

SEMPRA PROGRESS

Oil boilers



new line
2002


CHAPPEE

SEMPRA

SEMPRA PROGRESS IS A RANGE OF CAST IRON FUEL BOILERS. ITS WIDE RANGE GIVES IT UNRIVALLED ADAPTABILITY FOR ALL REQUIREMENTS. WELL KNOWN FOR ITS QUALITY AND BEING SOLID ITS HEATING BODY IS LINED WITH A CASING OF GRACEFUL SOFT DESIGN IN THE PUREST CHAPPEE STYLE.

ADVANTAGES

- a range of 18 models appropriate for all requirements: heating only or with hot water production, with a complete covering burner, with external TIGRA burner or one to be fitted;
- delivered fully assembled (SEMPRA Progress C) or in two packages (SEMPRA Progress B) up to 42 kW;
- unlimited hot water with a 120 or 150 litres horizontal water heater;
- long lasting foolproof reliability ;
- regulator to be chosen from the wide ECOCONTROL range;
- range of heating modules for a perfect aesthetic installation;
- very rigid casing of discreet graceful design.



THE MODELS

Four versions are offered:

- SEMPRA Progress Be:
4 models 22, 27, 35 and 42 kW.
Heating and hot water production boiler fitted with a complete covering fuel burner.
- SEMPRA Progress Ce:
4 models 22, 27, 35 and 42 kW.
Heating only boiler fitted with a complete covering fuel burner.
- SEMPRA Progress B:
4 models 22, 27, 35 and 42 kW.
Heating and hot water production boiler to be fitted with a fuel or gas burner (TIGRA burner as option)
- SEMPRA Progress C:
6 models 22, 27, 35, 42, 55 and 70 kW.
Heating only boiler to be fitted with a fuel or gas burner (TIGRA burner as option).

VERY MUCH DESIGNER FINISH

A casing of graceful soft design in the purest CHAPPEE style is fitted round its exemplary symmetrical heating body to form the very attractive SEMPRA Progress. The back of the boiler has also been particularly carefully prepared as it is of painted sheet. No more than 1,507 mm high the B and Be models also shine through their compact shape. Whatever the model chosen, the simple clear control panel is always located at the right height for easy reference and use. A housing for the operating instructions is provided within reach on this control panel. Once closed its aluminium cover provides a space for ergonomic display of operating status by means of luminous diodes.



The CHAPPEE modules are combined with SEMPRA Progress to produce very aesthetic high quality installations.

SILENCE MODELS

Complete burner covering has been designed on the Be models to protect the preset TIGRA 700e and 500e burners and above all for top of the range sound insulation. Compact and silent, the SEMPRA Progress Ce and Be still win aesthetically with this successful integration.

500e AND 700e BURNERS

Specially designed for the SEMPRA Progress Ce and Be, they are delivered preset to 27 kW for the 500e model and 35 kW for the 700e model (nozzle delivered for 22 kW and 42 kW).

Fully protected by a complete cover, they are designed for easier adjustment and maintenance using one single key supplied. The electronic control box is for diagnostic aid: through a colour code on the reset button or by connecting with certain combustion analyzers.



HARMONIOUS BALANCED HEATING BODY

The SEMPRA high technology cast iron heating body is acknowledged by professionals as one of the best on the market as it possesses undeniable virtues:

- **High performance:** perfectly symmetrical with large smooth surfaces for outstanding exchange, optimum output (93%) and incredibly simple maintenance.
- **Long lasting:** significant thickness and weight of cast iron for effortlessly absorbing thermal stresses and high water capacity (43 litres for 27 kW) for total hydraulic reliability. A huge 25 to 63 litres combustion chamber with low load loss where the burner flame expands without stresses providing optimum operation.
- **A front face door** for access to the combustion chamber for providing complete maintenance to preserve SEMPRA high performance over time.



HOT WATER COMFORT TAKES SHAPE

Abundant, regular and serene, such are the comfort aces in the SEMPRA Progress range. The tank has been located horizontally to make it more compact and less high.

Two baths and one shower simultaneously available in 10 minutes, it is the performance allowing the built in 150 litres tank in the boiler unit according to the model.

For the tank, CHAPPEE has chosen chrome free enamel for total hygiene to last a long time. Everything has been thought out to make the installer's work easier. Rigid insulated connections (hot and cold water, looping) are at the rear

outside the jacket. The boiler-tank copper water connection is preformed and a few connections to be screwed up are enough for assembly. The inspection trap is located at the front. SEMPRA Progress again proves that comfort and ergonomics are brought together with CHAPPÉE.

