

# STOKVIS

## ENERGY SYSTEMS

**ErP**   
Energy related Products



## STOKVIS R600 EVOLUTION RANGE

Fully Condensing Ultra low NOx  
Floor Standing Gas Fired Boilers

## ECONOFLAME R600 EVOLUTION RANGE

The R600 EVOLUTION range of boilers is packed with features that are best in class and provide high output, extreme efficiency, reliability and ultra low harmful emissions.

The R600 EVOLUTION range includes 7 models with outputs from 142 to 540kW (80°C /60°C). Utilising the proven patented water cooled, down-firing, premix burner system coupled with all stainless steel heat exchanger assembly, R600 EVOLUTION boilers have an impressive class 6 NOx level and can return seasonal efficiencies up to 110.4%.

Designed to pass through doors, with widths from 466mm to 746mm depending on model and each model can be equipped with an optional second return connection, allowing high efficiency to be achieved when serving a mix of high and low system circuit temperatures. Another feature is the option to use the boiler in either standard flue or room sealed applications without modification.

The R600 is suitable for use in single boiler or multiple/cascade installations. Optional extra low loss headers are available, and if being used in a retrofit application onto old systems, plate heat exchangers are available for total boiler isolation. The modulating burner system allows turn-down ranging from 4.5:1 to 5:1 to return optimum efficiency at low system loads.



### Exceptional high quality

- Robust corrosion resistant stainless steel heat exchanger - giving long life
- 8 bar maximum pressure - ideal for tall buildings with high static pressure
- Incorporated flue damper - to adjust draft
- Water cooled side walls - no insulation needed.

### Highest system flexibility

- Boilers on wheels - ease of location
- Narrow width - pass through standard door.
- Dismantle and reassembly available - for difficult access sites
- Low weight - ideal for roof top applications
- Safety valves, pumps, low loss headers and plate heat exchangers available - providing comprehensive kit for boiler primary system.
- Water  $\Delta T$  10°C to 30°C - suits variable system criteria
- Room sealed option - available with no change to standard boiler.
- Inspection glass and ignition electrodes have a flexible location- to suit site space/access conditions

### Efficiency and Environment

- Seasonal efficiency as high as 110.4% - low running costs
- 4.5:1 to 5:1 turn down ratio
- Optional second return connection - allowing possible increase in efficiency
- Speed controlled pump by boiler load, maintaining  $\Delta T$  - giving lowest return temperature and possible condensing efficiency.
- NOx class 6 - lowest levels of NOx emissions.
- Fully recyclable parts utilised - environmentally friendly

# Comprehensive Controls and Options

## Standard boiler controls interface

- Boiler Remote Enable Circuit (externally volt free)
- 0-10V External Control of Setpoint or Capacity
- 0-10V Boiler Capacity Indication
- Boiler Primary Pump Electrical Supply, including control of optional Variable Speed Boiler Pump
- 230V Boiler Alarm Signal
- Additional lockout input
- Connections for optional Outside Sensor, Header Sensor, DHW Sensor/Thermostat and DHW Pump Control.

## Optional controls

- Control of up to 2 heating zones / boiler.
- MASTER/SLAVE cascade control - maximum 8 boilers
- Room unit for each heating zone
- Outdoor sensor / DHW sensor / low loss header sensor for cascade / Heating zone sensor.

