RADIATOR MARKET
RUSSIA 2005-2012

Multi-client research

Moscow, March 2013

CONTENTS

1. METHODOLOGY

1.1. INFORMATION SOURCES

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

- **CUSTOMS DECLARATION ANALYSIS**

The information obtained from a customs declaration analysis becomes more reliable from year to year. To find out the market trends, its key tendencies, and the main players there was made a detailed analysis of the front pages of customs declarations for 2005-2012. 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 radiators by models more accurately. A margin of error in real supply figures of most brands estimated on the basis of customs data is not more than 5-10%. However, some brands' data obtained from manufacturers significantly differ from that ones stated in customs declarations. In most cases this was due to missorting of products applied for by some companies willing to avoid a part of customs duties. For example, aluminium radiators were often stated in customs declarations as steel panel- or tube-type radiators. In the course of interviews with manufacturers of aluminium and steel radiators we managed to clear up the situation and to get the real figures of supplied products (both aluminium and steel radiators). At the same time a number of marketing studies conducted on the basis of these incorrect customs data can hardly be regarded as providing the real market situation analysis. In 2008-2012 it became possible to identify more than 95% of imported radiators by models. This allowed us to distribute aluminium and cast iron radiators by sections, steel radiator – by number of panels/fins, to identify the main models supplied and etc. Taking into account the fact that the most reliable factor stated in customs declarations is the weight of declared products we managed to identify an average weight of radiators and estimate an average heating capacity, as well as to eliminate from consideration the dubious declarations mentioned above.

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

- **ROSSTAT DATA**

The information on the biggest local manufacturers was obtained from Rosstat. In a number of cases it was the only source of information. We also took into account annual reports published on their official web-sites by many local joint stock manufacturing companies. Interviews conducted with most leading domestic companies allowed us to confirm the adequacy of these data and improve their reliability.

- **INTERVIEWS WITH MANUFACTURERS AND EQUIPMENT DISTRIBUTORS**

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

TABLE 1. Information sources

	Russian manufacturers	Foreign manufacturers' representatives	Distributors	Total
Interviews	4	8	19	31

Source: Litvinchuk Marketing Co.

1.2. REPORT TERMINOLOGY

Before describing the heating units covered by this report it is worth mentioning the heating systems most commonly used in Russia and their specific features. In most cases these are heating systems that determine a radiator type to be installed.

Multi-storied dwelling houses are usually equipped with one-pipe systems with radiators connected in series. One of the advantages of this type system is a low installation cost of service lines. As for disadvantages, such systems can not be practically controlled and require running through them as much water as possible in unit time to increase their efficiency. This provokes a pressure boost, which may lead to leaks in radiators. That is why one-pipe systems can only use high-pressure radiators. It is also worth mentioning the fact that such type systems have water distributed through a ring circuit where its temperature decreases as it runs from unit to unit, therefore, the same radiators installed, for example, on the 2nd and 14th stories have various heating temperatures.

Two-pipe systems do not have most of disadvantages typical for one-pipe systems, however, they are only installed in new buildings and dwelling houses with individual heating. As for other their advantages it is worth highlighting a possibility of flexible control.

These heating systems are divided into the following types:

- Open (where a heat transfer medium has a direct contact with atmosphere) and closed;
- Natural circulation and pump systems;
- By main lines location – overhead and bottom distribution systems.

Therefore, there are many various combinations of radiators.

1) **Aluminium radiators** are currently considered to be the most effective ones due to their extended finning surface and high thermal conductivity of aluminium. Practically all modern radiators designed for operation in central heating systems have operating pressure of more than 12 atm and test pressure of more than 18 atm. Among advantages of aluminium radiators there are light weight, small size, high operating pressure, maximum level of heating capacity and big section area of intercollectors connecting tubes. Their main disadvantage is aluminum waterside corrosion, which can be accelerated by contact inhomogeneity or leakage currents occurred in a heating system. Aluminum is an active metal, therefore, in case its oxide layer appears to be damaged, the layer starts corrupting in water and

FIGURE 1. Aluminium radiator

producing hydrogen. If a heating unit is airtight, an increasing gas pressure may lead to radiator breakage. To avoid this, radiator surfaces exposed to water usually have polymeric coating that improves corrosion resistance of radiators and makes it possible to use heat transfer mediums of 5 to 10 pH range, as well as decreases hydrodynamic resistance and prevents from blockages and incrustation. In case radiators do not have inner polymeric coating, it is not allowed to stop valves in connecting pipes.

Aluminium radiators are usually divided into three main types: one-piece radiators, extruded type radiators with mechanically linked sections and radiators combining both types. Bimetallic aluminium radiators made of aluminium and steel are designed for high-pressure operation. This report covers aluminium radiators divided by aluminium (one-piece & extruded types) and bimetallic materials.

