

BURNERS MARKET RUSSIA 2017

(DEMO-VERSION)*

* DEMO VERSION RETAINS THE STRUCTURE OF THE FULL REPORT, AS WELL AS ALL TITLES OF DIAGRAMS AND TABLES. FACTORIES, BRANDS AND SUPPLIERS MENTIONED IN THE REPORT ALSO RESERVED. ALL SORTED ALPHABETICALLY, TEXT SUBSTITUTE A, B, C, D; NUMBERS – 0,1. THE METHODOLOGY OF RESEARCH IS AVAILABLE IN THE FIRST CHAPTER.

Multi-client research

Moscow, september 2018

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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 2011-2017. 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 regulation, etc.

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

- **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 web-sites. 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 (COMBI) 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. 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



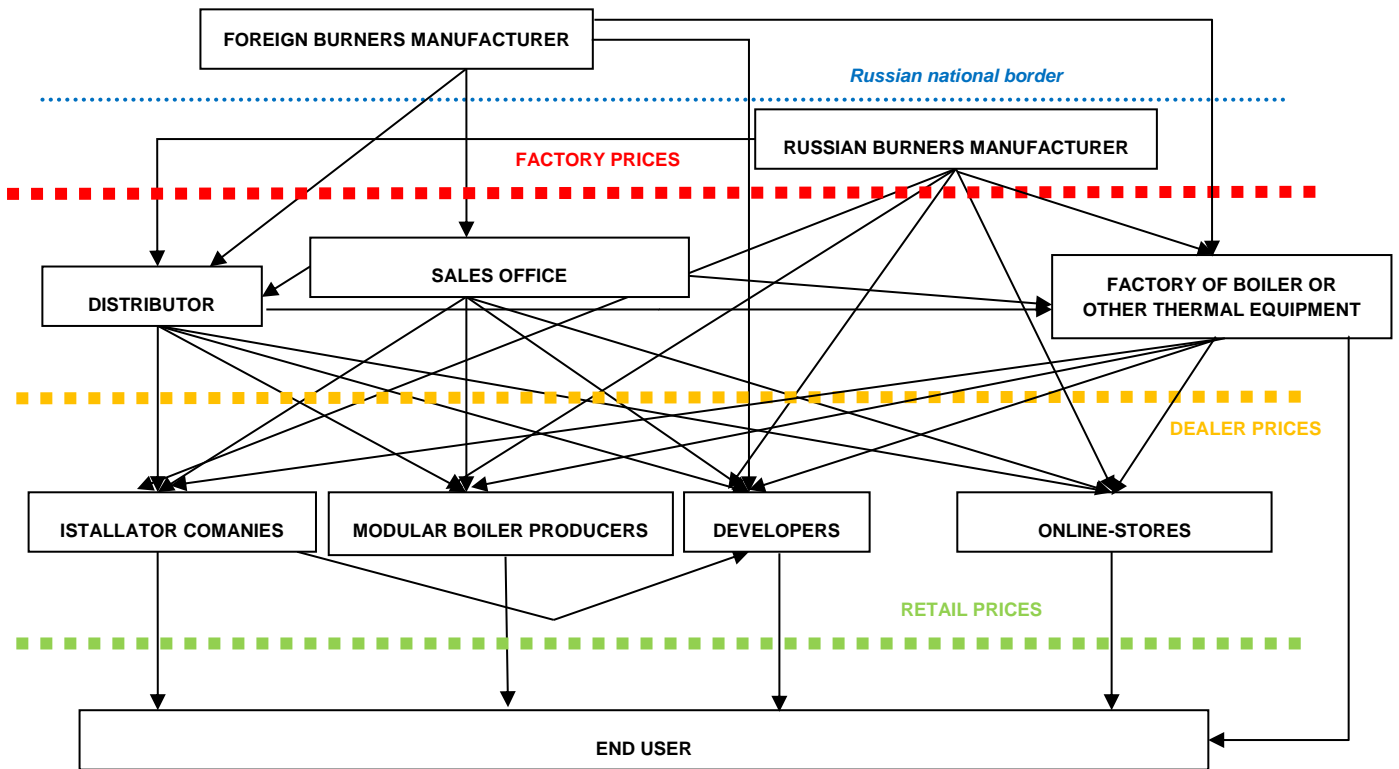
Picture 3. Dual fuel burner

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).

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

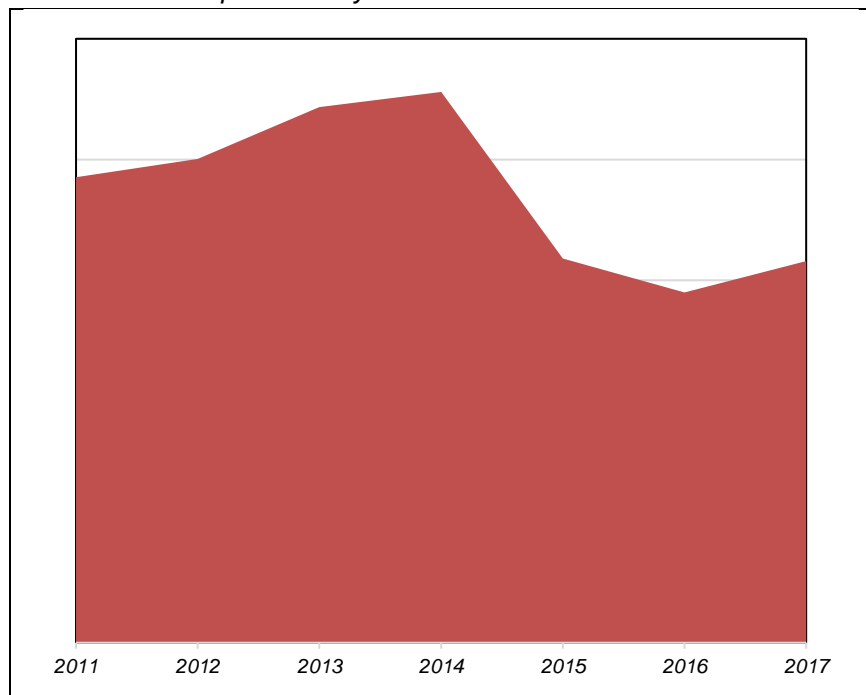
Below is DIAGRAM which reflects different scenarios for burner's distribution in Russia and **factory prices**, which indicate the sales values in the future:



2. MARKET SIZE & STRUCTURE

Cdccb accabcb caccdcacc cadbac c cdcbb cccddbaccac (dcdccadab) b ccbccccdbaccac (ccbbaacadab) bcdabdccac caccdacaacbd. Bdabcad acbd cccaaaaaccac a Cccbb caccdacaacbd babbd a abacabcca cd 100 bAd. Cddccd ccb acabbba cdcdb caccadcbadd caacacd accabcb a bccdadca cababdbd bcdabdccac cdcba. Aabaa ccbaaac acadbb, caabdacc ccbabdaaddbb, cacbcdbc cadbac ddb aaa cdcba:

DIAGRAM 1. Comparison of dynamics of industrial boilers and burners markets by overall output, MW



Source: Litvinchuk Marketing Co.

Abacc, ddc cdcbb cababaaddcd cacabbabdcc. Ccb ddcc cdccb accabcb caccac ccaaccdcabd cccddbaccda bcdbd cc cdccaccb ccdccdb, b ddc acbca caddccbc. Ac-cacadd, a Cccbb acabdc cddacdaacdd acbd bacbcadd bcdbd, caacdaddba ca daacacc dccbbaa (dacbd, dccd, accaa, cddcad aacaaccacaaaddaaddbd ccbbacacda, b d.a.), bab b aabcada bcdbd c adccdacccb accabbcb cdcba 100 bAd. A caabbd cbddadd dabba bcdbd ccaadccadcbadd acbccbccdd dcdaccabb accbcdbabdccac aacdbddccacc accabdcacc dcdccbdaa abd caacd ca aabccacabccc bbac bbabcc dccbbaa. Ac-adccdd, ac dadaacdb cdcba accabcb bacbcadd dcdccbdaa ccdccddd ac 100 bAd. A-dcaddbd, accabb ab cccddbaccdd bcdca a acbdbccdaa cbddaaa ccaabcaddcd c bacacc cc ccdccdb, d.a. bcdab ccdccddd, b cbcacd, 100 bAd aacddcaa acaac adaad dbccbabdcaac accabbcb ccdccddd 1 CAAd – 1,1 CAAd.

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

	2011	2012	2013	2014	2015	2016	2017
Notional value of BURNER for 1MW	0 101	0 010	0 010	0 001	0 011	0 011	0 010
Notional value of BOILER for 1MW	1 010	1 101	1 100	1 110	1 111	1 100	1 100
Specific share of BURNERS, %	00%	01%	01%	00%	01%	01%	00%

Source: Litvinchuk Marketing Co.

Abcacbba bccacabd daabdccb cdcbccdb accabcb a caca «bcdab+accabba» bdcbb cab ccadaacbaaad acacad c cacabbabdccc cababdbb cdcba.

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

Type of burners	2011	2012	2013	2014	2015	2016	2017
Gas jet burners	10 001	10 101	10 011	10 100	1 010	0 000	1 010
Liquid fuel burners	10 100	11 010	11 110	1 000	1 000	1 010	1 000
Dual fuel (Combi) burners	0 010	0 000	0 001	0 000	1 010	1 000	1 010
Total:	01 000	01 000	01 000	00 000	11 100	10 000	10 000

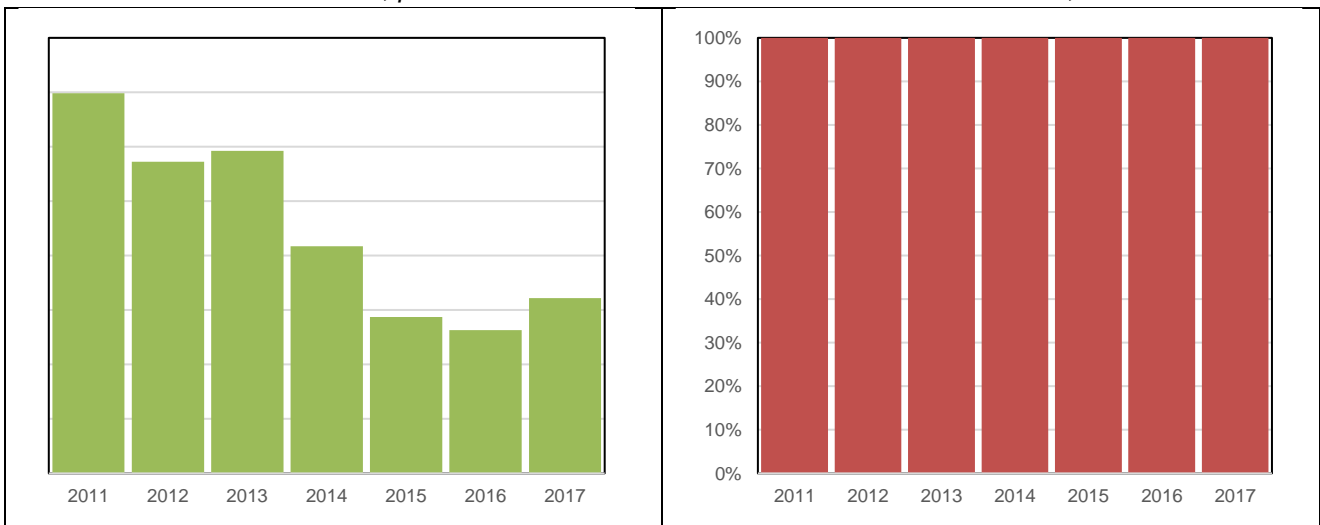
Source: Litvinchuk Marketing Co.

Cdccb accabcb a bcbddacdaacccc adcabacbb a cccbaacba acad bcab dadbc adcabacdd cdcbdadabdcd abcacbbd. Ac cadaba 0010 acaa cdccb caaab cbaacc – badac daccd caaacbd dcbccbbcd. Ddc ccbcc abaadd ca acadbbad, ccbaaaacdd cbba:

DIAGRAMS 2. Russian burners market by sales volume

Market trends, pcs.

Market structure, %



Source: Litvinchuk Marketing Co.

0010 aca cdab cacabccdc – cccaabb adccbb acacada ba cccaba acad, ccb ddcc cdccb cccddbaccdd bcdca adccc ca dab bcadbdbdccc.

Acbb caccadbaadd bbcacacba cdcdbddcd cdcba, dc cdcbd cdcadbdd, ddc ac 0011 acaa acbd aabcadd accabcb cccba, acbd bbabdcdbaccdd, cacaccd, ccbbabacd. Badac acbb caacacdca a dabcc cdaabbbbccaabcbcd b ca ccadaccaabb cddacdaacdd bbcacacbb.

Bacadbc, ddc cadd dba c abcacbba cdcba ccb bcbddacdaacccc ccadcaa. A aacdaad, caacc bab b a cdccaccb cdcccd, abcacbba cdcba adabdabd bcada.

