

# Ecocondens Silver Plus

## Technical Data

Parameter	Unit	SYSTEM BOILER: ECOCONDENS SILVER PLUS			COMBI BOILER: ECOCONDENS SILVER PLUS		
		-20	-25	-35	-20	-25	-35
Size							
<b>Energetic parameters</b>							
<b>Central heating circuit</b>							
Power range for P04=12 (Min. fan speed at 1200 RPM)							
Boiler thermal power at 80/60°C (modulated)	kW	2.7 ÷ 20.0	3.9 ÷ 24.0	4.1 ÷ 34.7	2.7 ÷ 20.0	3.9 ÷ 24.0	4.1 ÷ 34.7
Boiler thermal power at 50/30°C (modulated)	kW	3.0 ÷ 22.0	4.3 ÷ 26.5	4.5 ÷ 38.2	3.0 ÷ 22.0	4.3 ÷ 26.5	4.5 ÷ 38.2
Heat load	kW	2.8 ÷ 20.4	4.0 ÷ 24.6	4.2 ÷ 35.6	2.8 ÷ 20.4	4.0 ÷ 24.6	4.2 ÷ 35.6
Modulation range	%	13-100	16-100	12-100	13-100	16-100	12-100
Factory default setting (P04=15) for chimney system 60/100 with 3000 mm pipe (fan speed set to 1500 RPM)							
Boiler thermal power at 80/60°C (modulated)	kW	4.5 ÷ 20.0	5.7 ÷ 24.0	6.1 ÷ 34.7	4.5 ÷ 20.0	5.7 ÷ 24.0	6.1 ÷ 34.7
Boiler thermal power at 50/30°C (modulated)	kW	4.9 ÷ 22.0	6.2 ÷ 26.5	6.7 ÷ 38.2	4.9 ÷ 22.0	6.2 ÷ 26.5	6.7 ÷ 38.2
Heat load	kW	4.6 ÷ 20.4	5.8 ÷ 24.6	6.2 ÷ 35.6	4.6 ÷ 20.4	5.8 ÷ 24.6	6.2 ÷ 35.6
The efficiency of the boiler at nominal load and average boiler water temp. 70 °C	%	97.6	98.0	98.0	97.6	98.0	98.0
The efficiency of the boiler at partial load and return water temperature 30 °C	%	107.9	108.7	109.0	107.9	108.7	109.0
Seasonal space heating energy efficiency $\eta_s$	%	94	94	94	94	94	94
Seasonal space heating energy efficiency class		A					
Useful heat output :							
- at rated heat output P <sub>4</sub>	kW	20.0	24.0	34.7	20.0	24.0	34.7
- at 30% of rated heat output P <sub>1</sub>	kW	6.6	7.9	11.5	6.6	7.9	11.5
Useful efficiency :							
- $\eta_4$	%	88,3	89,0	88,4	88,3	89,0	88,4
- $\eta_1$	%	98,8	98,4	98,3	98,8	98,4	98,3
Gas consumption <sup>(1)</sup> :							
natural:	m <sup>3</sup> /h	0,30-2,10	0,39-2,55	0,54-3,66	0,30-2,10	0,39-2,55	0,54-3,66
liquid:	kg/h	0,21-1,53	0,43-1,88	0,47-2,67	0,21-1,53	0,43-1,88	0,47-2,67
Nominal kinetic pressure in front of the boiler for gas:	Pa (mbar)	2000 (20) 3000 (30)					
Maximum water pressure	MPa (bar)	0,3 (3)					
Max temperature (central heating)	°C	95					
Standard adjustable temperature	°C	40 ÷ 80					
Reduced adjustable temperature	°C	25 ÷ 55					
Lift of the pump at flow 0	kPa (bar)	60 (0,6)		70 (0,7)		60 (0,6)      70 (0,7)	
<b>Domestic hot water circuit</b>							
Nominal heat output of the boiler at temp. 80/60°C	kW	-----			2.7 ÷ 25	3.9 ÷ 30.0	4.1 ÷ 40.0
Nominal heat load	kW	-----			2.8 ÷ 25.6	4.0 ÷ 30.7	4.2 ÷ 41.0
The efficiency of the boiler at nominal load and average boiler water temperature of 70°C	%	-----			97.6	98.0	98.0
Gas consumption <sup>(1)</sup> :							
natural:	m <sup>3</sup> /h	-----			0,30-2,64	0,39-3,15	0,54-4,29
liquid:	kg/h	-----			0,21-1,91	0,43-2,32	0,47-3,13
Water heating energy efficiency class		-----			A	A	A
Load profile		-----			L	L	XL
Water pressure	MPa (bar)	-----			0.01 (0.1) ÷ 0.6 (6)		
Min water flow	l/min	-----			2.0		
Max water flow (flow limiter)	dm <sup>3</sup> /min	-----			-----	-----	-----
Range of water temperature regulation	°C	30 - 60					
Flow of domestic water for $\Delta t=30K$	dm <sup>3</sup> /min	-----			12	14	19
<b>Environmental protection</b>							
Emissions of nitrogen oxides	mg/kWh	21	24	29	21	24	29
Emission of NO <sub>x</sub> (natural gas)	class	6					
The pH of the condensate		natural gas - 5					
Sound power level L <sub>WA</sub>	dB	48	48	48	48	48	48
<b>Hydraulic parameters</b>							
Expansion vessel capacity	dm <sup>3</sup>	6					
Water pressure in expansion vessel	MPa (bar)	0.08±0.02 (0.8±0.2)					
<b>Electric parameters</b>							
Type and supply voltage	V	~ 230 ±10%/ 50Hz					
Degree of protection		IPX4D					
Power consumption	W	110					
Standby mode power consumption P <sub>SB</sub>	kW	0.002					
Electricity consumption :							
- at full load e <sub>lmax</sub>	kW	0,074	0,067	0,091	0,074	0,067	0,091
- at part load e <sub>lmin</sub>	kW	0,060	0,055	0,056	0,060	0,055	0,056

Maximum nominal current value of output terminals	A	2					
Controller classification according to PN EN 298		F-M-C-L-X-K					
Type of flame sensor		ionization					
<b>The parameters of flue gas</b>							
Fan characteristics		→ section 4.4 of this manual					
Flue gas mass flow at full load	kg/h	34.7	41.8	59.0	34.7	41.8	59.0
Flue gas mass flow at partial load	kg/h	5.2	6.4	8.7	5.2	6.4	8.7
The minimum flue gas temperature at minimum thermal power	°C	44	34.3	34.3	44	34.3	34.3
The maximum flue gas temperature at maximum thermal power	°C	61	66.9	66.7	61	66.9	66.7
<b>Time parameters</b>							
Time of central heating pump rundown	s	180					
Time preventing the anti-cyclical startup of the boiler (Anti-cycling time)	minutes	1+60					
Time of domestic hot water pump rundown	s	20-180					
Protection against pump and valve blocking	h /s	the pump turns on for 180 seconds every 24 hours the pump and three way valve turns on for 15 seconds every 48 hours					
<b>Assembly dimensions</b>							
Connection to the chimney duct	mm	Coaxial $\Phi 80/\Phi 125$ , Coaxial $\Phi 60/\Phi 100$ or 2 separate $\Phi 80 \times \Phi 80$					
Connection of heating water (CH) and gas	inch	G3/4					
Connection of DHW	inch	G3/4			G1/2		
Dimensions	mm	785x400x 334	785x400x 334	785x400x 334	785x400x 334	785x400x 334	785x400x 334
Boiler weight	kg	34.0	36	38.0	33.0	36.0	39.0