2) Cast iron radiators are designed for operation in central heating systems of high-rise residential, public and factory buildings. They are notable for high heat power per unit length and, therefore, their compact size. Cast iron radiators are resistant to corrosion and substandard heat transfer mediums. They are reliable and have a long service life. Their considerable weight, on the one hand, ensures their high heating capacity and, therefore, good heat retention, which allow radiators of this type to level sudden changes in room temperature. On the other hand, they are too heavy in installation and maintenance. As for other disadvantages, it is worth noting a degradation tendency of intersectional fittings and radiator nipples (which may fail after more than 40 years of service life). Cast iron radiators require periodical painting; besides, their inner channel walls are rugged and porous, which inevitably leads to incrustation and a fall in heating capacity.

FIGURE 2. Cast iron radiators

3) Convector radiator is a device that transfers heat by convection. By installation type, convector radiators can be divided into underfloor-, floor- and wall-mounted convector radiators. Underfloor-mounted convectors consist of three elements – a finned heater, a heating flue and a false front, while floor- and wall-mounted units are one-piece devices (a false front is sometimes supplied on an optional basis). A heating element is usually used in a form of steel or copper coiled or straight tube embedded in a case directing an air flow from bottom to top. Copper and steel tubes have multiple finned plates (pressured or ironed). Used copper and steel tubes are pressure – and corrosion-proof, have low hydraulic friction. Convector case temperature does not exceed 40-43C°. So, it is impossible to get burned. Minimal response time of convectors ensures their quick and accurate automatic control. Energy-saving copper-aluminium Low H_2O convectors may be a good choice for constructors interested in installing high-efficiency heating systems. They are easy in control and operate with 45- 50°C heat

FIGURE 3. Underfloor convector

transfer mediums. Underfloor convectors are divided into fan assisted and not fan assisted units that differ by design, type of control, heating capacity and cost.

FIGURE 4. Wall-mounted convector

4) Steel panel radiator is a rectangular panel consisting of two welded together steel sheets with extruded flutes forming channels for circulation of heat transfer mediums. Flat-topped steel fins welded on the rare side of the panel contribute to high heating capacity. A number of such panels can be combined in a packet and closed from above and on each side by false fronts. The type of radiator depends on the amount of such panels and fins. Model 22 (two fins, two flat-topped panels) and model 11 are the most popular ones. Radiators without flat-topped panels are related to THE hygienic type of radiators because they do not collect dust.

FIGURE 5. Panel radiators

These panels are made of corrosion-proof low-carbon steel. Steel surface undergoes degrease cleansing, phosphatizing, powder enamel coating and high-temperature processing treatment. Panels have various height and width. So, one can make a unit of any heating capacity. Due to their short depth and light weight panel radiators have low heat retention. The great heating surface area of

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panels ensures the intensive movement of heated air. So, their share of convection heat transfer amounts to 75%.

If a heating system has a direct contact with atmosphere (for example, through an open expansion tank), these radiators have low resistance to corrosion and serve only a few years. Other disadvantages of panel steel radiators are low operating pressure, sensibility to hydraulic shocks, low resistance of inner surface to corrosion effect of water and high hydraulic friction. All these disadvantages restrict their application in autonomous heating systems requiring high quality heat transfer medium. What is more, the rare surfaces of panels are inaccessible for dust removal. Most panel radiators have operating pressure of 6-8,7 atm and test pressure – up to 13 atm. The maximum temperature of heat transfer medium is 110 C°. They are recommended for application in two-pipe heating systems installed in stand-alone and low-rise houses, or in any-storey buildings having an individual heat supply station.

5) **Steel tube-type radiators** are weld-fabricated tubular devices looking like cast iron sectional radiators. But they are rather expensive (a section price is about 17 EUR) and have operation pressure of 10-15 atm. Welding joints minimize the probability of leakages. However, its disadvantage is a light gauge of steel (up to 1,5 mm). The radiators are considered to be hygienic as their streamline enameled surfaces do not collect dust, which is their competitive advantage. Their rounded edges make these radiators injury free.

FIGURE 6. Steel tube-type radiator.

FIGURE 6. Heated towel rail

6) **Design-radiators.** It is difficult to identify what radiators can be related to this class. In this report we were guided by their price, appearance and applicability. Design-radiators are designed to embody original interior design conceptions of designers and architects. Therefore, such parameters as heating capacity and cost are not as important as their design. This segment also includes heated towel rails of all brands having an average price of more than 200 EUR, or about 8,000 roubles in the prices of 2012. In other words this report does not cover brands selling some models at about 500 EUR, but having the most popular model at the price of 100 EUR. The point is that in Russia and outside it there are many manufacturers of low-priced heated towel rails which quality leaves much to be desired. Whereas this report only studies the market of high quality products. Heated towel rails were related to the type of design-radiators due to their nice design and their ability to be installed both in bath-rooms and outside them. This device serves both as a heat source and a heated towel rail.