SEMPRA Progress	Model 22	Models 27 to 42
1 bath + washbasins - sinks	○	○
1 bath + 1 shower + washbasins - sinks	○	○
1 bath + 2 showers + washbasins - sinks	○	○
2 baths + washbasins - sinks	▲	○
2 baths + 1 shower + washbasins - sinks	■ *	▲

○ Outstanding ▲ Possible ■ Not recommended
* preferably choose a SEMPRA Progress C with 200 or 250 litres PIM.

SIMPLICITY IN ALL DETAILS

All SEMPRA Progress details have been carefully designed to be user friendly and required.

Ease of installation

- SEMPRA Progress C is delivered fully assembled in one single package (up to 42 kW);
- SEMPRA Progress B is delivered in two packages pre-assembled with the jacket assembled (up to 42 kW).



Delivery in 2 packages plus burner package.

Access is provided for using two carrying bars making handling easier particularly in difficult locations.

Boiler tank connections are quickly made using two rigid well insulated pipes.

- the feet are adjustable for perfect alignment;
- the casing is fully rigid;
- the built in TIGRA 500e or 700e burners on the Be and Ce models are delivered factory preset and have an adaptor ring for problem free assembly;
- heating modules consistent with the boiler are available as options for gaining time and making quality installations.



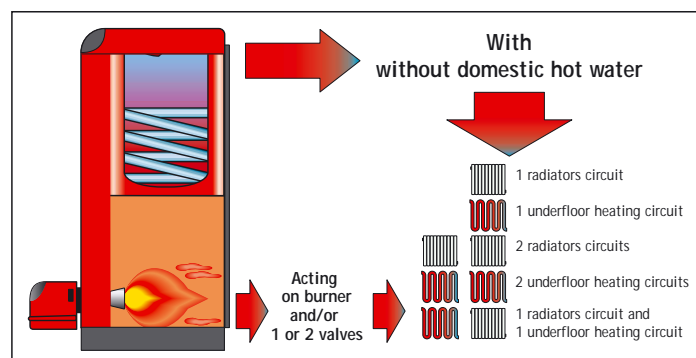
Easier handling thanks to the carrying bars.

