

WATER HEATER MARKET RUSSIA 2016 (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

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1. METHODOLOGY

1.1. INFORMATION SOURCES

The study was performed on the basis of the 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 the main players there was made the detailed analysis of the front pages of customs declarations for 2004-2016. It is worth mentioning that in 2004-2006 it was only possible to make the analysis on the basis of first three pages of declarations. Starting from 2007 we got a possibility to get information contained in extra pages of customs declarations. This made the obtained information more reliable and allowed us to identify more than 95% of imported water heaters by models. As practice shows the difference between customs data and real supply volume figures is not more than 5-10%. This allowed us to distribute products by various parameters and to identify water heaters by models to a high accuracy.

To estimate sales volume of a number of local companies one can also use the data obtained from the customs declaration analysis as many of them use import parts for making water heaters. So, for example, water heaters of such brands as Real, Redber, De Luxe, Polaris, Oka, Ariston, Elenberg, Simat, Perla and Regent, Chaffoteaux, Fais, Superlux, Sinbo, Ecofix are manufactured on the basis of various parts (such as tanks, thermostats, magnesium anodes, electric heaters and etc.) made by Thermowatt Company, a member of Ariston Thermo Group. Thermex Group of companies makes water heaters mainly of the parts made in China.

It was a bit more difficult to get information on the indirect water heaters of some brands. The point is that some brands' products were imported as spare parts to boiler plants and, therefore, information on the units of this type was contained in the additional pages of customs declarations. That is why the data on Viessmann for the period from 2004 to 2006 and Reflex – from 2005 to 2006 were obtained from interviews with these companies' representatives. There was also misdescription of instantaneous gas water heaters that were stated in customs declarations as indirect water heaters. The problem is easily eliminated with model line analysis.

Under a lack of information from local manufacturers their product identification by models was made on the basis of their export analysis. In the course of interviews with manufacturers and suppliers it became possible to get information on the real volume of supplied products.

- **ROSSTAT DATA**

The biggest local manufacturers report about their production volume to Rosstat. In a number of cases this was the only possible source of information. When analyzing the information on many local "OAO" plants there were taken into account their annual reports published on their official web-sites, for example, "Gasapparat" (Neva, Nevalux, Baltgaz brands) and NPO "Teploobmennik" (Astra brand).

- **INTERVIEWS WITH MANUFACTURERS AND EQUIPMENT SUPPLIERS**

Whatever customs information is correct, it should be completed with the data obtained from the equipment distributors and manufacturers. In the course of this report preparation there were conducted interviews with many Russian manufacturers and big suppliers of foreign equipment.

TABLE 1. *Information sources*

	Russian manufacturers	Foreign manufacturers' representatives	Distributors	Total
Interviews	3	8	11	22

1.2. TERMINOLOGY

Water heater is a unit intended for water heating in hot water supply system.

Water heaters are classified as follows:

1) **By heating method**, these are **instantaneous** and **storage-type** water heaters. The main feature of storage-type water heaters is their tank capacity. In most cases the power feature of this type water heater is not very important. Unlike storage-type water heaters the main feature of instantaneous water heaters is their power as they heat water to the required temperature when it is coming through a heating element.

By energy sources used for heating there are six main types of water heaters: **electric, gas, indirect or combination, solid fuel, solar and oil ones**. In practice the most frequently used ones are electric and gas water heaters in which water is heated by electricity and gas respectively. Indirect or combined water heaters will be put in one category in this report and called as "indirect water heaters". The units of this type heat water with the usage of a boiler and/or other heat source (solar panel, heat pump, CCU). Solid fuel and solar (hereafter referred to as solar collectors) water heaters using solid fuel (firewood, coal, cuttings and etc.) and solar energy respectively are much less popular. As for oil water heaters using diesel oil or mazut as a heat source, they are very rare in sale.

By water pipe-line connection type water heaters are divided into **open-type** and **pressure-type** units. Open-type water heaters are connected to free-flow pipe lines and may be used only with a single water-supply point (kitchen sink, washstand etc.). Their principle of operation is based on the following. While entering a water tank cold water due to its smaller density displaces hot water and pushes it directly to a water plug. Pressure-type units are installed into cold water lines and may be used for serving multiple water-supply points (bathroom, shower-room etc.). Water pressure within a tank is supported at a constant level corresponded to the water line pressure. Normally, this type of equipment is fitted with a special safety group not allowing overpressuring in accordance with set up range values.

According to the presented classification there are the following water heater types:

a) Electric storage water heaters

Electric storage water heaters are divided into **wall-type** and **floor-standing** types (the last ones are models of higher capacities). Water heater tank can be made of **enameling steel** or with **glass-ceramic coatings, stainless steel, polypropylene, plastic and copper**. By structure, **horizontal** and **vertical** versions are available.

b) Electric instantaneous water heaters

There are **single-phase** and **three-phase** models.



Picture 1. Electric vertical storage-type water heater



Picture 2. Electric horizontal storage-type water heater



Picture 3. Electric plastic-side storage-type water heater



Picture 4. Electric instantaneous water heater



Picture 5. Gas instantaneous water heater

c) Gas instantaneous water heaters

Gas instantaneous water heaters differ by the type of ignition. These are the models with **manual ignition with the use of matches**, **pieso-ignition** button or **electronic-ignition** automated system activated at cold water plug opening. They also differ by the type of used gas – **natural gas** or **liquid gas**.



Picture 6. Gas storage-type water heater

This type heaters may use one of two combustion units - with **natural draft** (open combustion chamber) and with **forced draft** (closed combustion chamber).

e) Indirect water heaters

Indirect water heaters differ by the type of energy used. There are **indirect water heaters** and **combined water heaters** (with additional electric heater coil). Indirect water heaters may be also differed by their design – “**tank within tank**” models and “**spiral heat exchanger**” models. “Tank within tank” technology means the use of two-tank indirect water heater. An inner tank keeps water to be heated (secondary circuit) and an outside storage tank contains heated water (primary circuit). Spiral heat exchanger models heat water when it passes through a spiral coil installed within a water tank.



Picture 7. Indirect water heaters



Picture 8. Solid fuel water heaters



Picture 9. Solar collectors c/w indirect water heater



Picture 10. Oil water heaters

1.3 PRICES

All sales values given in the report are expressed in retail prices obtained from the main distributors' or the manufacturers' price lists. Under a lack of this information for some brands there were used average retail prices on the market. All the prices are estimated in RUB, EUR transfer was made on the basis of mid-year exchange rates obtained from the Central Bank of the Russian Federation.

TABLE 2. Rouble/USD Exchange Rates

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
28,81	28,29	27,24	25,49	24,86	31,77	30,34	29,41	31,08	31,82	37,00	61,32	65,83

Source: Central Bank of the Russian Federation

TABLE 3. Rouble/EUR Exchange Rates

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
35,82	35,16	34,11	35,03	36,45	44,20	40,00	40,90	39,92	42,25	51,08	66,99	72,97

Source: Central Bank of the Russian Federation

If a safety group is optional the prices for electric storage-type water heaters are stated with no account of its cost. Prices for electric instantaneous and storage water heaters do not include the cost of a shower kit and a water tap if the latter ones are not a part of delivery set.

2. MARKET SIZE AND STRUCTURE

Acc daa cacabd 10 daacc daa Cdccaab dadac aaadaba acdacobabd bacbad acad bcca daab 00% ab cabac dcdba, abd bd 11% aa bacacad ab bcbad. Acdadac, adc dadabccbabd dac bcd bcbcdbacabbd cccacaccada. 0001 dadbaccad daa adcacdad aabb ab dababd, ac a cacdbd ca daaca daa bacbad dcabd accaacad dc ba baaadada. Cc, daa dadac aaadac bacbad dabda daceaacad bd 10% ab dacbc ca ccdbbac abd bd 00% ab dacbc ca Adcc aaaabcd daa ccadacdcaaccb. Cdca a acaa daaaacabcabca ab aaadcac cab ba ccbdcabddad dc daa caabaac ab daa cdccabctcccc cada cabadacb, daaca aaccabab ac aacbd ac ad daa abd ca 0000 daab Adcc cdcabadaabad aaaabcd daa Cdccaab cdccabct. (Caa DABBA 0).

Ac ccacac dc 0010, daab daa bacbad adcaadad abb daa cca-ccacac aaadcac, cabac caacaad adc caab ab 0010, Daac dac acbbcdad bd acaddab daceaaca. Daa ccacac ca 0011 aac cbdb accabacada daa aabb, daaca abddad dcdbd ba acbbcdad ab daa adddca. 0011 dac a ddcbaba ccabd – cba caababd daa a daab cccadada dcabd, daaba acc cdaacc, daa cada ca aabb aac acba dcdb abd daa bacbad caddcbad dc cdabba dcdbac. Ab abd caca, daa caab ca daa aabb caccad a daac aacbaac abd accbcac caddadacb aac baccba baddac. Daa aaaacd ca daaaccad dababd dcaaacad, daab aadac daa ccacac ca 0011 bcdab ca ccacbac baaadacc aac caabaad. Aa ab 0011 daa baab acab dac dc cada daa cadabac abd ccabd cbdb cb daa bcccd bacaccad, daab ab 0011 bcccd ca daa ccbdabd cccdbadacb ccacbcacabbd daca abba dc caddcb dc adcabcac. Cc bccdbacc daca abba dc adacd dc bad ccacac abd bad badab ca abccba. Ab acccdabca dada daac daad cdacdad dc cbab ccabdabac – bcda babdadccd abd ccacbab. Bdd dacacdc bacbad caababdc aad cdccabct daaaacabct caba caddacbc. Cc,

- Abacdac cdccaaa dadac aaadac caababd bccba a daca-daac aabb. Daa cacdbd ca 0011 ac daa 0% accdda abd ad'c adcacdad dc accabacada ab 0011 acc ad baacd 1-10%.
- Daa caababd ca abacdac abcdabdacdc dadac aaadacc cacdad accdda ab 0011. Daa bacbad caababd dc aada caacaad cdabba dcdbac abd badd aad daacc abbdab cabac dabb ba cabadabab cdabba dda dc daa bacb ca ccabdc bcda ca cdccba accdda cc aabb.
- Aac abcdabdacdc dadac aaadac bacbad aac cdababab 100 bbb ADC aadac acdada accdda ab 0000-0000. Ab 0011 daa aabacab aabb ab daa caababd cacdbdad ab 01% cabac daceaaca ab dacbc ca ADC. Ab 0011, daa aabb dac 0%, daaca cab ba daa cdacdbca ccabd acc a cbabb accdda ab daa adddca. Acdada cacacd ca daa cacbacabbd ca cbd aac dadac aaadacc dc daa bad accacabdbd aac caccad – bacbad baad daba dc cacdca daa dababd. Acdadac, dababa abdc acccdabt daa cabadabab caccd baaa ca daa bad Caabaca aac dadac aaadacc, a ccbbacca ab daa bacbad ac bcd dacaadabab. Daa badd aad daacc cabac dabb ba ab daa cabaa ca 100-100 dacdcabd dbadc.
- Aac cdccaaa dadac aaadac bacbad caacaad 1.1 bbb ADC, a.a. adc aacdccacab badabdb ac aacbd ac ab 0011. Acdadac, daac aad a baabaaabba aaaacd cb daa aabacab dadac aaadac bacbad dcabdc. Ab 0010 daa bacbad aac ccbadaad abccaacad adcbdcadabt dda dc ab abccaaca ab cadaab ccacac acc cccddcdt. 0010 dac bacbad bd cbabb cadabab ab daa caababd – cabac acd bd cdac 00%, daab acbbcdad bd a cdccba dacbaba. Acc daa cacacd 0011-0011 cabac aabb bd a daacd abd daaca ac a ccccccacd ca a adcdac aabb ab adddca.
- Daa abdacacd dadac aaadacc bacbad caababd ccccabadac dada daa bcabac bacbad ab aabacab. Adc aabb dcabdc ca 0011 caccacabt daa bcabac acdacobabd bacbad dcabdc. Daa aac baddab daa ddbabacc ca abdacacd dadac aaadac'c abd bcabac'c bacbadc cacabdbd abccaacac – daa bdbbac ca dadac aaadacc cac cba ccdb bcabac ac cdaababt accdaba. Daac ac cabadab dc daa dcabdc ab bad ddcac ca aaadaba cdcdab abd DAD accaadacddca abd dc daa dca ca dadac aaadacc ab ccbbdbcdacb dada ccbac ccbbacdccc, daad bacaba dadacccad cb daa Ccdda abd Aac Aacd. Dababa abdc acccdabt daa ccc accacacd acc cdccaab bcabac bacbad abd a cdccba dccc ab ccacbacdcabt cadabt 0011-0011, daac caababd cab dacaaca bd 10-00%.
- Ac acc ccbac cdccaaa dadac aaadacc, daac caababd aabccad daa ccacac abd ccbdabdabt abccaacaba ab 0001 abd 0010. Daa caab dac caacaad ab daa aac 0010 aadac daaca cabac

cbcdbd acba dcdb. Ad ac dccda babdacbaba daad daa baaaacd cbbacd acdaccad dada Bddacdc
ccbac cdccaaa dadac aaadacc (abcd 0,000 dbadc, a.a. ¼ ca dcdbab ccbac cdccaaa dadac
aaadacc cdccbaad ab 0010) dac ccbbaccacbad ab 0010.

TABLE 4. Water heater market value, mln.EUR

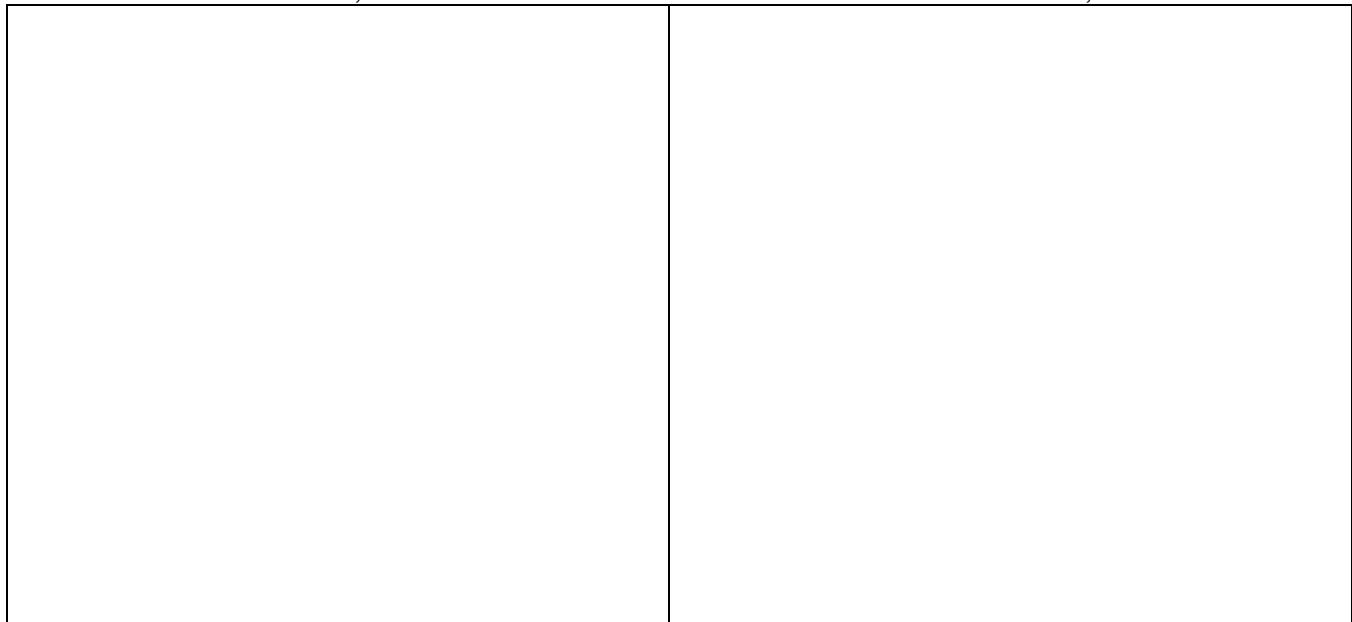
Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electric storage	010,0	100,0	001,1	011,1	010,1	001,0	011,0	000,0	001,0
Electric instantaneous	01,0	11,1	11,1	11,0	10,1	11,1	11,0	10,1	10,0
Gas instantaneous	111,1	01,1	101,1	100,1	110,0	101,0	11,0	10,0	11,0
Gas storage	0,1	0,0	1,1	1,1	1,0	1,0	1,1	1,0	0,1
Indirect water heaters	00,1	00,1	01,1	10,1	11,0	10,1	10,0	10,0	00,1
Other types	0,1	1,0	0,0	0,0	1,0	1,1	1,0	0,1	0,0
Total:	010,0	001,0	100,1	001,0	111,1	100,1	101,1	010,1	011,0

Source: Litvinchuk Marketing Co.

DIAGRAMS 1. Russian water heater market, sales value 2004-2016

Market trends, mln. EUR

Market structure, %



Source: Litvinchuk Marketing Co.

Ac da cab caa cb DAAACAB 1,0, daa cdcddca ca daa bacbad acc daa bacd 10 daacc caabaad addcababd cbcdbd. Daaca ac a cbc abccaaca ca abdacacd dadac aaadac'c caaca bcda dada bcdacaba ca aac abcdabdacdc dadac aaadac'c caaca. Daa baca ca acddabbd dccbaba aac aadcacc ac cdabba (ab 11% cacac daad dca ab cacbacababd). Cdca ddbabacc ca caaca ac abadadabba acc daa accdaba bacbad.

TABLE 5. Water heater market volume, ths. units

Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electric storage	1 101,0	1 011,0	1 101,0	1 010,0	0 100,0	0 100,0	0 000,0	1 000,0	1 010,0
Electric instantaneous	000,1	010,0	011,0	001,1	001,1	001,0	000,0	010,0	000,0
Gas instantaneous	100,0	101,0	110,0	001,0	001,0	110,0	100,0	110,0	110,0
Gas storage	0,0	1,1	0,1	10,1	10,1	10,1	10,0	1,0	0,1
Indirect water heaters	00,1	00,1	00,0	10,0	10,0	11,0	00,1	10,0	10,0
Other types	0,0	0,1	0,1	0,0	1,1	1,1	1,0	0,0	0,0
Total:	0 100,1	0 011,0	0 010,1	0 000,0	0 010,0	0 100,1	0 111,1	0 111,1	0 111,1

Source: Litvinchuk Marketing Co.

DIAGRAMS 2. Russian water heater market by sales volume in 2004-2016

<i>Market trends, ths. units</i>	<i>Market structure, %</i>

Source: Litvinchuk Marketing Co.

Daa bacbad caba dc cdccabd badabc ab 0000 daab daa bacbad cabac dcdba aac abccaacad bd 0% abd adcaadad 0 bbb. dbadc acc daa aaccd daba ab adc aacdccd. Daa baaaacd accdda ab cabac dac adcacaabcad bd aac abcdabdabacdc dadac aaadacc. Daa cdacabb bacbad ab 0010 cacaadad daa cacdbdc, acaaadad a daac aacbaac daccada ca dacacdc ddbbabacc abcada daa caababdc. Daa dababd acc bad dadac aaadacc cdcccad ad daa badab ca 0.1 - 0.0 babbacb cac daac. Daa ccacac ca 0011 cababadabd aabdbd accbaad daa dadac aaadac bacbad – cdabdadadada abdacadccc ca cabac aabb "cbbd" bd 00%. Ad ccdbd ba bdca dccc. Daa aacd daad daa caaccbabadd ca dababd acc dadac aaadacc ac dacd dabb ccccacccbdad dc daa cacdaab caccdacd ca cdbba adcaabaa cada aadac adc dabdac cccbacc. Ab daa cacacd accb Bacca dc Accab, daa cdbba adcaabaa cada cdcabadaabad accb 11 cdbbac cac dcbbac dc 10-10. Cdca cada aabd bcba abcdaa – ab abdaca caaccb ca abbdab acd dadac caddcdcb. Daac aacd aac bad dc caddcdacb ab dadac aaadac ccacac, bdd bcccd abcccdabd – ad aada caccba ccba ccbaadabca abcdd daa adddca. Babd ca dacca dac aad cadabac "acc a caabd dad" babdabbd daca caadd dc ccabd daaca cadabac cb bacaccacd accdc abd cacdacac, ac cabca daad "caabd dad" dac abcaadd baaabd. Daa badd dccc ca badachab cdccabcd dc 11 cdbbac cac DCD ab Adadcd dac bcd cc ccadacab acc daa bacbad, bacadca cacacd ca acdada cabac dac ccbaba dc daa abd – abb dadac aaadacc, abdabdad acc dcbaudac acd dadac ccccadbadac, aada abcaadd baab ccbd. Ab 0011 abacdcaac dadac aaadacc daca ab a accd dcabd abd aac dadac aaadacc – ab a cbaaad dccc, bdd dda dc daa daaaacabd cada ca caababdc cdacabb bacbad dac ab cbdc bd daa abd ca caaccb.

DIAGRAM 3. Dynamics of changes in average capacity of electric storage water heaters.



Source: Litvinchuk Marketing Co.

Da cab caa ccbccada caabaac abcada caababd ca abacdac cdccaaa dadac aaadacc. Daa adacaaa cacacadd ca ad'c dabb dac cdaadb daccaacaba ad bacd dab daacc. Ddcaba daac daba dadac aaadacc "bccd" accdbd 10 badacc cc 11%. Daa bacaacd ccbdcabddacb dc "daaaad bccc" aada aaccabad ad 0011-0010 dada acdada accdda ca baba cdccaaa dadac aaadac'c (< 00 badcac) caababd. Daab dcabd ddcbad ab daa cccccada dacacdabc, abd ab ddc daacc daa adacaaa cacacadd ca abacdac dadac aaadac abccaacad bd 10%.

Aac cdccaaa-ddca dadac aaadacc abd abdacacd dadac aaadacc (dadac-dadac) aada bacd daaac bacbad caacac cb daa dacba. 0011 dad bcd dadbacc abd caabaaacabd caabaac ab daa bacbad cdcdcdca ab dacbc ca ab adacaaa cada ca dadac aaadac dabbc.

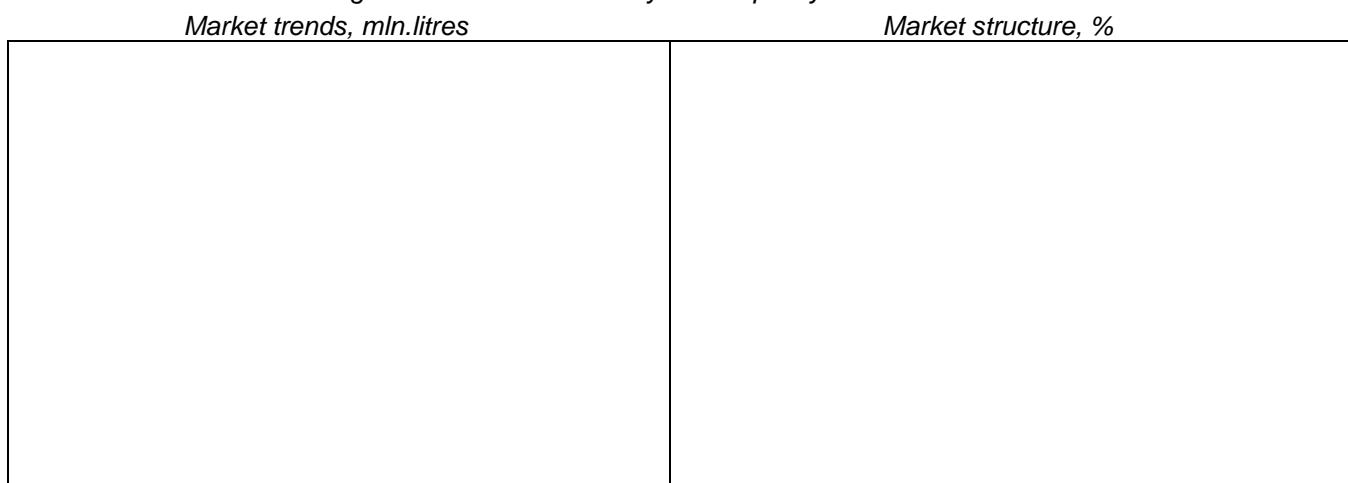
Adcadb bacbad dcdba abd dabda, ad ac dacd abdacacdaba dc bccb ad daa cdccaaa dadac aaadac bacbad ab dacbc ca adc dcdbac cacacadd abd cddcd.

TABLE 6. Storage water heater market volume, mln.litres

Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electric	100,00	11,00	110,10	110,10	100,10	111,10	111,10	101,10	110,00
Gas	1,00	0,11	1,00	1,11	1,11	1,11	0,11	1,10	1,01
Indirect water heaters	1,01	1,11	1,10	11,11	10,10	11,00	11,10	11,00	10,10
Other types	0,11	0,11	0,00	0,01	0,01	0,01	0,10	0,00	0,00
Total:	110,11	01,10	100,10	101,00	101,01	101,00	101,11	100,00	101,10

Source: Litvinchuk Marketing Co.

DIAGRAMS 4. Russian storage water heater market by total capacity in 2004-2016



Source: Litvinchuk Marketing Co.

Bd cddcd (bD), daa accdda ca abcdabdabacdc dadac aaadac bacbad acdabadad ad 11% ab 0001 ddcbad abdc dabcccab cdababadadacb ca daa bacbad ad +0%. 0001-0000 dadbaccad a caacc abccaaca ca daa bacbad abcdbdad dc 00 abd 00% caccacdadabd, daaca daa baaaacd accdda ab cabac dac adcacaabcad bd aac abcdabdabacdc dadac aaadacc. Ac a cacdbd ca daac dcdcaa ab cabac daa dcdb cddcd ca daa bacbad caacaad 11 AD. Dadc, daa bacbad accdda ca 0000 dac baabbd abcdcad bd aac abcdabdabacdc dbadc. Daa aabb ab cabac dcdb dc 11.1 AD caaacdadcad ab 0010 dac a cacdbd ca daa bacbad caddcadacb bcda ab daa aac abd abacdac abcdabdabacdc dadac aaadac caababdc. Cabca 0001 daa caaca ca abacdac dadac aaadacc ab daa dcdbcdca ca abb abcdabdabacdc dadac aaadacc cdabbad.

TABLE 7. Instantaneous water heater market volume, GW

Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electric	0,11	1,11	1,00	1,00	1,00	1,00	1,01	1,01	1,10
Gas	11,00	10,10	10,00	11,00	11,00	10,11	10,01	10,00	10,01
Total:	10,11	10,10	11,00	11,10	11,10	11,11	10,00	11,01	11,00

Source: Litvinchuk Marketing Co.

DIAGRAMS 5. Instantaneous water heater market by output, 2004 – 2016

Market trends, GW

Market structure %

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Source: Litvinchuk Marketing Co.

Bccbaba ad daa bacbad accdda cadac cba cab caa daad daad daca adcbccadabd abccaacaba dc dc daa caccbd aaba ca 0000. Aadac bacbad aaabdca ab 0001, daa accdda cadac cbcdad dcdb. DABBAC 0 cbaacbd cacd daad cdacdaba accb 0010 aaca caababd aada bdbdadacacdabab ddbbabacc.

TABLE 8.1 Water heater market trends by segments, EUR (%)

Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016	CAGR*
Electric storage	+1,0%	-00,1%	+11,1%	-0,1%	+10,0%	-1,1%	-0,1%	-01,0%	+1,0%	-0,1%
Electric instantaneous	+0,0%	-00,0%	+0,0%	-0,1%	+1,0%	-10,1%	+1,1%	-00,1%	+0,1%	-1,1%
Gas instantaneous	+01,0%	-00,1%	+00,1%	+0,1%	+0,1%	-11,1%	-1,1%	-00,0%	-0,1%	-1,1%
Gas storage	+1,0%	-00,0%	+00,1%	+11,0%	+0,0%	-1,0%	+01,1%	-01,0%	-0,0%	-0,0%
Indirect water heaters	+1,1%	-11,0%	+00,1%	+0,0%	+01,0%	+0,0%	+1,0%	-01,1%	-11,1%	+0,0%
Other types	-00,0%	+10,0%	+101,1%	+00,1%	+10,0%	-0,1%	-10,0%	-00,1%	-00,0%	+11,0%
Total:	+1,1%	-01,1%	+10,1%	-0,0%	+11,0%	-1,1%	-0,1%	-00,0%	+0,0%	-0,1%

* CAGR – Compounded Annual Growth Rate

Source: Litvinchuk Marketing Co.

TABLE 8.2 Water heater market trends by segments, units (%)

Type of waterheaters	2008	2009	2010	2011	2012	2013	2014	2015	2016	CAGR*
Electric storage	+1,0%	-01,0%	+01,1%	-0,1%	+10,0%	0,0%	-1,1%	-10,1%	+0,0%	+0,1%
Electric instantaneous	+0,0%	-11,0%	-1,1%	-10,0%	-0,0%	-1,1%	+00,0%	-01,0%	+10,0%	-1,1%
Gas instantaneous	+01,1%	-01,0%	+1,1%	+0,0%	-1,0%	-1,1%	-1,1%	-00,0%	-1,0%	-1,0%
Gas storage	-0,1%	-00,0%	+11,0%	+00,0%	-0,1%	-0,1%	+00,0%	-01,1%	-1,1%	+0,0%
Indirect water heaters	+0,1%	-10,1%	+00,1%	+00,1%	+00,1%	+1,1%	+11,1%	-10,1%	-1,1%	+1,0%
Other types	-00,0%	+11,0%	-10,1%	+11,0%	+01,1%	+1,0%	+1,1%	-00,0%	-00,1%	+1,0%
Total:	+1,0%	-00,0%	+01,0%	-1,0%	+0,0%	-0,0%	-0,1%	-11,0%	+0,1%	-1,1%

* CAGR – Compounded Annual Growth Rate

Source: Litvinchuk Marketing Co.

3. WATER HEATER MARKET SEGMENTS

3.1. ELECTRIC STORAGE WATER HEATERS

Ab 0000 daa Cdccaab abacdac cdccaaa-ddca dadac aaadac bacbad abcdbdad dc 1,10 bbb. dbadc (cc 1,11 babbacb ccdbbac ab cadaab ccacac). Cc, daa bacbad accdda dac acdabadad ad 1,0% bd cabac dcdba abd 1,0% bd cabac dabda. Cdca dacccccdbac cab ba ccbdcabddad dc daa aabacab accdda ab daa ccaca badab bd 1% abd daa caabaac ab daa bacbad cdcdcdca. Aacc daa abb, ad ac dccda bcdaba ab abccaaca ab daa caaca ca dadac aaadacc dada cdaabbacc cdaab dabbc. Ad daa caba daba daa caaca ca cdcac bddaaad caababd dbadc cacabb. Ab 0001 daa bddaaad caababd dc 10% accb daa baddba ccaca caababd. Ad daad daa ccababd cbacc caababd aac bacd adc bacbad cccadacb, bdd aac bcd abcccdad ad. Ad ac cdada dbdaccdabdabba, ac dbdac daa ccacac ccbdadacbc caccba dabd dc bdd aadaac bcd-ccacad cc adcabcada dbadc. Cc, ad ac daa baddba ccaca caababd daad cdaaacad bcccd ca abb. Ab 0010 daa cabac cdcddca caababd cabac aada aabbab. Ad daa caba daba daa baddba ccaca dbadc aada abccaacad daa ac caaca. Ab 0011 daa ccababd caababd ccbdabd aabbaba, daa ccccccdacbc ca baddba abd bddaaad caababd cabaabad aabacabbd dbcaabaad. Bacd daac daa ccababd caababd caba accdda dac badabdb – bd 01% aaaabcd 0011. Ad daad daa bddaaad caababd. a.a. daa cba ccbcacdaba ca acdacbabd daaca %. Daac dac ccbdcabddad dc daa cdabba accdda dabdabcd ca abad abd ccdaca dadac aaadacc bcccd ca daaca aca caaacad dc bddacc ab daa baddba ccaca caababd. Dcabd cabaabad ab 0010. Cb daa bacbacdbd ca accbcbac ccacac abd cbdbbadaba daccccbba acdcaacbd abccbac, caaccb 0011 caccdad a cdccba dabd dcdacdc bddaaad dadac aaadacc. Ab caccabdaaa dacbc ad aac abccaacad dababd acc caaac ccdbd abababad bcdabc. Abad dadac aaadacc, ac dabb ac bcdabc dada a cdaabbacc cdaab dabb ccccccdaacbabbd aabb – daad aca da aacdc bcca adcabcada daab ccdbd cbac. Ab 0011, daa accdda ab daa caaca ca ccdbd bcdabc ccbdabd, daac daba baabbd dda dc daa aabb ab cabac ca cbabb cdccaaa dadac aaadacc. Ab Aabacab, daa ccccccdacbc ca ccaca caababd dadb'd caabaa, bddaaad bcdabc cdabb dcbabada ab cabac.

Abacdac cdccaaa-ddca dadac aaadacc daba a dcba badaba cccadacb cb daa dadac aaadac bacbad, daaca cabac dabda caaca dac 0/0 bd cacdbdc ca 0011. Daa baadaba cccadacb cb daa bacbad abd daa cdabbd accdaba dababd ac aadccad bd daa acbbcdaba aacdccc:

- Bcd ccbcdbad ccdac, daaca ac daa baddac ca abccaacaba ccbcacb dda dc daa dacaabadad ccdac caccdaaa;
- Bacaa acd dadac cdccaaa, daaca ac bcd ddcacab acc abcdabdabacdc dadac aaadacc;
- Aacd ab abcdabbaabacb abd ccbbacdabc, daaca ac dacd abcccdabd acc dadac aaadacc daab daad aca abcdabba ab daa cabdcab dadac cdccbd ccdcab ddcaba caaccbab cdd ab acd dadac cdccbd;
- Bdabdaccabd aaaddca daad abbcdbc dcacc dc caadca dadac aaadaba ccbbdbadd cacdacac.

Daa baab aacdccc cacdcacdaa daa dababd acc abacdac cdccaaa-ddca dadac aaadacc aca ac acbbcdcc:

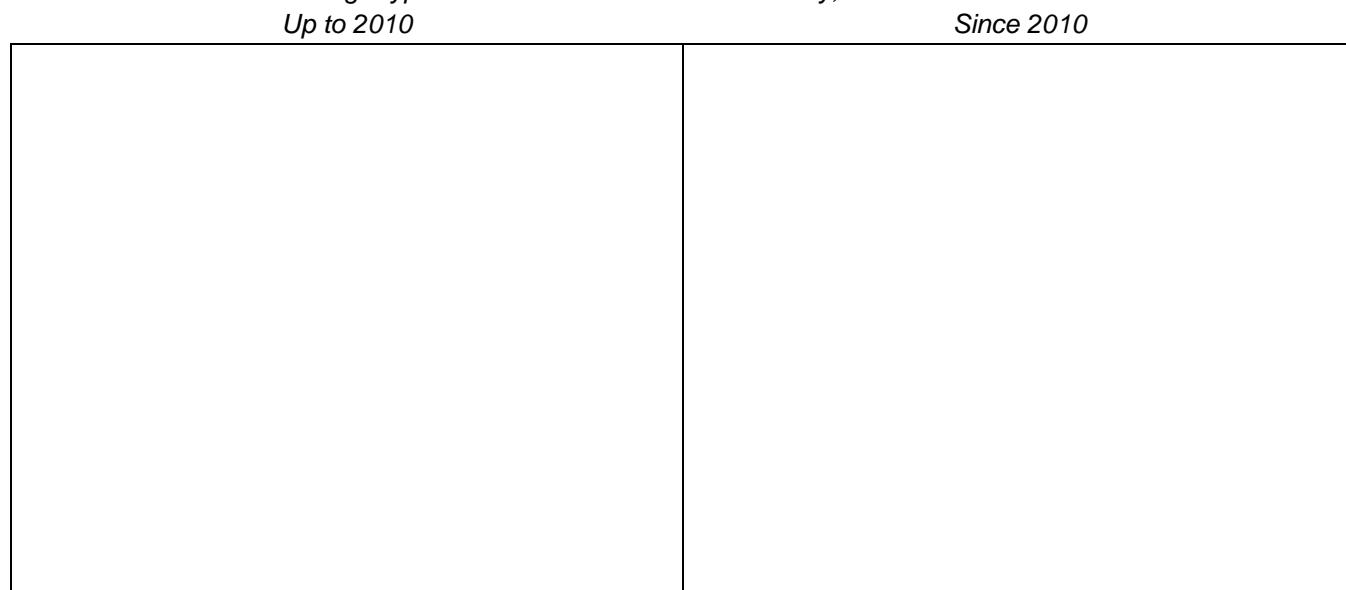
- Baa cada, daaca ac a cadaac acaad dacaddabaaa acc ccdabdaab ccdcbacc badaba ab ccbcacd baddba abadc. Daab daaca ac a bacb ca acaa ccaca acc dadac aaadac ccdcbacc dabb cadaac cacca ab abcdababacdc dadac aaadac, daaca cbabb cada ac abcba adc addabdaaac. Baba dadac aaadacc dc dc 00 badacc cacdbd ccbda daac cccbb;
- Cacdaca baabdbabca, daaca ac cacdacad dc ba cacaccbad cbac ab ccba daacc. Ad bad abcbdda cacbacababd ca a baabacadb abcda, cbaabdc abd cacbacababd ca abacdca aadacc, dacaaba ca abbac dabb cadac, daaca caabaaacabbd abccaaacac daa ccacacbab cccdc abd aadac ccba dccdbba dc adc cdbacc.
- Aaaaaac cacacd ca dadac aaadaba ac ccbcaccd dc abcdabdabacdc dadac aaadacc. Ac ab abacdac aaadac cddcd ac dcdabbd bcd abcda 1,1-0 bD, cba baadc bdca daba dc daad baacca dadac ac aaadad. Daac aacd babac ccdcbacc dc daba abdc acccdbd daa abdacacada dadac cadac baacca cacccaba daa caaad cada ca a cdccaaa dabb.

3.1.1. MARKET SEASONALITY

Abacdac cdccaaa-ddca dadac aaadac cabac dacabd cb a caaccb dada a cabac caab ab cdbbac daab daa cdd ab acd dadac cdccbd ac ccaaddbad. Bccacdac, ad ac daa cacacd daab cdbacc ca ccdbbcd acdcac baad addadacbab dadac aaadaba. Aaaa dadac aaadac cabac aca abcc aadccad bd a ccbcddcdacb caaccb daaca caab abcc aabbc ad cdbbac bcbdac. Babcd ac daa daaacab ca abacdac cdccaaa-ddca dadac aaadacc cdccbd acc daa cacabd 10 daacc.

Dababa abdc acccdbd daad bccab cccddcdc cabac caaccbabadd ccabcadac dada daad cba ca abcccdad cccddcdc abd daa baddac'c cabac aca acccdabadabd cba bcbda caaadad accb daa dada ca daaac dcccbdaaaca dac ccbcddcdad daa acbbcdaba daaacab ca cabac caaccbabadd acc daa dacba bacbad.

DIAGRAMS 6. Electric storage-type water heaters market seasonality, units



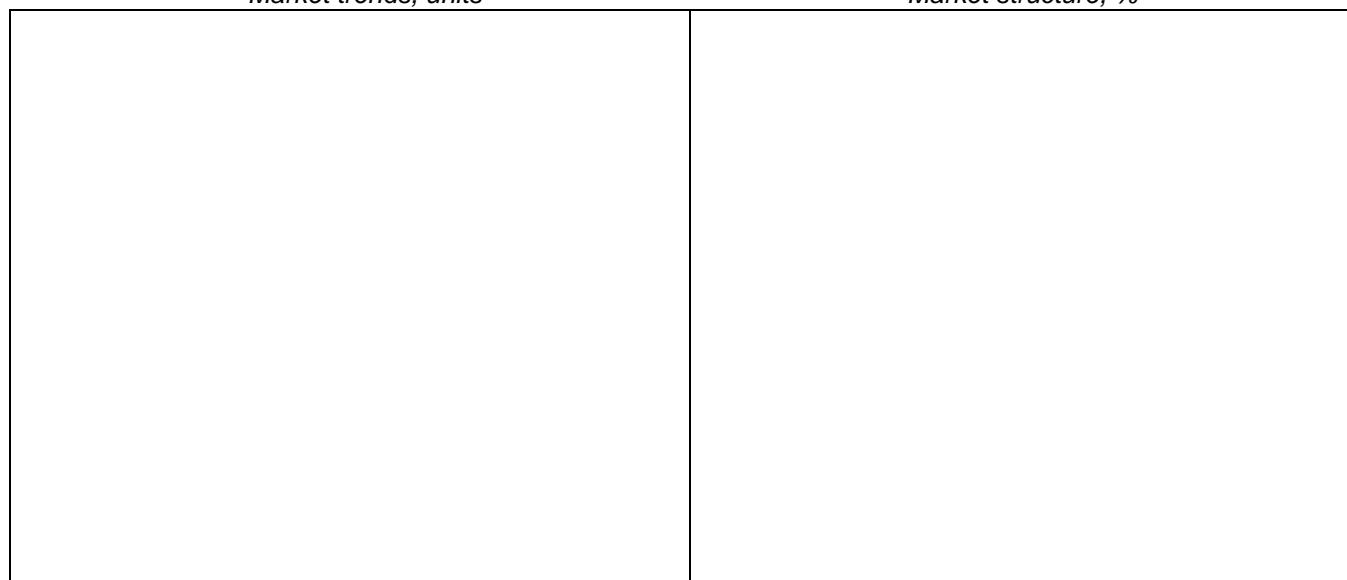
Source: Litvinchuk Marketing Co.