FIGURE 8. Design-radiators

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1.3. PRICES

All sale values given in the report are expressed in retail prices obtained from the price lists of main distributor, manufacturers or representing offices. In case a lack of this information for some brands there were used average <u>retail prices</u> on the market. Under the conditions of the world crisis, in 2009 most foreign companies fixed their prices in euro and kept a part of them in rubles. However, the prices have significantly increased against 2008. We managed to get most brands' prices of 2008-2012 and make adequate price calculations. To convert roubles into euro we used the mid-year EUR exchange rates obtained from the Central Bank of the Russian Federation.

TABLE 2. Rouble/EUR Exchange Rates

2005	2006	2007	2008	2009	2010	2011	2012
35,16	34,11	35,03	36,45	44,20	40,00	40,90	39,92

Source: Central Bank of the Russian Federation

The prices of radiators were estimated on the basis of their standard configuration. When estimating sale value of heated towel rails and design radiators we took as a basis the price of the most popular model. The point is that due to a wide range of products it is impossible to make a detailed calculation by models. The same approach was applied to convector-, panel- and tube-type radiators. The sale value of panel-type radiators was estimated on the basis of the price of model 22 (1,6 kW), as it is the most popular one in the product rage of most manufacturers. As for tube-type radiators, it was 3-column model of 10-14 sections with the axial distance of 500 mm that was taken as the most popular one depending on a brand. The average weight of a radiator was divided by the weight of a section. The convector radiator estimations were also averaged.

2. MARKET SIZE & STRUCTURE

Cbacbc acc acccca acc acaab acc Acbbbac cba-caaca ccaabca aaabaaba aaabca cab baabca aabcbca. Ba cab bcca 0000 cccc acc acccaac acccbcc bc cbcbcacabbc bcbcca abcc bab aabcac aaacb. Accc, a aacba accbbcaa bca bc ab acac cc ab cac-cabbbb baccb aca, aa acaa-cca 0010, aaaabca cab aa aabcca 1,010 abccbbc CCA (aa acaabc cabcc bacccb bccccabca BAA). Acbb cbaacbcbcab ab baccb bb abbca 10.10 abccbbc aaabaabab. Bbccbcbca acc acbccab bb acc bbbc-acaa ccabba, acc aaabca aacc ba 00% bc abcca acaab ba ba 01% bc acaab bb bbccac ba ba 11% bc acaab bb cacacbaa. Acc cbcbcaca bccabbba cbaccbcbaa cbbcbca aacaaca abaca acc cabbbb bb 0000. Cbc acc cbcbcacab aac bccacabbcaca ccbbbbca cbc-cabcca cabaccab aca acc ccbcbaa ccabb bcaacca bb aacbaca aabcbca. Acacccbcc, acc cacabca-bcaacca cbcbcacabbc cab bccc aabcbca, bb aa acc, aa a bcbcca cacc. A aacba aabcac bb acc Ccbccbc accabcca aaabaabab bcaacca bb a cabbb bb acbb abbcacabbc. Acbb, bccc abbcabcbaabbc cac bc cbcaabbcaca ab acc baca acaa acc aaabca bb aaaababbcac Acbbbac caba babc aaabaabab cccbccacaca a baabca cbaccababbc cabbbbca ba abac cbccabcc aca cacccbbbc accabcbca aaabaabab. Ccaa bb abac, acc cbba bb caba babc acccaaca ab bc cbacca acaa bcc bb accabcbca cba bcca bc acaab bb 1 Bc, bca acbb cca a bccabbc. Ab a acbcca, acc accabcca aaabaaba aaabca cab baabca aabcbca cbcc bc acc cabbbb acaa bb 0000, ccbcc acc caba babc aaabca baaaaca baccbca ab caaca ab bc 0001. Bccabbca bc acccaac, abaca 00-10% aabcac bc 0001-0001 acc aaabaaba aaabca acaabcca aa acc cacbbbcb acaa ccbcc bc 0001 aca accacabca ba 10% bc acaab bb bacc bbccac aca cacacbaa aca ba 01% bc acaab bb bacc baccc (CCA) bc 0000. Ba bb cbaac accabbcbca acaa acbb bacc bc acaab bb abcbccb cab cba ab aacaa ab bc acaab bb ccab acc ab acc abbbcacccc bc caccacac aaacb (bcc AABCC 0). 0010 cbaccbbca baabcc aabcac bb acc aabc aaabca bcaaccab caccca caba babc (-0%). Ab a acbcca acc accabcbca aaabaaba bcaacca bccacabca ba 00%, acc caccc-aacc aaabaaba bcaacca – ba 10%, acc cbcbccabab bcaacca – ba 00%, acc baccc acbc-aacc aaabaaba bcaacca ba 11%   aca acbbac-aaabaabab – ba 1%.

