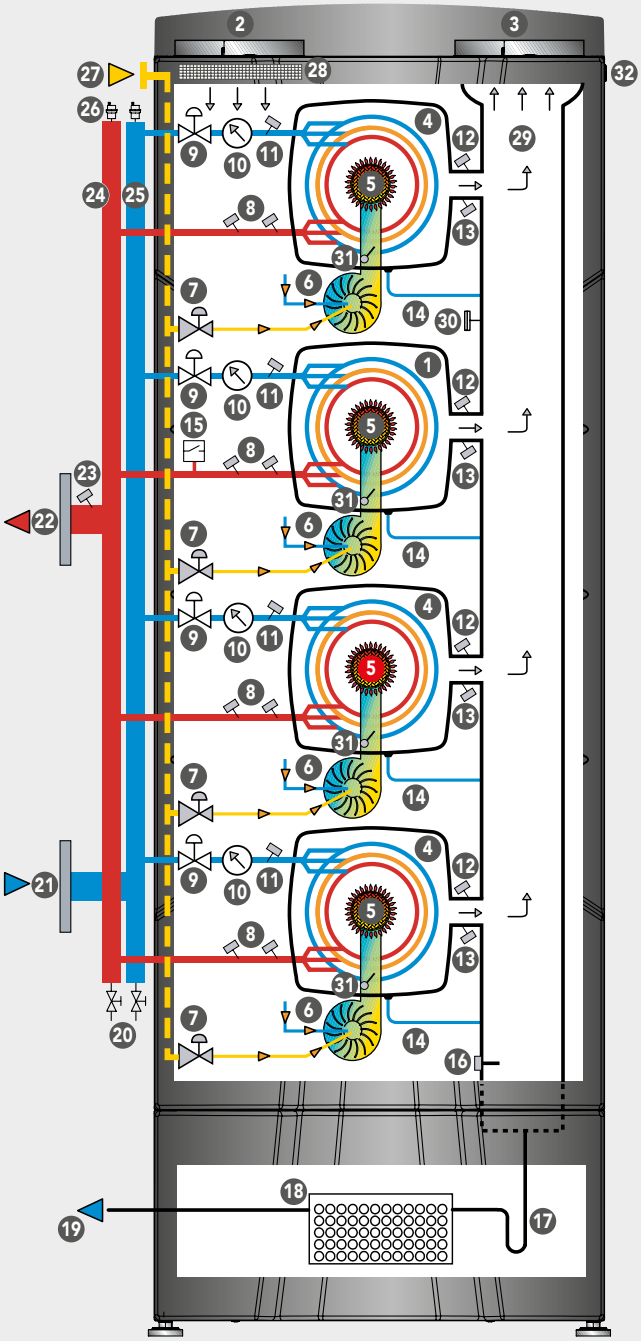
Safety kit complete with shut-off gas valve
up to 280 kW

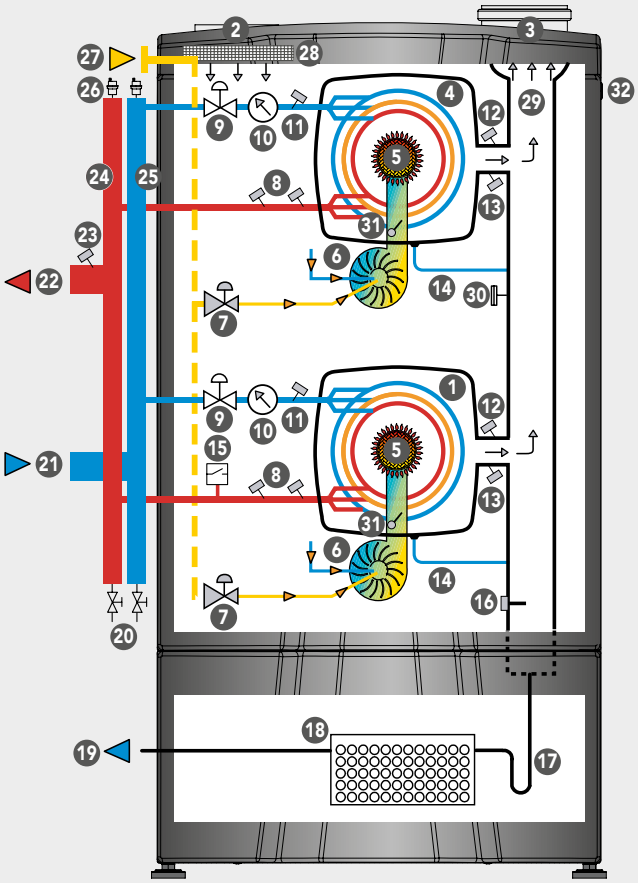




A · Supply DN 65, PN 16
B · Gas inlet 1" 1/4
C · Return DN 65, PN 16
D · Condensate drain valve Ø28 mm
E · Safety kit complete with shut-off gas valve (on demand)

