

NEW

VALERIUS

ehc
the electric heating company

Floor Standing Commercial Boilers



Commercial Boilers

50-240KW heat only boilers

The Electric Heating Company Limited

Key product features

- High Quality Floor Standing boiler
- Can be cascaded with up to 10 boilers using cascade regulator
- Can be operated via simple make & break contact
- Independent operation or Cascade operation via BMS
- Elements can be range rated with fully automatic modulation
- Has the ability to utilise Outdoor Temperature Compensation
- Pipe Connections DN65 (2 1/2") PN16 Flange.



Product Range

EHC Product Code	Product Name
EHCVAL50KW	Valerius 50 KW floor standing Electric Boiler
EHCVAL70KW	Valerius 70 KW floor standing Electric Boiler
EHCVAL90KW	Valerius 90 KW floor standing Electric Boiler
EHCVAL120KW	Valerius 120 KW floor standing Electric Boiler
EHCVAL160KW	Valerius 160 KW floor standing Electric Boiler
EHCVAL200KW	Valerius 200 KW floor standing Electric Boiler
EHCVAL240KW	Valerius 240 KW floor standing Electric Boiler
EHCVAL-CR	Valerius Cascade regulator

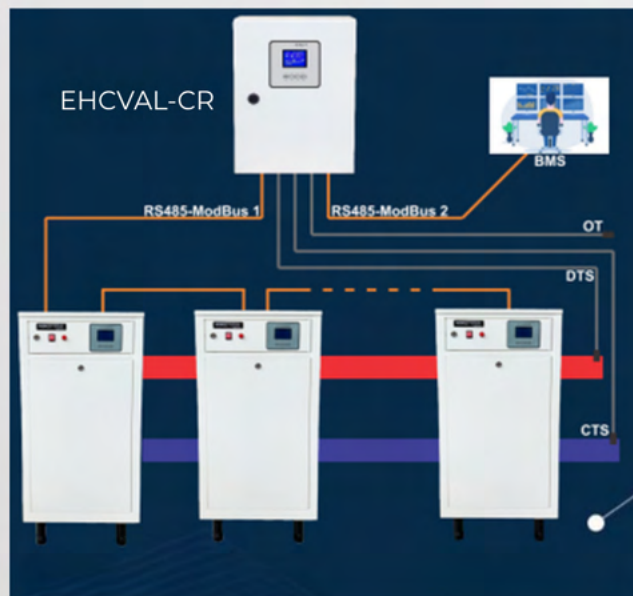
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Cascade Regulator

- The cascade controller distributes power to individual boilers so that all available boilers are loaded as evenly as possible.
- This enables the boilers to work at optimal efficiency - maximising the life of the boiler.