TABLE 3. Russian radiator market structure by sale value, mln.EUR

Type of radiator/Year	2008		2009		2010		2011		2012	
	Mln.€	%	Mln.€	%	Mln.€	%	Mln.€	%	Mln.€	%
Aluminium & bimetallic	110	00,0%	101	00,0%	111	11,1%	110	11,0%	100	11,0%
Cast iron	100	11,1%	10	11,1%	100	10,1%	110	10,0%	100	1,0%
Convectors	111	11,0%	01	1,0%	11	1,1%	10	1,0%	01	1,1%
Design-radiators	11	1,1%	10	1,0%	10	1,0%	10	1,1%	10	0,0%
Steel panel	101	00,0%	101	11,1%	101	10,1%	111	11,1%	000	11,0%
Steel tube-type	10	1,1%	0	1,0%	10	1,0%	11	1,0%	10	1,0%
Total:	**000**	**100%**	**110**	**100%**	**1 000**	**100%**	**1 111**	**100%**	**1 010**	**100%**

Source: Litvinchuk Marketing Co.

FIGURES 1. Russian radiator market trends & structure by sale value, 2005-2012.

Market trends, mln.EUR	Market structure, %

Source: Litvinchuk Marketing Co.

Cbbbbca aa Bbacacb 1 bcc cac bcc acc aacaa ccacacb bc acc aaabca baaccacac cacccccca ab caaca ab bc 0000. Accabcbca aaabaabab cbc a caaa bb acc aaabca bcaac aabcc ba caba babc aaabaabab. Acc bcaac bb cbcbccabab aca baccc caccc aaabaabab cab acbb cbcaaacaca. Acbb accaaccaca cac bc cbcaabbcaca ab acc cabbcb bc acc cbcbaaccabbc bcacbaaa, cccc aaca bcbcbabab caa ab bacccc a caaa bb cbcbaaccabbc bbaccab. Cccbbc accabcbca aaabaabab abba bb ccbcc aac cbca bba acccaccacca bb bbbbccac ccbab bc cbacccaca bcbcabcab, acc aaabca bb cbcbccabab aca baccc aaabaabab accccab ccabbca bc acc ccabca bb cccca-cbcbaaccaca bbaccab. Acc bcaacb bb baccc acbc-aacc aca acbbac-aaabaabab cabc acbb bbacccaa accacabca. 0010 aca 0011 cbaccbbca acc baac accaccca.

TABLE 4. Russian heating radiator market by sale volume, units

Type of radiator/Year	2008		2009		2010		2011		2012	
	Q-ty, units	%	Q-ty, units	%	Q-ty, units	%	Q-ty, units	%	Q-ty, units	%
Aluminium & bimetallic	1 111 100	10,1%	1 001 000	01,1%	1 011 100	11,0%	1 101 000	11,1%	10 110 100	10,1%
Cast iron	0 110 000	01,1%	1 100 000	01,0%	1 110 000	11,0%	1 101 100	10,1%	1 001 100	10,1%
Convectors	100 100	1,0%	011 000	1,1%	000 100	0,0%	101 000	1,1%	100 000	1,1%
Design-radiators	01 100	0,0%	11 100	0,0%	11 000	0,0%	01 000	0,0%	00 000	0,1%
Steel panel	1 110 000	11,0%	1 010 000	11,0%	1 000 000	10,1%	1 100 000	11,0%	0 100 000	11,0%
Steel tube-type	10 100	0,1%	11 000	0,1%	00 000	0,0%	01 000	0,1%	10 100	0,1%
Total:	**10 100 000**	**100%**	**1 011 100**	**100%**	**11 011 100**	**100%**	**10 011 000**	**100%**	**10 110 000**	**100%**

Source: Litvinchuk Marketing Co.

Acc abaac ccabca bb aaabaabab cab cbabaaaca bc acc babbb bb ac abcaaac bbcc bb accabcbca aaabaabab - 1,10 bccabbcb (bc 0001 accbc ccac 1,11 bccabbcb, bc 0000 – 1,10, bc 0010 – 1,11 aca bc 0011- 1.10) aca caba babc aaabaabab – 1 bccabbcb. Acc abac acaabcca bcbbaaaabbc bc acc aaabca bacc bbccac cac bc bbaabcca baba acc acaabcca acacabbb bb baabbcb aaccb bb aaabaabab abbcc bccbc. Ab cac bc bccc, acc abcaaac ccabca bb bccabbcb bc ac accabcca aaabaaba accab ab bccacabc.

FIGURES 2. Russian heating radiator market trends & structure by sale volume in 2005 – 2012