Operating
schemes





1 · Manager thermal unit
2 · Air intake
3 · Flue gas outlet
4 · Dependent thermal unit
5 · Fecralloy metal fibre premix burner
6 · Fan
7 · Gas valve
8 · High limit supply temperature switch
9 · 2-way motorised valve ("TV" version only)
10 · Water flow meter
11 · Heating return temperature sensor
12 · Flue gas temperature sensor
13 · High limit flue gas temperature switch
14 · Thermal unit condensate drain
15 · Water pressure sensor
16 · Blocked drain switch
17 · Condensate drain siphon
18 · Condensate acidity neutralizer
19 · Condensate drain
20 · Drain valves
21 · Heating return
22 · Heating supply
23 · System temperature sensor
24 · Heating supply manifold
25 · Heating return manifold
26 · Automatic air vent valve
27 · Gas inlet
28 · Air filter
29 · Flue gas outlet pipe
30 · Blocked flue pressure switch
31 · Backdraft damper
32 · Main switch

ERP
product fiche

Name or brand of the supplier			COSMOGAS							
Reference of the model given by the supplier			MYDENS							
			60 T	70 T	100 T	115 T	140 T	180 T	210 T	280 T
Condensing boiler			YES	YES	YES	YES	YES	YES	YES	YES
Low temperature boiler			NO	NO	NO	NO	NO	NO	NO	NO
B1 Boiler type			NO	NO	NO	NO	NO	NO	NO	NO
Cogeneration space heater			NO	NO	NO	NO	NO	NO	NO	NO
Combination heater			NO	NO	NO	NO	NO	NO	NO	NO
Equipped with supplementary heater			NO	NO	NO	NO	NO	NO	NO	NO
Energy efficiency class			A	A	-	-	-	-	-	-
Item	Symbol	Unit								
Rated heat output	Pn	kW	56,0	68,0	96,0	113,0	136,0	170,0	205,0	274,0
Seasonal space heating energy efficiency	ηs	%	91,0	91,0	92,0	92,0	92,0	92,0	91,0	92,0
Useful heat output at rated heat output and high-temperature regime (*)	P4	kW	55,8	67,9	96,2	112,6	135,6	170,1	205,4	274,2
Useful efficiency at rated heat output and high-temperature regime (*)	η4	%	87,2	87,3	87,8	87,8	87,9	88,4	88,3	89,0
Useful heat output at 30% of rated heat output and low-temperature regime (**)	P1	kW	18,4	22,3	32,1	37,9	44,9	56,2	67,3	91,4
Useful efficiency at 30% of rated heat output and low-temperature regime (**)	η1	%	95,7	95,8	96,6	97,0	96,6	97,0	95,9	96,8
Auxiliary electricity consumption										
At full load	elmax	kW	0,060	0,070	0,095	0,110	0,140	0,180	0,210	0,280
At partial load	elmin	kW	0,018	0,020	0,030	0,035	0,040	0,050	0,060	0,080
In standby mode	Psb	kW	0,005	0,005	0,007	0,008	0,010	0,012	0,015	0,020
Other items										
Standby heat loss	Pstby	kW	0,050	0,060	0,095	0,100	0,120	0,150	0,180	0,240
Ignition burner power consumption	Pign	kW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual energy consumption	QHE	GJ	107	130	169	194	235	288	346	450
Sound power level, indoors/outdoors	LWA	dB	70	70	70	70	70	70	70	70
Emissions of nitrogen oxides	NOx	mg/kWh	34	34	34	34	34	34	34	34

According to commission delegated regulation (EU) No 811/2013 and No 813/2013.
(*) High-temperature regime means 60°C return temperature and 80°C supply temperature.
(**) Low temperature means for condensing boilers 30°C, for low-temperature boilers 37°C and for other appliances 50°C return temperature.

