

# BURNERS MARKET RUSSIA 2019

**(ДЕМО-ВЕРСИЯ)\***

\*В ДЕМО-ВЕРСИИ СОХРАНЕНА СТРУКТУРА ПОЛНОЙ ВЕРСИИ ОТЧЕТА, ТАКЖЕ КАК И ЗАГОЛОВКИ ВСЕХ ГРАФИКОВ И ТАБЛИЦ. ЗАВОДЫ-ИЗГОТОВИТЕЛИ, БРЕНДЫ И ПОСТАВЩИКИ, УПОМЯНУТЫЕ В ОТЧЕТЕ, ТАКЖЕ СОХРАНЕНЫ. ВСЕ ОТСОРТИРОВАНО В АЛФАВИТНОМ ПОРЯДКЕ, ТЕКСТ ЗАМЕНЕН НА ████████; ЧИСЛА – НА 0,1. С МЕТОДОЛОГИЕЙ ИССЛЕДОВАНИЯ МОЖНО ОЗНАКОМИТЬСЯ В ПЕРВОЙ ГЛАВЕ

***Multi-client research***

*Moscow, june 2020*

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# 1. METHODOLOGY

## 1.1. INFORMATION SOURCES

The study was performed on the basis of following information sources:

- **CUSTOMS DECLARATION ANALYSIS**

The information obtained as a result of the customs declaration analysis becomes more reliable from year to year. To find out the market trends, its main tendencies and main players there was made the detailed analysis of the front pages of customs declarations for 2011-2019. As practice shows the difference between the customs data and the real volume of products supplied is not more than 5-10%. This allowed us to analyze Russian burners market situation by power range, burner type, type of fuel, regulation, etc.

Under a lack of information from local manufacturers their product identification by models was made on the basis of their export analysis and financial data from open sources.

- **ROSSTAT DATA**

The information on output volume of the biggest local manufacturers was obtained from Rosstat. In a number of cases Rosstat was the only source of information. When analyzing the information on many local open joint stock producing companies there were taken into account the annual reports published on their official websites. In case there is no data on a number of producers financial reports published annually in open access were accepted as indirect indicators. Zero customs duty for burners does not give preference to domestic producers, so the share of imports exceeds 90% of the market and not reducing over the years.

## 1.2. REPORT TERMINOLOGY

This Chapter contains summary information about the types, principles of operation and design features of burners, which will be discussed in the report. This research includes EXCLUSIVELY gas, liquid fuel and dual fuel jet burners intended for use with heating boilers. Specialized furnace burners, as well as atmospheric gas burners, injection burners, ignition devices, flare devices for the oil and gas industry are NOT INCLUDED in objectives and tasks of the research. Pellet burners we also did NOT INCLUDE in the subject of research – market is relatively small, but despite its direct relation to the boiler market has a different structure of sales, which in most cases does not cross sales structure of jet burners market. Nevertheless, two producers, Ferroli and Lamborghini have pellet burners in its model range.

There are tree main segments, studied in report:

- **GAS JET BURNERS**
- **LIQUID FUEL JET BURNERS**
- **DUAL FUEL JET BURNERS**, working both on gaseous and liquid fuel types.

**Gas burners** – devices, designed to burn a gaseous fuel. There are two main types of gas burners: at first, ventilatory (jet) burners in which air required for combustion is injected into the mixing unit, and secondly, atmospheric burners, where combustion is provided by air supplied naturally. Unlike atmospheric (injection) burners which often comes bundled with the boiler, jet burners are chosen individually and in most cases are not included in boiler standard complete set. In this case, the consumer has many options for



Picture 1. Gas jet burner

choosing brand, type and manufacturer of burner.

**Liquid fuel burners** – devices designed, as the name implies, to burn liquid fuel. The fuel can act as diesel, masut and waste oil. Use of liquid fuel is reasonable in case, if there is no access to the magistral gas, or it is too expensive. Also, liquid fuel burners are widely used in Russia because of legislative need to back up several types of fuel for a number of consumers.

**Dual fuel burners** – "two in one" devices, working at two or more fuel types. The main advantage of combined burners is no need for changing the burner when switching from one fuel to another. Dual fuel burners are more complicated devices as compared to the mono-fuel analogs that accordingly affects their cost.

Burners also differ by type of power regulation:

- **One stage burners.** These burners work only in a single power range. The disadvantages of one-stage burners include frequent on/off switches, which negatively affect the resource as boiler and burner itself. Note that a one-stage burners are widely used in the segment of domestic and semi-industrial (commercial) boilers – as the power grow their market share is rapidly falling.
- **Two stage burners** have an ability to work at two power levels. First stage typically provides 40% power, the second - 100%. In this case, the frequency of on/off switching cycles of burners is significantly less compared to the one-stage units.
- **Three stage burners.** By analogy with the two-stage burners such models are able to work at three power levels.
- **Two-stage progressive burners** provide a smooth jump from the first stage to the second. This type of burners occupies an intermediate place between two-stage and modular burners.
- **Modular burners** provide continuous burning process, gradually lowering and increasing power when necessary. Modular burners have a number of advantages over the staged, making it possible to minimize the number of on / off switches of burner, which significantly prolongs the life of boiler.

In this research, we combined the segments two-stage progressive and modular burners for several reasons. At first, various regulating types for different fuel are often used in the dual fuel burners. Ie instead of modulating burners, we have two-stage progressive burner while working on gas and modular when using liquid fuel, for example. And there are quite a lot of such variants. Secondly, the burner can be two-stage progressive in basic configuration, but with buying additional automatic it can start working in modular mode.



Picture 2. Liquid fuel burner



Picture 3. Dual fuel burner

### 1.3. PRICES

All sales volumes in this report are presented in **contract (factory) prices without VAT** (i.e. the price of goods before border crossing and before customs duties and VAT).

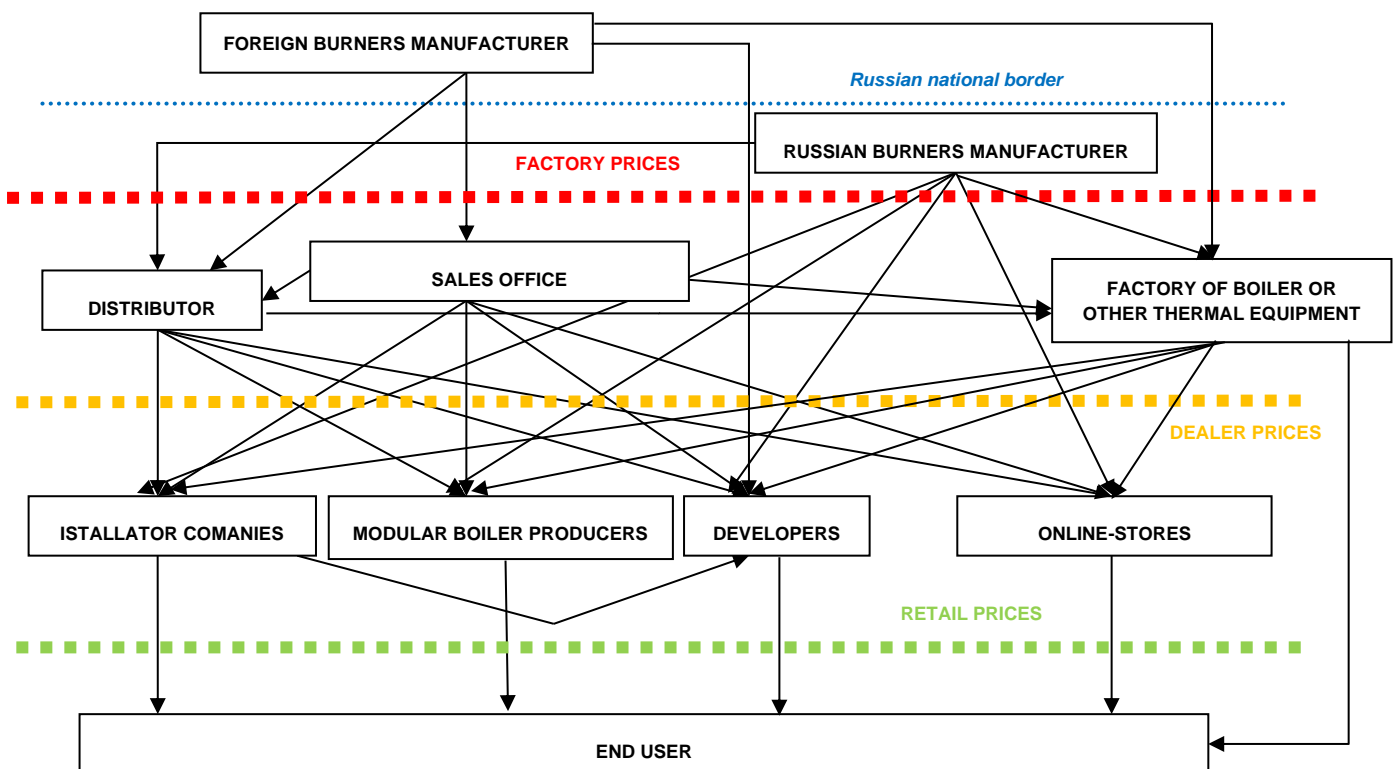
TABLE. Rouble exchange rates according to the Central Bank of Russian Federation

Currency	2011	2012	2013	2014	2015	2016	2017	2018	2019
US Dollar	29,41	31,09	31,82	38,69	61,32	65,83	58,30	62,69	64,62
EUR	40,90	39,92	42,25	51,08	66,99	72,58	65,80	74,13	72,32

Source: Central Bank of the Russian Federation

In case of prices are given in Rubles, EUR or other currency, conversion into US dollars is made, according to the annual average exchange rate based on data provided by the Central Bank

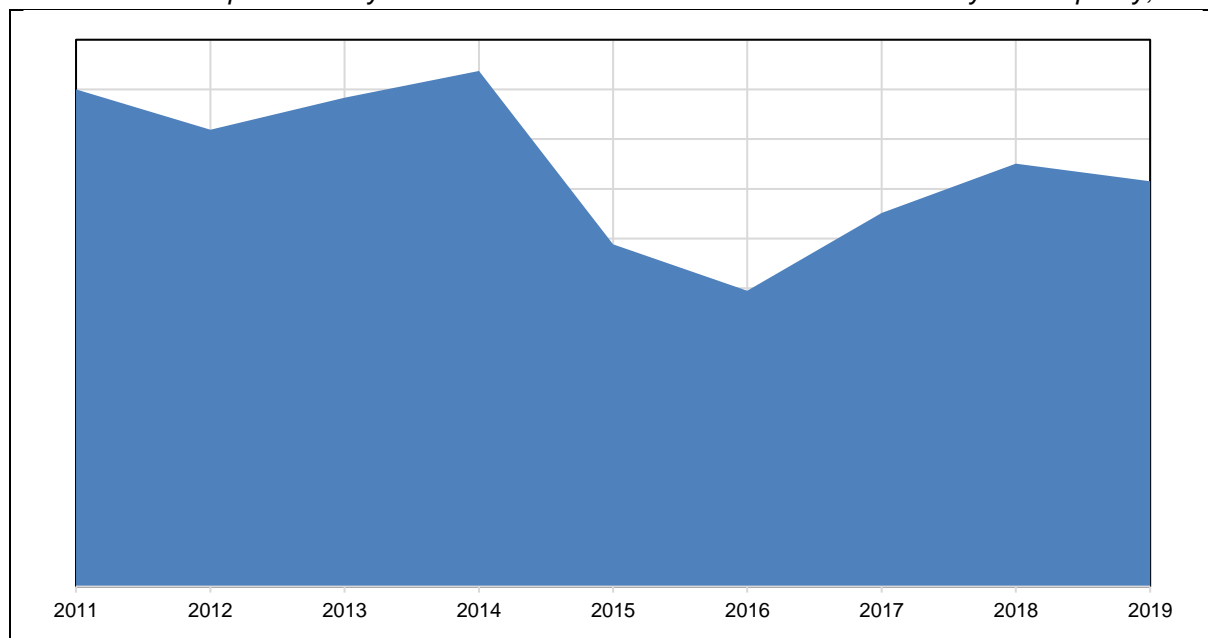
Below is DIAGRAM which reflects different scenarios for burner's distribution in Russia and **factory prices**, which indicate the sales values in the future:



## 2. MARKET SIZE & STRUCTURE

Burners market is closely linked with the market of industrial and (commercial) boiler equipment. The greatest share of lies in the range of 100 kW. Therefore, the analysis should consider the of the development of boilers market. The indicates how those are connected:

DIAGRAM 1. Comparison of dynamics of industrial boilers and burners markets by total capacity, MW



Source: Litvinchuk Marketing Co.

We can see that . At the same time the burners market is slightly larger than the market of industrial boilers in total capacity, and this is understandable. First, in Russia quite significant proportion atmospheric burner of capacity more than 100 kW. In rare cases, these boilers provide the ability equipment for gas or liquid fuel. Second, a quarter of the burners market is occupied by devices with the power up to 100 kW. Third, the burners in most of the cases are selected with a power reserve capacity of 1MW-1,1MW.

TABLE 1. Comparison of mean value of burners & boilers of 1 MW power in dynamics, USD

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Mean value of BURNER for 1MW	\$0 110	\$0 001	\$0 010	\$0 001	\$0 101	\$0 101	\$0 111	\$0 001	\$0 110
Mean value of BOILER for 1MW	\$1 010	\$1 001	\$1 100	\$1 110	\$1 111	\$1 100	\$1 010	\$1 000	\$1 110
Average share of BURNERS, %	00%	01%	00%	01%	01%	01%	00%	01%	00%

Source: Litvinchuk Marketing Co.

Dynamics of changes in " once again the development of the markets.

