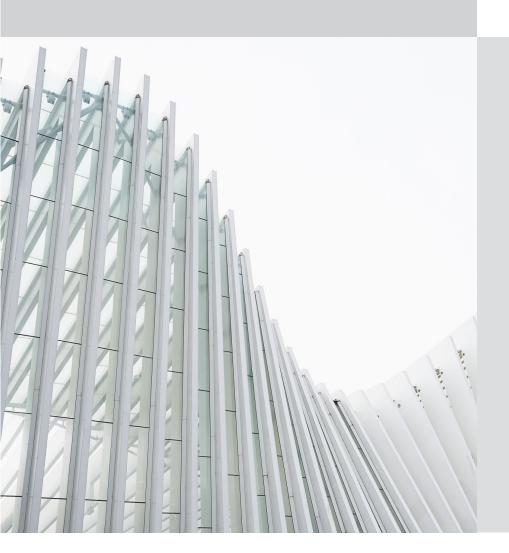


W W W . K E T R O W A . I R



### درباره کتــروا

تأمیـن مصالـح و تجهیـزات پروژههـای سـاختمانی همـواره یکـی از مهمتریـن دغدغههـای سـازندگان و مدیـران پروژههاسـت. اهمیـت ایـن مسـئله نشـأت گرفتـه از تأثیـر مسـتقیم آن بـر زمـان بنـدی یـروژه، هزینـه تمـام شـده سـاخت و ارزش سـاختمان نهایـی اسـت.

تیم کتروا با هدف تسهیل فرایند تأمین کالاهای ساختمانی و با در نظرگرفتن مسئولیت اجتماعی خود، سامانه، سازندگان اجتماعی خود، سامانه ی جامع و برخط را ایجاد نموده است. در این سامانه، سازندگان قادر خواهند بود برای پروژه های ساختمانی خود، زمان بندی تأمین مصالح و تجهیزات را آماده نمایند و براساس این برنامه، سفارش تأمین کالا داشته باشند. این سفارش ها با مقایسه کالاهای متنوع موجود در سامانه انجام می گیرد.

انبوه سازان، مهمترین مشتریان هدف کتروا هستند و کتروا تلاش می کند با برنامه ریزی منطقی برای سازندگان و با ارائه مدل خرید نقدی و اعتباری، تأمین و تحویل به موقع کالا را به مصرف کننده ارائه نماید.

تأمین کالاهای ساختمانی برای بازارهای صادراتی، یکی دیگر از اهداف اصلی کتروا است. کتـروا قصـد دارد بـازار سـنتی و غیرشـفاف را بـه بـازاری مـدرن، پرسـرعت و دقیـق تبدیـل نمایـد کـه در آن خریـداران بـا مناسـب تریـن قیمـت بـه کالاهـای بـا کیفیـت مدنظـر خـود دسـت یابنـد.

# MECHANICAL, HEATING & COOLING FACILITIES

نأسیسات مکانیکی، گرمایشی و سرمایشی

ELECTRICAL FACILITIES

تأسيسات الكتريكي

SANITARY بهداشتی

3 2

JOINERY & FINISHING

ر نازک کیاری

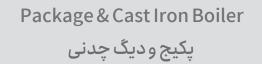
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محصولات در پنج شاخهی،

سازه و ابنیه، تأسیسآت الکتریکی، تأسیسات مکانیکی، گرمایشی و سرمایشی، بهداشتی و نازک کاری تحت یک برند، با ترکیب هنر و صنعت تولید و عرضه می گردد. SIKULI

ســـازه وابنيه

Products are produced and supplied in five branches
Structure, Electrical Facilities, Mechanical, Heating & Cooling Facilities,
Sanitary, Joinery & Finishing, combining art and industry









#### Cast Iron Package for Dual-Burner Ground Heating (Diesel-Gas) Class G

- Heat capacity 38000 to 110000 kcal/h
- Equipped with a 60 litre capacity spa reserve
- Ability to work with two types of gas and diesel burners
- Suitable for use in summer and mountain areas without natural gas fuel
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beautiful and durable
- Ability to install floor heating circuit
- The most suitable package for working with heavy and chalky water
- Quick and easy installation
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system