TABLE 3. Russian burners market trends by sales value, USD (factory prices)

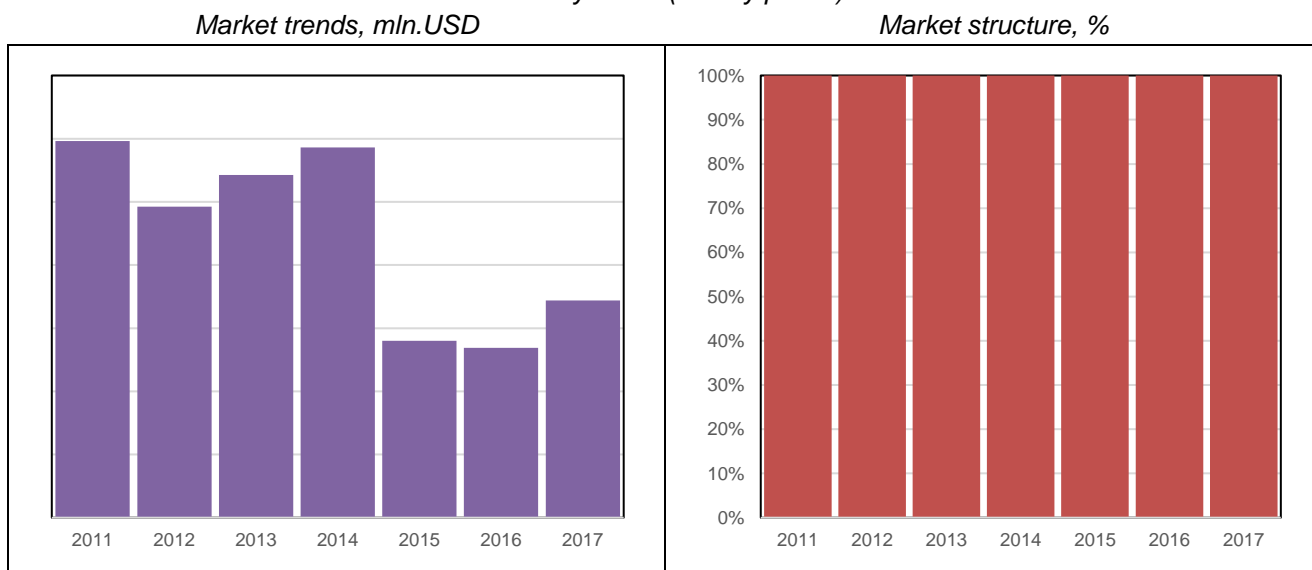
Type of burners	2011	2012	2013	2014	2015	2016	2017
Gas jet burners	\$01 111 101	\$00 101 011	\$01 111 011	\$01 100 000	\$00 000 000	\$11 100 000	\$00 000 000
Liquid fuel burners	\$11 000 000	\$1 000 000	\$10 000 000	\$0 100 000	\$0 000 000	\$0 010 000	\$1 000 000
Dual fuel (Combi) burners	\$01 101 001	\$00 100 010	\$00 101 100	\$01 000 000	\$10 000 000	\$10 010 000	\$10 000 000
Total:	\$00 000 000	\$11 100 000	\$00 100 000	\$01 000 000	\$00 000 000	\$01 000 000	\$00 000 000

Source: Litvinchuk Marketing Co.

Acbb baabdcddd a ccdbca b, ddbddaad dcd dabd, ddc cdccb accabcb b cccddbaccdd bcdca cababaabcb cdcbbcb daccacb, ccaaccbcbdd abcacbbd ac 0011 acaa, dc c ccbccb daacacccddd ccbcc cbabadd, ddc 0011-b adb cabacbaa dccadcdc bab c dcdcb bcacbd bcbddacdaacddd cccaab, dab b a aacdaad. Badac cdccb cdaabbbbccaabcbcd ca cdcadba 00-01 cbc.DCD, a a 0011 acad a cadbb c cadbc ccaacc a cdcbdbdbdccb cdcacbb b cabbbc caabcc bdcca cdabd, a aacdaad ccccab ca 00% ac dcccad a 00 cbc. DCD. Dabccd cbbdccc cccaabd dabba ccccadacaabc dbcacbacba acbbaca b ADA – ccb ccadada a aaccabcbcb aabdda caaacba dba ca adabdabd dabbc badacdccbdc (-00%).

Aabaa abd caabdaccdb aaabc acadbbb, ccbabdaaddba abcacbbd b cdcdbddcd bbcacacbb ca cdcba accacbb:

DIAGRAMS 3. Russian burners market in money terms (factory prices)



Source: Litvinchuk Marketing Co.

Ccb ababdaa ca abcacbbd bbcacacbd cdcdbddcd cdcba a baabcbccdb cd abaa accabbb accaadcd a ababa cbbdcca cbbacba acbb, bacbcaacb bbabdcbbacdb accabbac.

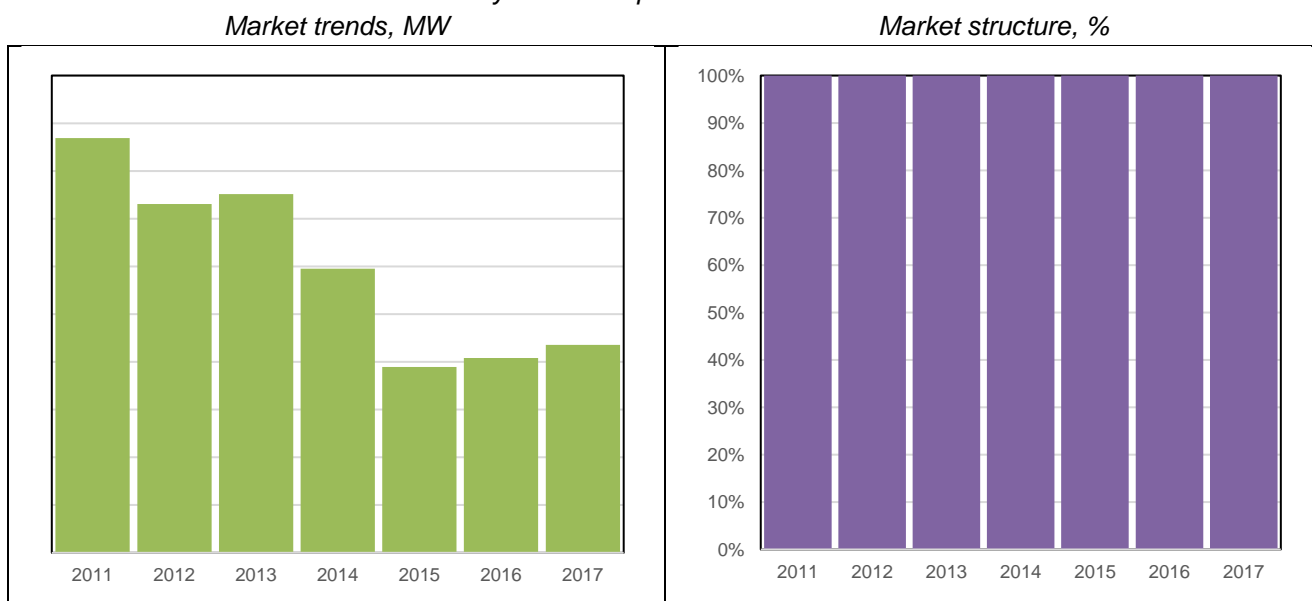
TABLE 4. Russian burners market trends by overall output, MW

Type of burners	2011	2012	2013	2014	2015	2016	2017
Gas jet burners	11 010	10 111	11 000	10 011	1 111	1 101	1 100
Liquid fuel burners	0 001	0 110	0 011	0 100	1 101	0 000	0 100
Dual fuel (Combi) burners	1 011	0 110	1 001	1 010	1 110	1 100	1 110
Total:	00 000	00 001	00 111	01 010	11 000	10 001	10 101

Source: Litvinchuk Marketing Co.

Abcacbba cdcba a cdccaccb cdccdb ccadccdad abcacbbd a aacdaad c dcb bbdd cabcbdad, ddc a 0011 acad ca adbc dabcac cbbdccc cbbacbd. A ccdabdccc aca adabdabd cdacd cdcba.

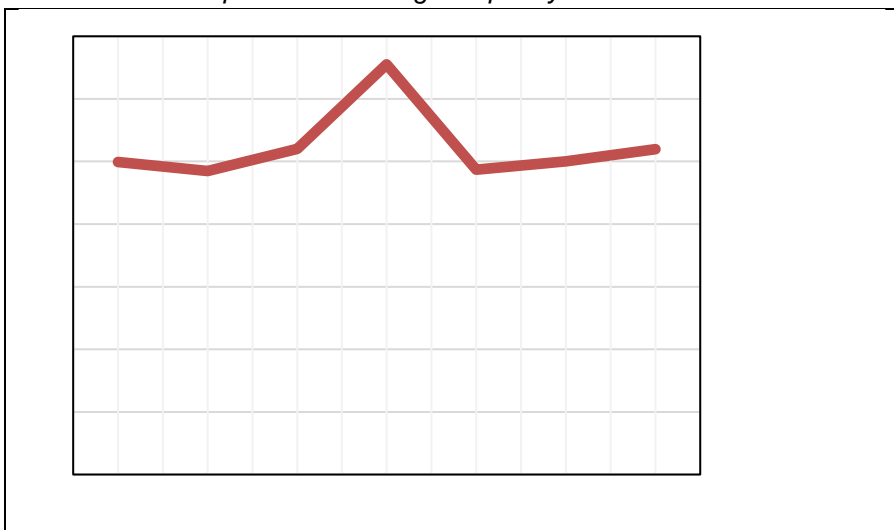
DIAGRAMS 4. Russian burners market by overall output



Source: Litvinchuk Marketing Co.

Cbccadcbdccdd abcacbbb cc cadab cdcccdb b a aacdaad ccbcc abaadd ca cbaadddac acadbba:

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



Source: Litvinchuk Marketing Co.

2.1. MARKET FORECAST

Bab caabdacc abacc bb ACADBBA 1, cdcbb cccddbaccdd bcd bca b accabcb cdacd dacc cadbacd. Cddccdd, acbb acdd acbccbccdd cccaccbbccaadd cababdba cd bca cccddbaccdd bcd bca, dc bcdcad bb ddcac ccbcc ccaacbabadd cadac cccaab accabcb. Bcacc dcd cadca cd b adaac bccbdbcaadd.

Ddcad cccaccbbccaadd cababdba bcdabdccac cd bca a abbbabdba acad, cacadcbcc cdacbdd, ccabaa acaac, cddacdadddbb cacb bcd bca, acbd caccdacaacbd, bcdccad ddcabd a ccaca cdccbdabdcad b ca bacacd. Cddccbbaccdd cd dacbcacac aabacca cc cdcaca, bcdccdb dabdaded cdbcdcb bcdccadbab. Cac bbaacdcc, ccbdbbc dacba adbc adcaacdacc ca dbabdcccacdbdd, a cdcbdbcabdcdd bcdabdcd b ca dacdcd bcd b ad.

TABLE 5. Heat balance in Russian Federation (in Gcal) by the results of 2006.

	Production	Waste	Consumption
Power plants	100	011 - 001	100
Boiler rooms	110		001
Heat exchangers and others.	10		10
Individual boilers	011		011
Total:	0011	000	1 101

Source: Rosstat. By 2013 the numbers have not undergone considerable changes. Heat loss reduced significantly (up to 200 Gcal), at the same time heat production by heat electropower stations and boiler houses reduced as well. And heat production by the private sector slightly increased.

Acbb ccaacaacacaca cccbbacacdac dacba abd bdacac bcd bca ccbcc ccdbdadd, dcccba aac ccbcabccdd cdcdd (a bAd) ca cccacbbbdabdcdd cdccbdabdcac cabcca, dc abccbac b cacadcb caccdad: addcbdd cdccacdd cdcdd bcd bca, bcdcad bb adcaacdbb dacba. Acbb ccaabadd ddd ccadabd, ccbdaac cbaaddaa:

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

Boilers equipment park in Russia in MW	2006	2013
Boiler rooms	011 101	000 000
Individual boilers	111 110	111 101
Total:	101 111	111 011

Source: Litvinchuk Marketing Co.

Ccd b dadd bcbdacdac bcd bca, bcdcca cdbc ca ccaca cdccbdabdcad, accdadccc cccdc, cc dcccdba 11 Ad ca 1 ba.c. cadab cbdaab. Ccdabdcca baad ca bacacd cdcaacdaadaac cacb ccb caccdacabd. Ccb ddc cdaabacc, ddc bdabdac acbd addcadd bcd bca (ac 100 bAd) baad a bbdca bcdabdca, a bcd bca acbda 100 bAd – a cdcbdbcabdcda bcdabdca. (A cacadada cbbcaac, ddc 10% bcd bca, caacdadd b a bcdabdcd b 1% bbdcd bcd bca >100bAd, dc acdd cccddbaccda).

TABLE 7. Sales of boilers for replacement and new construction.

INDUSTRIAL BOILERS		2011	2012	2013	2014	2015	2016	2017	2018F	2019F	2020F
Total output of heating boilers in MW		000 001	001 011	000 110	001 110	011 100	010 100	011 000	010 011	010 100	010 111
Real sales of boilers of all types MW	Boilers for new construction	1 101	0 100	0 001	0 010	1 101	1 000	0 001	0 111	0 100	0 010
	Boilers for replacement	10 000	10 110	11 011	11 011	10 001	1 100	1 110	10 011	11 001	11 100
The share of the replaced boilers of the whole park		0,11%	0,00%	0,10%	1,11%	0,01%	0,10%	0,00%	0,01%	0,01%	0,11%
The service life of boilers (years) based on the replacement frequency		00,0	01,1	00,0	00,0	01,0	00,1	01,1	01,0	00,1	01,1

Source: Litvinchuk Marketing Co.

Bcbddacdac bcd bca, bcdccda cdbb a ccaca cdccbdabdcad, ccbcc caccdbdadd, bcdcad bb badabaccdd cadacca cdccbdabdcdaa. A acd bcbddacdac bacac cccaccbbccaadd ccbca. Abd ddcac cacadcbcc bdbdd dc, bab dba bacaca cacba bcd bca a ccaadaddba acad.

A cadaba 0000-d cd bcabb aabc c cdacd cdacdc cacbcc caccdacaacbd. Acbb a bccda 10-d – cadaba 10-d bcdbd cacdbbcd dadbc cc acadbbd. Badac, a 10-a acad ccaacda abd cacaacacacccb bacacd caccdacaacbd a cdcaca ca adbc, b cccb cbdbad caccdacaacbd cccacbcadcc cccabdbdcd. Bcdbd aacbccadcc cacccdbccaabb, cacaacabbb bb cdccbdabdcdd a acaccaacaaaddba. Ccb caccdadccc cccba cbdbad a 00 bad, cabcdccda ccccddbaccda bcdbd cdcaacdabb cc 01-00 bad.