Ease of maintenance

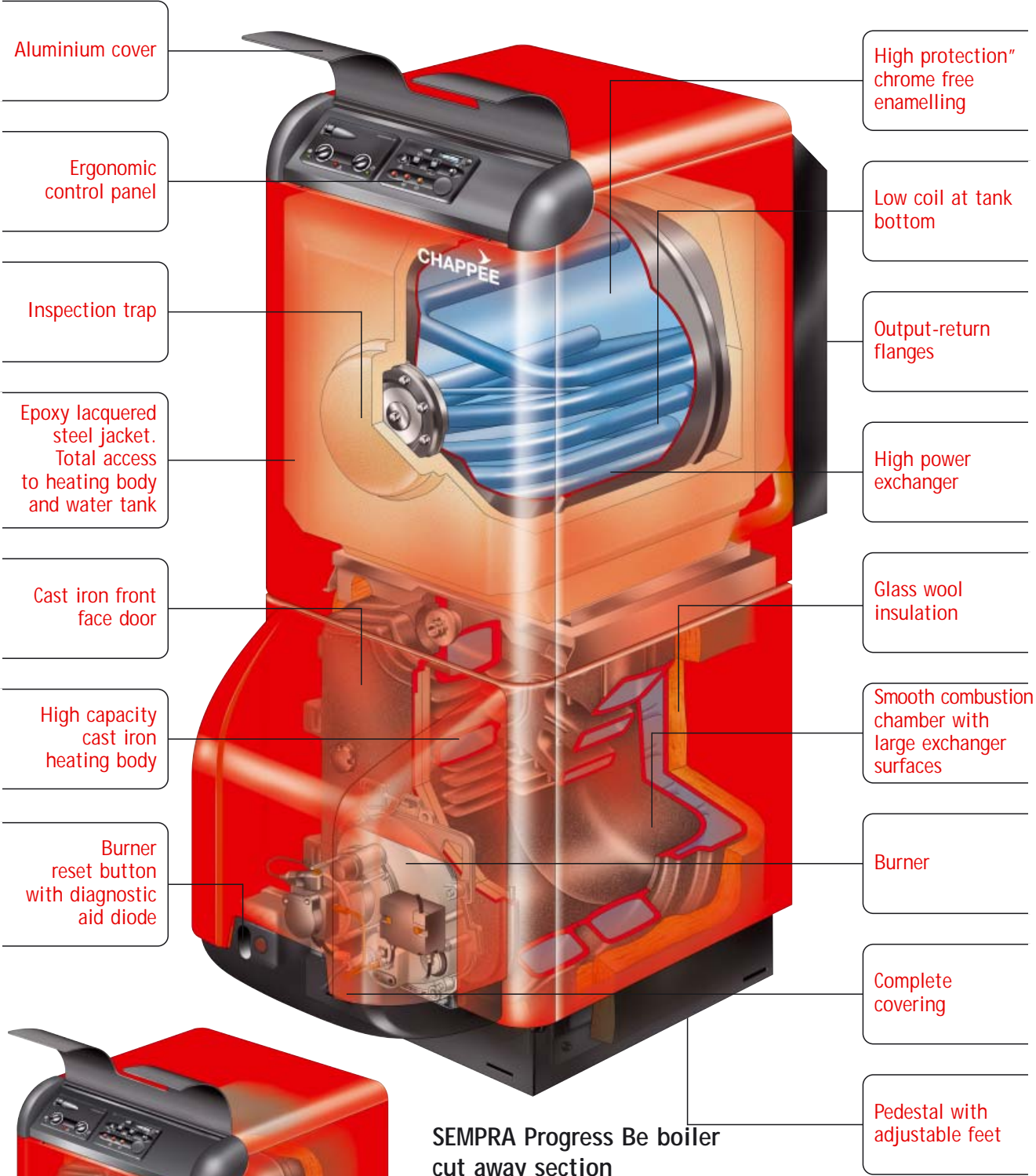
- the ceramic fibre protected combustion chamber has a reversible hinge for left or right opening;
- access to the heating body is complete and maintenance of its smooth walls is made easier;
- the top and bottom faces of the jacket are easily taken down and put back;
- the front face inspection trap provides instant access for maintaining the tank.

CONFIGURE YOUR INSTALLATION

The flexibility of SEMPRA Progress allows a la carte installation building. Nothing is missing from its complete set for multiplying solutions, from the simplest circuit to the most sophisticated double circuit.



n y t a k e s s h a p e



SEMPRA Progress Be boiler cut away section



SEMPRA Progress C boiler cut away section

CONTROL PANEL

Located at the right height and sloping for easy use, they shall be made to measure according to regulation requirements with the appropriate comfort module.

Basic module

- 1 Prewired housing for the comfort module of choice
- 2 Thermometer
- 3 Overheating safety thermostat
- 4 Thermostat test button
- 5 Boiler switch
- 6 Fuse
- 7 Overheating safety indicator
- 8 Burner safety indicator
- 9 On indicator

Comfort modules

The choice of a comfort module is required for maintaining SEMBRA Progress operation and control under the best simplicity conditions for energy savings and comfort. All models in the ECOCONTROL SP range are easily incorporated in the control panel according to the required price and comfort level. All regulators are delivered preset according to an always accessible standard programme.

ECOCONTROL SP regulators control heating and domestic hot water production (each ECOCONTROL SP is delivered with a water temperature measuring probe).

ECOCONTROL SP OB version S

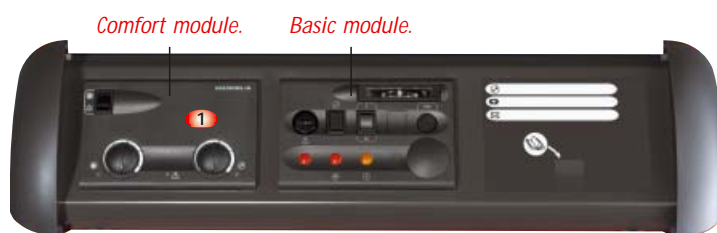
This is an electronic module controlling the boiler and managing hot water priorities when installing comfort regulation is not wanted. Boiler temperature is chosen manually.

- 10 SUMMER/WINTER switch
- 11 Heating thermostat
- 12 Hot water thermostat
- 13 Heating on indicator
- 14 Probe fault indicator
- 15 Domestic water on indicator

ECOCONTROL SP OB version a

The electronic module is aided by an ECOCONTROL programmable ambience thermostat.