Dimensions of the	Installa	tion Site					اندازه های محل نصب
Model Dimensions	s (mm)	Α	В	C D	E	F G	Н
G		125	690	695 830	1040	60 190	330
Model /	Unit	G380	G500	G620	G750	G750	G1100
Nominal heat capacity (Urban Gas)	Kcal/hr Kw Btu/hr	38000 44 152000	50000 58 200000	62000 72 248000	75000 87 300000	88000 102 352000	110000 128 440000
Diesel consumption	Kg/hr	3.5	4.6	5.8	6.9	8.2	10.2
Maximum circulating water pressure	bar				3		
Urban gas pressure (G20)	mmH20				180-200		
Natural gas consumption (urban)	m3/hr	4.4	6.8	7.3	8.8	10	13
Number of boiler blades	blades	4	5	6	7	8	10
Maximum burner flame length	mm	350	425	500	575	650	725
Volume of hot water source	Litre				60		
<b>Chimney diameter</b>	mm				ф180		
Frequency/Voltage	V(AC)Hz				220/50		
Power consumption	W	36-	70		37-78		180-195
Ingress protection class	IP				54		
Height	mm				1100		
Width	mm				400		
Depth	mm	70	0	800	900	1000	1200
Weight	Kg	205	240	275	310	345	430



#### Cast Iron Package for Dual-Burner Ground Heating (Diesel-Gas) Class GL

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Equipped with advanced intelligent control system.
- Ability to work with two types of gas and diesel burners.
- Suitable for use in summer and mountain areas without natural gas fuel.
- Ability to work at low water pressures.
- Simultaneous use of domestic hot water and air conditioning.
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment.
- Ability to install floor heating circuit.
- The most suitable package for working with heavy and chalky water.
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage.
- Quick and easy installation.
- Ability to connect to building management system (BMS) and network.
- Heat capacity 88000 to 550000 kcal/h.
- Equipped with advanced intelligent control system.
- Maximum input power without burner.
- Suitable for residential units with a large area (villas, penthouses, etc.) or public environments with a large area (banks, schools, hospitals, swimming pools, etc.)

Dimens	ions of the Install	ation S	ite								ىب	عای محل نم	اندازه ه
Model	Dimensions (mm)	Α	В	С	D	E	F	G	Н	I	J	K	L
GLC		140	300	690	695	120	150	220	335	1,1/4"	ф180	400	740
GLE		150	505	765	850	140	130	220	410	2"	ф250	500	950
GLS		150	670	990	1020	120	115	250	510	3"	230x330	600	1140

Model /	Unit	GLC880	GLC1100	GLE1400	GLE1800	GLE2200	GLE2600	GLS3000	GLS3800	GLS4600	GLS5500
	Kcal/hr	88000	110000	140000	180000	220000	260000	300000	380000	460000	550000
Nominal heat capacity	Kw	102	128	164	211	257.5	304.5	344	442.5	541	639
(Urban Gas)	Btu/hr	352000	440000	560000	720000	880000	1040000	1176000	1512000	1848000	2184000
Diesel consumption	Kg/hr	8	10	13	17	20.5	24	28	35.5	43	51
Urban gas pressure (G20)			180-200								
Natural gas consumptior (urban)	m3/hr	10	13	16.5	21	26	30.5	35	42	54	65
Maximum circulating water pressure	bar		3			5				6	
Frequency/Voltage	V(AC)/Hz				2	20/50				3x3	80/50
Power consumption	W	180	)-195		50	06-595		564	4-735	465	5-763
Ingress protection class	IP						54	•			
Number of boiler blades	blades	8	10	8	10	12	14	8	10	12	14
Chimney diameter	mm	φ'	180		φ2	250			230	0x330	
Height	mm	7	50		9	50			1	140	
Width	mm	4	00	500 600							
Depth	mm	1000	1200	1330	1550	1770	1990	1500	1740	1980	2220
Weight	Kg	285	355	535	660	785	910	810	985	1160	1340

#### Cast Iron Package for Gas-Burning Floor Heating (Atmospheric) Class E

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder
- Ability to connect to building management system (BMS) and network.
- Equipped with advanced intelligent control system.
- Ability to work at low water pressures.
- Simultaneous use of domestic hot water and air conditioning.
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment.
- The most suitable package for working with heavy and chalky water.
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage.
- Equipped with a 60 litre capacity spa reserve.
- Heat capacity 18000 to 54000 kcal/h
- The ability to install a gas stove in order to use the kitchen space optimally
- Can be installed in 0.3 square metres of kitchen
- No sound (atmospheric)
- Ability to work with one cubic metre of natural gas per hour
- Ability to install gas exhaust fan and floor heating circuit
- Complete combustion of fuel and minimal pollution in the environment
- The ability to separately adjust the water temperature of the package intelligently based on the outside temperature
- It has a quick heating system for sanitary hot water
- PLUS
  - A) Stronger customized pump for systems with more path loss such as split duct, fan coil, air washer, underfloor heating, etc.
  - B) module or automatic flame adjustment
  - C) Filling valve or electric boiler water supply
- SMART
  - A) Inverter pump that automatically changes pump speed according to needs.
  - B) module or automatic flame adjustment
  - B) Filling valve or electric boiler water supply