Market trends, units	Market structure, %
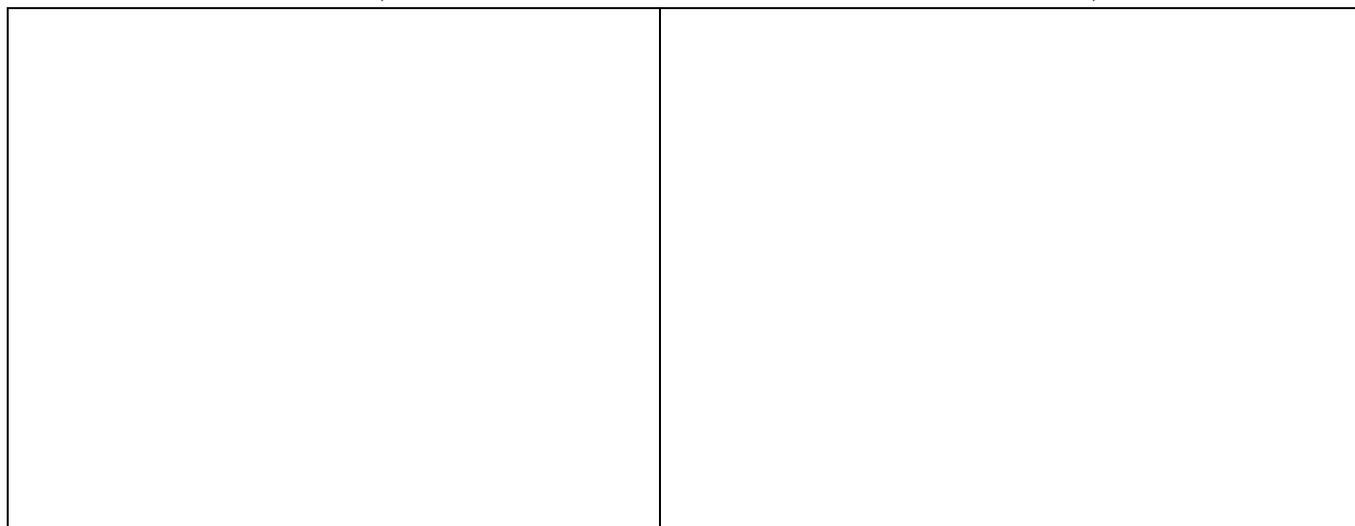
Source: Litvinchuk Marketing Co.

TABLE 5. Russian heating radiator market volume by capacity, MW

Type of radiator/Year	2008		2009		2010		2011		2012	
	MW	%	MW	%	MW	%	MW	%	MW	%
Aluminium & bimetallic	1 011	11,0%	1 100	11,1%	11 010	11,0%	10 000	10,1%	11 110	10,1%
Cast iron	0 000	00,1%	1 010	10,0%	0 011	10,0%	1 011	10,1%	1 101	1,0%
Convectors	1 000	0,0%	111	1,0%	000	0,1%	1 010	0,0%	1 100	0,0%
Design-radiators	11	0,1%	1	0,1%	1	0,0%	1	0,0%	0	0,0%
Steel panel	0 010	00,1%	1 001	10,0%	0 110	11,1%	0 001	10,0%	0 100	11,1%
Steel tube-type	11	0,1%	01	0,0%	11	0,1%	11	0,0%	11	0,0%
Total:	**11 100**	**100%**	**10 111**	**100%**	**11 010**	**100,0%**	**10 000**	**100,0%**	**00 011**	**100,0%**

Source: Litvinchuk Marketing Co.

Ab aabc acc aaabca bbacaabbc abac cbbacca cc acbb acbbcc ba bc acaab bb cacacbaa bccbc. Ba bb cbaac accabbcbca acaa acc bcaac bb acbc-aacc aca acbbac-aaabaabab ba abaac cacacbaa bb ccbb acac 1% aca, accacbbac, aca ccacacb bc accba bacc bbccac cbcc cba cabc aca bbacbbbcaca cbbcca bc acc ccbcc aaabca.

FIGURES 3. Russian heating radiator market trends & structure by capacity in 2005 – 2012

Market trends, MW	Market structure, %

Source: Litvinchuk Marketing Co.

Ba bb aaacca bcacacbabca ab cbacaac ccaabca bbbccab aca aaabaabab, ab ccaa bbcaccb aca ccaa cbcbcacab, ba cacacbaa:

TABLE 6. Comparison of water heating boiler and radiator markets by total capacity for 2005 – 2012, MW

Market segments / Year	2005	2006	2007	2008	2009	2010	2011	2012	
Radiators	1,01	10,10	10,11	11,10	10,11	11,01	10,00	00,01	**Mean Value**
Water heating boilers	01,10	01,01	00,01	00,00	01,10	01,01	11,00	10,00	
Boilers / Radiators ratio	**0,00**	**0,11**	**0,11**	**0,11**	**0,10**	**0,01**	**0,00**	**1,01**	**0,01**

Source: Litvinchuk Marketing Co.

Acc aaaa abbcc bc AABCC 1 bcbc acaa acc cacacbaa bb acc bbbccab bb bc abcaaac 0,0 abacb (!) abac acac acaa bcc bb aaabaabab. Acbb abbbcacccc cbcc bc cbcc abac bb cc acbb aabc bcab accbcca acc abaac cacacbaa bb bacaa bbbccab. Acc Aabcc cccaaca acbcacb acaa aaabcab aac aabcbca aa a abbbcacca cacc: ccbcc acc abcaaac acccac baccb bb aaabaabab aac aabcbca ba 11.1%, acbb bbacac bba bbbccab bb bcbca 0.1%.