- | | |
|---|--|
| <ol style="list-style-type: none"> 16 Key for setting instruction values, time and switching times 17 Operating rate selector 18 Day of the week setting 19 Real time setting 20 Selection and exit from switching setting | <ol style="list-style-type: none"> 21 Instruction value setting for Economy operating 22 Instruction value setting for Comfort operating 23 Validating key for programme switching settings |
|---|--|



SEMPRA Progress C control panel.



Basic module.



ECOCONTROL SP OB comfort module.

Models ECOCONTROL SP	TYPE OF REGULATOR			
	Manual			
Acting on burner	ECOCONTROL SP OB s	ECOCONTROL SP OB a	ECOCONTROL SP 1a analogue	ECOCONTROL SP 1a analogue
Acting on burner and valve			ECOCONTROL SP 2s digital 3s	ECOCONTROL SP 2s digital 3a
Acting on burner and 2 valves			ECOCONTROL SP 4s	ECOCONTROL SP 4a



REGULATORS

How to choose the regulator

It is very easy to choose an ECOCONTROL SP regulator: you have to fix its programming principle according to its life style, and so predictable times when the heated room will be occupied. The regulator model is selected according to the features of its installation: radiator, low temperature, underfloor heating, separate heating areas (2 apartments), or one furnished with radiators, and the other underfloor heating.

ECOCONTROL SP 1 daily programming

- Life style: identical predictable tempo every day of the week (including the weekend).
The regulator is programmed to raise or lower the temperature according to a timetable selected by the user. Introduction of the "clock" type benefited touch instruction for fans of dials and needles;
- Features of heating plants with or without domestic hot water:
 - single radiator system with burner control;
 - system of low temperature radiators or underfloor heating with control of 3 way valve.
- Main advantages: ease of setting.

ECOCONTROL SP 2, 3, 4 daily or weekly programming

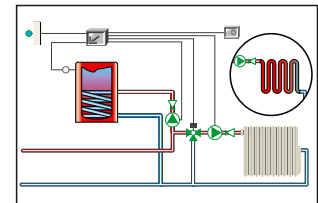
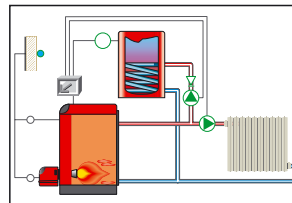
- Life style: different tempo and activities according to the days of the week. Suits activity users or business premises especially.
Introduction of "digital" type benefits comfort instructions and information on screens, etc.
- Features of heating and domestic hot water plants:
 - single radiator system with burner control (ECOCONTROL SP 2);
 - system of low temperature radiators or underfloor heating with control of 3 way valve and burner (ECOCONTROL SP 3);
 - 2 systems of independent low temperature (or underfloor heating) radiators control of burner and 2 three way valves (ECOCONTROL SP 4).
- Remote control and programming of ECOCONTROL SP 2, 3 and 4 (as option).

Selection Table

ECO-CONTROL	Burner	3 way valve	Burner and 3 way valve	Burner and two 3 way valves
SP 0B	Radiator			
SP 1	Radiator	Low temperature radiator or underfloor heating		
SP 2	Radiator			
SP 3			Radiator and low temperature radiator or underfloor heating	
SP 4			Radiator and low temperature radiator or underfloor heating	2 low temperature radiators system or mixer with underfloor heating

Daily programming

ECOCONTROL SP 1

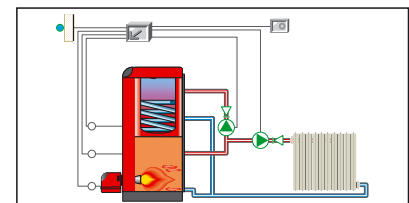


Intended for: individual heating. Plant comprising one single heating area with or without built in hot water production or connected to the CHAPPÉE boiler.

Installation: radiators with burner and low temperature radiators control.

Weekly or daily programming

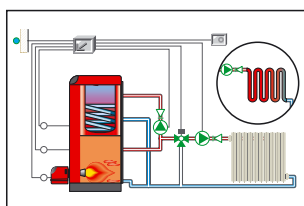
ECOCONTROL SP 2



Intended for: individual heating. Installation comprising one single heating area with or without built in hot water production or connected to the CHAPPÉE boiler.