Dimens	Dimensions of the Installation Site									
Model	Dimensions (mm)	Α	В	С	D	E	F			
E240		660	180	500	240	150	3.4			
E480		820	260	660	240	150	3.4			
E600		910	310	750	175	180	1			
E720		990	350	830	175	180	1			







Cast Iron Package	for Gas-	Burning Floor Heatin	g (Atmospheric	) Class E	گازسوز (اتمسفریک) کلاس E	پکیج چدنی شوفاژ زمینی د
Model /	Unit	E240	E360	E480	E600	E720
Nominal heat capacity	Kcal/hr	18000	27000	36000	45000	54000
(Urban Gas)	Kw	21	31	42	53	63
(Orban Gus)	Btu/hr	72000	108000	1440000	180000	216000
Urban gas pressure (G20)				180-200		
Natural gas consumption (urban)	m3/hr	2.1	3.2	4.2	5.3	6.4
Maximum circulating water pressure	bar			3		
Number of boiler blades	blades	3	4	5	6	7
Volume of hot water source	ce litre			60		
Frequency/Voltage	V(AC)/Hz			220/50		
Power consumption	W		36-70		37-8	37
Ingress protection class	IP			54		
Chimney diameter	mm		ф1	50		ф180
Height	mm	730	1365		730	
Width	mm	660	400	820	910	990
Depth	mm			550		
Weight	Kg	110	135	145	165	185
		1				



### Cast Iron Package for Gas-Burning Floor Heating (Atmospheric) Class S

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beauti-ful and durable
- The most suitable package for working with heavy and chalky water
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Can be installed in 0.3 square metres of kitchen
- Ability to install gas exhaust fan and floor heating cir-cuit
- Quick and easy installation
- Heat capacity 18000 to 54000 kcal/h
- Equipped with a 120 litre capacity spa reserve
- Stainless steel

Dimens	ions of the Installa	tion Site					اندازه های محل نصب
Model	Dimensions (mm)	Α	В	С	D	E	F
S360		310	3"/4	615	ф150	480	240
S480		270	3″/4	615	ф150	480	240
S600		910	1"	620	ф150	570	175
S720		990	1"	620	ф180	650	175

Cast Iron Package	for Gas-	Burning Floor Heating	(Atmospheric) Class E	ىوز (اتمسفريک) كلاس E	پکیج چدنی شوفاژ زمینی گازس
Model /	Unit	S360	S480	S600	S720
Nominal heat capacity	Kcal/hr	27000	36000	45000	54000
(Urban Gas)	Kw	31	41	53	63
(0.54.1 645)	Btu/hr	108000	144000	180000	216000
Urban gas pressure (G20)			180-	200	
Natural gas consumption (urban)	m3/hr	3.2	4.2	5.3	6.4
Maximum circulating water pressure	bar			3	
Number of boiler blades	blades	4	5	6	7
Volume of hot water source	e litre		17	20	
Frequency/Voltage	V(AC)/Hz		220	)/50	
Power consumption	W	36	5-70	37-7	8
Ingress protection class	IP		54		
Chimney diameter	mm		ф150		ф180
Height	mm		14	145	
Width	mm	480	480	570	650
Depth	mm		5	50	
Weight	Kg	149	167	185	210

