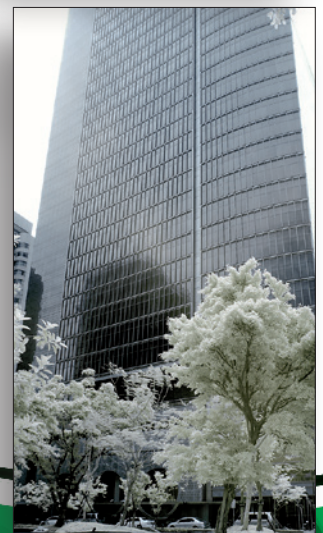
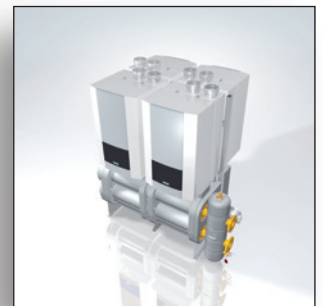
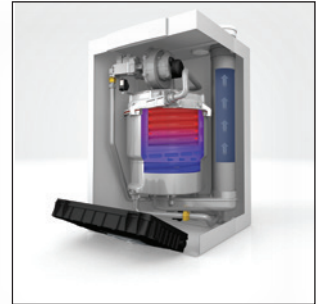


STOKVIS

ENERGY SYSTEMS



STOKVIS R40

EVOLUTION RANGE

High Efficiency Fully Condensing Ultra Low NOx
Wall Mounted Gas Fired Boilers

R40 EVOLUTION RANGE

High Efficiency - Fully Condensing - Ultra Low NO_x

Wall Mounted Gas Fired Boilers with Stainless Steel Heat Exchanger

The Range

The new R40 EVOLUTION wall mounted boiler incorporates the latest high quality gas heating technology providing maximum efficiencies and minimum environmental impact. With six models ranging from 56kW to 138kW, all small commercial requirements can be accommodated, along with larger commercial properties when modules are combined to form the "Modupak", where outputs up to 1,102kW are achievable.

The Modupak is a frame mounted combination of up to 8 boiler modules in a back-to-back configuration, or up to 6 boiler modules as an in line formation, supplied as a complete package including boilers, pumps, pipe work and valves, header, dirt and air separator, manifolds, insulation, flues and control system.

Reliability

- Corrosion-resistant stainless steel heat exchanger: minimal wear and significantly longer lifespan

Ground breaking Efficiency

- Consistently high efficiency is maintained due to the single or double-helix heat exchanger, dependent on model: lower hydraulic resistance, and therefore less electrical energy usage by boiler pump.

Advanced robot laser welding technology between exchanger tube and fins, guaranteeing highest possible heat transfer

Seasonal Space Heating Efficiency up to 92.5%
Fully insulated Casing.

Environmentally Friendly

- CO₂ levels between 8.2% and 9%
NO_x Emission EN 15502, mg/kWh range is from 22 to 42.
NO_x Class 6

The Greatest Flexibility

- 6 capacities of up to 138kW and complete and variable "Modupak" boiler packages with full mechanical and control options with outputs up to 1,102kW
 - * Can operate over a range of differential temperatures of between 10-30°C
 - * 8 Bar maximum water pressure (Safety Valve setting)



The new standard of reliability: Stainless steel single/double-helix heat exchanger.

The R40 EVOLUTION combines the highest degree of material quality with intelligent technology. The single or double-helix heat exchanger is made of high quality 316 stainless steel.

NEW HIGH STANDARD OF EFFICIENCY

This allows for a substantially optimised transfer of heat. As a result, the innovative gas condensing boiler is setting new standards of efficiency. Another benefit is its lower hydraulic resistance, which enables the use of smaller, more economical circulation pumps.