Installation: radiators with burner control.

ECOCONTROL SP 3



Intended for: individual heating. Installation comprising one single heating area with or without built in hot water production or connected to the CHAPPEE boiler.

Installation with radiators, low temperature radiators or underfloor heating with burner and valve control.

Installation with radiators, low temperature radiators or underfloor heating, air heaters, hot water convactor with burner and 2 valves control.

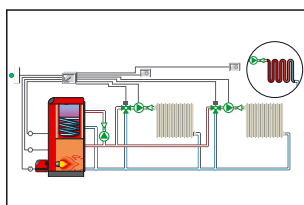
Digital screen weekly programming

Remote control

Digital screen weekly programming of all regulation functions. The QAA 70 programmer is for remote control of CHAPPEE boilers fitted with ECOCONTROL SP 2s, 3s or 4s regulation; that is to say the ECOCONTROL SP boxes delivered with no ambience sensor. Its control screen is for displaying all temperatures, ambient and outside and hot water as well as operating rates.



ECOCONTROL SP 4



Intended for: the ECOCONTROL SP 4's speciality is its capacity to control 2 completely independent heating areas, for example 1 area with underfloor heating + 1 area with radiators, 2 radiator areas, 2 underfloor heating areas or 2 separate apartments. Hot water production may be built in or connected to the boiler.

Advantages

- 3 heating periods per day, everyday of the week able to be customised;
- Plant delivered with standard programming for fast starting;
- Display of temperatures and operating rate.

REGULATION OPTIONS



QAA 50 sensor.



MT 31 telephone interface.



BP 30 sound generator.



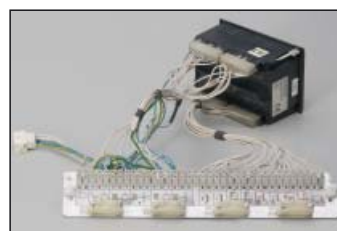
Mixing valve package.



Outside temperature sensor.



ECOCONTROL SP OB ambience thermostat.



ECOCONTROL SP connectors.

SEMPRA HEATING MODULES

Their advantages:

- saving time when installing;
- installation on left or right of boiler;
- neat finish;
- thermally insulated pipes and modules.

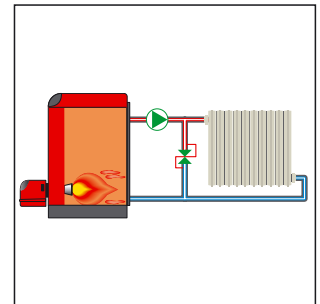
1. Heating module for circuit with no mixer valve

Intended for: boiler with or without regulator directly controlling burner for a radiator circuit.

Packaging: Delivered in 1 package



Module 1.



Example of connection with differential valve diagram.

2. Heating module for circuit with no mixer valve but with differential valve

Intended for: boiler with or without regulator directly controlling burner for a radiator circuit. The differential valve balances pressure in the event of the thermostat valves on the radiator circuit closing.

Packaging: Delivered in 1 package



Module 2.

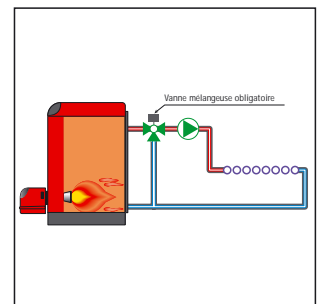
3. Heating module for circuit with 3 way valve with no motor

Intended for: boiler with or without regulator controlling valve and burner for a radiator circuit or underfloor heating.

Packaging: Delivered in 2 packages: 1 valve package and 1 circulating pump package



Module 3.



Example of connection.

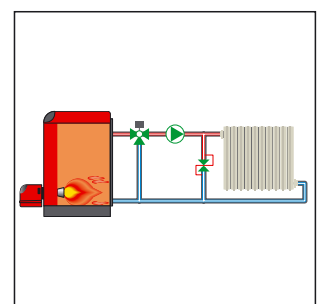
4. Heating module for circuit with 3 way valve with no motor and differential valve

Intended for: boiler with or without regulator controlling valve and burner for 1 radiator circuit with thermostat valve or underfloor heating.

Packaging: Delivered in 2 packages: 1 circulating pump with differential valve package



Module 4.



Example of radiator or underfloor heating connection layout.