#### Cast Iron Package for Gas-Burning Floor Heating (At-mospheric) Class SL

- Heat capacity 72000 to 171000 kcal/h
- Cascading installation capability
- Gas pipe size
- Equipped with a 60 litre capacity spa reserve1,252 / 5,000
- It is suitable for heating and supplying hot water to apartments and residential buildings with a capacity of 27,000 to 54,000 kilocalories per hour. It can be easily installed in the kitchen and its dimensions are designed in such a way that it is compatible with the standard of kitchen cabinets. It has low gas consumption, is com-pletely silent, and due to the use of a cast iron pot with an excellent thermal surface, it has high thermal effi-ciency and is resistant to corrosion. Hot water is provid-ed by a 120 litre coiled source, this source is galvanized and therefore hot water is completely hygienic. The cast iron package is equipped with safety valves for the heat-ing water system as well as the hot water source. The temperature setting is done by the control system, which can be adjusted between 30 and 90 degrees Celsius. Wa-ter circulation in the system is done by the pump and has three states: low, medium and high. The water pres-sure of the system is adjusted by the water valve enter-ing the device, and the working pressure is between 0.5 and 3 bar. The use of a cast iron pot and hot water stor-age source with a high cross section in the heating and hot water circuit and insensitivity to high hardness water have distinguished these packages from similar samples. The package is equipped with a smoke sensor and au-tomatically turns off the device if the smoke outlet is blocked. It is possible to install a gas exhaust fan and produce a package suitable for the underfloor heating system.
- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beauti-ful and durable
- The most suitable package for working with heavy and chalky water
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Can be installed in 0.3 square metres of kitchen
- Ability to install gas exhaust fan and floor heating cir-cuit
- Quick and easy installation

Dimens	ions of the Installa	tion Site			اندازه های محل نصب
Model	Dimensions (mm)	Α	В	С	Gas pipe size
SL960		960	830	490	1/2"
SL1200		1120	990	600	1/2"
SL1600		1340	1210	700	1"
SL2020		1590	1460	825	1"
SL2300		1850	1720	925	1"

Cast Iron Package	for Gas-	Burning Floor Heatin	g (At-Mospheri	c) Class SL S	گازسوز (اتمسفریک) کلاس L	پکیج چدنی شوفاژ زمینی
Model /	Unit	SL960	SL1200	SL1600	SL2020	SL2300
Nominal heat capacity (Urban Gas)	Kcal/hr Kw Btu/hr	27000 84 288000	90000 105 360000	117000 136 468000	144000 167 576000	171000 200 648000
Urban gas pressure (G20)				180-200		
Natural gas consumption (urban)	m3/hr	8.5	11	14	17	20
Maximum circulating water pressure	bar			3		
Number of boiler blades	blades	9	11	14	17	20
Volume of hot water source	ce litre			120		
Frequency/Voltage	V(AC)/Hz			220/50		
Power consumption	W	180-19	5		224-294	
Ingress protection class	IP			54		
<b>Chimney diameter</b>	mm			ф220		
Height	mm			765		
Width	mm	960	1120	1340	1950	1850
Depth	mm			580		
Weight	Kg	211	248	302	360	430



The cast iron boilers of the Industrial Company of Ketrowa are designed and manufactured for central heating and hot water consumption in residential, commercial, industrial, hospital and hotel buildings and complexes. Due to their finned design, these boilers can be easily transported and assembled in any engine room. The cast iron boilers of the Industrial Company of Ketrowa can be used with gas and diesel burners.

Ketrowa Cast Iron Hot Water Boil	er – S300	Series (ShK	ar)				
Model	Unit	S300-4	S300-5	S300-6	S300-7	S300-8	S300-9
Maximum Capacity	Kcal/h	33800	43700	53600	63400	73300	83100
Water Intake Volume	Liter	17.9	22.3	26.8	31.3	35.8	40.2
Chimney Opening Diameter	mm			144			
Combustion Chamber Volume	M3	0.0323	0.0403	0.0484	0.0565	0.0645	0.0726
Boiler Inlet & Outlet Connection Sizes	(")			11/2			
Torch Opening Diameter	mm			110			
Boiler Length	mm	600	682	764	846	928	1010
Net Weight	Kg	177	205	233	262	291	321
Maximum Allowable Temperature	°C			90			
Maximum Allowable Pressure	Bar			4			
Fuel Type				Natural Gas - Diese			



The cast iron boilers of the Industrial Company of Ketrowa are designed and manufactured for central heating and hot water consumption in residential, commercial, industrial, hospital and hotel buildings and complexes. Due to their finned design, these boilers can be easily transported and assembled in any engine room. The cast iron boilers of the Industrial Company of Ketrowa can be used with gas and diesel burners.