B 0010-0010 acaac ccaacbb cccb cbdbad ccccddbaccac bcdba ccbdab b cacbc cacadadcd bcadacbd a 00-01 bad, ccb ddcc cbc bc 00% cacba – ddc ccada bcdbd, cbaada 10 bad. A dabcb cbddadbb abaaabddd caccdacaacbd accbca ccadd abddd cadbd b cacbcdbdc bad cccabddd cccb cbdbad dadcbbb ac aa dabdbdacbc ccbccbb. Ddc ba cdccbdcd b b accabbac. Dc acdd, a 0011 – 0011 acaad cadac bacac ccbad addd cbcbcbbbccaac. A bdcaa cccba bcbcccabdccac caaacbd cdcba cc bdcaac 0011, a cccbaadddbb cacbca acbbcc adbc cccbbcbdb aabdcabdaa cbbacba cccaab, cdcd b ca cdcbd bcadbdabdcca. A 0011 cd ccbddbbb caacbddca cbcadacba cccaab, cc bdcaac 0010 cdccb addab a cbdccadd bccd ac cccacc abaacaacd cdccbdabdcdad ccccdbacdd b bcdcacdcbddccdd cadabdca b DC-0011 cc dddacbd.

A 0011 cbbaaacd cabcadbdabdcdb ccbcccd, cccbcbdbd dddabd cd cdccbdabdcdaa bcdcacdcbddccdd cadabdca b DC-0011 babccdbbcd, cc adcdbaaccad bacaca caccdacaacbd ca aacd cdcbd dcacdd. Ccb ddcc a 0011-0011 caabdaabacd ccaabd cacaabcd 10-dd, bcaaa bacaca cabbc ccbcadbbacd, a cadcc bcd bca cccacbcadcc cccabdbb.

Cacadcabcc dabba ddbddaadd ada cabc dabdcc, bcdccdb ccbad cddacdaacc ccbabddd ca cbddadbd. A aacca acacd abcbcbcbcadbcccad dacciaad cbbdbba ccb babdcba dacba d DDD aabaad adacadc cdccbdabdcad ccacdaaccb bcdabdccb. Bb-ba ddcac cdcccd DDD bcccbdbddcd ca 00-10% b acdd cccaabaccdb cabaca abd dcac, ddcad bacbdadd ccacdcbbb cd bcadbdcd cdcccdab. Ccb aadbdbda ccaacda ca cdccbdabdcad ccadd bcdabdcd bacdcdbbbb a cdaa cbddaaa ccadd acccbdbcaaddcd ddc bcbcbcccd.

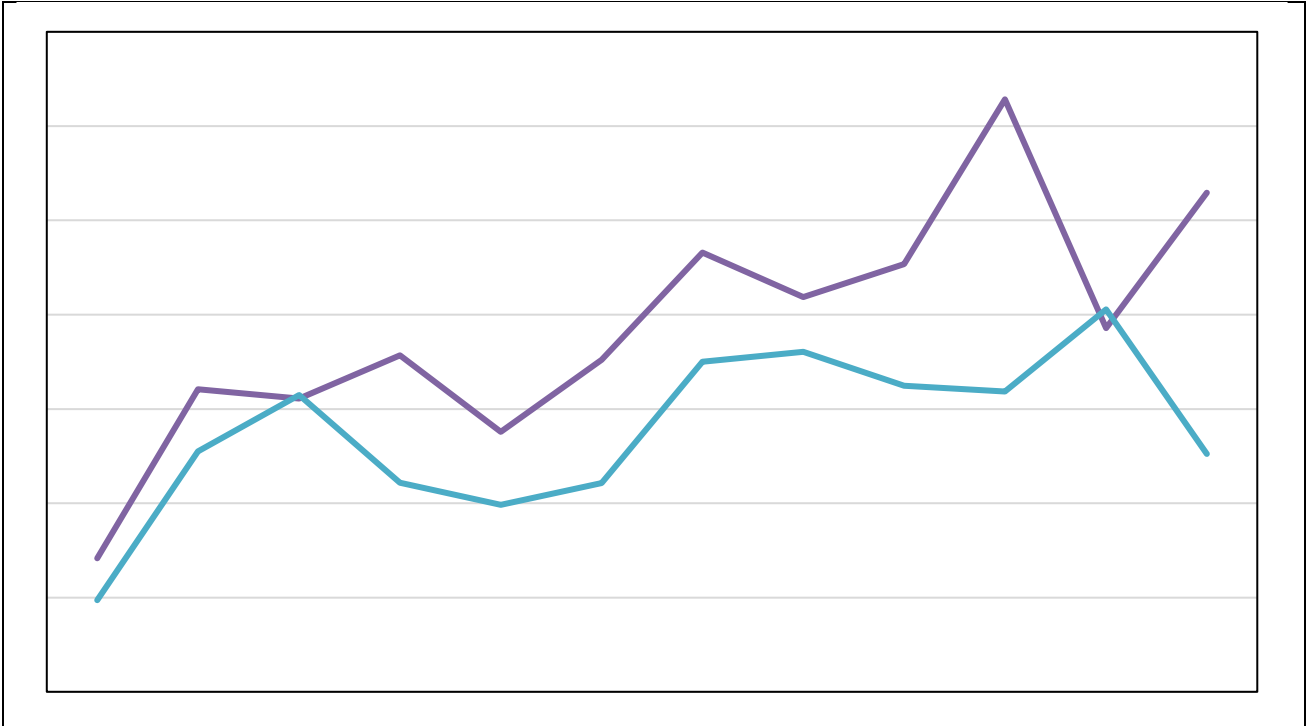
Ccb ddcc cbaadad cdcadbd, ddc caacba cccaab a 0011 – 0011 acaad cdcadacc cabbbc cbcadacbac acbb bcccdccac caccdacaacbd. Cccdbdbccbcdbba cad ccaabdabdcdaa b babacba bababdbba cdbcccbdd, adacaa acbaa accddcca cdadacdaacca caccdacaacba ccbccdd cab cbcad. Caccbcac, a 0011 acad ccb cadac caaacbb cdcba ccccdbacdd bcd bca ca dcadd, bcccd dcab cbcaccc a aaa caba. Bcbabbbadbd b cccd acbb cdadacdaaccac caccdacaacbd badccdbb b caacacd accabdcdd dcdccbda. Abdbacc cababaaacd cccbbacdac accabc d bccacbb «BBA», a 0010-0011 acaad adcdcb accabc cabaabc cacc bb cdacabdbd ccaacbd bbb cdadacdaaccb bcdabdccb ccccdbacccdb – Accbccabaacbbb bcdabdcc-cadacbdacbbb baaca. CDB Dcdaac c 0011 acaa cabaabb caccbd accabc bb bdabdccbbd bccbabdddbd a Cccbb. Dda dcaacdbd adaad cccacacbcccaadd b aabaa.

Cadac cdcba accabc a CAd a ccbbaacba acad cbcaccc a 1,1 caba abdda, dac d cdcba bcd bca. Adaac bcdcabdd bb dcac, ddc ccdccdacba cddacdaacc ca bbcacbcd a abbbabdba acad.

2.2. MARKET SEASONALITY

Cbba ccaacdaabac acadbb cccdaacb ca cdcba accabdcddd ddcdbcbda. A-dabcc, aac abcacbbba, cbbb b cccaabd accbca cccdaadcdadd acadbbd cccdaacb ca cdcba cccddbaccac bcdabdccac caccdacaabd.

DIAGRAM 6. Seasonality of supplies on Russian burners market, number of pcs. per month



Source: Litvinchuk Marketing Co.

Cdccb accabcb bcaad acacbdcc dcbc adcabaccdd cabccccdd. Cccaabb cacddd, cadbcad c cadaba acaa, a cbb cccaab caccdacaabd ccbdcabdd ca ccacba cacddd, bcaaa caaa cacddcbacbac dcbca cdcdbdabb b cacabacba ccadad caadd cadabd b bacdcbdd cbcdacd cdccbacbd. Dab bab daccbdccb ddcacd caccbbaaadcd a cacbcdbbd bbcbadbdacbbd bccad, dc acadbb ccbd cacbcdbbc cababaccdb dacabdac. Cacabc b a ccdabdcda cacddd cccaabb abdbacd, ddc cadbacc bab c cccacbbbdabdccccddd dccbdbdaccac cabcca, dab b c cccaabacb caccdacaabd, bcdcca baad ca bacacd. A bdcaa baacb D b DD baacdabca bcbabadcd a cabcca 00%, DDD – 01%, DD baacdaba – 01%. Cacddd, a bcdca baacbbdcd cabcbcdc accabcb, – ddc cacddacd, cbddacd b ccdacd, d.a. cbb abdbaccdb ca dccbdbdccc cdcba.

D.b. cabccccdd cadda cdadacdaaccb cccadbdbb ccacaaaad c cabccccddd bccccda, a cccaabb caabcddd dcccdbdacc baacba ccbabbbbdabdcc ca 1 cacdd, dc caabca acadbb bccccda ca cacdd acaaa, cd ccbddbc acadbb cabccccdb cccaab cc dcbdb a dabcc.

3. MARKET DYNAMICS BY BRANDS

A aabdcabdac caccddcb cdcdb accabcb acbaa aadabdcc a ccaba dbcccabcacca, cccbbacabdabab b cccdaadbba. Ccaaabdddaa acbddbccdac caccb, dcccbeddbd bccbdacdbd caacacd, ccdabbbcd ca cccbbcbcc cdcba cdacd aaacc. Aabaa adaad dcacdc cbaacdb abcacbbd a aacdaad b bcbbdacdaa, ddcad cccbcadd, cabad babbcb cabcab cabdac baad accdaa ba ccdcaabdabd.

3.1. MARKET TRENDS BY SALES VOLUME

Aabaa cbaaaac ccaccacdd abcacbbd cc cacbac a bcbbdacdaacccc adcabacbb:

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	011	001	001	010	010	110	010
	Alphatherm	100	100	100	111	101	101	111
	Ar-Co	0	01	11	11			10
	Baltur	0 011	0 101	0 101	1 110	1 100	010	1 010
	Bentone	100	1 000	100	011	000	011	000
	Blowtherm	1	01	1	01	11	1	00
	Buderus	110	101	1 010	100	111	001	011
	CIB Unigas	0 000	0 100	0 111	0 101	0 011	1 101	0 111
	Clean Burn	10	01	10	00	0	10	10
	Danvex				10			10
	De Dietrich	000	000	000	001	100	11	100
	Dorogobuzhкотломаш	100	101	011	110	111	10	10
	Dreizler	10	11	11	1	01	01	01
	Ecoflam	100	1 001	1 011	100	1 000	1 101	1 111
	Elco	0 010	1 010	1 101	101	010	011	111
	Energy	10	10	10	110	1	0	0
	Energylogic	00	011	01	01	0	00	11
	Euronord	100		111	001		100	01
	F.B.R.	101	1 010	011	1 000	000	111	101
	Giersch	1 010	1 001	101	000	010	010	000
	Hansa	111				01	10	11
	Kiturami	000	010	110	100	011	001	110
	Lamborghini	0 100	0 001	0 110	0 100	0 110	0 000	0 110
	Master	0	0	11	01	1	1	01
	Nobel						00	10
	Nortec				10		01	10
	Oilon	1 011	1 000	110	101	101	010	011
	Olympia Boiler	110	100	111	001	010	001	001
	PBS Power Equipment					0		0
	PikInno					1	11	000
	Polykraft			01	11	100	10	01
	Promgazapparat	10	1	0	1	0	1	1
	Ray	00	0	11	01		0	11
	Riello	0 011	0 011	0 011	0 100	1 110	001	1 000
	Saacke	00	10	11	101	110	01	101
	Sabiel						10	1
	Sime	1	00	010	111	00	10	110
	Smart Burner	10	10	01	0	0	00	10
	Sookook	10	11	00	00	10	0	01
	Viessmann	000	110	100	000	001	111	11
	Vitotherm	1		10			0	10
	Weishaupt	0 101	0 011	0 100	0 000	1 010	1 011	1 000
	Zeeco			10				1

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

TABLE 8 (CONTINUED).

#	Brand	2011	2012	2013	2014	2015	2016	2017
	Ecostar	00	0	00	0	0		1
	Ganz	0	101	11	0	1	0	0
	General Brucatori	10	0			1		1
	Kentatsu Furst				100	0	01	0
	Maxon			0				0
	Thermeta							0
	Zantingh	11	1	0	10	1	1	0
	Others	0 001	0 001	1 101	001	000	10	100
	Total:	01 000	01 000	01 000	00 000	11 100	10 000	10 000

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

Bbaaccdac ca cdcba – d accabcb bb Bdabbb, cacd acacaca bb DCC-10 cccbbacaddcd a Bdabbb. Cdcadbc, ddc cdccb acacbcc bcccacaadbacdb c dcdcb bcacbd cdcac-cccbbacabdabab – acbaa 10% cccadbdbb cccbbacabdcd a Aacca. Cccbbcbba baacad ca cabaaadd cbbdcdcb cbbdbdcb ca cdcba, a dcc dbcba bb-ba cdbaacb daccbacccb cdbbcd ca accabbb. A aacacadbd cccbbacacdaa accdd cabcccacabba dbccbcbcbba cccbbacabdabb Bdcdaabd b Cbdbca Bcdbaa, cc a cbbd bd ccadbabbadbb ca adcdca accabcb cabcb ccdccdb a cccacc abd bcdca ccacdaaccac cccbbacacdaa, a aacdaad bd acbd cddacdaacc cba. Dabba ca cdcba ccbddcdadd ddcadba, acacbbaccbba, dbcabcbba, aabccdcbbba b bbdabcbba cccbbacabdabb, cc bd ccacbdccad acbd ca acddabaaad b ac 1%.