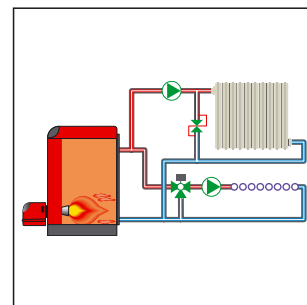
5. Heating module for 2 circuits with one of them on 3 way valve with no motor

Intended for: boiler with regulator controlling 2 circuits, first circuit radiator or underfloor heating, second circuit exclusively radiators with differential valve. For one DHW production boiler this module is for making 2 heating circuits.

Packaging: delivered in 5 packages (1 valve 1 package, 1 circulating pump with differential valve package, 1 circulating pump package, 1 alignment package and 1 manifold package).



Module 5.



Example of connection layout.

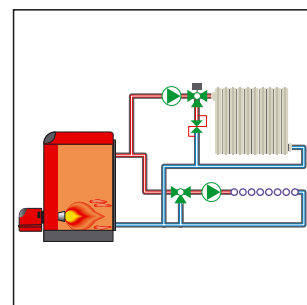
6. Heating module for 2 circuits on two 3 way valves with no motor

Intended for: boiler with regulator controlling 2 circuits, acting on two 3 way valves.

Packaging: Delivered in 5 packages (2 valve packages, 2 circulating pump packages of which 1 with differential valve, and 1 manifold package).



Module 6.



Example of connection layout.

7. Valve motor with QAD 21 output sensor

8. Insulated connection piping

Intended for: Connecting modules below, on SEMPRA boilers up to 42 kW. These insulated pipes are fitted on the left or right of the boiler. Possibility of connecting the safety module and expansion tank (not supplied).

Packaging: delivered in 1 package.



SEMPRA piping.



QAD 21 output sensor delivered with all our valve motors. Piping mounted operation.

9. Safety module

Intended for: This insulated module consists of a safety valve, degasser and pressure gauge. The safety valve is fitted on the insulated connection pipes. It cannot be fitted separately. The connection pipe is delivered separately according to the SEMPRA boiler.



Safety module.

10. Wall bracket

11. ECO heating module

The ECO heating module designed for SEMPRA groups together all the additional boiler components to make a complete installation of quality and in less time.

Intended for: a heating circuit with 3 way valve, fitted on left or right or in double circuit with the 2 outputs kit.

Packaging: delivered in 1 package: pump, valve, 3 way valve with motor, safety valve, pressure gauge, 18 litres expansion tank, degasser, isolating

valves, compression connections, insulated connection pipes and isolation shell.