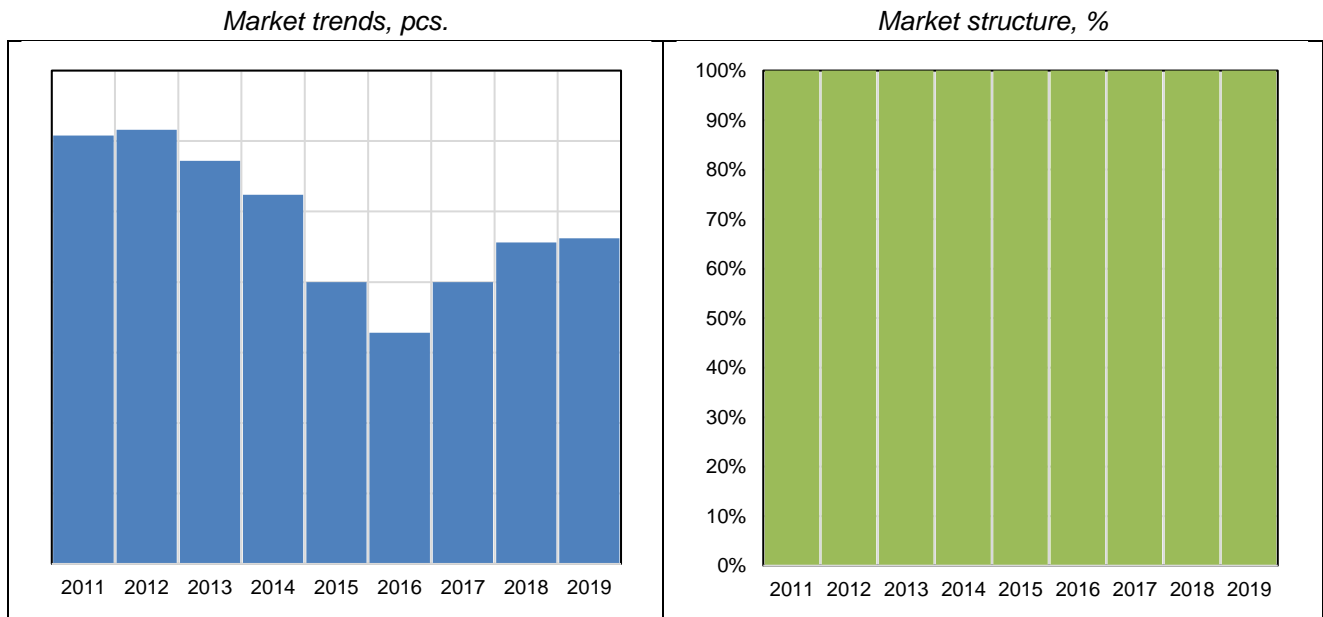
TABLE 2. Russian burners market dynamics by sales volume, pcs.

Type of burners	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gas jet burners	11 000	11 100	11 000	10 100	10 000	0 000	10 000	11 100	11 110
Liquid fuel burners	11 000	11 000	10 000	0 110	1 100	1 110	1 110	0 000	0 010
Dual fuel burners	0 000	0 000	0 100	0 010	1 100	1 010	1 110	1 100	1 100
Total:	01 000	01 000	01 000	01 000	10 100	11 000	10 100	00 100	01 000

Source: Litvinchuk Marketing Co.

The burners market [redacted] last few years [redacted] trend. Until the beginning of [redacted]. Next two years the [redacted]. This can be seen in the diagram below:

DIAGRAMS 2. Russian burners market by sales volume



Source: Litvinchuk Marketing Co.

0010 was a [redacted] for the first time in many years, [redacted] the burner market was significantly [redacted] of industrial boilers (see DIAGRAM 1). In 0011, [redacted] the quantitative [redacted], the [redacted] measured in money [redacted] and in the total power output of burners [redacted]

If we consider the [redacted] structure, we should note that the share of gas jet [redacted] to 0011 and the share [redacted], on the contrary, was falling. Then the proportion of the [redacted] significant changes.

Note that it was a [redacted] dynamics in a [redacted]. In the money, as well as in the total capacity, market [redacted]

TABLE 3. Russian burners market trends by sales value, mln.USD (factory prices without VAT)

Type of burners	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gas jet burners	\$00,0	\$01,0	\$00,0	\$10,0	\$00,0	\$10,0	\$00,1	\$01,1	\$01,1
Liquid fuel burners	\$10,0	\$1,0	\$10,1	\$0,0	\$1,1	\$1,1	\$1,1	\$1,0	\$1,0
Dual fuel burners	\$01,1	\$01,0	\$00,0	\$01,0	\$11,0	\$10,1	\$10,0	\$10,1	\$10,1
<b>Total:</b>	<b>\$00,0</b>	<b>\$00,0</b>	<b>\$01,0</b>	<b>\$00,1</b>	<b>\$11,1</b>	<b>\$01,0</b>	<b>\$11,0</b>	<b>\$10,0</b>	<b>\$11,0</b>

Source: Litvinchuk Marketing Co.

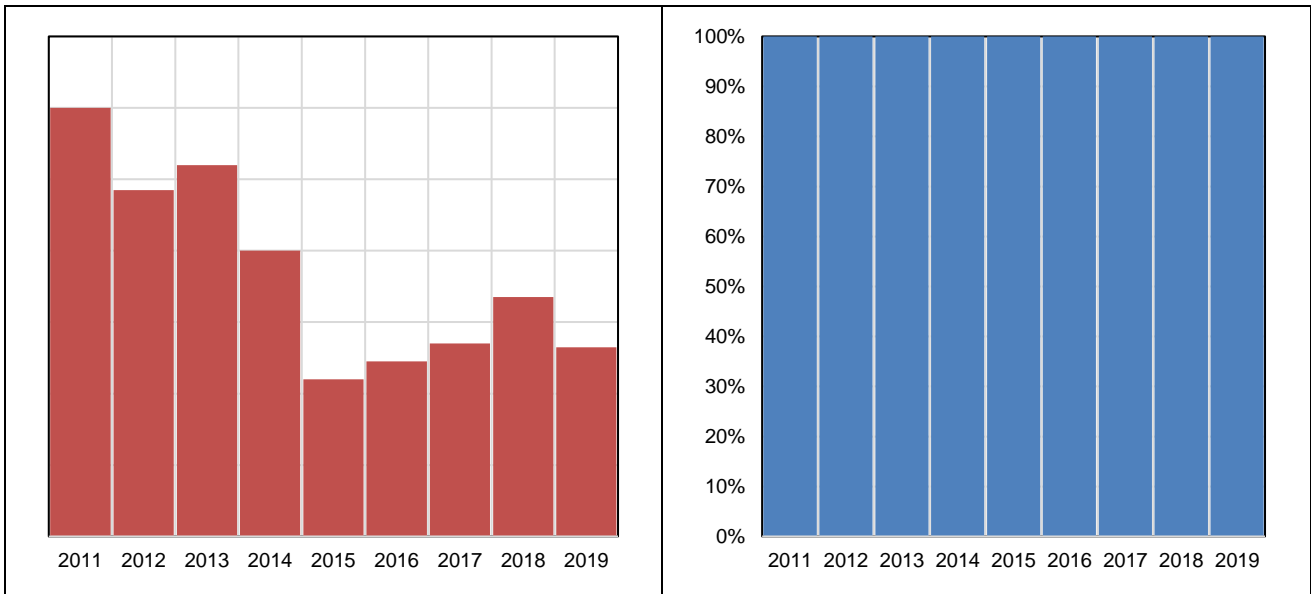
If we look into the past and, considering the fact that the burners market [redacted] to suggest dynamics until 0011, then [redacted] we can say that [redacted] year both in [redacted] money. Then the market has [redacted] million USD, and in [redacted] downturn in the [redacted] collapse of the ruble, [redacted] to a level of [redacted] USD. Such a strong [redacted] by the [redacted] of the [redacted] EUR – when [redacted] currency [redacted] does [redacted] (-00 [redacted])

Further, for clarity, we give graphs showing the dynamics and structure of the burners market changes:

DIAGRAMS 3. Russian burners market in money terms (factory prices without VAT)

Market trends, mln.USD

Market structure, %



Source: Litvinchuk Marketing Co.

If we look at the [redacted] in the market structure [redacted], we can [redacted] share [redacted] burners.

TABLE 4. Russian burners market trends by total capacity, MW

Type of burners	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gas jet burners	11 001	11 011	11 101	10 011	1 100	0 110	10 100	10 000	10 010
Liquid fuel burners	1 100	0 011	1 000	0 110	0 111	0 111	0 010	0 111	0 010
Dual fuel burners	0 011	0 001	0 100	1 001	1 110	1 101	1 100	1 000	1 011
<b>Total:</b>	<b>01 001</b>	<b>00 101</b>	<b>01 101</b>	<b>01 101</b>	<b>10 010</b>	<b>11 001</b>	<b>10 001</b>	<b>01 010</b>	<b>00 000</b>

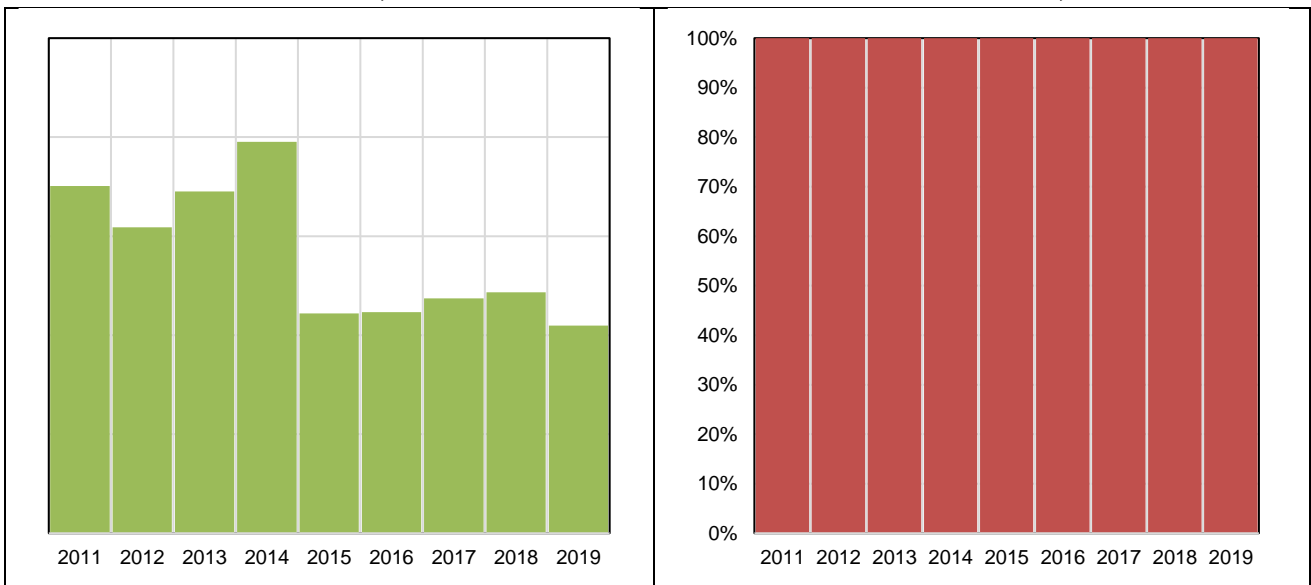
Source: Litvinchuk Marketing Co.

The dynamics of the [redacted] to the dynamics in money [redacted] was no such a strong [redacted] looks very [redacted].

DIAGRAMS 4. Russian burners market by total capacity

Market trends, MW

Market structure, %

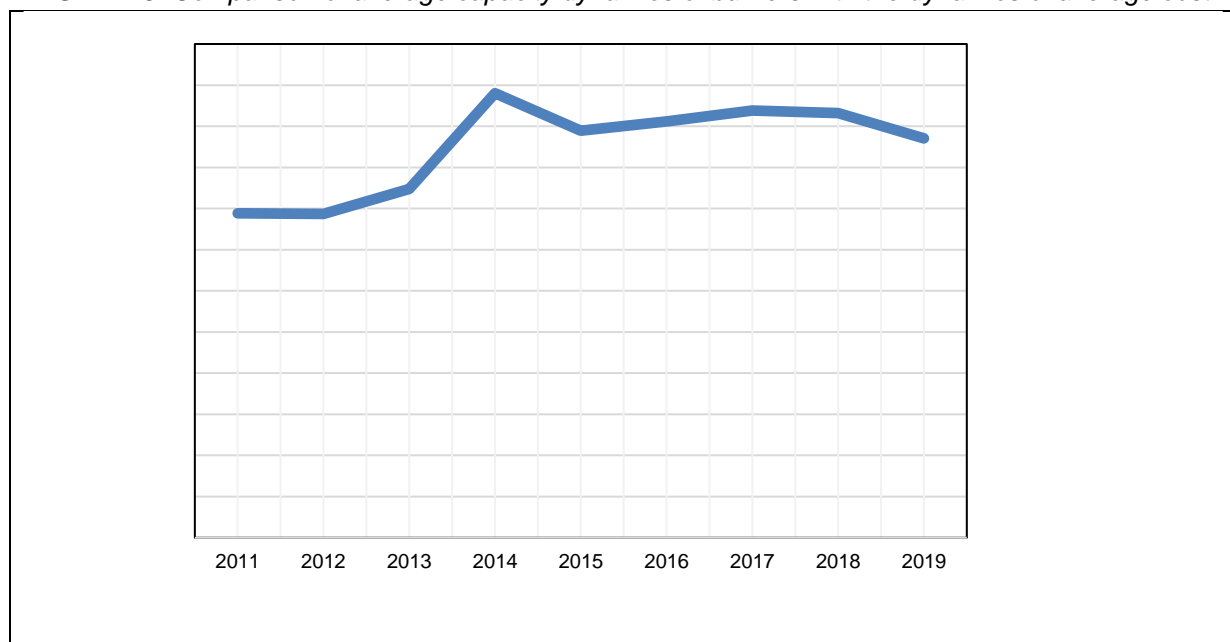


Source: Litvinchuk Marketing Co.



The [redacted] on the total capacity [redacted] be seen in [redacted]:

DIAGRAM 5. Comparison of average capacity dynamics of burners with the dynamics of average cost



Source: Litvinchuk Marketing Co.

## 2.1. MARKET FORECAST

As can be [REDACTED] to predict the development of industrial [REDACTED] such a method we will use in a forecast.

To assess the prospects of the boiler market in the coming years, it is necessary to assess, first of all, the existing [REDACTED] which goes to a new construction and for replacement. Let us depart from a heat balance around the country, which is public [REDACTED] individual boilers.