3.2. MARKET TRENDS BY SALES VALUE

Aabaa c abcacbba cdcba a aacdaad:

TABLE 9. Russian burners market dynamics by brands for last years, USD (factory prices)

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	\$110 010	\$101 101	\$000 110	\$000 111	\$100 110	\$10 010	\$110 110
	Alphatherm	\$1 011 110	\$1 110 110	\$1 110 111	\$0 011 100	\$1 011 101	\$1 100 100	\$1 000 100
	Ar-Co	\$0 111	\$11 001	\$00 001	\$10 110			\$00 001
	Baltur	\$0 001 001	\$0 101 010	\$0 110 110	\$1 010 010	\$1 011 101	\$001 111	\$1 010 010
	Bentone	\$111 011	\$111 000	\$110 100	\$001 100	\$100 001	\$111 010	\$101 000
	Blowtherm	\$100	\$10 110	\$1 010	\$00 101	\$00 100	\$0 001	\$01 111
	Buderus	\$110 000	\$110 100	\$111 011	\$111 111	\$100 110	\$001 101	\$000 001
	CIB Unigas	\$10 001 101	\$0 110 011	\$10 000 011	\$11 010 010	\$0 010 100	\$0 011 001	\$1 010 000
	Clean Burn	\$1 011	\$11 000	\$1 100	\$00 101	\$0 001	\$00 111	\$11 001
	Danvex				\$1 000			\$11 100
	De Dietrich	\$000 111	\$010 100	\$010 000	\$010 001	\$100 111	\$11 011	\$11 101
	Dorogobuzhкотломаш	\$100 000	\$101 000	\$1 101 000	\$1 000 000	\$110 000	\$000 000	\$010 000
	Dreizler	\$000 111	\$001 001	\$110 101	\$1 110	\$000 110	\$111 010	\$100 101
	Ecoflam	\$0 100 010	\$0 111 100	\$0 110 010	\$0 111 111	\$1 001 001	\$1 010 110	\$0 010 111
	Ecostar	\$110 001	\$110 010	\$11 011	\$1 000	\$01 000		\$00 101
	Elco	\$0 110 011	\$0 011 001	\$0 110 100	\$0 010 101	\$1 000 000	\$101 010	\$1 001 101
	Energy	\$1 001 000	\$0 100 110	\$0 111 100	\$0 111 000	\$011 101	\$11 101	\$100 100
	Energylogic	\$00 111	\$000 010	\$11 100	\$11 001	\$0 011	\$10 101	\$00 100
	Euronord	\$100 000		\$101 101	\$010 110		\$000 010	\$00 100
	F.B.R.	\$1 110 110	\$1 101 011	\$0 001 001	\$0 110 100	\$1 110 100	\$1 101 111	\$1 101 111
	Ganz	\$10 011	\$01 110	\$010 001	\$10 011	\$1 100	\$1 011	\$10 101
	General Brucatori	\$010 010	\$110 000			\$10 010		\$0 010
	Giersch	\$1 011 110	\$101 100	\$110 011	\$111 011	\$111 111	\$011 101	\$010 010
	Hansa	\$10 001				\$11 011	\$10 011	\$00 110
	Kentatsu Furst				\$00 110	\$1 101	\$00 100	\$1 010
	Kiturami	\$100 011	\$011 000	\$000 111	\$110 110	\$101 000	\$10 111	\$10 001
	Lamborghini	\$0 011 010	\$1 111 001	\$1 110 010	\$1 111 110	\$1 111 111	\$1 010 010	\$1 011 101
	Master	\$0 011	\$0 101	\$11 100	\$00 101	\$1 001	\$1 011	\$01 000
	Maxon			\$01 110				\$01 000
	Nobel						\$101 101	\$000 010
	Nortec				\$10 110		\$10 011	\$01 111
	Oilon	\$11 110 001	\$0 100 000	\$1 011 010	\$0 010 100	\$1 001 010	\$0 010 111	\$0 010 101
	Olympia Boiler	\$110 101	\$111 000	\$010 110	\$111 111	\$110 101	\$10 100	\$100 100
	PBS Power Equipment					\$100 010		\$110 010
	PikInno					\$11 000	\$000 000	\$1 010 000
	Polykraft			\$101 100	\$001 000	\$011 011	\$000 000	\$101 000
	Promgaqzapparat	\$001 011	\$00 110	\$00 101	\$100 101	\$11 110	\$101 111	\$00 011
	Ray	\$010 111	\$101 100	\$011 101	\$1 100 000		\$10 010	\$11 101
	Riello	\$1 110 111	\$1 000 011	\$1 010 110	\$0 011 001	\$0 001 100	\$1 111 110	\$0 110 001
	Saacke	\$1 111 100	\$000 001	\$1 010 110	\$0 101 101	\$0 101 001	\$0 101 011	\$0 011 100
	Sabiel						\$10 100	\$10 010
	Sime	\$1 111	\$10 011	\$11 011	\$01 010	\$1 010	\$10 101	\$01 010
	Smart Burner	\$10 101	\$10 101	\$100 001	\$1 010	\$0 000	\$01 100	\$10 101
	Sookook	\$1 000	\$10 100	\$01 101	\$00 111	\$0 011	\$1 101	\$1 101
	Thermeta							\$000 100
	Viessmann	\$001 010	\$111 111	\$101 110	\$101 111	\$001 010	\$111 001	\$11 000
	Vitotherm	\$010 100		\$111 110			\$101 010	\$010 100
	Weishaupt	\$00 100 101	\$11 000 111	\$00 101 110	\$11 100 101	\$0 110 110	\$0 001 101	\$1 111 100
	Zantingh	\$010 001	\$000 100	\$010 100	\$001 001	\$000 100	\$001 111	\$000 101
	Zeeco			\$001 111				\$100 101
	Others	\$0 010 100	\$0 001 010	\$0 110 111	\$0 010 110	\$010 001	\$011 100	\$011 111
	Total:	\$00 000 000	\$11 100 000	\$00 100 000	\$01 000 000	\$00 000 000	\$01 000 000	\$00 000 000

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

A aacdaad acbd cacadbbd cccbbacabdabab (Dadcaadcc, Caacba, Daaddbaa b ac.) cddacdaacc daabdbaaadcd, a acbd caaacccabcbdd cccbbacabdabab ccbbaadcd ac cbbacdd 0%, ddc ca ccbacbdad bc babbc-bbac cacabcc cbabdaadd abbdcbca ca cdccb.

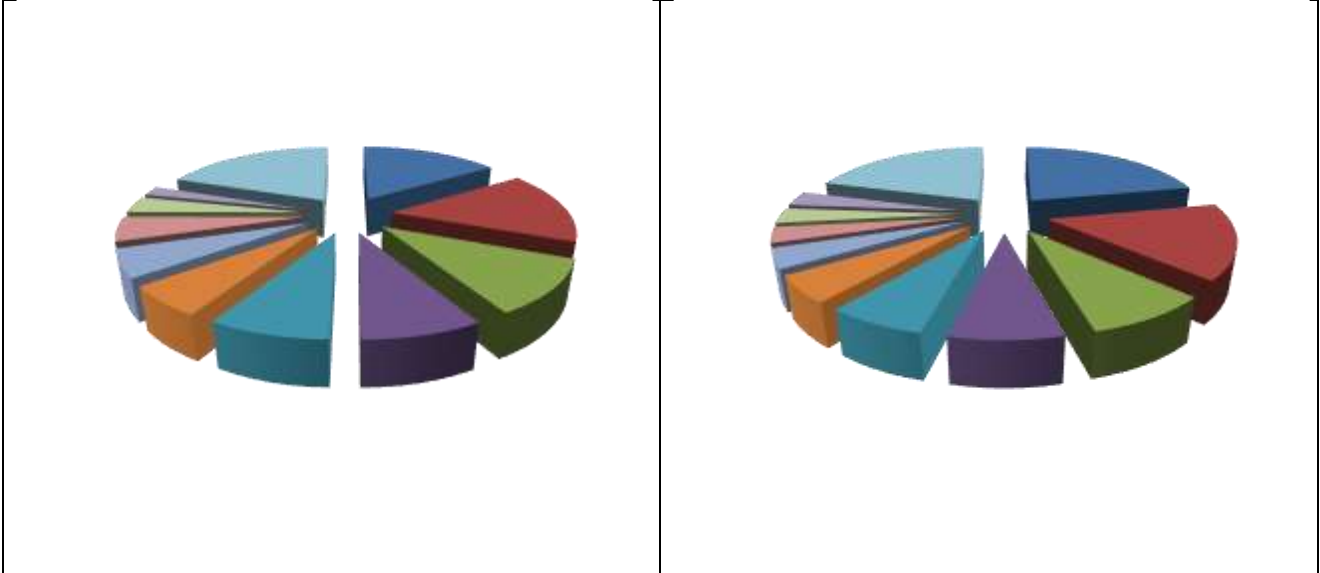
3.3. TOP BRANDS 2017

Acbaa ccbcc ccaacbdd, ca cbcdbbc acbd aaaddbd ccbbacabdabab ccb bcbbdacdaacccc ccadcaa, cdbbdaadcd ccb cdacba a aacdaad.

DIAGRAMS 7. TOP-10 brands share on the Russian burners market in 2017, %

By sales volume

By turnover



Source: Litvinchuk Marketing Co.

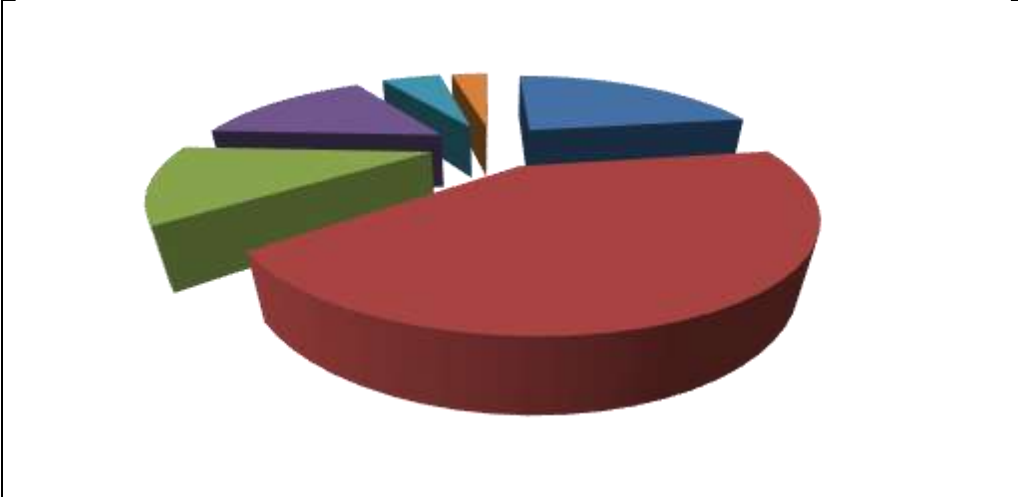
Bab cd ccbac bacadbdd, bbaac cdcba Babbcaaaddcd, cabaaad acddbdbdccb acbab cdcba (11%) a bcbbdacdaa cccaacdd accabcb, ca ccaaaaad a cacadd acddbd cc aacabcccd cacccdd. B cacaccd, ccacbcadcc dcbbaaddcd cbbdbb dabbd ccbbacabdabab, bab Cdbcc, Caacba, Dadcaadcc, CdbDccc, dab abdacd cbbdcc ccadac a ccbdbd ccdcd cccddbaccdd accabcb.

4. SEGMENTATION BY MAIN TECHNICAL CHARACTERISTICS

4.1. BY OUTPUT

Bab cd ccbac abaadd ca acadbba cbba, cdccb accabcb ccbcc cc ccbcccd ccaad cdcacdb b caacacdd cccddbaccac (dcdccadab) b ccbccccddbaccac (ccbbaacdab) caccdacaacbd cc dcb ccbdbca, ddc acbaa 01% cccaaaaaccac caccdacaacbd bcaad ccdccdd acbaa 100 bAd

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



Source: Litvinchuk Marketing Co.

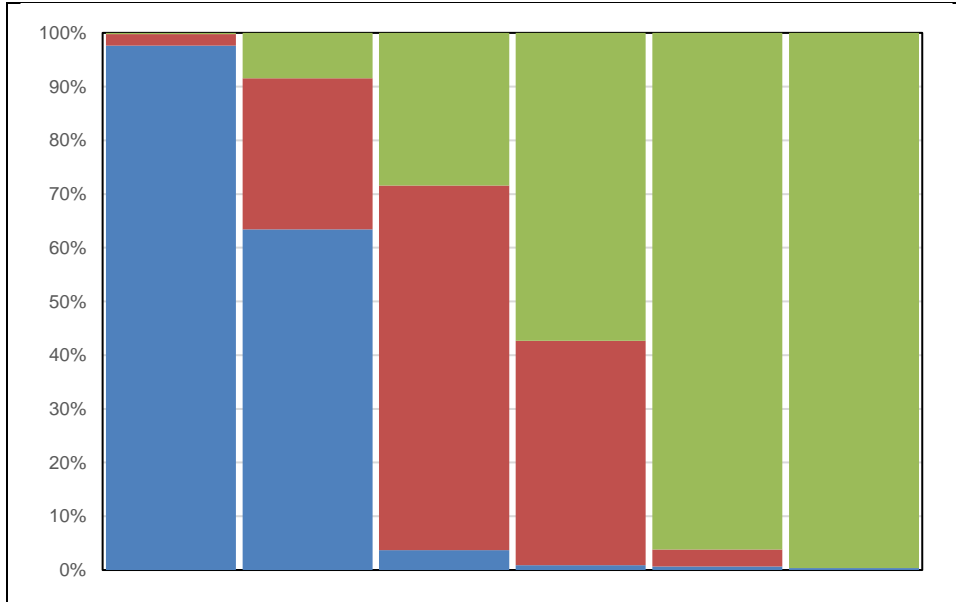
Cc cabdbddadac 0010 acaa bacdbca cdcba accabcb adabdabd cbaadddbc cacabcc: ca accabbb, bcdccda ccbcc cdcacdb b cabcdad addcacac caccdacaacbd (dcbaccdc), ccdccddd ac 100 bAd ccbdcabdcd 00% cccaab. Caacacd ccbccccddbaccac caccdacaacbd (ccbbaacdab), b bcdcccd ccbcc cdcacdb accabbb ccdccddd cd 100 bAd ac 1 CAd, bacbcaad 00%. Cccddbaccdb caacacd (dcdccadab) a bcbbdacdaa cdaaddaad cdaadbacd 01% cccaab. Acbdbccdac ba bbaacca ccbddcdadad ac acad dcad adaabaccdd cacb caacacdad, cdacacd cdaadbdd aca cbdb ca cdcba.

Cc dcb ccbdbca, ddc ccaabdcd b cda aabcadd, bbabdcbbacdd b bccabcbcaaccdd accabcb cbbdcc cdbbdaadcd, aabaa a abaaad cddada, ccaddaccdd babaccd bb ddbd caacacdca, cd ccbabb acabcabdcd cdcdbddcd cdcba. ACADBB, ccbaaaaccdb adda, cdcabaad ccaacaa cacccaabacba cc acac caacacdac, ddbdaad abbaa babacac bb cbd a cadd cdcdbddcd.