ECO heating module

PERFORMANCES

★★★€ HIGH PERFORMANCE

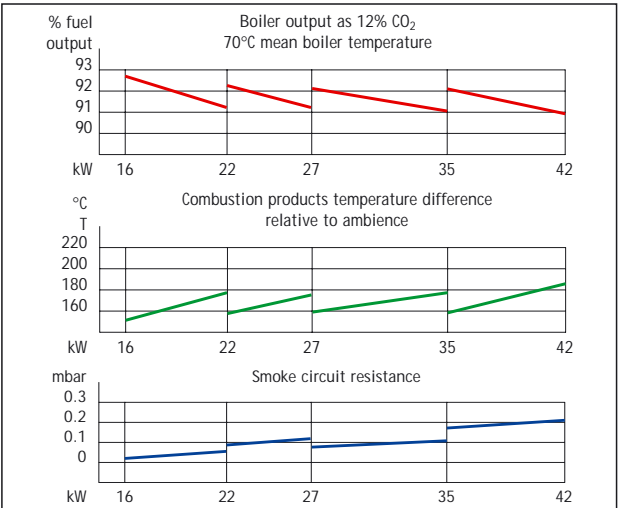
SEMPRA Progress specifications according to RT 2000	C/Ce						B/Be				
	22	27	35	42	55	70	22	27	35	42	
Type of generator	heating	heating	heating	heating	heating	heating	mixed	mixed	mixed	mixed	
Type of boiler	Low temperature										
	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	
Venting	Chimney	Chimney	Chimney	Chimney	Chimney	Chimney	Chimney	Chimney	Chimney	Chimney	
Nominal power	kW	16/22	22/27	27/35	35/42	42/55	55/70	16/22	22/27	27/35	35/42
Heat output	kW	17.4/24.0	23.8/29.5	29.2/38.3	37.9/46.1	45.5/60.4	59.5/75.6	17.4/24.0	23.8/29.5	29.2/38.3	37.9/46.1
Smoke discharge	kg/h	36	44	57	70	90	115	36	44	57	70
Smoke volume	l	30	38	30	38	-	-	30	38	30	38
Smoke circuit resistance	mbar	0.02/0.08	0.10/0.13	0.08/0.10	0.18/0.21	0.11/0.21	0.10/0.22	0.02/0.08	0.10/0.13	0.08/0.10	0.18/0.21
Required draught	mbar	0.12	0.21	0.16	0.27	0.29	0.3	0.12	0.21	0.16	0.27
100% and 70°C load output	%	90.4	90.3	90.1	90.3	91.4	92.6	90.4	90.3	90.1	90.3
30% and 50°C load output	%	90.1	90.5	91.1	91.6	91.9	92.2	90.1	90.5	91.1	91.6
Losses when shut down Δt 30 K	W	138	138	156	156	180	230	194	194	254	254
Auxiliary electric power (burner)	W	140	140	140	140	140	140	140	140	140	140
Nominal water flow at NP Δt 15 K	m ³ /h	1.70	2.10	2.70	3.20	4.20	5.40	1.70	2.10	2.70	3.20
Boiler ΔP at nominal flow	mbar	2.8	4.3	7.2	10.0	2.0	3.2	2.8	4.3	7.2	10.0
Water content	l	43	43	57	57	71	85	43	43	57	57
Max operating pressure (primary)	bar	4	4	4	4	4	4	4	4	4	4
Test report reference	n°	K101/96	K101/96	K101/96	K101/96	K101/96	K101/96	K101/96	K101/96	K101/96	K101/96
Body		TUV	TUV	TUV	TUV	TUV	TUV	TUV	TUV	TUV	TUV
EC Reference		85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750	85AQ0750

DHW heaters

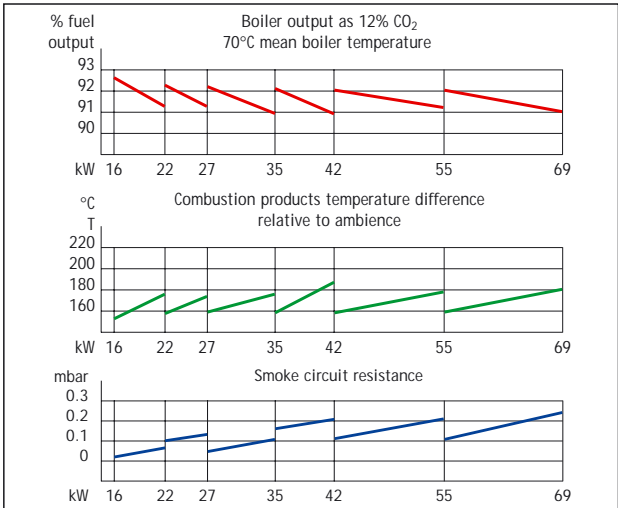
DHW heater specifications according to RT 2000			
Storage capacity	l	150	120
Heating surface	m ²	1.07	0.834
Storage temperature	°C	60	60
Draw off discharge in 10 min**	l/mn	27.5	22
Continuous draw off discharge $\Delta t = 30$ K	l/h	1,100	900
Reheating time	min	15	15
Cooling constant	Wh/l/°C/day	0.385	0.337
Nominal power*	kW	28.7	24
Room temperature at NP	°C	20	20
Max operating pressure	bar	10	10
Auxiliary electric power (DHW pump)	W	104	104

* 40 °C hot water, 10 °C cold water.
 ** according to EN 303.6 on 35 B model.

SEMPRA Progress B/Be performances



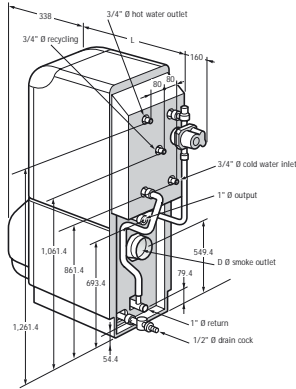
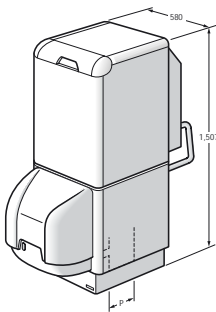
SEMPRA Progress C/Ce performances