TABLE 5. Heat balance in Russian Federation (in Gcal) by the results of 2016

	Production	Waste	Consumption
Power plants	111	111	110
Boiler rooms	101		100
Heat exchangers and others.	00		00
Individual boilers	111		111
<b>Total:</b>	<b>1 010</b>	<b>111</b>	<b>1 000</b>

Source: Rosstat. Since 0001 the numbers have not undergone considerable changes. There has been a reduction in heat generation by heat electropower stations and boiler houses. And heat production by the private sector slightly increased. In 0011, Rosstat revised data on heat loss and heat generation by municipal-owned boilers.

If the [REDACTED] of the heating season, then a return calculation is possible: to calculate the total power of boilers on the assumption of heat production [REDACTED]

TABLE 6. Total power capacity of the boilers park in Russian Federation

Boilers equipment fleet in Russia in MW	2006	2016
Boiler rooms	001 110	000 000
Individual boilers	101 110	111 101
<b>Total:</b>	<b>101 000</b>	<b>111 110</b>

Source: Litvinchuk Marketing Co.

It is quite [REDACTED] that the lion's share of domestic boilers (up to 100 kW) goes to personal boiler rooms, and the majority of [REDACTED] in boiler rooms, and [REDACTED] kW, ie industrial types).

TABLE 7. Sales of boilers for replacement and new construction

INDUSTRIAL BOILERS		2012	2013	2014	2015	2016	2017	2018	2019	2020F*	2021F*
Total capacity of boilers in MW		011 000	010 101	010 101	010 000	011 010	010 010	010 010	010 001	011 111	010 100
Boilers sales of all types in MW	Boilers for new construction	0 110	0 001	0 101	1 001	1 100	0 101	1 010	1 100	1 111	1 101
	Boilers for replacement	11 110	11 011	11 011	10 111	1 000	10 001	11 110	11 100	10 001	10 000
The share from all the fleet of boilers which have been replaced		1,11%	1,11%	0,01%	1,00%	1,00%	1,10%	1,10%	1,01%	1,01%	1,11%
<b>Average lifetime of industrial boilers for the moment of each period (YEARS)</b>		<b>10,0</b>	<b>11,1</b>	<b>11,1</b>	<b>01,0</b>	<b>01,0</b>	<b>01,0</b>	<b>00,1</b>	<b>00,0</b>	<b>00,0</b>	<b>00,1</b>

\* - market forecast

Source: Litvinchuk Marketing Co.

It is possible to [REDACTED]. But the number of the boilers for [REDACTED] previous years.

In the early 0000s, we were [REDACTED] the 10s there were no means in the country for a timely replacement of equipment, and the service life of equipment [REDACTED] many times. Boilers were endlessly repaired, they also [REDACTED] for 01-10 years.

By 0010 – [REDACTED] the [REDACTED] life of the industrial [REDACTED] has come to the [REDACTED] values of 00-01 [REDACTED]. Thus, [REDACTED] 10% of the base are new [REDACTED] under 10 years old. In this situation equipment owners can quite take a [REDACTED] equipment replacements can be [REDACTED]. As [REDACTED], after great fall of the [REDACTED] by [REDACTED] of 0011, the further [REDACTED] in sales should happen in the [REDACTED] period, [REDACTED] not so large. In 0011 we [REDACTED] a slow [REDACTED] in sales. By results of 0010, the [REDACTED] came into the [REDACTED] zone, largely due to the [REDACTED] of sports and infrastructure [REDACTED] for the [REDACTED] 0010 World Cup.

A slight [REDACTED] was predicted at 0010. [REDACTED] so it happened – the [REDACTED] let to fall. At the same time in 0011 – 0011 there was a model mid – [REDACTED]

[REDACTED] heat electropower stations [REDACTED]. In some cases, developers can take advantage of this opportunity at the [REDACTED] new boilers.

Sales of 0000 and subsequent [REDACTED] mainly by the replacement market. And such dependence [REDACTED] of the construction market also increased sharply during these years, which led to the appearance of new boilers in [REDACTED], and even expecting the slowly stagnation in new construction in [REDACTED] rners.

It should be noted that [REDACTED] are paying off. For example, in 0011, with a general decline at the market of industrial boilers by a third, [REDACTED] of the oldest enterprises of the domestic boiler industry – the Borisoglebsky boiler-mechanical plant set up [REDACTED] in Russia. Subsequently [REDACTED] family company [REDACTED] also followed the trends for localization. There are new Russian [REDACTED] which appeared after 0011 – NPF "[REDACTED]" and "[REDACTED]". [REDACTED]

[REDACTED] 1.1 times greater in MW than market of industrial boilers. We should [REDACTED] on the fact that the ratio will not change [REDACTED] in the next years.

The situation with the [REDACTED] pandemic has already made its own adjustments to the results of 0000 [REDACTED] that the second wave of the [REDACTED] 0000-0001.

Moreover, the [REDACTED] systems has a high [REDACTED] DIAGRAMS 1). By

that time, both [redacted] positive scenarios and the [redacted]  
[redacted] from such a scenario that the  
restrictions associated with [redacted]  
[redacted] will proceed according to the [redacted]  
[redacted]

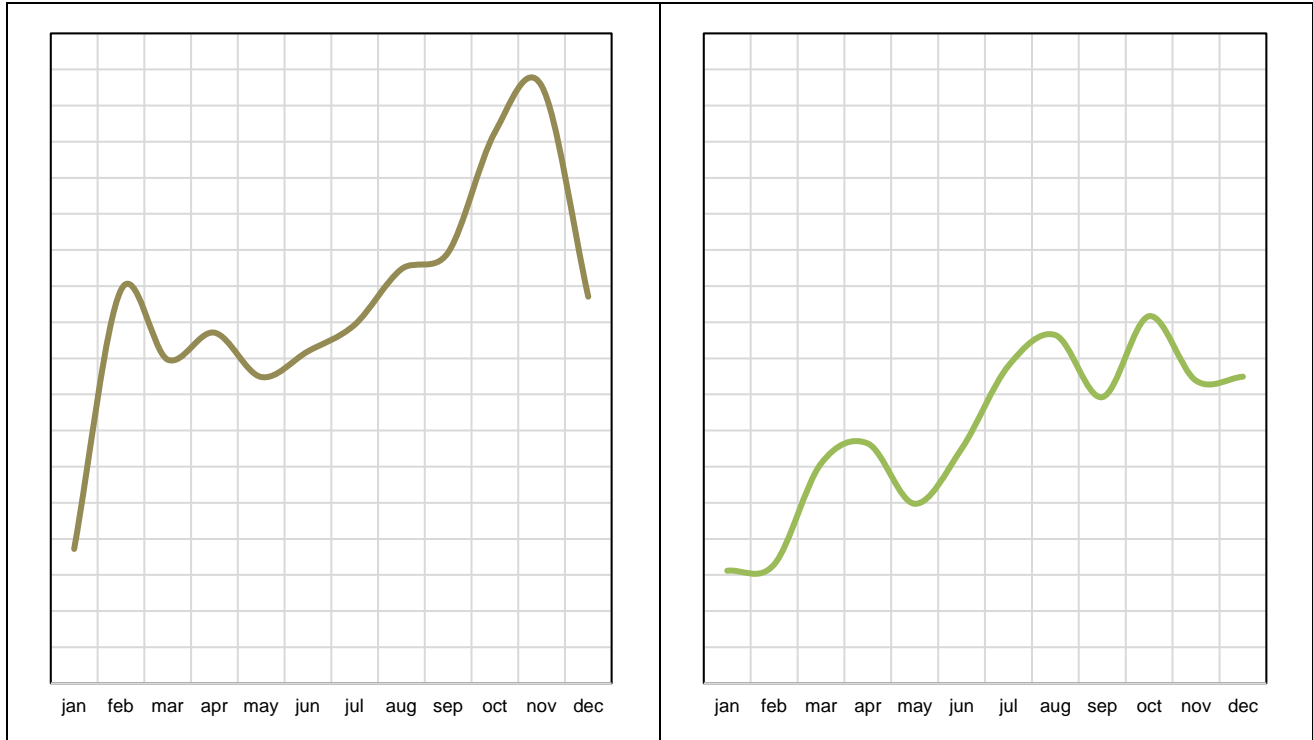
It is clear that the market of [redacted]  
[redacted] of the [redacted], according to our [redacted]%.  
At the [redacted] time, this [redacted] will create [redacted] demand, [redacted] realized in 0001-0000. In 0000 all  
[redacted] in change of the [redacted] structure that will be [redacted] observed will [redacted] and [redacted].

## 2.2. MARKET SEASONALITY

Below is [REDACTED]

[REDACTED] of the supply on the market of [REDACTED] boilers [REDACTED].

DIAGRAMS 6. Seasonality of supplies on Russian burners market, number of pcs. per month  
2011-2015-2019 last three years



Source: Litvinchuk Marketing Co.

The burners market has quite a pronounced seasonality. Sales are growing starting from the beginning of the year, and the [REDACTED]

in [REDACTED]

[REDACTED] to replace. Thus, [REDACTED] I and II quarters is around 00%, III – 01%, fourth quarter – 01%. The months in which import of the burners is the highest are September, October and November, i.e. the peak [REDACTED]

[REDACTED] factories go on vacation in August.

Since the seasonality [REDACTED] domestic products [REDACTED]

[REDACTED] approximately 0-[REDACTED]

[REDACTED] e market as a whole.

### 3. MARKET DYNAMICS BY BRANDS

In the future chapters

. Then it

gle for the consumer today.

#### 3.1. MARKET TRENDS BY SALES VOLUME

Below are a detailed dynamics by brands in terms of volume:

TABLE 8. Russian burners market dynamics by brands for last years, pcs.

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	011	000	101	010	000	110	010	101	101
	Alphatherm	100	110	001	011	101	101	111	010	110
	ATEC									0
	Baltur	0 111	0 100	0 100	1 110	1 100	110	1 010	0 011	0 010
	Beckett	10		00					00	10
	Bentone	000	1 000	110	011	100	011	010	011	110
	Blowtherm	1	01	1	01	11	0	01	01	01
	Brestselmash	100	100	100	110	010	010	100	100	010
	CIB Unigas	0 001	0 100	0 001	0 101	0 001	1 100	0 111	0 000	0 111
	Clean Burn	10	01	11	10	0	10	10	00	0
	Danvex				10			00	00	00
	De Dietrich	111	000	011	001	101	11	100	100	10
	Dorogobuzhkotlomash	100	110	011	110	111	10	10	10	00
	Dreizler	10	11	11	1	01	01	11	00	1
	Ecoflam	100	1 001	1 011	100	1 000	1 111	1 010	0 110	0 111
	Ecostar	01	0	10	0	0		1	10	01
	Elco	0 101	0 001	0 011	1 110	001	1 001	1 000	1 011	0 011
	Energylogic	00	11	10	11	0	00	10	01	11
	Euronord	110		111	001		100	01	111	1
	F.B.R.	101	1 010	011	1 000	000	011	101	1 111	1 110
	Giersch	1 010	1 001	001	000	100	000	010	000	100
	Hansa	110				01	10	11	00	01
	Hofamat					10			101	11
	Kiturami	100	010	110	100	111	001	110	100	110
	Kroll	100	011	111	11	10			11	11
	Lamborghini	0 000	0 101	0 111	0 100	0 100	0 010	0 111	0 011	0 011
	Master	0	0	01	01	1	1	11	01	10
	Maxon			1				0	1	1
	Nobel						00	01	11	11
	Oilon	1 000	1 000	110	001	101	110	011	111	001
	Olympia Boiler	111	100	011	001	010	001	000	011	000
	Oroflam								1	11
	PikInno					1	11	000	010	000
	Promgazapparat	10	1	1	1	0	0	0	1	10
	Ray	00	0	11	11		0	11	1	11
	Riello	0 011	0 010	0 011	0 100	1 010	001	1 100	010	1 110
	Saacke	10	10	11	100	110	01	100	11	00
	Sabiel						10	1	11	10
	Sime	1	10	011	111	00	10	110	00	10
	Smart Burner	10	00	01	0	0	00	11	10	0
	Sookook	11	11	10	00	10	1	00	1	0
	Tecflam								0	11
	Uret	11	1	1	1				1	01
	Viessmann	000	110	100	110	011	111	11	01	10
	Weishaupt	0 101	0 011	0 100	0 010	1 010	1 001	1 001	1 101	111

Source: Litvinchuk Marketing Co.

TABLE 8 (CONTINUED).

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Buderus	010	001	1 001	001	111	001	011	100	0
	Clayton					1				1
	Elster	0								1
	Wayne									0
	Others	0 111	0 001	1 110	1 110	100	001	001	001	010
	<b>Total:</b>	<b>01 000</b>	<b>01 000</b>	<b>01 000</b>	<b>01 000</b>	<b>10 100</b>	<b>11 000</b>	<b>10 100</b>	<b>00 100</b>	<b>01 000</b>

Source: Litvinchuk Marketing Co.

in . Note that the market is quite in terms of countries of production – more than % of burners are made in .

Russian producers do not jet strong positions at the market, in particular due to a zero manufacturers ( ) assemble the burners on the territory of the , but all components and parts come in pre-installed form from foreign factories of the companies. Such prefer Russian products. In other cases, the commercial attractiveness of such localization of plants in the future are beginning to produce burners in (Novosibirsk) aims to press foreign manufac ers on the Russian market. Nowadays, they are just at the beginning of this difficult path.

cers such as in the production of low-power burners basically for their own boilers, their share in turnover.

manufacturers are ready to offer consumers mainly burners working on waste oil. Therefore, due to oil boilers, manufacturers a have a small market share.

, , and manufacturers are also on the , but their share is than %.