LONG LIFETIME

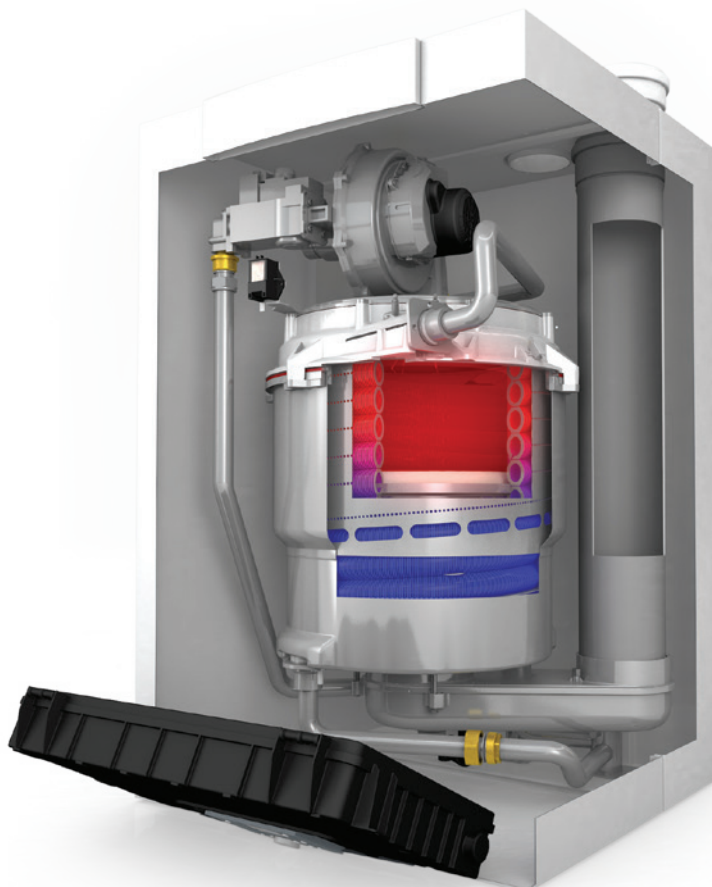
Equipped for a long life expectancy, the use of stainless steel also guarantees extreme reliability. This is because the high quality of the material makes the heat exchanger much less susceptible to lime scale and pH values and therefore provides heat at a consistently high efficiency.

Heat exchangers of some conventional boilers are made of aluminium; the disadvantage is that the faster material-related wear and scaling, negatively impacts on the flow of water, as well as creating surface changes (patina) on the exhaust gas side, which impairs the transfer of heat to the water and thus decreases the efficiency.

With the R40 EVOLUTION, however, corrosion-resistant stainless steel guarantees much less wear and tear and thus offers consistently high efficiency over its entire life span.

LOW ELECTRICAL CONSUMPTION

The R40 EVOLUTION is equipped with either a single or double-helix heat exchanger. This construction minimises the hydraulic pressure drop and thus enables the use of smaller pumps. The result is significantly lower electricity consumption and less wear on the heat exchanger.



Controls – features

Standard boiler:

- LCD text display in different languages
- Burner control
- Weather compensation (optional sensor required)
- DHW control (optional sensor required)
- Clock program for heating and DHW
- 0-10 volt external set point control (temperature/load)
- OK/Alarm contacts

Optional Controls which can be added:

- Control of up to 2 heating zones.
- MASTER/SLAVE cascade control - maximum 8 boilers
- 2 additional heating zones via separate wall mounted controller
- Room unit QAA75 for each heating zone
- Outdoor sensor / DHW sensor / low loss header sensor for cascade
- Heating zone sensor
- 0-10 volt capacity feedback signal

R40 EVOLUTION ERP INFORMATION - CE CERTIFICATE NUMBER CE-0063CM3576

ErP Heating 1) by return temperature 30°C 2) by return temperature and feed temperature (60-80°C)								
Seasonal space heating energy efficiency class			R40 EVOLUTION					
			 60 	 70 	80	100	120	140
Rated heat boiler	P _{rated}	kW	57	66	75	93	112	130
At rated heat output and high-temperature regime	P4	kW	56,5	65,5	75,3	92,9	111,9	130,4
At 30 % of rated heat output and low temperature regime 1)	P1	kW	18,6	21,5	24,7	30,8	37,0	43,0
Seasonal space heating energy efficiency	η _s	%	91,7	91,8	91,7	91,7	92,5	91,7
At rated heat output and high-temperature regime 2)	η ₄	%	87,9	88,2	88,2	87,9	88,2	88,2
At 30 % of rated heat output and low temperature regime 1)	η ₁	%	96,5	96,5	96,4	97,1	97,2	96,9
Auxiliary electricity consumption								
At full load	el _{max}	kW	0,10	0,12	0,13	0,13	0,12	0,15
At 30% load	el _{30%}	kW	0,03	0,03	0,04	0,03	0,04	0,03
In stand-by mode	PSB	kW	0,004					
Supplementary heater								
Standby heat loss	P _{stby}	kW	0,081			0,093		
Ignition burner power consumption	P _{ign}	kW	NA	NA	NA	NA	NA	NA
Emissions of nitrogen oxides	NO _x	mg/kWh	22	29	37	42	35	27