Technical data

MYDENS		MU	60 T	70 T	100 T
Type (Type of exhaust flue gas/air intake)					
Category			II2H3P	II2H3P	II2H3P
EU type approval certificate (PIN)			0476CR1272	0476CR1272	0476CR1272
Range Rated Boiler			APPROVED	APPROVED	APPROVED
Heating maximum heat input "Qn" LHV (HHV)		kW	57,8 (64,2)	69,9 (77,6)	99,0 (109,9)
Heating minimum heat input LHV (HHV)		kW	12,0 (13,3)	14,7 (16,3)	12,0 (13,3)
Heating maximum heat output (80/60) "Pn"		kW	55,8	67,9	96,2
Efficiency at 100% load (80/60) LHV (HHV)		%	96,8 (87,2)	96,9 (87,3)	97,2 (87,5)
Minimum heat output (80/60)		kW	11,5	14,1	11,5
Efficiency at minimum heat output (80/60) LHV (HHV)		%	95,9 (86,4)	96,2 (86,7)	95,9 (86,4)
Heating maximum heat output (50/30)		kW	60,7	73,5	104,0
Efficiency at heating maximum heat output (50/30) LHV (HHV)		%	105,0 (94,6)	105,1 (94,7)	105,0 (94,6)
Minimum heat output (50/30)		kW	12,8	15,6	12,8
Efficiency at minimum heat output (50/30) LHV (HHV)		%	106,6 (96,0)	106,3 (95,8)	106,6 (96,0)
Efficiency at 30% of the load LHV (HHV)		%	106,3 (95,7)	106,4 (95,8)	108,0 (97,3)
Losses at the chimney, burner ON (80/60)		%	1	1	1
Losses at the chimney, burner OFF		%	0,1	0,1	0,1
Losses at the casing, burner ON		%	0,1	0,1	0,1
Losses at the casing, burner OFF		%	0,05	0,05	0,05
Gas flow rate	G20	m^3/h	6,11	7,39	10,47
	G31	kg/h	4,49	5,43	7,68
Gas supply pressure	G20	mbar	20	20	20
	G31	mbar	37	37	37
Gas supply minimum pressure	G20	mbar	10	10	10
	G31	mbar	10	10	10
Gas supply maximum pressure	G20	mbar	45	45	45
	G31	mbar	45	45	45
Primary heat exchanger water content		l	4,6	5,7	9,2
Minimum operating water flow rate with motorised valves		l/h	/	/	2400
Minimum operating water flow rate without motorised valves		l/h	2400	2700	4800
DHW temperature adjustment range with hot water storage tank		°C	40 - 60	40 - 60	40 - 60
Maximum temperature for safety intervention		°C	95	95	95
Maximum heating temperature		°C	80	80	80
Minimum heating temperature		°C	20	20	20
Maximum heating pressure "PMS"		bar	11	11	11
Minimum heating pressure		bar	1	1	1
Rated power supply voltage		V ~	230	230	230
Rated power supply frequency		Hz	50	50	50
Absorbed electrical power		W	110	150	220
Electrical protection rating			IP 21	IP 21	IP 21
Burner electrical power		W	110	150	220
Flue gas exhaust pipe diameter		mm	110	110	110
Maximum length of exhaust flue gas pipe		m	10	10	10
Equivalent length of a 90° bend		m	4	4	4
Weighted CO (0% O2)	G20	ppm	30	27	30
Weighted NOx (0% O2) (class 6 EN 15502) HHV	G20	mg/kWh	34	34	34
CO2 (%) at minimum output	G20	%	8,5	8,5	8,5
	G31	%	9,8	9,8	9,8
CO2 (%) at maximum output	G20	%	8,7	8,7	8,7
	G31	%	10,2	10,2	10,2
O2 (%) at minimum output	G20	%	5,8	5,8	5,8
	G31	%	6,0	6,0	6,0
O2 (%) at maximum output	G20	%	5,4	5,4	5,4
	G31	%	5,4	5,4	5,4
Maximum recirculation of flue gas permitted in windy conditions		%	10	10	10
Maximum flue gas temperature at boiler outlet		°C	80	80	80
Minimum flue gas temperature at boiler outlet		°C	30	30	30
Δt flue gas temperature/Return (at 100% of the load) (80/60)		°C	20	24	20
Δt flue gas temperature/Return (at 30% of the load) (37/30)		°C	7	7	7