Ketrowa Super Cast Iron Hot Wat	er Boile	r (ShKar	)						
Model	Unit	S400-5	S400-6	S400-7	S400-8	S400-9	S400-10	S400-11	S400-12
Thermal Capacity	Kcal/h	118700	146200	174500	202100	229600	258000	285500	313800
Water Intake Volume	Liter	55.2	65.9	76.5	87.1	97.8	108.4	119	129.7
Chimney Opening Diameter	mm				30	7			
Combustion Chamber Volume	M3	0.0663	0.0791	0.0919	0.105	0.1175	0.1303	0.1431	0.1559
Boiler Inlet & Outlet Connection Sizes	DN				21/	2			
Torch Opening Diameter	mm				12	7			
Boiler Length	mm	918	1035	1152	1269	1386	1503	1620	1737
Net Weight	Kg	370	427	481	535	597	651	709	765
Maximum Allowable Temperature	°C				90	)			
Maximum Allowable Pressure	Bar				4				
Fuel Type					Natural Ga	ıs - Diesel			



Ketrowa wall-mounted heating packages are manufactured using Italian design and the highest quality components. These products are very suitable for buildings where it is not possible to create an engine room or where it is not cost-effective to establish an engine room. Wall-mounted packages are suitable for apartments ranging from 60 to 220 square meters in areas with a temperate climate and are effective on the same floor.



Gas Type	N.G		Gas Pressure		2000 Pa
Standard			E	N 483,26,298	
Capacity	Kw	24	28	32	40
Bath Water Flow. (Δt=25°C)	L/Min	12	14	16	20
Input Power	Kw	24	28	32	40
Min. Input Power	Kw	7.2	8.4	9.6	12
Output. Power	Kw	21.6	25.2	28.5	36
Min. Output Power	Kw	6.5	7.5	8.6	10.8
Input Voltage	V/Hz		220-2	240/50	
Electric Power	W	125	)		145
Bath Water Pressure	Bar		0	3-6	
Heating Water Pressure	Bar		0	5-3	
Bath Water Temperature	°C		30	~60	
Heating Temperature	°C		30	~80	
Floor Heating	$^{\circ}C$		30	~60	
Nox Level			Lev	vel 1	
Safety IPX4					
Model			Elegar	nt 24 fx2	

Ketrowa wall-mounted heating packages are manufactured using Italian design and the highest quality components. These products are very suitable for buildings where it is not possible to create an engine room or where it is not cost-effective to establish an engine room. Wall-mounted packages are suitable for apartments ranging from 60 to 220 square meters in areas with a temperate climate and are effective on the same floor.

### Technical Specifications of the Wall-mounted Heating Package- Comfort 28 FH2 (ShKar)

Fuel Consumption Natura	l Gas	Gas	2	20mbar			
Capacity	Kw	20	24	28	32	40	
Consumption Hot Water Flow Rate ( $\Delta t=25^{\circ}$ C)	L/Min	10	12	14	16	20	
Input Power	Kw	20	24	28	32	40	
Minimum Input Power	Kw	6	7.2	8.4	9.6	12	
Output Power	Kw	18.3	21.6	25.2	28.5	36	
Minimum Output Power	Kw	5.5	6.5	7.5	8.6	10.8	
Power Supply Input	V/Hz		220~2	20~240/50			
Maximum Electrical Power Consumption	W	125				145	
Hot Water Pressure Range	Bar		C	).3~6			
Maximum Working Pressure	Bar			3			
Maximum Working Pressure of the Device	Bar			0.5			
Hot Water Temperature Range	°C		3	0~60			
Heating Circuit Temperature Range	°C	30~80					
Operating Temperature Range in Underfloor Heating Syst	em °C	30~60					
NOX Class		Level One					
Electrical Protection Level				IPX4			



## **Ketrowa Package & Cast Iron Boiler (Irf)**

### Cast Iron Package for Dual-Burner Ground Heating (Diesel-Gas) Class G

- Heat capacity 38000 to 110000 kcal/h
- Equipped with a 60 litre capacity spa reserve
- Ability to work with two types of gas and diesel burners
- Suitable for use in summer and mountain areas without natural gas fuel
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beautiful and durable
- Ability to install floor heating circuit
- The most suitable package for working with heavy and chalky water
- Quick and easy installation
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system

Dimensions of the Installation Site										
Model		G								
Dimensions (mm)	A	В	C	D	E	F	G	Н		
	125	690	695	830	1040	60	190	330		