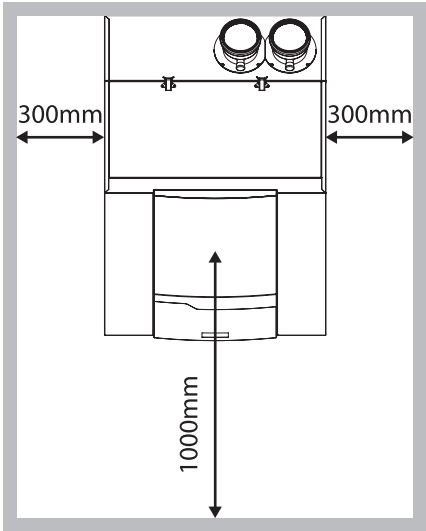
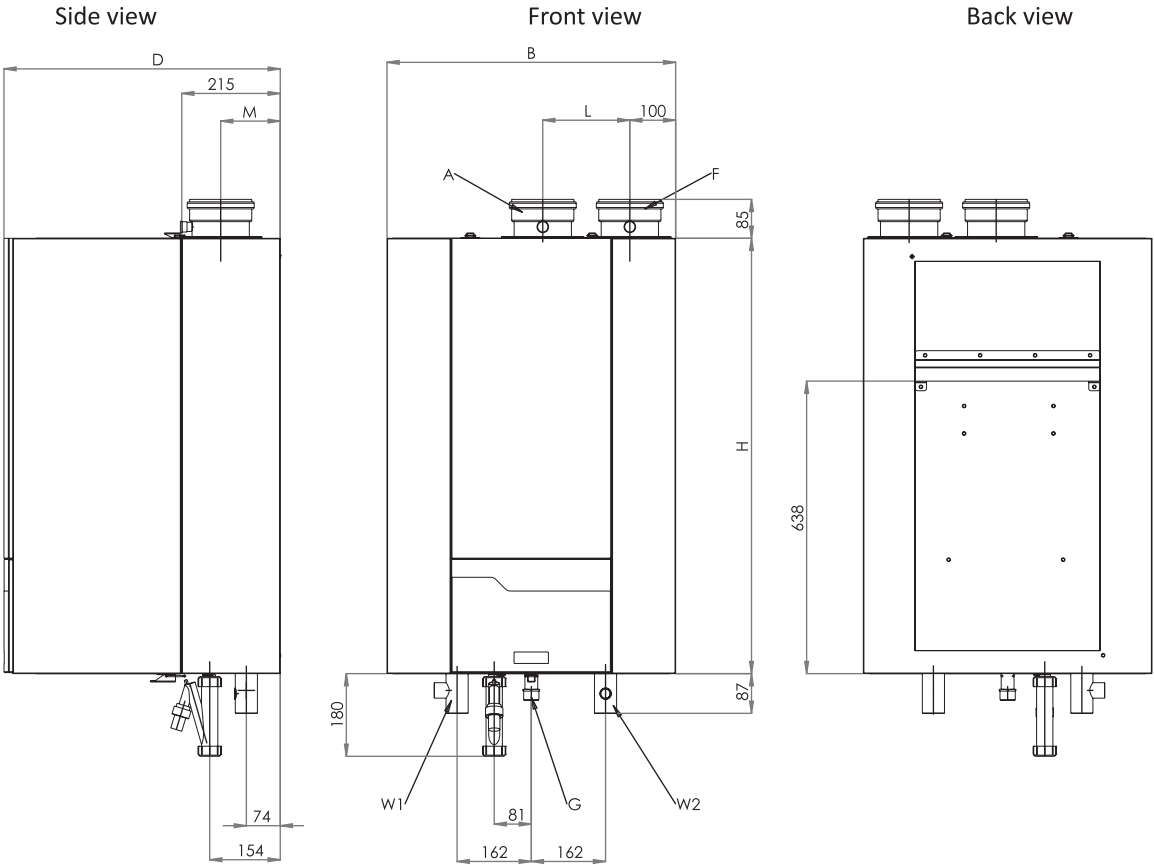
Technical data