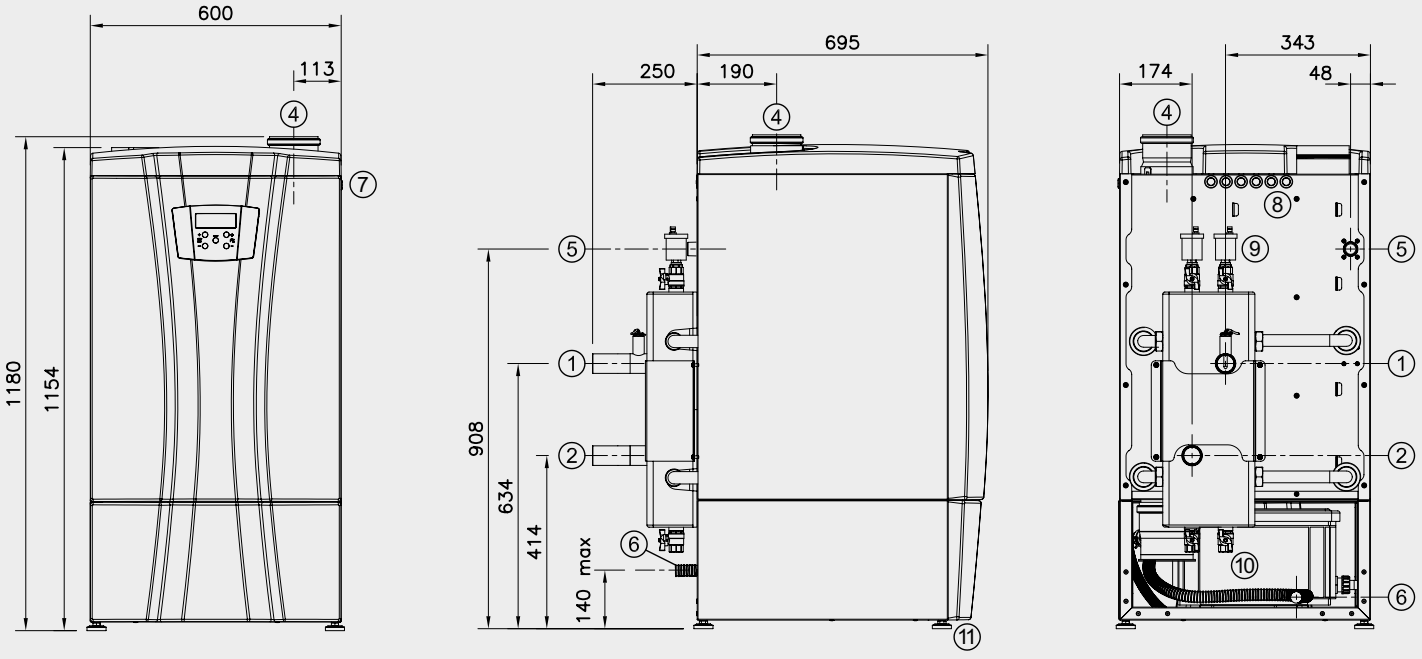
115 T	140 T	180 T	210 T	280 T
	B23 ; B23P			
II2H3P	II2H3P	II2H3P	II2H3P	II2H3P
0476CR1272	0476CR1272	0476CR1272	0476CR1272	0476CR1272
APPROVED	APPROVED	APPROVED	APPROVED	APPROVED
115,6 (128,3)	140,0 (155,4)	173,4 (192,5)	210,0 (233,1)	280,0 (310,8)
12,0 (13,3)	14,7 (16,3)	14,7 (16,3)	14,7 (16,3)	14,7 (16,3)
112,6	136,6	170,1	205,4	274,2
97,4 (87,7)	97,6 (87,9)	98,1 (88,3)	97,8 (88,1)	97,9 (88,2)
11,5	14,1	14,1	14,1	14,1
95,9 (86,4)	96,2 (86,7)	96,2 (86,7)	96,2 (86,7)	96,2 (86,7)
121,4	147,1	182,2	220,7	294,3
105,0 (94,6)	105,1 (94,7)	105,1 (94,7)	105,1 (94,7)	105,1 (94,7)
12,8	15,6	15,6	15,6	15,6
106,6 (96,0)	106,3 (95,8)	106,3 (95,8)	106,3 (95,8)	106,3 (95,8)
107,5 (96,8)	107,0 (96,4)	108,0 (97,3)	106,8 (96,2)	108,8 (98,0)
1	1	1	1	1
0,1	0,1	0,1	0,1	0,1
0,1	0,1	0,1	0,1	0,1
0,05	0,05	0,05	0,05	0,05
12,22	14,80	18,30	22,20	29,61
8,97	10,87	13,50	16,30	21,73
20	20	20	20	20
37	37	37	37	37
10	10	10	10	10
10	10	10	10	10
45	45	45	45	45
45	45	45	45	45
9,2	11,4	17,1	17,1	22,8
2400	2700	2700	2700	2700
4800	5400	8100	10800	10800
40 - 60	40 - 60	40 - 60	40 - 60	40 - 60
95	95	95	95	95
80	80	80	80	80
20	20	20	20	20
11	11	11	11	11
1	1	1	1	1
230	230	230	230	230
50	50	50	50	50
220	300	430	430	590
IP 21	IP 21	IP 21	IP 21	IP 21
220	300	430	430	590
110	110	160	160	160
10	10	10	10	10
4	4	4	4	4
30	27	27	27	27
34	34	34	34	34
8,5	8,5	8,5	8,5	8,5
9,8	9,8	9,8	9,8	9,8
8,7	8,7	8,7	8,7	8,7
10,2	10,2	10,2	10,2	10,2
5,8	5,8	5,8	5,8	5,8
6,0	6,0	6,0	6,0	6,0
5,4	5,4	5,4	5,4	5,4
5,4	5,4	5,4	5,4	5,4
10	10	10	10	10
80	80	80	80	80
30	30	30	30	30
20	24	24	24	24
7	7	7	7	7