### 3.2. MARKET TRENDS BY SALES VALUE

Than market dynamics in sales value:

TABLE 9. Russian burners market dynamics by brands for last years, USD (factory prices without VAT)

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	101 000	101 001	000 110	000 111	100 110	10 010	110 110	000 000	010 100
	Alphatherm	1 011 010	1 110 110	1 110 010	0 011 100	1 011 101	1 100 100	1 100 111	010 000	000 110
	ATEC									01 001
	Baltur	0 101 001	0 101 010	0 110 110	1 001 011	1 111 000	011 111	1 110 011	0 110 101	0 100 111
	Beckett	0 111		11 111					11 011	11 001
	Bentone	101 110	111 000	110 110	001 110	100 001	111 000	111 000	111 001	11 100
	Blowtherm	100	00 110	1 010	10 101	00 101	0 101	01 110	10 000	00 110
	Brestselmash	000 000	010 000	110 000	1 000 000	111 000	100 000	000 000	001 100	111 000
	Buderus	110 000	101 110	110 011	111 100	100 110	011 111	000 101	101 101	1 100
	CIB Unigas	10 000 101	0 110 011	10 010 011	11 010 010	0 110 100	0 010 000	1 010 000	10 011 111	0 110 101
	Clayton					1 001				1 101
	Clean Burn	1 011	11 100	0 100	00 111	1 001	00 111	11 001	01 000	1 111
	Danvex				1 011			11 100	11 001	01 010
	De Dietrich	010 000	010 110	000 000	011 001	100 000	10 011	11 101	111 111	101 010
	Dorogobuzhкотломаш	100 000	001 000	1 101 000	1 000 000	110 000	000 000	010 000	000 000	110 000
	Dreizler	000 110	001 001	111 001	1 000	100 110	101 010	000 101	011 111	11 011
	Ecoflam	0 101 010	0 111 100	0 100 000	0 101 111	1 001 101	1 100 010	0 000 101	0 110 010	0 010 111
	Ecostar	100 001	110 010	01 010	1 000	01 100		00 101	110 110	000 000
	Elco	1 100 111	1 100 100	0 110 100	0 010 101	0 010 111	1 110 001	1 101 110	0 000 001	0 000 011
	Elster	10 100								0 010
	Energylogic	00 111	01 010	10 110	11 011	1 011	10 111	00 101	00 100	100 110
	Euronord	100 000		101 001	010 110		010 010	00 110	11 000	00 001
	F.B.R.	1 110 100	1 101 011	0 111 101	0 111 110	1 100 100	1 101 111	1 001 111	0 101 001	0 010 110
	Giersch	1 001 110	101 100	001 011	111 000	111 111	010 101	010 011	111 001	100 110
	Hansa	10 001				11 011	10 001	00 010	11 111	1 011
	Hofamat					00 000			011 111	111 011
	Kiturami	110 011	010 010	001 110	110 111	111 000	11 010	10 001	10 100	110 100
	Kroll	110 000	101 000	101 011	10 001	11 011			00 000	00 001
	Lamborghini	0 111 010	1 011 011	1 101 010	1 100 110	1 111 101	1 000 010	1 011 101	1 101 010	1 111 111
	Master	0 010	0 101	01 100	10 001	1 000	0 001	11 001	01 011	10 100
	Maxon			01 010				01 010	101 111	000 100
	Nobel						101 101	010 010	110 011	111 000
	Oilon	11 111 000	0 100 000	0 010 010	0 000 101	1 001 010	1 010 110	0 010 001	1 111 001	0 000 101
	Olympia Boiler	111 001	111 000	001 100	111 100	110 111	10 000	100 110	111 111	10 100
	Oroflam								001	1 000
	Piklno					11 000	000 000	1 110 000	1 000 000	1 010 000
	Promgazapparat	001 011	00 010	10 101	100 101	11 110	101 011	00 011	00 100	100 000
	Ray	110 111	111 100	011 111	1 100 000		10 110	11 101	10 110	001 110
	Riello	1 110 110	1 000 011	1 011 110	0 001 011	0 101 100	1 100 100	0 011 101	1 101 000	1 101 000
	Saacke	1 101 101	100 001	1 010 100	0 101 101	0 101 001	0 101 011	0 011 100	0 100 101	0 011 101
	Sabiel						10 000	10 010	11 011	11 000
	Sime	1 011	10 001	10 111	10 000	1 010	10 101	01 010	10 011	10 111
	Smart Burner	10 101	00 001	100 001	0 010	0 000	01 100	10 000	11 011	01 010
	Sookook	0 000	11 100	01 010	00 011	0 111	1 111	1 100	100	0 101
	Tecflam								101 011	000 101
	Uret	11 010	1 101	1 101	100				0 110	10 110
	Viessmann	001 000	101 111	100 010	101 111	001 110	101 101	01 001	01 011	101 111
	Wayne									1 110
	Weishaupt	00 000 101	10 010 111	00 101 010	10 100 100	0 110 110	0 101 111	1 111 110	0 110 010	1 010 110
	Others	1 101 101	1 010 011	1 001 100	0 111 110	1 101 000	1 101 011	0 001 101	0 111 111	1 110 101
	<b>Total:</b>	<b>00 000 000</b>	<b>00 000 000</b>	<b>01 000 000</b>	<b>00 100 000</b>	<b>11 100 000</b>	<b>01 000 000</b>	<b>11 000 000</b>	<b>10 000 000</b>	<b>11 000 000</b>

Source: Litvinchuk Marketing Co.

The money [redacted] the share of non-European producers [redacted]%, which [redacted] to [redacted] the [redacted] in any way.



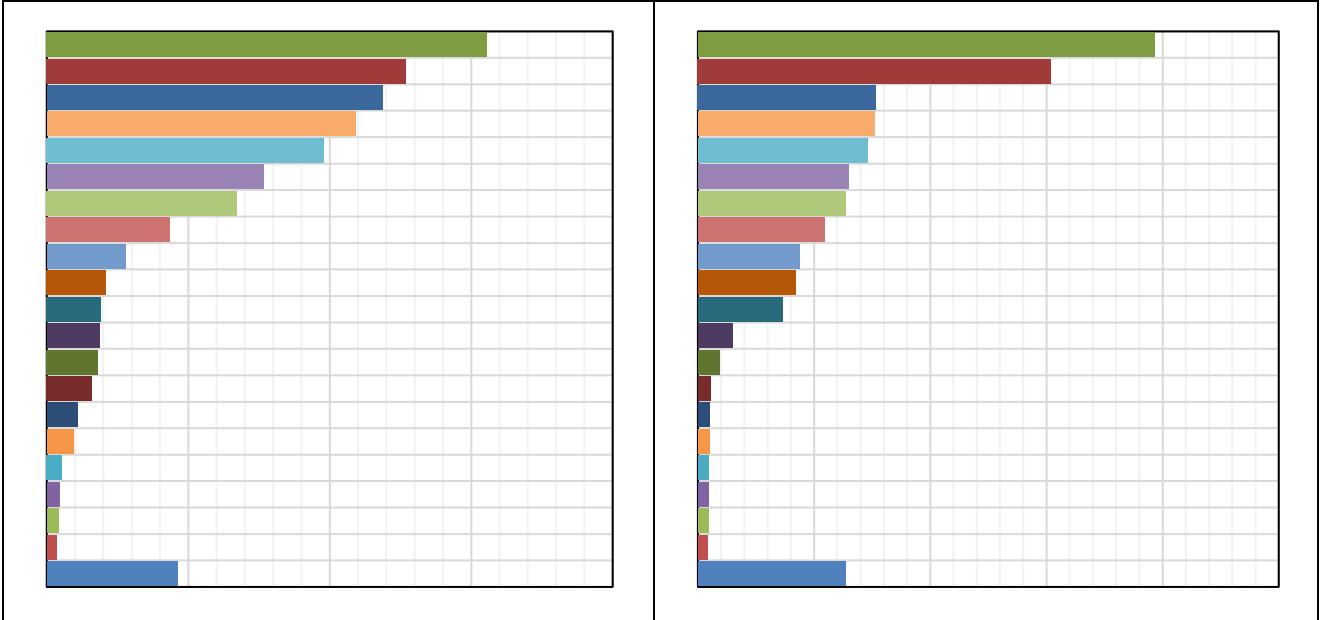
### 3.3. LEADING BRANDS

Further it is possible to [redacted] of sales value.

DIAGRAMS 7. TOP-20 brands share on the Russian burners market in 2019, %

By sales volume

By turnover



Source: Litvinchuk Marketing Co.

As we can see, market [redacted] money turnover. Vice versa, position of [redacted] such as [redacted], [redacted] and [redacted], whose [redacted] is strongly [redacted] towards [redacted] industrial burners, are greatly increased.

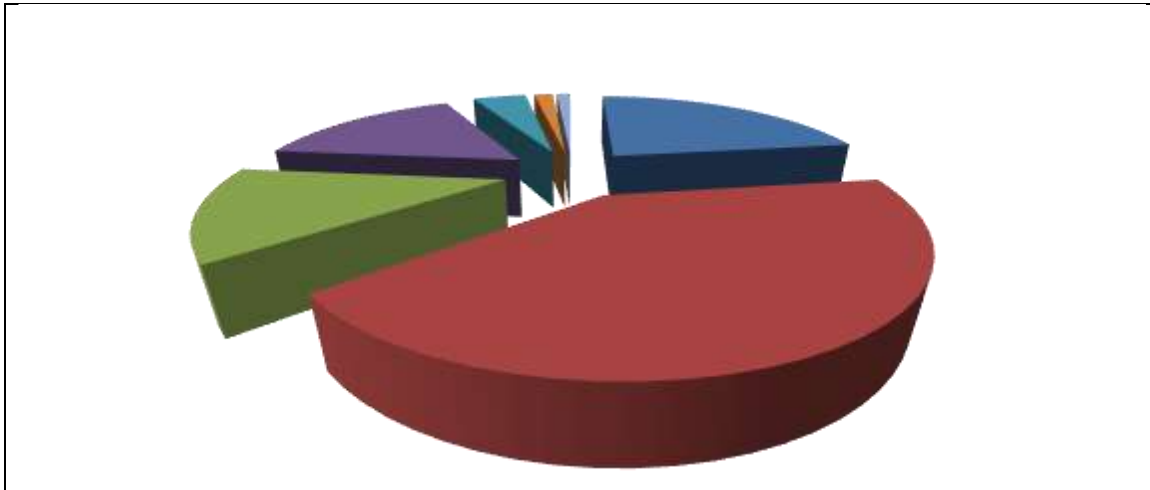
The [redacted] of such factories as [redacted] Brucatori (both from Italy) are stronger than [redacted] held by the [redacted] brands. The [redacted] is that these [redacted] produce burners under the brands by [redacted]-agreement in [redacted] to the factory [redacted]. In the case of [redacted] this is [redacted] [redacted] and [redacted] brands. [redacted] produces the vast [redacted] of [redacted] burners for the [redacted] market.

## 4. JET BURNERS BY MAIN TECHNICAL CHARACTERISTICS

### 4.1. POWER OUTPUT

As we can see on the diagram below, [REDACTED] for the reason, that more almost 00% of the equipment sold [REDACTED].

DIAGRAM 8. Russian burners market structure by power output, %



Source: Litvinchuk Marketing Co.

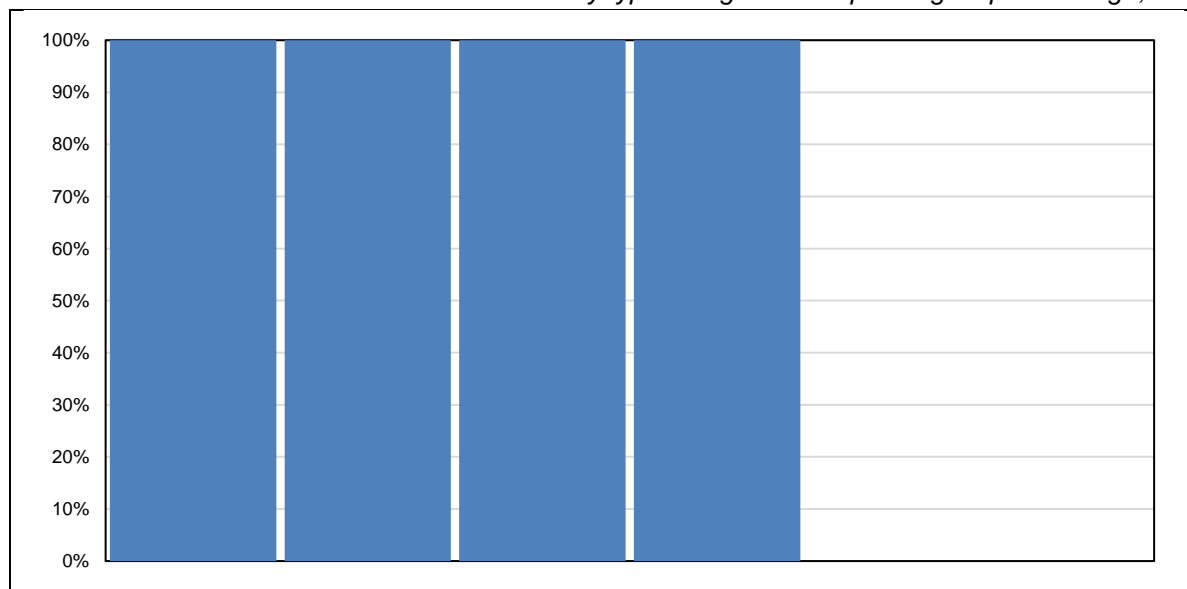
By results of [REDACTED] as domestic equipment, have about 00% market share. Segment of semi-industrial (commercial) [REDACTED] 00%. [REDACTED] mers.

For the [REDACTED] structure devoted to each of these [REDACTED] of each to the overall market structure.

## 4.2. TYPE OF REGULATION

According to the type of [REDACTED] progressive / modular [REDACTED] ranges. The [REDACTED] shown in DIAGRAM below:

DIAGRAM 9. Russian burners market structure by type of regulation depending on power range, %



Source: Litvinchuk Marketing Co.

We can clearly see that [REDACTED] growth. Thus, [REDACTED] not used for [REDACTED] of [REDACTED] than [REDACTED] power apply [REDACTED] stage [REDACTED] or [REDACTED] type.