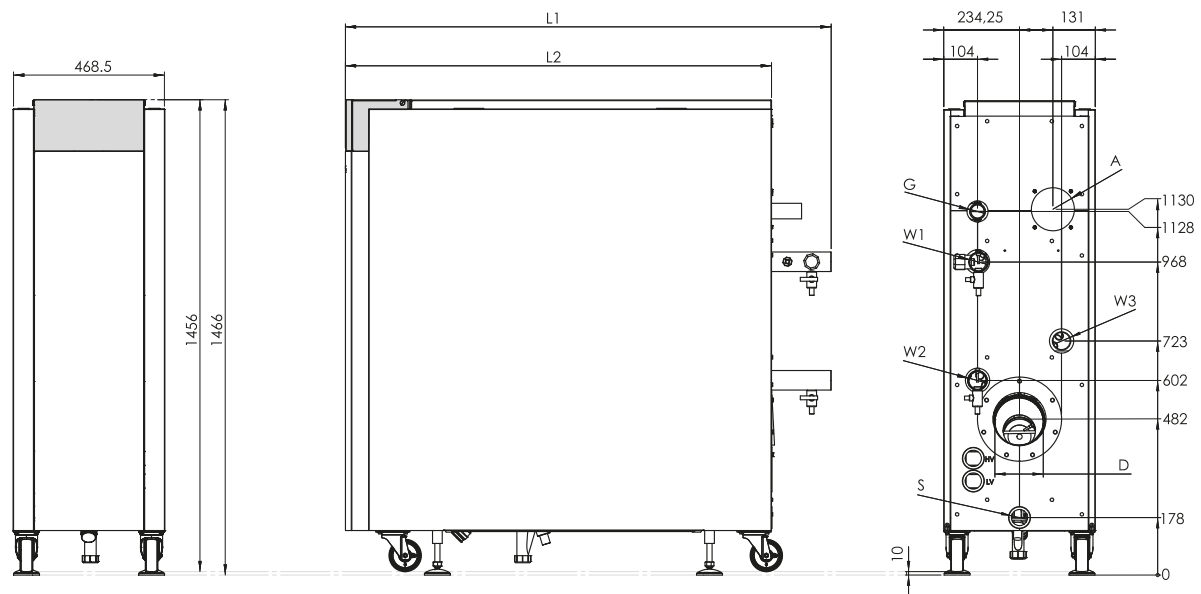
ErP Heating 1) by return temperature 30°C 2) by return temperature and feed temperature (60-80°C)							
R600 EVOLUTION			R601	R602	R603	R604	R605
Rated heat boiler	$P_{rated}$	kW	140	190	237	286	381
At rated heat output and high-temperature regime	$P_4$	kW	142,3	190,4	237,6	285,7	381,3
At 30 % of rated heat output and low temperature regime 1)	$P_1$	kW	47,5	63,5	79,2	95,2	127,1
Seasonal space heating energy efficiency	$\eta_s$	%	93,4	93,5	93,5	93,6	93,6
At rated heat output and high-temperature regime 2)	$\eta_4$	%	88,4	88,4	88,5	88,5	88,5
At 30 % of rated heat output and low temperature regime 1)	$\eta_1$	%	98,3	98,3	98,3	98,3	98,3
Auxiliary electricity consumption							
At full load	elmax	W	176	267	286	230	486
At 30% load	elmin	W	56	56	69	69	69
In stand-by mode	$P_{SB}$	W	7	7	7	7	7
Supplementary heater							
Standby heat loss	$P_{stby}$	W	286	286	310	310	310
Ignition burner power consumption	$P_{ign}$	W	-	-	-	-	-
Emissions of nitrogen oxides	NOx	mg/kWh	25	25	24	24	24