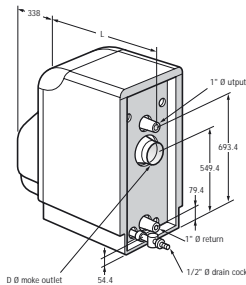
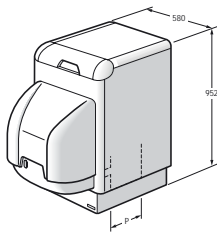
SEMPRA PROGRESS

Oil boilers

SEMPRA Progress Be



SEMPRA Progress Ce



SEMPRA Progress B		22	27	35	42
Power	kW	16/22	22/27	27/35	35/42
Number of elements		2	2	3	3
Dimension L	mm	720	720	880	880
Combustion chamber depth P	mm	317	317	477	477
Drain cock	Ø	1/2"	1/2"	1/2"	1/2"
DHW heater capacity	l.	120	120	150	150
Electricity supply		220/240 V - 50 Hz			
Packed weight	kg	365	365	411	411
Net weight	kg	305	305	351	351

SEMPRA Progress C		22	27	35	42	55	70
Required power	kW	16/22	22/27	27/35	35/42	42/55	55/69
Number of elements		2	2	3	3	4	5
Dimension L	mm	600	600	760	760	920	1,080
Combustion chamber depth P	mm	317	317	477	477	637	797
Smoke outlet Ø D	mm	139	139	139	139	153	153
Heating/output return	Ø	1"	1"	1"	1"	1 1/2"	1 1/2"
2 nd circuit output/return	Ø	1"	1"	1"	1"	1"	1"
Drain cock	Ø	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Electricity supply		220/240 V - 50 Hz					
Packed weight	kg	206	206	252	252	318	364
Netweight	kg	186	186	232	232	281	327

SEMPRA Progress		SUPPLIED		
Be	Ce	B	C	• Standard • Option
GENERAL FEATURES				
•	•	•	•	Cast iron heating body
•	•	•	•	Cast iron combustion optimizer
•	•	•	•	Red lacquered steel jacket
•	•	•	•	Optimized glass wool insulation
•	•	•	•	Enamelled hot water heater, insulated, 120 or 150 litres according to model
•	•	•	•	Control panel ready for fitting a control module
ACCESSORIES				
•	•	•	•	Sweeping brush
•	•	•	•	Drain cock fitted (except 55-70)
•	•	•	•	Pedestal with adjustable feet
•	•	•	•	Tapped cast iron output and return flanges or 26/34 or 40/49 threaded collar according to model
•	•	•	•	Delivery in 2 packages on pallet + control module
•	•	•	•	Delivery in 1 package on pallet (except 55-70) + control module
MANDATORY CONTROL MODULE OF CHOICE				
•	•	•	•	ECOCONTROL SP 0Ba/OBs
•	•	•	•	ECOCONTROL SP 1a/1s
•	•	•	•	ECOCONTROL SP 2a/2s
•	•	•	•	ECOCONTROL SP 3a/3s
•	•	•	•	ECOCONTROL SP 4a/4s
500e OR 700e PRESET BURNER				
•	•	•	•	ABS sound absorbing complete covering
•	•	•	•	Control box with diagnostic aid
•	•	•	•	Two 1m hoses
•	•	•	•	Setting and maintenance key
•	•	•	•	Delivery in cardboard package
OPTIONS				
0	0	0	0	Burner operation hour counter
0	0	0	0	Heating module without valve
0	0	0	0	Heating module with 3 way mixing valve
0	0	0	0	ECO heating module
0	0	0	0	2 outputs pipe kit
0	0	0	0	500/700/900 CF TIGRA burner or CG 4/7 gas burner

PIM		SUPPLIED		
HR	CR	GENERAL FEATURES		
•	•	Floor fitting		
•	•	Wall fitting (with bracket as option) except 250 l		
•	•	Under boiler (up to 42 kW)		
SUPPLIED				
•	•	Chrome free enamelled tank and coil		
•	•	30 to 50 mm injected polyurethane insulation		
•	•	Lacquered steel jacket		
0	0	Load pump, nonreturn valve, hoses		
•	•	Electronic sensor and boiler connecting cable		
•	•	Detachable anode inspection trap on top		
•	•	Detachable anode inspection trap at front		
•	•	Water temperature thermometer		

CHAPPEE

L'ÉTÉ VOUS ACCOMPAGNE

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