

Modulo Duo Condensa is controlled by an advanced technology system which is BMS connection ready.

Each MDC is controlled by an individual control panel which can be connected to max. 5 other control panels, allowing 6 boiler units to be controlled in cascade.

The system operates with the following logic: one panel acts as the Master and the others as Slaves; each one controlling the operation and safety of the entire unit.

The Master assumes overall control of the slaves in order to control the total output power of the MODULO DUO CONDENSA and rotation of daily start up amongst the units in order to keep a uniform usage level between the boilers. The master will also maintain a constant flame modulation level in each unit according to the installation's duty demands.

For ease of monitoring and control of the unit a clear and easy to operate display system has been installed in the control panels. This allows quick and easy access to the working data (temperature of inlet/return, fan' speed, ionization current, heating demand) as well as the diagnostic information.

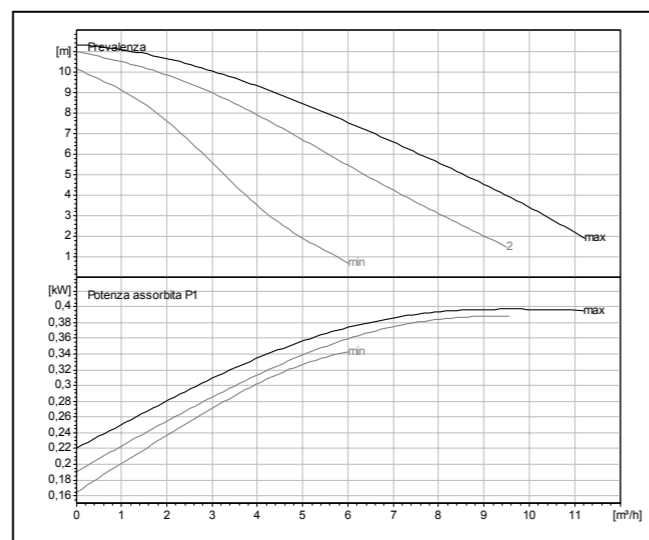
The complete system's working information (cascade of single units info) are indicated on the Master control offering further ease of operation.

The Wilo TOP S 30/10 circulator installed in each MODULO DUO CONDENSA unit ensures a high level of circulation, 8 m<sup>3</sup>/h.

(As per graph of circulator's delivery/prevalence.)



Control board of MODULO DUO CONDENSA 300



# THERMPAK

## THERMAL SOLUTIONS



# MODULAR CONDENSA

## FOR INSTALLATION IN HEATING PLANT OR OUTSIDE

**THERMPAK SYSTEMS LTD.**

Unit 15, Dunlop Industrial Units, 8 Balloo Drive, Bangor, Co Down, BT19 7QY

Tel. (028) 9146 3737 Fax. (028) 9146 3797 Dublin Office. 01 2820624

Email. [david@tpsheatexchangers.com](mailto:david@tpsheatexchangers.com)

[www.tpsheatexchangers.com](http://www.tpsheatexchangers.com)

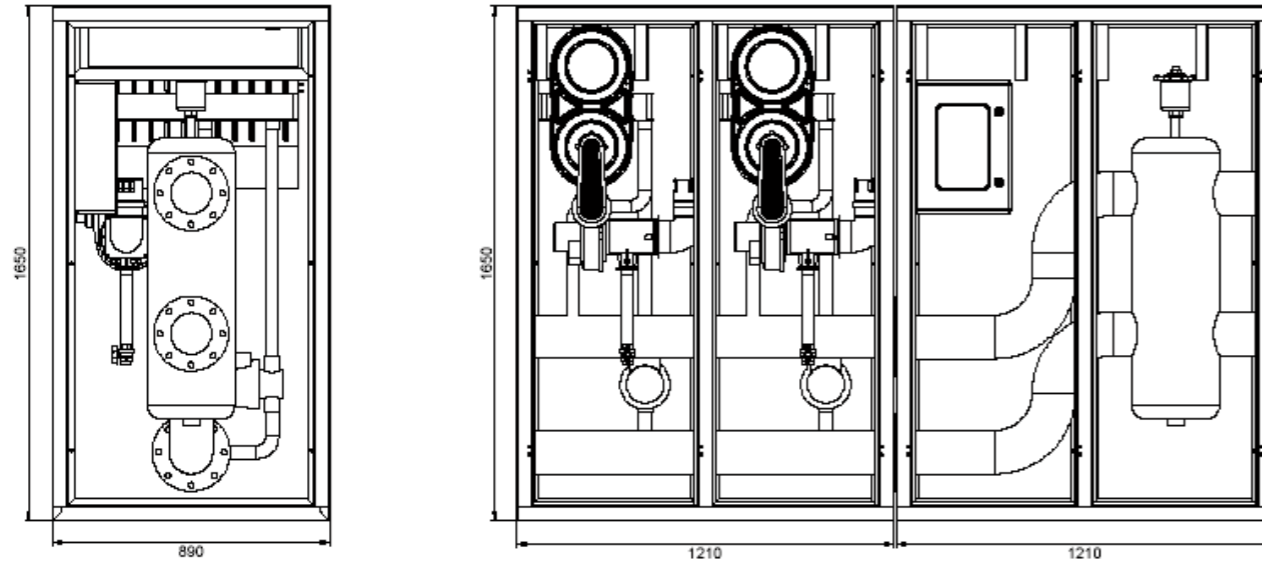
MODULO DUO CONDENSA 300 is the SILE solution for medium power heating plants. It consists of a fully packaged assembly with all the necessary components for heat production, complete with the necessary safety systems according to ISPEL norms on electronic check and supervision.