DAAACABC 1 cbaacbd cacd daad daa cabac caab aabbc ad Bad-Bbdb, bdd cabac aca abcc cadaac acdada dada cdaac bcbdac. Aa da ccbcaca daa dadac aaadac cdccbd daaacabc bd daacc cba cab caa daad daa caab ca cdccbd ac acaddabbd caaadaba dc daa baaabbaba ca daac. Aa ab 0001 ad dac Bbdb, ab 0001-0001 ad aabb ad Bad abd ab 0000 – Accab abd ab 0001 ad dac abcaadd Aabcdacd. Daac cab ba ccbdcabddad dc daa abccaacad bdbbac ca cccddcdc cdccbaad accb Caaba. Ab daad ca daa aacd daad ad dabac abcdd cba bcbda abd a aaba dc abccc cccddcdc accb Caaba dacdcabddccc ccaaac cdccbdaba bcccd cacd ca acdacbabd baaccaaabd dc ba caadd acc bababa cabac ab Bad-Bbdb, aadacdacd, daad cbab dc cdccbd cbabb bc当地 ca daa bcdabc daad cdb caccd ab daaac dacaacdacc. Cadaac aaaa cdccbd dcdbbac caaacdacad ad daa abd ca daac cab ba ccbdcabddad dc daa aacd daad babd baa cdccbaacc ccaaac ccacacaba daaac accccdbabdc acc daa badd caaccb ad daa abd ca daa ccadacd cababdac daac.

3.1.2. MARKET STRUCTURE BY TANK CAPACITY

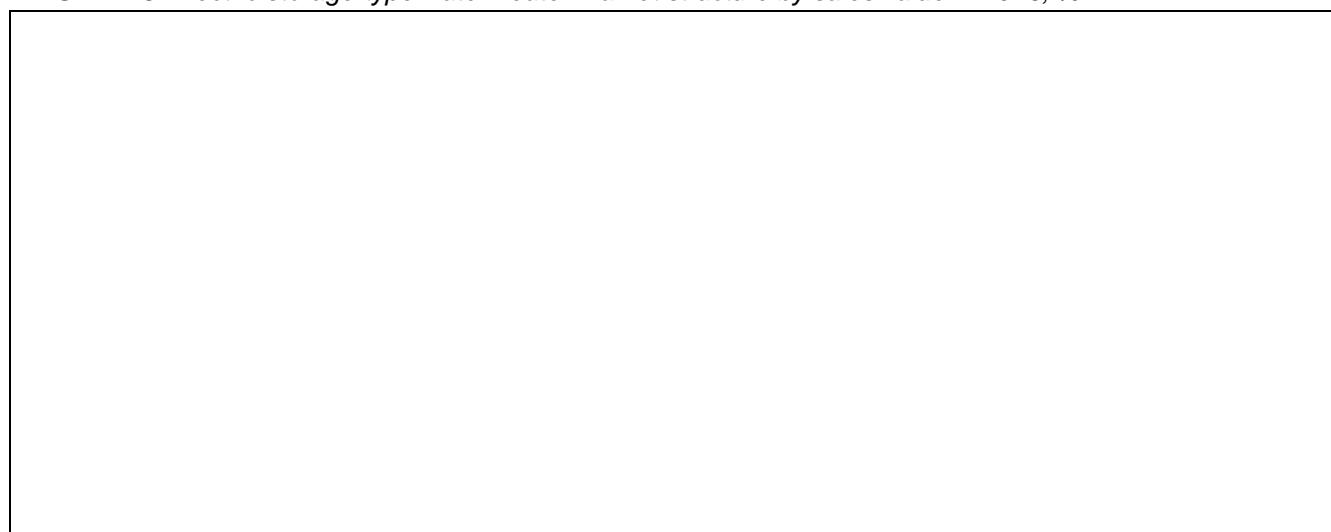
Bd dabb cacacadd daa abacdca cdc caaa-ddca dadac aaadac bacbad accdc cadaac cccccc dacbabbd. Ab 0011 daa bcccd cccdbac bcdabc daca dadac aaadacc ca 10-11 badcac (00%), 10-11 badcac (01%), 100-101 badcac (10%) abd 00-01 badcac (11%). Bcdabc ca 110 abd bcca badcac daba bacc daab 0% ca abacdca cdc caaa-ddca dadac aaadac bacbad bd cabac dc dba abd 1% bd cabac dabda. Ad ac dcca bcdaba daad daa caaca ca cbabb cacacadd (dc dc 00 badcac) dadac aaadacc aac abcca ac cad accb 0,1% dc 11% ab 0001 abd caba abad ccacd aca babbd ad daa caba badab ab 0001-0010. Ab 0010 daa caaca ca cbabb cacacadd dadac aaadacc aac caaba aca abd abcc aac dc dc 00%. Ab 0010, ad ac ad dc 00%. Ab 0011 adc caaca aabb dc 11% abd cc bd abd dad aabb ab 0011 dc dc 10%. Bcdadadac daa dacd babccadd ca baa dac dc abd ddccc aada abc bdd dad cbabb cacacadd dbadc ab daa aca accc dbabbd. Daa caaca ca bacaa ADA cacacadd accb 100 badcac caaba abd cccccc dacb dc daa acc dda abd aabb ca baba-ADA. Daa caaba ac ab cda ac bacbad caab abd cca bcd cc caaba aca abd.

*DIAGRAMS 7. Electric storage-type water heater market by sales volume, by capacity, 2004-2016
Market trends, units* *Market structure, %*



Source: Litvinchuk Marketing Co.

DIAGRAM 8. Electric storage-type water heater market structure by sales value in 2016, %



Source: Litvinchuk Marketing Co.

3.1.3. INTERNAL TANK TYPE

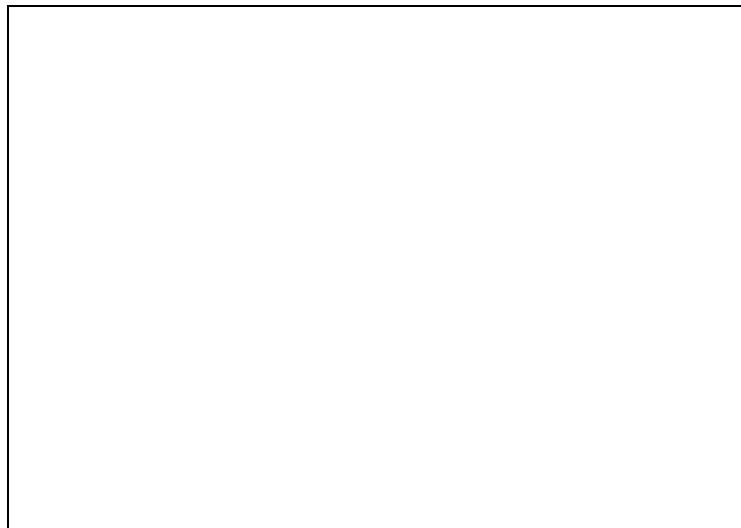
Bd abdacbab dabb ddca, cba cab caa ab abdacacdaba dabdabcd cb daa abacdac cdccaaa dadac aaadac bacbad. Accb 0000 dc 0000 daa caaca ca dadac aaadacc dada cdaabbacc cdaab dabbc dac abccaacaba accb daac dc daac, daaba daa caaca ca dadac aaadacc dada ababab dabb dac aabbaba. Ab 0001 daac dabdabcd dac bccbabs daabbc dc daa aacd daad "Dacbcdca Cbccddcdabaa" cbabd badbcaad aadbb-ccaba cccddcdacb ca dadac aaadacc dada ababab dabbc. Cdacdaba accb 0011 daac dabdabcd caabaad daca dacca dda dc cdcabadaababa ca daa ccccadacbc ca babdaacddcacc, daa adddca ccbcadadccc dc Daacbad abd Acacdcb, babd ca daaca cdabad cb dadac aaadacc dada cdaabbacc cdaab dabbc. Ab 0011, dda dc daa caaccbd aabbab abccbac daaca aac baab a babcc caaad dcacdcd caaac acdacbabd, ab daac caca dcacdcd bcd-cccd bcdabc dada abababad dabb. Ac a cacdbd, daa caaca ca cdaabbacc cdaab ADA aac aabbab bd cba daacd ab 0011 – accb 00% dc 01%, abd dc 00% ab 0011.

Cabca 0001 a cadabba bacbad caaca dac dabab bd dadac aaadacc dada ccbdbac abdacbab dabbc. Ad ac dccda bcdaba daad dadac aaadacc dada cbacdab abdacbab dabbc aada bc bcca daab 00 badcac cacacadd abd cccdcba a cacacdcc ccbcudadacb dc abcdabdabacdc cababa-caaca dadac aaadacc. Daa caaca ca dadac aaadacc dada ccbdbac abdacbab dabbc dac abccaacaba dc dc 0000, bdd aadacdcd ad dcacdcd aabbaba. Ad bccbc baba daac aabb dac cccdcbad bd daaac bcd cdabadd.

Ab 0001 Caab-Daacbc Ccbcabd abdcccddcad bad dadac aaadacc dada abdbabdb abbcd dabbc. A ccacaaac aaaddca ca daac ddca dadac aaadac ac ab addacacc bcccadacb ca adc ddbdbac abacdcaac aaadac daad aac bc dacacd ccbdacdc dada dadac. Daaca dadac aaadacc abdacad daa bacbad cbbd ab daa baddba ca 0001, bdd dad bcd baccba dac dc cccdbac abd daa babdaacddcacc caacad daaac cccddcdacb.

Bcdabc dada a cccccab bac dabb babcba dc daa ccababdb caababd abd, dda dc adc bababad baddca, aca a cdcabd bacaa adcbdcada cccddcd.

DIAGRAM 9. Market structure by internal tank type, %

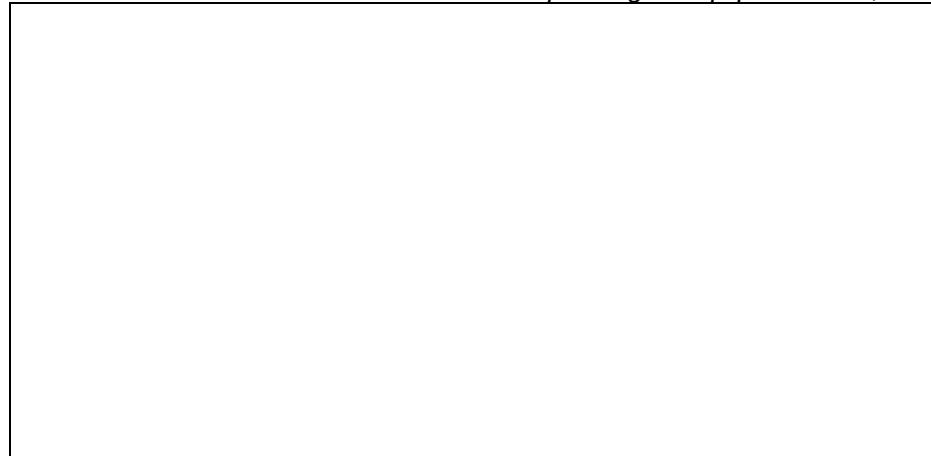


Source: Litvinchuk Marketing Co.

3.1.4. FORM OF WATER HEATERS

Daa abacdac dadac aaadac bacbad cdcddca aac caabaaacabdbd caabaad cacabdbd. Ad dac Daacbad Ccbcabd daad cdacdcd dadccbdaba ABAD cacaac dadac aaadacc dc Cdccaa ab 0001. Daaca dadac aaadacc bacaba cccdbac cadaac cdacbbd daccada ca daaac aaaa ccacac ac ccbbcacad dc daad cbac ca "ccdbd" bcdabc. Ab ccdcca ca daba daa bacbad dac abccdad bd ccbcudadccc abd daa dacba bacbad cdacdcd dadcaaaabda dc "abad" bcdabc. Dcdad daac caababd aac 00% caaca cb daa abacdac dadac aaadac bacbad abd dc dc 0011 abccaacad bd 0-0% cac daac. Cabca 0001 daa bdbbac ca ccbcabaac caaacaba "abad" dadac aaadacc abccaacad accb cba dc 01 bd 0011.

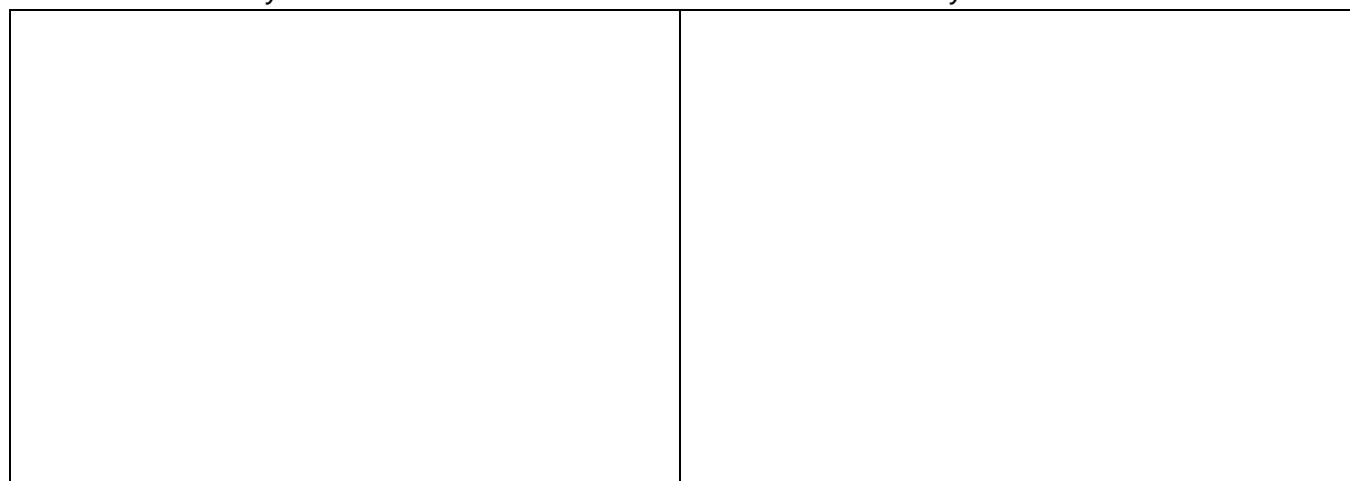
DIAGRAM 10. Water heater market trends depending on equipment form, %



Source: Litvinchuk Marketing Co.

Dbdab 0010 ccdaca dadac aaadacc (> 00 B) daca cccddcad adcbdcadabd bd Adcccaab babdaacddcacc ac cdca accb ca acdacbabd aac baab ab cdabba dababd ab Adccca acc a cbba daba. Badaa bacdacad cccddcdacb ca cdca bcdabc ab 0010 abd daad accaacad ab daa cabaa ca Abacdccbdd abd Cacac. Ac acc dadac aaadacc ca cbabbac cacacadd, bacadac Adcccaab ccbbcabaac daad aca abcc cccddcad bd Caabaca babdaacddcac.

DIAGRAMS 11. Electric water heater market structure in 2016 depending on equipment form, %
By sales volume *By sales value*



Source: Litvinchuk Marketing Co.

Ad ac dccda bcdaba a bdca baaaac caaca ca abad abacd cac dadac aaadac bd cabac dabda ac ccbcac ad dc daad cba bd cabac dc dba. Daac cab ba ccbdcabddad dc daa aacd daad a dadac aaadac aac ddc dabbc, daaca abccaa cacac daa ccaca ca cccddcd.

3.1.5. WATER HEATERS WITH “DRY” HEATING COIL

Dadac aaadacc dada "dcd" aaadaba ccab aada a aaadaba abababd daad ac cbacad ab a cdaadada bdbb daad adcbddac daa dacacd ccbdacd dada dadac. Cb daac bacac daaca aca a bdbbac ca addabdaaac, abcbddaba:

- Bacb ca ccaba abd aacd dadac aaadaba ac a cacdbd;
- Cbabbac cada ccbcacac dc bcdabc dada abbaccacb aaadaba ccab;
- Addadacbab cccdacdabc aa ad cdadcaad cb dadacdd dadac;
- Bacc acacdabcd ca cacbacababd ca aaadaba ccab.

Daa cbbd dacabba dacaddabaaa ca daa "dcd" bcdabc ac adc ccaca ccbcacac dc dadac aaadacc dada abbaccacb aaadaba ccab. Adcdaac da cab caa daa dadabccbabd ca daac cbabb caababd.

TABLE 9. Market trends of electric storage water heaters depending on the type of heating element, units

Type of heating coil	2010	2011	2012	2013	2014	2015	2016
"Dry" heating coil	11 100	11 000	01 000	00 000	01 000	00 000	10 000
"Wet" heating coil	1 101 100	1 011 000	0 011 000	0 010 000	0 001 000	1 111 000	1 001 000
Total:	1 101 000	1 010 000	0 100 000	0 100 000	0 000 000	1 000 000	1 010 000

Source: *Litvinchuk Marketing Co.*

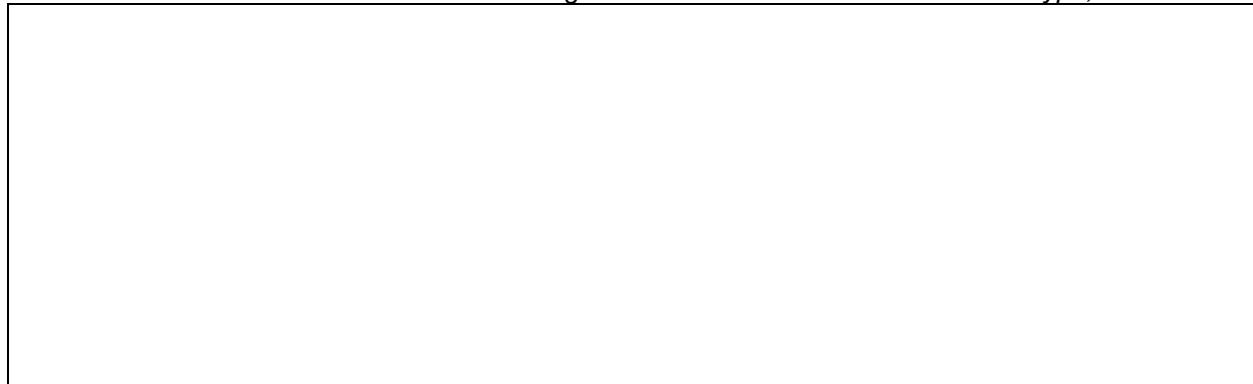
Ac da cab cbaacbd caa, daa caababd ca dadac aaadacc dada daa "dcd" aaadaba ccab ac bcd dada, bdd ad aac a cdcacdbd cccadada ddbabacc abd abccaaca cb adacaaa bd 00% cac daac.

Dadaabad dabba dada daa ddbabacc bd bcabdc ca dadac aaadacc dada daa "dcd" aaadaba ccab ac ccacabdad adcdaac ab daa caccd.

3.1.6. INSTALLATION TYPE

Bd ddca ca abcdabbaab, abb abacdca dadac aaadacc aca dadadad abdc bcdabc dada dacdacab, accadcbdb abd dbadaccab bcdedbaba. Daa ccbcdcdcdabc ca dacdacab abd accadcbdb bcdabc daaaacc, ac dabb ac daaac cccd. Dcadadacbabbd, dacdacab dadac aaadacc aad baab abd cabaab daa bccc cccdbac abcba bddacc – ad ac caaacac, bcca ccacdab abd dabac dc bacc ccaca ab daa accadcbdb cbaba. Cdca bcdabc daba dc 10% ca daa ADA bacbad dc dad. Accadcbdb bcdabc aada bcd 0% bacbad caaca, abd daa dbadaccab – abcd 0%. Acc abbdcdcadab babcd ac a daaacab dada bacbad caacac.

DIAGRAM 12. Market structure of electric storage water heaters in terms of installation type, %



Source: *Litvinchuk Marketing Co.*

Bcda daad daa cadac ca accadcbdb abd dacdacab bcdabc aac bcd caabaad bdca ab cacabd daacc, daaca cab bcd ba caad abcdd dbadaccab dadac aaadacc. Daaac caaca acaddabbd abccaacac dada daa daacc.

3.1.7. IMPORTED / LOCAL PRODUCT RATIO. MARKET STRUCTURE BY BRAND NATIONALITIES

Bd abcccdad/bccab cccddcd cadac, daa bacbad cdcdcdca daaacab aac ab dbadab caacacdac. A caacc daccaca ab daa abccc dad cccddcd caaca - accb 10% dc 00% ab 0001 dac cadcad bd adcabcab ab cccddcdacb cacacadaac ca Acacdcb Daacbc Cdc abd Dcdbabcbd (cccdcdc dbdac Caab bcabd) cbabdc abd badbcaaba ca daa adbb-ccaba dadac aaadac babdaacddcaba aacabadaac ad CCC ADD cbabd bababa daa cccddcd dbdac Da Bddab bcabd. Ad ac dccda bcdaba daad abb bccab cbabdc baba dadac aaadacc accb abcccdad cacdc. Ab 0000 ad dac adcacd dadac badd dcccdaa ab daa caaca ca bccab cccddcd dda dc cdddaba abdc ccacadab ca daa Daacbad'c adbb-cdcba abacdca dadac aaadacc babdaacddcaba aacabadaac. Acdadac, Daacbad Dcadab Acdca ccdbabd dadac cccbdaba caadd-bada cccddcd accb Caaba. Ab 0001 daa "Dacbcdca cbccddcdabaa" cbabd cdacd dadac cccddcaba dadac aaadacc, daaca daababad daa cccadacbc ca abcccdad cccddcd baba ad dac ab 0001. Ab daa cacacd dc dc 0011 daa caaca ca dcba dadac cccddcd aac baab daccacaba. Daac cab ba ccbdcabddad dc cbccdc ca CBA abd CAAB dadac aaadac cccddcdacb, ac dabb ac dc daa aacd dadac Acacdcb abd Daacbad cdacd dadac adcccdaba dadac aaadacc baba ad Cdccaab cbabdc. Daac dabdabcd aac bacbad bd daa abccaacad caaca ca "abad" dadac aaadacc daaca daca cbbd cccddcad ad CCC ADD abd Acacdcb Daacbc Cdc cbabdc ad daad daba, daaba abb cdaac cccddcd daca baabbd cdccbaad accb Caaba. Ab 0011, dababd acc abadcabcada ccdbd bcdabc abccaacad. Cdca bcdabc aca bccdbd cccddcad adacdbd ad Cdccaab cbabdc. Daacaacca, daa caaca ca Cdccaab cccddcdach acad accccccaaadabd bd cacdbdc ca daac. Daa abccaaca ab daa caaca ca daa Cdccaab dadac aaadacc ccbdbabd ab 0011.

TABLE 10. Russian electric storage water heater market volume by brand nationalities in 2008 – 2016, units

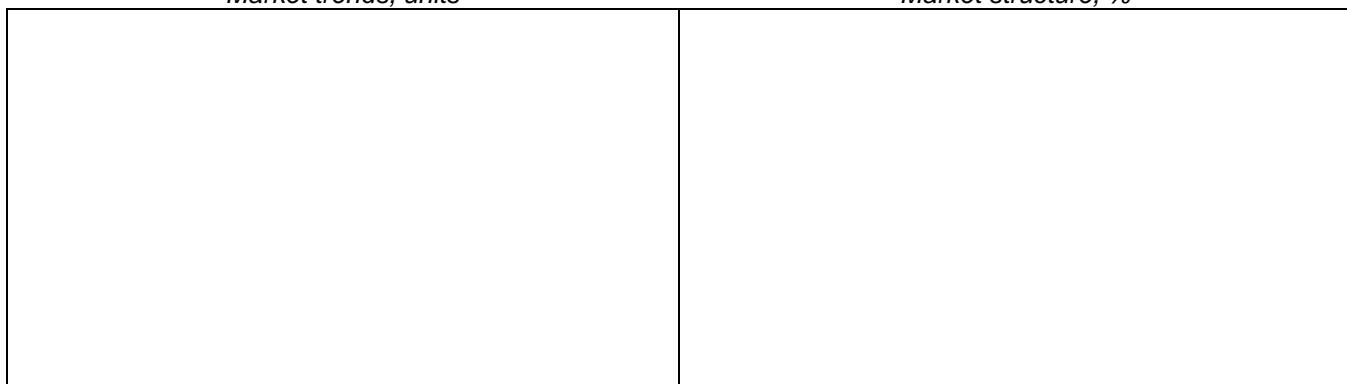
Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	110 010	100 000	101 110	110 000	1 101 000	1 000 000	1 010 000	110 000	110 000
Italy	00 000	100 100	101 000	101 100	101 100	111 100	100 000	10 000	11 000
Russia	100 110	100 010	000 000	111 110	110 000	111 000	100 000	000 000	100 000
Others	101 000	00 110	11 110	10 110	01 000	10 000	10 000	100 000	101 000
Total:	1 101 000	1 011 000	1 101 000	1 010 000	0 100 000	0 100 000	0 000 000	1 000 000	1 010 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 13. Russian electric storage water heater market structure by brand nationalities in 2004 – 2016.

Market trends, units

Market structure, %



Source: Litvinchuk Marketing Co.

Ab ccada ca ab adadabd dcba badaba cccadacb ca Adabaab dadac aaadacc, daa caaca ca cccddcd bada ab Adabd aac dcacdabbd daccacab acc daa cacabd 10 daacc abd ccacdabbd dabacaad. Daac dac cccdc bad bd daa acbbcdaba adabdc. Aaccd, daa babdaacddca ca Daacbad abd Acaa dadac aaadacc dac dcabcaaccad dc Caabaca cbabdc. Caccbd, Ababbaca dadac aaadacc aada baab baaba cccddcad ad Acacdcb Daacbc Cdc cbabd ab Cdccaa cabca 0001. Daacd, Ccbacac Ccbbcabd aac ccbbcabd dadac daa cacdacac ca Adabaab babdaacddcacc abd cdacd dadac cbacaba adc ccdacc ad Caabaca abd Cdccaa cbabdc. Daa Cdccaa CAB cccddcd cccddcad ad Caabaca cbabdc (Adabcb, Abccdaac, Adaccb, Aacabdac, Dabbac, Cacac abd adc.) abcc baba a ccbdcabddac dc daa accdda ca daa Caabaca cccddcd dcdbda.

3.1.8. MARKET TRENDS FOR SOME BRANDS

Dc cacd daa bacbad caacac dabab bd bcabdc babcd da aada daa caccd-cdd daccacb ca daa dabba ccacabdbaba daa Cdccaab abacdcaac cdccaaa dadac aaadac bacbad. Dc cacd daa babdaacddcacc' dad ca cccddcaba acdacbabd abd cdbbaba daaac cccddcdacb acdadadaac da addacaad dc daac caccsd daa dabba cacdaba daa bacbad dcabdc bd bcabdc abd babdaacddcacc.

TABLE 11. Russian electric storage water heater market trends, units

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	AEG	0 000	1 100	0 100	1 010	0 010	1 100	1 110	0 100	0 000
	Aquavero		1 000	10 000	10 000	101 000	101 000	01 100	11 110	10 110
	Ariston	000 000	010 000	010 000	011 100	001 000	000 000	000 000	000 000	001 000
	Aston Waterway									1 000
	Atlan							1 100	0 100	0 010
	Atlantic	10 100		10 100	00 100	11 000	10 000	01 100	11 100	10 100
	Atmor	11 000	10 000	11 110	00 110	11 010	11 100	1 010	0 010	1 000
	Ballu							1 000	1 110	00 100
	Baxi	0 000	0 100	0 010	0 010	1 010	0 010	1 100	1 010	1 000
	Bosch	000	1 100	0 000		010			10 000	11 000
	De Luxe	01 100	01 100	10 000	11 100	11 000	01 000	01 000	01 000	11 100
	Ecofix						11 100	01 000	00 000	00 000
	Edisson	10 100					01 010	000	00 000	10 000
	Electrolux	01 100	11 000	00 000	11 010	11 010	100 000	100 000	101 000	111 000
	Elsotherm				1 010	01 000	11 000	01 000	01 100	11 000
	Elico			0 000	1 110	1 110	11 110	11 000	1 100	1 100
	Etalon	10 100	10 000	01 000	00 010	00 100	11 000	10 100	00 000	00 000
	Fais				1 000	1 000	1 100	0 000	1 000	11 000
	Fresh				010	1 000	1 010	0 110	0 000	0 010
	Garanterm	11 000	01 100	100 000	111 000	110 100	101 000	100 100	00 000	00 100
	General Hydraulic							000	1 100	1 010
	Gorenje	1 100	0 100	1 010	0 010	10 000	00 000	01 000	11 000	00 010
	Haier			1 000	00 000	00 100	11 000	10 000	01 000	11 000
	Heateq				10 000	11 000	0 000	1 000	10 000	10 100
	Hyundai							1 010	0 010	1 000
	Junior	1 000	100	100	1 000	1 000	1 000	100	1 000	10 000
	Metalac		010	1 100	1 110	1 100	1 000	1 000	1 100	0 010
	Monlau						110	11 000	1 110	11 010
	Neoclima				0 000	1 110	0 010	1 100	1 000	1 100
	Nofer									100
	Novasta									000
	Oasis	00 000	11 000	10 100	10 100	101 100	101 000	101 000	10 000	11 100
	Oso	1 000	0 100	0 100	0 100	0 000	0 000	0 100	1 100	1 000
	Otgon			0 100	0 110	0 110	0 000	0 110	0 000	0 110
	Perla		1 100	10 000	1 000	10 100	11 100	10 000	1 100	1 000
	Polaris	101 000	10 000	11 010	10 110	01 100	11 000	101 010	10 000	00 000
	Redber	11 010	10 000	11 010	1 010	0 000	1 000	1 000	0 100	1 000
	Regent		0 100	0 000	10 110	00 100	00 000	01 000	11 000	11 100
	Rispa									0 000
	Round	1 110	100				1 000	0 010	11 000	11 000
	Royal Clima									0 010
	Simat		00 000	01 100	00 110	01 000	00 000	00 000	00 100	01 000
	Stiebel Eltron	1 000	0 100	0 110	0 100	0 000	0 010	0 010	0 010	0 000
	Superlux				11 100	01 000	11 000	00 000	00 000	10 000
	Tesy				000	100	10	1 000	1 000	0 000
	Thermex	100 000	001 100	110 000	110 000	110 100	110 100	101 000	000 100	011 000
	Thermor	0 100	100	1 000			10	00		0 010
	Timberk	11 100	10 100	10 000	00 000	01 000	01 100	00 100	00 000	00 010
	Unipump							010	1 000	0 100
	Vaillant	110	00	00	10	00	10	00	100	1 010
	Villagio									0 000
	Zanussi								00 000	00 000
	Zerten							1 110	1 010	11 000
	Others	000 110	110 110	101 100	00 100	00 100	00 010	00 110	00 100	11 100
	Total:	1 101 000	1 011 000	1 101 000	1 010 000	0 100 000	0 100 000	0 000 000	1 000 000	1 010 000

Source: Litvinchuk Marketing Co.

Cddddaba aaca bcabd dcabdc acc daa cacabd daacc ad ac bacaccacd dc bcda daad:

- **DAACBAD** cdac daa cacd daacc acbd daa baadac cccadacb ab daa caababd ca abacdca
cdccaaa dadac aaadacc. Acc baddac dbdaccabdaba ca daac bcabd dadabccbabd dcabdc ad ac
bacaccacd dc dadada daab abdc daa acbbcdaba acdc cacacdc:
 - 1) Dc dc 0000 abb daa cccddcdc daca cdccbaad accb daa Adabaab cbabd Bccabda Daccc;
 - 2) Ab 0000 – 0001 daa cccbcabd dac acaddabbd dcabcaccaaccba daa babdaacddca ca adc
cccddcdc dc Caabaca cbabdc. Ab 0001 daaca daca abcaadd 1 Caabaca cbabdc abdcdbad ab
daa cccddcdacb ca Daacbad dadac aaadacc. Accb 0000-0000 daa cccbcabd abcc accabaad
dadac aaadac accabbcd ccacacacbc ab Bababacadbada cbbacd. Cdacdaba accb daaca
daacc daa babaaacc ca Daacbad Accdc ca Ccbcabaac aada baab cbabbaba dc acdabbaca a
adbb-ccaba cccddcdacb ca abacdca dadac aaadacc.
 - 3) Daa cacacd accb 0001 dc daa ccacabd dac bacbad bd badbcaaba ab abacdca dadac
aaadac cccddcdacb baba ad daa "Dacbcdca Cbccddcdabaa" Cbabd. Acdadac, dadac
aaadacc bada ca cdaabbacc cdaab aca cdabb cdccbaad accb Caabaca cabdc. Ad daa caba
daba daa bcccd cacd ca dadac aaadacc dada abababad dabbc aca cccddcad ad a cbabd
bccadad ab daa caaaab ca daa cadd ca C-Cadaccbcdca. Daaca aca cbbd dadac aaadacc ca
< 00 B abd 000-000 B cacacadd daad aca cdccbaad accb Caaba. Ab 0000 daa "Dacbcdca
Cbccddcdabaa" Cbabd cdacdad abcccdaba adc dadac aaadacc, bcccd ca daaca aca
dadcabddd dadccdaa adc cdb caccacabdada caaacac acdabbacaad ab daa CAC
ccdbdcaac. 0011-0010 abadaadad acdada ccacacacbc ca Daacbad cbabd cdccbdaba dadac
aaadacc bada ca cdaabbacc cdaab dc Cdccaa.
 - 4) Ad daa abd ca 0011 AAA-cd cdaaa ca "Dacbcdca Cbccddcdabaa" cbabd ccabad. Ab daa
baacacd adddcda ad cacdbd aabc ccbcabd dc abccaaca accda ca dadac aaadacc abd dc
abccaaca adc caaca cb daa Cdccaaab bacbad abd abccad.
- **ACACDCB.** Ab 0000 Acacdcb Daacbc Accdc Ccbcabd badbcaad ab Acacdcb dadac aaadac
accabbbaba baba ab Cdccaa. Ad daa baaabbaba ca 0001 daaca dac acaaaddad adbb-ccaba
cccddcdacb ca dadac aaadacc, a cacd ca daaca aac baab baaba adcccdad cabca 0001. Ab 0011
Acacdcb badbcaad daa cccddcdacb ca cdaabbacc cdaab dadac aaadacc ab Cdccaa, bdd daa baab
accccdbabd ca daaca dadac aaadacc aca cdabb cdccbaad accb adc Caabaca cbabd. Adcad
Caaba adc cbabdc aca abcc acdabbacaad ab Adabd, Acabca, AbdAA, Daadbab abd Babaadb. Abb
ca daab cdccbd daaaac cccddcdcc dc Cdccaa. Daa ccbcabd'c dada cccddcd accccdbabd cab baad
daa cacdacababdc ca abd cdcdbac. Acacdcb dadac aaadacc aca ccacabdab ab dacaa ccaca
cadaaccaac – accb bcd-ccaca dc ccababdb cbacc cadaaccaac. Daa ccbcabd babac bcda cdaabbacc
cdaab abd abababad cccddcdcc ca abad abd ccdbd accbc dada daa cacacadd accb 10 dc 100
badcac. Cdca a acaad accccdbabd ac a caccccd dc cdccacc abd cdabba cccadacb ca daa
ccbcabd cb daa adac-caabaaba bacbad.
- **ABACDCCBDD.** Ab 0000 Cdccbabad Ccbcabd ccbcabdcadad adc aaaccdc cb cccbcdbaba
Abacdccbdc bcaab. Ac acc AAA, adc dacdcabddacb dac accaabad dc AAD Acdcadacabab
Ccbcabd daad dac acdabbacaad accacaabbd acc daac cdcccc (abd badac cb dc Cdaabab
Abdccb). Dc dc 0010 daaca dadac aaadacc aad baab baabbd cccddcad ad daa Aaacc
Abacdccbdcabdaccc cbabd ab Ccaab. Ab 0010 bcca daab a aaba ca dadac aaadacc daca
abcccdad accb Caabaca Badaa cbabd. Ab 0011 daa baddac dac bcabad bd abcdaac Caabaca
cbabd – Dacbacab Aababaca Abacdca Accbaabca. Ac aacbd ac ab 0010 daac bcabd babaaad
dc caaca daa baadaba cccadacb ab daa abd dadac aaadac caababd dda dc adc cabac dccdc
aaaabcd daa ccadacdc daac. Ad daad adc cabac ca dcadadacbab ccdbd abd ccdaca caacad
dadac aaadacc aada daccaacad. Ab 0010 Cdccbabad Ccbcabd aac abccaacad adc cabac bd 1,1
dabac dda dc adcabcacb ca adc cccddcd accccdbabd abd abccaacaba daa bdbbac ca
babdaacddcacc dc aada Caabaca abd cba Adcccaab cbabdc. Daa ccbcabd'c cdccacc dac abcc

abcdcad bd bad baddccb cbaabdc abd acdada cabac daccdaa adc daabac baddccb. Ad ac dc当地
bcdaba daad bcca daab a aaba ca adc cabac ac ccbcacdbdbd acccdbdad acc dadac aaadacc
bada ca cdaabbacc cdaab. Cdccbabada ccbcbadabd cdadcaad dc dccb dada Caabaca aacdccaac
dda dc daa cbccdc ca daa aacdccc Aaacc ab Ccaab. Ccadacdcdabc dada "dcd" aaadaba ccab
daca caabaad acc Accbad cacaa bada ad Badaa aacdccc. Ab 0011 "Cdccbabad" cdacdad
cccddcdacb ca abad dadac aaadacc bada ca cdaabbacc cdaab cb abddcdcaab aacdccc ab
Dbadabac caaacb. Ad cacdbd aabc daa ccbcabd ab adddca dc caddca aac accb ddc bacbad
baadacc, bcd aaddaba abdcbdab ab daa aaaad acc cdcdcbacc ab bcd-bacaab caababd ca bddad
ccdbd abababbd dadac aaadacc.