## Technical Data

	R600 EVOLUTION							
		R601	R602	R603	R604	R605	R606	R607
Nominal heat output at 80-60°C max/min	kW	142,3/31,3	190,4/42,0	237,6/47,0	285,7/56,5	381,3/75,2	476,7/94,6	540,2/120,0
Nominal heat output at 40-30°C max/min	kW	151,2/35,4	202,3/47,4	252,3/53,4	303,3/64,2	404,3/85,6	505,2/106,9	572,8/135,1
Nominal heat input Hi max/min	kW	145,0/32,2	194,0/43,1	242,0/48,4	291,0/58,2	388,0/77,6	485,0/97,0	550,0/122,2
Efficiency at 80/60°C	%	98,2	98,2	98,2	98,2	98,3	98,3	98,2
Efficiency at 40/30°C	%	104,3	104,3	104,2	104,2	104,2	104,2	104,2
Annual Efficiency (NNG 40/30°C)	%	110,4	110,4	110,4	110,4	110,4	110,4	110,3
Max. condensate flow	l/h	9,2	12,4	15,4	18,5	24,7	30,7	34,8
Gas Consumption G20 max/min (10.9 kWh/m³)	m³/h	13,3/3,0	17,8/4,0	22,2/4,4	26,7/5,3	35,6/7,1	44,5/8,9	50,5/11,2
Gas Consumption G25 max/min (8.34 kWh/m³)	m³/h	17,4/3,9	23,3/5,2	29,0/5,8	34,9/7,0	46,5/9,3	58,2/11,6	65,9/14,7
Gas Consumption G31 max/min (12.8 kWh/kg)	kg/h	11,3/2,5	15,2/3,4	18,9/3,8	22,7/4,5	30,3/6,1	37,9/7,6	43,0/9,5
Gas Pressure G20	mbar	20						
Gas Pressure G25	mbar	25						
Gas Pressure G31	mbar	30/50						
Maximum gas pressure	mbar	50						
Max. temperature flue gas	°C	90						
Flue gas temperature at 80/60°C max/min	°C	75/58	75/58	75/58	75/58	75/59	75/59	76/58
Flue gas temperature at 40/30°C max/min	°C	54/30	54/30	55/30	55/30	56/30	56/30	56/30
Flue gas quantity max/min H-gas	m³/h	188/43	251/57	313/64	377/77	502/102	628/128	712/161
CO2 level G20/G25 max/min	%	10,2/9,4 ±0,2 (Restriction type 570 delta max/min ≥0,8%						
CO2 level G31 max/min	%	11,9/10,0 ± 0,2						
NOx 80/60°C max/min	mg/kWh	38/19	38/19	36/18	36/18	34/17	37/18	40/19
CO 80/60°C max/min	mg/kWh	14/3	14/3	14/5	14/5	14/8	16/5	18/1
Max. permissible flue resistance max/min	Pa	200/10	200/10	200/10	160/10	400/10	300/10	400/10
Water volume	l	26	31	33	60	63	71	77
Water pressure max/min	bar	8/1						
Max. water temperature (High limit thermostat)	°C	100						
Maximum temperature setpoint	°C	90						
Nominal water flow at dT=20k	m³/h	6.1	8,1	10,1	12,2	16,3	20,3	23,1
Hydraulic resistance at nominal water flow	kPa	11,2	26,8	31,2	11,9	32,3	34,3	57,1
Electrical connection	V	230/400						
Frequency	Hz	50						
Mains connection fuse	A	16						
IP class	-	IP20						
Power consumption boiler max/min (excl. pump)	W	176/56	267/56	286/69	230/69	486/69	620/64	676/61
Power consumption speed controlled pump (opt.)	W	190/9	190/9	310/12	310/12	470/25	590/25	800/38
Weight (empty)	Kg	290	332	366	434	496	540	595
Sound Power Level LWA ***	dB	70,3	70,3	70,3	70,3	77,3	77,3	77,3
Ionisation current average	µA	10,6/4,4						
pH value condensate	-	3.2						
CE certification code	-	CE - 0063CQ3970						
Water connections	-	R2"	R2"	R2"	DN65 PN16			
Gas connection	-	R1.1/2"	R1.1/2"	R1.1/2"	R1.1/2"	R1.1/2"	R2"	R2"
Flue gas connection (DN)	mm	150	150	200	200	250	250	250
Air intake connection (for room sealed use) (DN)	mm	130	130	130	130	130	150	150
Condensate connection	mm	32						