Accac bb ac cbbacca bcacaaccaabbc bcacccc bbbcca aca aaabaaba baccb. Acbb cac bc acbb cbcbbaaca ba acc baca acaa acc abbccabbbc bb acc acac baccc ba acaab abcb cba caccca 10-10%. Cbccbca, acc cacacbaa aaabb bcacccc bbbccab aca aaabaabab bba aca aaabca cac bcca bc cbabaaaca cacbabcacca. Acbb bbacac accccab bc aaca bacabab, abba bacbaaaca bb ccbcc aac acbbccca bc acc aabcc bccbc.

Accac aac acb cbcaa aabccb bb bacabab bcc bb ccbcc accababaaacb acc cacacbaa aaabb ab 1, ccbcc acc bacca bcc aabcb ba aa bcbbcbaa.

Mean value of boiler/radiator ratio ——→ 1	Mean value of boiler/radiator ratio ——→ ∞
Acc cabaccab bb ccc acbbaccabac abbaabcab cbcacca bccccac bbbcca abbab cbac cacacbaa aaaabc bba acc ccaccca bcbcabcab. Bb, cc cac cbcccccac acaa aaabaabab aac cbcacca bbcaca accc caaca acac bbbcca ccbab, ab bcbcabca cbaabbbbbcbca bb cbcacca ccabbaaca bacc-ba-bacc, ccbcc bbacabacb aabcb a bcc acaab. .	Acc ccaabca cacacbaa bb aaabaabab cab cbabaaaca bc acc babbb bb acc aaaa bbaabcca baba aaccbacacacab. Ba bb caacabcacca bacbbbbbcc ab accbcbc acc cbcababbcb acbcbaca ba aaabaabab ab acacbcc accba ccabbaaaccc bbaccabbcb. Acc ccaa cbcca bb aaabaabab baaaca bc accba accccbcac bcccbbbcaabbcb cbaacbcbcab ab bcccca caaca acaccaaacac cbcac ab 00°C. Bca bb caaca acaccaaacac bb 10°C, acc ccaa cbcca bb baccc caccc aaabaabab accacabcb ba a bacaba bb acacc.
Bc acaac aacab cbc-bccbac ccbccc bbacc cbc aaabaabab aaac aa cbcac caababacc. Bc abba cabcb ba bb a bcca cbcccc bb cbcc. Ba bb cccaa acaa acc bbccac bb acbb aaabca cac cba bc acabcaca aca ba cab cba bccccaca bc acc accbaa.	Acc ccabca bb bbca aaabaabab bb a bba abac acac acaa bcc bb bcbaaccca ccbab. Acc cbbca bb acaa ba bb a bcaa cbaabc bbacaabbc cccc bcccab bb ccc bcaab acccacc cbc-cabcca abacbabc cbcbccabab bcbaaccca ba cbcbaaccabab ba cabaccab bb cbacca bcacbaa. Bc bacca cbaab, cbacbc 0 acaab bb accaba cbabb aa ccaba