## 5. BURNERS MARKET SEGMENTS

### 5.1. GAS JET BURNERS

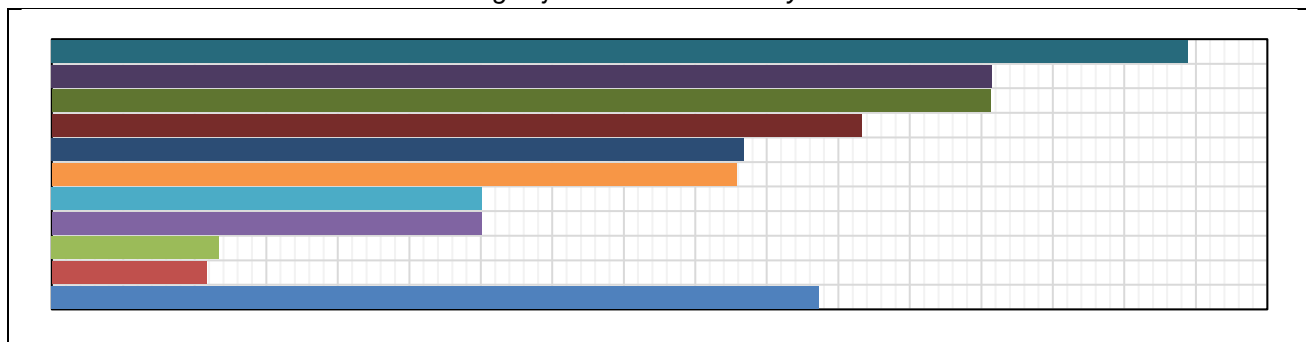
Gas burners today are [REDACTED]. Below is a table presenting a dynamics of gas jet burners segment by brands in terms of sales volume:

TABLE 10. Russian gas jet burners market dynamics by brands, pcs.

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	010	001	010	000	001	110	111	100	101
	Alphatherm	110	111	111	101	101	000	110	000	10
	ATEC									0
	Baltur	000	1 011	1 011	011	111	000	101	1 001	1 111
	Bentone	000	111	100	10	11	100	01	111	11
	Blowtherm		11	1	11	11	0	00	01	00
	Brestselmash	010	000	010	000	010	010	000	000	010
	Buderus	011	011	110	111	111	100	101	01	0
	CIB Unigas	1 011	1 111	1 011	1 101	1 110	1 011	1 100	1 110	1 001
	De Dietrich	000	101	110	110	100	00	11	01	01
	Dreizler	1	10	1	1	11	00	10	11	1
	Ecoflam	100	001	101	101	110	111	010	1 000	1 000
	Elco	1 000	1 111	1 001	100	101	001	1 001	1 001	1 111
	Elster	0								1
	F.B.R.	001	100	101	010	100	110	110	111	1 101
	Giersch	101	110	111	110	001	001	111	100	110
	Hansa	100				01	10	10	00	11
	Hofamat					10			11	11
	Kiturami	111	001	000	000	000	100	11	01	10
	Lamborghini	1 011	101	101	001	000	1 010	011	110	1 110
	Maxon			1				0	1	1
	Nobel						01	10	00	01
	Oilon	101	001	000	011	000	101	110	110	111
	Olympia Boiler	10	100	001	10	11	00	11	00	01
	Oroflam									1
	Piklnno					1	10	000	010	000
	Promgazapparat	10	1	1	1	0	0	0	1	10
	Ray	1	1		00		1	11	1	10
	Riello	1 011	1 000	1 000	1 100	1 101	011	1 001	100	111
	Saacke	00	10	10	101	11	01	01	11	10
	Tecflam								0	11
	Viessmann	100	001	011	010	111	111	00	01	11
	Weishaupt	0 111	1 100	1 000	1 111	000	010	001	001	111
	Others	001	001	100	101	000	011	11	110	010
	<b>Total:</b>	<b>11 000</b>	<b>11 100</b>	<b>11 000</b>	<b>10 100</b>	<b>10 000</b>	<b>0 000</b>	<b>10 000</b>	<b>11 100</b>	<b>11 110</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 10. TOP-10 manufacturers of gas jet burners in 2019 by sales volume



Source: Litvinchuk Marketing Co.

The [REDACTED] of burners in 0010, as well [REDACTED], are associated with the [REDACTED]. At the end of 0010, "[REDACTED]" broke up [REDACTED]

partner in the person [REDACTED] cooperation with [REDACTED], [REDACTED] this regard, sales [REDACTED] down, and [REDACTED], on the [REDACTED], [REDACTED] up.

There were no serious [REDACTED] IB [REDACTED] and [REDACTED] down.

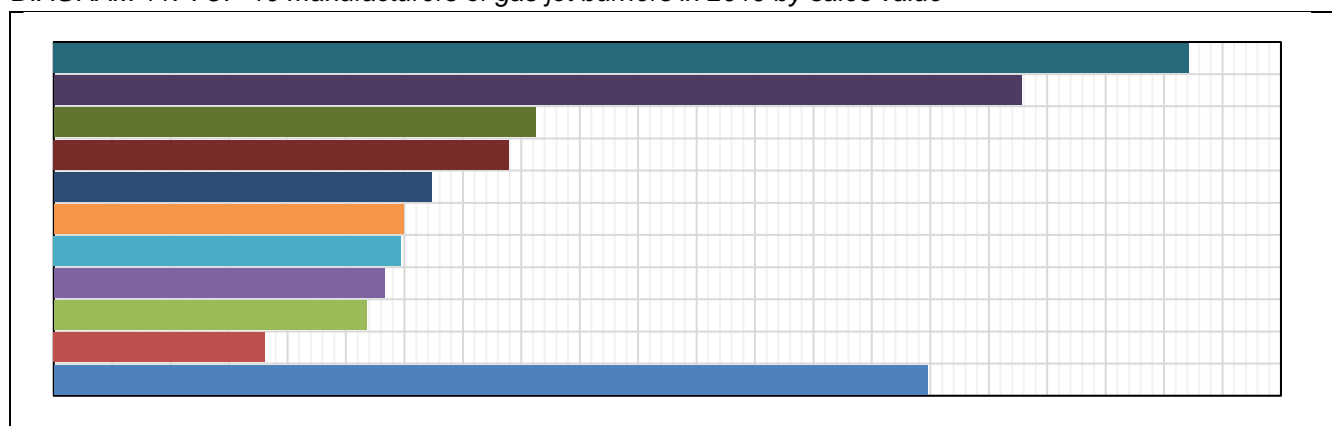
Below is a table with the same dynamics, but measured in sales value:

TABLE 11. Russian gas jet burners market dynamics by brands, USD (factory prices exclusive VAT)

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	111 010	111 011	111 011	101 000	101 110	00 000	101 001	101 011	10 000
	Alphatherm	100 111	111 101	1 001 000	1 010 100	1 001 000	001 011	110 000	111 101	001 001
	ATEC									01 001
	Baltur	1 001 101	0 001 011	1 100 010	1 010 001	111 111	100 010	1 001 001	1 111 101	1 101 101
	Bentone	010 001	010 101	100 010	00 100	11 101	111 001	10 101	110 111	10 100
	Blowtherm		00 010	0 011	01 011	00 000	1 000	01 100	10 111	00 100
	Brestselmash	100 000	100 000	010 000	010 000	100 000	111 000	111 000	110 100	100 000
	Buderus	011 100	011 101	001 100	100 000	111 001	101 101	110 110	110 011	1 100
	CIB Unigas	1 000 111	1 111 011	1 111 000	1 010 101	1 011 101	0 101 111	1 001 010	1 100 111	1 100 111
	De Dietrich	010 110	110 000	101 100	110 111	111 101	01 001	01 111	101 100	10 101
	Dreizler	100 101	010 001	110 110	1 000	000 111	110 100	110 111	110 100	01 110
	Ecoflam	1 111 101	1 010 101	1 000 000	1 100 110	101 011	100 110	1 010 000	1 000 111	1 110 110
	Elco	0 110 010	0 010 100	1 111 110	0 000 110	1 111 101	1 001 010	1 000 011	1 011 101	1 101 001
	Elster	10 100								0 010
	F.B.R.	1 100 011	1 110 011	1 110 011	0 011 111	1 001 100	1 010 110	1 001 011	1 001 000	0 011 000
	Giersch	110 011	101 000	100 101	110 111	100 110	001 001	100 011	001 100	100 110
	Hansa	10 101				11 011	10 001	10 111	10 111	0 011
	Hofamat					00 000			101 001	101 111
	Kiturami	11 101	10 000	01 101	01 110	110 000	11 011	00 001	01 000	11 000
	Lamborghini	1 011 001	101 111	110 101	000 011	101 110	011 011	110 011	001 111	110 100
	Maxon			01 010				01 010	101 111	000 100
	Nobel						11 000	110 000	101 001	111 010
	Oilon	1 000 000	0 100 111	0 010 111	1 000 011	1 001 110	100 100	100 001	1 010 011	1 100 000
	Olympia Boiler	11 011	10 100	10 010	11 000	00 000	10 011	00 011	10 011	10 100
	Oroflam									0 101
	PikInno					11 000	010 000	100 000	000 000	010 000
	Promgazapparat	001 011	00 010	10 101	100 101	11 110	101 011	00 011	00 100	100 000
	Ray	11 011	11 010		010 110		01 100	11 101	10 110	11 000
	Riello	0 100 000	0 101 001	0 011 001	1 110 001	0 010 110	110 110	0 110 000	001 000	1 011 100
	Saacke	1 001 001	001 110	1 001 111	0 101 110	1 111 100	111 000	1 111 110	0 110 010	1 100 110
	Tecflam								101 011	000 101
	Viessmann	100 100	100 001	100 001	011 101	101 110	111 000	11 000	01 010	100 000
	Weishaupt	11 011 111	10 000 011	10 100 101	1 101 000	1 011 000	1 010 100	0 011 100	1 001 110	1 000 000
	Others	1 111 110	1 111 001	1 010 111	0 111 110	111 110	110 011	110 100	101 011	000 111
	<b>Total:</b>	<b>00 000 000</b>	<b>01 000 000</b>	<b>00 000 000</b>	<b>10 000 000</b>	<b>00 000 000</b>	<b>10 000 000</b>	<b>00 100 000</b>	<b>01 100 000</b>	<b>01 100 000</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 11. TOP-10 manufacturers of gas jet burners in 2019 by sales value



Source: Litvinchuk Marketing Co.

Among the [redacted] had the largest [redacted] in 0011. Due to sometimes [redacted] from different manufacturers, [redacted] different when [redacted] in sales [redacted] and [redacted].

TABLE 12. Russian gas jet burners market structure by power range in 2019, pcs.

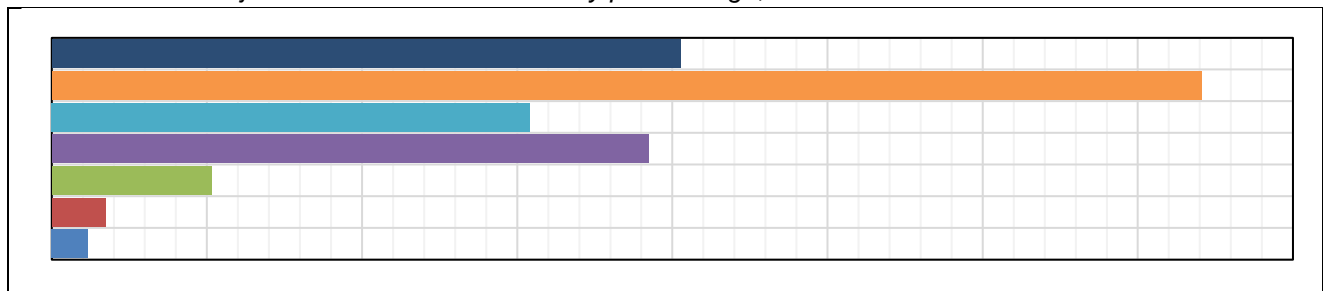
#	Brand	Maximum power output of burners, kW						Total:	Average power, kW	
		< 100 kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW			≥ 10MW
	ACV	101						101	11	
	Alphatherm	1	11	00	01	0	1	1	1 011	
	ATEC			0				0	100	
	Baltur	000	100	000	001	11	10	0	1 111	
	Bentone	00	01	1	1				11	
	Blowtherm		00	1					00	
	Brestselmash		110	10	00	1			010	
	Buderus	0							0	
	CIB Unigas	110	101	011	110	100	01	01	1 001	
	De Dietrich	10	00	1	0				01	
	Dreizler			1	0		1		1	
	Ecoflam	111	100	010	001	10	0	10	1 000	
	Elco	100	110	100	100	10	01	1	1 111	
	F.B.R.	101	001	011	000	11	0	1	1 101	
	Giersch	11	00	10	1				110	
	Hansa	11							11	
	Hofamat			1	00	1	0		11	
	Kiturami	11	1						10	
	Lamborghini	110	101	11	01				1 110	
	Nobel		10	1	00	1			01	
	Oilon	00	00	11	10	10	00	1	111	
	Olympia Boiler	11	11						01	
	Oroflam	0	0						1	
	PikInno			00	111	10	00	1	000	
	Promgazapparat		0		0	1		1	10	
	Ray				10				10	
	Riello	010	000	00	101			0	111	
	Saacke			1	1	1	0	01	10	
	Viessmann	10	10	10					11	
	Weishaupt	11	011	100	000	10	11	11	111	
	Others	11	10	00	11	11	1	1	010	
	<b>Total:</b>	<b>0 010</b>	<b>1 000</b>	<b>1 000</b>	<b>0 000</b>	<b>111</b>	<b>000</b>	<b>101</b>	<b>11 110</b>	<b>1 010 kW</b>

Source: Litvinchuk Marketing Co.

After [redacted] by the results of 0011 [redacted] such producers as [redacted] and [redacted] sell only [redacted] up to 1 MW on the [redacted] market, while the [redacted] burners up to [redacted] kW in this group of [redacted] is 00%.

Below is a diagram that clearly shows the market share of different power range:

DIAGRAM 12. Gas jet burners market structure by power range, %



Source: Litvinchuk Marketing Co.