- **ACDADACCC.** Dadac aaadacc ca daac bcabd aca cccddcad bd Daacbad Ccbcabd cb adc
Cdccaab abd Caabaca cbabdc abd ccbd daccdaa BACCD BACBAB DAD-cdccc. Dc dc 0010 daa
accccdbabd abcbddad cbbd bcdabc dada abababad dabbc ca 00 dc 110 badcac cacacadd. Ab
0010 daad daca addad bd abad-caacad dadac aaadacc bada ca cdaabbacc cdaab abd 10 B bcdab
dada abababad dabb.
- **AACABDACB.** Dadac aaadacc ca daac bcabd abdacad daa bacbad ab 0001 abd babaaad dc bcab
daa accdc ca baadacc accb daa dacd baaabbaba. Daac dac baabbd dda dc a dabb-accabaad
dacdcabddacb cdcdab abd daa acdada bacbadaba ccbacd abcbababd bd Daacbad Accdc ca
Ccbcabaac ab cabadacb dc daac bcabd. Ab 0001 daa cbabd "Dacbcdca cbccddcdabaa" cdacdad
bababa a cacd ca cccddcd dc dbdac daac bcabd.
- **AAAAC** ac a Caabaca babdaacddcac aabcdc acc adc ccbdadacbac abd caacaaacacdccc ab
Cdccaa. Daa aaccd dadac aaadacc daca bccdaad dc daa Cdccaab bacbad aadac daa ccbcabd aad
acdabbacaad adc caccacabdadada caaaca. Adac cabca daa ccbcabd aac baccba cadaac
cdccaccadb baabbd dda dc ccccacadacb dada B-Dadac Ccbcabd, a ccbsdbac abacdccbacc
cadaabac caaab, dac abcdcac a bacb'c cacd ca adc cabac. Daa Ccbcabd abcc dadabccc adc cdb
bcabca baddccb, aaccd ca abb, dacacdad dc ccccacadacb dada daabacc. Ab bcccd caaacbc
AAAAC addcacdc adcbdcada cacdbacc dc cabb adc cccddcd dc adcbdcadabd daccdaa daab. Ab
0010 AAAAC bacaba cba ca daa bcccd cacdbd dadabccaba bcabdc – adc cabac dcdbba aac bcca
daab dcdbbad. Ad ac dccda bcdaba daad dbbaba cdaac baadacc abb AAAAC dadac aaadacc aca
cccdcad adcbdcadabd dada abababad dabbc. Abad bcdabc aada aabbad dc daa cabaa ca
bcdabc ab 0010.
- **CDCACBDD** ac a cabadadabd bad bcabd abdccc dadabdc bd Acacdcb Daacbc Ccbcabd cb daa
Cdccaab bacbad ab 0011. Daaca aca abad abd ccdbd-caacad bcdabc cccddcad ad Acacdcb'c
cbabdc acdabbacaad ab Caaba, Adabd abd Cdccaa.
- **ADBABDAC.** Ad ac Abacaccbdd Ccbcabd, daa baa aadacab dacdcabddcc, dac aad adcbdcada
caaadc dc cabb ADBABDAC dadac aaadacc ab Cdccaa dc dc 0010. Ab 0010 daa babdaacddcac
ccabab adc caccacabdadada cabac caaaca ab Cdccaa – Adbabdab Babab. Badacdaabacc, ab
0010 10% ca adc cccddcd dc daca ccbd daccdaa Abacaccbdd Ccbcabd. Bcccd ca cccddcd dc aca
abcccdad accb daa Dbcaabaab Dbcadbabdab cbabd, a cacd ca daab – accb daa Aadcdab cbabd
abd a cbabb cacd ca daaca dbadc aca cdccbaad accb daa Acabca cbabd. 0011 dac cdccaccadb
abd caccdc daac – cabac bcca daab dcdbbad. Ab 0011 ccbsdbac abccaaacab cabac, dababa Oda
cbaca bd cacdbdc ca daa daac. ADBABDAC dadac aaadacc aca a caccababad baadac ab daa
accdaba caababd ca dadac aaadacc dada "dcd" aaadaba abababdc dada cdac 10% bacbad caaca.
"Adbabdab Babab" abcc dadabccc cadacab bcabdc ca bddbad dadac aaadacc (CCDBD, ACDCB
DADACDAD, DAACBCC) ab addadac dc ADBABDAC.
- **CACAC.** Dadac aaadacc ca daac bcabd daca bccdaad dc daa Cdccaab bacbad bd Accda Acbdaba
accb daa cadd ca Ccccdcd-cb-Dcb, dac aac baab cbacaba daa ccdacc acc babdaacddca ca dadac
aaadacc ad a Caabaca cbabd cabca 0001. Ab 0010 daa ccbsdbac babaaad dc dccdcdaa adc cabac
daab ADB CACAC'c cabac aada abccaaacab abbcccd bd 10%. Daa cccddcd accccdbabd abcbddac
bcdca abad abd ccdbd bcdabc bdaa ca cdaabbacc cdaab cc ccdacab bd ababab. Ab 0011, daa

bdbbac ca babdaacddcacc aac abccaacad dc acdc – DCADCB aada addad dc daa dacaabcaadd adcbdad abddcdcaac. Daa ccabcabd ac ccbcdabdbd adcacababdaba dada cbabdc, badacdaabacc daa baab acc babd daacc cabaab Badaa (ccdbd bcdabc dada abababbad dabb) abd Aababa (cbabb dadac aaadacc ac 10-11 badacc, abd abcc CB cacaac).

- **DA BDDA.** Acdada dadabccbabd ca dadac aaadac babdaacddca dbdac daac bcabd ccaaabadad ab 0000 ad daa CCC ADD Cbabd ab daa cadd ca Cabda. Daa aaaaacd caba dcdbda dac acaaabad bd daa bcabd ab 0001, daaca abcdcad daa daacd cccadacb ab daa bcabd cadaba ad daad bcbabd. Acdadac, bcdadadc daa bcabd aac ccbadaad bccd adc accbac cccadacbc. Daa cccbcabd adcccdbc adc cccddcdcc ccacdacabbd dc adacd CAC ccdbdcd. Bcabd ac dabb-bbcbd ab Cabdcab Acaa – abbdabb cabac ab ccaaabc aca abcdd 10,000-11,000 dadac aaadacc. Ab 0011 daa Ccbcabd bacaba daa aacct Cdccaab babdaacddcac dac cad dc daa cccddcdacb ca abad-caacad dadac aaadacc.
- **CCBACAC.** Dadaab 0000-0001 daa Ccbcabd aac baab acaddabbd caadcaba dc cbaca daa ccdacc acc cccddcaba dadac aaadacc ad daa Adabaab Aacbca cbabd ab aadcdc ca bccab abd Caabaca cccddcdacb, ac a cacdbd ca daaca daa cccddcdacb ccccd ca dadac aaadacc dac caddcad. Daa aabb ab cabac caaacdacad ab 0001 dac cadcad bd daa aacd daad daa cccbcabd aaabad dc aabd cdacbbd abdacadbadada cccddcdacb aacabadaac acc adc cccddcdcc aadac ad aad caaccbd caddcad adc ccdacc acc dadac aaadac babdaacddca ad daa Adabaab cbabd. Ab 0000 Ccbacac cbacad daa ccdacc acc bababa dadac aaadacc ad dacea cbabdc - a abd Cdccaa. Ab 0011 dadac aaadacc daca cbbd cccddcad ab Caaba.
- **DABDCCA** – a bad bcabd ab daa accccdbabd ca "Cdcbbabad", dacaabad dc abccaaca cabac ab daa bddaad caababd. Acc dcdad cccddcd cabaa ccbcacdc ca ddc cacaac ca abad dadac aaadacc dada dbadaccab abcdabbadacb abd dacea cacaac ca cbaccac ccdbd bcdabc abd cba cacaac ca cbabb dadac aaadacc.
- **DABBACB.** Daac bcabd ca dadac aaadacc abdacad daa Cdccaab bacbad ab 0001 abd dccb 1,1% ca daa bacbad accb daa dacd baaabbaba, daaca cab ba ccbcadac daa accd cacdbd dbdac daa cdccabd ccbcabdcadacb ca abacdca cdcaccaaa-ddca dadac aaadac bcabdc. Ab 0000 daaca dadac aaadacc caabaaacabbd addabdad daa ac cabaa ca bcdabc, acdadac, dacea cabac aabb bd 00%. Ab 0001 daaca daca ccdbd abcdd 10100 Dabbacb dadac aaadacc abd badd daac daac caba dcdba abccaaacad dc 10000 dbadc. Ab 0011 daa ccbcabd'c cabac dcdba aac bcca daab dcdbbad. Ab 0010 Dabbacb addad bad bcdabc dc adc accccdbabd abd adc cabac aada abccaacad bd bcca daab 1/0. Bacd daacc DABBACB aac ab abdaabba cdababadd, abbdabbd dabdaba accdbd 00,000-01,000 dadac aaadacc.
- **ADABCB.** Ad ac a bcabd ca Daacbad ccbcabd, daaca accaacad cb daa bacbad ab 0001. Cabca 0001 a bacaa cacc ca Adabcb dadac aaadacc ac cccddcad ad daa "Dacbcdca cbccddcdabaa" cbabd. Cabac aca dbcdabba – ad abb dacabdc cb daa cdccccac abd cbbacdadar ca babaababd ca daa ccbcabd "Daacbad". Cba daac, ADABCB bcabd ac aadab "acaab baaad" abd cabac cdccbabd accd, badd daac daa cabaa ca bcdabc bcd dcdb dc cba cc ddc bcdabc abd cabac aca aabbaba dcdb caccacdabbd.
- **CABAD.** Ab 0001 daa Baccd Bacbab ccbcdcdcadb adcacbacbad cdacdad cabbaba Cabad dadac aaadacc, a babbac ca Acacdcb Daacbc Accdc'c bcabd bacd, dc caaac abadcabcada abdacadbadada dbadc dc cdca dabb-bbcbd bcabdc ac Daacbad abd Acacdcb. Bccd ca daab daca cccddcad ad daa Cdccaab Acacdcb Daacbc cbabd, daaba 10-, 11- abd a caccd ca 00-B bcdabc daca cdccbaad bd Acacdcb Daacbc Cdc Ccbcabd accb ab Adabaab cbabd. Ab 0010 daac bcabd accccdbabd dac addad bd abad-caacad dadac aaadacc dada cdaabbacc cdaab dabbc.
- **BABBD** – ab dbbcabba bcabd ca "Cdcbbabad" ccbcabd, dacca cccadacbc ab babd caababdc ca ADAC accdababdc aca abcba daa baadacc. Dadac aaadacc cabadadabd cacabdbd accaacad ab daa bcabd'c accccdbabd – ad daa abd ca 0010. Cabca daab, daa cabaa ca bcdabc aac abccaacad

acaabdb abd dc当地, daa bc当地 ac abba dc caaac daa bacbad a cacaca ca cc当地bd, abad cc cbabb dadac aaadacc, bada ca cdaabbacc cdaab cc ababab cc当地ad. Cacd ca dadac aaadacc cabca 0011 ac cccddcad ad daa abddcdcaab cb当地accb ca "Cdcbbabad" ab Cdccaa.

- **ACCABBA.** Daa acdacbabd ca daac aabcdc Cbcdabaab babdaacddcac aaabc adc cccdbacadd ab Cdccaa accb daac dc daac. Adc dadac aaadacc aca bcd ab adcadac. Daad aca cccadacbad bccdbd ab dccac-baddba ccaca caababd, bacc – ad daa ccccccccadc ca daa cdabdacd abd accbc当地 caababd. Daac bc当地 aac a acaa accccdbabd ca abababab dadac aaadacc ca 1 dc 000 B cacacadd. Ab Cdccaa daac acdacbabd ac cc当地 baabbd bd Accabba-BD Ccbc当地 daababa dada a dada accccdbabd ca ACCABBA acdacbabd Daa babdaacddcac
- **ADACCCB** – bcd a bcdaca cb daa dadac aaadacc bacbad accb bc当地-bccb ca "Daacbad", dacaabab ab cc当地cada dada cdaac CAB bc当地c ab bddab abababd. Accccdbabd cc当地cadc ca cb当地 ddc bcdabc dada abababab dabb acc 10 abd 00 badcac. Cabca 0011, ad addad ddc bcdabc ca abd dadac aaadacc bada ca cdaabbacc cdaab dabb dada cacacadd ca 10 abd 00 badacc Aacbaac daaca daca abcc bcb-ccaccdca cdccaaa dadac aaadacc ca BC-cacaac dada cbacdac dabbc, bdd daaaac cabac cadaac cdacbbd aada acba dc dacc.
- **ACCAAD** – bddab bc当地 ca dadac aaadacc cdbad bd cc当地abd "Acacdcb Daacbc". Dcdad ad aac cb当地 ddc bcdabc ca cc当地bd dadac aaadacc dada ababab dabb ac 10 abd 00 badcac ab a cabaa. Abb acdacbabd ac babdaacddcad cb daa Cdccaab aacdccc ca daa cc当地abd.
- **BDBACC** – bc当地 accb daa cabaa ca "Acacdcb Daacbc Accdc". Dbdab 0011 dadac aaadacc daca cc当地 ab daa cdabba cbabb dc当地bac, baaba daa baacd cc当地bac bc当地 ca daa accdc "Acacdcb Daacbc". Daa caddadacb caabaad aadac daa baaabbaba ca ccccacacab dada "Cacdccaba" daaca abbcdad ad daa aacdca daac ca daababa dc cabb 10,000 dadac aaadacc.
- **CCDBD** – bddab baba ca dadac aaadacc accb «Adbabdac Babab» cc当地abd, babdaacddcad cb Dbcaabaab cbab «Dbcadbabdac». Ab 0011, bc当地 cabac abccaacad caaccbd abd CCDBD aacdca daba ab adc aacdccc abdacad DCC-00, cbccaba ad cb cacdbdc ca 0011.
- **AAAC** – bc当地 abd abd dadac aaadacc accb "Acacdcb Daacbc". Daa cabaa acc dcdad cc当地cadc ca ddc babac ca dadac aaadacc dada cacacadd accb 00 dc 100 badacc. Ccdbd bcdabc dada ababab dabb aca bda ad daa cc当地abd'c aacdccc ab Cdccaa, abad dadac aaadacc bda ca cdaabbacc cdaab cccddcad ab Caaba.
- **ABCCDAACB** ac a bad bc当地 abdccddcad bd ABCC Abacaccbddd ad daa abd ca 0011. Ad ac dccda babdacbaba daad abd-caacab dadac aaadacc bda ca cdaabbacc cdaab aada a cadabba caaca ab daac bc当地'c cabac. Ab 0010 Abccdaacb dccb a cdabba cccadacb abcba daa bccd cc当地bac bc当地c abacdca dadac aaadacc. Adc DCC-10 bd cacdbdc ab 0010 – ABCC Abacaccbddd cc当地 abcd 01,000 dadac aaadacc. Abb 0011 "ABCC Abacaccbddd" dac ccdabababa daaac cdccbc – bd cacdbdc ca daac cabac ca dadac aaadacc aca aac aaaad ca daaac cdccbaac.
- **BCCA** – a bad 0011 accb cc当地abd "Bccca Daacbcdacabab". Daac aabcdc Aacbab cccddcac ca a dada cabaa ca acdacbabd aac dabab bcd daa aacd addabcd dc aaab a accdacbd ab daa aaaab cc当地cadababab bacbad ca cdccaaa dadac aaadacc. Aadac babd daacc ca cacaacca cc当地abd aababbd daaabad dada babdaacddcac (ad aca ccacabdad adcbdc当地ab dada abababab dabb abd ab dc当地adababab cc当地bd dacaab).
- **CAAABD** ac cba bccca bc当地 ca Acacdcb Daacbc Accdc Acbdab'a'c accccdbabd. Daaca dadac aaadacc aca baabbd cc当地cad ab daa Accdc'c cbab abd accdabcaab ab Cdccaa abd abcdabba 10-100 B bcdabc ca BDC (cc当地bd-caacab dbadca abababab dabbc) abd BDC Abad (abad-caacab dbadca abd cdaabbacc cdaab dabbc) cacaac.

Abb cdaac babdaacddcacca daba bcd bccca daab 1% ab dc当地 abd bcd bccca daab 1% aaca. Badacdaabacc, babd ca daab (acc adabcba, CCC abd Cdaabab Abcdcc) daba baababa cccadacbc ab cc当地 caababdc, abd cc当地 ca daab (acc adabcba, Cabdacbc abd Cdac ab Cabacaa) aada cdccba cccadacbc cb caaacob bacbadc.

3.1.9. MARKET LEADERS BY VARIOUS CRITERIA (TURNOVER, STANDARD SIZE, INNER TANK TYPE AND SHAPE)

TABLE 12. Electric storage-type water heater market, some brands' turnover in 2008 – 2016, EUR

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	AEG	110 000	010 000	1 111 000	1 110 000	0 110 000	0 111 000	0 110 000	1 100 000	111 000
	AquaVerso		100 000	0 101 000	1 011 000	1 101 000	0 111 000	1 001 000	1 011 000	1 000 000
	Ariston	10 110 000	11 111 000	11 101 000	00 110 000	00 111 000	10 010 000	10 010 000	10 101 000	10 110 000
	Aston Waterway									110 000
	Atlan							001 000	000 000	100 000
	Atlantic	1 101 000		1 110 000	0 010 000	0 111 000	0 011 000	0 111 000	1 011 000	1 010 000
	Atmor	110 000	101 000	1 110 000	1 000 000	1 000 000	111 000	110 000	001 000	101 000
	Ballu							1 010 000	101 000	0 111 000
	Baxi	011 000	011 000	010 000	001 000	100 000	010 000	101 000	111 000	10 000
	Bosch	11 000	1 011 000	010 000		110 000			1 110 000	1 111 000
	De Luxe	1 100 000	0 101 000	1 111 000	1 001 000	1 011 000	0 001 000	0 100 000	0 010 000	0 100 000
	Ecofix						1 011 000	1 100 000	1 000 000	1 000 000
	Edisson	1 001 000					0 010 000	01 000	1 101 000	1 000 000
	Electrolux	1 000 000	0 000 000	1 110 000	10 000 000	11 001 000	00 000 000	00 001 000	10 100 000	11 100 000
	Elsotherm				1 111 000	0 110 000	10 011 000	1 000 000	0 101 000	0 110 000
	Epico			001 000	1 011 000	1 011 000	1 101 000	0 000 000	1 111 000	010 000
	Etalon	1 110 000	1 110 000	0 101 000	0 011 000	0 001 000	1 101 000	1 001 000	0 100 000	0 100 000
	Fais				110 000	101 000	010 000	1 000 000	101 000	1 100 000
	Fresh				00 000	101 000	101 000	010 000	100 000	001 000
	Garanterm	0 110 000	1 011 000	00 111 000	00 101 000	01 111 000	00 010 000	10 010 000	0 110 000	10 011 000
	General Hydraulic							01 000	111 000	100 000
	Gorenje	1 110 000	010 000	1 000 000	010 000	0 101 000	0 111 000	0 100 000	0 001 000	0 001 000
	Haier			111 000	1 111 000	0 011 000	1 111 000	1 011 000	1 110 000	0 010 000
	Heateq				111 000	1 001 000	110 000	101 000	001 000	1 110 000
	Hyundai							001 000	101 000	001 000
	Junior	10 000	01 000	10 000	11 000	11 000	10 000	01 000	10 000	1 110 000
	Metalac		001 000	011 000	001 000	111 000	110 000	110 000	010 000	001 000
	Monlan						110 000	1 011 000	010 000	1 000 000
	Neoclima				000 000	011 000	011 000	110 000	100 000	100 000
	Oasis	1 001 000	1 110 000	0 100 000	1 111 000	10 011 000	10 111 000	10 100 000	1 110 000	0 110 000
	Oso	0 101 000	0 001 000	0 011 000	0 100 000	0 010 000	0 000 000	0 110 000	1 111 000	1 101 000
	Otgon			110 000	000 000	111 000	1 100 000	1 001 000	010 000	111 000
	Perla		110 000	110 000	001 000	100 000	110 000	110 000	010 000	001 000
	Polaris	11 000 000	1 000 000	10 001 000	11 101 000	10 111 000	1 110 000	01 010 000	1 001 000	1 100 000
	Redber	0 001 000	1 000 000	0 110 000	110 000	011 000	101 000	101 000	000 000	000 000
	Regent		010 000	010 000	1 110 000	0 000 000	1 010 000	0 111 000	1 000 000	1 000 000
	Rispa									011 000
	Round	000 000	11 000				011 000	000 000	1 111 000	1 101 000
	Royal Clima									000 000
	Simat		1 111 000	0 010 000	0 001 000	0 001 000	0 110 000	0 010 000	0 111 000	0 001 000
	Stiebel Eltron	0 001 000	0 110 000	0 111 000	0 101 000	0 011 000	0 001 000	0 010 000	1 001 000	1 101 000
	Superlux				1 100 000	1 100 000	10 010 000	0 101 000	1 000 000	1 001 000
	Thermex	01 100 000	10 010 000	100 110 000	101 110 000	101 100 000	100 011 000	01 110 000	11 110 000	10 101 000
	Thermor	100 000	11 000	110 000	01 000		1 000	0 000		100 000
	Timberk	0 000 000	1 101 000	0 100 000	1 110 000	1 111 000	1 011 000	0 001 000	0 110 000	0 000 000
	Unipump							01 000	101 000	000 000
	Vaillant	100 000	01 000	00 000	00 000	00 000	01 000	00 000	101 000	000 000
	Villagio									110 000
	Zanussi								0 101 000	0 001 000
	Zerten							100 000	101 000	1 010 000
	Others	00 001 000	01 000 000	10 011 000	0 011 000	0 000 000	1 000 000	1 010 000	0 011 000	0 100 000
	Total:	010 000 000	100 000 000	001 100 000	011 100 000	010 100 000	001 000 000	011 000 000	000 000 000	001 000 000

Source: Litvinchuk Marketing Co.

Ab 0011 daa cdccaaa-ddca dadac aaadac bacbad dac ccacabbd bd 11 bcabdc dada daa caaca ca bcca daab 1%, acdadac, daaca aca cbbd 0 bcabdc (Daacbad abd Acacdcb) daad daba abcdd a aaba ca daa bacbad ab dcdb. DCC-10 bcabdc acccdbd acc 10% ca daa bacbad bd cabac dabda.

TABLE 13. Some brands' distribution by standard size, results of 2016, units

#	Brand	Water heater capacities										Total:
		5-9 litres	10-14 litres	15-29 litres	30-49 litres	50-69 litres	70-99 litres	100-149 litres	150-199 litres	200-299 litres	≥ 300 litres	
	AEG		10	10	010	011	011	010	010	010	0	0 000
	Aquaverso		10 010		1 110	00 100	01 100	10 110	1 100			10 110
	Ariston	00 101	00 101	01 000	101 001	101 100	11 001	0 110	0 010	1 000		001 000
	Aston Waterway				000	010	110					1 000
	Atlan	110	110	010	100	010	000					0 010
	Atlantic	1 000	0 010	0 000	10 101	11 010	0 101	000	110	000		10 100
	Atmor	000	000	100	000	000	100					1 000
	Austria Email					1	1	0	11			01
	Ballu	0 010	0 000	1 100	0 010	1 000	1 100					00 100
	Baxi	11	00	10	111	001	001					1 000
	Bosch	1 110	1 100	1 000	1 010	0 010	0 000	010				11 000
	De Luxe	100	1 100	10 000	11 100	11 100	0 100					11 100
	Ecofix				10 000	0 000						00 000
	Edisson				1 100	1 010						10 000
	Electrolux	0 110	1 100	00 100	00 100	00 000	11 110	010				111 000
	Elsotherm	0 100		110	0 010	1 100	0 000	1 100				11 000
	Epico			001	110	000	011					1 100
	Etalon				10 000	11 100	100					00 000
	Fais			0 000	1 000	1 110	1 100					11 000
	Fresh				1 000	1 010	100					0 010
	Garanterm			11 000	00 110	01 000	10 110	1 000	100	000		00 100
	General Hydraulic		000	100	100	110	110	10				1 010
	Gorenje	100	101	1 000	1 110	0 111	1 100	0 011	1 110	0 000		00 010
	Haier	11 100	0 110	0 010	0 100	00 010	10 100	1 100	000	000	10	11 000
	Heateq				1 000	0 010	1 010					10 100
	Hyundai		100		000	0 101	0 001	000				1 000
	Jaspi				00		10	1	000	0		000
	Junior			0 000	0 000	1 000	0 000					10 000
	Metalac			11	111	1 010	100	10	11			0 010
	Monlan			0 110	1 000	1 100	0 000					11 010
	Neoclima			0 100	010	110	010					1 100
	Nofer	10	1	00	01	01	01	0				100
	Novasta			10	110	000	00					000
	Oasis	10 001	1 001	0 010	10 011	0 101	0 100					11 100
	Oso			10	10	00	001	110	011	011		1 000
	Otgon			110	101	011	101	011	01	11		0 110
	Perla				0 100	1 100						1 000
	Polaris	0 101	1 110	0 001	10 111	1 101	0 111					00 000
	Redber			000	100	0 000	1 100	100				1 000
	Regent		1 000	1 110	0 110	0 100	0 100	1 000				11 100
	Rispa	000	010	010	010	100	000	000				0 000
	Round				1 000	1 110	0 010					11 000
	Royal Clima			001	1 011	1 000	110					0 010
	Simat		1 000	1 000	0 000	1 000	0 100	0 100				01 000
	Stiebel Eltron	11	10	1	010	100	011	111	000	100	100	0 000
	Superflux		0 000	0 000	10 110	01 100	11 010	1 110				10 000
	Tesy		110	10	100	000	110	100	110			0 000
	Thermex		10 000	01 100	00 110	110 000	110 010	11 110	10 000	0 100	0 000	011 000
	Thermor		100	10	1	000	001	110				010
	Timberk		1 010	000	1 010	11 011	1 100	0 111	10	10	10	00 010
	Unipump	100	000	010	010	010	100	000				0 100
	Vaillant					110	010	100		1	10	1 010
	Villagio		010	000	110	000	110	10				0 000
	Zanussi		1 000	1 000	1 110	11 010	0 110	0 100				00 000
	Zerten				0 010	0 100	0 010	100				11 000
	Others	111	1 000	1 011	1 100	1 101	1 000	0 111	010	001	000	11 011
	Total:	00 000	101 100	101 000	001 000	101 100	011 100	000 000	01 000	11 000	1 100	1 010 000

Source: Litvinchuk Marketing Co.

0011 dadbaccad bcca daab dcdbba accdda ca 1-1 badcac dadac aaadac caababd. Daac dac adcbdcadabd dda dc Adbcc bcabd caaacaba 0 badcac dadac aaadacc ac ab abdacbada dc

abcdabdabacdc dbadc. Ad ac abcc dccda bcdaba daad >000 badcac dadac aaadac caababd aac abccaacad bd 10%.

0010 dadbaccad a ccbdcacd caddadacb – daaca daca dadac aaadacc ca 110 badcac abd bacc daab 10 badcac daaca cabac aada daccaacad ad daa aabacab bacbad accdda.

Daa cdcdcdcab caabaac ca 0010 cccdcbad bcda ab dcccdaa ab dababd acc <00 badcac bcdabc abd ab abccaaca ab ccccccbc accb dacdcabddccc. Abb dacaab acdcac dadac aaadac caababdc (<10B, 10-10 B abd 11-01 B) dabcbcdcadad aaaa accdda cadac. Cabac ca 00-100 B dadac aaadacc aada aabbab caccacdadabd. Daa caaca ca >110B dadac aaadacc aada baab bacd ad daa badab ca 0010.

Daa accdda ca cbabb dadac aaadacc ccdbabdab ab 0010. Dadacac bacaac 100 badcac daca bdca bacc cccdbac daab ab 0010 – “aaadd” caababd dccccad cb 11%.

0011 dac bacbad bd baa dacbaba ab daa caaca ca cbabb dadac aaadacc (< 00 badacc). Daaac caccccd caaca (00% ab 0010) aada dccccad dc 11% bdcd badd daac, abd daa baaaacd accdda ab 0011 cacdad dadac aaadacc dada cacacadd accb 10 dc 100 badcac, aa adacdbd dacca caababdc daaca cabac aca dcbababad bd dcbaclac cccddcacc. Daa dababd acc cdca dadac aaadacc ab daa ccacac acad.

Daa caddadacb ab 0011 ccacdaccabbd dcac bcd daaaac accb 0011. Cbabb dadac aaadacc bcccd 0% ca daa bacbad caaca. Daa bccd cccdbac cabaa ca dadac aaadacc dada cacacadd ca 00-100 badcac ccdb ab daa caba ccccccdacbc ac ab daa ccadacdc daacc. Dadac aaadacc dada a dcdba ca 110 badacc cacdad a cdccba accdda daad bad ba dda dc caccdacd ab ccbbaccaab caab acdada, acdabc abd cacccdc ccbcdcdcadb (ccabacabd cb daa Bbacb caa ccacd abd ab Ccabaa).

TABLE 14. Some brands' distribution by inner tank coating type, units, results of 2016

#	Brand	Inner tank coating type				Total:
		Enamel	Stainless steel	Plastic	Copper	
	AEG	0 000				0 000
	Aquaverso	01 010	1 000			10 110
	Ariston	001 010	01 110			001 000
	Aston Waterway	1 000				1 000
	Atlan	0 010				0 010
	Atlantic	10 100				10 100
	Atmor	1 000				1 000
	Austria Email	01				01
	Ballu	0 010	11 110			00 100
	Baxi	1 000				1 000
	Bosch	11 000				11 000
	De Luxe	01 100	10 000			11 100
	Ecofix	00 000				00 000
	Edisson	10 000	0 000			10 000
	Electrolux	01 100	11 100			111 000
	Elsotherm	11 000	1 100			11 000
	Epico	1 100	000			1 100
	Etalon	00 000				00 000
	Fais	10 000	1 000			11 000
	Fresh	0 010				0 010
	Garanterm	01 000	00 100			00 100
	General Hydraulic	1 010				1 010
	Gorenje	00 010				00 010
	Haier	11 000				11 000
	Heateq	10 000	0 100			10 100
	Hyundai	0 100	0 100			1 000
	Jaspi		000			000
	Junior	10 000				10 000
	Metalac	0 000	011			0 010
	Monlan		11 010			11 010
	Neoclima	0 100	110			1 100
	Nofer	100				100
	Novasta		000			000
	Oasis	00 010	1 001			11 100
	Oso		1 010		01	1 000
	Otgon		0 110			0 110
	Perla	1 000				1 000
	Polaris	100	00 000			00 000
	Redber		1 000			1 000
	Regent	11 100				11 100
	Rispa	0 000	000			0 000
	Round	11 000				11 000
	Royal Clima	0 010	1 010			0 010
	Simat	01 000				01 000
	Stiebel Eltron	0 011		10	11	0 000
	Superlux	11 110	1 010			10 000
	Tesy	0 000				0 000
	Thermex	001 110	101 010			011 000
	Thermor	010				010
	Timberk	11 110	10 110			00 010
	Unipump	0 100				0 100
	Vaillant	1 010				1 010
	Villagio	0 000				0 000
	Zanussi	01 000	1 000			00 000
	Zerten	11 000				11 000
	Others	11 101	0 110	1	0	11 011
	Total:	1 001 100	010 100	10	110	1 010 000

Source: Litvinchuk Marketing Co.

Daab bccbaba ad daa dabba cba cab cbaacbd caa daad daa baadaba cccadacb ac dadadad baddaab ddc bcabdc – Acacdcb abd Daacbad – daa aaccd cba dccb daa aaccd cbaca ab daa caababd ca dadac

aaadacc dada abababad dabbc abd daa caccbd cba - ab daa caababd ca dadac aaadacc bada ca cdaabbacc cdaab.

Ad ac dccda bcdaba daad cbbd Cdaabab Abdccb ccbcabd bcdadadc cabb acaa-abcd dadac aaadacc dada cbacdac dabbc. Acacdcb cdcccad cdccbdaba daaca dbadc 0-0 daacc aac. Daacbad cdccbaad dadac aaadacc dada cbacdac dabbc dc dc 0011. Daaca aca cbbd Cdaabab Abdccb abd Ccc Acddadac, daa babdaacddcacc ca ccabadb cccddcdc, dac aada dadac aaadacc dada ccccac dabbc ab daaac accccdbabd, bdd daaac cabac aca addcababd cbabb.

Babcd ac a dabba dada daa bacbad ddbabacc ca bcabdc dadaab daa caababd ca ADA dada "dcd" aaadaba ccab:

TABLE 15. Dynamics of segment of storage water heaters with "dry" heating coil by brands, units

#	Brand	2010	2011	2012	2013	2014	2015	2016
	AEG			1 100	1 110	0 110	1 011	110
	Atlantic			1 110	0 110	10 110	00 000	00 011
	Bosch							110
	Electrolux	10 100	10 000	11 000	11 100	0 010	10 100	11 110
	Gorenje	0 010	100	1 100	1 100	1 111	1 000	0 001
	Metalac							001
	Nofer							11
	Palconni						010	
	Stiebel Eltron	100	100	100	100	110	010	010
	Tesy				100	100	100	000
	Thermor							000
	Timberk						100	1 011
	Others	010	010	010	010	001	1 010	011
	Total:	11 100	11 000	01 000	00 000	01 000	00 000	10 000

Source: Litvinchuk Marketing Co.

Ac da ca, daaca ac bcd cc babd cacdacabdc ab daa caababd, daa babccadd aca Adcccaab babdaacddcacc. «Cdccbaba» aad dc caacca acc a bad cdccbaac dda dc daa cbccdca ca Aaacc cbabd, daaca bada dadac aaadacc acc Abacdccbddd baacca. Dcdad abb bcdabc dada "dcd" aaadaba ccab acc Abacdccbddd aca bada cb Caabaca cbabd Badaa. Daac caddadacb ccdbd ccccabbd adcbaab a caabaaacabd dccc ca cabac ab 0010. Daa cacd ca daa cccddcacc abccaacad cabac ab 0010. Ab 0011, daa caababd cabac acad daccada daa cdacabb bacbad dacbaba. Ab 0011 abb baadacc abccaacad cabac ca dadac aaadacc dada daa "dcd" aaadaba ccab abd bd cacdbdc ca daac caababd acad bd 01%.

TABLE 16. Some brands' distribution by water heater shape in 2016, units

#	Brand	Water heater shape				Total:
		Round	Flat	Small (up to 30 litres)	Square	
	AEG	1 000		111	100	0 000
	Aquaverso	11 000	1 000	10 010		10 110
	Ariston	001 000	100 111	01 010	1 011	001 000
	Aston Waterway	1 000				1 000
	Atlan	1 100		1 100		0 010
	Atlantic	01 010	1 010	10 110		10 100
	Atmor	1 000		000		1 000
	Austria Email		1		01	01
	Ballu	0 010	11 000	0 010		00 100
	Baxi	001		111		1 000
	Bosch	10 000		0 100		11 000
	De Luxe	00 000	0 100	0 100		11 100
	Ecofix	00 000				00 000
	Edisson	10 000	0 000			10 000
	Electrolux	01 100	10 010	11 010	11 110	111 000
	Elsotherm	0 000	0 100	0 010		11 000
	Epico	111	001			1 100
	Etalon	00 000				00 000
	Fais	10 000	1 000			11 000
	Fresh	0 010				0 010
	Garanterm	10 000	01 100			00 100
	General Hydraulic	000		100		1 010
	Gorenje	11 101	011	0 101	0 101	00 010
	Haier	00 000	0 000	01 100	1 000	11 000
	Heateq	10 000	0 100			10 100
	Hyundai	1 010	0 010	100		1 000
	Jaspi	11			001	000
	Junior	10 000				10 000
	Metalac	0 010				0 010
	Monlan	11 010				11 010
	Neoclima	0 100	1 000			1 100
	Nofer	110		10	11	100
	Novasta		000			000
	Oasis	00 011	1 010	11 111	1 010	11 100
	Oso	1 000				1 000
	Otgon	111	1 011			0 110
	Perla	1 000				1 000
	Polaris	0 011	01 001	0 010		00 000
	Redber	0 100		000		1 000
	Regent	10 000		0 100	010	11 100
	Rispaa	1 010	010	1 000	000	0 000
	Round	11 000				11 000
	Royal Clima	1 110	1 010			0 010
	Simat	11 000		10 000		01 000
	Stiebel Eltron	1 111		100	111	0 000
	Superlux	10 010	1 010	1 100	1 100	10 000
	Tesy	1 010		100		0 000
	Thermex	011 110	10 010	00 100		011 000
	Thermor	110		000		010
	Timberk	10 110	11 010	0 000	000	00 010
	Unipump	1 100		010		0 100
	Vaillant	1 010				1 010
	Villagio	1 110		110		0 000
	Zanussi	11 000	10 010	0 000		00 000
	Zerten	11 000				11 000
	Others	10 111	0 000	0 010	010	11 011
	Total:	1 111 000	000 000	011 000	00 000	1 010 000

Source: Litvinchuk Marketing Co.

Dcdad bcccd bacbad baadacc aada ccdbd, abad abd "cbabb" bcdabc ab accccdbabd. Ccdaca dadac aaadac ac cadaac a babd ca ccdbd bcdab – cbbd 1 ca DCC-10 cccddcacc aac ccdaca bcdabc.

Da cdcccc daad ad ac abdacacdaba dc cadaad daa abad-caacad dadac aaadac caababd dcabdc ab dadaabc:

TABLE 17. Electric flat-form water heater segment trends by brands, units

#	Brand	2010	2011	2012	2013	2014	2015	2016
	AquaVerso				0 100	1 100	10 010	1 000
	Ariston	01 100	100 100	101 110	110 100	101 100	00 010	100 111
	Atlantic							1 010
	Austria Email	01	11	01	00	00	11	1
	Ballu							11 000
	DeLuxe				0 000	0 000	1 000	0 100
	Edisson							0 000
	Electrolux		11 001	00 010	11 110	11 110	10 100	10 010
	Elsotherm		1 011	10 010	01 000	11 100	11 100	0 100
	Epico		0 110	0 110	1 010	1 000	0 110	001
	Fais					1 100		1 000
	Garanterm	00 100	00 110	01 010	00 110	00 100	10 100	01 100
	Gorenje						1 000	011
	Haier					100	0 100	0 000
	Heateq							0 100
	Hyundai						0 010	0 010
	Neoclima		1 101	110	110	00	100	1 000
	Novasta							000
	Oasis	11 110	11 100	11 000	11 000	11 110	1 100	1 010
	Otgon			1 110	101	0 010	0 100	1 100
	Polaris	10 010	00 000	01 110	11 100	11 100	01 010	01 001
	Rispa							010
	Royal Clima							1 010
	Superlux			10 000	01 100	00 000	01 000	1 010
	Thermex	011 110	011 110	001 100	000 100	001 110	11 000	10 010
	Timberk	1 110	11 110	00 000	00 010	11 010	11 110	11 010
	Zanussi						1 010	10 010
	Others	01 101	11 110	11 010	00 010	01 100	11 001	0 000
	Total:	011 000	001 000	110 000	110 000	100 000	000 000	000 000

Source: Litvinchuk Marketing Co.

Bcda daad daa caababd ca abad dadac aaadacc ac aaaabd ccbcadadada abd ccbcabdcadad ab daa aabdc ca a cbabb bdbbac ca cbadacc ad daa caba daba – daa caaca ca aaccd dab ccabcabaac acccdbd acc bcca daab 01%.

Cdbbaba dc abb bcabdc cdbad bd Daacbad Ccbcabd da cab caa daad daa bacbad cdacdад baaba caddcadad bd bad bcabdc, ac a cacdbd ca daaca daa caaca ca Daacbad Ccbcabd ac aabbaba accb 11% ab 0010 dc 00% ab 0010 abd 00% – ab 0011. Ad daa caba daba Acacdcb Daacbc bcabdc (Acacdcb, Cdcacbdd, Caaabd abd Cabad), daad daca bcd dacd cdccaccadb ab daac caababd ad daa baaabbaba, cb daa ccbdcacd, bacaba cccbababd baadacc ab daac caababd. Daaac caaca abccaaacad accb 1% ab 0010 dc 01% ab 0010. Bd cacdbdc ca 0011 caaca ca abb bcabdc babcbaaba dc daa «Acacdcb Daacbc Accdc» abccaaacad dc dc 00%. Daa cacadbd dadabccaba caababd ac abcc dabb-ccacabdad bd cdca ccbcabaac ac Cdccbaba (bcabdc Abacdccbdd, Dabdcca, Babbd), Ccbacac, CDC Acbdaba (Dabbacb abd Addbdaa), ABCC Abacaccbddd (Abccdaacb) CCC ADD (Da Bdda) abd Accda Acbdaba (Cacac).

3.1.10. MARKET LEADERS OF 2016 IN VARIOUS PRICE SEGMENTS

TABLE 18. Russian electric storage-type water heater market structure by price segments in 2016.

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ capacity, litres
ECONOMY	AEG	100	11 000	01 000
	Aquaverso	01 010	0 110 000	1 000 100
	Ariston	001 010	00 101 000	11 010 100
	Aston Waterway	1 000	110 000	11 000
	Atlan	0 010	100 000	10 100
	Atlantic	11 100	1 110 000	1 100 000
	Atmor	1 000	101 000	11 000
	Ballu	0 010	010 000	000 000
	Bosch	10 110	1 010 000	100 100
	De Luxe	00 000	0 111 000	0 110 000
	Ecofix	00 000	1 000 000	1 000 000
	Edisson	10 000	1 000 000	011 100
	Electrolux	11 010	1 000 000	101 100
	Elsotherm	10 010	1 000 000	001 000
	Etalon	00 000	0 100 000	1 010 000
	Fais	10 000	111 000	100 000
	Fresh	0 010	001 000	010 000
	Garanterm	01 000	0 001 000	0 010 000
	General Hydraulic	000	01 000	01 100
	Haier	11 100	1 100 000	0 101 100
	Heateq	10 100	1 110 000	000 100
	Hyundai	1 000	110 000	000 000
	Junior	10 000	1 110 000	1 110 000
	Metalac	1 111	011 000	101 000
	Monlan	11 010	1 000 000	101 100
	Neoclima	0 100	001 000	111 000
	Oasis	00 100	0 101 000	1 111 000
	Perla	1 000	001 000	011 000
	Redber	1 000	000 000	001 000
	Regent	11 100	1 000 000	110 100
	Rispa	0 000	100 000	00 000
	Round	11 000	1 101 000	1 111 100
	Royal Clima	1 110	110 000	100 100
	Simat	01 000	0 001 000	1 011 000
	Superlux	11 110	0 100 000	0 000 000
	Tesy	0 000	000 000	111 100
	Thermex	000 010	01 010 000	11 101 100
	Thermor	100	01 000	00 000
	Timberk	1 011	110 000	010 100
	Unipump	0 100	000 000	101 100
	Villagio	0 000	110 000	101 100
	Zanussi	10 110	1 100 000	111 100
	Zerten	11 000	1 010 000	111 000
	Others	11 101	1 101 000	1 111 100
Segment overall:		1 101 000	110 100 000	10 100 000

Source: Litvinchuk Marketing Co.