Model	Unit	G380	G500	G620	G750	G880	G1100		
Naminal heat conscity (Lybon	Kcal/hr	38000	50000	62000	75000	88000	110000		
Nominal heat capacity (Urban Gas)	Kw	44	58	72	87	102	128		
Gasj	Btu/hr	152000	200000	248000	300000	352000	440000		
Diesel consumption	Kg/hr	3.5	4.6	5.8	6.9	8.2	10.2		
Maximum circulating water pressure	Bar	3							
Urban gas pressure (G20)	mmH <sub>2</sub> O	180-200							
Natural gas consumption (urban)	m <sup>3</sup> /hr	4.4	6.8	7.3	8.8	10	13		
Number of boiler blades	Blades	4	5	6	7	8	10		
Maximum burner flame length	mm	350	425	500	575	650	725		
Volume of hot water source	Litre			6	0				
Chimney diameter	mm			ф1	80				
Frequency/Voltage	V(AC)Hz			220	/50				
Power consumption	W	30	6-70	37-	-78	180-	-195		
Ingress protection class	IP			5	4				
Height	mm			11	00				
Width	mm	400							
Depth	mm	700 800 900 1000 1							
Weight	Kg	205	240	275	310	345	430		

### Cast Iron Package for Dual-Burner Ground Heating (Diesel-Gas) Class GL

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Equipped with advanced intelligent control system.
- Ability to work with two types of gas and diesel burners.
- Suitable for use in summer and mountain areas without natural gas fuel.
- Ability to work at low water pressures.
- Simultaneous use of domestic hot water and air conditioning.
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment.
- Ability to install floor heating circuit.
- The most suitable package for working with heavy and chalky water.
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage.
- Quick and easy installation.
- Ability to connect to building management system (BMS) and network.
- Heat capacity 88000 to 550000 kcal/h.
- Equipped with advanced intelligent control system.
- Maximum input power without burner.
- Suitable for residential units with a large area (villas, penthouses, etc.) or public environments with a large area (banks, schools, hospitals, swimming pools, etc.)

Dimensions	Dimensions of the Installation Site												
Model		A	В	C	D	E	F	G	Н	I	J	K	L
GLC	Dimensions	140	300	690	695	120	150	220	335	1,1/4"	ф180	400	740
GLE	(mm)	150	505	765	850	140	130	220	410	2"	ф250	500	950
GLS		150	670	990	1020	120	115	250	510	3"	230x330	600	1140

Model	Unit	GLC880	GLC1100	GLE1400	GLE1800	GLE2200	GLE2600	GLS3000	GLS3800	GLS4600	GLS5500
Nominal heat capacity	Kcal/hr	88000	110000	140000	180000	220000	260000	300000	380000	460000	550000
(Urban Gas)	Kw	102	128	164	211	257.5	304.5	344	442.5	541	639
(Cibali Gas)	Btu/hr	352000	440000	560000	720000	880000	1040000	1176000	1512000	1848000	2184000
Diesel consumption	Kg/hr	8	10	13	17	20.5	24	28	35.5	43	51
Maximum circulating water pressure	Bar		3		5					6	
Urban gas pressure (G20)	mmH <sub>2</sub> O		180-200								
Natural gas consumption (urban)	m <sup>3</sup> /hr	10	13	16.5	21	26	30.5	35	42	54	65
Number of boiler blades	Blades	8	10	8	10	12	14	8	10	12	14
Chimney diameter	mm	ф	180		ф25	50		230x330			
Frequency/Voltage	V(AC)H z				2	220/50				32	x380/50
Power consumption	W	180	)-195		506-	595		564	735	4	65-763
Ingress protection	IP						54				
class	п						J+				
Height	mm	7	'50		95	0			1	140	
Width	mm	4	00	500				600			
Depth	mm	1000	1200	1330	1550	1770	1990	1500	1740	1980	2220
Weight	Kg	285	355	535	660	785	910	810	985	1160	1340

#### Cast Iron Package for Gas-Burning Floor Heating (Atmospheric) Class E

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder
- Ability to connect to building management system (BMS) and network.
- Equipped with advanced intelligent control system.
- Ability to work at low water pressures.
- Simultaneous use of domestic hot water and air conditioning.
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment.
- The most suitable package for working with heavy and chalky water.
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage.
- Equipped with a 60 litre capacity spa reserve.
- Heat capacity 18000 to 54000 kcal/h
- The ability to install a gas stove in order to use the kitchen space optimally
- Can be installed in 0.3 square metres of kitchen
- No sound (atmospheric)
- Ability to work with one cubic metre of natural gas per hour
- Ability to install gas exhaust fan and floor heating circuit
- Complete combustion of fuel and minimal pollution in the environment
- The ability to separately adjust the water temperature of the package intelligently based on the outside temperature
- It has a quick heating system for sanitary hot water