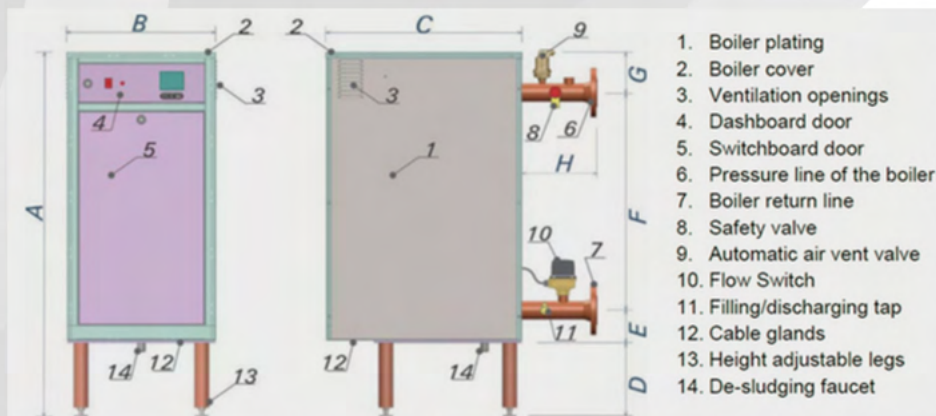
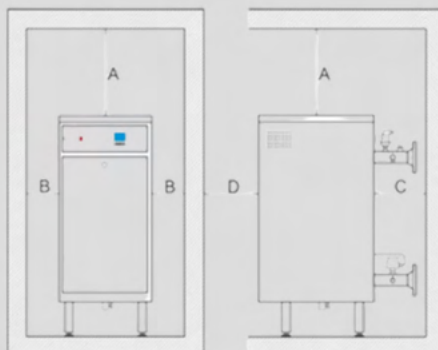
Valerius Cascade Regulator	
EHCVAL-CR	
Device mass	9kg
Protection level (water and dust)	IP54
Protection level (external mechanical influences)	IK02
Maximum ambient temperature	-20... 70°C
Maximum relative humidity of the ambient	90%
Maximum number of boilers in cascade connection	10
Network voltage	230 VAC
Spring-loaded power cable clamps	4mm ²
Spring clamps of sensors, signals and communication	2,5mm ²
Main Fuse (MCB)	1-p C6A
Minimum cross-section of the power cable	Cu 3x0,75mm ²
Device consumption in stand-by mode	3W
Maximum device consumption	11W
Measuring range of temperature sensors	-50... 125°C
Minimum cross-section of cables for Temperature sensors	Cu 2x0,2 (AWG24)mm ²
Maximum cable length for Temperature sensors	20m
Minimum cross-section of cables for Communication	Bus twisted cable 2x0,1 (AWG26)
Maximum communication cable length	100m
Communication protocol of cascade regulator and boilers-BMS	RS485 ModBus RTU
Relay signal "Boiler in operation / Boiler Operation error/ Error in Communication with Boiler"	Voltage-free contacts, I _{max} =IOA, 230VAC
External conditions for boiler operation (remote start/ stop)	24VDC
Microprocessor Unit (CPU)	EK- CPU- 1- 6
Dimensions	
Total Height (A)	400mm
Width (B)	300mm
Depth (C) Unit only	140mm



Space Requirements

Minimum dimensions of free space for installation

	A [mm]	B [mm]	C [mm]	D [mm]
40÷60kW	600	500	600	1000
70÷100kW	500	500	600	1000
120÷240kW	500	500	700	1000



Technical Data & Product Dimensions

	Valerius 50 KW EHCVAL50KW	Valerius 70 KW EHCVAL70KW	Valerius 90 KW EHCVAL90KW	Valerius 120 KW EHCVAL120KW
Heating groups	5 x 10 kW	7 x 10 kW	9 x 10 kW	6 x 20 kW
Internal Heater fuses	5 x 3P C25A	7 x 3P C25A	9 x 3P C25A	6 x 3P C40A
Nominal Current	3 x 72,5A	3 x 101,5A	3 x 130A	3 x 174A
Power supply	3N - 400 / 230V 50Hz	3N - 400V 50Hz	3N - 400V 50Hz	3N - 400V 50Hz
Main circuit breakers	3 x 80A	3 x 125A	3 x 160A	3 x 200A
Minimum Power cable CSA	Cu 3 x 25 mm ²	Cu 3 x 35 mm ²	Cu 3 x 50 mm ²	2 cable Cu 3 x 35 mm ²
Protective earth cable CSA	Cu 1 x 25 mm ²	Cu 1 x 25 mm ²	Cu 1 x 35 mm ²	Cu 1 x 35 mm ²
Weight Empty	94kg	130kg	135kg	195kg
Volume of water in the boiler	60l	90l	90l	170l
Hydraulic connection	DN 40 (6/4"); PN 16	DN 50 (2"); PN 16	DN 50 (2"); PN 16	DN 65 (2½"); PN 16
Safety valve	¼col 4,5 bar	¾" 4,5 bar	¾" 4,5 bar	¾" 4,5 bar
Recommended heating* surface-floor/radiator		S700m' f.h. S560m' r.h.	S900m' f.h. S720m' r.h.	51200m2 f.h. 51000m2 r.h.
Max. concentration of glycol in the medium	30%	30%	30%	30%
MCCB with voltage release	160A / 36kA	160A / 36kA	160A / 36kA	160A / 36kA
Microprocessor thermoregulator (CPU)	EK_CPU_1_6fw: vs15.03.005	EK_CPU_1_6fw: vs15.03.005	EK_CPU_1_6fw: vs15.03.005	EK_CPU_1_6fw: vs15.03.005
Flow switch min/max flow for enabled heating	3m3/h + 9m3/h	3m3/h + 9m3/h	3m3/h + 9m3/h	3m3/h + 9m3/h
Min and max pressure	0,4 bar+ 4 bar (on request 6 bar)	0,4 bar+ 4 bar (on request 6 bar)	0,4 bar+ 4 bar (on request 6 bar)	0,4 bar+ 4 bar
Ingress Protection rating	IP 20	IP 20	IP 20	IP 20
Working temperature range	10 + 90 °C	10 + 90 °C	10 + 90 °C	10 + 90 °C
Security safety thermostat	95°C	95°C	95°C	95 °C
Communication with cascade protocol	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus
Communication with BMS/protocol	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus
Dimensions				
Total Height (A)	1165mm	1220mm	1220mm	1470mm
Width (B)	400mm	500mm	500mm	605mm
Depth '(C) Unit only	530mm	665mm	665mm	665mm
Leg Height (D)	215mm	235mm	235mm	255mm
Bottom of Unit to centre bottom return Line (E)	80mm	110mm	110mm	120mm
Centre return line to centre pressure line (F)	740mm	735mm	735mm	765mm
Top of Unit to centre of pressure line (G)	130mm	140mm	140mm	330mm
Length of Pressure line and return line (H)	215mm	255mm	255mm	250mm