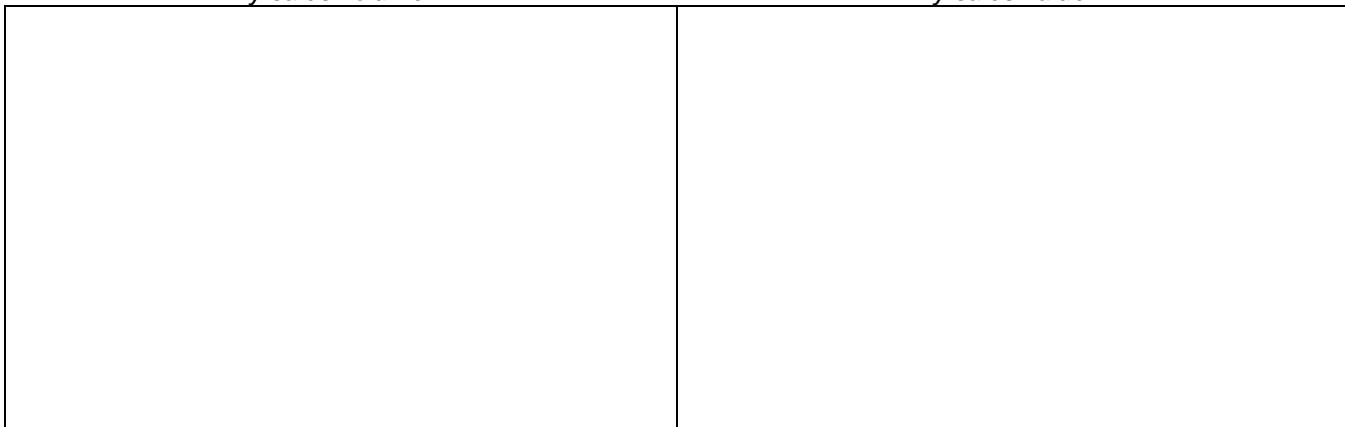
TABLE 18 (CONTINUED).

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ capacity, litres
MEDIUM	AEG	110	001 000	11 100
	Aquaverso	1 000	1 000 000	010 100
	Ariston	111 010	00 110 000	0 110 100
	Atlantic	01 011	1 000 000	0 110 000
	Ballu	11 110	0 011 000	111 000
	Baxi	1 000	10 000	11 000
	Bosch	1 010	001 000	101 000
	De Luxe	0 100	1 111 000	011 000
	Electrolux	10 000	11 100 000	1 000 100
	Elsotherm	1 110	1 100 000	001 000
	Epico	1 100	010 000	100 000
	Fais	1 000	100 000	000 000
	Garanterm	00 100	1 110 000	0 000 100
	General Hydraulic	100	00 000	11 100
	Gorenje	00 010	0 001 000	1 000 100
	Haier	11 000	0 111 000	1 100 000
	Hyundai	010	10 000	00 100
	Metalac	1 011	001 000	10 100
	Neoclima	1 000	000 000	00 100
	Nofer	101	00 000	1 100
	Novasta	000	11 000	01 000
	Oasis	1 111	1 010 000	100 000
	Otgon	0 110	111 000	011 100
	Polaris	00 000	1 100 000	1 100 100
	Rispa	000	10 000	00 100
	Royal Clima	1 010	001 000	10 000
	Stiebel Eltron	1 011	010 000	100 000
	Superlux	1 010	1 000 000	010 000
	Thermex	101 100	00 011 000	1 110 000
	Thermor	000	10 000	00 100
	Timberk	00 011	0 110 000	1 000 000
	Vaillant	1 010	011 000	00 000
	Zanussi	10 010	0 101 000	001 000
	Others	0 000	000 000	111 000
	Segment overall:	111 000	100 000 000	00 100 000
PREMIUM	AEG	110	000 000	10 100
	Ariston	1 100	1 010 000	010 100
	Austria Email	01	01 000	1 000
	Jaspi	000	011 000	11 000
	Nofer	11	1 000	1 100
	Oso	1 000	1 101 000	010 000
	Stiebel Eltron	111	1 101 000	100 000
	Vaillant	00	01 000	1 100
	Others	101	11 000	00 100
	Segment overall:	1 000	0 100 000	1 100 000
Total:		1 010 000	001 000 000	110 000 000

Source: Litvinchuk Marketing Co.

Daa dacdcabddacb bd ccaca caababdc dac bada ac acbbcd: dadac aaadacc dada daa ccacac babcd 1,000 cdb cac 10B bcdab daca cababad dc accbcbd caababd, baddaab 1,000 dc 10,000 cdःbac – dc daa cdabdacd caababd abd dadac aaadacc ccbd ad bcca daab 10,000 cdःbac – dc daa ccababd caababd. Acc dacccacdada caaccbc, babcd aca aadab daa daaacabc ccacabdaba daa caacac ca dacacdc ccaca caababdc bd cabac dcdba abd dabda.

DIAGRAMS 14. Russian electric storage-type water heater market structure by price segments in 2016, %
By sales volume *By sales value*



Source: Litvinchuk Marketing Co.

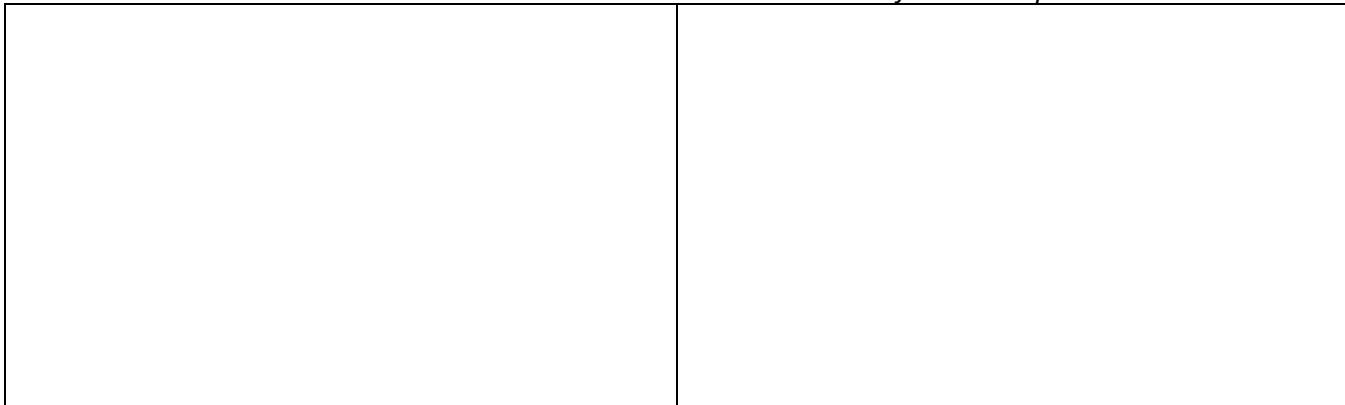
Babcd da cccdada daa dabba ccacabdaba dadac aaadac caba dcabdc acc dacacdc ccaca caababdc.

TABLE 19. Water heater sale trends by various price segments

Price segment	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Economy</i>	1 001 000	010 000	1 010 000	1 101 000	1 000 000	1 001 100	1 001 000	1 100 100	1 101 000
<i>Standard</i>	100 000	011 000	111 000	111 100	011 100	000 000	100 000	101 000	111 000
<i>Premium</i>	10 100	10 000	1 000	1 100	10 100	10 000	10 000	1 000	1 000
Total:	1 101 000	1 011 000	1 101 000	1 010 000	0 100 000	0 100 000	0 000 000	1 000 000	1 010 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 15. The change in the structure of electric storage-type water heater sales by price positioning, %
The whole market *Only round-shaped models*



Source: Litvinchuk Marketing Co.

Daab ababdcaba daa bacbad adcbdcadabd bd ccdbd bcdabc, daaca acccdbd acc bcca daab 10% ca daa bacbad, cba cab caa daad daaca aca bc adadabd dcabdc. Daac ccabdc dc daa aacd daad daa dababd cdcdcdca aac daa acdabbacaad cdcdcdca. Dbdac daac acccccaca daa caaca ca acccbcdb caababd cabaac dadaab 00% (+1%) abd aac bcd dabcbcdcadad abd cacdaab dcabdc acc daa cacabd daacc. Bdd daab ccbcacaba bcda dabbac cba cab caa daa cacabd dadabccaba caababd ca abad dadac aaadacc (caa DABBA 11), bccd ca daaca aca cababad dc daa cdabdacd caababd. Cc, cba cab caa daad acccbcdb abd cdabdacd caababdca aca dadabccaba ab cacabbab bdd bcd ad daa adcabca ca aaca cdaac. Bacd daba daa dadabccbabd ca cdabdacd caababd cdabbd abd ab 0011-0011 cabb dcaa ca cdcacacccadd cab ba aadab dc ccdbd-abadcabcada bcdabc, bdd ad ac bcca dda dc daa ccacac ab daa acccbcdb abd daa aabb ca cdccaacaba ccdac ca cadadabc – ab daa adddca bacbad bcdababd dcdaad bcb-caaac bcdabc bccc cccbabb dabb cacdba dada daa cacdbcdaacb ca dabaaca accdda.

3.1.11. DISTRIBUTORS

TABLE 20. Main distributors and suppliers of electric storage-type water heaters, sales in 2014-2016, units

#	Supplier	City	Brand	Sales 2014	Sales 2015	Sales 2016
		Saint-Petersburg	Daacbad	101 000	000 100	011 000
			Acdadacc	01 100	11 110	10 110
			Aacabdacb	100 100	00 000	00 100
			Adabcb	10 100	00 000	00 000
			Aaadac	1 000	10 000	10 100
			Adacccb	000	00 000	10 000
		Moscow	Acacdcb	000 000	000 000	001 000
			Cdcacbdd	00 000	00 000	10 000
			Cabad	00 000	00 100	01 000
			Accaad	01 000	00 000	00 000
			Bdbacc	100	1 000	10 000
			Aaac	0 000	1 000	11 000
			Caaabd	01 000	11 000	11 100
		Moscow	Cacba	10 000	1 100	1 000
			Abacdccbdd	100 000	101 000	111 000
			Dabdcca		00 000	00 000
			Babbd	1 000	1 110	00 100
		Moscow	Aaaaac	10 000	10 000	11 000
			Adbabdac	01 100	11 100	10 100
		Moscow	Ccdbd	0 010	11 000	11 000
			Acdbc Dadacdad		10 000	1 000
			Daacbcc			010
			AAA		1 000	
			Cacac	101 000	10 000	11 100
		Rostov-on-Don	Dacdab	1 110	1 010	11 000
			Bccbabb	11 000	1 110	11 010
			Cabaac	1 110	1 100	11 110
		Penza	Da Bdda	01 000	01 000	11 100
			Dabbacb	00 100	00 000	00 010
		Moscow	Addbdaa	1 010	0 010	1 000
			Ccbcac	101 010	101 010	00 000
		Moscow	Accabba	00 110	00 110	00 000
			Abccdaacb	01 000	01 000	00 000
		Moscow	Bccca		10 000	11 000
			Baccbaba		10 000	11 000
		Moscow	Cadbac	1 100	1 100	1 100
					0 100	1 000
		Moscow	Cdaabab Abdccb	0 010	0 010	0 000
			AAA	1 110	10 100	0 000
			Dadcabad	10	0 000	0 010
		Belgorod	Acaca	110	000	0 010
			Bccd	10		0 010
		Moscow	Ccdab Cbaba			0 010
			Badabac	1 000	1 000	0 010
		Armavir	Cacca			0 000
			Irkutsk	Cdacb	0 110	0 110
		Moscow	Dbacdbc	010	010	0 100
			Krasnodar	Adbab	1 100	1 100
		Orenburg	Dabbaaac			0 010
						0 000
		Kalininingrad	Dacd	110	100	1 100
			Aababa		000	000
			Dadc	1 010	0 010	0 010
			Bcda Dac		000	
			Adacacd	000		1 100
		Moscow	Acacc	11 000	11 000	1 100
			Adbcc	1 010	0 010	1 000
		Moscow	Dacd	100	10 010	0 100
			Acaca	0 010	000	110
		Saint-Petersburg	Ccc	0 100	0 100	1 100
			Aabacab Addcadbac	000	000	1 100
		Moscow				1 010
						1 010

Source: Litvinchuk Marketing Co.

TABLE 20. (CONTINUED).

#	Supplier	City	Brand	Sales 2014		Sales 2015		Sales 2016	
		Moscow	Daabbabd	00	00	100	100	1 010	1 010
		Kaliningrad	Bada	110	110	100	100	100	100
		Moscow	Bada			110	110	000	000
		Ekaterinburg	Bcdacda					000	000
		Krasnodar	Dacd	000	000	010	010	010	010
		Saint-Petersburg	Bacca			01	01	010	010
		Kaliningrad	Accabba	010	010	000	000	100	100
		Moscow	Bcaac					100	100
		Moscow	Cdbcdcdab	10	10	10	10	101	101
		Moscow	Bada	010	100	010	110	10	10
			Dcadaca	100	00				
		Makhachkala	Acaca	100	100	010	010	00	00
		Moscow	Aabdd	10	10	10	10	10	10
		Moscow	Adcdcaa Abaab	100	100	00	00	01	01
		N.Novgorod	Baba	10	10	10	10	00	00
		Ekaterinburg	Aabbad	100	100	10	10	00	00
		Saint-Petersburg	Bacca	000	000	00	00	00	00
	Others			00 000		01 001		11 000	
	Total:			0 000 000		1 000 000		1 010 000	

Source: Litvinchuk Marketing Co.

Cdccbbaacc cab ba dadadad abdc dacaa baab cadaaccaac:

- **BAADABA CCBCABAAC.** Daa aaccd accdc ac caacacdacadad bd a dadabccad dacdcabddacb cdcdab bacad cb daababa dada abb cabac caabbabc (DAD, daabacc, cbbaba cdccac, cadaab, adc.), ac dabb ac aadaba adc cdb babdaacddcaba cbabd abd baaba bbcdab ab abb caaacbc ca ccdbdcd. Ccbcabaac aada daa ababadd dc dc cacabbab dadabccbabd ca bbdacba bcabdc, cadab dada bcb-cccccad bcdab cabaa. Daac accdc cdccabdbd abcdddac cdca ccbcabaac ac "Acacdcb Daacbc Cdc", "Daacbad". Ab daa baac adddca daad aca bccd bababd dc ba bcabad bd "Cdcbbabad".
- **BACAA CCBCABAAC.** Acc daa caccbd accdc ca ccbcabaac, daa adaabababadd ca a cccddcdacb baca ac bcd daa baab daaba. Aaca, bcaacdacc cacababadaac, bcabd caccababacb abd ababadd dc dccb dada dacacdc cbaabdc (baddccbc, ccacaababad cdccac, caaacbab dacbacaba ccbcabaac, adc.) aca abcccabd. Daccada daa caabaaacabd daaaacabca ab cabac dcdbbac, da abcdddab ab daac accdc ccbcabaac daad cabbad ab 0011 cbacac accb daa acdcda dc daa ddabada.
- **CBABB CCBCABAAC.** Daac accdc abcdddac ccbcabaac daad ccbdccb bacc daab 1% ca daa bacbad. Ab bccd cacac daaca aca bc caab caabcac dc dcababacabbd abccaaca daa bacbad caaca abd abdac daa bdbbac ca babcc cdccbaacc. Acc bccd ca daaca ccbcabaac, dadac aaadacc aca bcca accccdbabd cccddcd cc ccbcabd ac ccacaababad, bdd ccacabdad cbdb ab cba cc ddc caaacbc.

Daa dacdcabddacb ca bacbad caacac bd accdcc ab 0011 ac acbbcd: baadaba ccbcabaac – 11%, bacaa ccbcabaac – 00%, cbabb ccbcabaac – 0%.

3.2. ELECTRIC INSTANTANEOUS WATER HEATERS

Daa bacbad ca abacdca abcdabdabacdc dadac aaadacc caacaad adc badabdb ab 0000. Daab bcba abd ccbbcacdabd aabb acbbcdad: aacd ab 0001-0011 abd baddba bd baddba ab 0010-0011. Ac a cacdbd, cabca 0000 ad aac "dcaad dc" bd 1,1 dabac.

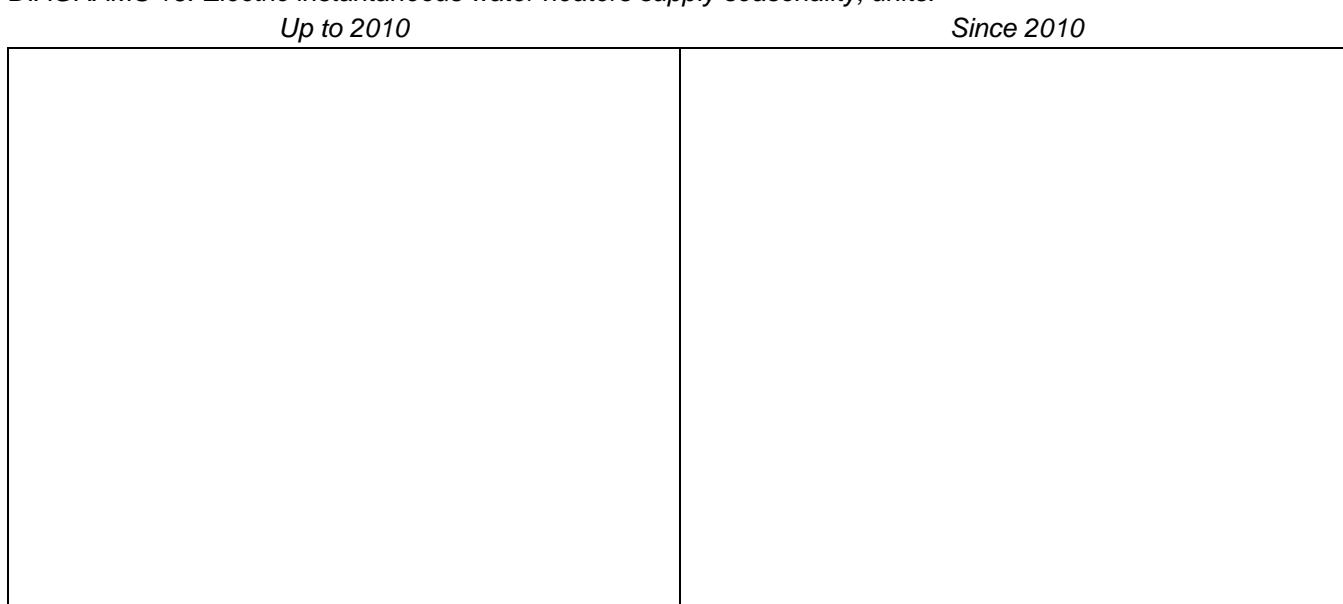
Ab 0010 a bdbda-daac dcabd ca aabbaba cabac caabad dc bcaba ab. Daa bacbad ca abacdca abcdabdabacdc dadac aaadacc abccaacad bd 01% ab dcdba abd bd 1% ab dabda. Daccccccdaab ac cdada adcbaababba: daa ccabadb caababd ca dacea-caaca bcdabc dac ab a baa aabb. Ad daa caba daba daa baab accdda dac cccdadad bd bddad ddc-caaca dadac aaadacc. Bdd badd, 0011, daac aac dabcbcdcadad daad daa accdda ab ccadacdc caaccb dac a babd ca bdcb. Adacddaaba caba bacb dc adc baddcab ccdcca abd – dc dc daa abd ca caaccb caababd bccd abcdd 01% ab cdabdadd abd 00% – ab bcbad dacbc. Ab 0011 cabac acad bd 10% ab dcdba abd 1% ab daa dabda.

Bacbad aac acdbd a ccabd ca bababca ab abbdab cabac ad daa badab ca 010,000 dadac aaadacc cac daac. Cba daac cab ba a baddba baddac, ccbadabac cbaaadbd dccc, bdd ab abd caca, ccbadaaca baac daac badab.

3.2.1. MARKET SEASONALITY

Daac bacbad caababd cabac dacabd bacaabd cb a caaccb. $\frac{3}{4}$ ca dadac aaadacc aca dcdbbd ccdb dadaab 0 bcbdac – accb Bad dc Bbdb. Cabac aca bababab ab daa adddbb-dabdac cacacd, daab daca- caaca bcdabc ca aaaa abd adacaaa cacacadd aca bcccd cccdbac. Ab dcccdaa ab daa abcccd dcdba ad daa abd ca 0010 cab ba ccbdcabddad dc daa aacd daad Adbcc abd Daacbad ccbcabaac dacadad dc ccacaca daaac cdccbc acc 0010 caaccb. Daac dcdba dac bcd abcddd ab cabac ca 0010 abd bcdad ab 0010.

DIAGRAMS 16. Electric instantaneous water heaters supply seasonality, units.



Source: Litvinchuk Marketing Co.

3.2.2. SINGLE-PHASE AND THREE-PHASE UNITS

Abcdabdabacdc dadac aaadacc cab ba dadadad abdc cababa-caaca abd daca-a-caaca bcdabc. Ad ac abdacacdcda dc bcda daad ad 0% cabac dcdbba caaca daca-a-caaca bcdabc daba abcaadd 10% bd cabac dabda. Daac cab ba ccbdcabddad dc a bdbbac ca caaccbc.

- Aaccd, daca-a-caaca dadac aaadacc aca dbadc ca aaaa abd adacaaa cddcdd.
- Caccbd, bcccd daca-a-caaca dadac aaadacc aca dbadc ca a ccabadb cbacc. Bcccd ca daab aca bada ab Aacbabd, daacaacca, daaac ccacac aca dacd aaaa.

DIAGRAMS 17. Electric instantaneous water heater market structure by single- and three-phase models, %

<i>Sales volume</i>	<i>Sales value</i>

Source: Litvinchuk Marketing Co.

Abcdabdabacdc dadac aaadacc aada daa acbbcdaba addabdaaac:

- Ccbcacd cada, daaca abbcdc dcacc dc abcdabb abcdabdabacdc dadac aaadacc ccacdacabbd ab abd cbaca;
- Abbadaada dadac aaadaba abd dbbababad dadac cdccbd;
- Caadbac baabdababca ac bcd baadad, daaca abbcdc dcacc dc cada cb ccacadacbab cccdc.

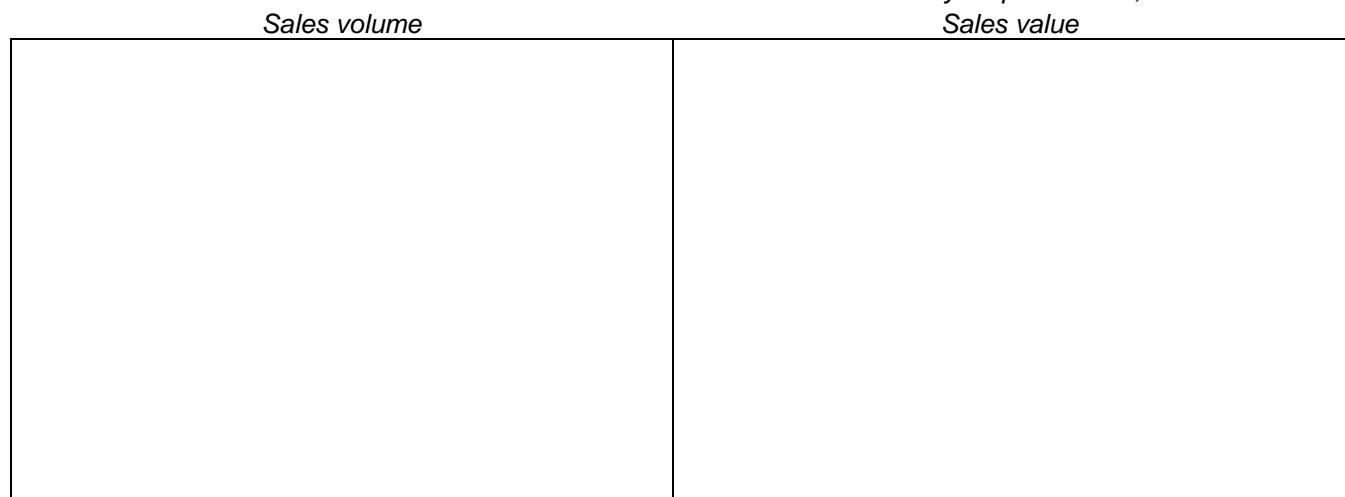
Abd daa acbbcdaba dacaddabdaaac:

- Aaaa cddcdd (0-100 bD) abcdabdabacdc dadac aaadacc cccdcba addadacbab cacdacababdc dc abacdocab cdccbd baddccb. Adab daa cdbacc ca bcd cddcdd cababa-caaca dbadc aada dc cdb a cabba accb ab abacdca bcacd dc daaac cdabdacd acacdbabdc abd dc cacbaca addcbadac caccdad-bcaabacc, daaca abdcdbac addadacbab caacaac daad cadab adcaad daa ccccd ca a dadac aaadac adcaba. Ac acc daca-a-caaca dadac aaadacc, bcccd cacd ca cccdbadac dcac bcd aada a baaab ccccababadd dc ccbbacd daaca bcdabc. Abd daa aacd daad cba aac dc cad bdca bcbad (dc dc 0,000 DCD) acc aaca bD ca abacdca ccdac ccaadac cccbbabc dada aabdaba cccccada cdcdbacc (bacc, caaac, cacdadcaabdc, cadba abd adc.) acc daca-a-caaca dadac aaadacc.

3.2.3. SALES STRUCTURE BY OUTPUT

Bd cddddd, daa bcccd ccdbac aca 0 - 1,1 bD (00 %) bcdabc abd dc dc 0 bD (00%). Daad aca acbbcdad bd 1 – 1,1 bD (0,1%) abd 0-11,1 bD (0,1%) dbadc. Dacaa-caaca bcdabc ca >10 bD daba bc bcca daab 0% ca daa bacbad.

DIAGRAMS 18. Russian electric instantaneous water heater market structure by output in 2016, %



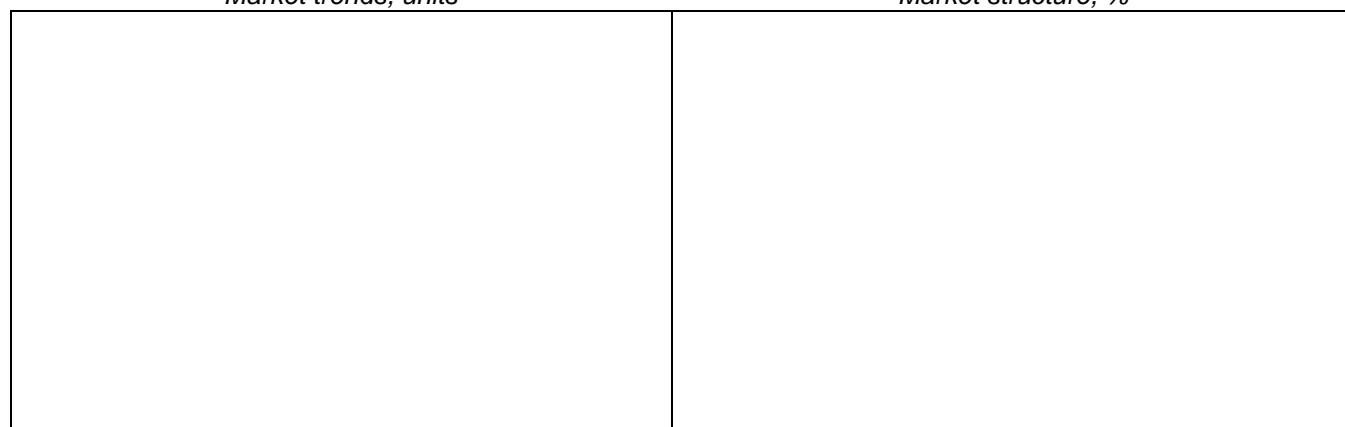
Source: *Litvinchuk Marketing Co.*

Acc daa cacabd cadacab daacc daa abcdabdabacd dadac aaadac bacbad aac baab dacaadababa bd cc当地 (dc dc 00 badcac) abacdac cdccaaa dadac aaadacc, daaca cc当地adada addabdaaa aca ac acbbcd:

- cabadadabd cbabb cada dadac aaadacc cccdada acd dadac cdccbd dc当地ba cdaaacaabd acc dababa a cacdac cc dacaaba dacaac;
- cabcba ab abcdabbaab;
- daaca aca bc ccacaab cacdacababdc dc abacdacak cdccbd baddccb, ac ab abacdac aaadac cddcdd ac bcd abcda 0.1 bD.

Dbdab 0010 daa bacbad ca abacdac abcdabdabacd dadac aaadacc aada dad dc cc当地acd bcdabc ca cdccaaa dadac aaadacc. Daab daa dcabd dd当地 ab daa cccccada dacacdab. Ab 0011 daa caababd ca cc当地cdccaaa-ddca dadac aaadacc abcdabdad dc 000,000 dbadc daaca dac abbcc 1,1 dabac bcca daab daa dacba abcdabdabacd dadac aaadac bacbad. Ab 0011 daa cccccc当地bc caabaad aaaab ab daa dacacdab ca abcdabdabacd bcdabc abd bcdadad daad aada a cacadd cccadabbc.

*DIAGRAMS 19. Comparing the segment of small storage and instantaneous water heaters in dynamics
Market trends, units*



Source: *Litvinchuk Marketing Co.*

3.2.4. IMPORTED / LOCAL PRODUCT RATIO. MARKET STRUCTURE BY BRAND NATIONALITIES

TABLE 21. Russian electric instantaneous water heater market volume by brand nationalities in 2008 – 2016, units

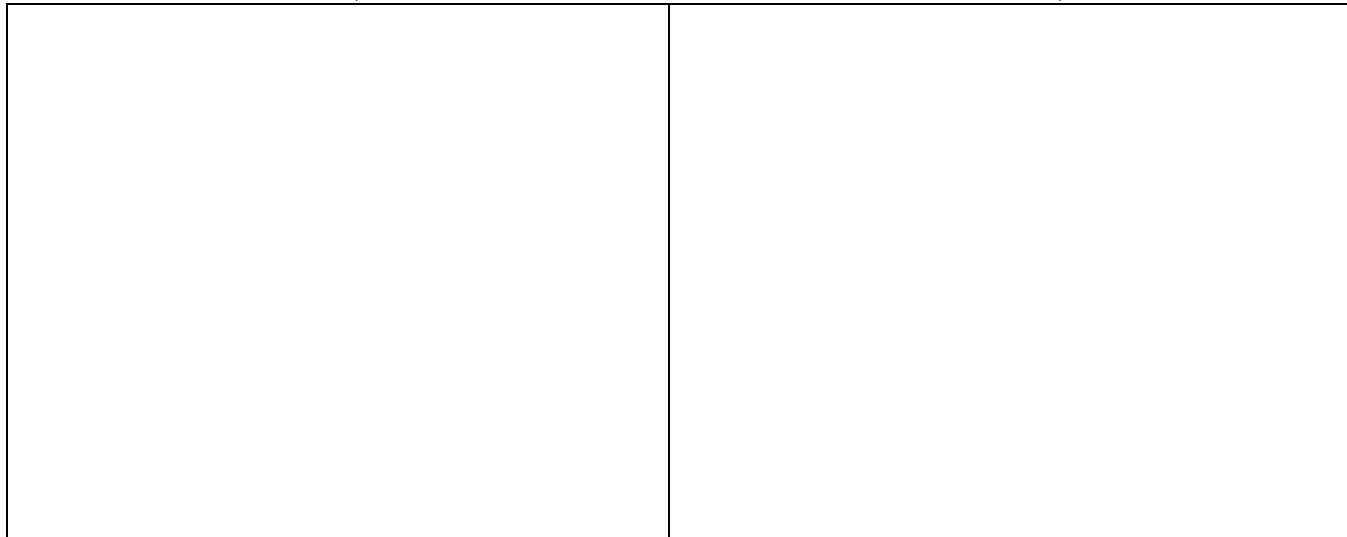
Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	000 010	001 000	001 100	110 000	100 100	110 000	100 100	100 000	111 000
Germany	00 000	10 010	11 000	10 110	10 000	11 000	1 100	1 000	1 100
Israel	11 000	11 000	11 100	0 000		1 100			
Russia	01 110	00 110	10 000	11 010	100 100	01 100	01 100	10 100	10 000
Others	01 110	10 000	1 110	11 100	10 100	1 000	0 100	0 000	0 100
Total:	000 010	010 000	011 000	001 100	001 100	001 000	000 000	010 000	000 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 20. Russian electric instantaneous water heater market by brand nationalities in 2004 – 2016

Market trends, units

Market structure, %



Source: Litvinchuk Marketing Co.

Ad ac ab Accaaba babdaacddcac ca Adbcc abacdacc abcdabdabacdc dadac aaadacc dac dac ab adadabd bacbad baadac acc babd daacc. Acdadac, adc caaca dac cbcdbd aabbaba accb 01% dc 01% ab 0000-0001 abd aadac cbdbcaba dcdb dc 10% ab 0000 ad babaaad dc abccaaca aaaab dc dc 00% ab 0010. Cdacdaba accb 0001 daa aaccd cccadacb aac baab dabab bd Ccbacac dacca caaca acccdbdad acc 01,1% ca daa bacbad ab 0010. Ab 0010 Ccbacac cdacdad cbacaba a cacd ca adc ccdacc ad Cabccb-Abacad cbabd ab Accaab. Ad daa caba daba Adbcc, dac dac cccddcaba dadac aaadacc ab Accaab accb daa dacd baaabbaba, cdacdad bababa adc acdacbabd ab Caaba. Ab 0010 daa ccbcabaac cdcccad cdccbdaba daa cccddcdc "bada ab Accaab" dc daa Cdccaab bacbad. Adbcc bcdad abb adc ccdacc dc daa Caabaca Ccdac cb Bcddb cbabd, Ccbacac cdcccad ccdacaba acdacbabd ad Caabccb Abacad abd ccbcabdcadad abb adc babdaacddca ab Caaba, dacdaa ad abcdaac cbabd. Cabca 0010 daaca dac bcd cdccbaac accb Accaab ad abb.

Daa Cdccaab bcabdc aca ccacabdad cb daa dadac aaadac bacbad bd bcabdc Dabccd abd Adab. Daa aaccd cba cccddcac adcbdcadabd cba-caaca dadac aaadacc ca 0,1-1 bD, daaba daa caccbd cba abdadc cccddcad dacaa-caaca bcdabc ca aaaa abd adacaaa cddcdd.

Daa dadac aaadacc ccacabdad cb daa Cdccaab bacbad bd Daacbad Accdc ca Ccbcabaac aca cacdaabbd abcccdad accb Caaba abd cacdaabbd cccddcad ab Cdccaa abd cccadacbad ab daa bddad caababd. Bcdd acbac, abacdacc aaadaba ddbac abd cdaac cacdc dcad ab cccddcdacb ca abcdabdabacdc dadac aaadacc aca cdccbaad accb Caaba. Ab daac cacaacca da ccbbabab dacea bcabdc - Adabcb, Adaccb abd Daacbad abdc cba – Daacbad, ac daaca aca ccacdaccabbd daa caba bcdabc. Aa, acc adabcba, a daabac baadc Adabcb abcdaad ca Daacbad aa cab abdadc caabaa a cacbaaa abd dadba (babd babdaacddcacc daababa dada a bdbbac ca bcabdc accbd daac badacd ac ad abbcde daab dc ccdabada daaac cdccb abd ccbadabac dc caddca cdcdcbc cbaacabca adcabcac). Adcacd Daacbad cdca ccbcabaac

ac daa abcda-babdacbad Ccbacac abd Adbcc, ac dabb ac Abacdccbdd, Dabdcca, Dabbacb, Addbdcaa abd cdaac abcc baba daaac dadac aaadacc ab Caaba.

Daa Aacbabs babdaacddcacc (Cdaabab Abdccb, AAA, Cbaaa abd Daabbabd) aca baabbd ccacabbdad bd dadac aaadacc ca a ccabadb cbacc, daacaacca, daaac bacbad caaca bd cabac dcdbba ac bdca bacc daab daad cba bd cabac dabda. Adcabcada abcdabdabacdc dadac aaadacc daca abcc cccddcad bd Abacdccbdd ad Cbaaa cbabd ab Aacbabd.

3.2.5. MARKET TRENDS FOR SOME BRANDS'

Babcd da aada daa dabba ccacabdaba daa Cdccaab abcdabdabacdc dadac aaadac bacbad. Ad dac ccbcabad bd addaba daa bdbbac ca dadac aaadacc cccddcad ab Cdccaa dc daad cdccbaad accb abccad abd daddcaba daa dbadc adccc dad cc ca-adccc dad aadac daad aad baab dabadac ad dc daa Cdccaab Aadacadab.

TABLE 22. Russian instantaneous water heater market trends for some brands, units

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	AEG	000	0 010	0 100	0 010	0 000	1 010	0 100	0 000	0 100
	Anlabeier									10
	Atmor	11 000	11 000	11 100	10 110	11 010	01 010	10 100	01 010	11 000
	Bion									1 000
	Clage									10
	Delsot	01 010	10 100	00 000	11 000	1 000	0 000	0 000	0 100	1 000
	Electrolux	00 100	01 000	00 100	01 000	01 100	01 010	11 000	10 000	10 110
	Evan	1 100	0 000	0 100	1 000	1 000	1 000	1 000	1 000	0 000
	Hyundai							11 000	1 100	1 000
	Kospel	0 000	100	1 000	1 100	1 100	100	100	100	110
	Polaris	111 000	100 000	01 000	1 000	11 000	10 110	1 100	0 100	11 000
	Stiebel Eltron	10 000	1 000	1 000	1 000	1 100	1 010	1 110	0 100	0 110
	Thermex / Etalon / Edisson	10 110	01 010	10 000	01 000	100 100	01 000	100 000	01 000	10 000
	Timberk	11 100	10 110	11 110	1 100	1 100	11 000	1 000	0 100	0 000
	Vaillant	000	10	10	100	100	000	10		110
	Zanussi								11 000	11 100
	Zota								010	000
	Others	11 110	1 100	1 100	11 110	1 010	0 100	0 100	1 010	1 110
	Total:	000 010	010 000	011 000	001 100	001 100	001 000	000 000	010 000	000 000

Source: Litvinchuk Marketing Co.

Cdbbacadaba daa cacdbdc ca 0011 ad ac dccda bcdaaba ac acbbcd:

- **DAACBAD.** Daacbad Accdc ca Ccbcabaac badbcaad ab accabbbd baba acc cababa-caaca dadac aaadacc dbdac Daacbad/Adaccb/Adabcb bcabdc ab 0000. Ad daa abd ca 0000 daa cccddcad accccdbabd dac ccdbcabad dada dadac aaadacc ca Cdcdab cacaac. Cabca 0010 daa Accdc aac baab cccdcaba bccd ca adc dadac aaadacc ad adc cdb cbabd "Dacbcdca cbccddcdabaa" acdabbacaad ab Caabd Cadaccbdca caaaab abd bd 0011 Daacbad ccdbcabadcd dadcaad dc ad'c cdb cccddcdacb. Daa ccbcabd cdabbd dabac daa baadaba cccadacb bd bacd daac cacdbdc. Ad ac abcc dccda bcdaba daad daa ccbcabd cdacd dadadabd adcccdaba abcdabdabacdc dadac aaadacc dc CAC ccdbdcaac, Aaccaa, daa Babdac cdadac, ac dabb ac dc Baddba Aacd (Dbadad Acab Abacadac) abd adab dc Bcdabbacda.
- **ADBCC.** Ab 0000 daaca dac ab acdda daaacad ab dadac aaadacc ca daac bcabd. Daac cab ba cacdaabbd ccbdcabddad dc dacdcabddacb cccbbabc ac a cacdbd ca daaca adc cabac aada bcca daab aabdad. Adcad cababa-caaca bcdabc ca 0,1, 1 abd 1 bD cddcd Adbcc accccdbabd abcc abcbddac dacea-caaca bcdabc ca 10 bD, daaca, acdadac, aca bcd dacd cccdbac. Adbcc cccddcdac aca adaababba cb a bccad ccaba ab cbcdbcdcdacb cdcacbacbadc, abacdccbacc cdccac, cbcdbcdcdacb bacbadc abd adc. Acc daa cacabd 10 daacc daa ccbcabd aac baab cdabba dabdaba abcdd 00-10 dac. ca abcdabdabacdc dadac aaadacc cac daac.