#### **PLUS**

- A) Stronger customized pump for systems with more path loss such as split duct, fan coil, air washer, underfloor heating, etc.
- B) module or automatic flame adjustment
- C) Filling valve or electric boiler water supply

#### **SMART**

- A) Inverter pump that automatically changes pump speed according to needs.
- B) module or automatic flame adjustment
- B) Filling valve or electric boiler water supply

<b>Dimensions of th</b>	Dimensions of the Installation Site											
Model		A	В	C	D	E	F					
E240		660	180	500	240	150	3.4					
E480	Dimensions (mm)	820	260	660	240	150	3.4					
E600		910	310	750	175	180	1					
E720		990	350	830	175	180	1					

Model	Unit	E240	E360	E480	E600	E720			
	Kcal/hr	18000	27000	36000	45000	54000			
Nominal heat capacity (Urban Gas)	Kw	21	31	42	53	63			
	Btu/hr	72000	108000	144000	180000	216000			
Diesel consumption	Kg/hr								
Maximum circulating water pressure	Bar			3					
Urban gas pressure (G20)	mmH <sub>2</sub> O		180-200						
Natural gas consumption (urban)	m <sup>3</sup> /hr	2.1	3.2	4.2	5.3	6.4			
Number of boiler blades	Blades	3	4	5	6	7			
Volume of hot water source	Litre			60					
Chimney diameter	mm			ф150		ф180			
Frequency/Voltage	V(AC)Hz			220/50					
Power consumption	W		36-70		37	-87			
Ingress protection class	IP			54					
Height	mm	730	1365		730				
Width	mm	660	400	820	910	990			
Depth	mm			550					
Weight	Kg	110	135	145	165	185			

### Cast Iron Package for Gas-Burning Floor Heating (Atmospheric) Class S

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beautiful and durable
- The most suitable package for working with heavy and chalky water
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Can be installed in 0.3 square metres of kitchen
- Ability to install gas exhaust fan and floor heating circuit
- Quick and easy installation
- Heat capacity 18000 to 54000 kcal/h
- Equipped with a 120-litre capacity spa reserve
- Stainless steel

<b>Dimensions of th</b>	Dimensions of the Installation Site											
Model		A	В	C	D	E	F					
S360		310	3/4"	615	ф150	480	240					
S480	Dimensions (mm)	270	3/4"	615	ф150	480	240					
S600		910	1"	620	ф150	570	175					
S720		990	1"	620	ф180	650	175					

Model	Unit	S360	S480	S600	S720			
	Kcal/hr	27000	36000	45000	54000			
Nominal heat capacity (Urban Gas)	Kw	31	41	53	63			
	Btu/hr	108000	144000	180000	216000			
Maximum circulating water pressure	Bar	3						
Urban gas pressure (G20)	mmH <sub>2</sub> O	180-200						
Natural gas consumption (urban)	m <sup>3</sup> /hr	3.2	4.2	5.3	6.4			
Number of boiler blades	Blades	4	5	6	7			
Volume of hot water source	Litre			120				
Chimney diameter	mm		ф150		ф180			
Frequency/Voltage	V(AC)Hz		22	20/50				
Power consumption	W	30	6-70	37	7-78			
Ingress protection class	IP			54				
Height	mm		1	445				
Width	mm	480	480	570	650			
Depth	mm	550						
Weight	Kg	149	167	185	210			

#### Cast Iron Package for Gas-Burning Floor Heating (Atmospheric) Class SL

- Heat capacity 72000 to 171000 kcal/h
- Cascading installation capability
- Gas pipe size
- Equipped with a 60 litre capacity spa reserve1,252 / 5,000

It is suitable for heating and supplying hot water to apartments and residential buildings with a capacity of 27,000 to 54,000 kilocalories per hour. It can be easily installed in the kitchen and its dimensions are designed in such a way that it is compatible with the standard of kitchen cabinets. It has low gas consumption, is com-pletely silent, and due to the use of a cast iron pot with an excellent thermal surface, it has high thermal effi-ciency and is resistant to corrosion. Hot water is provided by a 120 litre coiled source, this source is galvanized and therefore hot water is completely hygienic. The cast iron package is equipped with safety valves for the heat-ing water system as well as the hot water source. The temperature setting is done by the control system, which can be adjusted between 30 and 90 degrees Celsius. Wa-ter circulation in the system is done by the pump and has three states: low, medium and high. The water pres-sure of the system is adjusted by the water valve enter-ing the device, and the working pressure is between 0.5 and 3 bar. The use of a cast iron pot and hot water stor-age source with a high cross section in the heating and hot water circuit and insensitivity to high hardness water have distinguished these packages from similar samples. The package is equipped with a smoke sensor and au-tomatically turns off the device if the smoke outlet is blocked. It is possible to install a gas exhaust fan and produce a package suitable for the underfloor heating system.