Technical
data

MYDENS	MU	60 T	70 T	100 T	115 T
Maximum CO in exhaust flue gas	ppm	250	250	250	250
Mass flow of exhaust flue gas at maximum power	g/s	27,1	32,9	46,6	54,4
Mass flow of exhaust flue gas at minimum power	g/s	5,8	7,1	5,8	5,8
Available head at outlet	Pa	110	110	110	110
Maximum temperature of the combustion agent air	°C	40	40	40	40
Maximum CO2 content in the combustion agent air	%	0,9	0,9	0,9	0,9
Maximum exhaust flue gas temperature for overheating	°C	95	95	95	95
Max. negative pressure allowed in the exhaust flue gas/air intake system	Pa	110	110	110	110
Condensate maximum flow rate	l/h	7,3	8,8	12,4	14,5
Condensate average acidity	pH	4	4	4	4
Operating room temperature	°C	0,5 ; + 50	0,5 ; + 50	0,5 ; + 50	0,5 ; + 50
Boiler weight (empty)	kg	96	98	142	142

Size
and connections

MYdens 60 T - 70 T - 100 T - 115 T - 140 T

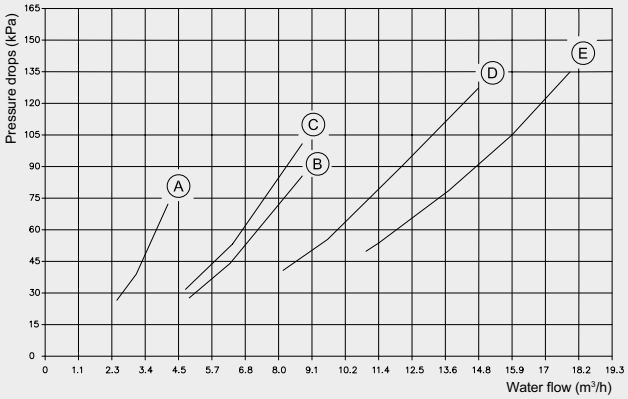


1 · Supply 1" 1/2 ∗
2 · Return 1" 1/2 ∗
4 · Flue gas outlet Ø110 mm
5 · Gas inlet 1"
6 · Condensate drain Ø28 mm
7 · Main switch
8 · Power supply and auxiliary input
9 · Intercepted air purge valves
10 · Ball valves for manifold drain
11 · Adjustable feet

