Elginkan

DEVICE TYPE		ARCEUS EK 6	ARCEUS EK 9	ARCEUS EK 12	ARCEUS EK 15	ARCEUS EK 18	ARCEUS EK 24	ARCEUS EK 27
Nominal Power (kW)		6	9	12	15	18	24	27
Minimum Heating Power (kW)		2	3	2	2	2	2	3
Supply Power Voltage		1~ 230 VAC	1~ 230 VAC	1~ 230 VAC	3~ 400 VAC	3~ 400 VAC	3~ 400 VAC	3~ 400 VAC
		3~ 400 VAC	3~ 400 VAC	3~ 400 VAC				
Nominal Current (A)		1~ 26,1	1~ 39,1	1~ 52,2	21,7	26,1	34,8	39,1
		3~ 8,7	3~ 13,1	3~ 17,4				
Power Cord Cross Section (mm^2)		1~ 3x6	1~ 3x10	1~ 3x10	5x6	5x6	5x6	5x10
		3~ 5x2,5	3~ 5x2,5	3~ 5x4				
Protection Class		IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D	IPX4D
Sound Level (dB)		42	42	38	38	38	38	38
Net Weight (kg)		26	26	27	27	29	29	29
Gross Weight (kg)		29	29	30	30	32	32	32
Dimensions (HxWxD)		678x410x288	678x410x288	678x410x288	678x410x288	678x410x288	678x410x288	678x410x288
Central Heating Seasonal Energy Efficiency		39,4	39,5	39,6	39,8	39,8	39,9	39,9
Energy Efficiency Class	"Domestic Hot Water Load Profile - Efficiency Class"	-	-	M-C	L-C	L-C	XL-C	XL-C
	Central Heating Efficiency Class"	D	D	D	D	D	D	D

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Arceus

GOOD DESIGN

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E.C.A.®
TOGETHER FOR YEARS

E.C.A. ARCEUS is a line of electric boilers that comes with “Monothermic”, “Central Heating” and “Storage Tank” alternatives with 7 capacities (6 kW, 9 kW, 12 kW, 15 kW, 18 kW, 24 kW and 27 kW). Operation principle of the device is based on heating the water enters from the inlet of a tank-formed heat exchanger which contains resistor heaters through the outlet of it. ARCEUS boilers of different capacities contain 3,6 or 9 resistors. Unlike the gas boilers which can modulate in small intervals of thermal power input within the range of minimum and nominal power input, ARCEUS electric boilers heat modulate in as many stages as the number of electric resistor. Every single heater is either “OFF” or “ON” in full capacity so momentary power input of the devices during operation is simply the sum of the resistor capacities which are turned on.

Heaters are turned on by a set of switching elements through the power supply line. First, there is a circuit breaker for overcurrent protection, then a power contactor for direct overheat protection and analytical fault protection and finally mechanical relays for gradual power control according to heating demand. Contactors are always pulled in unless a lockout type failure occurs or heat exchanger tank is overheated. When the contactor is released, it is secured that heating is disabled. This double stage switching structure ensures that the device is protected against an undesired continuous heating incident in case contactor or one of the relays is stuck.

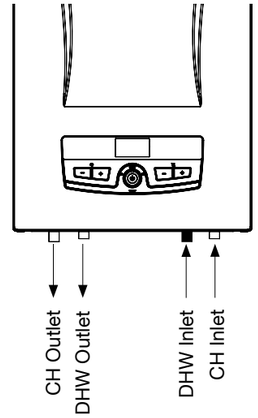
1 MT Type

MT (Monothermic Type) ARCEUS boilers operate both as space heater and instantaneous domestic water heater. They have two water heating circuits inside, for space heating (CH) and domestic water heating (DHW).

As the device is operated to heat space through radiators or underfloor installation, water coming from CH return connection goes through the heat exchanger tank and gets hotter. Outlet pipe of the tank is connected to the hydroblock and 3 way valve directs water to the space heating installation via CH Flow node.

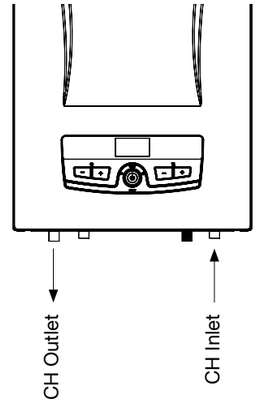
For domestic water heating, the water that leaves the tank is directed to the plate heat exchanger, discharge some of its heat to the other side of the plates and sent back to the tank by circulation pump. Plate heat exchanger’s other side is connected to DHW inlet and DHW outlet nodes. The water gets heated during transition through plate heat exchanger and leaves the device hotter from DHW outlet node.

ARCEUS boilers with 6 kW and 9 kW capacities do not have monothermic version due to incapacity to meet instantaneous water heating demand at required flow rates for customer’s comfort.



2 CH Type Device

CH (Central Heating) type devices conduct water heating with the same principle as MT devices. The difference between them is CH devices do not provide domestic water heating. Therefore they do not contain DHW related components as 3 way valve, plate heat exchanger, flow sensor, flow limitator, DHW inlet-outlet nodes etc. E.C.A. ARCUES ST devices are available in all capacities.



3 ST Type Device

ST (Storage Tank) type devices are sort of a mixture of CH and MT devices. They do not function as instantaneous water heaters but they provide hot water by keeping the water inside an external storage tank at a desired temperature. Since domestic water heating takes place outside of the boiler, in external storage tank, the ST boilers do not contain a plate heat exchanger hydroblock, likewise CH type. But there is a 3 way valve inside to direct the water towards the storage tank when the water stored in the tank drops below set temperature and hysteresis value. E.C.A. ARCUES ST devices are available in all capacities.