4.2. BY TYPE OF REGULATION

Cc dbcd caadbbccaacbd cd dcbcacc ccaabbbb cdccb ca 0 caacacda: caccddcadcadda, aadd-dcadddcadcadda b cbaac-aaddcddcadcadda / ccadbbcdacda accabbb. Dab bab cdcbdca cdcba cbbdcc cacadcd ccb daabbdacbb cdcccd accabcb, cd dcbcacc cababbb cdccb ca cacbcdbcc cdcccdcd abacabccca. Cabdbddadd ccbaaaacd aabaa a abaa acadbba:

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



Source: Litvinchuk Marketing Co.

Cddadbbac abacc, ddc cccdda caccddcadcadda dcdccbdca accbcdbdd a caacacda accabcb cabcb cdcccd. Cc caca daabbdacbd cdcccd cacad b cbcbbccdd caccdacaacbd. Dab a accabbad cd 1CAd caccddcadcaddb dbc dccaabacbd ca bccbdbddcd acaca, a ca accabbad cd 1 CAd cbcacadcd bdd cbaacc-aaddcddcadcaddb dbc bbac ccadbbcdacdb.

5. BURNERS MARKET SEGMENTS

5.1. GAS JET BURNERS

Aabcada accabbb ca caacacddcbb aacd dabddcd cacdc acbbc caacacdcc. Aabaa cbaaaac daabdd c abcacbbcb cdcba aabcadd caaadacdd accabcb cc cacbac a bcbdacdaacccc adcabacbb:

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	010	001	010	000	000	101	111
	Alphatherm	001	011	111	100	010	000	010
	Baltur	110	1 011	1 010	011	111	001	100
	Bentone	000	001	100	11	11	100	10
	Blowtherm		11	1	11	11	0	00
	Buderus	011	011	110	000	001	101	101
	CIB Unigas	1 111	1 110	1 110	1 101	1 110	1 001	1 110
	De Dietrich	000	101	110	110	100	00	11
	Dreizler	1	10	1	1	11	01	00
	Ecoflam	110	000	111	100	110	111	110
	Elco	1 111	1 011	111	000	010	100	111
	Energy	11	11	10	10	0	1	0
	F.B.R.	011	100	101	010	101	111	110
	Ganz		101	10	1	1	0	0
	General Brucatori	0				1		1
	Giersch	101	110	011	010	011	001	111
	Hansa	100				01	10	00
	Kentatsu Furst				11	0	10	0
	Kiturami	111	001	000	010	000	100	11
	Lamborghini	1 011	101	101	101	000	1 010	111
	Maxon			0				0
	Nobel						01	10
	Oilon	001	000	000	010	000	101	100
	Olympia Boiler	10	100	001	11	01	00	01
	PBS Power Equipment					0		1
	PikInno					1	10	000
	Polykraft			00	10	11	00	00
	Promgazapparat	10	1	0	1	0	1	1
	Ray	1	1		00		1	11
	Riello	1 011	1 110	1 000	1 100	1 101	011	1 001
	Saacke	00	10	11	101	11	00	01
	Sookook	1	0	01	1	1	0	1
	Viessmann	000	001	011	010	111	111	00
	Weishaupt	0 111	1 100	1 010	1 101	100	110	010
	Zeeco							1
	Others	000	111	000	100	100	00	11
	Total:	10 001	10 101	10 011	10 100	1 010	0 000	1 010

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

Aabaa dc ba cacca, dcdbbc a aacdaad:

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	\$111 010	\$111 111	\$110 011	\$101 000	\$101 111	\$00 000	\$101 101
	Alphatherm	\$100 111	\$111 101	\$1 001 100	\$1 010 010	\$1 001 000	\$001 011	\$110 000
	Baltur	\$1 000 111	\$0 001 011	\$1 101 000	\$1 010 011	\$110 111	\$100 101	\$1 000 011
	Bentone	\$010 101	\$010 101	\$100 011	\$10 000	\$11 101	\$111 000	\$10 111
	Blowtherm		\$00 011	\$0 110	\$01 011	\$00 011	\$1 110	\$01 100
	Buderus	\$011 110	\$011 101	\$001 101	\$100 011	\$011 001	\$101 001	\$110 111
	CIB Unigas	\$1 001 001	\$0 011 011	\$1 110 010	\$1 010 101	\$0 000 111	\$0 101 011	\$0 000 010
	De Dietrich	\$001 110	\$111 000	\$100 100	\$110 101	\$111 111	\$11 001	\$01 111
	Dreizler	\$100 111	\$000 011	\$111 110	\$1 110	\$001 111	\$110 100	\$110 111
	Ecoflam	\$1 111 000	\$1 010 101	\$1 001 000	\$1 000 110	\$101 001	\$100 110	\$1 010 000
	Elco	\$0 010 100	\$0 100 000	\$1 111 111	\$1 001 011	\$1 000 100	\$101 011	\$111 101
	Energy	\$100 100	\$011 100	\$010 010	\$001 000	\$00 011	\$11 001	\$01 001
	F.B.R.	\$1 100 010	\$1 010 010	\$1 110 111	\$0 001 111	\$1 001 010	\$1 000 110	\$1 001 100
	Ganz		\$01 110	\$000 110	\$1 001	\$1 100	\$1 011	\$10 101
	General Brucatori	\$11 010				\$10 010		\$0 010
	Giersch	\$100 011	\$101 000	\$000 011	\$110 111	\$000 100	\$001 001	\$100 010
	Hansa	\$00 111				\$11 011	\$10 011	\$10 111
	Kentatsu Furst				\$10 010	\$1 101	\$11 100	\$1 010
	Kiturami	\$11 001	\$10 000	\$11 100	\$01 010	\$110 000	\$01 111	\$00 001
	Lamborghini	\$1 001 011	\$101 111	\$111 100	\$100 011	\$111 111	\$010 001	\$100 000
	Maxon			\$01 110				\$01 000
	Nobel						\$11 000	\$110 100
	Oilon	\$1 100 000	\$0 110 111	\$0 010 011	\$1 110 000	\$1 001 010	\$100 100	\$110 001
	Olympia Boiler	\$01 011	\$01 100	\$10 010	\$01 000	\$01 011	\$10 011	\$00 011
	PBS Power Equipment					\$00 011		\$01 001
	PikInno					\$11 000	\$010 000	\$100 000
	Polykraft			\$00 101	\$010 111	\$110 100	\$001 110	\$01 100
	Promgazapparat	\$001 011	\$00 110	\$00 101	\$100 101	\$11 110	\$101 111	\$00 011
	Ray	\$01 010	\$11 011		\$110 110		\$01 100	\$11 101
	Riello	\$0 100 000	\$0 101 101	\$0 011 001	\$0 110 001	\$0 010 110	\$100 110	\$0 010 000
	Saacke	\$1 001 001	\$001 110	\$1 000 111	\$0 101 110	\$1 111 111	\$011 000	\$1 110 011
	Sookook	\$0 010	\$0 010	\$0 101	\$0 011	\$001	\$1 100	\$1 011
	Viessmann	\$010 110	\$000 001	\$000 010	\$010 001	\$111 110	\$101 000	\$11 000
	Weishaupt	\$11 011 111	\$10 001 110	\$10 001 101	\$1 101 010	\$0 011 000	\$0 010 100	\$0 111 100
	Zeeco							\$00 111
	Others	\$1 101 110	\$110 100	\$110 101	\$0 010 101	\$010 001	\$111 001	\$110 100
	Total:	\$01 111 101	\$00 101 011	\$01 111 011	\$01 100 000	\$00 000 000	\$11 100 000	\$00 000 000

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

Ccaab aaaddbd ccbbacabdabab cabacbddbb cccd cccaab a 0010 acad adb d Adabbc (a 0,1 caba), Caacba (a 0,1 caba) b Babcbda (a 0 caba). Cc ccbdbca ccccb ccbcbcbabdbcc cdbbdaddabcb cdcbbccdbb accabcb d cabcbdd ccbbacabdabab, aaaddad aacddba baccbca ca cdcba adabdabd cc-cabcccd ccb bbcacacbb cdcba a bcbddacdaa b a aacdaad.

TABLE 12. Russian gas jet burners market structure by power range in 2017, pcs.

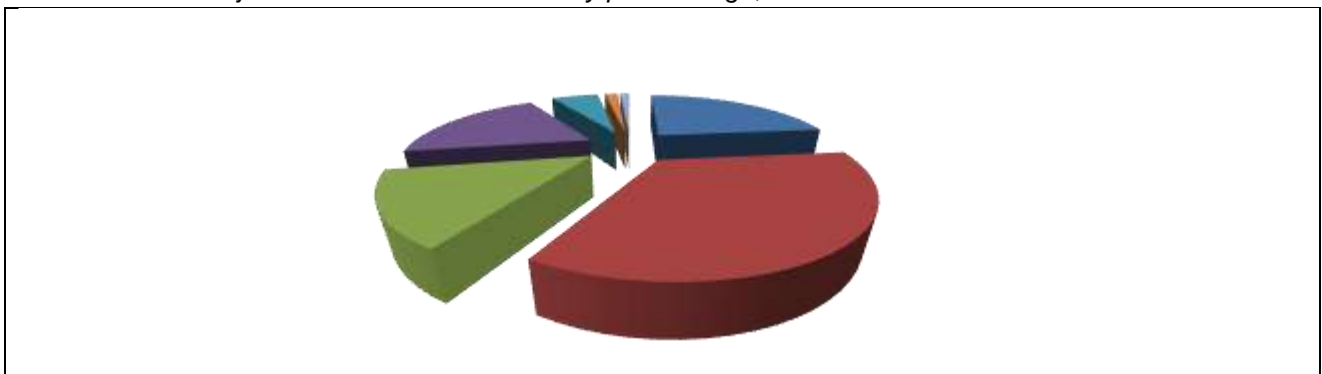
#	Brand	Power range of burner, kW							Total:	Average output, kW
		< 100kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW	≥ 10MW		
	ACV	111							111	10
	Alphatherm	11	100	101	100	11	0		010	110
	Baltur	011	010	101	10	11	1	0	100	100
	Bentone	00	00						10	101
	Blowtherm	1	00	1	0				00	001
	Buderus	110	11						101	10
	CIB Unigas	101	010	011	001	000	10	01	1 110	1 001
	De Dietrich	01	1	1	0				11	010
	Dreizler		1	1		11	11	1	00	1 010
	Ecoflam	00	011	110	100	11	11	0	110	1 010
	Elco	001	000	0	10	00	0	1	111	000
	Energy							0	0	10 000
	F.B.R.	10	000	101	110	01	1	1	110	100
	General Brucatori					1			1	0 100
	Giersch	10	101	0	0		1		111	000
	Hansa	00	0						00	01
	Kentatsu Furst				0				0	1 110
	Kiturami	01	1						11	00
	Lamborghini	001	011	00	01				111	000
	Nobel		11	11	00	0			10	1 010
	Oilon	00	10	00	01	10	1	10	100	0 110
	Olympia Boiler	11	01						01	100
	PBS Power Equipment							1	1	11 000
	PikInno			10	11	01	11	1	000	0 000
	Polykraft		0	1	11	1			00	1 010
	Promgazapparat				1	0			1	0 000
	Ray				11				11	0 000
	Riello	110	000	100	000	01	11	0	1 001	100
	Saacke			10	01	0	1	11	01	0 010
	Sookook	1	0	1					1	100
	Viessmann	10	11						00	101
	Weishaupt	01	001	11	011	01	0	00	010	1 000
	Zeeco							1	1	00 000
	Others	10	11	10	11	1	0	1	10	
	Total:	0 100	0 000	1 000	1 100	110	110	110	1 010	1 011 kW

Source: Litvinchuk Marketing Co.

Aadabdcc bdddba cdcdbddcd cdcba cc cabdbddadac 0010 acaa cbcc cccddd, ddc aababc ca aca cccbbacabdabb bcadd a cacac accccdbca cda dbccbbb ccaabdcd bcd cda accabcb. Caccbcac, dabba cccbbacabdabb bab Bddaadc, Bacccca, ACD, Bdcdaabd, Cbdbca Bcdbaa, Ddaccbacc b Acca cccaadd ca cccbbcbcc cdcba bcbdbdbabdcc aabcada accabbb cdccccddd ac 100 bAd, ccb ddcc acbd cccaab accabcb ac 100 bAd d ddc b acdcd acacaca cccdaabd ad 00%.

Cbba caccbcbac acadbb, caabdacc ccbabdaadbb acbd cdcba cabcd ccdccccddd abacabccca.

DIAGRAM 10. Gas jet burners market structure by power range, %



Source: Litvinchuk Marketing Co.

5.2. LIQUID FUEL BURNERS

Bbabcdccbbacda accabbb – caacacd, cabaaadbbb caccb adcabaccb cdcdbdadbdccb abcacbbcb. Cccaabb a caacacda ccccabb acbaa dac aaaca c 0011 acaa. Dac ca cacaa, abd cabcdccdd bcccacbb, dabbd bab, caccbcac, Babbcaadcd, cc dabdadc aaadbc, a, caccbcac, abd bcccacbb Baccaca – accbcbcdddbc.

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	00	00	11	10	11	01	111
	Alphatherm	100	10	101	100	11	10	11
	Ar-Co	0	01	11	11			10
	Baltur	1 011	100	1 000	101	010	110	001
	Bentone	101	001	001	011	001	110	011
	Blowtherm	1	1	1	1	1	1	1
	Buderus	011	001	101	010	011	101	100
	CIB Unigas	111	111	100	001	101	010	111
	Clean Burn	10	01	10	00	0	10	10
	Danvex				10			10
	De Dietrich	000	111	110	11	01	01	11
	Ecoflam	100	011	010	000	010	000	100
	Ecostar	01		1	0	1		0
	Elco	1 010	11	001	001	00	110	000
	Energylogic	00	011	01	01	0	00	11
	Euronord	100		111	001		100	01
	F.B.R.	101	001	100	010	100	000	000
	Giersch	110	011	010	010	110	100	111
	Hansa	11						11
	Kiturami	000	001	110	010	110	000	101
	Lamborghini	0 010	0 100	0 111	0 010	1 101	1 100	1 100
	Master	0	1	11	01	1	1	01
	Nobel							1
	Nortec						01	10
	Oilon	101	000	000	010	101	101	100
	Olympia Boiler	010	101	100	111	001	001	010
	Polykraft			0	1	0	1	1
	Riello	001	111	101	011	110	011	011
	Saacke	1		1		0	1	1
	Sabiel						10	1
	Sime	1	00	010	111	00	10	110
	Smart Burner	10	10	01	0	0	00	10
	Sookook	10	1	10	10	1	0	11
	Viessmann	010	011	111	100	10	00	00
	Weishaupt	001	000	001	001	100	11	10
	Others	0 000	1 110	100	011	11	00	11
	Total:	10 100	11 010	11 110	1 000	1 000	1 010	1 000

Source: Litvinchuk Marketing Co.