∗ · Connections and flanges are not factory mounted

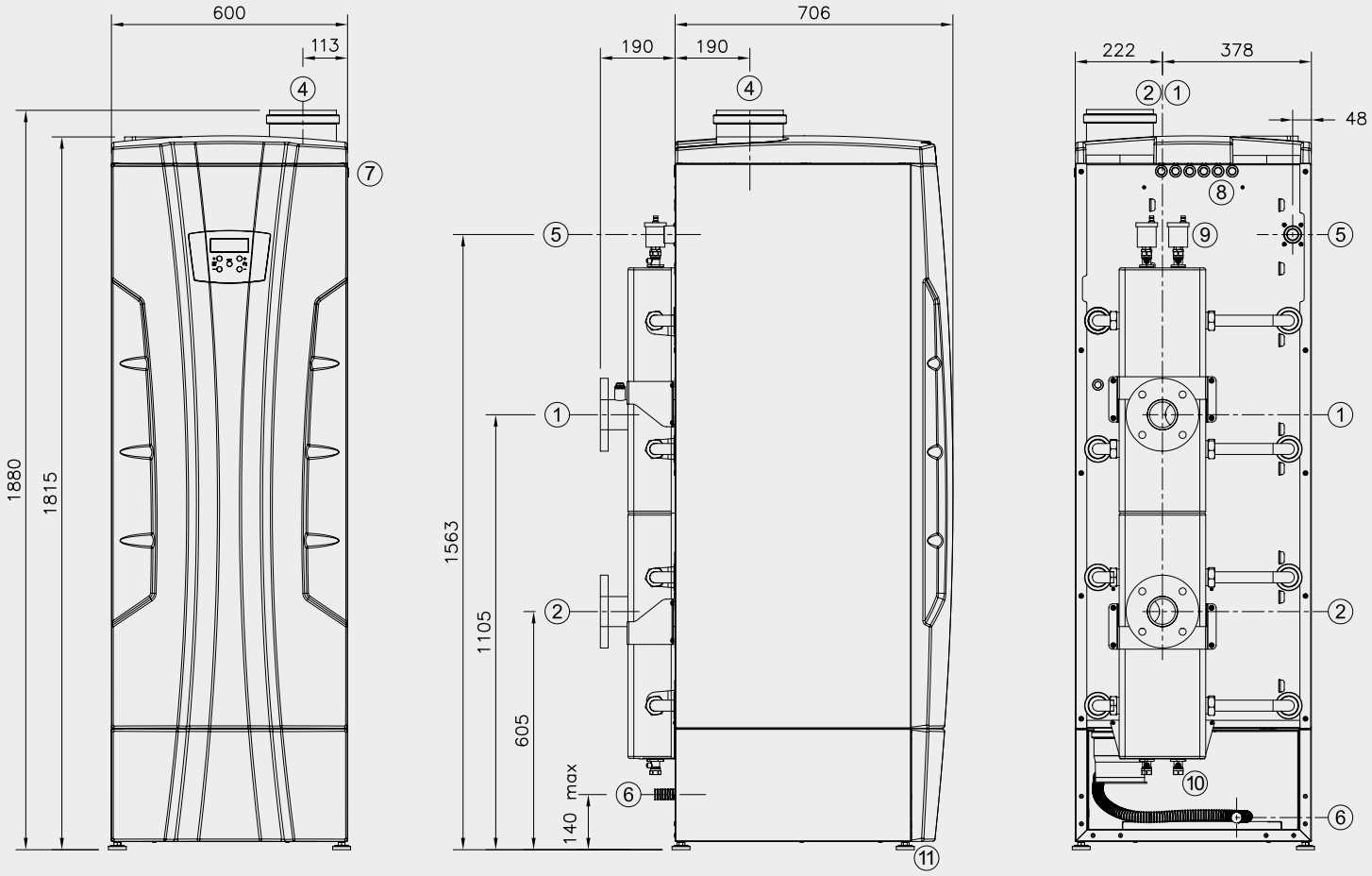
140 T	180 T	210 T	280 T
250	250	250	250
65,8	81,6	98,7	131,7
7,1	7,1	7,1	7,1
110	110	110	110
40	40	40	40
0,9	0,9	0,9	0,9
95	95	95	95
110	110	110	110
17,6	21,8	26,3	35,1
4	4	4	4
0,5 ; + 50	0,5 ; + 50	0,5 ; + 50	0,5 ; + 50
147	211	211	249

MYdens T
pressure drops



Ⓐ MYdens 60 T and 70 T
Ⓑ MYdens 100 T and 115 T
Ⓒ MYdens 140 T
Ⓓ MYdens 180 T and 210 T
Ⓔ MYdens 280 T

MYdens 180 T - 210 T - 280 T



1 · Supply DN 65, PN 16 ∗
2 · Return DN 65, PN 16 ∗
4 · Flue gas outlet Ø160 mm
5 · Gas inlet 1" 1/4
6 · Condensate drain Ø28 mm
7 · Main switch
8 · Power supply and auxiliary input
9 · Intercepted air purge valves
10 · Ball valves for manifold drain
11 · Adjustable feet

∗ · Connections and flanges are not factory mounted

Massimiliano Pieraccini

All Cosmogas products are designed, patented and built by us

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