		R40 EVOLUTION						
		60	70	80	100	120	140	
Nominal heat output at 80-60°C max/min	kW	56,5/15,5	65,5/15,6	75,3/19,4	92,9/18,7	11,9/22,5	130,4/26,2	
Nominal heat output at 50/30°C max/min	kW	60,4/17,2	70,0/17,2	79,7/21,2	98,9/20,6	118,5/24,8	137,8/28,9	
Nominal heat output at 40/30°C max/min	kW	60,5/17,3	70,0/ 17,4	79,7/21,5	98,9/20,9	118,5/25,2	137,8/29,3	
Nominal heat input Hi max/min	kW	57,9/16,0	66,8/16,0	76,8/19,8	95,2/19,0	114,3/22,9	133,3/26,7	
Modulation ratio	-	3,6	4,2	3,9	5,0	5,0	5,0	
Efficiency at 80/60°C max/min	%	97,6/97,0	98,0/97,5	98,0/97,9	97,6/98,3	97,9/ 98,3	97,8/ 98,3	
Efficiency at 50/30°C max/min	%	104,4/107,4	104,8/107,3	103,8/107,2	103,9/108,5	103,7/108,4	103,4/108,3	
Efficiency at 40/30°C max/min	%	104,5/108,3	104,8/108,5	103,8/108,6	103,9/110,0	103,7/109,9	103,4/109,8	
Efficiency at 46/30°C load 30%	%	107,2	107,2	107,1	107,8	107,9	107,6	
RAL 40/30 average	%	108,7	109,1	109,4	109,4	109,1	108,7	
Heat Loss (Pstby)	W	81,0	81,0	81,0	92,7	92,7	92,7	
Max. condensate flow	l/h	3,6	4,4	4,3	5,4	6,4	7,1	
Gas consumption G20 max/min (10,9 kWh/m³)	m³/h	5,3/1,5	6,1/1,5	7,0/1,8	8,7/1,7	10,5/2,1	12,2/2,4	
Gas consumption G25 max/min (8,34 kWh/m³)	m³/h	6,9/1,9	8,0/1,9	9,2/2,4	11,4/2,3	13,7/2,7	6,0/3,2	
Gas consumption G31 max/min (12,8 kWh/kg)	kg/h	4,5/1,3	5,2/1,3	6,0/1,5	7,4/1,5	8,9/1,8	10,4/2,1	
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 (high limit)	°C	90						
Flue gas temperature at 80/60°C max/min	°C	59/57	60/57	61/58	60/56	63/56	66/57	
Flue gas temperature at 50/30°C max/min	°C	43/35	44/34	45/33	44/33	46/33	48/33	
Flue gas temperature at 40/30°C max/min	°C	42/33	44/33	44/33	43/32	45/32	47/32	
Flue gas temperature at 36/30°C load 30%	°C	34	35	35	33	34	35	
Flue gas quantity max/min	m³/h	83/22	98/22	113/27	139/27	168/33	202/38	
CO level at 80/60 °C max/min	ppm	75/11	92/11	87/7	67/5	82/4	62/7	
CO level at 80/60 °C max/min	mg/kWh	80/11	99/11	94/7	72/5	88/5	67/7	
CO year emission EN15502	ppm	35,79	43,76	51,73	41,53	40,76	39,99	
CO year emission EN15502	mg/kWh	38,44	47,00	55,56	44,60	43,78	42,95	
CO ₂ level G20-G25	Max. load	%	8,5 (+0 -0,2)	8,4 (+0 -0,2)	8,4 (+0 -0,2)	8,4 (+0 -0,2)	8,2 (+0 -0,2)	
	Min. load	%	9,0 (+0 -0,2)	9,0 (+0 -0,2)	9,0 (+0 -0,2)	8,5 (+0 -0,2)	8,5 (+0 -0,2)	
Restriction ΔC02 max.load - min. load		%	-	-	-	-	<0,3	
CO ₂ level G31	Max. load	%	9,6 (0 +0,2)					
	Min. load	%	9,6 (0 +0,2)					
Restriction ΔC02 max.load - min. load		%	C02 Min. load ≤ C02 Max. load					
NOx level at 80/60 °C max/min		ppm	25/10	30/11	34/16	25/11	22/15	15/15
NOx level at 80/60 °C max/min		mg/kWh	44/17	53/19	60/28	44/19	38/27	26/26
NOx emission EN15502 (ppm)		ppm	13,94	18,78	23,61	28,38	22,61	16,84
NOx emission Hi/Hs EN15502 (mg/kWh)		mg/kWh	24,60/22,15	32,61/29,36	40,61/36,57	46,67/42,03	38,19/34,40	29,71/26,76
NOx class EN15502			6					
Max. permissible flue resistance		Pa	167	200	200	173	134	200
Water volume		l	6	6	6	9	9	9
Water pressure max/min		bar	8/1	8/1	8/1	8/1	8/1	8/1
Max. water temperature (High limit thermostat)		°C	100	100	100	100	100	100
Maximum temperature setpoint		°C	90	90	90	90	90	90
Nominal water flow at dT=20°K		m3/h	2,4	2,8	3,2	4,0	4,8	5,6
Hydraulic resistance at nominal flow rate		kPa	15	18	22	7	9	11
Electrical connection		V	230					
Frequency		Hz	50					
Mains connection fuse		A	10					
IP class with Appliance Type B23(P) **		-	IP30					