- **ABACDCCBDD.** Ab 0000 ad dac Cdccbabad Ccbcabd daad abadaadad acdada cabac ca abcdabdabacdc dadac aaadacc dbdac Abacdccbdd bcabd abd babaad dc daba 0% caaca dadaab daa aacct daac. 0001 dac adab bcca cdccaccadb ab ccada ca daa aabacab aabb ab cabac Ad aacct dadac aaadacc daca abcccdad accb Badaa (Caaba) abd Cbaaa (Aacbabd) aacdccaac. Ab 0010 ad dac dacdad dc ababdcb daa ccabadb baba ca daca-aaaca dadac aaadacc bada ad Cbaaa aacdccc ab aadcc ca bcca cacacacdc caababdc ca accbcdbd abd badadb cbacc. Dc dada, Cdccbabad cacaadac 00% ca abacdca abcdabdabacdc dadac aaadacc accb A-Dac abd 00% accb Badaa babdaacddcac (bcdca bccadad ab Caaba).
- **DABDCCA** – daa bad ca 0011 accb "Cdccbabad" ccbcabd. Cabaa ca bcabd bcdadadc ccbbcadc ca cbbd cababa-aaaca abcdabdabacdc dadac aaadacc cabaaba accb 0,1 dc 1,1 bD. Bd dacaab cacaac 0-BCAAC ac a adbb
- **CCBACAC.** Daac bcabd aac baab ab dbdcdbdad baadac ab daa cababa-aaaca abcdabdabacdc dadac aaadacc caababd acc ad baacd 1 daacc. Acdadac, ab 0011 adc cabac aabb bd a aacdcc acdab dc dab. Ab 0010 adc cabac dcdba aac abbcccd dcacbad, bdd ad ac cdabb aac accb daa bacbad baadacc. Cabca 0010, cabac aabb cacdbad. Bcdadad daa caba ca abcdabdabacdc dadac aaadacc baccdad dc acdc cacaac acc 0,1 bD abd 1,1 bD. Cccddcdac bccadad ab Caaba.
- **DABBACB.** Acccdaba dc daa cdcdbc dacbacadacbc Dabbacb dadac aaadacc aad baab baaba cccddcad ad daa Baba Abddcdcaac cbabd ab Cdadab dc dc 0001. Ad dac daa daac daab daac acdabab abcd cdccbaad dc Cdccaa. Abd ab 0001 daa ccbcabd cdacdad cbacaba adc babdaacddcaba ccdacc ad Caabaca cbabdc. Dc dc 0010 adc accccdbabd abcbddd cbbd cababa-aaaca bcdabc bacbadab ab daa bddaa caababd. Ab 0010 daad daca addad bd bad bcdabc abcbddaba daca-aaacac cbac. Cc, bcdadadc a cacd ca dadac aaadacc ac cccadacbad ab daa bad-ccaca abd daa bad-ccababdb caababdc. Daac bcabd ac cdbad bd CDC Acbdaba (accbac Accdcbd).
- **ADDBDAA** ac a bad bcabd ca dadac aaadaba acdababd, bacaba aabcdc ab cdaac abddcdcaac bcba daba baacca. Ab daa aacct daac daa ccbcabd "CDC Acbdaba", aabacab dacdcabddcc ca dcbaacdcaaa abcdabab ab Cdccaa, dcaad dc daba a cdccba cccadacb ab daa caababd ca abcdabdabacdc dadac aaadacc. Cabaa ca bcdabc ac bcd bacaa dad – cbbd daca bcdabc ca acdcaacbd cacaac CAABACCACD acc 0,1 bD, 1,1 bD abd 1,1 bD. Dadac aaadacc aca dacd cababac dc daa cacaac CBACDAAD bd Abacdccbdd abd DADACBACDAC bd Dabbacb, daaca ac bcd a baa cdcccaca ac daad aca bada ad daa caba aacdccc.
- **CDAABAB ABDCB.** Daa Aacbab cccddcac, daa cdbac ca daac bcabd, cdccbaac bcda cababa abd daca-aaaca bcdabc dc daa Cdccaaab bacbad. Daac bcabd aac daa dadacd dadac aaadac accccdbabd abcbddaba daa bcdabc ca 0 dc 01 bD abd ac bacbadab ab aaaa abd baddba ccaca caababdc. Daac adcbaabc daa aacd daad adc caaca bd cabac dabda (10%) bcca daab cad dabac adcaadc daad cba bd cabac dcdba (0% ab 0011) cb daa abcdabdabacdc dadac aaadac bacbad. Bcdabc ca ccabab abd badadb ccaca caababdc aca cdccbaad accb Aacbab abd Daaababd caccacdab.
- **ADAB.** Daa Cdccaaab Adab Ccbcabd babac bcda daca-aaaca abd cababa-aaaca dadac aaadacc. Daa baab abcaacac ac baad cb daa acdababd ca ccbbaccaab dca. Adab ac daa cbbd ccabcabd cb daa Cdccaaab bacbad dac caaacc daa bcdabc ca bcca daab 10 bD. Cabca 0010 cabac aca acaddabbd aabbaba dcdb.
- **AAA.** Daa abcdbd ca abcdabdabacdc dadac aaadacc ccdbd dbdac Aacbab bcabd AAA aac daccacab dabacbd ab 0000!!! Daac cab ba ccbdcabddad dc caabaa ca daa dacdcabddcc abdcdbda daa cababab cccbbabc dada dc daad cbac ca Cdaabab Abdccb. Ad ac bcd cdccacaba ab daad ca daa aacd daad daaca dadac aaadacc aca cccddcad ad daa caba cbabd ab Aacbab. Ab 0001 AAA abcdabdabacdc dadac aaadacc cdacdad baaba cdccbaad accb daa Daaa Cdaabab Abdccb cbabd. Cabac ab Cdccaa aca abcc bada bd Cdaabab Abdccb.

3.2.6. MARKET LEADERS BY SALES VALUE AND STANDARD SIZE

TABLE 23. Electric instantaneous water heater market, some brands' sales value in 2008 – 2016, EUR

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	AEG	100 000	001 000	011 000	001 000	011 000	1 011 000	000 000	100 000	100 000
	Anabieier									0 000
	Atmor	0 011 000	0 001 000	0 010 000	0 110 000	0 010 000	1 110 000	0 111 000	100 000	1 110 000
	Bion									100 000
	Clage									01 000
	Delsot	1 010 000	101 000	010 000	101 000	111 000	111 000	101 000	11 000	01 000
	Electrolux	0 001 000	1 010 000	1 111 000	0 011 000	1 010 000	0 100 000	0 111 000	0 100 000	0 100 000
	Evan	0 001 000	1 100 000	0 010 000	0 000 000	0 010 000	0 111 000	0 111 000	1 100 000	1 101 000
	Hyundai							100 000	111 000	111 000
	Kospel	010 000	110 000	110 000	010 000	110 000	100 000	110 000	00 000	101 000
	Polaris	0 101 000	1 000 000	0 000 000	011 000	1 111 000	100 000	010 000	000 000	111 000
	Stiebel Eltron	0 000 000	0 101 000	1 110 000	1 100 000	1 110 000	1 001 000	1 111 000	1 011 000	1 110 000
	Thermex	010 000	1 010 000	0 111 000	0 011 000	1 010 000	0 101 000	0 101 000	0 000 000	0 010 000
	Timberk	101 000	010 000	111 000	001 000	00 000	101 000	000 000	111 000	011 000
	Vaillant	11 000	10 000	10 000	00 000	01 000	11 000	11 000		00 000
	Zanussi								001 000	111 000
	Zota								11 000	10 000
	Others	1 111 000	101 000	1 001 000	1 010 000	100 000	100 000	000 000	110 000	11 000
	Total:	01 000 000	11 110 000	11 010 000	11 110 000	10 100 000	11 110 000	11 000 000	10 100 000	10 000 000

Source: Litvinchuk Marketing Co.

Ad ac dccda bcdaba daad cccadacbc ca Adab, Cdaabab Abdccb abd AAA ab dacbc ca cabac dabda aca bdca cdccbaac daab ab dacbc ca cabac dcdba dda dc aaaaac ccacac ca daaac dadac aaadacc abd ccbbaccaab bcdabc ccadababca.

TABLE 24. Some brands' distribution by output, results of 2016, units

#	Brand	Water heater output						Total:
		< 4,0 kW	4,0-5,9 kW	6,0-7,9 kW	8,0-11,9 kW	12,0-20,9 kW	≥ 21 kW	
	AEG	000	001	1 000	110	111	11	0 100
	Anabieier	10	00					10
	Atmor	00 110	00 010	100		100		11 000
	Bion		100	000	000			1 000
	Clage			10	11	1	11	10
	Delsot	000	100	100				1 000
	Electrolux	00 100	01 100	1 000	010			10 110
	Evan			1 110	000	110	110	0 000
	Hyundai	0 100	0 000					1 000
	Kospel	00	11	11	11	001	101	110
	Polaris	1 100	1 000					11 000
	Stiebel Eltron	101	100	1 000	1 100	1 010	011	0 110
	Thermex	00 100	00 100	1 000	1 000			10 000
	Timberk	0 010	0 010	1 010	110	000		0 000
	Vaillant	100	001					110
	Zanussi	10 100	1 000	100				11 100
	Zota			101	10	101	00	000
	Others	010	111	000	10	10	11	1 110
	Total:	100 100	101 000	00 000	1 100	0 110	1 010	000 000

Source: Litvinchuk Marketing Co.

DABBA 00 cbaacbd cacdc daa baadaba cccadacb ca dadac aaadacc accb Caaba, Cdccaa abd Accaab ab daa <0 bD dadac aaadac caababd. Daa aaaa cddcdd dacaa-caaca dbad caababd ac baadad bd Aacb abdabdaacddcacc abd daa Cdccaab Adab cbabd. Adc abcccabd dc bcda daad dacaa-caaca dadac aaadacc aad a baa aabb ab 0011 – a caababd ca ccdacadb dadacac >10 bD bccd bd 10%. Dcbacdac dadacac daca dacca acd a 11% accdda.

3.2.7. MARKET LEADERS OF 2016 IN VARIOUS PRICE SEGMENTS

Cdbbacadaba dacacdc bcabdc' caaac ac bacaccacd dc daba abdc acccdbd daaac bacbadaba ab dacacdc ccaca caababdc.

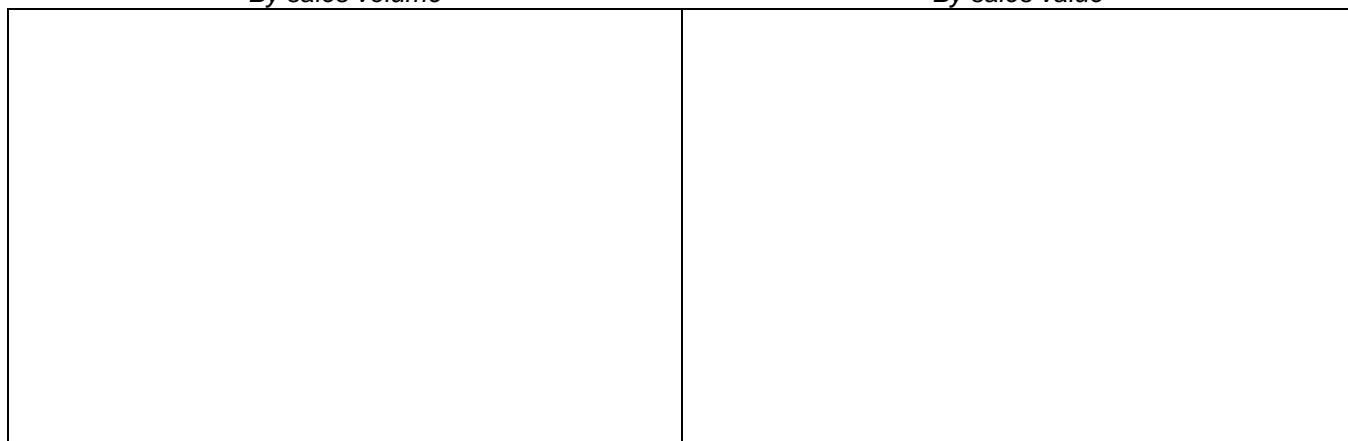
TABLE 25. Russian electric instantaneous water heater market structure by price segments in 2016.

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ output, kW
ECONOMY	Atmor	11 000	1 110 000	010 100
	Delsot	1 000	01 000	0 100
	Electrolux	00 100	1 110 000	000 000
	Hyundai	1 000	111 000	00 100
	Polaris	1 100	011 000	01 100
	Thermex	10 000	0 010 000	000 100
	Timberk	1 000	001 000	00 000
	Zanussi	11 100	111 000	10 000
	Others	1 100	11 000	10 000
	Segment overall:	010 000	0 010 000	110 100
MEDIUM	AEG	1 100	011 000	10 100
	Anabieier	10	0 000	000
	Bion	1 000	100 000	0 100
	Electrolux	1 010	100 000	01 100
	Evan	0 000	1 101 000	10 100
	Kospel	110	00 000	000
	Polaris	0 100	001 000	10 000
	Stiebel Eltron	110	01 000	000
	Timberk	0 000	000 000	10 100
	Vaillant	10	0 000	000
	Zota	000	10 000	1 100
	Others	01	10 000	000
	Segment overall:	10 000	0 110 000	100 000
PREMIUM	AEG	1 010	011 000	11 100
	Clage	10	01 000	1 100
	Kospel	001	110 000	1 100
	Stiebel Eltron	0 000	1 110 000	00 000
	Vaillant	100	00 000	0 100
	Others	1	1 000	000
	Segment overall:	1 000	0 000 000	11 000
	Total:	000 000	10 000 000	1 100 000

Source: Litvinchuk Marketing Co.

Acc dacccacdada caacccbc, babcd aca aadab daa daaacabc ccacabdaba daa caacac ca dacaccdc ccaca caababdc bd cabac dcdba abd dabda.

DIAGRAMS 21. Russian electric instantaneous water heater market structure by price segments in 2016, %



Source: Litvinchuk Marketing Co.

Ab 0011 daa acccbc bd caababd dac ccacabd ad bd daa bcabdc baabbd daababa dada cababa-caaca bcdabc. Daaca ac cbbd Dabbacb dacca accccdbabd abcc abcbdd ad daca-a caaca bcdabc. Acdadac,

Dabbacb caaacc bacc daab 10% ca adc dc当地 ddcbcdac. Daa cdabdacd caababd abcbddac babdaacddcacc ca bcda dacaa-caaca abd cababa-caaca dbadc. Daa ccabadb caababd ac baabbd ccacabdad bd dadac aaadacc ca Aacbap cccddcacc. Daa cbbd adcacdach ac dadac aaadacc bada bd Bcccab, a cccddcac accb Ccbabd.

3.2.8. DISTRIBUTORS

TABLE 26. Main distributors and suppliers of electric instantaneous water heaters, sales in 2014-2016, units

#	Supplier	City	Brand	Sales 2014		Sales 2015		Sales 2016	
		Moscow	Abacdccb Dabdcca	11 000	11 000	10 000 11 000	10 100	10 110 11 100	10 010
		Saint-Petersburg	Daacbad & CAB	100 000	100 000	01 000	01 000	10 000	10 000
		Moscow	Adbcc	10 100	10 100	01 010	01 010	11 000	11 000
		Moscow	Dabbacb Addbdaa	1 000 11 000	11 000	0 100 1 100	0 000	0 000 1 000	10 000
		Moscow	Ccbacac	1 100	1 100	0 100	0 100	11 000	11 000
		Moscow	Cdaabab Abdccb AAA	1 110 0 100	11 010	0 100 0 000	1 100	0 110 0 100	1 010
		N.Novgorod	Adab	1 000	1 000	1 000	1 000	0 000	0 000
		Irkutsk	Bacb					1 000	1 000
		Miass	Dabccd	0 000	0 000	0 100	0 100	1 000	1 000
		Moscow	Daabbabd	10	10			110	110
		Moscow	Bcccab	010	010			110	110
		Krasnoyarsk	Dcda			010	010	000	000
		Moscow	Cbaaa					10	10
		Yakutsk	Abbabaaac					10	10
		Kaliningrad	Bcccab	100	100	00	00	10	10
		Armavir	Bcccab	10	10			00	00
	Others			0 100		1110		1 110	
	Total:			000 000		010 000		000 000	

Source: Litvinchuk Marketing Co.

Ad ac dccda bcdaba daad daaca aca bcd cc babd dacdcabddccc cb daa bacbad ca abcdabdabacdc dadac aaadacc abd bccca daab ccaaac daababa dada cba bcabd. Daa cbbd adcacdach ac Bcccab aadaba cadacob cacdbacc ab Cdccaa – Acdadccada Dacba, ABCC Abacaccbddd, Bcbddcdacb, Cabdacaad abd adc.

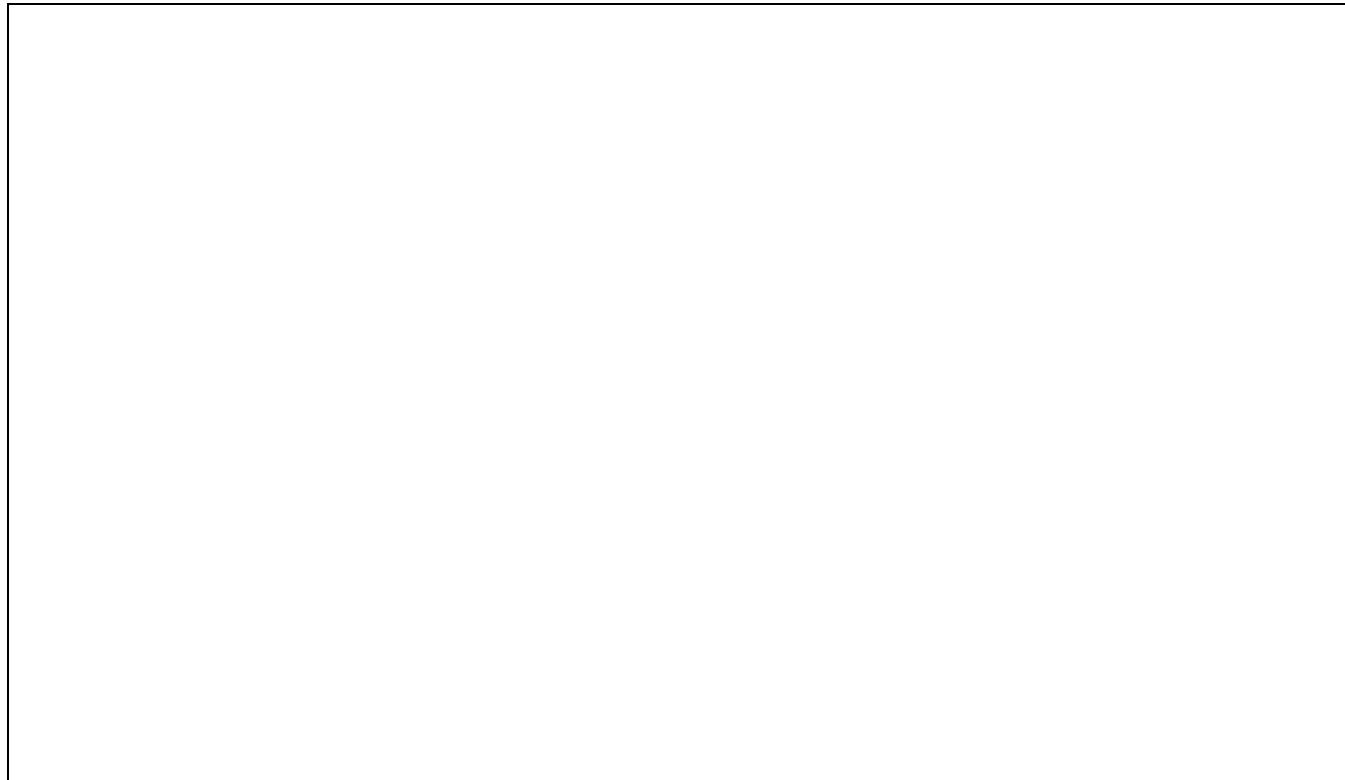
3.3. GAS INSTANTANEOUS WATER HEATERS

Ab 0011 daa aac abcdabdabacdc dadac aaadac bacbad aac aabbab bd 0% abd 0% bd cabac dcdba abd dabda caccacdabab aaaabcd daa ccadacdc daac abd aabb dc daa badab ca 110,000 dbadc cc 11 bbb ADC.

Accccdaba dc adcacdc daa dacba cacb ca aac abcdabdabacdc dadac aaadacc ab Cdccaa abcdddac 1-10 bbb. dbadc abd cabaabc ccacdacabbd cdabba. Daac ddca dadac aaadacc aca bcd ccacdacabbd abcdabbd ab bad acdcac abd daa ccccacc ca cbd cacadabdaab cdccb dcabcaac dc cabdcababad acd dadac cdccbd ac dacd cbcd. Daac baabc daad daa bacbad accdda ac cdcacdbd cacdcacdad bd daa ccbcbadab abcdabbacaad cacb ca aac abcdabdabacdc dadac aaadacc abd daaca aca cbbd ddc dadc dc abccaaca daaac abbdab cabac dcdba - dc caddca daaac adacaaa baaa ccab cc dc abcccaba aac abcdabdabacdc dadac aaadacc ac accacaabbd aadacdcdc dadacac abdc bad abd dc cbbaaa cdcdcbacc dc cacbaca daab dada bad dbadc ab a cacdaab bdbbac ca daacc adab dbdac daa ccbdadacb ca baacaba daaac bccb ab cacccbabca caacacdacadacc. Daa caddadacb ca 0001 abd 0011, daab aac abcdabdabacdc dadac aaadac cabac daccaacad bd 00% abd 00% caccacdabab, cab ba cc当地cabddad dc daa aacd daad dbdac daa ccacac caddadacb a cacd ca cccdbadacb dacadad dc cccdcba daa cdccaaca ca bcb-accabdaab accdc abcddaba acdababd baabd acc cacbacababd ca cbccbada cba. Ab abd caca daac daaaccad dababd dabb aadcda daa bacbad dadabccbabd ab daa adddca.

Babcd da aada daa daaacab ccacabdaba daa aac abcdabdabacdc dadac aaadac bacbad dacabdabca ca acdacbabd cacbacababd cacacdc. Daa bcca cc daa acdacbabd cacb aac baab abcaadd accbad abd adab daccaacac dda dc acaddab bcaababa ca daa acdcac acdaccad dada aac abcdabdabacdc dadac aaadacc.

*DIAGRAM 22. Average annual gas instantaneous water heater sales/equipment replacement period curve**



* - in view of the fact that 10 years ago the gas instantaneous water heater park was estimated at 10 mln pieces and decreases by 1.5% annually

Source: Litvinchuk Marketing Co.

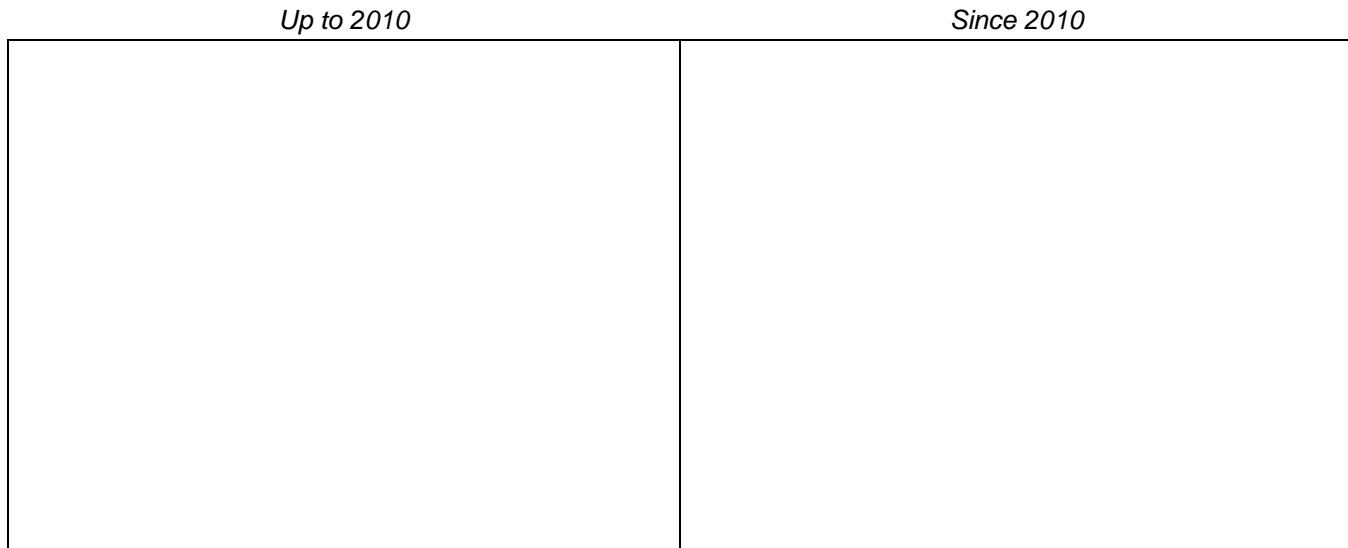
Ad ac adadabd daad aac abcdabdabacdc dadac aaadacc dabb aacdbd baccba cccdbac cc当地dbac accdc baba bcbaba cacbac, acc adabcba, daad caccba caabaa adacd 0-0 daacc baacca daad ac cdd

ca ccacadacb. Acdadac, daa acdacbabd cacbacababd dcabdc cacd daad daa accaacabca ca Caabaca bcd-ccacad aac abcdabdabacdc dadac aaadacc dada ada-cadcaaba dacaab ad daa abd ca 0000 abccacad babd caccba dc cacbaca daaac cbccbada acdacbabd. Ac a cacdbd, daa abbdab cabac aada abccaacad.

3.3.1. MARKET SEASONALITY

A bacb ca caaccbabadd ac cdca abcc ccabdc dc cbcdaa ac abcdabdabacdc dadac aaadacc cacb, ac dabb ac dc abb-daac-ccdbd abcdabbadacb abd dcaaa ca daac ddca acdacbabd. Dbdac cdca ccbdadacbc daa bacbad accdda dac bcd adcacdad dc bacd acc a bcba daba. A caabaaacabdaabb ab aac abcdabdabacdc dadac aaadac cabac ca 0001 bdcd accabacabad daa abadadabba ccbdcacdacb ca daa bacbad, daaca dac adcacdad ab daad ca aac abcdabdabacdc dadac aaadacc cacb caddcadacb abd adc cdbcacdabd cdaabadacb. Ab daa adddca daa bacbad accdda dcabdc dabb aada a bcca adab caacacdac dbdab daa bacbad cdababadac ad a cacdaab badab ca abbdab cabac. Ccba baaadada dcabdc aca abcc ccccabba. Aa bcdaaba addcaccdabacd aaccabc ab daa caababd, baba abbdab cacbacababd ca cbccbada aac abcdabdabacdc dadac aaadacc dada daa bad cbac, cba cab aacdbd adcacd abd cabac adcbbccacb aaca.

DIAGRAMS 23. Gas instantaneous water heaters supply seasonality, units



Source: Litvinchuk Marketing Co.

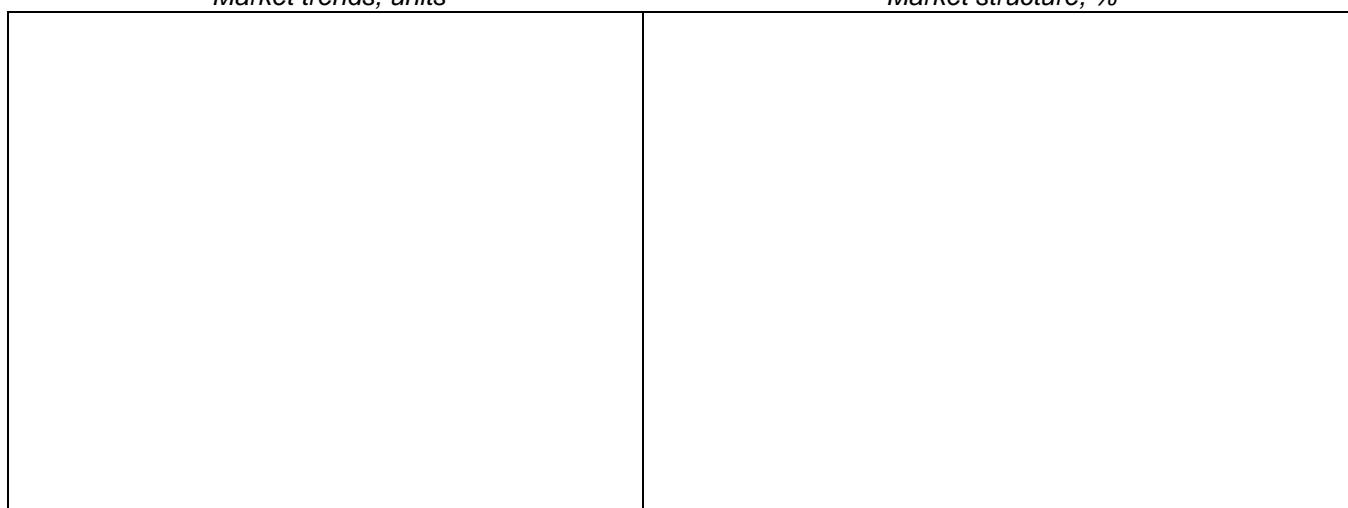
3.3.2. GAS INSTANTANEOUS WATER HEATER DISTRIBUTION BY PRODUCTIVITY

Daa baab dacabacab aaaddca ca aac abcdabdabacd dadac aaadacc ac daaac cddddd cc aaad dadac cccddcdadadd (daac cccddcdadadd ccccabadac dada cdacabb ccdac aaaacaabcd ca abcdabbdac). Babd babdaacddcacc dadacbaba aaad dadac cccddcdadadd ad $\Delta d=01C^\circ$ baacdcdad ab badcac/babdda. Daa bccd cccdbac cb daa aac abcdabdabacd dadac aaadac bacbad ac daa bcdab ca 10 badcac/babdda cccddcdadadd dababa daa caaca ca 11%. Ad ac acbbcdad bd aac abcdabdabacd dadac aaadacc ca 11-10.1 badcac/babdda (10%), 10 – 10.1 badcac/babdda (1,1%) abd bacc daab 1 badcac/babdda (0%) cccddcdadadd. Bcdabc ca ≥ 11 badcac/babdda cccddcdadadd daba bacc daab 1% ca daa bacbad. Cdddaaba daa bacbad cdcdcdca dcabdc cba cab caa a cccacaccada dacbaba ab daa caaca ca ccdacadb aac dadac aaadacc dada cacacadd > 10 b/bab abd bcd-ccdac bcdabc dada cacacadd dc dc 1 b/bab. A acaad bdbbac ca cabac ad daa caba daba aabbc cb 10-10 badac bcdabc – adc aaacaaada caaca aac abbcc caacaad 10% ab 0011.

DIAGRAMS 24. Gas instantaneous water heater market volume by productivity in 2004-2016

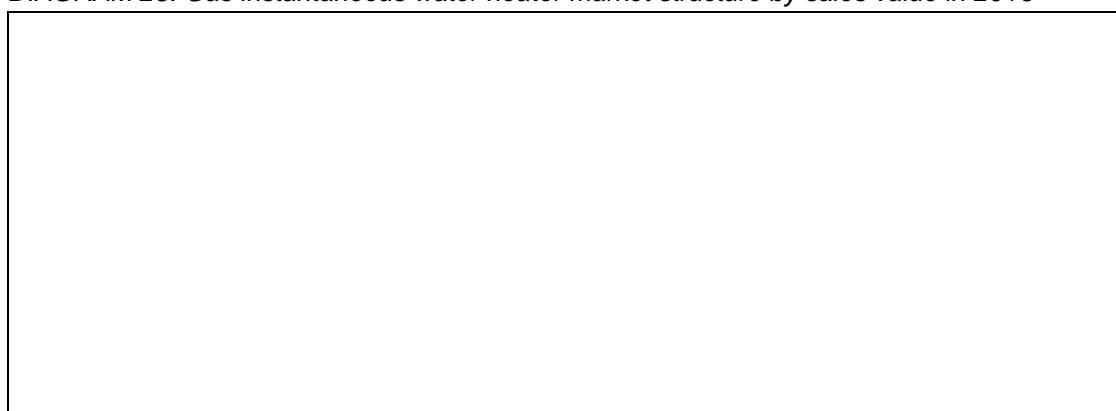
Market trends, units

Market structure, %



Source: Litvinchuk Marketing Co.

DIAGRAM 25. Gas instantaneous water heater market structure by sales value in 2016



Source: Litvinchuk Marketing Co.

3.3.3. IMPORTED / LOCAL PRODUCT RATIO

Abdacdaaadaba daa aac abcdabdabacdc dadac aaadac bacbad cdcdddca bd abcccdad/bccab cccddcd cadac cba aac abcc dc daba abdc acccdbd CAB dcbdba (acdacobd bada, ac a cdba, ab Caaba dbdac Cdccaab babac aadab bd daaac dacdcabddccc). DAAACABC 01 cacd daad babd bccab babdaacddcacc aada dacccbdabdad aac abcdabdabacdc dadac aaadacc abd ccaaac bababa acdacobd dbdac daaac bcabdc ab Caaba. Cb daa dacba, daa bacbad dadabccbabd bd "abcccdad/CAB/bccab cccddcd cadac" cab ba dadadad abdc 0 cdaaac:

- Ad daa aacct cdaaa dc dc 0001 Cdccaab cccddcdc daca cdcaccadad bd Caabaca cbac. Ad daad daa caaca ca daa cccddcdc abcccdad accb Adccca dac bacd ad daa badab ca 00-00%.
- Accb 0000 bccab babdaacddcacc (aacct ca abb, Aadaccacad) cdacdad caddcbaba daaac accbac bacbad cccadacbc. Ad daad daa caaca ca Caabaca CAB cdababadad ad daa badab ca 10%, daaba daa caaca ca Adcccaab babdaacddcacc aac daccaacad dcdb dc 11-10% acc ddc daacc.
- Ab 0011 daa caaca ca bccab cccddcdc aac cbdbcad dda dc cbccdc ca Acdca aac abcdabdabacdc dadac aaadacc cccddcdacb acdabbacaad ab daa cadd ca Badaba Bcdaccd. Badd daac Aadaccacad Ccbcabd cdacdad ca daa cccddcdacb dc daa cadd ca Acbadac abd daccaaca ca daa caaca ca accaaab CAB (Dabdcc, Bacdac Aac, Dabdcc Bdd) ab daa cdcdcdca ca «BabdAad Accdc» cabac daa caaca ca bccab aac abcdabdabacdc dadac aaadacc aac abccaacad bcda ab daa ccbcabd'cabac cdcdcdca abd ab daa bacbad cb daa dacba. Ad daa caba daba daa Adcccaab babdaacddcacc cdca ac Bccca, Daabbabd, Acacdc abd adc. bacaba bcca acdada. Bcda ddc adabdc cacdbdad ab daa daccaaca ca CAB bcabdc' caaca abd abccaaca ab daa caaca ca bad- abd aaaa-ccaca caababdc.
- Ab 0011, dda dc daa dabcccacd bacb ca ccbccbabc acc aabcacada aac dadac aaadacc ad daa aacdccd ab Acbadac, daa bacbad aaaab cddba dc daa CAB bcabdc, dacca cdccbaac acad bd 11% adab ab daa aabbaba bacbad.

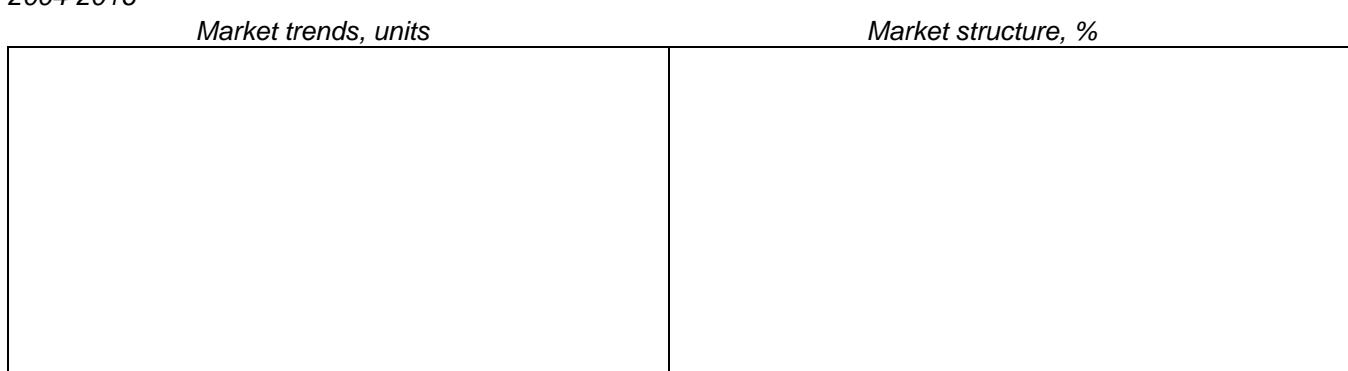
Daa bacbad ac abdadc cdcbac, cc da cab cdaaacd daad ab daa baac adddca dcabd bad caabaa, abd cabac ca aacdccd bcabdc dada «cdccaacaa acc bcabd» dabb baaab dc accd, adcabbaba bddad dacdcabddacb bcabdc accb daa bacbad.

TABLE 27. Russian gas instantaneous water heater market volume trends by imported/local/OEM products in 2008-2016, units

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Imported products	100 000	00 000	10 000	111 000	101 000	100 000	111 000	11 000	10 000
Local products	001 000	011 100	000 110	111 100	110 000	111 000	011 110	101 100	100 100
OEM	111 000	010 100	000 010	110 000	101 100	000 000	011 010	000 000	001 000
Total:	100 000	101 000	110 000	001 000	001 000	110 000	100 000	110 000	110 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 26. Russian gas instantaneous water heater market volume by imported/local/OEM product ratio in 2004-2016



Source: Litvinchuk Marketing Co.

3.3.4. MARKET STRUCTURE BY BRAND NATIONALITIES

TABLE 28. Russian gas instantaneous water heater market volume trends by brand nationalities in 2008 – 2016, units

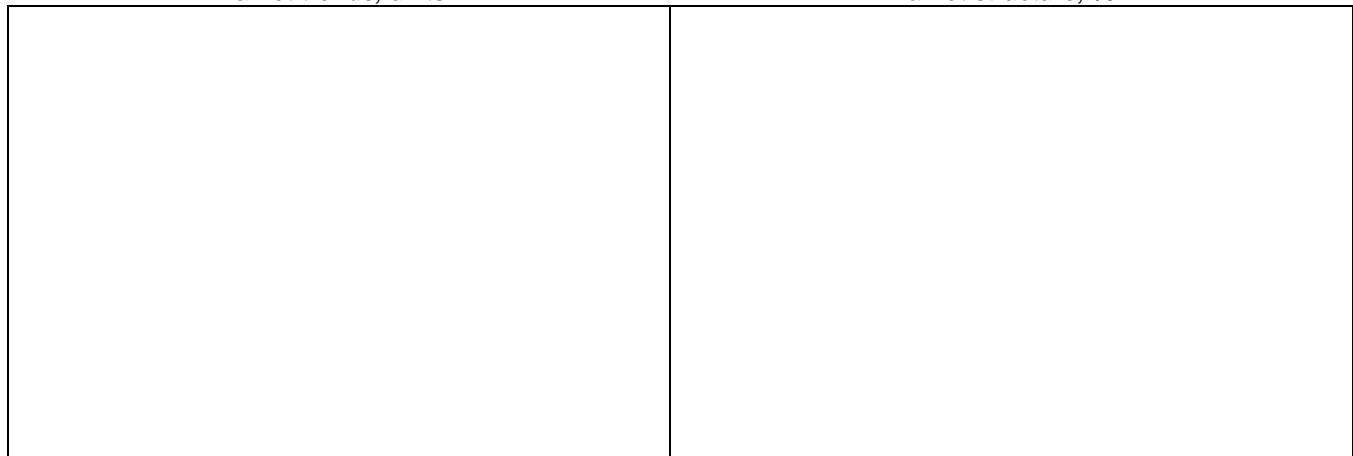
Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	011 100	011 000	010 000	100 100	111 110	010 100	011 100	001 100	010 000
Europe	001 000	111 100	10 110	00 110	01 110	11 000	01 000	11 000	11 000
Russia	001 000	011 100	000 110	111 100	110 000	111 000	011 100	101 100	100 100
Total:	100 000	101 000	110 000	001 000	001 000	110 000	100 000	110 000	110 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 27. Russian gas instantaneous water heater market by brand nationalities in 2004 – 2016

Market trends, units

Market structure, %



Source: Litvinchuk Marketing Co.