	Valerius 160 KW EHCVAL160KW	Valerius 200 KW EHCVAL200KW	Valerius 240 KW EHCVAL240KW
Heating groups	8 x 20 kW	10 x 20 kW	6 x 40 kW
Internal Heater fuses	8 x 3P C40A	10 x 3P C40A	12 x 3P C40A
Nominal Current	3 x 232A	3 x 290A	3 x 248A
Power supply	3N - 400V 50Hz	3N - 400V 50Hz	3N - 400V 50Hz
Main circuit breakers	3 x 250 A	3x315A	3 x 400 A
Minimum Power cable CSA	2 cable Cu 3 x 50 mm ²	2 cable Cu 3 x 70 mm ²	2 cable Cu 3 x 95 mm ²
Protective earth cable CSA	Cu 1 x 50 mm ²	Cu 1 x 70 mm ²	Cu 1 x 70 mm ²
Weight Empty	200kg	200kg	217kg
Volume of water in the boiler	170l	170l	170l
Hydraulic connection	DN65(2½");PN16	DN65(2½");PN16	DN65(2½");PN16
Safety valve	¾" 4,5 bar	¾" 4,5 bar	¾" 4,5 bar
Recommended heating* surface-floor/radiator	51600m2 f.h. 51300m2 r.h.	52000m2 f.h. 51600m2 r.h.	52400m2 f.h. 52000m2 r.h.
Max. concentration of glycol in the medium	30%	30%	30%
MCCB with voltage release	160A / 36kA	160A / 36kA	160A / 36kA
Microprocessor thermoregulator (CPU)	EK_CPU_1_6fw: vs15.03.005	EK_CPU_1_6fw: vs15.03.005	EK_CPU_1_6fw: vs15.03.005
Flow switch min/max flow for enabled heating	3m3/h + 9m3/h	3m3/h + 9m3/h	3m3/h + 9m3/h
Min and max pressure	0,4 bar+ 4 bar (on request 6 bar)	0,4 bar+ 4 bar (on request 6 bar)	0,4 bar+ 4 bar
Ingress Protection rating	IP 20	IP 20	IP 20
Working temperature range	10 + 90 °C	10 + 90 °C	10 + 90 °C
Security safety thermostat	95°C	95°C	98 °C
Communication with cascade protocol	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus
Communication with BMS/protocol	RS485_RTU / ModBus	RS485_RTU / ModBus	RS485_RTU / ModBus
Dimensions			
Total Height (A)	1470mm	1470mm	1470mm
Width (B)	605mm	605mm	605mm
Depth '(C) Unit only	665mm	665mm	665mm
Leg Height (D)	255mm	255mm	255mm
Bottom of Unit to centre bottom return Line (E)	120mm	120mm	120mm
Centre return line to centre pressure line (F)	765mm	765mm	765mm
Top of Unit to centre of pressure line (G)	330mm	330mm	330mm
Length of Pressure line and return line (H)	250mm	250mm	250mm

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Disclaimer - All figures quoted and images used are correct at the time of printing and maybe subject to change.
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