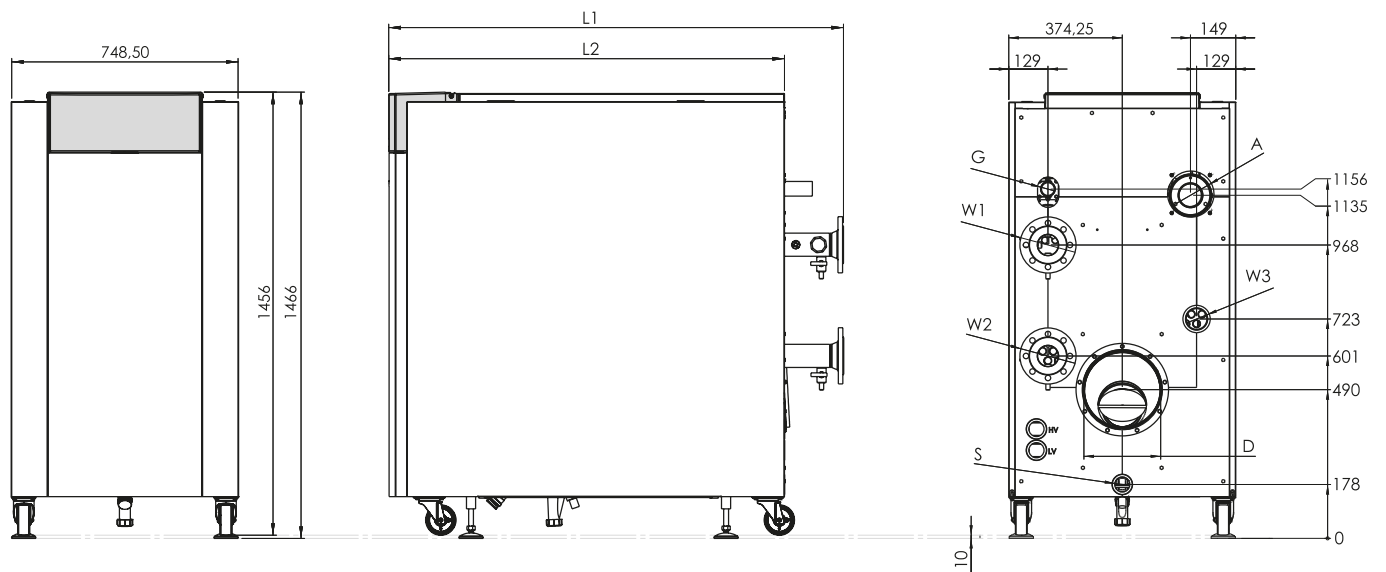
# Dimensions R600 EVOLUTION

## R601 - R602 - R603 EVO



R600 model	R601 EVO	R602 EVO	R603 EVO	R604 EVO	R605 EVO	R606 EVO	R607 EVO
L1 [mm]	1349	1499	1649	1348	1496	1646	1769
L2 [mm]	1165	1315	1465	1152	1302	1452	1602
A [mm]	Ø130					Ø150	
G [mm]	1½"					2"	
D [mm]	Ø150		Ø200		Ø250		
S [mm]	32						
W1-W2-W3	2"			DN65 PN16			

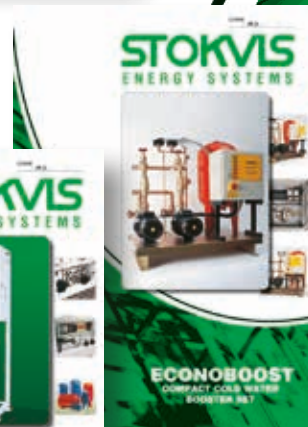
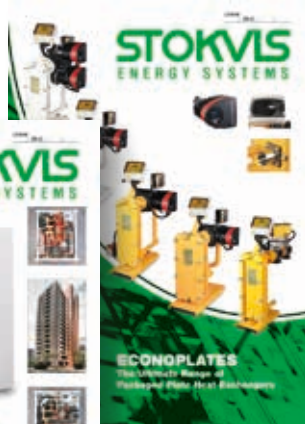
## R604 - R605 - R606 - R607 EVO





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