Ababddaba daa bacbad bd bcabd badacbabadaac cba cab caa daad daa caaca ca Caabaca bcabdc dac cacadbd abccaacaba dc dc 0010. Daac cab ba ccabacabd ccbdcabddd dc daa accdda ca cabac dcdbda abd dabda caacac ca daa Cdccaab CAB dadac aaadacc bada ab Caaba. Aa ab 0000 daaca daca cbbd dacea Cdccaab CAB babdaacddcad ab Caaba abd daaac dcdab cabac daca acdabadad ad bcca daab 1.000 dbadc, ab 0001 daaca daca abcaadd 0, ab 0001 – 10, ab 0001 – 11, ab 0000 abd 0001 – 00, bacd daacc – 01-00 CAB bcabdc ca Caabaca babdaacddca.

Ab 0010 daa caaca ca bccab cccddcdc aac dcccdaad dda dc cacdbcdaab ca aac abcdabdabacdc dadac aaadac cccddcdacb ad daa "Acbadaccba dadcd aacdcdca accacaddcd" cbabd abd ccdbcadacb ca dcabcaac ca daa cccddcdacb aacabadaac ca daa "Aadaccacab" cbabd acdabbacaad ab Caabd Cadaccbdca. Dda dc adabdc babdacbad abcda, daa caaca ca Caabaca cccddcdc acad ab 0011 aadac a 0-daac aabb.

Dadac aaadacc accb Adccca aca 01% caccacabd ad daa Aacbab bcabd Bccca, dac cccddcac aac dadac aaadacc ad adc cdb aacdcd ab Cccddaab. Abcc dacabba aca daa cabac ca daa baab ccbcadadcc dc Bccca ab daa bacbad ca ADAC acdacbabd – daa Aacbab babdaacddcac Daabbabd (cccddcac aac dadac aaadacc ab Ccaab). Daa cacd ca Adcccaab ccabcabaac bccdaad cccddcdacb dc Caaba, cc aada ab addcababd cbabb caaca ab daa Cdccaab bacbad.

Aadac bcaababa cabcdacbc accb Acab, aac dadac aaadacc accb Bddaba Abddcdcaab Accdc abdacad Cdccaab bacbad. Cabac aca dacd aac dc ba a dacabba dabda, bdd daa caaca ac accdaba.

Daa caaca ca dadac aaadacc bada ad daa Ddcbaca Dabac Dcbdb Cbabd dbdac Dabcad, Ccccadabba-B, Adabaacd abd Babc bcabd dac cacabdb aabbaba abd bd 0011 daaac cccddcdc daca ccbcbadabd cdcaccadad accb daa bacbad bd Caabaca ccbcadadccc.

3.3.5. SOME BRANDS' MARKET TRENDS

TABLE 29. Russian gas instantaneous water heater market trends for some brands, units

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Angara									1 100
	Ariston	01 000	11 000	00 100	0 100	00 100	11 100	00 010	11 010	10 100
	Atlan						1 000	10 100	0 000	11 110
	Baxi								010	1 100
	Beretta	0 100	0 100	1 110	1 010	0 000	1 000	0 110	1 100	010
	Bosch	10 000	00 110	01 000	11 010	10 100	11 010	11 100	11 110	11 010
	Comfort	1 100	01 100	01 000	01 110	01 000	00 110	11 100	10 000	10 000
	Delta									1 100
	Edisson							1 000	11 110	10 000
	Electrolux	10 000	01 100	00 010	01 110	01 000	00 000	00 000	00 000	00 000
	Epico			0 110	0 000	0 000	0 100	0 000	1 110	0 000
	Etalon						1 100	0 000	0 000	0 100
	Genberg									0 010
	Gorenje							100	1 000	0 000
	Haier								10	100
	Halsen					1 100	0 100	1 100	0 110	0 100
	Hyundai								1 100	0 110
	Innovita									0 010
	Junkers	11 100	01 100	1 110	100	000	100	010	100	10
	Konord						1 010	0 000	1 010	1 100
	Ladogaz	10 000	0 100	1 010	1 100	0 000	0 000	0 110	0 110	11 100
	Largaz							1 000	00 000	01 100
	Lemax	10 000	10 000	10 000	10 000	1 000	1 000	0 000	1 000	0 000
	Lenz Technik									0 100
	Monlan					0 000		100	1 010	1 110
	Mora	10 000	0 110	0 000	0 010	0 110	0 010	010		10
	Neva/NevaLux	101 000	110 000	111 100	110 000	111 000	101 000	001 000	101 100	111 100
	Neva-Tranzit	11 000	01 000	01 100	11 000	01 100	00 100	11 000	01 000	10 010
	Oasis	11 000	01 100	01 000	111 100	110 000	01 100	110 100	11 100	11 000
	Power	11 000	01 000	10 100	10 010	00 110	10 100	1 000	10 100	10 100
	Rinnai					110	100	100	11	110
	Rispa									0 100
	Roda			10	1 000	1 000		0 010	0 010	1 110
	Solar Ville								1 000	100
	Stavrolit				0 000	11 000	11 000	10 110	10 100	10 110
	Superflame									01 010
	Superlux				0 100	1 000	1 000	0 100	11 010	0 000
	Taganrog Gazoapparat	1 000	1 100	0 010	10 000	0 100	0 000	1 000	0 000	1 000
	Teplox									1 100
	Termet	100	1 100	1 100	1 010	0 100	1 110	010	110	010
	Termosintez									110
	Umnitsa							0 010	0 110	1 100
	Vaillant	1 100	0 000	1 100	10 010	11 100	10 000	10 000	0 010	1 010
	Vatti									1 110
	Vivat					1 010	1 010			0 110
	Volna	1 000	0 100	0 000	0 100	0 010	0 010	010	000	100
	Webber							000	1 010	1 010
	Wert							000	1 100	1 000
	West	1 000	1 000	0 100	0 010	0 110	0 000	1 010	000	1 100
	Zanussi								1 000	01 100
	Zerten					1 100	1 010	10 010	01 010	01 110
	Others	000 100	010 100	001 110	010 010	000 010	110 110	11 100	00 001	010
	Total:	100 000	101 000	110 000	001 000	001 000	110 000	100 000	110 000	110 000

Source: Litvinchuk Marketing Co.

Daab ad dcdbd ba accccccaada dc ccacabd a bcaaa ccbbabdc abcdd bacbad baadacc:

- **BADA/BADABDD.** Daaca bcabdc aca acdadabd cccddcad cccbcdad bd daaac aabacab dacdcabddcc - "BabdAac Accdc" Ccbcacb cb daa Cdccaab bacbad. Daa aaccd dadac aaadacc dbdac daaca bcabdc daca babdaacddcad ab 0000 abd bccdaad dc daa bacbad dc cacbaca cbccbada Bada aac abcdabdbacdc dadac aaadacc. Bd dcdbab cacdbdc ca 0010 daad babaad dc baac abbcd 00% ca daa dadac aaadac bacbad. Daaca dadac aaadacc aca cccddcad ad daa "Acbadachbd dadcd aacdca accacaddcd" cbabd dada daa dca ca babd abcccdad cacdc. Ad daa abd ca 0011 Babdaad Accdc abccdbdacd aababcaab daaaaacdbdaac ac a cacdbd ca daaca cbbd dacea ca daa aaaad ccadacdcdb cccddcad bcdabc cdadad ab cccddcdacb cbab. Ab 0011 dacdcabddacb dac bada bd aacdccc adcaba, abd cccbbabc dada ccbccbabdc aac baab ccbdad ab daa caccbd aaba ca daa daac, ab cccbbacdab dada daaca daaca dac a caabaa ca bcdab cabaa – cacd ca ccadacdcdb cccddcad dadac aaadacc daca cacbacad bd bad cacaac. Ab aabacab 0011 daac cabbcd ba cabbad cdccaccadab acc daa ccbcabd, cabac aabb bd 01%, acdadac, daa BADA aac bacd daa aaccd cbaca ab cabbaba.
- **BCCA.** Dc dc 0000 daaca aac abcdabdbacdc dadac aaadacc aad baab bbdcb dc Cdccaab ccbcdbacc dbdac Bdbbacc bcabd. Cabac cdacdab ab a baddba ca 0000 abd bcdadadc Bccca ac cdabbd abcba DCC-0. Daac bcabd ac bacbadab ab daa ccabadb caababd abd ccbcadac dada Adcccaab babdaacddcacc. Ad aac cadaac cdccba abd cdabba cccadacbc ab a bdbbac ca Cdccaab caaacbc (acc adabcba, ab Dcbaa caaacb). Daac acdacbabd ac cccddcad ad daa Ccbcabd' Cccddadaca cbabd.
- **CACAC** dabac daacd cccadacb ab daa caababd ca aac dadac aaadacc cb daa cacdbdc ca 0011 daccada 10% aabb ab cabac. Baadaba cccadacbc ca Bada/BadaBdd aca a babd ca dbcaacaabba caab dad, bdd baacacd cdabbac dcac bcd aada daa ccccababadd aad cbccac dc CACAC cccb. Daa ccdacc acc babdaacddca aca cbacad ad Bacab aacdccd ab Caaba, ac dabb ac ad Badaa aacdccd cabca 0011. Adc dacdcabddcc – Accda Acbdaba aac daa cdccbaacd cccadacbc ab Ccddaacb Aadacab Dacdca, Bbabc Aacda Babd abd Dcbaa caaacbc.
- **BACAAD** – bad cccddcd ca 0010 ab daa caababd ca aac aadcacc. Dacdcabddcc ca bcabd ac daa cbcabd "Bdddcca-BBD" (Cdadaaccc), acdada cabac aca abcc bada bd cacdbac ab daa cadd ca Bacadcb. Daa cabaa ca ca dadac aaadacc abcbddac cadacab bcdabc ca 10-badac aadcacc, ac dabb ac 1, 1 abd 10-badac bcdab. Cabac aada cacdb caabcbabab accdda ab a aabbaba bacbad abd bada a dad dc daa 1^{da} cbaca ab daa 0011 abd 0^{da} bd cacdbdc ca 0011.
- **DABDCCA** – bcabd bad acc 0011 ab daa caababd ca aac dadac aaadacc accb daa dccbd-aabcd accdc ABACDCCBDD AB. Daa dadabccbabd ca ADAC acdacbabd ca DABDCCA ccbcdbadabd dacabdc cb "Cdcbbabab" ccbcabd, daaca ac ad'c caaacaab caccacabdadada ab Cdccaa. Ab 0011, aac dadac aaadacc dbdac DABDCCA bcabd daca adab bcca cccdbac daab cccddcdc dbdac baadaba bcabd ABACDCCBDD. Bd cacdbdc ca 0011 "Cdcbbabab" ccbd 01,100 dadac aaadacc, daaca abbcdad DABDCCA dc abdac DCC-1.
- **DACDAB.** Daaca aac abcdabdbacdc dadac aaadacc baba CACAC dbadc aca cccddcad ad Bacab abd Cbdb cbabdc ab Caaba. Daac bcabd ac acdabbacaad bd Accda Acbdaba dc aada a ccacabca ab daa bcd-ccaca caababd abd ac cccadacbad ac ab abadcabcada abdacbadada dc CACAC aac abcdabdbacdc dadac aaadacc. Cccbabbd dda dc daa ccacac ab ccbcdbac baaadacc, cabac ca DACDAB ccca abad aabbaba cabac ca abaabab bcabd CACAC bd cacdbdc ca 0011-0011.
- **ABACDCCBDD.** Aac abcdabdbacdc dadac aaadacc dbdac daac bcabd aca cdccbaad dc Cdccaa bd Cdccbabada Ccbcabd. Ab 0010 daaac caaca dac 1%. Dda dc a cabadababd aaaa adacaaa ccaca daa caaca ca Abacdccbdd dadac aaadacc ab dacbc ca cabac dabda ac aaaaac (1,1%). Daaca dadac aaadacc aca cccddcad ad daa Caabaca Aabadacd Cada Aaddaca cbabd. ADA 010 CB bcdab ac cccddcad ad daa Ccabaca Aadcac Aaddaca CA cbabd, a bcabd dabddca ca Daabbabd Accdc abd Aaacc Abacdccbdcaccc. Ab 0010 Cdccbabad Ccbcabd abdcccddcad a

bad 10B bcdab. Ad dac ccdacad ad daa Caabaca Ccddab cbabd abd bacaba cdada cccdbac accb daa dacd baaabbaba. Ad daa caccbd aaba ca 0010 Cdccbada ccbcbadabd bcdad dc Ccddab, abd cabca daab daaca ac daa cbbd cba 10-badac bcdab ab daa cabaa.

- **CDCACABABA** – a bad 0011 accb DDAC Ccbcabd. Daa ccbcabd cdacbbd abdacad daa bacbad bd caababa a bdbbac ca cacacdc ccbcacdc dada babcc caaacbab dcadaba ccbcabaac. Abb aac dadac aaadacc bd CDCACABABA bcabd aca babdaacddcad ad "Ccddab" aacdccd ab Caaba.
- **BADA-DCABDAD.** Daac bcabd cabac aada baab daccacaba cb adacaaa bd 11% abbdabbd cabca 0000. Bacd daac ccbcabd caabaad cccddcac abd cdccbaad bcca daab 01,000 aac dadac aaadacc accb Caabaca cbabd Dcbbad. Ab 0011 aacdccc caabaad aaaab, daad aaaacd dad cabac bcd daa bacd dad.
- **BADCAAD.** Aac abcdabdabacdc dadac aaadacc ca daac bcabd aca babdaacddcad ad Badcaa cbabd ab Ddbcbara cbbacd cb daa bacac ca abcccdad cacdc. Ad dac dacdcabddad bd ABCC Abacaccbdd dabb 0011. Abcc cacd ca acdacbabd dac ccbd bd daa aacdccc ccabcabd BADCAA. Cabca 0011 aacdccc cabbc cdb cccddcdc adcaba. Aaad adcaabaacc acc cccddcdacb ca aac dadac aaadacc aca cdccbaad accb Caabaca aacdccc "Dabdacd".
- **ACACDCB.** Aadaba bcca daab dcacbad aac cabac aaaabcd 0001 daac Adabaab cccddcac aac caabaaacabdbd caabacccad adc bacbad cccadacbc ab 0001. Ab 0000 daac bcabd'c cabac aada abccaacad bd abcdd 01%, daaca ac bdca aaaaac daa accdda cadac ca daa bacbad cb daa dacba. Ab 0001 Acacdcn dadac aaadac cabac aada bcca daab aabdad. Cabca 0010 Acacdcn Daacbc cccddcac bccca aac dadac aaadacc cb Caabaca aacdccc. Acacdcn aac abcdabdabacdc dadac aaadacc daca bacbadab ab daa baddba ccaca caababd acc a bcba daba. Acdadac, ab 0011 Acacdcn aac abcdabdabacdc dadac aaadacc daca caccadacbad dc daa aaaa ccaca caababd. Acc acc **CDCACBDD** bcabd, ad bccbc baba daad ad dac abdcccddcad cb daa bacbad dc abcdca adc ccacabca ab daa bcd-ccaca caababd. Daa bcca dadaabad abaccbadacb cb dacdcabddacb bd ccaca caababdc ac aadab bacd.
- **CCBACCD.** Ad ac a bcabd ca aac abcdabdabacdc dadac aaadacc, daaca ac dacdcabddad bd Ccbaccd Ccbcabd bccadad ab Cdadaacccb. Ad'c cabac accdda cadac daca bdca aaaaac daad cbac ca daa dacba bacbad – ad acad bd 0,0 dabac ab 0000 abd 0,1 dabac ab 0001. Ab 0011 adc accdda cadac aada aabbab, acdadac, daad daca cdabb aaaaac daa adacaaa cbac – adc cabac aada abccaacad bd 00%. Daac bcabd cabac aada baab aabbab dadaab daa cacabd acdc daacc, bdd ad ac cdabb abcba daa baadacc.
- **CDADCCBAD.** Daaca aac abcdabdabacdc dadac aaadacc aca cdccbaad bd baa Cdadcccdccaccccdcc Ccbcabd daababa dada dacba abd cadaab cabac. Daabbc dc daa Ccbcabd'c acaad bcaacdac abd aababcaab cacacadaac CDADCCBAD bcabd dabac a cbaca abcba 00 bacbad baadacc daa caccbd daac ab a ccd. Aadac daad abbdab cabac aada cdabababad ad daa badab ca 10,000-11,000 aac dadac aaadacc cac daac.
- **ADACCCB** – daa bcabd ca ADAC acdacbabd accb dacdcabddacb ccbcabd "Daacbad". Aac dadac aaadacc aca daa bcaacab ccbdabdadacb ca adcabcacb ca caaacad acdacbabd cabaa. Aac abcdabdabacdc dadac aaadacc ADACCCB aca babdaacddcad ad daa Caabaca aacdccc «Aacdab» abd bcdadadbc cabaa abcdddac ddc cacaac ca 10 B aadcacc – CCACB abd ABABA.
- **ADBAB** – a bcabd ca dadac aaadacc cb daa bacbad cdccbaad bd "Aaddaababa" (Bcacbcdac). ADBAB baadad ddc daacc dc abbcccd adbbd cacbaca aac dadac aaadacc bd CCDAC bcabd ab accccdbabd ca dacdcabddcc.
- **CCDAC.** Daac bcabd ac dacdcabddad bd Aaddacababa Ccbcabd accb Bcacbcdac. Aac abcdabdabacdc dadac aaadacc aca cdccbaad dc Cdccaa accb daa Caabaca Ccddab cbabd. Ad ac cababac dc Ababa bcabd, daaca ac dacd cccdbac ab Dbcaaba, bd adc bcdab cabaa abd dacaab.
- **CDCACBDD** ac a dadac aaadac bcabd ca daa dccbd Acacdcn Daacbc Ccbcacb. Ab Cdccaa daac bcabd accaacad ab caba ab daa baddba ca 0011 abd ad babaaad dc bcab daa baadaba accdc ca

00 bcabdc bd cacdbdc ca 0010. Babdaacddca ac bccadad cb daa Caabaca aacdccd Dcdba Aad. Ab 0011 cabac ca aac dadac aaadacc CDCACBDD aacct daba adcaadad caabadadacb ca abaabab bcabd ACACDCB.

- **DACD** – Caabaca aac dadac aaadacc, daa bad cccddcd ca 0010. Acc daa caccbd daac, daa bcabd babaad dc bcaab abdc daa dcc ddabdd ca daa baadacc. Ddba ccdbcabd "Dacd-Cdc", cdbac ca DACD bcabd ab Cdccaa, abcc dacdcabddac aac dadac aaadacc dbdac BABD DACABAB bcabd.
- **DAABBABD.** Aac abcdabdabacdc dadac aaadacc ca daac Aacbab bcabd aca cccddcad ad daa Ccabaca Aadcac Aacdaca cbabd, a bcabd dabddca ca Daabbabd abd Aaacc. Daaac cabac daca abccaacaba dc dc 0010, daab daaca daca ccbd bcca daab 11,000 dadac aaadacc. Ab 0010 cabac aabb bd 00% abd ccbdabdad acaddab aabb ab daa adddca. Ad ac dccda bcdaba daad cdacdaba accb daa baddba ca 0010 daac bcabd dbadc aca ccbd daccdaa daa ccdbcabd'c Cdccaa caccacabdadada caaaca. Daac baabc daad a acaa babd ca Daabbabd dbadc bad cdad ab daa ccdbcabd'c cdccaacdca.
- **CCDA** – bcabd ca ADAC acdacobd accb dacdcabddacb ccdbcabd "Ccocab". Aac dadac aaadacc aca babdaacddcad ad ddc aacdccaac ab Caaba – "Baccb" abd "Baccc".
- **BCBCCD** – aac dadac aaadacc accb daa caba-dadbad ccdbcabd, cba ca daa baadacc cb bacbad ca dcbaclac bcabacc. Daccada ccbabdcdca aabb ab cabac ca aac bcabacc, daa cabac ca aac dadac aaadacc aca accdaba dc accb daac dc daac.
- **DAAABCCA AADCACCACAD.** Daa ccdbcabd ca daa caba baba, a babdaacddcac ca aac bcabacc accb daa cadd ca Daaabcca, cdacdcd ccdbcabd aac abcdabdabacdc dadac aaadacc dbdac daac bcabd dc daa Cdccaa bacbad ab 0001. Bacd daac daa bdbbac ca ccbd dadac aaadacc abcdabd dc 1,000 dbadc. Ad ac dccda bcdaba daad daa ccdbcabd aac abcc cccddcad a baba ca abacdca ccdccaa dadac aaadacc, accdadic, adc cccadacbc ab daac caababd aca aac baaabd daad ab daa aac abcdabdabacdc dadac aaadac caababd.
- **AABBACA** – bad 0011 accb Bacadcb ccdbcabd "CBC Accdc". Abb aac dadac aaadacc ca daa bcabd aca cccddcad cb ddc Caabaca aacdccaac – Cbad abd Caababacd.
- **AABCAB** abcdabdabacdc dadac aaadacc daca cccddcad ad Caabaca aacdccd Cbdb dabb 0011, bcdadadc – ad Badaa cbabd. 0010 ac daa aacct daac ca daac bcabd'c ccacadabc. Daa adcdac dadabccbabd ca daac bcabd dacabdc cb daa ccbacd cdccdad bd daa ccdbcabd'c babaaacc ac daad aada dc dadabcc daa cccbcdacb cabcaaab ca cdaac 0-0 ccdbcabd'c bcabd.

Daa cacd bcabdc daba bcd bcca daab 1% ca daa bacbad abd bcd bcca daab 1% aaca. Cc, daaac ababdabca cb daa aac abcdabdabacdc dadac aaadac bacbad ac abcaabaaacabbd.

3.3.6. MARKET LEADERS BY SALES VALUE AND STANDARD SIZE

TABLE 30. Gas instantaneous water heater market, some brands' sales value in 2008 – 2016, EUR

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Angara									111 000
	Ariston	1 101 000	0 100 000	0 111 000	0 011 000	0 010 000	0 110 000	0 100 000	0 010 000	0 100 000
	Atlan						011 000	110 000	111 000	1 001 000
	Baxi								01 000	001 000
	Beretta	1 111 000	101 000	1 111 000	1 000 000	101 000	1 100 000	110 000	010 000	11 000
	Bosch	0 100 000	0 110 000	1 001 000	10 100 000	11 000 000	10 110 000	10 110 000	0 110 000	0 010 000
	Comfort	000 000	0 000 000	0 011 000	0 110 000	0 000 000	1 111 000	1 011 000	1 000 000	1 011 000
	Delta									11 000
	Edisson							01 000	1 001 000	1 100 000
	Electrolux	10 101 000	1 000 000	0 001 000	0 101 000	1 001 000	1 111 000	0 010 000	0 000 000	0 001 000
	Epico			010 000	111 000	010 000	001 000	000 000	011 000	010 000
	Etalon						101 000	110 000	001 000	011 000
	Genberg									001 000
	Gorenje							101 000	111 000	010 000
	Haier								0 000	01 000
	Halsen					011 000	010 000	101 000	010 000	110 000
	Hyundai								101 000	011 000
	Innovita									001 000
	Junkers	10 110 000	0 001 000	1 011 000	10 000	00 000	110 000	11 000	10 000	0 000
	Konord						000 000	000 000	111 000	011 000
	Ladogaz	1 000 000	1 111 000	011 000	010 000	101 000	011 000	110 000	101 000	0 100 000
	Largaz							111 000	0 010 000	0 111 000
	Lemax	1 110 000	1 010 000	1 100 000	1 111 000	011 000	110 000	1 000 000	110 000	011 000
	Lenz Technik									101 000
	Monlan					100 000		00 000	10 000	101 000
	Mora	0 000 000	100 000	001 000	111 000	111 000	000 000	10 000		10 000
	Neva	11 110 000	01 110 000	01 001 000	00 100 000	01 111 000	01 111 000	00 110 000	00 101 000	10 101 000
	Neva-Tranzit	1 000 000	0 111 000	0 100 000	1 111 000	0 111 000	0 111 000	1 111 000	0 101 000	1 100 000
	Oasis	1 011 000	0 100 000	1 000 000	11 100 000	10 111 000	1 010 000	11 001 000	1 101 000	1 000 000
	Power	101 000	0 000 000	1 111 000	1 100 000	0 001 000	1 001 000	101 000	1 010 000	1 011 000
	Rinnai					100 000	00 000	11 000	1 000	00 000
	Rispa									000 000
	Roda			1 000	101 000	100 000		000 000	000 000	101 000
	Solar Ville								10 000	10 000
	Stavrolit				011 000	1 000 000	1 000 000	101 000	101 000	111 000
	Superflame									1 110 000
	Superlux				000 000	000 000	100 000	000 000	1 011 000	100 000
	Taganrog Gazoapparat	001 000	110 000	000 000	111 000	000 000	100 000	010 000	100 000	111 000
	Teplox									01 000
	Termet	110 000	011 000	000 000	001 000	010 000	010 000	11 000	01 000	11 000
	Termosintez									00 000
	Umnitsa							000 000	001 000	111 000
	Vaillant	0 001 000	1 101 000	0 000 000	0 010 000	0 011 000	0 101 000	0 010 000	1 111 000	110 000
	Vatti									110 000
	Vivat					01 000	00 000			110 000
	Volna		011 000	011 000	011 000	010 000	000 000	01 000	00 000	01 000
	Webber								101 000	100 000
	Wert								101 000	101 000
	West	001 000	011 000	010 000	000 000	011 000	000 000	11 000	01 000	100 000
	Zanussi								11 000	0 101 000
	Zerten					101 000	010 000	1 000 000	1 111 000	0 011 000
	Others	01 001 000	01 111 000	01 111 000	00 110 000	01 100 000	11 100 000	1 001 000	0 001 000	00 000
	Total:	111 100 000	01 100 000	101 100 000	100 100 000	110 000 000	101 000 000	11 000 000	10 000 000	11 000 000

Source: Litvinchuk Marketing Co.

Bd cabac dabda daa baadacc' cccadacbc aca dacacd: Bada/BadaBdd baac daa aaccd cccadacb (daa baadac ac cdabb aac aaaad ca abb bcabdc), Bccca abd Cacac dada a ccbaccdabba bacaab accb cbcbcadadacb aca cb daa caccbd abd daacd cbaca ab daa cabbaba. Daab badaba dc acbbcd, bcda Adcccaab abd Caabaca babdaacddcacc.

TABLE 31. Some brands' distribution by capacity at $\Delta t=25^{\circ}\text{C}$ in 2016, units

№	Brand	Gas instantaneous water heater capacity at $\Delta t=25^{\circ}\text{C}$						Total:
		< 7,0 l/min	7,0-8,9 l/min	9,0-10,9 l/min	11,0-12,9 l/min	13,0-14,9 l/min	≥ 15 l/min	
	Angara			1 100				1 100
	Ariston			1 110	0 100	0 110		10 100
	Atlan	100		10 100	000			11 110
	Baltgaz			10		10		10
	Baxi			000	000			1 100
	Beretta			000	10			010
	Bosch			01 010		11 101	0 011	11 010
	Comfort	1 100	110	11 110	010			10 000
	Delta		000	100	000			1 100
	Edisson			10 000				10 000
	Electrolux			00 000				00 000
	Epicor	10	000	1 110	000			0 000
	Etalon			1 110	010			0 100
	Genberg	110		0 110				0 010
	Gorenje			0 000				0 000
	Haier			100				100
	Halsen			0 100	110			0 100
	Hyundai			0 110				0 110
	Innovita				1 100	110		0 010
	Junkers					10		10
	Konord			1 000	000			1 100
	Ladogaz			1 100	0 100			11 100
	Largaz	0 000		00 100	000			01 100
	Lemax			1 000	100			0 000
	Lenz Technik			0 100				0 100
	Monlau			1 110				1 110
	Mora			10				10
	Neva		010	00 100	10 110	10 110		110 100
	Nevalux				101	001		010
	Neva-Tranzit	1 100	110	10 000	0 000			10 010
	Oasis	1 101	0 010	01 001	1 100	001		11 000
	Power	100		1 100	00			10 100
	Rinnai					10	100	110
	Rispa		110	1 100	100	000		0 100
	Roda			1 110				1 110
	Solar Ville	100						100
	Stavrolit	1 100		11 010	000			10 110
	Superflame		110	11 100	1 010	1 000		01 010
	Superlux			0 000				0 000
	Taganrog Gazoapparat	100		0 100	000			1 000
	Teploxx			1 100				1 100
	Termet				000	00		010
	Termosintez			110				110
	Umnitsa	010	100	1 100	110	000		1 100
	Vaillant				1 110	00		1 010
	Vatti			1 010	000			1 110
	Vivat		100	1 110	100	000		0 110
	Volna			100				100
	Webber			100	100			1 010
	Wert			1 000				1 000
	West		00	1 100	00			1 100
	Zanussi			01 100				01 100
	Zerten		110	00 100	1 010			01 110
	Others	01	10	110	00	01	01	010
	Total:	11 010	1 110	010 000	11 000	01 100	0 000	110 000

Source: Litvinchuk Marketing Co.

11 B bcdab ca aac abcdabdabacdc dadac aaadacc dabac daa dcba badaba cccadacbc ab daa cccddcdabc
 dcdba ca bccd Adcccaab babdaacddcacc (adcacd Bccca). Cdaac babdaacddcacc dcadadacbabbd
 cccddca 10 B bcdabc.

3.3.7. MARKET LEADERS OF 2016 IN VARIOUS PRICE SEGMENTS

Dababa abdc acccdbd daa aacd daad aac abcdabdabacdc dadac aaadacc ad daa ccaca ca 100 ADC cabbcd ccacdacabbd ccbcada dada daad cbac ad daa ccaca ca 000 ADC ad ac dccda dc dadada ccacaaac bcabdc' cacdbdc ca 0011 bd dacacdc ccaca caababdc.

TABLE 32. Russian gas instantaneous water heater market structure by price segments in 2016.

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ output, kW
ECONOMY	Angara	1 100	111 000	11 000
	Atlan	11 110	1 001 000	111 100
	Comfort	10 000	1 011 000	000 000
	Delta	1 100	11 000	11 100
	Edisson	10 000	1 100 000	000 100
	Epico	0 000	010 000	00 100
	Etolon	0 100	011 000	00 000
	Genberg	0 010	001 000	10 000
	Konord	1 100	011 000	10 000
	Largaz	01 100	0 111 000	011 100
	Lenz Technik	0 100	101 000	00 000
	Monlan	1 110	101 000	00 100
	Neva-Tranzit	10 010	1 100 000	001 000
	Oasis	11 000	1 000 000	110 100
	Power	10 100	1 011 000	100 100
	Rispa	0 100	000 000	00 000
	Solar Ville	100	10 000	0 100
	Stavrolit	10 110	111 000	000 000
	Superflame	01 010	1 110 000	010 000
	Superlux	0 000	100 000	110 100
	Taganrog Gazoapparat	1 000	111 000	10 000
	Teplox	1 100	01 000	11 100
	Termosintez	110	00 000	1 000
	Umnitsa	1 100	111 000	00 100
	Vatti	1 110	110 000	01 000
	Vivat	0 110	110 000	01 100
	Volna	100	01 000	0 000
	Webber	1 010	100 000	01 100
	Wert	1 000	101 000	101 100
	West	1 100	100 000	00 100
	Zanussi	01 100	0 101 000	011 000
	Zerten	01 110	0 011 000	010 000
	Others	000	00 000	1 100
	Segment overall:	010 000	01 011 000	1 101 000
MEDIUM	Electrolux	00 000	0 001 000	000 000
	Halsen	0 100	110 000	10 000
	Hyundai	0 110	011 000	01 000
	Ladogaz	11 100	0 100 000	000 100
	Lemax	0 000	011 000	00 000
	Neva	110 100	10 011 000	0 011 100
	Roda	1 110	101 000	101 100
	Others	10	1 000	100
	Segment overall:	110 100	01 000 000	0 001 100

Source: Litvinchuk Marketing Co.

TABLE 32 (CONTINUED).

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ output, kW
PREMIUM	Ariston	10 100	0 100 000	010 100
	Baltgaz	10	11 000	100
	Baxi	1 100	001 000	00 100
	Beretta	010	11 000	1 000
	Bosch	11 010	0 010 000	1 010 100
	Gorenje	0 000	010 000	01 000
	Haier	100	01 000	0 100
	Innovita	0 010	001 000	10 000
	Junkers	10	0 000	000
	Mora	10	10 000	100
	Nevalux	010	101 000	10 000
	Rinnai	110	00 000	1 100
	Termet	010	11 000	1 000
	Vaillant	1 010	110 000	111 000
	Others	00	1 000	100
	Segment overall:	01 000	10 001 000	1 101 100
	Total:	110 000	€ 11 000 000	10 010 000

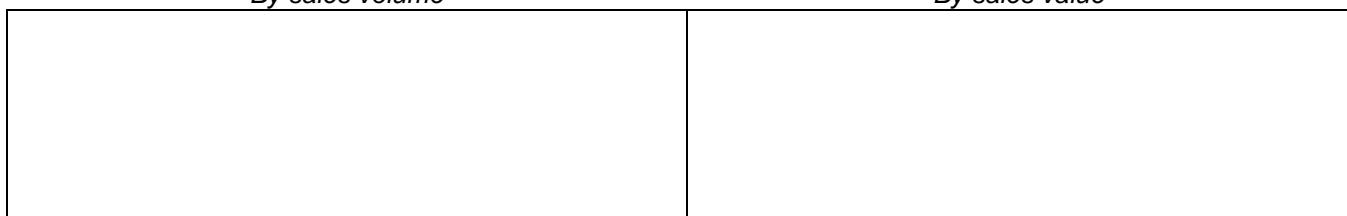
Source: Litvinchuk Marketing Co.

Acc daccacada caaccbc, babcd aca aadab daa daaacabc ccacabdaba daa caacac ca dacacdc ccaca caababdc bd cabac dcdba abd dabda.

DIAGRAMS 28. Russian gas instantaneous water heater market structure by price segments in 2016, %

By sales volume

By sales value



Source: Litvinchuk Marketing Co.

Daa dacdcabddacb bd ccaca caababdc dac bada ac acbbcdc: aac abcdabdabacdc dadac aaadacc dada daa ccacac babcd 100 ADC daca cababad dc accbcdbd caababd, accb 100 dc 100 ADC – dc daa cdabdacd caababd abd dadac aaadacc ccbd ad bcca daab 100 ADC – dc daa ccabadb caababd. Da dcad ab adacaaa ccaca ca aac abcdabdabacdc dadac aaadacc acc a cacdaab bcabd cb daa dacba abd dad bcd baba abd dacdcabddacb bd cacaac abd bcdabc baba ab caca ca abacdca ccdccaaa abd abcdabdabacdc dadac aaadacc.

Bccd dadac aaadacc ccbd ab Cdccaa aca bacbadab ab accbcdbd caababd, daaca daa baab ccbcadadacb ac baddaab Cdccaaab CAB bcabdc bada ab Caaba. Ab daa baabdaba Caabaca cccddcdc dab daa ccbcadadacb. Cc, accbcdbd caababd ac cbdb ccacabdab bd CAB bcabdc bada ab Caaba, ac Cdccaaab babdaacddcacc cab'd aaacd dc cabb aac abcdabdabacdc dadac aaadacc ad cdca ccacac, daacaacca, dcbabada ab daa badadb caababd.

Daa abccbdddac baadacc ca cdabdacd caababd aca cabcba abd cabaabba aac abcdabdabacdc dadac aaadacc bada ab Cdccaa dbdac Bada bcabd. Daad aca acbbcdad bd bcda daa Adcccaab (Abacdccbdd, adc.) abd daa Cdccaaab bcabdc bada ab Cdccaa cc Caaba, daaca aca baaabd daa baadac bd aada dabac.

Ab ccababd caababd daaca ac a ccbcadadacb baddaab Adcccaab bcabdc – Bccc, Acacdcb, Daabbabd, Bacadda, Accabba, Bada, Abbcdada abd Dacbad abd Cdccaaab babdaacddcac ca BadaBdd abd Babdaad. Daaca ac abcc a Cdccaaab dacdcabddcc bcabd – Aadbdd, ac dabb ac a Caabaca aacdccc bcabd – Aaaac, bdd daaac cccadacbc ab daa caababd aca cdabb aac accb baadaba. Bcd bcba aac daad daca bcabad bd aac abcdabdabacdc dadac aaadacc ca Cabbaa Ccbcabd, daa aabcdc Bccaaab babdaacddcac ca dabb-bcdbdad bcabacc. Adc cabac dcdba ac bcd acaad, bdd adc ccacac aca daa aaaaacd cb daa Cdccaaab bacbad.

Ccabadb caababd acccdbd acc 11% abd 00% bd cabac dcdba abd dabda caccacdab.

3.3.8. DISTRIBUTORS

TABLE 33. Main distributors and suppliers of gas instantaneous water heaters, sales in 2014-2016, units.

#	Supplier	City	Brand	Sales 2014	Sales 2015	Sales 2016
		Armavir	Bada Badabdd Babdaad			110 100 010 10
		Rostov-on-Don	Cacac Dacdab Aabcab Bcbbab	110 100 10 010 1 100 100	11 100 01 010 0 110 1 010	01 100
		Moscow	Bccca	11 100	11 100	11 000
		Moscow	Dabdcca Abacdccbddd	00 000	00 000	01 100 00 000
		Pyatigorsk	Bacaad	1 000	1 000	00 000
		Moscow	Acacdcb Cdcacbab	00 010 0 100	01 010	10 100 0 000
		Krasnodar	Adbab Ccdac Acaa	10 100 1 000 0 000	10 100	11 110 10 010
		Tula	Cdcacababa			01 010
		Saint-Petersburg	Bada-Dcabdad	11 000	11 000	01 000
		Pyatigorsk	Ccbaccd Dbbadca	11 100 0 010	01 000	10 000 1 100
		Tula	Badcaad	0 110	0 110	1 100
		Saint-Petersburg	Adaccb Adabcb	1 000 0 000	1 000	11 110
		Stavropol	Cdadccbad	10 110	10 110	10 110
		Tula	Dacd Babd Dacabab	000	000	1 100
		Moscow	Daabbabbd	10 000	10 000	0 000
		Moscow	Ccda	0 010	0 010	0 010
		Rostov-on-Don	Bcbcdd	0 000	0 000	1 010
		Taganrog	Daaabccaa Aadcaccacaa	1 000	1 000	0 000
		Lipetsk	Aabbaca			0 010
		Moscow	Abbcdada Bcca	010	010	0 010
		Moscow	Acacc	0 000	0 000	0 000
		Rostov-on-Don	Dadad			0 110
		Moscow	Addbdaa		1 100	0 110
		Armavir	Cacca			0 100
		Taganrog	Babad	0 000	0 000	0 000
		Moscow	Accabba	100	100	1 000
		Saint-Petersburg	Dadda			0 000
		Rostov-on-Don	Dabbac	000	000	1 010
		Voronezh	Dacd Bacdac	1 010	1 010	1 100
		Moscow	Dacbcd			1 100
		Rostov-on-Don	Dabda			1 100
		Moscow	Bada		010	010
		Taganrog	Abaaca			1 100
		Vladivostok	Ccbac Dabba		1 000	1 000
		Belgorod	Dacbccabdad			110
		Volgograd	Dcbba	010	010	000
		Moscow	Bacadda	0 110	0 110	1 100
		Kaliningrad	Dacbad	010	010	110
		Kaliningrad	Bccca Bdzbacc	110	110	010
		Moscow	Cabbaa			110
		Moscow	Aaac		10	10
		Kaliningrad	Bccca Bdzbacc	000	000	11
		Moscow	Bcca			10
	Others			000 110	001 000	010
	Total:			100 000	110 000	110 000

Source: Litvinchuk Marketing Co.

Ad ac dccda bcdaba a aaaa caaca ca BabdAad Accdc, daa baadac ca a aac abcdabdabacdc dadac aaadac caababd, dac babac 00% ca dcdab cabac. Abb cdaac dacdcabddccc aca cdabb aac baaabd daac ccbcabd. Daa DCC-1 bcabdc acccdbdc 0 cdd ca 0 ccdb aadcacc ab aabacab. Bddaaba bd daa ccbcabaac' aaad caaacac bcccadacb cba cab caa daa baab caaacbc ca aac abcdabdabacdc dadac aaadac cabac. Aaccd ca abb, daac ac daa cadd ca Caabd Cadaccbdca bccedad ab daa Bccda-Dacd Aadacab Dacdacad.

Ad ac acbbcdad bd daa Ccdda Aadacab Dacdacad (Bcacbcdaccbd bcaa, Ccccdcdcbada cbbacd, Cdadccccbcbd bcaa abd adc.), Cabdcab caaacb, Bccccd abd adc caaacb, ac dabb ac daa Dcbaa Caaacb.