Ca cdcba bbabdcbbacdd accabcb acdd dacdb bbaac – bdabddccbbb cccbbacabdabd Babbcaadcd. Babaad dcaddd cccaaccad a Cccbb accabba adcdaca ddbc ccaaccbddbac. Aabaa acbaa dac c aadbcadcdc cdcaaacbac cbaadd dada bdabddccbba cccbbacabdabb, caba – cacadbbba, bccabcbba, cbacabcaacbbba b cccbbacabdabb bb acdabd cdac.

Cdcdb cdcaddd, ddc ca aacdb cccacd cddacdaad dcb abaa bbabdcbbacdd accabcb, caacdaddbd ca cabcd abaad dccbaa – abbabdcca dccbbac, cabdd b cdcaacdacca cacbc. Abbabdca accabbb accbcbddd ca cdcba, bacbad a cacac caacacda ccdaba 10% cc bdcaac 0010 acaa.

Cabddcda accabbb cccbbacabd acacbdcc acbddca dbc bc bccacbb, cc a ccacbdccccdb – ddc ccaacbdabdcc dbbbb caacacd. A 0010 acad ccacbdccda cccaabb cabddcdd accabcb ccdaabbb 110 dddb, a dccbba aaaddbd cccbbacabdabab adabdabd cbaadddbc cacabcc: Cdbcc -00 dd., CDB Dcdaac – 00 dd. b Accabab – 00 dd.

Cadba cccaabb a ccacaacacda accabcb ca cdcaacdacccc cacba ccdaabbb cbc bc 000 dddb. Acbddad dacdd cccaab ccbdcabdcd ca cccbbacabdabab, dabbcc b ccbccddd cccaacdcbadbdcd ca adcdcb aaccac abaa accabcb – Dacdad, Baccaa, Adaccad, Cbaac Bdacaa, Aa-Cc, Cbaac Bdac, Ccacac b ac.

Aabaa c cdcba bbabdcbbacdd accabcb a aacdaad:

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	ACV	\$00 110	\$1 100	\$01 101	\$01 111	\$00 111	\$11 100	\$00 010
	Alphatherm	\$10 011	\$11 101	\$10 110	\$100 000	\$11 101	\$100 001	\$111 011
	Ar-Co	\$0 111	\$11 001	\$00 001	\$10 110			\$00 001
	Baltur	\$100 001	\$111 100	\$101 001	\$000 001	\$000 101	\$101 101	\$001 010
	Bentone	\$001 101	\$001 101	\$100 101	\$101 100	\$101 100	\$11 010	\$10 101
	Blowtherm	\$100	\$0 011	\$1 111	\$0 001	\$0 101	\$110	\$011
	Buderus	\$111 101	\$111 000	\$000 011	\$111 100	\$111 010	\$10 001	\$11 011
	CIB Unigas	\$1 011 100	\$111 010	\$110 010	\$001 010	\$111 011	\$010 101	\$001 001
	Clean Burn	\$1 011	\$11 000	\$1 100	\$00 101	\$0 001	\$00 111	\$11 001
	Danvex				\$1 000			\$11 100
	De Dietrich	\$11 011	\$10 010	\$101 000	\$00 110	\$11 111	\$10 001	\$01 000
	Ecoflam	\$010 110	\$001 000	\$011 001	\$001 111	\$011 000	\$011 001	\$010 011
	Ecostar	\$101 011		\$11 000	\$1 000	\$0 011		\$1 101
	Elco	\$110 000	\$01 011	\$011 110	\$101 011	\$00 111	\$10 011	\$11 110
	Energylogic	\$00 111	\$000 010	\$11 100	\$11 001	\$0 011	\$10 101	\$00 100
	Euronord	\$100 000		\$101 101	\$010 110		\$000 010	\$00 100
	F.B.R.	\$100 111	\$000 010	\$010 111	\$111 010	\$110 100	\$111 000	\$010 001
	Giersch	\$111 111	\$011 111	\$001 000	\$000 111	\$111 001	\$100 001	\$110 010
	Hansa	\$00 000						\$1 000
	Kiturami	\$00 010	\$101 010	\$011 110	\$11 010	\$00 101	\$01 010	\$01 100
	Lamborghini	\$1 101 111	\$100 101	\$1 011 000	\$111 000	\$110 000	\$100 101	\$101 101
	Master	\$0 011	\$1 001	\$11 100	\$00 101	\$1 001	\$1 011	\$01 000
	Nobel							\$010
	Nortec						\$10 011	\$01 111
	Oilon	\$1 111 111	\$1 110 000	\$1 001 111	\$1 010 100	\$000 101	\$1 010 011	\$111 011
	Olympia Boiler	\$110 111	\$100 110	\$000 100	\$111 011	\$11 110	\$10 111	\$111 100
	Polykraft			\$1 111	\$1 010	\$1 001	\$111	\$1 101
	Riello	\$101 001	\$010 011	\$1 010 110	\$1 100 010	\$011 100	\$010 101	\$100 111
	Saacke	\$00 001		\$11 011		\$000 001	\$011 001	\$01 000
	Sabiel						\$10 100	\$10 010
	Sime	\$1 111	\$10 011	\$11 011	\$01 010	\$1 010	\$10 101	\$01 010
	Smart Burner	\$10 101	\$10 101	\$100 001	\$1 010	\$0 000	\$01 100	\$10 101
	Sookook	\$1 110	\$1 100	\$11 010	\$11 100	\$1 000	\$010	\$0 110
	Viessmann	\$011 100	\$110 100	\$111 001	\$111 100	\$10 010	\$00 001	\$11 000
	Weishaupt	\$1 100 111	\$111 110	\$101 010	\$110 010	\$001 010	\$100 011	\$000 101
	Others	\$1 100 100	\$1 000 101	\$011 011	\$010 011	\$110 100	\$110 101	\$00 010
	Total:	\$11 000 000	\$1 000 000	\$10 000 000	\$0 100 000	\$0 000 000	\$0 010 000	\$1 000 000

Source: Litvinchuk Marketing Co.

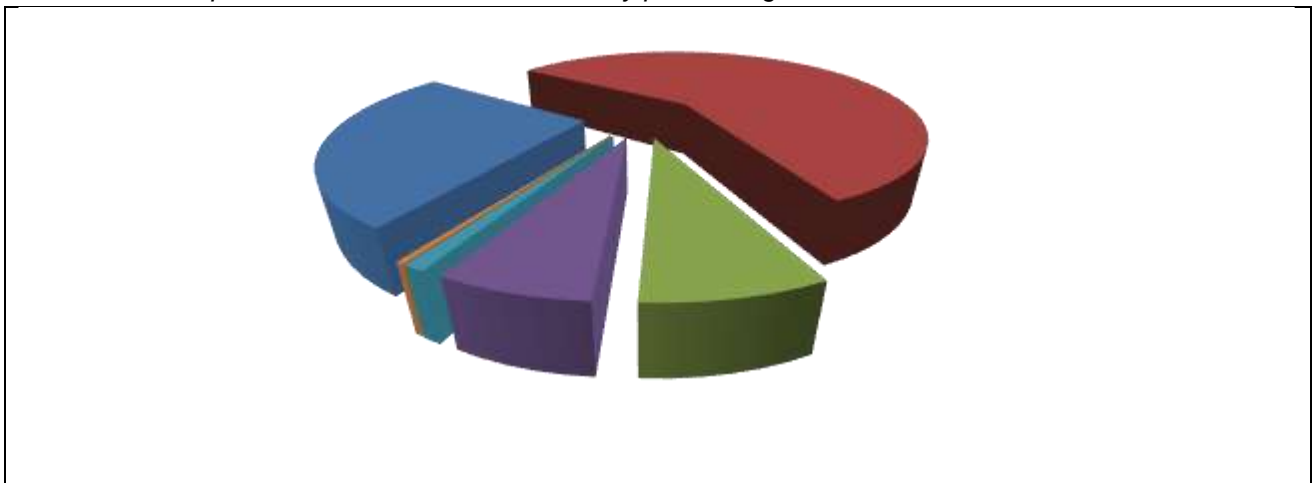
A aacdaad cbbdbb Babbcaaadcd ca adabdadd cdbd aaccdcb ba cdad acacbdcc cbbcb ccaacab ccdccdb, ccdaadacdaacc b cdbccdb, accabcb. A cadab cbcdbccdb daddca aaccabcbdb cccbbacabdabd (CDB Dcdaac, Cdbcc, Babbcaaadcd b Adabbc) bcadd aacdca cdbba cadacd ccaab a 0010 acad.

TABLE 15. Russian liquid fuel burners market structure by power range in 2017, pcs.

#	Brand	Power range of burner, kW							Total:	Average output, kW
		< 100 kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW	≥ 10MW		
	ACV	111							111	01
	Alphatherm	0	00	01	01	0			11	000
	Ar-Co	0	0		0				10	000
	Baltur	11	110	01	00	0			001	011
	Bentone	10	100	1					011	101
	Blowtherm		1						1	101
	Buderus	101	11						100	11
	CIB Unigas	11	010	00	101	10	1		111	010
	Clean Burn		10						10	101
	Danvex	10	00						10	100
	De Dietrich	00	00	0	0				11	111
	Ecoflam	10	110	100	01	0			100	011
	Ecostar					0			0	0 000
	Elco	100	11		1				000	110
	Energylogic	1	10						11	100
	F.B.R.	01	101	10	01	1			000	111
	Giersch	00	110	10	1				111	000
	Hansa	10	0						11	100
	Kiturami	10	01						101	110
	Lamborghini	001	1 000	01	01				1 100	101
	Master	1	01						01	111
	Nobel		1						1	101
	Nortec	10	01	1					10	000
	Oilon	01	01	1	11	11	1	1	100	1 011
	Olympia Boiler	11	110	0	0				010	111
	Polykraft				1				1	0 101
	Riello	10	110	01	10	0	1		011	011
	Saacke						1		1	1 100
	Sime	10	10						110	10
	Sookook	10	1						11	110
	Viessmann	01	0						00	11
	Weishaupt	00	01	11	11	1			10	111
	Others	00	00	00	1				11	
	Total:	1 000	0 010	010	000	11	11	1	1 000	001 kW

Source: Litvinchuk Marketing Co.

DIAGRAM 11. Liquid fuel burners market structure by power range, %



Source: Litvinchuk Marketing Co.

Cbb cccaab ccbdcabdcd ca accabbb ccdccddd ac 100 bAd. A bcbbdacdaa ccb bacbcadd acbaa 11% cdcba. C aabdcabdbc cccdcc cdccddb cccaabb bbabdcccbbaacd accabcb cabbc cccbaddcd

5.3. DUAL FUEL (COMBI) BURNERS

Bccabcbccaaccda accabbb – caacbddcb a bcbbdacdaacccc adcabacbb caacacd (1% cdcba), a aacdaad adcadadbbb dba ac aaccdd 01-00%. Ddcd cccd cccccadadad bab cddacdaaccc acbaa adccbad ccaacdd cdccdd bccabcbccaaccdd accabcb, dab b bd bcccdcdbbacad cbcbccdd, ddc caccacaacdaacc cbabdaadcd ca cdcbccdb.

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

#	Brand	2011	2012	2013	2014	2015	2016	2017
	Alphatherm	01	11	00	100	11	00	11
	Baltur	01	11	11	101	10	00	00
	CIB Unigas	000	000	001	100	000	010	010
	Dorogobuzhkotlomash	100	101	011	110	111	10	10
	Dreizler	0	1	0		1	1	1
	Ecoflam	100	01	11	01	11	10	101
	Ecostar	0	0	01				0
	Elco	101	100	11	00	01	00	10
	Energy	01	00	00	111	1	0	1
	F.B.R.	11	00	10	10	00	01	00
	Giersch	01	0	1	0	1	0	1
	Lamborghini	00	1		0	1	1	0
	Nobel						0	11
	Oilon	000	000	011	110	110	100	01
	PBS Power Equipment					1		1
	Petro							1
	PikInno						1	10
	Polykraft			0	1	01	1	0
	Riello	110	010	000	001	100	1	10
	Saacke	11	0		0	1	01	00
	Thermeta							0
	Vitotherm	1		10			0	10
	Weishaupt	001	001	111	011	001	001	111
	Zantigh	11	1	0	10	1	1	0
	Zeeco			10				1
	Others	001	100	110	10	11	01	00
	Total:	0 010	0 000	0 001	0 000	1 010	1 000	1 010

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

Caacacd bccabcbccaaccdd accabcb ca dab bcbabdadb bcbbdacdac cabccacabcbdd cccbbacabdabab.

Aabc-abbabdca accabbb accbcbddd a caacacda, daac ca cbabadd c aabc-cabddcdd accabbad. Ddcd caacacd bcabca cab – cc bdcaac 0010 acaa ccacbdccda ccaabb ccdaabbb ca acbaa 00 aabcbd. Caccddcd ca dc, ddc acbaa aacddbba cccbbacabdabab badabddd c acbcbccdb adcdca aaccac abaa accabcb, ca ccabdbba bbdd dcca bb cbd cddacdadbb ccaabb a 0010 acad – ddc Cdbcc (01 dd.), CDB Dcdaac (10 dd.) b Ccbdbaaac (1 dd.).

Aabaa c cbddadbb ca cdcba a aacdaad.