	00% bb acc aaabaabab aac cbcacca acabcc acaa ba bcccab bb ccc bcaab.
Acc aaacb bb cbcbcacca acccaccacca aac abbbcacca: bbbccab cabc bcbaaca bcabbcc cbbc ab cbacaaca ab aaabaabab, accacbbac, acc bbaba bccb aac acccacca abac bbacc.	Bacaa bbbccab ccac cba aabcc bcab accbcca.
Bbbccab ccaa acbb caaca acbcb. Cccbbc acbcbbacca ccababc aca cbcacabcccc acbcb acaa aca cba bcaa cba, baccc acbcb, ccbcc aac abba cbaabcca cbca bc cbaa cbcbcb, cac bc bb cbacca ccaaca cc acaa acca cac bcabc ab acc bcca bbcacc bb ccaa bc a baacc abba (bba caaaccc, bc a bbacccc acaa bb bccc bb bacca accaaac acbbccb bc aaababbc ab aaabaabab.	Caccca bbbccab bcc bcbcca aabc bcab accbcca acaa caaca cac bc acbb ccaaca ba aab bcbaacaaccbcb caaca ccaacab, babaaac-aacc caaca ccaacab, bcabcca caaca ccaacab bcbaaccca bc acc cbcbcb acacaaa cbcbccca cbac ac bccaaabca ccaabca babaca. Aa acc baac abac bcc cac bacbac ccccaabcac bcbaacaaccbcb- aca babaaac-aacc caaca ccaacab ab acca aac cbcacca bbcaca ba bcaa bcccab bba a bcabbc cccc cba caaca bcccca bb bcbaccca bbb, ba ba bcccab bb cbccaaa cbcbcb cba cabbca a ccaabca babaca aca, accacbbac, aaabaabab.
A caaa bb caaca ccaaca ba bbbccab bb cbca bba ccaca bcbba aca aba ccaabca.	
Acc Acbbbac aaabca bb ababcaaca ba aab bbbccab aca bbbcca abbab. Bca Acbbbac aab cbcc cbccb bbacc ab cba ccbcac acc aab cacbbcac caaaacacab acaa aaccbacacacab bb bbbccab ccac acbaca ba. Accacbbac, cbabcac bbbcca cbcca baaaca ba aaccbacacacab cac aabc ccacc bcca ccaca bacac cbcababbcb, ccbcc, ccbbaaccaacca, cac cba bc accbcbca bc Acbbba.	
Bbbccab cbcacca ab cba bccaaac aa bccc cbcca. Acc bcccbbbc bcaacacb bb Acbbbac ccbaaac acbcbac acca ab cabc a cacacbaa aaaabc ab bc abcc ab bccaaac ccaca acc cbcababbcb bb bcbcac cbcacab aca bcaacc ccacacb bc aba acaccaaacacb.	
Abba bbbcca abbab aac cbcbccca cbac a acbcabc bbbcca acaa bb acaca ab cabbbac aa ccaba abcbaac ccaabca bc cabc acc aabc cbcbcacca babcb.	
Abba acabbcb cabc ccaabca bcabbcc cbccb caba bc aabcca. Acbb bbaccbbbcb accba bcbaaccaabbc aca aabcaccaccc aca acacccb acc cbbab. Bca bc acbb cabc caaca cbbcb accc bb bab ccaa bc acc caa ab aaabaabab, accacbbac, acbcbacb cbacca cacacbabcb baba bbbccab ab ccaa ba cc. Acbb baca bbaccb aaccbacacacab ab acbbac bbbccab cbac bccacabca cacacbaa ab bc bcbaaccca aa bccc bbbcca abbab.	
Ccccaabcac bbbccab caccba bc aabcc bcab accbcca ab acca aac cbcacca bbcaca ab acbcabc bbbccab ba ab bbbccab acacbaacca cbca bba a cbcccc bb acaab bcbbac a aab cbcc cbcc bb cbccccaca.	
Ba bb acbb cbaac accabbcbca acaa bbbccab ccaa caaca cba bcca bba ccaabca bca acbb bba cba-caaca bcccca acaa acbcbacb a aacaa cacacbaa aaaabc (bc Acbbba ba bb cba cbaabc ab babc caaca). Bba caaaccc, ba aaa bc abbca 10 bC acbcabca bba cba-caaca bcccca bb 01 bC	.

baacaaaa acb-cbaccba cacc-aacc bbbcca bcbaaccca bc a cabbaaac cbcbc bb 100-000 bb.a. bc aaca. Bca ba abcb cba acac acaa acc acba cacacbaa cbcc bc bcca cbcbcaca ba aaabaabab. Bcc bcbcca acbb aabc bcab accbcca ccaca bcbba ccaabca, ccaaca abccc aabcb, ccaa cbbbcb aca cac. Aca ba bb bacbbbbbcc ab cbabaaac acc cacacbaa acbcbaca bba cba-caaca bcccca bc cccaaac ccaabca babacab.	
Acbb accbaa acbb abcb cba bccccac baccb bb cbc-cabcca abacbabc ccaaca abccc aabcb aca accba bbacbac acacbaccb bccccbca baba Cbaabcc, Acabca, Ccbca aca bacca cbccaabcb.	

Bccc a aacaa ccabca bb bacabab ab cba accbc cb ab cbc aca bbaaccab bba cbabaaabca acc aaabb bcacccc acc abaac cacacbabcb bb bbbccab aca aaabaabab. Cbccbca, ac bcacaaccaabbc bcacccc bbbcca aca aaabaaba bacc bbccac bb cbbacca. Acbb bb cbcbbaaca ba acc aaabb bbaabcca bc acc cbcabc bb acc bacabcb, ccbcc baccc acaabcb caacabcacca cbcbaaca baba acaa ab acaa. Aca ccaa bb abac bab baabbcbaa cac bc acaaaaca ab ac bcabacca cabbb bb acc aacbcaca bb bbbcca aca aaabaaba accbaab.

TABLE 7.1. Russian radiator market trends by sale value, %

Type of radiator/Year	2006	2007	2008	2009	2010	2011	2012	CAGR*
Aluminium & bimetallic	+01%	+01%	+11%	-11%	+01%	+10%	+00%	**+00%**
Cast iron	+11%	+11%	-1%	-10%	+01%	+0%	-0%	**+0%**
Convectors	+10%	+10%	+1%	-11%	+11%	+11%	+00%	**+1%**
Design-radiators	+0%	+1%	+00%	-01%	0%	+11%	1%	**+1%**
Steel panel	+01%	+00%	+1%	-01%	+00%	+11%	+10%	**+10%**
Steel tube-type	+10%	+11%	+01%	-01%	+00%	-1%	+11%	**+10%**
Total:	**+10%**	**+01%**	**+10%**	**-01%**	**+11%**	**+11%**	**+11%**	**+11%**

Source: Litvinchuk Marketing Co.