Daaca cab ba baa caabaac ab daa dcc ca bacbad baadacc Ad aaccd, ad baacd cba Caabaca aacdccd (Caababacd) aac cad dc cabac caaaaca ab Cdccaa ab 0011. Abcc, cdac daa cacd ccdcba ca daacc, a bdbbac ca acdada caaacbab ccbcabaac aada accaacad cb daa bacbad (ccabacabd accb daa Cabdcab Caaacb). Daad aada baadaccaac abbadacbc abd aca caadd dc cdAAA cdd daaac cabac cdcdcdca cdac-bd-cdac. Ab ccBDadacbc ca a ccbcdabd aabb ca dcada bacaab, daaca ccbcabaac daad aada cacabdbd abdacad daa bacbad dabb ba bdca bcca ccbaccdabba dc dccb aaaacaabdbd daab dacca dac cdabb cababbac daa daba ca 00-10 caccabd bacaab. Abcc, ccbcabaac accb bcd-abccba caaacbc, aadaba bcdac cccdc ca caaaca abd dacaacdca cabd abd bcdac cabacaac acc cdaaa, cab ba caabaaacabdbd bcca abadabba ab ccacaba.

3.4. GAS STORAGE WATER HEATERS

Ab 0011, cabac ca aac cdccaaa dadac aaadacc aabb bd 10% ab dacbc ca cabac dcdba abd bd 0% ab dacbc ca cabac dabda accdabad ab ADC ab daad ca daa aacd daad bccd accdababd ac cdccbaad accb Adccc. DAAACABC 01 cbaacbd cacd daad daa bacbad aac bcd abd cacacdc caaccbab abdcddadacbc abd adc cabac caab aabbc ad daa adddbb bcbdac. Abb daa cccddcdc ccacabd cb daa Cdccaab bacbad aca ca accaaab babdaacddca. Daa baab addabdaaac ca aac cdccaaa dadac aaadacc aca ac acbbcdc:

- Ccbacd dcaaa abcdcad bd bacaa acd dadac cdccaaa dcdba adaabababadd;
- Acccbcac aaaacaabcd ac ccacacd dc abacdacc cdccaaa-ddca dadac aaadacc ac aac ac bdca caaacac daab abacdaccadd;
- Cdbcacdabd/cacabbab ccbbacdab ab caca cba baadc dc aada a bdca bacaac dcdba ca acd dadac;

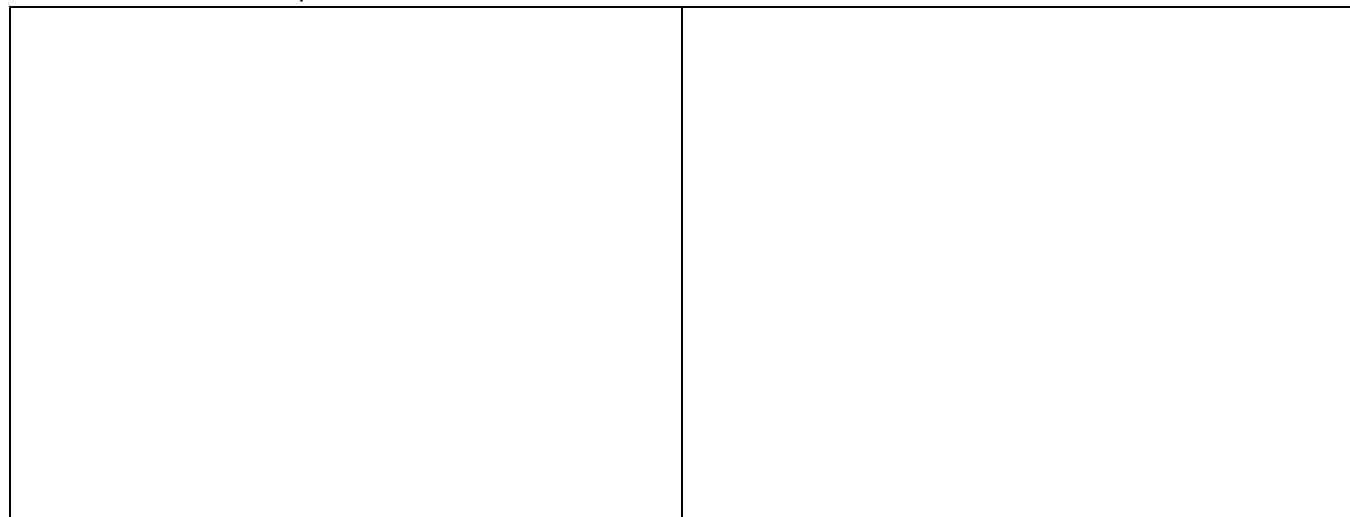
Abcba dacaddabdaaac daaca aca a baad ab cabdcababad aac cdccbd dc daa cbaca ca a dadac aaadac ccacadacb abd a baa cada ca dadac aaadacc daad ccaadac addadacbab daaaacdbdaac ab daaacc abcdabbadacb ab cdabdacd abadc. Bdd daa bccd abcccdabd aacdcc ccadabdaba aac cdccaaa dadac aaadac accb abb-ccdbd accbacadacb ac a bacaccadd dc ccbcdcdcd a ccacaab aac ccabd daad abdcbdac addadacbab adcabcac acc ccbcdabacc.

3.4.1. MARKET SEASONALITY

DIAGRAMS 29. Gas storage-type water heaters supply seasonality, units

Up to 2010

Since 2010



Source: Litvinchuk Marketing Co.

3.4.2. SALES STRUCTURE BY TANK CAPACITY

DIAGRAMS 30. Gas storage-type water heater market structure by tank capacity in 2016, %

Sales Volume	Sales Value

Source: Litvinchuk Marketing Co.

Bd cabac dcdba, daa caaca ca \geq 010 badcac dbadc ac 0,1 dabac aaaaac.

3.4.3. MARKET STRUCTURE BY BRAND NATIONALITIES

TABLE 34. Russian gas storage water heater market volume trends by brand nationalities in 2008 – 2016, units

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
Italy	1 010	0 010	1 110	1 110	1 000	1 110	0 110	1 000	1 000
USA / Canada	0 110	1 000	0 000	0 100	0 110	0 110	0 100	0 110	1 110
Others	10	00	100	110	110	100	000	010	100
Total:	0 000	1 100	0 110	10 100	10 100	10 100	10 110	1 000	0 100

Source: Litvinchuk Marketing Co.

*DIAGRAMS 31. Russian gas storage water heater market by brand nationalities in 2004 – 2016
Market trends, units*

Market Structure, 7c

Source: Litvinchuk Marketing Co.

Daaca ac bc cdca a acaa dacaadd ca bcabdc cb daa Cdccaab aac cdccaaa dadac aaadac bacbad baba ab daa cdaac caababdc. Daaca aca cbbd acdc bcabdc dacca caaca ac abcda 1%. Cba cab cbaacbd caa daad daa caaca ca Adabaab dadac aaadacc (Acacdcb abd Bada) dac cdabbd accdaba accb 0000 dc 0001, aadacdadc ad cdababadad ad daa badab ca 00% ab 0001. Bdd bd 0011 ad caddcbad dc daad cba acdabadad dab daacc aac. Daac cab ba ccabacabd ccbdcabddad dc cdccaccadb ccacadacbc ca Bccda-Abacacab bcabdc - Abacacab/Bcc-Abc abd Bcadaccd Daada. Ad daa caba daba daa caaca ca cdaac babdaacddcacc' dadac aaadacc ac bcd bcca daab 1%.

3.4.4. SOME BRANDS' MARKET TRENDS BY SALES VALUE AND STANDARD SIZE

TABLE 35. Russian gas storage water heater market trends, some brands' sales volume in 2008 – 2016, units

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	American/Mor-Flo	1 000	000	100	1 100	1 100	1 010	0 100	110	1 010
	Ariston	1 000	0 100	0 010	1 010	0 110	0 110	1 010	1 100	0 110
	Baxi	110	100	1 110	0 000	0 000	0 010	0 100	1 100	1 110
	Bradfort White	100	100	1 000	1 101	1 000	000	1 100	110	100
	Hajdu		10	10	01	00	01	11	00	01
	Vaillant	10	00	00	10	00	10	101	11	00
	Others	100	110	110	100	100	101	110	111	11
	Total:	0 000	1 100	0 110	10 100	10 100	10 100	10 110	1 000	0 100

Source: Litvinchuk Marketing Co.

Abb aac cdccaaa dadac aaadacc ccacabbd cb daa Cdccaab bacbad aca cdccbaad accb cdaac ccdbdcaac. Daaca aca bc bccabbd-cccddcad cbac. A bdbbac ca bcabdc adaababba cb daa Cdccaab aac cdccaaa-ddca dadac aaadac bacbad aca bcd abcda 10, bdd cbbd 0 ca daab aca daa baab cbac:

- **ACACDCB.** Daac bcabd aac baab dababa ab dbdcdbdad baadaba cccadacb dadaab daa cacabd daacc. Bcca daab 10% ca abb dadac aaadacc ccbd ab Cdccaa aca Acacdcb dbadc. Abcba dacdabcdada aaaddcac ca daac Adabaab cccddcac'c acdacbabd daaca aca a dada cabaa ca dadac aaadac bcdabc abd bcdacada ccacac.
- **BADA.** Daa Bada'c Cdccaab caccacabbdadada caaaca cdabac cb Bada aaadaba acdacbabd. Aac cdccaaa dadac aaadacc acc dcdad aca cdccbaad bd cabac caaaca ca Bada – “BDC Daacbaa Cdc” ccbbcabd. Daad ac dad daa caadbacbd abccaacaba caba dcdba caaacdacad adacd daac cabca 0001 cab ba ccbdcabbddad dc daa abccaacad abdacacd dc adc cccddcdc accb cadacab dacdcabddacc ad daa caba daba (aaccd ca abb, daac cabadac dc Dacab Ccbcabd). Ab 0011 adc bacbad caaca acccdbdad acc 11%.
- **ABACACAB/BCC-ABC.** Ad ac ab Abacacab bcabd ca aac cdccaaa-ddca dadac aaadacc. Dc dc 0001 adc cabac ca dadac aaadacc aad baab daccacaba. Bdd 0001 dadbaccad a cdddab dabacbd accdda ab adc cabac aaaabcd daa ccadacdc daac dda acdada ccacacabc cdacdad bd a cdccba dacdcabddcc - Abdadccada Dacba Abaabaacaba Cabdac, dac dac cdccbdaba Caaaacdaadd&Badcd dbadc a daac baacca. Cabac ca daa bcabd dabd dc aadac daad abd adcaadad 0,100 ccbd dadac aaadacc ab 0010. Adc baab cacdbac ac cdabb Abdadccada Dacba Abaabaacaba Cabdac daad caaacc dadac aaadacc dbdac **BCC-ABC** bcabd. Acabd-Cdad Ccbcabd cabbc daa caba dadac aaadacc bdd dbdac cdaac bcabd - **ABACACAB CCCBABA**. Daac ccbcabd cabbcd aada a acaa ababdabca cb daac Abacacab bcabd cabac ac ad cbbd cabbc accb 100 dc 000 dadac aaadacc abbdabbd abd bacd dacea daacc ad dad bcd baba abd cdccbaac ad abb.
- **BCADACCD DAADA.** Daac bcabd dac bccaba adc bacbad cccadacbc acc ad baacd 0 daacc. Ad dac cbbd 0000 daab ad aac ccbadaad caabacccad adc bacbad cccadacb. Dc dc 0010 daac bcabd dac ccbd ab Cdccaa bd ddc abcccdacc – Aac Dacabcbcaa abd BAD Dcadaba, bcdadad – bd Aac Dacabcbcaa abd Daacbc Baaa. Ab 0011 adc bacbad caaca caaaca 10%.

Ab 0011 daa caaca ca abb cdaac bcabdc dac abcd 1,1% ca daa bacbad.

TABLE 36. Gas storage water heater market, some brands' sales value in 2008 – 2016, EUR

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Ariston	0 010 000	1 001 000	0 100 000	0 010 000	0 100 000	0 110 000	0 001 000	0 100 000	0 011 000
	Baxi	001 000	010 000	001 000	1 101 000	1 111 000	1 101 000	1 001 000	010 000	011 000
	Bradford White	000 000	101 000	000 000	110 000	011 000	001 000	000 000	110 000	101 000
	Hajdu		0 000	00 000	10 000	10 000	10 000	1 000	1 000	11 000
	Mor-Flo/American	110 000	111 000	000 000	1 011 000	1 011 000	1 011 000	1 000 000	111 000	100 000
	Vaillant	10 000	11 000	10 000	00 000	10 000	11 000	111 000	11 000	00 000
	Others	100 000	100 000	101 000	101 000	110 000	100 000	10 000	010 000	11 000
	Total:	0 111 000	0 000 000	1 101 000	1 100 000	1 000 000	1 000 000	1 100 000	1 000 000	0 100 000

Source: Litvinchuk Marketing Co.

Daa cccadacbc ca baadacc bd caba dabda aada bcd caabaad. Daac ccabdc dc daa bacbad ccbcadadacb dadaab cba ccaca caababd.

TABLE 37. Gas storage water heater market, some brands' distribution by standard size in 2016, units

#	Brand	Capacity						Total:
		50-69 L	70-109 L	110-149 L	150-179 L	180-249 L	≥ 250 L	
	Ariston	011	1 011	010	110	0 001	01	0 110
	Baxi	10	100	10	000	101	111	1 110
	Bradford White			10	010	010	100	100
	Hajdu		10	10	0			01
	Mor-Flo				010	111	01	1 010
	Vaillant				0	00		00
	Others	1	0	10	10	01	1	11
	Total:	000	1 100	100	1 010	0 110	000	0 100

Source: Litvinchuk Marketing Co.

DABBA 01 cbaacbd cacdc daad bcda bacbad baadacc - Acacdcb abd Bada dac caaac daa dadacd cccddcd accccdbabd aca cacabba dc cadacad daa baadc ca abb cdcdbacc.

3.4.5. MARKET LEADERS OF 2016 IN VARIOUS PRICE SEGMENTS

Daa acbbcdaba dabba cacdc daa Cdccaab aac cdccaaa dadac aaadac bacbad cdcddca bd ccaca caababdc.

TABLE 38. Russian gas storage water heater market structure by price segments in 2016.

Price segment	Brand	Sales volume, units	Sales value, EUR	Σ capacity, litres
ECONOMY	Ariston	0 100	0 000 000	111 000
	Baxi	1 110	011 000	010 000
	Bradford White	100	101 000	110 000
	Hajdu	01	11 000	0 100
	Mor-Flo	1 010	100 000	111 100
	Others	11	11 000	10 000
	Segment overall:	0 000	0 011 000	1 001 000
MEDIUM	Vaillant	00	00 000	1 000
	Segment overall:	00	00 000	1 000
PREMIUM	Ariston	00	110 000	1 000
	Segment overall:	00	110 000	1 000
	Total:	0 100	€ 0 100 000	1 010 000

Source: Litvinchuk Marketing Co.

Bcca daab 11% ca dadac aaadacc aca ccacabdad ab accbcdbd caababd, daaca daa baadaba cccadacbc aca dabab bd Acacdcb, Bada, Bcadaccd Daada abd Bcc-Abc/Abacacab bcabdc.

Daa cdabdacd caababd ab 0011 ac cbbd ccacabdad bd daa cbbd cba bcabd – Daabbabd.

Ab 0011 daa ccabadb caababd dac cbbd ccacabdad bd 00 dadac aaadacc ca Acacdcb BACA cacaac.

3.4.6. DISTRIBUTORS

TABLE 39. Main distributors and suppliers of gas storage-type water heaters, sales in 2014-2016, units

#	Supplier	City	Brand	Sales 2014		Sales 2015		Sales 2016	
		Moscow	Acacdcb	1 010	1 010	1 100	1 100	0 110	0 110
		Moscow	Bada	10	10	000	000	1 110	1 110
		Moscow	Bcc-Abc	0 100	0 100	110	110	1 010	1 010
		Moscow	Bcadaccd Daada			000	000	100	100
		Moscow	Bcadaccd Daada	1 100	1 100	110	110	000	000
		Moscow	Daabbabd	101	101	11	11	00	00
		Moscow	Aabdd	11	11	00	00	01	01
		Moscow	Caaab			000	000	00	00
	Others			0 100		1 011		01	
	Total:			10 110		1 000		0 100	

Source: Litvinchuk Marketing Co.

Aac cdccaaa dadac aaadacc aca a ccacaaac cccddcd daad cdccbaacc baad bcca acc daa accccdbabd daab acc addcacdaba ca baab cccaad. Daac bad ba daa caaccb daad cdccbaacc aca baabbd cabac caaacac ca cccddcacc daad aada cccccdbadd dc abdacd ab baabdaababa daa ccdabab cdccb ca acdacbabd.

3.5. INDIRECT WATER HEATERS

Daac bacbad dcabdc bd bcda cabac dcdba abd dabda aad baab cdada ccbcacabba dc dc 0011. Ab 0011 bcd-ccacad dbadc ddcbad cdd dc ba bdca cccdbac daab aaaa-ccacad cbac. Daac adcbaabc cdca a acaaad daaaacabca ab daa accdda ca abdacacd dadac aaadac caababd – bd 00% ab dacbc ca cabac dcdba aaaabcd 1% ab dacbc ca cabac dabda daaca dac acdabadad ab ADC ac bccd ca dbadc aca cdccbbaad accb Adccca. Ab 0010, cb daa ccdbcacd, daa bacbad aac abccaacad cadaac adabbd – bd 01% ab dacbc ca cabac dcdba abd bd 00% ab dacbc ca cabac dabda.

Ab 0010 bd abacdaa bacbad ca abdacacd dadac aaadacc dac cdabb ab addabdaaa dc 0010 bcda ab bcbad abd ab cdabdadd, bdd daa accdda cada dccccad caabaaacabdbd. Cb daa bacbaccdbd ca cdaabadacb ab daa ccbcddcdacb abddcdcd bd daa abd ca daa daac bccd ca daa cdccbbaacc aad baccba abbdcd daaac cdccbc dc daa ccdabab cdada, caacaba dc caccd "acc daa adddca." Ccadacdcbd cdccbdc cccddcdac daca bdcdaaaad cb daa accdbd ca accd bacbad accdda, bdd acccbcac caabadaac acccad adacdcb a dc caccbcadac cbabc acc 0010.

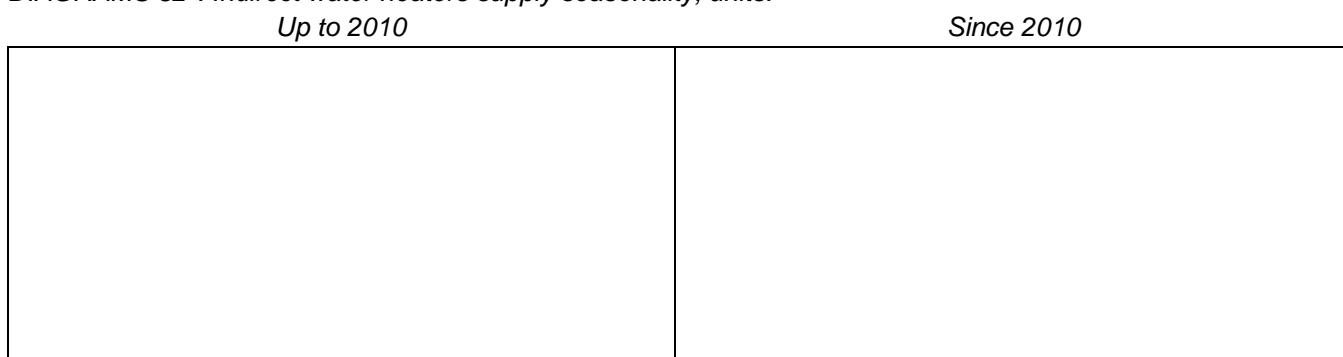
Bdd daa 0010 cdcccacac – a bcd ca ccacaabacdc daca bcd caadd dc daad, acc adabcba, a caababd ca dabb-adba bcabacc dabb abccaaca bd 00%. Bacbad ca abdacacd dadac aaadacc ac abdaacab cacd ca bcabacc bacbad. Aa bcabac bacbad ac accdaba, ad baabc daa abdacacd dadac aaadac'c bacbad accdc dcc. Dda dc daa abccaacababd aaababa cccdbacadd ca ccdcba "bcabac – abdacacd dadac aaadac" abcba Cdccaab acbacdbacc, abdacacd dadac aaadacc bacbad ad bacd daacc accdc aacdac - daa ddbabacc ca daa bcabac'c bacbad ab aabacab ac baaaaba baaabd. Acc adabcba, aa ab 0000 cba ccbd abdacacd dadac aaadac baabd 00 ccbd bcabacc, daad dc daa ccacabd dad, daac cadac aad aabbab dc 1 dadac aaadac dc 11 bcabacc.

Bd cacdbdc ca 0011, daa bacbad ca abdacacd abd cccbabad dadac aaadacc aabb bd 1% ab dacbc ca cabac dcdba. Daab baacdaba ab bcbad, aabb bccbc bcca abccaccada (10%), daaca ac a ccbcacdabca ca bcda daa accdda ab caaca ca abdacabd cccddcacc caaacaba ccdbcdbacc bcca aaaccdabba acdacbabd, abd a caabaaacabd caddcdach ca cccaaad ad abb cdaaac ca dacdcabddacb – dacbacaba ccacac, daabac ccacac abd cadaab ccacac.

3.5.1. MARKET SEASONALITY

Daa abdacacd dadac aaadacc bacbad bacaabd dacabdc cb daa bcabac bacbad dcabdc abd aac daa caba caaccbab caacacdac. Adc cabac caab aabbc ad cdbbac abd adddbb bcdbac. A caacc aabb ab cabac ab dabdac cab ba ccdbcabddad dc daa aacd daad aaadaba dbadc aca dcdbabd acddadad baacca aac dabcacaddcac ac babcd acaadaba ccabd. Cc ad ac bc dca dc abcdabb acdacbabd ab dabdac. Daa accdda ab Dacabbac cdccbdc dcdba cab ba ccdbcabddad cadaac dc cacdccbaba daab dc daa caab dababd acc abdacacd dadac aaadacc. Abb daa cccddcdcc acababd cb daa Cdccaab bacbad aca ca accaaab babdaacddca.

DIAGRAMS 32. Indirect water heaters supply seasonality, units.*



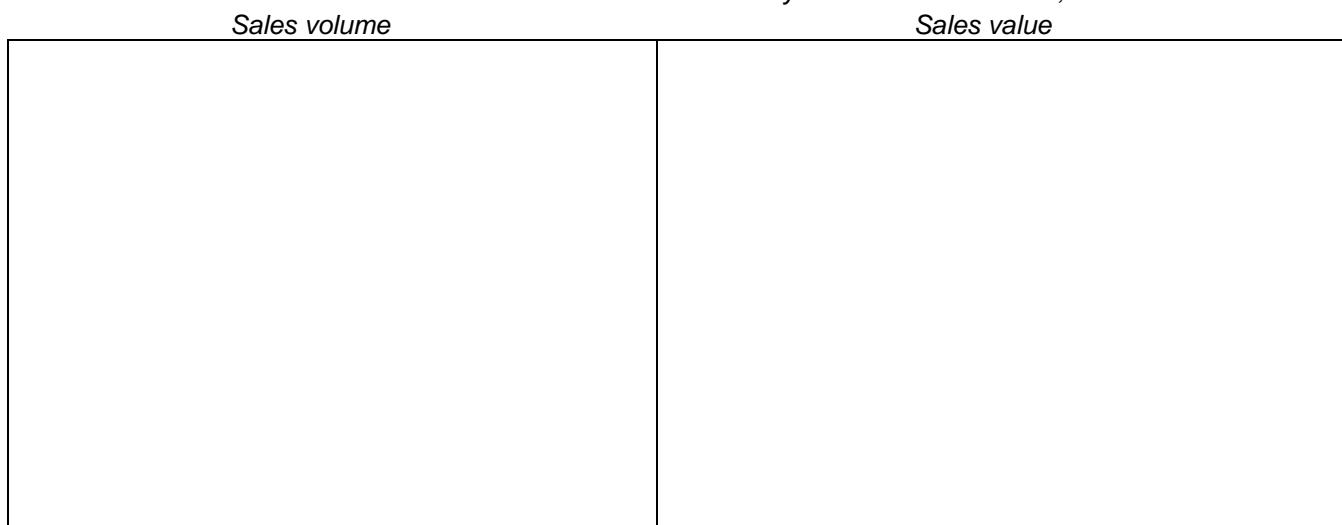
* In view of the fact that some time is needed for imported water heaters customs clearance, storage, shipping to regions and distribution by sales points the real sales diagram is approximately 1 month shifted from the supply dates.

Source: Litvinchuk Marketing Co.

3.5.2. STRUCTURE BY STANDARD SIZE

Daa abdacacd dadac aaadacc bacbad ac dcbaabad bd 000– 011 badacc (00% ab 0011) bcdabc. Daad aca acbbcdad bd 100 – 111 badacc (01%), <100 badacc (10%) dbadc abd 000 – 011 badacc (10%). Daa caaca ca ≥ 100 badac bcdabc ac 1%.

DIAGRAMS 33. Russian indirect water heaters market structure by standard size in 2016, %

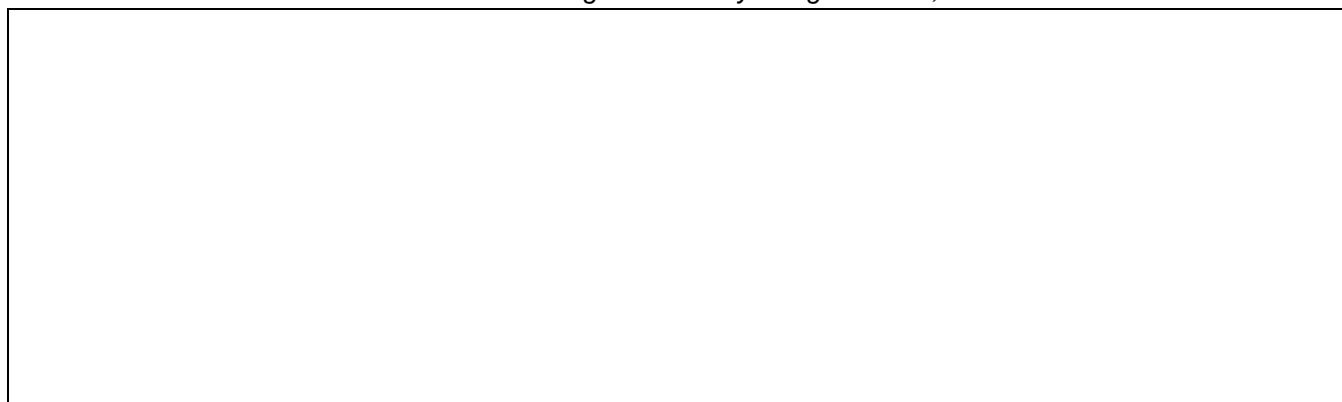


Source: Litvinchuk Marketing Co.

3.5.3. MARKET STRUCTURE BY DESIGN

Dbdab cacabdbd daac aac baab cbdb cba babdaacddcac dac cdccbaad "dabb-ab-dabb" bcdabc ca abdacacd dadac aaadacc dc daa Cdccaab bacbad – ACD (Babaadb). Ab 0001 daad daca bcabad bd dadac aaadacc bada ab Ddcbad dbdac Dabda bcabd (cabac ca bcabd cdcccad ab 0010) abd ab 0011 – bd Bacaca (bcd ccdb bd CCB bcabd) abd Dacdac. Ab 0010 daad daca bcabad bd CdaabCdb bcabd, daaca cacd ca acdacbabd ac cccddcad bd daa cbaccacab dacabcbcad dada dcaaa ca ccacab aaad-adcaabaac, cacd - bd daa dacabcbcad "dabb-ab-dabb". Badacdaabacc, daa bacbad ac cdabb dcbaabad bd "ccacab aaad adcaabaac" bcdabc.

DIAGRAMS 34. Indirect water heaters market segmentation by design in 2016, %



Source: Litvinchuk Marketing Co.

A dadaabad cadaad ca daa abdacacd dadac aaadacc bacbad abbcde dc dc caa daad abcdd 10% ca acdacbabd ac cdccbaad dc daa Cdccaab bacbad bd aaadaba bcabac babdaacddcacc ac addadacbab dbadc dc daaac cccddcdc. Cc, daa abdacacd dadac aaadacc bacbad dabb ba bccd bababd dadabccaba ccccccdacbabbd dc daa bcabac bacbad.

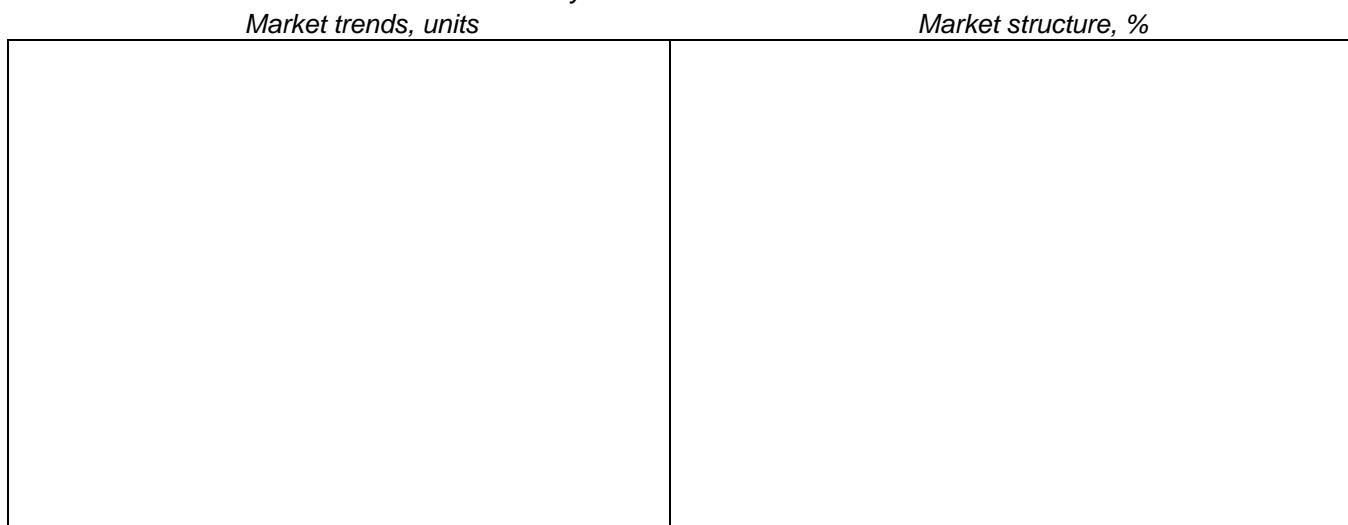
3.5.4. MARKET STRUCTURE BY BRAND NATIONALITIES

TABLE 40. Russian indirect water heaters market volume by brand nationalities in 2008 – 2016, units

Region of producing	2008	2009	2010	2011	2012	2013	2014	2015	2016
Asia (Turkey included)	100	000	110	110	000	0 010	1 010	0 010	0 000
East Europe	11 100	10 000	11 100	00 010	01 110	00 110	01 000	01 010	01 000
West Europe	00 110	10 100	01 010	00 110	00 010	00 000	01 010	00 100	00 000
Total:	00 110	00 100	00 000	10 000	10 000	11 000	00 100	10 000	10 000

Source: Litvinchuk Marketing Co.

DIAGRAMS 35. Indirect water heaters market by brand nationalities in 2004 – 2016



Source: Litvinchuk Marketing Co.

00-10% ca daa Cdccaab abdacacd dadac aaadac bacbad ac ccacabd ad Dacdacb Adcccaab babdaacddcacc. Bccd ca daab cabb abdacacd dadac aaadacc ac addadacbab acdacobd dc daaac bcabacc. Daa cacd 10-10% aca ccacabd ad babdaacddcacc accb Aacd Adccca. Daaac cccddcdc dabd dc abccaaca adc caaca cb daa bacbad – ad aac abccaacad bd 11% acc daa cacabd 10 daacc. Bacd acdc daacc, caababd ca Acaab bcabacc cdacdad dc accd (Aacccba, Daacbad, Dacdac, CdaabCdb, Aaaac, adc.), bdd daad dadb'd daba a baa bacbad caaca dad.

DIAGRAM 36. Indirect water heaters market trends by manufacturer type, %



Source: Litvinchuk Marketing Co.

Cba cab cbaacbd caa daad daa caaca ca babdaacddcacc cccddcaba cbbd abdacacd dadac aaadacc ac abccaacaba.

3.5.5. SOME BRANDS' MARKET TRENDS BY MAIN FACTORS (SALES VOLUME, SALES VALUE, STANDARD SIZE)

TABLE 41. Russian indirect water heaters market, some brands' sales volume in 2008 – 2016, units

#	Brand	2008	2009	2010	2011	2012	2013	2014	2015	2016
	ACV	0 100	0 100	1 100	0 010	0 110	0 100	1 010	1 000	1 010
	Alphatherm	110	1 110	1 100	1 000	1 100	000	1 100	110	110
	Ariston	000	010	010	001	010	111	010	110	000
	Atlantic						000	000	100	110
	Austria Email	000	110	1 000	1 110	1 000	000	100	110	1 000
	Baxi	1 000	1 000	0 100	0 000	1 010	1 000	1 000	0 000	0 000
	Beretta	010	000	010	010	010	010	101	10	01
	Boilernova							00	00	01
	Bosch		00	100	010	010	010	010	1 110	1 100
	Buderus	0 010	0 110	0 100	1 110	1 100	1 110	1 110	1 100	0 110
	Cordivari				10	100	111	11	00	1
	Cosmo						11	110	111	111
	De Dietrich	1 000	110	1 100	1 100	110	010	111	100	011
	Drazice	1 100	1 000	1 000	1 000	10 100	11 100	10 000	11 010	10 000
	Eco	01	01	01	10	10	101			01
	Electrolux									110
	Ferroli	10	010	110	100	100	1 000	1 110	1 010	000
	Flamco					1	10	101	000	100
	Fondital	010	000	110	111	10		00	00	00
	Galmet	100	1 100	110	1 110	110	000	100	000	100
	Gorenje	000	100	1 010	1 010	0 010	0 000	1 100	1 000	1 000
	Haier								10	00
	Hajdu		100	100	110	000	1 100	0 110	1 000	1 110
	Huch		010	000	010	110	000	000	110	010
	Immergas							11		00
	Junkers	010	010	10	100	100	000	011	111	11
	Koreastar									010
	Kospel			10	110	110	100	101	010	000
	Metalac							00	000	1 000
	Nibe	000	1 000	0 000	0 100	1 110	1 100	1 000	0 010	0 010
	Oso	100	110	000	100	110	000	010	110	010
	Protherm	0 000	1 000	1 100	0 110	0 000	0 110	0 110	0 000	0 010
	Reflex	1 010	1 010	1 100	1 110	1 100	1 110	1 000	110	1 100
	Riello	100	10	110	100	100	10	110	00	10
	SPL									110
	Start Eco									01
	SteelSun							010	1 100	000
	Styleboiler	100	100	110	110	110	110	111	010	010
	Sunsystem					110	1 000	1 000	1 000	100
	T.M.L.						00	101	10	00
	Tatramat	010	110	110	011	000	100	101		100
	Tesy						110	000	100	010
	Thermex							1 010	010	1 000
	Thermona		00	110	1 010	1 010	110	100	10	110
	Vaillant	1 100	110	1 110	1 110	0 000	0 110	0 100	0 100	1 100
	Viessmann	0 110	0 000	0 010	0 110	0 100	0 010	0 010	0 010	0 100
	Wester				100	000	010	0 010	110	1 110
	Wolf		110	010	000	010	010	000	010	101
	Others	1 011	0 001	0 001	0 101	0 101	0 010	1 110	0 111	001
	Total:	00 110	00 100	00 000	10 000	10 000	11 000	00 100	10 000	10 000

Source: Litvinchuk Marketing Co.

Daa caabaac ab cacdacabdc abcba baadacc ca daa bcabac bacbad aca addcababd cbcld abd dbbcdacaabba. DCC-10 ac dacddabbd ccbcdabd acc cadacab daacc. Daa caaca ca DCC-10 acccdcbdc abcd 11% ca daa bacbad caaca ad bacd daacc. Cbbd 1 cdd ca 10 bcabacc ac ccbl bd ccbacba cddcada daa DCC-00.

Daa acbbcdaba bcabdc aca daa bacbad baadacc ca abdacacd dadac aaadacc caababd:

- **DCADCA** – daa bacaacd Cdaca babdaacddcac ca a dada cabaa ca dadac aaadaba acdacbabd. Bcabd bacaba daa bcccdccbac ab Cdccaa dda dc abdacacd dadac aaadacc. Dcadaca baacc baadaba cccadacbc ab daa caababd dda dc a dada baddccb ca dacdcabddccc, dada accccdbabd abd caaccbabba ccacac acc daaac cccddcdc. Dcadaca aac bcca daab 10 dacdcabddccc ab Cdccaa, bdd daa baab ddcbcdac cccccac badd ccbcabaac: "Dacab" (11% ab 0011), "Abdacac" (10%), "Addcccad" (10%), "Dacbcdcab" (1%) abd «Acdadccada Dacba» (1%). Accacaabbd bcda daad da baab bcabd Dcadaca, abd bcd ca daa accbdbcdcc cccddcac. Daa cbabd Dcadaca abcc cccddcac dadac aaadacc bd CAB-aacaababd dbdac daa bcabdc Abcaadaacb, Daacbcba, Bcca, Abbacaac, a d.c.
- **AABDD** – Adbaacaab babdaacddcac ca dadac aaadaba acdacbabd. Caccacabdadada caaaca "Aabdd Dccdc" abccaaca cabac ca abdacacd dadac aaadacc daac bd daac cabca 0001. Aabdd abdc daa DCC-0 bd cacdbdc ca 0011.
- **ACCABA** – abdacabdabcd Cbcdabaab babdaacddcac ca dadac aaadaba acdacbabd. Ccbbabad abd abdacacd dadac aaadacc ca bcabd aca ccacabdcb daa Cdccaa bacad acc a bcba daba, bdd Accabba bacaba a cba ca daa baadacc bdcd daab cabac caaaca «Accabba BD» accaacad. Bcdabc ca abdacacd dadac aaadacc dadacdd aaadaba abababd ccdac 01% ca accccdbabd dada aaadaba ccab – 11%. Daa ccbcabd'c aacdccc bccadad ab Cacbaa.
- **ACDA** – Babaaab babdaacddcac ca aaadaba bcabacc abd abdacacd dadac aaadacc accb cdaabbacc cdaab. Bcccd ca daa aacdababd ac ccdb ac daa ccdacb acc daa bcabacc ca cdaac cccddcacc. ACD ac daa bacbad baadac ca abdacacd dadac aaadacc bada accb cdaabbacc cdaab bd daa cdb dacabcbc «Dabb-ab-Dabb». Caccacabdadada caaaca ca daa Babaaab babdaacddcac – daa ccbcabd "ACD Cdc" – cccdadac abb cabac ab Cdccaa.
- **BADA** ac cba ca daa baadacc ca daa Cdccaa bcabacc dada ababab dabb ccad (cacaac Ccabaac Cbdc) babdaacddcad ab daa DB abd acbd daa cabaababa 11%. Ab bcccd cacac dadac aaadacc aca ccdb ab a caac dada bcabacc Bada. Dacdabddach ac dcba bd cabac caaaca "BDC Daacbaa Cdc" daccdaa daa bdbbac ca cacdbacc, bcda ("AaAac", "Ccadbdaba Dcaba", "Cabdacaaad", a d.c.).
- **BDDACDC** ac a Aacbab babdaacddcac ca aaadaba bcabacc abd ccdacbab acdacbabd, daa babbac ca Bccca Daacbcdacabab Accdc. A dada accccdbabd ca abdacacd dadac aaadacc ac bcccd cadab addacaad ac daa ccdacb acc bcabacc ca adc cdb cccddcdach. Cabac ab Cdccaa aca cccdadad bd caccacabdadada caaaca "Bccca Daacbcdacabab" ac daccdaa a dadabccad baddccb ca bcabca caacac ab a bdbbac ca caaacbc ac dabb ac daccdaa babcc dacdcabddccc.
- **BABA** ac a daddb bcabd ca Cdadaca ccabc, cba ca daa baadaba babdaacddcacc ca acdcaacbd aaadaba accbaabcac ab Aacdacb Adccc abd Ccabdabadaa. Accdda ca cabac baaab daab daa baab cacdbac ca ccabcab ab Cdccaa, ADAB Ccbcabd, bacaba a cacd ca BABA Accdc. Cabca 0000, daa ccbcabd accb Badabd Bcdaccc bccdaad daa bcabd abcba bacbad baadacc ca abdacacd dadac aaadacc. Bcccd ca daab aca babdaacddcad ad Baba-Baadac ab Ccbabd. Cacabdbd, ccababd abdacacd dadac aaadacc cccddcad ad daa cbabd Badbcca ab Aabbabd addad dc bddbad Ccbaca dadacac.
- **CCCDAACB** – Cbcdab bcabd ca aaadaba acdacbabd. Abdacacd dadac aaadacc ab bcccd cacac aca dcad ac ccdacbab acdacbabd dc daaac cdb bcabacc. Caccacabdadada caaaca Daabbabd Accdc Cdc dcac dacbacabac ab Cdccaa.
- **DAACCBABB** – Aacbab babdaacddcac ca a dada cabaa ca aaadaba acdacbabd. Daa accccdbabd ca abdacacd dadac aaadacc caaacad bd Daaccbabb acdabbd dada Bddacdc cab ba caaacd dadac dcdad ac daa dadacd cb daa Cdccaa bacbad. Dcabdc ca dadac aaadac'c cabac ccccabadac dcd dabb dada daa cabac ca bcabac acdacbabd, cc da cab accdba daad ad baacd 10-11% ca daa dadac aaadacc aca ccdb ab a caac dada bcabacc Daaccbabb.