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Dimensions



Model		60/70/80	100/120	140
Dim/Type				
A	mm	100	100	130
B	mm	630		
D	mm	605		
H	mm	810	950	950
W1	mm	R1.¼	R1.½	R1.½
W2	mm	R1.¼	R1.½	R1.½
G	mm	R¾	R1	R1
F	mm	100	100	130
L	mm	140		190
M	mm	115		130

The Modupak multi boiler package for custom-made performance

The Stokvis Modupak can be installed in a very short time and comes complete with boilers, pumps, header, manifolds, dirt and air separator, valves, insulation, flue and control system.

Almost unlimited configurations of boiler size and number are possible as well as the type of Modupak, whether it be located against a wall free-standing, or back to-back.

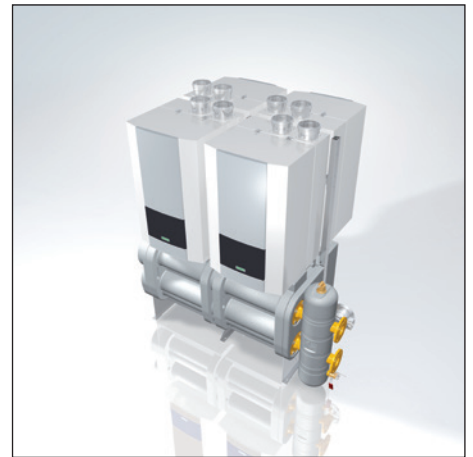
The Modupak can be made up from a selection of any of the six R40 EVOLUTION boiler models available in the capacity options 56kW, 65kW, 75kW, 93kW, 112kW and 130kW (80/60°C)

Up to eight boilers can be combined with one another in a cascade operation. In practice, the Modupak solution allows for high-precision adjustment of the output capacity to match the seasonal load.

The R40 EVOLUTION is robust and compact and due to the modular format of the Modupak the units can be assembled and installed in the tightest of plantrooms and also sections can be transported to the plantroom that have the narrowest of access routes.

With the modular format, boilers with a total capacity of up to 1,102 kW can easily be located into the smallest areas.

For full details of the Modupak options please see the full technical manual.



Back to Back



Wall Mounted



Free Standing

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