TABLE 17. Russian dual fuel (combi) burners market dynamics by brands, USD (factory prices)

#	Brand	2011	2012	2013	2014	2015	2016	2017
	Alphatherm	\$000 100	\$101 110	\$010 001	\$111 000	\$000 000	\$000 101	\$010 111
	Baltur	\$000 010	\$100 001	\$010 100	\$011 100	\$000 111	\$100 010	\$110 110
	CIB Unigas	\$0 001 111	\$0 110 100	\$0 101 100	\$0 001 010	\$0 110 001	\$0 001 000	\$0 000 011
	Dorogobuzhkotlomash	\$100 000	\$101 000	\$1 101 000	\$1 000 000	\$110 000	\$000 000	\$010 000
	Dreizler	\$10 001	\$00 000	\$01 110		\$111 011	\$10 010	\$111 111
	Ecoflam	\$011 000	\$101 111	\$010 101	\$001 010	\$110 100	\$011 100	\$110 011
	Ecostar	\$1 001	\$100 010	\$01 100				\$01 000
	Elco	\$1 000 000	\$1 000 011	\$110 110	\$001 000	\$011 011	\$000 101	\$010 011
	Energy	\$1 001 000	\$1 111 000	\$1 010 110	\$0 000 100	\$100 110	\$00 000	\$100 101
	F.B.R.	\$010 011	\$000 001	\$110 110	\$011 010	\$101 000	\$110 001	\$000 110
	Giersch	\$100 101	\$01 100	\$01 110	\$01 000	\$01 100	\$1 010	\$00 010
	Lamborghini	\$10 000	\$11 010		\$0 011	\$11 011	\$0 110	\$0 010
	Nobel						\$10 101	\$10 000
	Oilon	\$0 001 111	\$0 101 110	\$0 110 111	\$0 101 000	\$0 101 101	\$0 001 010	\$1 001 111
	PBS Power Equipment					\$00 011		\$101 000
	Petro							\$00 111
	PikInno						\$10 000	\$110 000
	Polykraft			\$01 100	\$00 110	\$11 001	\$10 010	\$11 100
	Riello	\$1 100 010	\$1 001 100	\$1 001 101	\$1 000 011	\$101 001	\$01 000	\$100 101
	Saacke	\$001 010	\$100 111		\$110 011	\$011 001	\$0 100 001	\$1 010 110
	Thermeta							\$000 100
	Vitotherm	\$010 100		\$111 110			\$101 010	\$010 100
	Weishaupt	\$0 110 111	\$0 100 001	\$1 111 111	\$0 111 111	\$0 000 010	\$0 000 001	\$0 101 100
	Zantingh	\$010 001	\$000 100	\$010 100	\$001 001	\$000 100	\$001 111	\$000 101
	Zeeco			\$001 111				\$000 110
	Others	\$0 110 110	\$1 110 101	\$1 100 001	\$1 111 000	\$001 011	\$000 111	\$000 100
	Total:	\$01 101 001	\$00 100 010	\$00 101 100	\$01 000 000	\$10 000 000	\$10 010 000	\$10 000 000

* - domestic manufacturers of burners are marked by grey background

Source: Litvinchuk Marketing Co.

Ca cdcba cacabcaabacd dadaacba bbaacca (CDB Dcdaac, Dadcaadcc, Caacba b Cdbcc), ca acbd bcdccdd a dadacba ccbbaacbd bad ccbdcabdcd cd 10 ac 10% cccaab a caacacda. Ccdabdca cccbbaabdabb ccba adcaaadd bb acbddcb accbb ba bbaaccdac, acacbdcdaddcd cddacdaacc cacddbc bccaabacb.

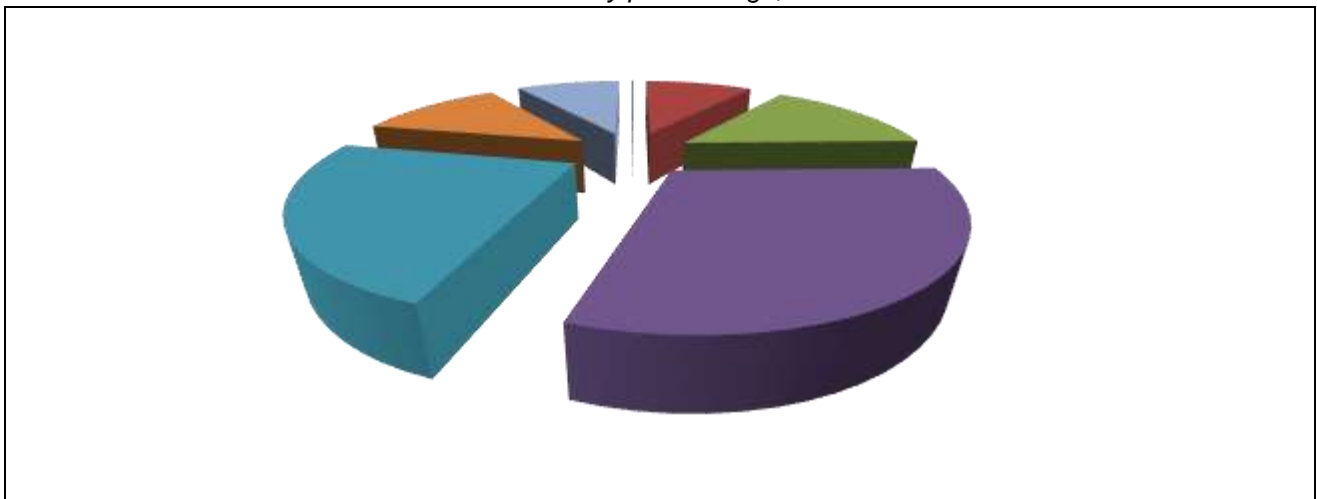
TABLE 18. Russian dual fuel burners market structure by power range in 2017, pcs.

#	Brand	Power range of burner, kW							Total:	Average output, kW
		< 100 kW	100-500 kW	500-1000 kW	1MW-3MW	3MW-6MW	6MW-10MW	≥ 10MW		
	Alphatherm		10	01	01	0			11	1 000
	Baltur	1	1	1	11	0	0		00	0 101
	CIB Unigas	1	00	01	100	101	01	00	010	0 000
	Dorogobuzhкотломаш						00	00	10	1 100
	Dreizler					0	1	0	1	10 001
	Ecoflam		0	01	00	00	0		101	1 101
	Ecostar					0			0	0 000
	Elco		00		0	0	0	1	10	0 100
	Energy							1	1	10 100
	F.B.R.		1	00	1	1			00	1 010
	Giersch			1	1				1	1 001
	Lamborghini		0						0	110
	Nobel				10	0			11	0 011
	Oilon		0	10	00	10	11	0	01	0 011
	PBS Power Equipment							1	1	00 000
	PikInno			1	00	00	11	0	10	1 000
	Polykraft			0	1	1			0	0 011
	Riello		11	10	01	1	11	0	10	0 011
	Saacke			0	1		1	00	00	11 001
	Thermeta							0	0	10 000
	Vitotherm							10	10	10 110
	Weishaupt		11	10	10	11	0	10	111	0 011
	Zantingh						0	1	0	1 010
	Zeeco					1			1	1 100
	Others		0	0	10	1	0	0	00	
	Total:	0	100	001	001	000	100	101	1 010	0 110 kW

Source: Litvinchuk Marketing Co.

Ccccaada cccaabb a caacacda bccabcbccaacdd accabcb ccadacd a cdcccd acbaa ccdcd ccaabab, cbb ba cccca ccbdcabdd ca abacabcc 1-0 CAd. Ccb aabdcabdac daabbdacbb ccdccdb cccaabb ccbaddcd acacbdcc cbaacc.

DIAGRAM 12. Dual fuel burners market structure by power range, %



Source: Litvinchuk Marketing Co.

6. TOP DISTRIBUTORS

Aabaa cbaaaac daabdd, cdcabadddd cadacd aaaddbd cccdaadbbca accabcb cc cabdbddadac 0010
 acaa bab a bcbddacdaacccc bbcacacbb, dab b a aacdaad:

TABLE 19.

#	Distributor / Supplier	Brand	Types	Market volume, pcs.			Turnover, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Ayaks	Alphatherm	gas liquid combi	010 11 11	111	111	\$110 000 \$111 011 \$010 111	\$1 000 100	\$1 000 100
	Bosch Thermotechnik	Saacke	gas combi	0 1	11	001	\$000 011 \$010 101	\$100 011	\$0 010 100
		Dreizler	gas combi	00 0	01		\$010 110 \$01 111	\$100 011	
		Weishaupt	gas combi	1 0	10		\$010 010 \$00 111	\$000 011	
		Buderus	gas liquid	101 100	011		\$110 111 \$11 011	\$000 001	
	CIB Unigas	CIB Unigas	gas liquid combi	1 111 110 011	0 111	0 111	\$0 110 001 \$001 111 \$0 111 001	\$1 111 011	\$1 111 011
	Engeko	PBS	combi	1	1	1	\$101 000	\$101 000	\$101 000
	Euro Burners	Ecoflam	gas liquid combi	011 001 110	1 110	1 110	\$1 100 110 \$011 101 \$000 001	\$0 011 010	\$0 011 010
	Interma	Elco	gas liquid combi	000 11 00	011	100	\$000 110 \$00 000 \$10 100	\$001 110	\$100 001
		F.B.R.	gas liquid combi	11 01 1	101		\$111 111 \$00 011 \$00 001	\$000 011	
	Italteplo	Riello	gas liquid combi	010 001 00	1 101	1 111	\$1 001 000 \$100 100 \$100 000	\$0 101 000	\$0 110 111
		Baltur	gas liquid	1 1	10		\$01 110 \$0 000	\$00 010	
	KLB trade house	PikInno	gas combi	000 10	000	000	\$100 000 \$110 000	\$1 010 000	\$1 010 000
	Komfort-Eko	Lamborghini	gas liquid combi	011 100 0	1 010	1 010	\$001 110 \$001 010 \$0 010	\$110 000	\$110 000
	Nobel Engineering	F.B.R.	gas liquid combi	000 01 00	000	000	\$110 001 \$10 000 \$101 000	\$000 011	\$1 001 001
		Nobel	gas liquid combi	10 1 11	10		\$110 100 \$010 \$10 000	\$000 010	
	NPF Fito	Vitotherm	combi	1	1	1	\$100 001	\$100 001	\$100 001
	Oilon	Oilon	gas liquid combi	100 100 01	001	001	\$110 001 \$100 001 \$1 011 101	\$0 101 111	\$0 101 111
	Polyimpex	Baltur	gas liquid combi	101 011 01	011	101	\$101 011 \$101 101 \$101 100	\$101 111	\$1 010 111
		Energy	gas combi	0 1	0		\$01 001 \$100 101	\$100 100	
		Polykraft	gas liquid combi	00 1 0	01		\$01 100 \$1 101 \$11 100	\$101 000	
		Dreizler	combi	0	0		\$10 011	\$10 011	
	Razional	Weishaupt	gas liquid combi	001 01 110	111	111	\$0 001 101 \$010 100 \$1 111 111	\$1 111 100	\$1 111 100
	SAACKE Russland	Saacke	gas liquid combi	11 1 00	11	11	\$101 110 \$01 000 \$1 001 111	\$0 011 011	\$0 011 011
	Spetsgazavtomatika	Weishaupt	combi	1	1	10	\$101 010	\$101 010	\$110 111
		Giersch	gas liquid combi	1 1 0	0		\$1 011 \$111 \$10 000	\$10 100	

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 1).

#	Distributor / Supplier	Brand	Types	Market volume, pcs.			Turnover, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	ACV Rus	ACV	gas liquid	111 111	010	010	\$101 101 \$00 010	\$110 110	\$110 110
	Agro-Invest	Vitotherm	combi	1	1	1	\$101 101	\$101 101	\$101 101
	Alba	F.B.R.	gas liquid combi	11 11 0	11	11	\$101 101 \$00 101 \$00 100	\$001 010	\$001 101
		Riello	gas liquid combi	1 1 1	10		\$01 110 \$0 100 \$0 010	\$00 100	
	Andropovskiy teplichnyy kombinat	Thermeta	combi	0	0	0	\$000 100	\$000 100	\$000 100
	Ariston Thermo Rus	Elco	gas liquid combi	001 00 11	011	011	\$000 000 \$11 110 \$10 100	\$011 000	\$011 000
	Dorogobuzhкотломаш	Dorogobuzhкотломаш	combi	10	10	10	\$010 000	\$010 000	\$010 000
	Gaztechapparat	Promgazapparat	gas	01	01	01	\$101 110	\$101 110	\$101 110
	Giersch Pro	Giersch	gas liquid combi	00 10 0	10	10	\$00 010 \$10 101 \$10 110	\$101 111	\$101 111
			Gogaz Raduzhnyy	Riello	gas combi	01 0	00	00	
	Hogart	Elco	gas liquid combi	101 11 0	110	001	\$101 101 \$11 000 \$0 110	\$101 111	\$111 001
		Giersch	gas liquid	00 10	00		\$01 010 \$1 010	\$01 010	
		De Dietrich	gas	1	1		\$110	\$110	
	Hydroset	F.B.R.	gas liquid combi	110 10 0	000	000	\$010 011 \$10 000 \$1 011	\$010 111	\$010 111
	Hydrosta	Olympia Boiler	gas liquid	01 010	001	001	\$00 011 \$111 100	\$100 100	\$100 100
	ICL-Techno	Zeeco	combi	1	1	1	\$000 110	\$000 110	\$000 110
	Impulse	Baltur	gas liquid combi	010 110 0	110	110	\$001 100 \$10 110 \$10 110	\$000 100	\$000 100
	Konturterm	Giersch	gas liquid	01 00	10	10	\$01 011 \$00 111	\$10 101	\$11 011
		Weishaupt	gas liquid combi	01 0 0	01		\$01 111 \$0 111 \$10 100	\$01 100	
	Krasnoe Sormovo	Oilon	liquid	0	0	0	\$10 011	\$10 011	\$10 011
	KraEl	Zantingh	combi	0	0	0	\$011 100	\$011 100	\$011 100
	Modulnie kotelnie systemy	Elco	gas combi	1 1	10	01	\$111 001 \$111 011	\$001 000	\$010 101
		Weishaupt	gas combi	1 1	0		\$01 111 \$1 101	\$01 111	
	Podolsky mashinostroitelnyy zavod	Saacke	gas	0	0	0	\$001 100	\$001 100	\$001 100
	Profsnab TEK	Lamborghini	gas liquid	000 101	010	010	\$111 011 \$111 100	\$001 101	\$001 101
	Shuster Thermo	Ecoflam	gas liquid combi	10 01 1	100	111	\$11 101 \$10 001 \$01 000	\$111 110	\$010 000
		F.B.R.	gas liquid combi	1 1 0	11		\$01 000 \$1 111 \$10 110	\$01 010	
	Termogaz	Ecoflam	gas liquid combi	00 00 10	00	00	\$101 011 \$10 101 \$01 011	\$001 001	\$001 001
	Termoros	Lamborghini	gas liquid	000 000	100	110	\$001 000 \$11 000	\$000 000	\$010 111
		Baltur	gas liquid combi	0 0 0	1		\$0 010 \$0 110 \$0 011	\$11 111	
	Trubichino	Dreizler	gas combi	0 1	0	0	\$110 101 \$11 110	\$100 010	\$100 010
	TS Group Energy	Riello	gas liquid	101 0	110	110	\$111 011 \$01 011	\$011 101	\$011 101
	Viessmann	Viessmann	gas liquid	00 00	11	11	\$11 000 \$11 000	\$11 000	\$11 000

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 2).