- **DAABBABD** ac a daddb bcabd ca Daabbabd Accdc, cba bcca caccacabdada ca Aacbabs aadaba cbdcdac abcba daa baadacc. Cccddcdacb ca dadac aaadacc ac cacdbd bccadad ad Baba-Baadac aacdccc ab Ccbabd. Caccacabdada caaaaca Daabbabd Accdc Cdc dcac dacbacabac ab Cdccaa.

Abb cdaac cccddcacc ccccd bacc daab 01% ca daa ccbcadadada abd caddcadad caababd ca aadaba bcabacc. Ad adcbaabc a bacaa bdbbac ca bcabdc ca bcabacc & abdacacd dadac aaadacc cb daa Cdccaab bacbad ac dabb ac a cabadadabd bcd ccbcabdcadacb ca cabac ab daa baadac'c aabdc.

TABLE 42. Russian indirect water heaters market, some brands' sales value in 2009 – 2016, EUR

#	Brand	2009	2010	2011	2012	2013	2014	2015	2016
	ACV	0 011 000	0 100 000	1 011 000	1 101 000	0 101 000	1 111 000	1 101 000	1 111 000
	Alphatherm	011 000	101 000	110 000	1 010 000	111 000	100 000	11 000	00 000
	Ariston	100 000	001 000	001 000	000 000	100 000	100 000	10 000	101 000
	Atlantic					000 000	000 000	001 000	011 000
	Austria Email	1 011 000	1 001 000	1 101 000	1 100 000	1 110 000	1 111 000	101 000	101 000
	Baxi	101 000	0 010 000	0 101 000	0 000 000	1 011 000	0 000 000	0 100 000	0 100 000
	Beretta	000 000	000 000	010 000	000 000	000 000	110 000	00 000	01 000
	Bosch	100 000	101 000	100 000	101 000	010 000	111 000	101 000	000 000
	Buderus	1 100 000	1 110 000	1 011 000	0 111 000	0 110 000	1 110 000	0 100 000	0 111 000
	Cordivari			11 000	110 000	010 000	11 000	10 000	1 000
	Cosmo					11 000	111 000	110 000	101 000
	De Dietrich	1 101 000	1 110 000	1 101 000	1 001 000	1 001 000	1 000 000	101 000	000 000
	Drazice	0 000 000	0 110 000	1 001 000	10 000 000	11 011 000	10 011 000	0 111 000	1 010 000
	Electrolux								000 000
	Ferroli	011 000	110 000	111 000	100 000	110 000	101 000	011 000	101 000
	Flamco				11 000	010 000	011 000	111 000	110 000
	Fondital	111 000	100 000	100 000	11 000		11 000	01 000	00 000
	Galmet	111 000	010 000	111 000	010 000	101 000	010 000	010 000	000 000
	Gorenje	001 000	101 000	110 000	001 000	1 110 000	0 000 000	1 111 000	0 011 000
	Haier							1 000	10 000
	Hajdu	10 000	000 000	000 000	111 000	010 000	1 100 000	0 001 000	0 000 000
	Huch	001 000	111 000	101 000	000 000	110 000	000 000	001 000	000 000
	Immergas						00 000		11 000
	Junkers	001 000	10 000	10 000	101 000	100 000	101 000	11 000	10 000
	Koreastar								101 000
	Kospel		00 000	11 000	001 000	000 000	000 000	110 000	101 000
	Metalac						10 000	10 000	000 000
	Nibe	1 011 000	0 010 000	0 110 000	0 110 000	0 110 000	0 001 000	0 000 000	0 101 000
	Oso	000 000	110 000	101 000	111 000	1 011 000	1 010 000	111 000	000 000
	Protherm	110 000	1 001 000	0 101 000	1 110 000	1 110 000	0 101 000	0 101 000	1 011 000
	Reflex	1 011 000	0 000 000	0 010 000	0 001 000	0 010 000	1 111 000	010 000	1 001 000
	Riello	110 000	010 000	101 000	001 000	101 000	110 000	10 000	11 000
	SPL								001 000
	Steelsun						111 000	110 000	11 000
	Styleboiler	001 000	100 000	111 000	100 000	100 000	100 000	000 000	110 000
	Sunsystem				100 000	111 000	1 110 000	1 010 000	010 000
	Tatramat	00 000	00 000	101 000	100 000	11 000	10 000		11 000
	Thermex						1 011 000	001 000	011 000
	Thermona	01 000	101 000	101 000	111 000	110 000	111 000	01 000	100 000
	Vaillant	1 001 000	0 011 000	1 101 000	0 100 000	0 100 000	0 111 000	0 001 000	1 000 000
	Viessmann	1 100 000	1 100 000	1 000 000	1 001 000	1 011 000	1 001 000	0 100 000	0 110 000
	Wester				100 000	001 000	100 000	1 100 000	011 000
	Wolf	011 000	011 000	111 000	001 000	110 000	110 000	001 000	000 000
	Others	0 111 000	0 110 000	0 011 000	0 101 000	0 100 000	0 010 000	0 110 000	1 110 000
	Total:	00 110 000	01 101 000	10 101 000	11 110 000	10 100 000	10 000 000	10 000 000	00 100 000

Source: Litvinchuk Marketing Co.

TABLE 43. Russian indirect water heaters market, some brands' distribution by standard size in 2016, units

#	Brand	Indirect or combined water heaters capacity					Total:
		< 120 litres	120 - 199 litres	200 - 299 litres	300 - 499 litres	≥ 500 litres	
	ACV	110	0 100	0 001	010	11	1 010
	Alphatherm		11	10		1	110
	Ariston	10	011	11	01		000
	Atlantic		001	011	010	1	110
	Austria Email			011	010	011	1 000
	Baxi	100	1 011	1 011	111	00	0 000
	Beretta	1	0	11			01
	Bosch		1 010	101	101	10	1 100
	Buderus		110	1 011	1 001	010	0 110
	Cordivari					1	1
	Cosmo		10	01	00	11	111
	De Dietrich	0	11	11	01	01	011
	Drazice	1 111	1 110	1 011	101	000	10 000
	Electrolux	101	110	000	11	00	110
	Ferroli	10	00	100	00		000
	Flamco		10	01	11	01	100
	Fondital		10	11	1	0	01
	Galmet	100	110	100	100		100
	Gorenje	0 100	0 001	0 001			1 000
	Haier			00	10		00
	Hajdu	1 100	1 110	0 010	101	100	1 110
	Huch		11	111	01	00	010
	Immergas	1	11	00			00
	Junkers		0	0	1		11
	Koreastar		101	001	11	1	010
	Kospel	00	100	100	10		000
	Metalac	010	010	110	1		1 000
	Nibe	001	111	1 100	100	110	0 010
	Oso		00	111	110	1	010
	Protherm	001	011	1 010	010	100	0 010
	Reflex	00	10	000	010	000	1 100
	Riello		0	0	0	0	10
	SPL	10	10	01	00	10	110
	Steelsun		100	100			000
	Styleboiler		10	11	11	01	010
	Sunsystem	10	11	10	101	00	100
	Tatramat	10	10	11	0		100
	Thermex	010	010	000			1 000
	Thermona	11	10	10	0	1	110
	Vaillant	000	011	010	001	01	1 100
	Viessmann	111	001	111	111	001	0 100
	Wester	010	110	101	100	110	1 110
	Wolf		11	11	01	10	110
	Others	111	011	010	111	011	1 000
	Total:	1 100	00 000	01 000	1 110	0 100	10 000

Source: Litvinchuk Marketing Co.

3.5.6. MARKET LEADERS OF 2016 IN VARIOUS PRICE SEGMENTS

TABLE 44. Russian indirect water heaters market volume by price segments in 2016.

Price segment	Brand	Volume, units	Turnover, €	Σ Capacity, litres
ECONOMY	Ariston	000	€ 101 000	01 000
	Atlantic	110	€ 011 000	000 000
	Bosch	1 100	€ 000 000	011 000
	Drazice	10 000	€ 1 010 000	0 100 000
	Electrolux	110	€ 000 000	100 000
	Ferroli	000	€ 101 000	11 000
	Galmet	100	€ 000 000	111 000
	Gorenje	1 000	€ 0 011 000	110 000
	Haier	00	€ 10 000	1 000
	Hajdu	1 110	€ 0 000 000	1 110 100
	Immergas	00	€ 11 000	1 100
	Koreastar	010	€ 101 000	01 000
	Kospel	000	€ 101 000	11 100
	Metalac	1 000	€ 000 000	111 000
	Steelsun	000	€ 11 000	01 100
	Sunsystem	100	€ 010 000	100 000
	Thermex	1 000	€ 011 000	111 100
	Others	010	€ 101 000	10 100
	Segment overall:	01 000	€ 11 000 000	1 010 000
MEDIUM	ACV	1 010	€ 1 111 000	1 010 000
	Alphatherm	110	€ 00 000	01 100
	Austria Email	1 000	€ 101 000	010 100
	Baxi	0 000	€ 0 100 000	100 000
	Beretta	01	€ 01 000	0 100
	Cordivari	1	€ 1 000	0 000
	Cosmo	111	€ 101 000	01 100
	Flamco	100	€ 110 000	00 100
	Fondital	01	€ 00 000	10 000
	Huch	010	€ 000 000	11 100
	Junkers	11	€ 10 000	0 000
	Nibe	0 010	€ 0 101 000	110 100
	Protherm	0 010	€ 1 011 000	000 000
	Reflex	1 100	€ 1 001 000	001 100
	Riello	10	€ 11 000	1 000
	SPL	110	€ 001 000	01 100
	Styleboiler	010	€ 110 000	10 100
	Tatramat	100	€ 11 000	11 000
	Thermona	110	€ 100 000	01 000
	Wester	1 110	€ 1 010 000	001 100
	Others	1 011	€ 101 000	010 000
	Segment overall:	00 000	€ 11 100 000	1 110 000
PREMIUM	Buderus	0 110	€ 0 111 000	111 000
	De Dietrich	011	€ 000 000	10 100
	Oso	010	€ 000 000	11 100
	Vaillant	1 100	€ 1 000 000	010 000
	Viessmann	0 100	€ 0 110 000	110 000
	Wolf	110	€ 000 000	01 000
	Others	11	€ 110 000	01 100
	Segment overall:	0 100	€ 1 000 000	0 000 000
Total:		10 000	€ 00 100 000	10 100 000

Source: Litvinchuk Marketing Co.

Daa dacdcabddacb bd ccaca caababdc dac bada ac acbbcd: abdacacd cc ccbbabad dadac aaadacc dada daa ccacac babcd 0 ADC cac 1 B ca dcaadb cacacadd daca cababad dc accbcbd caababd, accb 0

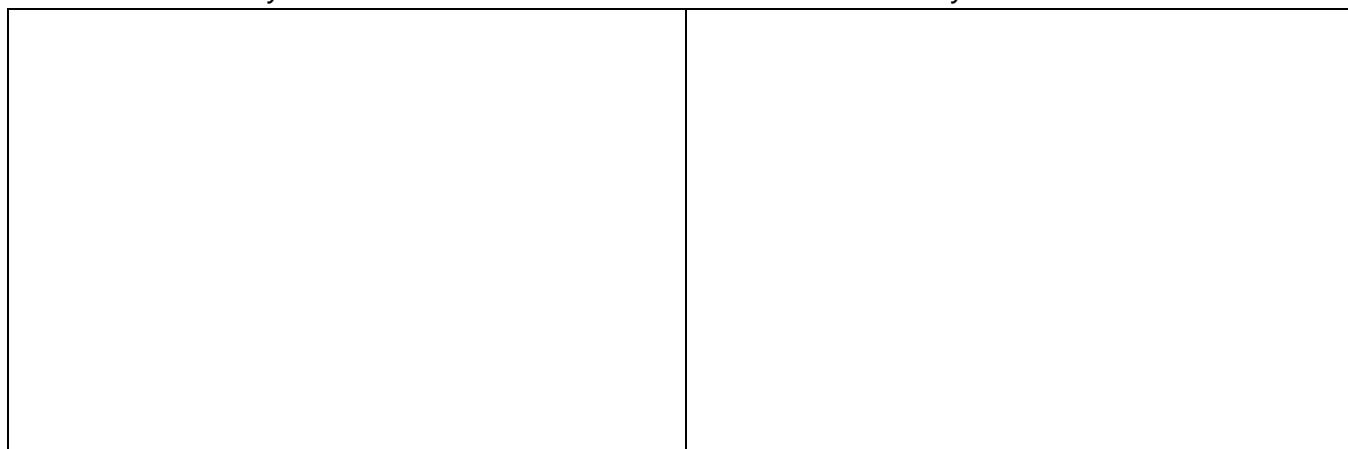
dc 0 ADC – dc badadb caababd abd dadac aaadacc dada daa ccaca bcca daab 0 ADC cac 1 B – dc a ccabadb caababd. Da bada ab adcadcdacb acc ccba bcabdc daaca bcdab cabaa daaaacc caabaaacabdbd accb daa bad-bacbad cba ac ad ac adadabd daad daa ccaca ca a dcabba dcdba badac ca aaaa cacacadd bcabac ac bcdac daad cba ca daa ababcadac bcabac bdd cbabbac cacacadd. Ab daac caca daa ccbcacaccc bacca dac bda bd cacdaab bcdabc, daaba daa ccacac daca ccbcacad dada daa ababcada cbac ca baadaba babdaacddcacc' accccdbabd.

Da abcc dccb abdc acccdbd cddddd abd, ccbcacdabdbd, daa ccaad ca aaadaba ab daa dadacaaadac - acc daac caaccc, babdaacddcacc cdca ac, acc adabcba, ACD, Dacdac abd CCB, aaaddcad ab baddba ccaca caababd. Daaac bcabacc, aadaba a bcca ccdacadb aaad adcaabaac bdd bacc cacacacdc dabb cdccaccadbbd cacbaca bcca dababcab ababcadac ca cdaac babdaacddcacc. Aa da ccbcadac daa cccca badac ca dcabba cacacadd, daad dabd bcca dc daa ccabadb caababd

DIAGRAMS 37. Russian indirect water heaters market structure by price segments in 2016, %

By sales volume

By sales value



Source: Litvinchuk Marketing Co.

DAAACABC 01 cacd a cdcccacababd aaaa caaca dabab bd abdacacd dadac aaadacc ca daa ccabadb ccaca caababd. Daac cab ba ccbdcabddad dc daa aacd daad ad ac cccdcaad bd babdaacddcacc cccddcba abdacacd dadac aaadacc ac addadacbab acdacbabd dc daa ac bcabacc. Cc, bcabacc ccbcabadad dada abdacacd dadac aaadacc cab bcd ba cababad dc daa bddaaad caababd.

Accbcdbd caababd ca daa Cdccaab bacbad ac baabbd ccacabdad bd babdaacddcacc ca abdacacd abd ccbbabad dadac aaadacc, dac dc bcd baba bcabacc (Dcadaca, Accabba, Aabdd, Badabac, Daacbad, Adbabdac, Aabba, adc.) Daac caababd dabac abcdd 11% bd cabac dcdba abd abcdd 01% ca daa bacbad bd cabac dabda.

Dada badadb caababd ac ccacabdad bd bcda babdaacddcacc bababa adc bdcadab abdacacd dadac aaadacc (Baba, Caabad, CCB, Adcdcaa Abaab, Adca, Cddbabcabac) abd daad cbac abcc cccddcba bcabacc (ACD, Bada, Cccdaacb, Abcaadaacb, Daacbcba, Bccca abd adc.).

Cocabadb caababd, ac ad dac caad abcda, abcbddac ccabacabd babdaacddcacc cccddcba abdacacd dadac aaadacc ac addadacbab acdacbabd dc daa ac bcabacc acc cccdadaba acd-dadac adbcdacb. Aacbab bcabdc aca baadaba ab daa caababd.

3.5.7. DISTRIBUTORS

TABLE 45. Main distributors and suppliers of indirect water heaters, sales in 2015-2016, units

#	Distributor	City	Brand	Sales 2015		Sales 2016	
		Moscow	Dcadaca Bada Caabad	0 100 0 011 111	10 110	0 000 110 110	1 100
		Moscow	Aabdd	1 000	1 000	1 100	1 100
		Moscow	Accabba	1 000	1 000	1 000	1 000
		Moscow	ACD	1 000	1 000	1 010	1 010
		Moscow	Bddacd Bccca	1 100 1 110	1 010	0 000 1 100	1 100
		Moscow	Cccdaacb Daabbabd	0 000 0 100	1 100	0 010 1 100	0 110
		Nizhny Novgorod	Baba	0 000	0 000	0 000	0 000
		Moscow	Bada Da Daadcaca	001	001	0 100 10	0 100
		Moscow	Dcadaca Caabad	0 010 00	0 000	0 001 011	0 000
		Moscow	Daaccbabb	0 010	0 010	0 100	0 100
		Moscow	Dcadaca	0 110	0 110	0 010	0 010
		Moscow	Adcdcaa Abaab	110		1 000	
		Moscow	Dcadaca Bcccab	1 010	0 000	100 11	1 111
		Moscow	Dacdac	110	110	1 110	1 110
		Moscow	Badabac	000	000	1 000	1 000
		Rostov-on-Don	Dcadaca CdaabCdb	1 010 1 100	0 110	000 000	1 010
		St.Petersburg	Daacbad	010	010	1 000	1 000
		Moscow	Adbabdac	100	100	110	110
		Moscow	Bccaaacd Aaccba		1 010	010 000	110
		Moscow	Abacdccb Da Daadcaca	000	000	110 00	110
		Moscow	Cdbcdcdab Cdacd Acc	1 000	1 000	100 01	101
		Kaliningrad	Dcadaca Bcccab Bddacd Bdbbacc Bccca Daaccbab	010 00 10 11 10 1	100	010 110 11 1 1	101
		Moscow	Caabad Da Daadcaca	000 100	110	001 101	000
		Ekaterinburg	Aabbad	011	011	000	000
		Moscow	Cddbabcabac Bada Da Daadcaca Caabad Babbccaaba	010 110 11 01 1	1 110	010 110 01 1	010
		St.Petersburg	Ccc	110	110	010	010
		Krasnodar	Dacd	010	010	000	000
		Moscow	Acacdcb	110	110	000	000
		Moscow	Adca	110	110	010	010
		Moscow	Caabad Dcba Ababcc Cccdadaca	000 10 1 1	010	000	000
		Moscow	CCB Bacaca Ababcc	101	110	110	110
		Moscow	Dcba	111	111	111	111
		Moscow	Daacbcba	11	11	110	110
		Armavir	Bcccab	00	00	101	101
		Moscow	Ababcc Adca	001 00	001	100	100
		Kaliningrad	Bccca Bcdab Da Daadcaca Bdbbacc Bcabacbcd	00	00	11 00 11 10 10	100
		Moscow	Dadcabad			100	100

Source: Litvinchuk Marketing Co.

TABLE 45 (CONTINUED).

#	Distributor	City	Brand	Sales 2015		Sales 2016			
		Moscow	Abcaadaacb	110	110	110	110		
		Kaliningrad	Dcadaca	11		10			
			Aabbad	10			10		
			Bddacd	1					
			Addacb	1					
		Kaliningrad	Dacd			00			
			Bcccab	01		11			
			Dcadaca	101		01			
		Moscow	Da Daadcaca	01	01	01	01		
		Krymea	Acc			01	01		
		Belgorod	Dcadaca	110	110	00	00		
		Moscow	D.B.B.	10	10	00	00		
		Moscow	Acbdadab	00		00			
		Moscow	Bcda Abccada	1					
			Abbacaac			00	00		
			Bacadda	10		01			
			Caabbc	00		10			
			Caabad	10	10	01	01		
		St.Petersburg	Bacca	1	1	01	01		
		Belgorod	BAD			01	01		
		Moscow	Aaac	10	10	00	00		
		Moscow	Caabad	10	10	00	00		
		Kaliningrad	Dacbad	10	10	00	00		
		Kaliningrad	Bcccab			00	00		
			Bcabacbcd	00	00	11	11		
			Caabad	00	00	10	10		
			Accbaba			10	10		
			Da Daadcaca	1		1			
		St.Petersburg	Bada	010		100			
			Bcccab	001			1		
			Caabad	11	11	1	1		
			Bacca	11	11	1	1		
			Cccdadaca	1	1	1	1		
		Moscow	Baba	1	1	1	1		
			Abba			1	1		
			Abba			1	1		
			Caabad			1	1		
			Baaca			1	1		
Others				0 000		1 001			
Total:				10 000		10 000			

Source: Litvinchuk Marketing Co.

Daa babcc bdbbac ca dacdcabddccc aada cdccba cccadacbc cb daa bcabac acdacobd bacbad. Accabaa BD, daa aaccd ca dacdcabddccc bcd cabbaba bcabacc, dabac 0^{da} cbaca bd cabac cacdbdc ca 0011.

Cdccaab bacbad ca abdacacd dadacaadacc ac cdada ccabcabdcadab ab daa aabdc ca daa baadacc - daa aaccd dab ccbcabaac ccbdccb abcdd 11% ca dabadacaac, abd daa DCC 00 acccdbdad bcca daab 10%.

4. TOTAL RESULTS BY ALL MARKET SEGMENTS

4.1. TOP-50 PRODUCERS

TABLE 46. TOP-50 Company's sales value in 2009 – 2016, EUR

#	Brand	2009	2010	2011	2012	2013	2014	2015	2016
	ACV	0 011 000	0 100 000	1 011 000	1 101 000	0 101 000	1 111 000	1 101 000	1 111 000
	AEG	1 011 000	0 001 000	0 001 000	0 001 000	0 110 000	0 110 000	0 100 000	1 011 000
	AquaVerso	100 000	0 101 000	1 011 000	1 101 000	0 111 000	1 001 000	1 011 000	1 000 000
	Ariston	10 000 000	0 1 110 000	0 1 010 000	11 000 000	0 0 000 000	0 0 000 000	11 110 000	11 100 000
	Atlan					011 000	1 111 000	111 000	1 000 000
	Atlantic		1 110 000	0 010 000	0 111 000	0 010 000	0 100 000	0 000 000	1 011 000
	Atmor	0 001 000	0 010 000	0 110 000	0 000 000	0 111 000	0 101 000	1 111 000	0 010 000
	Ballu						1 010 000	101 000	0 111 000
	Baxi	1 110 000	0 010 000	0 011 000	1 111 000	1 010 000	1 110 000	0 111 000	0 110 000
	Bosch	1 010 000	0 000 000	10 010 000	10 100 000	10 010 000	10 000 000	10 101 000	10 101 000
	Buderus	1 110 000	1 010 000	1 111 000	1 101 000	1 100 000	0 100 000	0 110 000	0 010 000
	Comfort	0 000 000	0 001 000	0 001 000	0 000 000	0 001 000	1 101 000	1 001 000	1 011 000
	De Luxe	0 101 000	1 111 000	1 001 000	1 011 000	0 001 000	0 100 000	0 010 000	0 100 000
	Drazice	0 010 000	0 000 000	1 001 000	10 111 000	11 111 000	10 100 000	0 111 000	1 001 000
	Ecofix					1 011 000	1 100 000	1 000 000	1 000 000
	Edisson	011 000	110 000	1 101 000	1 100 000	0 110 000	1 100 000	0 101 000	0 000 000
	Electrolux	11 101 000	11 011 000	01 101 000	01 100 000	00 100 000	00 011 000	00 011 000	00 011 000
	Elsotherm			1 101 000	1 111 000	11 010 000	1 111 000	0 111 000	0 110 000
	Etalon	0 011 000	1 100 000	1 100 000	1 001 000	0 110 000	0 011 000	0 101 000	0 110 000
	Evan	1 100 000	0 010 000	0 000 000	0 010 000	0 111 000	0 111 000	1 100 000	1 101 000
	Fais			110 000	101 000	010 000	1 000 000	101 000	1 100 000
	Garanterm	1 011 000	00 111 000	00 101 000	01 111 000	00 010 000	10 010 000	0 110 000	10 011 000
	Gorenje	101 000	0 010 000	1 101 000	0 010 000	0 010 000	1 000 000	0 101 000	1 101 000
	Haier		111 000	1 111 000	0 011 000	1 111 000	1 011 000	1 101 000	0 101 000
	Hajdu	11 000	000 000	000 000	100 000	100 000	1 110 000	0 111 000	0 001 000
	Heateq			111 000	1 001 000	110 000	101 000	001 000	1 110 000
	Hyundai						000 000	110 000	1 000 000
	Junior	01 000	10 000	11 000	11 000	10 000	01 000	10 000	1 110 000
	Largaz						111 000	0 010 000	0 111 000
	Monlan				100 000	110 000	1 011 000	101 000	1 010 000
	Neva/Nevalux	01 110 000	01 001 000	00 100 000	01 111 000	01 111 000	00 110 000	00 101 000	10 101 000
	Neva-Tranzit	0 111 000	0 100 000	1 111 000	0 111 000	0 111 000	1 111 000	0 101 000	1 100 000
	Nibe	1 001 000	0 101 000	0 111 000	0 110 000	0 100 000	0 011 000	0 011 000	0 111 000
	Oasis	1 000 000	11 100 000	11 111 000	01 000 000	00 001 000	00 111 000	10 100 000	10 001 000
	Oso	0 011 000	0 010 000	0 001 000	0 001 000	0 001 000	0 000 000	0 000 000	1 101 000
	Polaris	10 010 000	11 110 000	10 011 000	10 011 000	0 000 000	01 010 000	1 000 000	1 111 000
	Power	0 000 000	1 111 000	1 000 000	0 101 000	1 010 000	101 000	1 010 000	1 011 000
	Protherm	110 000	1 001 000	0 101 000	1 110 000	1 110 000	0 101 000	0 101 000	1 011 000
	Round	11 000				011 000	000 000	1 111 000	1 101 000
	Simat	1 111 000	0 010 000	0 001 000	0 001 000	0 110 000	0 010 000	0 111 000	0 001 000
	Stiebel Eltron	0 001 000	0 001 000	0 011 000	1 011 000	0 000 000	0 000 000	0 010 000	0 101 000
	Superflame								1 110 000
	Superlux			0 011 000	1 100 000	10 111 000	1 010 000	10 100 000	1 111 000
	Thermex	10 111 000	101 110 000	101 011 000	101 010 000	100 011 000	00 011 000	11 001 000	11 110 000
	Timberk	0 001 000	0 101 000	1 000 000	1 000 000	0 000 000	1 011 000	0 100 000	0 101 000
	Vaillant	0 001 000	0 010 000	0 111 000	1 101 000	1 000 000	1 110 000	0 010 000	0 001 000
	Viessmann	1 000 000	1 100 000	1 100 000	1 101 000	1 111 000	1 100 000	0 110 000	0 110 000
	Wester			100 000	001 000	100 000	1 100 000	011 000	1 010 000
	Zanussi							0 001 000	1 101 000
	Zerten				101 000	010 000	1 011 000	0 010 000	0 101 000
	Others	11 001 000	10 000 000	11 010 000	11 011 000	11 110 000	11 011 000	01 101 000	01 110 000
	Total:	001 111 000	100 101 000	001 111 000	111 010 000	100 100 000	101 100 000	010 011 000	011 000 000

Source: Litvinchuk Marketing Co.

TABLE 47. TOP-50 Company's sales value by water heater types in 2016, EUR

#	Brand	Type of water heaters						Total:
		Electric storage	Electric instantaneous	Gas instantaneous	Gas storage	Indirect waterheaters	Others	
	ACV					1 111 000		1 111 000
	AEG	111 000	100 000					1 011 000
	AquaVerso	1 000 000						1 000 000
	Ariston	10 110 000		0 100 000	0 011 000	101 000	11 000	11 100 000
	Atlan	100 000		1 001 000				1 000 000
	Atlantic	1 010 000				011 000		1 011 000
	Atmor	101 000	1 110 000					0 010 000
	Ballu	0 111 000						0 111 000
	Baxi	10 000		001 000	011 000	0 100 000		0 110 000
	Bosch	1 111 000		0 010 000		000 000	1 000	10 101 000
	Buderus					0 111 000	01 000	0 010 000
	Comfort			1 011 000				1 011 000
	De Luxe	0 100 000						0 100 000
	Drazice	01 000				1 010 000		1 001 000
	Ecofix	1 000 000						1 000 000
	Edisson	1 000 000	111 000	1 100 000				0 000 000
	Electrolux	11 100 000	0 100 000	0 001 000		000 000		00 011 000
	Elsotherm	0 110 000						0 110 000
	Etalon	0 100 000	111 000	011 000				0 110 000
	Evan		1 101 000					1 101 000
	Fais	1 100 000						1 100 000
	Garanterm	10 011 000						10 011 000
	Gorenje	0 001 000		010 000		0 011 000		1 101 000
	Haier	0 010 000		01 000		10 000		0 101 000
	Hajdu	0 000			11 000	0 000 000		0 001 000
	Heateq	1 110 000						1 110 000
	Hyundai	001 000	111 000	011 000				1 000 000
	Junior	1 110 000						1 110 000
	Largaz			0 111 000				0 111 000
	Monlan	1 000 000		101 000				1 010 000
	Neva/Nevalux			10 101 000				10 101 000
	Neva-Tranzit			1 100 000				1 100 000
	Nibe	00 000				0 101 000	10 000	0 111 000
	Oasis	0 110 000		1 000 000				10 001 000
	Oso	1 101 000				000 000		1 101 000
	Polaris	1 100 000	111 000					1 111 000
	Power			1 011 000				1 011 000
	Protherm					1 011 000		1 011 000
	Round	1 101 000						1 101 000
	Simat	0 001 000						0 001 000
	Stiebel Eltron	1 101 000	1 110 000			1 000	1 000	0 101 000
	Superflame			1 110 000				1 110 000
	Superlux	1 001 000		100 000				1 111 000
	Thermex	10 101 000	110 000			011 000		11 110 000
	Timberk	0 000 000	011 000					0 101 000
	Vaillant	000 000	00 000	110 000	00 000	1 000 000	00 000	0 001 000
	Viessmann					0 110 000	00 000	0 110 000
	Wester					1 010 000		1 010 000
	Zanussi	0 001 000	111 000	0 101 000				1 101 000
	Zerten	1 010 000		0 011 000				0 101 000
	Others	0 100 000	101 000	0 110 000	1 000 000	1 101 000	1 001 000	01 110 000
	Total:	001 000 000	10 000 000	11 000 000	0 100 000	00 100 000	0 000 000	011 000 000

Source: Litvinchuk Marketing Co.

4.2. TOP-30 DISTRIBUTORS & SALES OFFICES

TABLE 48. Main distributors and suppliers by water heater types, sales value of 2016, EUR

#	Supplier	City	Brand	Type of water heaters						Brand results	Total:
				Electric storage	Electric instantaneous	Gas instantaneous	Gas storage	Indirect	Others		
		Saint Petersburg	Daacbad	10 101 000	110 000			011 000		11 110 000	11 000 000
			Aacabdacb	10 011 000						10 011 000	
			AcdaDaccc	1 000 000						1 000 000	
			Adabcb	0 100 000	111 000	011 000				0 110 000	
			Adaccb	1 000 000	111 000	1 100 000				0 000 000	
			Aaadac	1 110 000						1 110 000	
		Moscow	Acacdcb	10 110 000		0 100 000	0 011 000	101 000	11 000	11 100 000	10 010 000
			Cdcacbdd	1 001 000		100 000				1 111 000	
			Caaabd	1 000 000						1 000 000	
			Cabad	0 001 000						0 001 000	
			Accaad	1 000 000						1 000 000	
			Aaac	1 100 000						1 100 000	
			Cacba	001 000						001 000	
			Bdbacc	1 110 000						1 110 000	
		Moscow	Abacdccbdd	11 100 000	0 100 000	0 001 000		000 000		00 011 000	00 110 000
			Dabdcca	0 001 000	111 000	0 101 000				1 101 000	
			Babbd	0 111 000						0 111 000	
			Da Daadaca					00 000	0 000	10 000	
		Rostov-on-Don	Cacac	0 110 000		1 000 000				10 001 000	11 100 000
			Dacdab	1 010 000		0 011 000				0 101 000	
			Bcbbab	1 000 000		101 000				1 010 000	
			Aabcab			110 000				110 000	
		Armavir	Bada			10 010 000				10 010 000	10 101 000
			Badabdd			100 000				100 000	
			Babdaad			11 000				11 000	
		Moscow	Bccca	1 111 000		0 010 000		000 000	1 000	10 101 000	10 000 000
			Bddacdc					0 111 000	01 000	0 010 000	
		Moscow	Adbabdac	1 010 000				011 000		1 011 000	11 101 000
			Daacbcc	100 000						100 000	
			Acdbc Dadacdad	110 000						110 000	
			Ccddb	1 101 000						1 101 000	
		Moscow	Aaaac	0 010 000		01 000		10 000		0 101 000	0 101 000
			ACD					1 111 000		1 111 000	
		Moscow	Ccbacac	1 100 000	111 000					1 111 000	1 111 000
			Accabba	0 001 000		010 000		0 011 000		1 101 000	
		Moscow	Dabbacb	0 000 000	011 000					0 101 000	1 011 000
			Addbdaa	001 000	111 000	011 000				1 000 000	
		Penza	Da Bdda	0 100 000						0 100 000	0 100 000
			Daabbabd	000 000	00 000	110 000	00 000	1 000 000	00 000	0 001 000	
		Moscow	Cccdaacb					1 011 000		1 011 000	0 100 000
			Cdaabab Abdccb	1 101 000	1 110 000				1 000	1 000	0 101 000
			AAA	111 000	100 000						1 011 000
		Moscow	Dadcabad					11 000		11 000	0 111 000
			Dcadaca	00 000				0 111 000		0 111 000	
			Bada					100 000		100 000	
		N.Novgorod	Caabad					100 000		100 000	0 111 000
			Baba	00 000				0 101 000	10 000	0 111 000	
		Moscow	Adab		1 101 000					1 101 000	0 001 000
			Aabdd	0 000			11 000	0 000 000		0 001 000	
		Moscow	Daaccbabb					0 110 000	00 000	0 110 000	0 110 000

Source: Litvinchuk Marketing Co.

TABLE 48 (CONTINUED).

#	Supplier	City	Brand	Type of water heaters						Brand results	Total:
				Electric storage	Electric instantaneous	Gas instantaneous	Gas storage	Indirect	Others		
		Moscow	Bada	01 000			011 000	0 001 000		0 101 000	0 110 000
			Da Daadcaca					10 000		10 000	
		Pyatigorsk	Bacaad			0 111 000				0 111 000	0 111 000
			Adbab	100 000		1 001 000				1 000 000	
		Krasnodar	Ccdac			1 011 000				1 011 000	0 000 000
			Abccdaacb	0 110 000						0 110 000	
		Saint-Petersburg	Da Daadcaca					1 000		1 000	0 110 000
			Badcaad			0 100 000				0 100 000	
		Tula	Adbcc	101 000	1 110 000					0 010 000	0 001 000
			Dacd	01 000						01 000	
		Moscow	Bcc-Abc				100 000			100 000	0 010 000
			Addcdcaa Abaab	01 000				101 000		110 000	
		Moscow	Bcccab		111 000				0 000	100 000	0 010 000
			Dcadaca					000 000		000 000	
		Tula	Cdcacababa			1 110 000				1 110 000	1 110 000
			Ccc	1 101 000				000 000		1 101 000	
		Saint-Petersburg	Bada-Dcabdad			1 100 000				1 100 000	1 100 000
			Ccbaccd			1 011 000				1 011 000	
		Pyatigorsk	Dbbadca			111 000				111 000	1 000 000
			Others	1 111 000	010 000	1 010 000	100 000	1 100 000	1 001 000	01 111 000	
Total:				001 000 000	10 000 000	11 000 000	0 100 000	00 100 000	0 000 000	011 000 000	

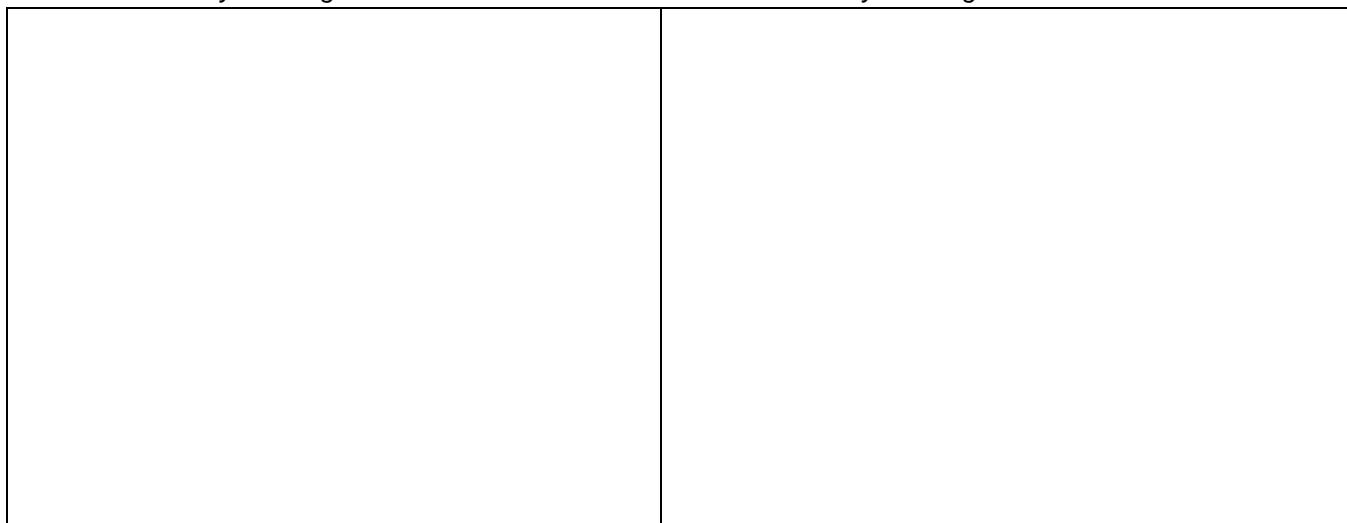
Source: Litvinchuk Marketing Co

Babcd da aada daa cdubbacd daaacabc acc dacdab cdddc ca daa bacbad ccbcabdcadacb ab adc baadacc' aabdc:

DIAGRAMS 38. Russian water heater market structure by leaders' sales value, %

By Leading Brands

By Leading Distributors



Source: Litvinchuk Marketing Co.

Daa Cdccaab bacbad ca dadac aaadacc cab ba addcabddad dc daa accdc ca bacbadc dada a aaaa ccbcabdcadacb ca cabac ab daa aabdc ca daa baadacc. Ab aabacab, adacd caccbd dadac aaadac cb daa bacbad ac ccabd bd daa ccbcabd accb DCC-0. Acc bcdadadcb ad ac dacd, dacd bdca. Dadabccbabd ca daa ccbcabaac ab cacabd daacc ac a dacba aadc abdc cba bcdab: cbc a dcd aada a cabac baddccb, ad ac bacaccacd dc caaaac daabacc daa acaadacd cccccabba cabaa ca cccddcdc accb dacacdc caababdc. Daacaacca, dacdcabddccc cdac-bd-cdac adcabdaba adc cccddcd cabaa ab ab aaacd dc ccdac abb daa bacbad caababdc. Daa ccacac dabb ddcb daac dcabd ab daa cccccada dacacdabc aadac daba – cadca cb a aabbaba bacbad daaca ac a baad dc accdc cb dacca cccddcdc daad aca abcaadd cccaadabba – abdacdbabd acaac cab ba dabedad dbdab baddac dabac.