## 5.2. LIQUID FUEL BURNERS

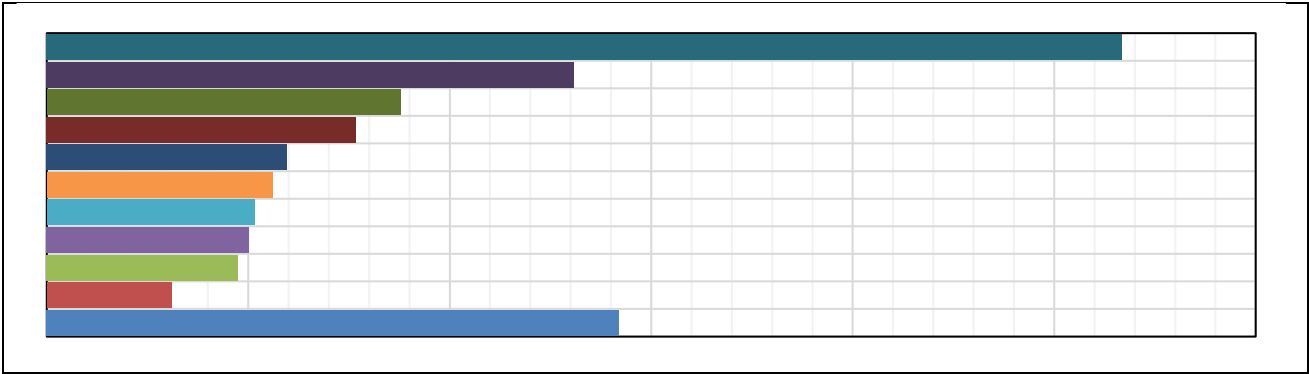
fuel is the having the most dynamics on the long time period. Sales in the . However, pany it's a dominant segment.

TABLE 13. Russian liquid fuel burners market dynamics by brands, pcs.

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	01	00	10	11	11	11	111	010	100
	Alphatherm	100	01	101	110	11	11	11	01	1
	Baltur	1 111	100	1 000	111	111	110	001	101	110
	Beckett	10		00					00	10
	Bentone	101	001	001	010	001	110	011	011	100
	Blowtherm	1	1	1	1	1	1	1	1	0
	Brestselmash	100	000	010	110	100	100	110	100	110
	CIB Unigas	101	111	100	101	101	010	111	100	111
	Clayton					1				1
	Clean Burn	10	01	11	10	0	10	10	00	0
	Danvex				10			00	00	00
	De Dietrich	010	110	111	11	01	01	11	00	10
	Ecoflam	100	011	010	000	011	100	000	010	1 010
	Ecostar	01		0	0	1		0	11	1
	Elco	1 101	101	100	100	110	010	001	011	101
	Energylogic	00	11	10	11	0	00	10	01	11
	Euronord	110		111	001		100	01	111	1
	F.B.R.	101	001	101	010	110	000	000	100	111
	Giersch	110	111	110	010	110	110	110	111	011
	Hansa	11						11	0	1
	Kiturami	001	101	100	010	110	001	101	11	000
	Kroll	100	011	111	11	10			11	11
	Lamborghini	0 010	0 100	0 100	0 010	1 101	1 110	1 000	0 011	0 110
	Master	0	1	01	01	1	1	11	01	10
	Nobel							1	0	1
	Oilon	101	100	010	010	101	110	101	111	110
	Olympia Boiler	110	111	100	101	000	001	000	011	001
	Oroflam								1	10
	Ray	1	0	0	0		0			1
	Riello	001	111	001	001	110	011	011	000	000
	Saacke	1		1		0	1	1	1	0
	Sabiel						10	1	11	10
	Sime	1	10	011	111	00	10	110	00	10
	Smart Burner	10	00	01	0	0	00	11	10	0
	Sookook	10	1	10	11	1	0	11	1	0
	Uret								1	01
	Viessmann	001	011	111	100	10	10	01	1	0
	Wayne									0
	Weishaupt	100	000	001	001	110	11	00	11	11
	Others	0 110	1 001	1 001	100	101	000	011	111	101
	<b>Total:</b>	<b>11 000</b>	<b>11 000</b>	<b>10 000</b>	<b>0 110</b>	<b>1 100</b>	<b>1 110</b>	<b>1 110</b>	<b>0 000</b>	<b>0 010</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 13. TOP-10 manufacturers of liquid fuel burners in 2019 by sales volume



Source: Litvinchuk Marketing Co.

Segment of liquid fuel burners has a [REDACTED]. Every [REDACTED] in Russia is [REDACTED]. With more [REDACTED] and producers from other countries.

It is worth noting [REDACTED] diesel, oil and [REDACTED] oil.

- [REDACTED] % sales in the [REDACTED] by results of 0011
- A [REDACTED], overall sales of oil [REDACTED] pcs.
- Total sales in the sub-segment of [REDACTED], entirely focused on production of this type of burner, namely: Danvex (00 [REDACTED] (1 pcs.), Clean [REDACTED] (0 pcs.) and others.

Below is a table with the market dynamics, measured in sales value



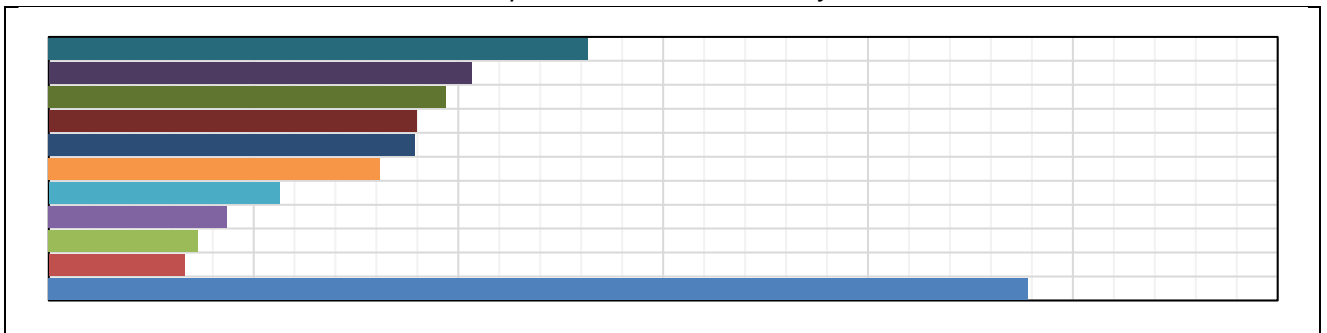
TABLE 14. Russian liquid fuel burners market dynamics by brands, USD (factory prices exclusive VAT)

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	ACV	00 110	1 100	01 101	01 111	00 111	11 110	10 011	11 001	110 000
	Alphatherm	00 011	11 100	00 110	110 000	11 101	101 000	111 011	01 011	11 011
	Baltur	000 010	111 110	101 000	000 001	000 101	101 101	011 010	010 110	100 111
	Beckett	0 111		11 111					11 011	11 001
	Bentone	000 101	001 111	110 101	101 100	101 110	10 010	00 101	00 010	10 110
	Blowtherm	100	0 011	1 111	0 001	0 101	110	011	001	1 011
	Brestselmash	110 000	100 000	000 000	110 000	101 000	111 000	110 000	100 000	101 000
	CIB Unigas	1 010 100	101 011	110 110	001 011	111 111	101 001	011 001	110 010	111 111
	Clayton					1 001				1 101
	Clean Burn	1 011	11 100	0 100	00 111	1 001	00 111	11 001	01 000	1 111
	Danvex				1 011			11 100	11 001	01 010
	De Dietrich	11 011	11 010	101 100	00 010	11 111	10 001	00 010	11 100	0 001
	Ecoflam	011 110	001 000	011 001	001 011	011 110	001 101	111 011	101 110	100 100
	Ecostar	101 010		11 000	1 000	0 111		1 001	10 111	0 011
	Elco	011 110	101 001	110 011	111 011	10 001	00 101	11 100	010 001	000 101
	Energylogic	00 111	01 010	10 110	11 011	1 011	10 111	00 101	00 100	100 110
	Euronord	100 000		101 001	010 110		010 010	00 110	11 000	00 001
	F.B.R.	111 110	000 010	000 111	110 110	110 110	110 100	010 001	111 001	101 110
	Giersch	111 011	010 111	001 000	010 111	111 000	101 101	110 010	100 110	110 001
	Hansa	11 011						0 001	1 011	1 000
	Kiturami	00 000	101 010	010 101	01 010	00 101	11 000	01 101	00 110	10 011
	Kroll	110 000	101 000	101 011	10 001	11 011			00 000	00 001
	Lamborghini	1 101 110	110 001	1 011 000	011 000	111 000	100 101	111 111	000 010	110 111
	Master	0 010	1 001	01 100	10 001	1 000	0 001	11 001	01 011	10 100
	Nobel							110	0 000	1 100
	Oilon	1 111 011	1 110 000	1 001 111	1 011 110	000 100	1 000 001	111 111	1 001 111	010 011
	Olympia Boiler	110 011	110 010	000 100	111 000	00 010	00 101	111 110	111 101	01 000
	Oroflam								001	0 011
	Ray	01 101	0 110	10 101	11 011		11 110			01 101
	Riello	001 010	000 001	1 010 010	1 101 010	011 101	010 011	101 011	010 010	110 010
	Saacke	10 111		11 001		110 011	011 001	11 100	110 110	101 110
	Sabiel						10 000	10 010	11 011	11 000
	Sime	1 011	10 001	10 111	10 000	1 010	10 101	01 010	10 011	10 111
	Smart Burner	10 101	00 001	100 001	0 010	0 000	01 100	10 000	11 011	01 010
	Sookook	1 100	1 100	10 010	11 100	1 001	010	1 110	100	0 101
	Uret								0 110	10 110
	Viessmann	011 001	100 100	111 001	111 100	10 010	00 101	11 001	11 110	1 011
	Wayne									1 110
	Weishaupt	1 101 111	111 100	101 011	110 010	101 110	100 110	000 100	001 110	111 000
	Others	1 011 100	100 111	001 001	101 100	010 101	101 100	001 011	010 001	100 001
	<b>Total:</b>	<b>10 000 000</b>	<b>1 000 000</b>	<b>10 100 000</b>	<b>0 000 000</b>	<b>1 100 000</b>	<b>1 100 000</b>	<b>1 100 000</b>	<b>1 000 000</b>	<b>1 000 000</b>

Source: Litvinchuk Marketing Co.

In terms of sales value [redacted] advantage melts due to [redacted] [redacted] [redacted] and low [redacted] [redacted] of burners [redacted]. [redacted] [redacted] [redacted] have a [redacted] [redacted] sales [redacted].

DIAGRAM 14. TOP-10 manufacturers of liquid fuel burners in 2019 by sales value



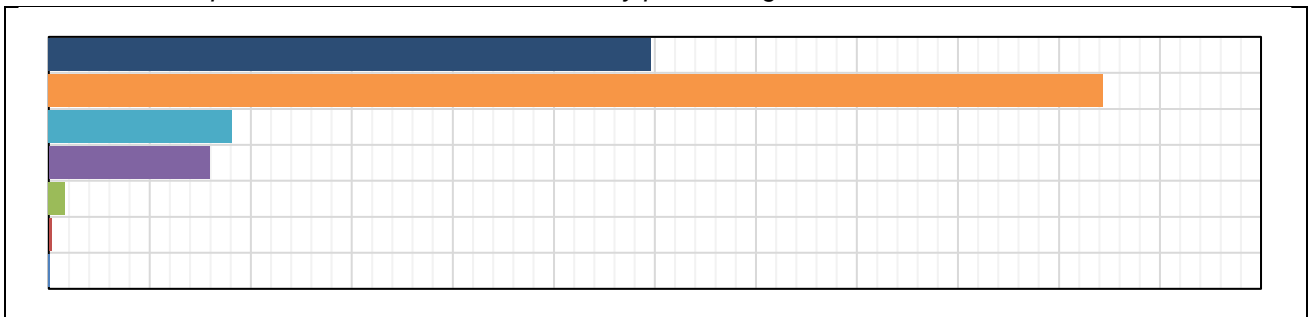
Source: Litvinchuk Marketing Co.

TABLE 15. Russian liquid fuel burners market structure by power range in 2019, pcs.

#	Brand	Maximum power output of burners, kW						Total:	Average power, kW	
		< 100 kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW			≥ 10MW
	ACV	100						100	10	
	Alphatherm		0	1	1			1	100	
	Baltur	101	010	11	110	11	1	110	001	
	Beckett		10					10	110	
	Bentone	01	110	0				100	111	
	Blowtherm			0				0	110	
	Brestselmash		10	00	10			110	110	
	CIB Unigas	10	100	101	10	1	1	111	001	
	Clayton				1			1	1 010	
	Clean Burn		0					0	111	
	Danvex	00						00	10	
	De Dietrich	1	1					10	100	
	Ecoflam	110	100	111	01	10		1 010	101	
	Ecostar				1			1	1 100	
	Elco	001	111	00	1	1		101	111	
	Energylogic	00	00					11	100	
	Euronord	1	1	1	1			1	111	
	F.B.R.	01	101	111	10	0		111	100	
	Giersch	01	111	11				011	000	
	Hansa	0	0					1	00	
	Kiturami	011	11					000	11	
	Kroll	1	10					11	11	
	Lamborghini	101	1 101	01	11			0 110	111	
	Master		10					10	000	
	Nobel			0		1		1	1 111	
	Oilon	10	11	0	1	11	0	110	010	
	Olympia Boiler	11	111	1	1	1		001	010	
	Oroflam	0	1					10	101	
	Ray					1		1	1 011	
	Riello	00	100	11	110			000	111	
	Saacke					1	1	1	0 110	
	Sabiel		10					10	101	
	Sime	10	01					10	10	
	Sookook		0					0	111	
	Uret		0	1	11	0		01	1 101	
	Viessmann	0						0	00	
	Weishaupt	10	10	10	00			11	001	
	Others	11	11	00	10	0	1	110		
	<b>Total:</b>	<b>0 100</b>	<b>1 000</b>	<b>000</b>	<b>110</b>	<b>11</b>	<b>10</b>	<b>1</b>	<b>0 010</b>	<b>010 kW</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 15. Liquid fuel burners market structure by power range, %



Source: Litvinchuk Marketing Co.

The sales [redacted] fuel [redacted] are greatly [redacted] to a further [redacted] of [redacted].