- Equipped with pump anti-seize system, water anti-freeze and electronic fault finder.
- Ability to connect to building management system (BMS) and network
- Equipped with advanced intelligent control system
- Ability to work at low water pressures
- Simultaneous use of domestic hot water and air conditioning
- The most suitable package for use in blower heating systems (air conditioner, fan coil, split duct, etc.)
- Complete combustion of fuel and minimal pollution in the environment
- High thermal efficiency, low fuel consumption, beautiful and durable
- The most suitable package for working with heavy and chalky water
- No formation of an electric pile between the package cast iron pot and the aluminum or steel radiator in order to avoid severe corrosion damage
- Ability to connect to hot water return
- Can be installed in 0.3 square metres of kitchen
- Ability to install gas exhaust fan and floor heating circuit
- Quick and easy installation

Dimensions of the Installation Site										
Model		A	В	C	Gas Pipe Size					
SL960		960	830	490	1/2"					
SL1200	Dimensions (mm)	1120	990	600	1/2"					
SL1600		1340	1210	700	1"					
SL2020		1590	1460	825	1"					
SL2300		1850	1720	925	1"					

Model	Unit	SL960	SL1200	SL1600	SL2020	SL2300			
	Kcal/hr	27000	90000	117000	144000	171000			
Nominal heat capacity (Urban Gas)	Kw	84	105	136	167	200			
	Btu/hr	288000	360000	468000	576000	648000			
Maximum circulating water pressure	Bar			3					
Urban gas pressure (G20)	mmH <sub>2</sub> O		180-200						
Natural gas consumption (urban)	m <sup>3</sup> /hr	8.5	11	14	17	20			
Number of boiler blades	Blades	9	11	14	17	20			
Volume of hot water source	Litre			120					
Chimney diameter	mm			ф220					
Frequency/Voltage	V(AC)Hz			220/50					
Power consumption	W	180	-195		224-294				
Ingress protection class	IP			54					
Height	mm			765					
Width	mm	960 1120 1340 1950 185							
Depth	mm			580					
Weight	Kg	211	248	302	360	430			















THE MANAGEMENT SYSTEM OF

TOSEE VA TAMIN BANA GOSTAR ASIA SAZEH CO. (KETROWA)

NO.477, BETWEEN 1ST AND 2ND VAHID ST., SHAHID BEHESHTI BLVD., BAGHESTAN HWY., SHAHRIAR, TEHRAN PROVINCE, IRAN

has been assessed and certified as meeting the requirements of

ISO 14001:2015

Environmental management system

#### FOR THE FOLLOWING ACTIVITIES

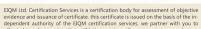
Comprehensive Supplier of Building Materials

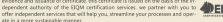
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THIS CERTIFICATE REMAINS VALID SUBJECT TO SATISFACTORY SURVEILLANCE AUDITS.









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TOSEE VA TAMIN BANA GOSTAR ASIA SAZEH CO. (KETROWA)

NO.477, BETWEEN 1ST AND 2ND VAHID ST., SHAHID BEHESHTI BLVD., BAGHESTAN HWY., SHAHRIAR, TEHRAN PROVINCE, IRAI

has been assessed and certified as meeting the requirements of

ISO 45001:2018

Occupational health and safety management system

#### FOR THE FOLLOWING ACTIVITIES

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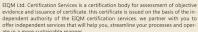
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has been assessed and certified as meeting the requirements of

ISO 9001:2015

Quality management system

#### FOR THE FOLLOWING ACTIVITIES

Comprehensive Supplier of Building Materials

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TOSEE VA TAMIN BANA GOSTAR ASIA SAZEH CO. (KETROWA)

NO.477, BETWEEN 1ST AND 2ND VAHID ST., SHAHID BEHESHTI BLVD., BAGHESTAN HWY., SHAHRIAR, TEHRAN PROVINCE, IRAN

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**IMS** 

ISO 9001:2015 , ISO 14001:2015 , ISO 45001:2018

#### FOR THE FOLLOWING ACTIVITIES

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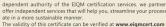




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