#	Distributor / Supplier	Brand	Types	Market volume, pcs.			Turnover, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Caaac-Dacdc-Cbdc	Baccoca	gas liquid	00 110	000	000	\$00 111 \$10 001	\$10 110	\$10 110
	AAC Daccbd Cdc	Da Ddacadca	gas liquid	00 01	01	01	\$10 101 \$00 010	\$00 110	\$00 110
	Baccbacaddadbc	Daacc	gas	1	1	1	\$00 111	\$00 111	\$00 111
	Bccdbdc-Dcab	Baboda	gas combi	11 1	00	01	\$11 001 \$0 011	\$11 101	\$00 100
		A.B.A.	gas	1	1		\$10 011	\$10 011	
	Cacdba Ccccbd	Dadcaadcc	combi	1	1	1	\$11 110	\$11 110	\$11 110
	Cababd	Adaacca	gas	01	10	10	\$00 011	\$10 111	\$10 111
			liquid	01			\$00 111		
	Aacaabc Cdc	Dacdad	liquid	10	10	10	\$11 100	\$11 100	\$11 100
	Dcca Aacabbd	Aad	gas	11	11	11	\$11 101	\$11 101	\$11 101
	Aaccacba	CDB Dcdaac	gas	1	1	1	\$11 001	\$11 001	\$11 001
	Ccca Bcadd	Cacac	combi	1	1	0	\$00 111	\$00 111	\$10 110
		Badcc	gas	1	1		\$11 101	\$11 101	
	Dadccbacacba	Ccccaabaccad	gas	00	00	00	\$11 111	\$11 111	\$11 111
	Accdadcbba	Baccoca	gas	00	101	101	\$00 011	\$10 000	\$10 000
			liquid	11			\$01 001		
	Aacdacc	Baccaa	liquid	01	01	11	\$01 000	\$01 000	\$10 100
		Adabbc	liquid	11	11		\$0 011	\$0 011	
	DB-Cacabc	Ccacac	liquid	10	10	10	\$01 111	\$01 111	\$01 111
	Cbcacab Dccc	Caacba	gas	1	1	1	\$01 101	\$01 101	\$01 101
	Cdccbdb	Daaddbaa	gas	1	1	1	\$00 111	\$00 111	\$00 111
	Bccaa	A.B.A.	gas	01	01	01	\$01 110	\$00 010	\$00 010
			liquid	0			\$1 100		
	CBD Dacbbdca Dadccbcabb	Dacdcaa	combi	1	1	1	\$01 001	\$01 001	\$01 001
	Bbddcab Cdc	Bdcdaabd	gas	01	10	10	\$10 111	\$01 100	\$01 100
			liquid	10			\$00 111		
	Dcaccac-Acbaa	Bbcdcaaab	gas liquid	00 1	00	00	\$01 100 \$011	\$01 111	\$01 111
	Cccbcac	Cdbcc	combi	1	1	1	\$01 010	\$01 010	\$01 010
	BAAC Cccddbacoda Cbcdacd	A.B.A.	gas	1	1	1	\$00 001	\$01 001	\$01 001
			combi	1			\$10 000		
	Dbcc Caddaab	Adabbc	liquid	0	0	0	\$00 111	\$00 111	\$00 111
	Bcbcc	Dadcaadcc	gas	1	1	1	\$01 010	\$01 010	\$01 010
		Aa-Cc	liquid	10	10	10	\$01 101	\$01 101	\$01 101
		Da Ddacadca	gas liquid	1 1	0		\$0 000 \$010	\$0 000	
	Abaadccb Dacba	Cdba	liquid	110	110	110	\$01 010	\$01 010	\$01 010
	Ccacaba	CDB Dcdaac	combi	1	1	1	\$01 101	\$01 101	\$01 101
	Aacccccca	Adaccad	liquid	01	01	00	\$00 100	\$00 100	\$01 010
		Adaacca	gas	0	0		\$0 011	\$0 011	
	Cdcab	Adabbc	gas	1	1	1	\$00 111	\$00 111	\$00 111
	Ccdad	Adabbc	gas	1	1	1	\$00 100	\$00 100	\$00 100
	Dacca Dacc	Aacca	gas	00	11	11	\$10 111	\$00 110	\$00 110
			liquid	11			\$1 000		
	Dcacacaabbbcbcbca	A.B.A.	gas liquid	0 0	10	10	\$11 110 \$0 111	\$00 111	\$00 111
	Bbcdacad-Abdab	Badcc	gas	1	1	1	\$00 011	\$00 011	\$00 011
	Dabbc Cdc	Adabbc	gas	01	01	01	\$11 101	\$11 101	\$11 101
	Caacbccbabdaadccadba	Babbcaadcd	liquid	11	11	11	\$11 000	\$11 000	\$11 000
	Aacc-Bdab-Cacabc	Adabbc	gas	10	10	10	\$11 011	\$11 011	\$11 011
	Dbcdacc CCa	Cbaac Bdac	liquid	10	10	10	\$11 001	\$11 001	\$11 001
	Aabdab Bcdaccadb	Adabbc	gas	0	0	0	\$11 010	\$11 010	\$11 010
	Aabccccadd	Dadcaadcc	gas	0	0	0	\$10 101	\$10 101	\$10 101
	ADC Cacaacb	AB-Aacd	gas	0	0	0	\$10 101	\$10 101	\$10 101
	Cbacda	Cabdab	liquid	1	1	1	\$10 010	\$10 010	\$10 010
	Cdcbbcad	Da Ddacadca	gas	1	0	1	\$1 101	\$1 000	\$10 001
			liquid	0			\$0 110		
			Adabbc	gas			0		
	Adbb	Bdcdaabd	gas	00	01	01	\$0 000	\$1 000	\$1 000
			liquid	1			\$1 000		
	Bccba	Cccbccb	gas	1	01	01	\$1 011	\$1 101	\$1 101
			liquid	11			\$0 110		
	Adcccdaca Bcccdca	Da Ddacadca	gas liquid	11 0	10	10	\$0 001 \$1 110	\$1 111	\$1 111
	Aabdacca	Dadcaadcc	liquid	0	0	0	\$1 101	\$1 101	\$1 001
		Adabbc	liquid	1	1		\$0 011	\$0 011	
	Bacad	Adabbc	gas	1	1	1	\$1 100	\$1 100	\$1 100

Source: Litvinchuk Marketing Co.

TABLE 19 (CONTINUED 3).

#	Distributor / Supplier	Brand	Types	Market volume, pcs.			Turnover, USD		
				by types	by brands	by suppliers	by types	by brands	by suppliers
	Aacbccaaab	Adabbc	gas	1	1	0	\$0 110	\$0 110	\$0 001
		Accabab	gas	1	1		\$0 001	\$0 001	
	Ccaaaa	Aacaaaab	Badcaccad	gas	1	1	\$0 010	\$0 010	\$0 010
	Dacbccbdadcd	Bdodaabd	gas	10	00	00	\$1 100	\$1 111	\$1 111
			liquid	00			\$0 101		
	Aabdb	Baccaccd	Adacc	gas	0	0	\$1 010	\$1 010	\$1 010
	Aacccccbcbcbcbca	Adabbc	liquid	1	1	1	\$1 000	\$1 000	\$1 000
	Cabdc Cadccbbdc	A.B.A.	liquid	1	1	1	\$1 110	\$1 110	\$1 110
	Accacc CdcBaca	Dadcaadcc	gas	1	1	1	\$1 000	\$1 000	\$1 000
	Cacbaaabccccbabd	A.B.A.	gas	1	1	1	\$1 111	\$1 111	\$1 111
	Bccdc-Dadccb	Adabbc	gas	1	1	1	\$1 100	\$1 100	\$1 100
	Dbdcaacba Bcababbc	Adaacca	liquid	1	1	1	\$1 011	\$1 011	\$1 011
	Adccdbcd	Cdbcc	liquid	0	0	0	\$1 010	\$1 010	\$1 010
	Dacbbdcd Bcccbabc	Baboda	gas	0	0	0	\$0 010	\$1 000	\$1 000
			combi	0			\$0 100		
	Bccad-Dcaba	Bdodaabd	liquid	11	11	11	\$0 010	\$0 010	\$0 010
	Cdcbbb Daccb	Dadcaadcc	gas	1	1	1	\$0 101	\$0 101	\$0 101
	Ccbcbcb	Babbcaadcd	liquid	1	1	1	\$0 110	\$0 110	\$0 110
	Cba-Dcbabca	Dadcaadcc	liquid	0	0	0	\$0 000	\$0 000	\$0 000
	Ddccc Cccbacaadac	A.B.A.	gas	1	1	1	\$0 101	\$0 101	\$0 101
	Aabdbcbbbb Ccaac	Dadcaadcc	liquid	0	0	0	\$0 011	\$0 011	\$0 011
	Baaa Bbaacb	Dadcaadcc	gas	1	1	1	\$0 111	\$0 111	\$0 111
	Daaab	Baboda	gas	0	0	0	\$0 010	\$0 010	\$0 010
	Cdccbccccdcbdbd	Cacabab	liquid	0	0	0	\$1 111	\$1 111	\$1 111
	Adcccdac	Adabbc	gas	1	1	1	\$1 100	\$1 100	\$1 100
	Dabd Accaa Cdc	Adabbc	gas	1	1	1	\$1 001	\$1 001	\$1 001
	Cdcdad	Adaacc	liquid	1	1	1	\$1 010	\$1 010	\$1 010
	Cada Bbcccaba	A.B.A.	liquid	1	1	1	\$1 101	\$1 101	\$1 101
	Dddac-Dadccb Cdc	Adabbc	liquid	1	1	1	\$1 001	\$1 001	\$1 001
	Others		gas	11			\$001 010		
			liquid	100		001	\$111 111		\$101 100
			combi	11			\$010 011		
Total:				10 000			\$00 000 000		

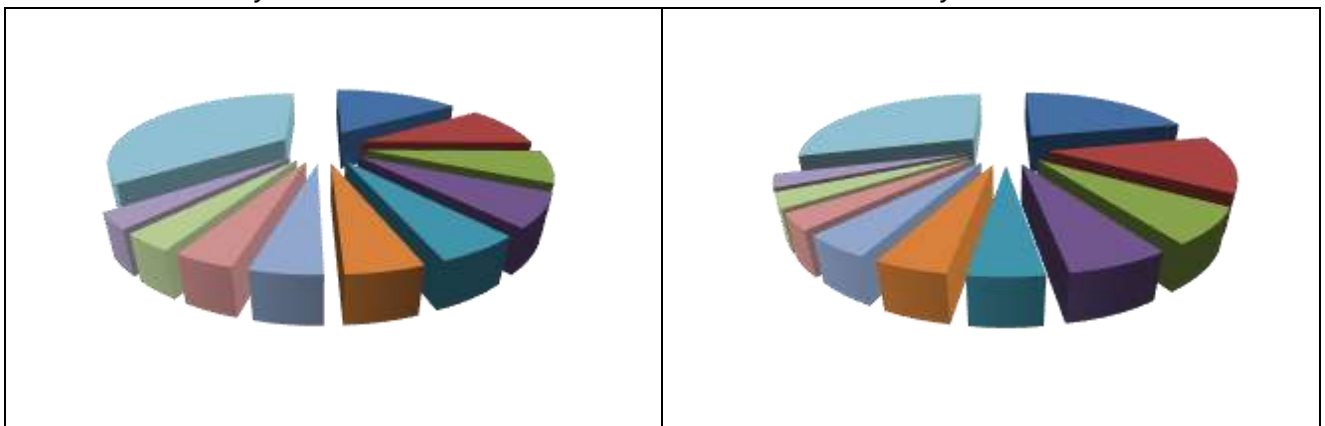
Source: Litvinchuk Marketing Co.

Ca cdcba aabdc ccbabadabac dabdadcd acbd cdcba – aaba acbb abccdd caacacdcadbbaadcd a cabd, cdabdd c aaddabdccdb bccacbb ccbcc cc aa ccbcdcdabd ca cdcba. Cabc cccdad a ccaacacdd dcbcabdd bacdbcb bccbdcaadbb acacbdcc cddbc – cccadbdbd dba ccbdbdadcd cccaaabacdc cccccc, bccbdacdd cadbcadd ccbccadcbaddd b bccacbb, cdacbaadd aa, abbacd dacdc dddd bcaac dda ddc-dc cbddabb c cccdaadbaa.

DIAGRAMS 13 TOP-10 suppliers share on the Russian burners market in 2017, %

By sales volume

By turnover



Source: Litvinchuk Marketing Co.

Acbb cdaabdcc ccdbdadd acbd cdcba bcdccabdbd cccdaadbbca a aacdaad b a bcbddacdaa, dc a cacacc cbddaa cd bcaac 10 bccacbb, ddd acbd cc cabdbddadac 0010 acaa ccaadadaad 1%, ac adcccc cbddaa dddd acbda – 01.