### 5.3. DUAL FUEL BURNERS

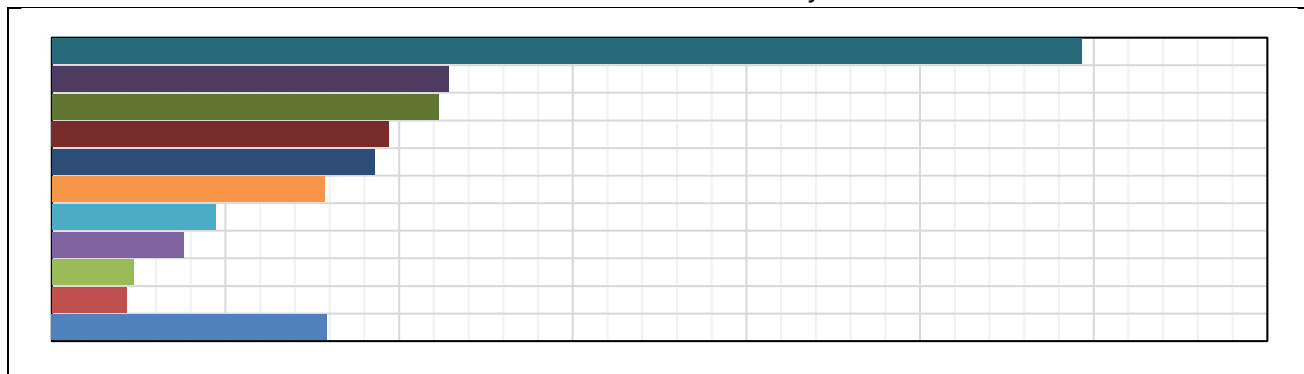
fuel burners – a small ( market) when . But it's % in terms contributes to dual fuel burners, complexity, which cost of burner.

TABLE 16. Russian dual fuel burners market dynamics by brands, pcs.

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Alphatherm	11	11	00	100	11	10	11	01	1
	Baltur	01	11	11	101	10	00	10	101	111
	CIB Unigas	100	000	100	101	000	010	110	110	111
	Dorogobuzhkotlomash	100	110	011	110	111	10	10	10	00
	Dreizler	0	1	0		1	1	1	11	1
	Ecoflam	100	01	10	00	11	10	101	100	100
	Ecostar	0	0	01				1		00
	Elco	111	001	101	100	11	00	10	100	101
	F.B.R.	11	10	10	10	00	01	10	10	10
	Giersch	01	0	0	0	0	0	1	0	10
	Hofamat								00	0
	Nobel						0	11		1
	Oilon	000	000	000	111	110	100	01	100	11
	PikInno						1	00	100	110
	Ray	11	1	0	11					1
	Riello	110	010	000	001	101	0	00	0	11
	Saacke	11	0		0	1	01	00	11	00
	Weishaupt	100	101	111	111	000	001	110	100	110
	Others	000	110	011	010	01	10	00	11	10
	<b>Total:</b>	<b>0 000</b>	<b>0 000</b>	<b>0 100</b>	<b>0 010</b>	<b>1 100</b>	<b>1 010</b>	<b>1 110</b>	<b>1 100</b>	<b>1 100</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 16. TOP-10 manufacturers of dual fuel burners in 2019 by sales volume



Source: Litvinchuk Marketing Co.

Segment of the on the market.

“Gas+diesel” dual-fuel burners les amounted to no more than 10 units in 0011. more than a dozen manufacturers have such models in their product range, in practice only 1 producers sold “-fuel in 0011 – (00 pcs.), (10 pcs.), (0 pcs.), (1 pcs.) (0 pcs.) and (1 burner).

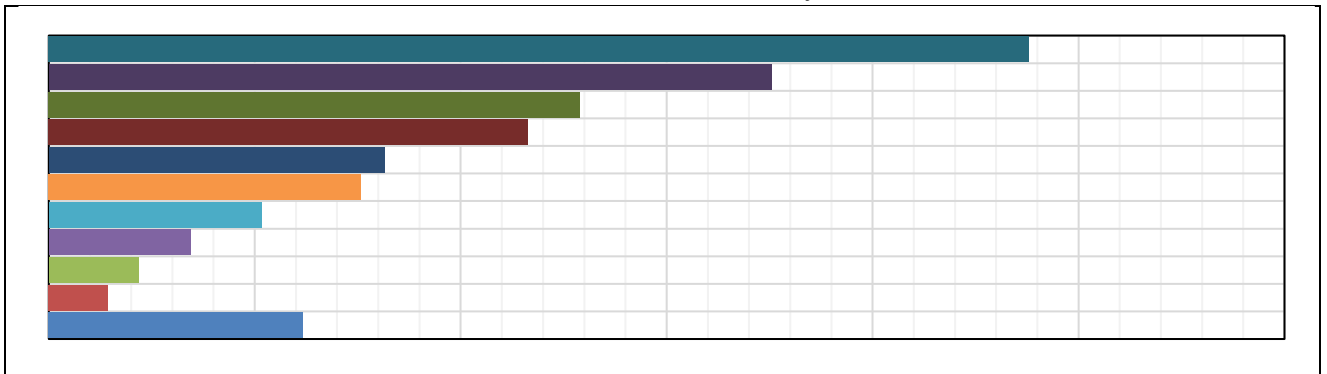
Below let us show the market dynamics in terms of sales value:

TABLE 17. Russian dual fuel burners market dynamics by brands, USD (factory prices without VAT)

#	Brand	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Alphatherm	000 100	111 111	010 100	111 000	001 000	001 101	010 111	110 001	01 100
	Baltur	100 000	110 011	010 100	111 000	001 111	110 010	100 100	010 001	110 001
	CIB Unigas	1 001 001	0 110 100	0 100 100	1 001 010	0 110 010	0 000 110	1 000 011	1 000 010	0 010 011
	DKM	100 000	001 000	1 101 000	1 000 000	110 000	000 000	010 000	000 000	110 000
	Dreizler	10 001	00 000	01 010		111 110	10 010	111 101	100 000	10 001
	Ecoflam	010 001	101 010	101 111	101 011	110 100	011 101	100 011	001 001	110 101
	Ecostar	0 001	100 010	00 101				01 000		111 000
	Elco	1 111 101	0 010 110	111 010	1 011 100	111 100	011 011	111 000	100 001	1 000 011
	F.B.R.	010 010	000 001	110 110	111 011	100 001	110 001	000 010	010 111	011 000
	Giersch	100 111	11 000	01 011	11 000	01 101	0 010	00 000	10 110	10 101
	Hofamat								110 001	00 010
	Nobel						11 101	01 000		10 100
	Oilon	0 101 101	0 100 110	1 100 011	0 001 110	0 111 101	0 001 010	1 001 111	0 101 001	1 111 111
	PikInno						10 000	010 000	1 000 000	1 100 000
	Ray	000 011	101 000	011 110	1 001 010					100 100
	Riello	1 110 010	1 001 101	1 011 111	1 100 010	111 011	01 001	000 101	11 001	11 010
	Saacke	011 010	100 111		110 010	111 011	0 101 001	1 010 111	100 110	1 011 101
	Weishaupt	0 110 111	0 100 001	0 011 110	0 001 111	0 000 010	0 010 011	0 001 000	0 101 100	0 011 000
	Others	1 001 110	0 011 101	0 010 110	1 001 010	1 101 000	100 011	0 110 011	0 100 000	001 101
	<b>Total:</b>	<b>01 100 000</b>	<b>01 000 000</b>	<b>00 000 000</b>	<b>01 000 000</b>	<b>11 000 000</b>	<b>10 100 000</b>	<b>10 000 000</b>	<b>10 100 000</b>	<b>10 100 000</b>

Source: Litvinchuk Marketing Co.

DIAGRAM 17. TOP-10 manufacturers of dual fuel burners in 2019 by sales value



Source: Litvinchuk Marketing Co.

There is a [redacted] of [redacted] ([redacted]) [redacted] 11 – 00% [redacted] the [redacted] years. Other [redacted] drop out of the [redacted] race for [redacted] yet and [redacted] with by much [redacted] [redacted].

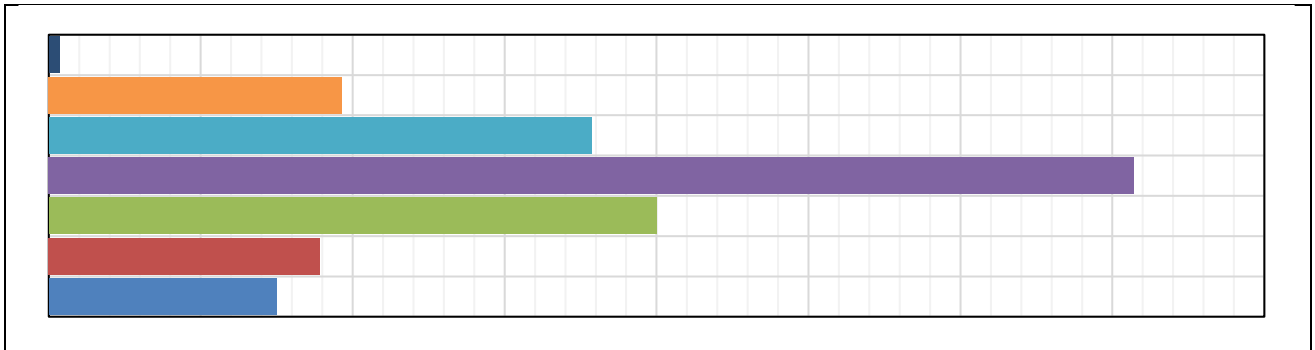
TABLE 18. Russian dual fuel burners market structure by power range in 2019, pcs.

#	Brand	Maximum power output of burners, kW						Total:	Average power, kW
		< 100 kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW		
	Alphatherm		1	0	1	1		1	1 111
	Baltur		01	11	10	1	0	111	1 111
	CIB Unigas	1	00	00	100	11	10	111	0 110
	Dorogobuzhкотlomash						00	00	1 100
	Dreizler					0	1	1	0 101
	Ecoflam		1	11	10	11	0	100	0 111
	Ecostar				0	11		00	0 000
	Elco		11	01	01	1	10	101	0 000
	F.B.R.		1	00	00	1	0	10	1 011
	Giersch			1	1			10	101
	Hofamat			0			1	0	0 010
	Nobel		1		1	1		1	0 010
	Oilon		0	1	01	1	0	11	0 001
	PikInno			10	01	11	11	110	1 000
	Ray						1	1	10 101
	Riello		1	1	1	1		11	1 000
	Saacke				1	1		00	11 100
	Weishaupt		11	11	11	11	1	110	0 101
	Others	1	1	1	10	10	1	10	
	<b>Total:</b>	<b>1</b>	<b>101</b>	<b>010</b>	<b>100</b>	<b>000</b>	<b>101</b>	<b>1 100</b>	<b>0 010 kW</b>

Source: Litvinchuk Marketing Co.

Major sales in the segment of [redacted] OMW models. With [redacted]

DIAGRAM 18. Dual fuel burners market structure by power range, %



Source: Litvinchuk Marketing Co.

## 6. TOP DISTRIBUTORS

The following table shows the [REDACTED] of 0011 both in sales volume (turnover) and sales value (number of units supplied):

TABLE 19. Leading suppliers on the Russian market of jet burners in 2019. Summary table by overall sales volume and sales value

#	Supplier	Brand	Type	Sales volume, pcs.			Sales value, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Ariston Thermo Rus	[REDACTED]	gas liquid dual	100 00 10	110	110	\$000 001 \$01 000 \$010 000	\$1 010 101	\$1 010 101
	CIB Unigas	[REDACTED]	gas liquid dual	1 001 111 111	0 110	0 110	\$1 110 111 \$111 111 \$0 000 100	\$0 111 011	\$0 111 011
	Euro Burners	[REDACTED]	gas liquid dual	1 110 101 100	0 001	0 001	\$1 111 010 \$110 110 \$100 000	\$0 111 001	\$0 111 001
	Hydroset	[REDACTED]	gas liquid dual	011 100 0	111	111	\$100 111 \$111 110 \$10 011	\$000 011	\$000 011
	Interma	[REDACTED]	gas liquid dual	010 00 0	111	110	\$011 001 \$01 101 \$11 111	\$100 110	\$001 001
		[REDACTED]	gas liquid dual	110 10 0	000		\$001 000 \$11 110 \$00 010	\$000 100	
	Italteplo	[REDACTED]	gas liquid dual	1 110 110 110	0 000	0 000	\$1 111 001 \$100 111 \$111 110	\$0 011 011	\$0 011 011
	KLB trade house	[REDACTED]	gas dual	000 110	000	000	\$010 000 \$1 100 000	\$1 010 000	\$1 010 000
	Nobel Engineering	[REDACTED]	gas liquid dual	101 110 00	101	100	\$010 010 \$111 111 \$000 000	\$1 010 000	\$1 100 110
		[REDACTED]	gas liquid dual	01 1 1	11		\$111 010 \$1 100 \$10 100	\$111 000	
	Oilon	[REDACTED]	gas liquid dual	111 111 10	000	000	\$1 101 111 \$011 011 \$1 001 000	\$0 000 010	\$0 000 010
	Rational	[REDACTED]	gas liquid dual	100 10 110	001	001	\$0 101 010 \$100 111 \$0 110 001	\$1 001 111	\$1 001 111
	Saacke Russland	[REDACTED]	gas dual	10 00	00	00	\$1 100 011 \$1 111 000	\$0 000 001	\$0 000 001

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 1).