It consists of a sturdy stainless steel cabinet with two condensing boilers, each one rated at 160 KW premixed, offering up to 320 KW in total output.

The MODULO DUO CONDENSA 300 can be installed together with an other MDC 300, reaching output levels of 640KW or 750kW when combined with a MODULO DUO CONDENSA 450. Furthermore it is possible to install the hydraulic separator on the output allowing a highly efficient transfer rate with minimal heat loss.

The MDCs can be installed together up to a maximum power of 960KW.

CE approved.



### MODULO DUO CONDENSA 300

Output power 50/30°C	max	KW - kcal/h	320,0 - 275.200
	min.	KW - kcal/h	34,20 - 29.400
Heat input (P.C.I.)	max	KW - kcal/h	300,0 - 258.000
	min.	KW - kcal/h	32,0 - 27.520
100% efficiency at 50/30°C		%	106.0
30% output at 50/30°C		%	107.0
100% output at 80/60 °C		%	98
CO2 in steam		%	9
Steam temperature with water at 80/60 °C		°C	75
Steam outlet diameter Ø		mm	100
Prevalence available on steam side		pascal	130
Overall steam mass		Kg/h	537
Max. pressure of heating circuit		bar	6
Boiler's total capacity		l	45
Natural gas inlet pressure (G20)		mbar	20
Feeding power		V/Hz	230/50
Wilo TOP S 30/10 circulator for each heat exchanger		W	400
Collector inlet/return		DN	125
Hydraulic separator (optional) connections		DN	125
Gas pipe			1 ½" F

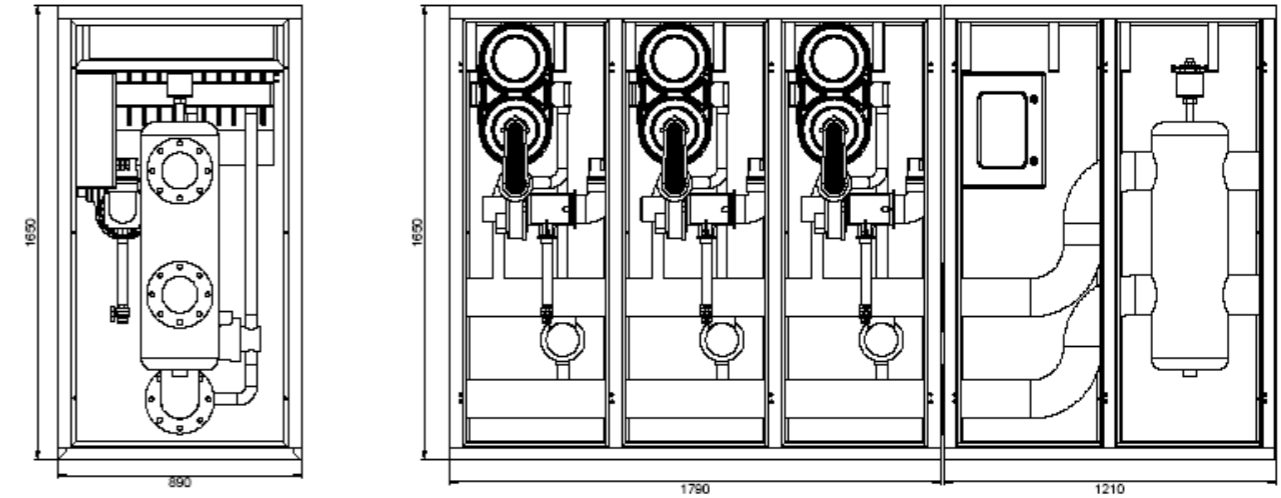
Sanitary hot water production dependent on the installation.

MODULO DUO CONDENSA 450 is the SILE solution for medium-high power heating plants. It consists of a fully packaged assembly with all the necessary components for heat production, complete with the necessary safety systems according to ISPEL norms on electronic check and supervision.

It consists of a sturdy stainless steel AISI 316L locker with three condensing boilers each one rated at 160 KW premixed, offering 480 KW in total.

The MODULO DUO CONDENSA 450 can be installed together with an other MDC 450, to reach 960KW or together with a MODULO DUO CONDENSA 300 to offer 750kW. Furthermore it is possible to install the hydraulic separator on the output allowing a highly efficient transfer rate with minimal heat loss.

CE approved.



### MODULO DUO CONDENSA 450

Output power 50/30°C	max	KW - kcal/h	480,0 - 412.800
	min.	KW - kcal/h	34,20 - 29.400
Heat input (P.C.I.)	max	KW - kcal/h	450,0 - 387.000
	min.	KW - kcal/h	32,0 - 27.520
100% efficiency at 50/30°C		%	106.0
30% output at 50/30°C		%	107.0
100% output at 80/60 °C		%	98
CO2 in steam		%	9
Steam temperature with water at 80/60 °C		°C	75
Steam outlet diameter Ø		mm	100
Prevalence available on steam side		pascal	130
Overall steam mass		Kg/h	805
Max. pressure of heating circuit		bar	6
Boiler's total capacity		l	68
Natural gas inlet pressure (G20)		mbar	20
Feeding power		V/Hz	230/50
Wilo TOP S 30/10 circulator for each heat exchanger		W	400
Collector inlet/return		DN	125
Hydraulic separator (optional) connections		DN	125
Gas pipe			1 ½" F

Sanitary hot water production depending on the installation.