#	Supplier	Brand	Type	Sales volume, pcs.			Sales value, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	ACV Rus	█	gas liquid	101 100	101	101	\$10 000 \$110 000	\$010 100	\$010 100
	Antares	█	gas liquid	000 010	100	100	\$111 010 \$100 110	\$000 100	\$000 100
	Ayaks	█	gas liquid dual	10 1 1	110	110	\$001 001 \$11 011 \$01 100	\$000 110	\$000 110
	Brestselmash	█	gas liquid	010 110	010	010	\$100 000 \$101 000	\$111 000	\$111 000
	Comfort-Eco	█	gas liquid	110 101	000	000	\$000 100 \$011 111	\$101 100	\$101 100
	ETN Cyclon	█	dual	00	00	00	\$111 000	\$111 000	\$111 000
	Giersch Pro	█	gas liquid dual	01 111 1	000	000	\$00 111 \$100 101 \$00 001	\$000 101	\$000 101
	Gogas Raduzhny	█	gas dual	01 1	00	00	\$111 101 \$10 110	\$010 001	\$010 001
	Hogart	█	gas liquid dual	000 100 10	110	111	\$110 001 \$11 110 \$01 101	\$101 010	\$001 010
		█	gas liquid	01 00	100		\$01 010 \$10 010	\$11 110	
	Melinvest	█	gas liquid dual	10 11 1	100	101	\$010 011 \$00 001 \$1 011	\$001 000	\$011 110
		█	gas	1	1		\$10 000	\$10 000	
		█	gas dual	0 01	00		\$10 011 \$110 000	\$100 010	
	MKS	█	gas	0	0	\$11 110	\$11 110		
	Plastic	█	gas	1	1	1	\$101 100	\$101 100	\$101 100
	Podolsky Mashinostroitelny Zavod	█	gas	1	1	1	\$011 010	\$011 010	\$011 010
	Profsnab-TEK	█	gas liquid	100 101	110	110	\$111 110 \$111 010	\$010 001	\$010 001
	Riello-Burners	█	gas liquid dual	001 000 1	100	111	\$001 010 \$000 110 \$11 010	\$111 110	\$101 100
		█	gas liquid	1 10	11		\$0 101 \$0 011	\$1 000	
		█	gas	111	1 110		\$100 101 \$111 100	\$110 000	
	Termoros	█	liquid	1	1	1 111	\$0 101	\$0 101	\$101 000

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 2).

#	Supplier	Brand	Type	Sales volume, pcs.			Sales value, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Termogas	██████	gas liquid dual	01 11 0	111	111	\$101 011 \$01 111 \$00 110	\$100 001	\$100 001
	Rustehnologii	████	gas	10	10	10	\$100 101	\$100 101	\$100 101
	OTsET	████	dual	0	0	0	\$100 000	\$100 000	\$100 000
	Voronezhselmash	██████	gas	10	10	10	\$100 100	\$100 100	\$100 100
	Gaztechapparat	██████	gas	10	10	10	\$100 000	\$100 000	\$100 000
	Kotelnie systemy Urala	████	gas liquid dual	00 1 0	00	00	\$111 110 \$111 \$1 001	\$111 100	\$111 100
	Dorogobuzhкотlomash	██████████	dual	00	00	00	\$110 000	\$110 000	\$110 000
	Viessmann	██████	gas liquid	11 0	10	10	\$100 000 \$1 011	\$101 111	\$101 111
	Bosch Thermotechnik	██████	gas	0	1	1	\$00 000	\$10 100	\$100 110
		██████	dual	0	0		\$01 111		
		██████	dual	0	0		\$01 101		
	RPK Engineering	████	gas	0	0	0	\$1 100	\$1 100	\$101 001
	Orto-Therm	████	gas	0	0	0	\$101 001	\$101 001	\$101 001
	Orto-Therm	████	gas	100	000	000	\$10 100	\$100 010	\$100 010
	Bryanskagrostroy	████	liquid	110			\$01 000		
	Bryanskagrostroy	████	dual	1	1	1	\$100 100	\$100 100	\$100 100
	BDR Thermea Rus	██████	gas	01	10	10	\$10 101	\$101 010	\$101 010
		██████	liquid	10			\$0 001		
	Entroros	████	gas	0	0	0	\$10 011	\$10 011	\$101 110
		██████	dual	1	1		\$10 010		
	Ekseko	████	gas	01	10	10	\$01 110	\$11 011	\$11 011
	Dantherm	████	liquid	01			\$01 100		
		████	gas	00	000	000	\$11 111	\$11 101	\$11 101
	Alpha-Trade	████	gas	00			\$01 111	\$10 101	\$10 101
		████	liquid	1	01	01	\$1 110		
		████	dual	0			\$1 010		
	Shuster Thermo	████	gas	01			\$10 111	\$11 101	\$11 101
		████	liquid	11	11	11	\$01 111		
		████	dual	1			\$10 110		
	Hydrostandart	██████	gas	01	000	000	\$10 100	\$01 011	\$01 011
		██████	liquid	000			\$00 000		
	Hukhtamaki SNG	████	gas	1	1	1	\$00 111	\$00 111	\$00 111
	Diant	██████	dual	0	0	0	\$01 101	\$01 101	\$01 101
	Losev	████	gas	00	00	00	\$00 101	\$00 101	\$00 101
	Kolokshansky agregatny zavod	████	liquid	1	0	0	\$00 111	\$00 000	\$00 000
		████	dual	1			\$11 001		

Source: Litvinchuk Marketing Co.



TABLE 19 (CONTINUED 3).

#	Supplier	Brand	Type	Sales volume, pcs.			Sales value, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	LPM-Teplostroy	[REDACTED]	dual	0	0	1	\$11 110	\$11 110	\$00 000
			gas	1			\$1 000		
			liquid	0	0		\$1 011	\$0 101	
	Termoalyance	[REDACTED]	liquid	0	0	0	\$01 010	\$01 010	\$01 010
	URSA Eurasia	[REDACTED]	gas	10	10	10	\$11 000	\$11 000	\$11 000
	Sever-Center-Plus	[REDACTED]	gas	01	110	110	\$00 011	\$10 101	\$10 101
			liquid	111			\$01 001		
	TTS	[REDACTED]	gas	11	11	11	\$01 101	\$11 111	\$10 010
			dual	0			\$11 000		
	ZKO TES	[REDACTED]	dual	0	0	11	\$00 111	\$00 111	\$11 001
			liquid	01	01		\$10 110	\$10 110	
	Konturterm	[REDACTED]	gas	11		01	\$01 110		\$10 100
			liquid	1	10		\$1 001	\$01 000	
			dual	1			\$1 011		
			gas	1	11		\$0 110	\$01 001	
	Polyimpex	[REDACTED]	liquid	0		1	\$10 001		\$10 010
			gas	1	1		\$01 110	\$10 010	
	Chance Enterprise	[REDACTED]	dual	1		1	\$00 011		\$10 010
	Helyos	[REDACTED]	gas	01	01	01	\$10 111	\$10 111	\$10 111
	Kiturami Rus	[REDACTED]	gas	10	010	010	\$11 000	\$10 111	\$10 111
			liquid	111			\$00 101		
	TS Group Energy	[REDACTED]	gas	10	00	00	\$01 010	\$11 111	\$11 111
			liquid	0			\$00 000		
	Select	[REDACTED]	gas	01	11	11	\$01 001	\$10 101	\$10 101
			liquid	00			\$10 000		
	Framoss	[REDACTED]	gas	01	01	01	\$10 111	\$10 111	\$10 111
	Euronord	[REDACTED]	liquid	1	1	00	\$00 001	\$00 001	\$11 001
			liquid	11	11		\$00 001	\$00 001	
	Promstroykraska	[REDACTED]	liquid	10	10	10	\$01 010	\$01 010	\$01 010
	Framoss-Volga	[REDACTED]	gas	00	01	01	\$00 100	\$00 110	\$00 110
			liquid	0			\$1 011		
	Starshine Petroleum and Chemical Rus	[REDACTED]	dual	0	0	0	\$01 000	\$01 000	\$01 000
	Domotechnika	[REDACTED]	gas	01	11	11	\$11 011	\$00 001	\$00 001
			liquid	01			\$10 101		
	Unical Engineering	[REDACTED]	liquid	0	1	1	\$01 110	\$00 100	\$00 100
			dual	1			\$0 001		
	Rusklimat	[REDACTED]	gas	01	01	01	\$01 000	\$01 000	\$01 000

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 4).

#	Supplier	Brand	Type	Sales volume, pcs.			Sales value, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Aerostar		gas	1	1		\$11 110	\$11 110	\$10 011
			gas	0	0	1	\$0 111	\$0 111	
			dual	1			\$1 111		
	Agrocompany Lutch		gas	1	1	1	\$10 000	\$10 000	\$10 000
	Alba		gas	0			\$01 111		\$01 110
			liquid	1	1	1	\$0 001	\$01 110	
			liquid	01			\$10 000		
	Tadel		gas	1	0	0	\$1 101	\$10 100	\$10 100
	Aquatep		liquid	00	00	00	\$1 011	\$1 011	\$1 011
	Baisad		gas	1	1	1	\$01 011	\$01 011	\$01 011
	Bezopasnie technologii		liquid	1	1	1	\$10 000	\$10 000	\$10 000
	Dantherm		liquid	10	10	10	\$10 100	\$10 100	\$10 100
	Danvex Rus		liquid	00	00	00	\$01 010	\$01 010	\$01 010
	Ecotherm		liquid	0	0	0	\$1 111	\$1 111	\$1 111
	Ekotechnika		gas	10	00	00	\$0 100	\$11 101	\$11 101
			liquid	10			\$0 101		
	Hansa Rus		gas	11	01	01	\$0 011	\$1 011	\$1 011
			liquid	1			\$1 000		
	Korea-Trade		liquid	01	01	01	\$10 001	\$10 001	\$10 001
	Lotos ship factory		liquid	1	1	1	\$00 000	\$00 000	\$00 000
	Lyoshe		liquid	1	1	1	\$01 101	\$01 101	\$01 101
	Megapolis		gas	10	01	01	\$1 011	\$01 110	\$01 110
	Menakom		gas	0	0	0	\$1 001	\$1 001	\$1 001
	Northern Gold		liquid	0	0	0	\$1 011	\$1 011	\$1 011
	Novoe Teplo		liquid	00	00	00	\$1 000	\$1 000	\$1 000
	Panini		liquid	1	1	1	\$1 011	\$1 011	\$1 011
	Petkus-Russland		liquid	1	1	1	\$10 011	\$10 011	\$10 011
	Rusal-Bratsk		gas	1	1	1	\$01 000	\$01 000	\$01 000
	Russky promisel		gas	0	0	0	\$10 010	\$10 010	\$10 010
	Sakhalin Energy		liquid	0	0	0	\$0 100	\$0 100	\$0 100
	Siesta		liquid	10	10	10	\$11 000	\$11 000	\$11 000
	Syberian boilers and technologies		liquid	0	0	0	\$1 111	\$1 111	\$1 111
	Techno Group		gas	0	0	0	\$1 101	\$1 101	\$1 101
	Ushakovo-Agro		gas	1	1	1	\$11 110	\$11 110	\$11 110
	Vostokdorstroy		liquid	0	0	0	\$0 110	\$0 110	\$0 110
	Others		gas	010			\$1 110 000		\$0 011 000
			liquid	010		000	\$100 011		
			dual	00			\$110 110		
<b>Total:</b>				<b>01 000</b>			<b>\$11 000 000</b>		

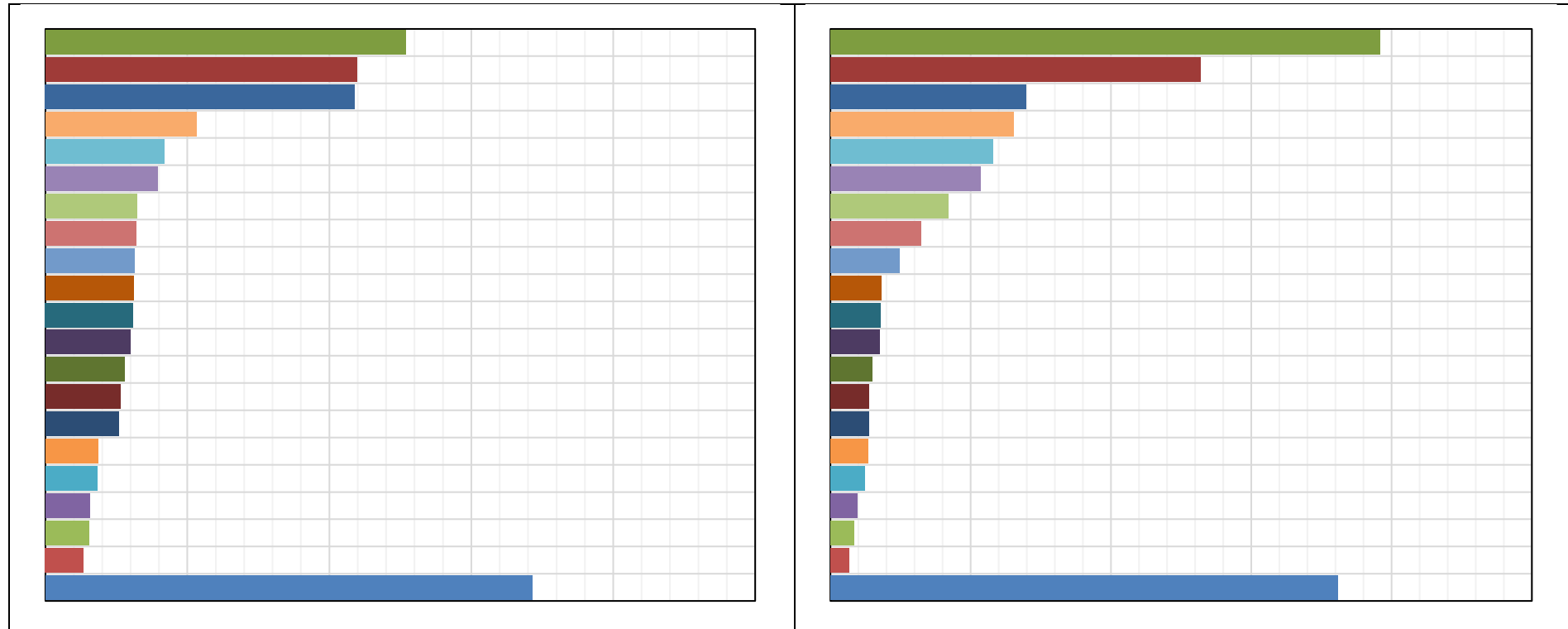
Source: Litvinchuk Marketing Co.

It is the market

market share means that its products have certain demand

1% market share.

DIAGRAMS 19. TOP-20 suppliers share on the Russian burners market in 2019, %  
by sales volume



Source: Litvinchuk Marketing Co.

Group of three is formed on of are higher than other. Further, the sales volumes of suppliers decrease smoothly.

If separately case the number of such 00.