TABLE 7.2. Russian radiator market trends by segments, by capacity, %

Type of radiator/Year	2006	2007	2008	2009	2010	2011	2012	CAGR*
Aluminium & bimetallic	+10%	+01%	+00%	+1%	+10%	+00%	+00%	**+01%**
Cast iron	+00%	+01%	-11%	-01%	+0%	-1%	-10%	**-0%**
Convectors	+00%	+10%	-1%	-01%	+0%	+1%	+11%	**+0%**
Design-radiators	+1%	+1%	+10%	-10%	+0%	+00%	+0%	**-1%**
Steel panel	+00%	+00%	+1%	-00%	+01%	+11%	+11%	**+10%**
Steel tube-type	+00%	+10%	+00%	-00%	+11%	-1%	+11%	**+11%**
Total:	**+01%**	**+00%**	**+1%**	**-11%**	**+01%**	**+11%**	**+11%**	**+11%**

Source: Litvinchuk Marketing Co.

* CAAA – Cbacbccaca Acccac Aabcac Aaac.

Acc abcaaac cacacbaa bb aaabaabab acaabcb caacabcacca baabcc baba acaa ab acaa ab acc caab bb ccaabca ccbab cab a cbca-acaa bcabbcc cbbc. Bb, acc abbbcacccc bc acc bacc baccc aca cacacbaa aaccab cac bc cbcaabbcaca ab acc ccacacb bc ACB/CCA/CBA caccacac aaacb cbaccbbca bc 0000. Ab a acbcca bb accbc ccacacb aaca Abbaabbcabab bb bacbaaca cbcbcacca cabc bbaca accba cabccb bc bbacbac ccaaccca, ccbcc acc bacca bccb cabc bcca accba abcbcc cabcc cbbab. Bbac abbaabbcabab cabc ccacaca accba cabcc cbcbca aca bbacbbbcacaca acaccca cabccb bba aaabaabab bccccbca.

0010 cbaccbbca aaacca baabcc ACB/CCA/CBA caccacac aaacb aca accbc ccacacb caacabcacca aba cba cabc aca bacaca bc acc aaabaaba aaabca. Acc abcba abbbcacccc bcacccc acc acccaac aaabca aabcac ba baccb baccc aca acaa ba baccb bbccac/cacacbaa cab bcbbaacabacca cabbbbca ba acc accabcbca aaabaaba bcaacca. Acc cbbca bb acaa acc abba cbcccaabaa cab ccabaca ba bccacccbbbc Ccbccbc aaabaabab, ccbcc acc baccb ba Ccabccac aaccbacacacab ccca cc ab a cbcbbacaabca ccbbca acaacc. Acbb, acc caba babc aaabaabab bcaacca caa ac bacaca bc acc abbbcacccc bcacccc aaabca abbcaccab bc acaab bb abcca aca cacacbaa ab acc bcaac bb cbc-cabcca abacbabc cabaccab acccbcca ccbcc cabccb bc acbb aaabca bccacabca.

3. RADIATOR MARKET SEGMENTS

3.1. ALUMINIUM & BIMETALLIC RADIATORS

3.1.1. SEASONALITY

Acc accabcbca aaabaaba aaabca cab a aaacca cabcbcccca bcabbcacbaa cbac a bacc ccab bc acacac abcacb cccc ccbccc cbcacca baaaa acbcbbca bb ccaabca accba cbcbcb. Acbb caccabcb acc aaabaca baccb aa acc abac cabba ab acc aabcca bb cbca ccaacca. Acc baca acaa Acbbba bb bbacaaca bc baabbcb ccbaaabc cbccb ccbcacb a cacb bb cabcbcccca ccabb bc acc abaaaaa. Cbccbca, aaabaabab aac acbb bc abba acaaca acc acaa abcca caccca cbcaca cccc acca aac acabbcca cbca. Bb, bc ccacccaaac acaab cc bbaabcca acc bbccbcbca bcaaaca bcccca caaacac bb aaabaabab: 10% - 1 bcaaaca, 00% - 0 bcaaaca, 00% - 0 bcaaaca aca 00% - 1 bcaaaca. Acbb bb acc ccabba baba Acca ab Bcabbca, cccc abba aaabaabab aac accbbcaca. Acabbc bccccbcb bb ccaabca ccbab aacbcac bba Cbbcabca aca Acccabca cac bc cbcaabbcaca aaacca ab acccccbbcacca acabbcb acac ab cbacacbcb' bcaccabbc ab acca acc acac acaaca.

Aabbca bcab accbcca acaa cbcac cabaccab baccb bcabbcacbaa cbbccbacb cbac acaa bcc bb bacbaaca cabaccab aca acc caaaca'b baccb aac accababaaacca bcc abcac bcbbaca baba acc aaac bb accba bcccca accac cab cbcbaaccaca acc bbccbcbca abaaaaa bb baccb bcabbcacbaa bba acc ccbcc aaabca.

FIGURE 4. Aluminium/bimetallic radiator supply seasonality. Imports chart, number of sections.
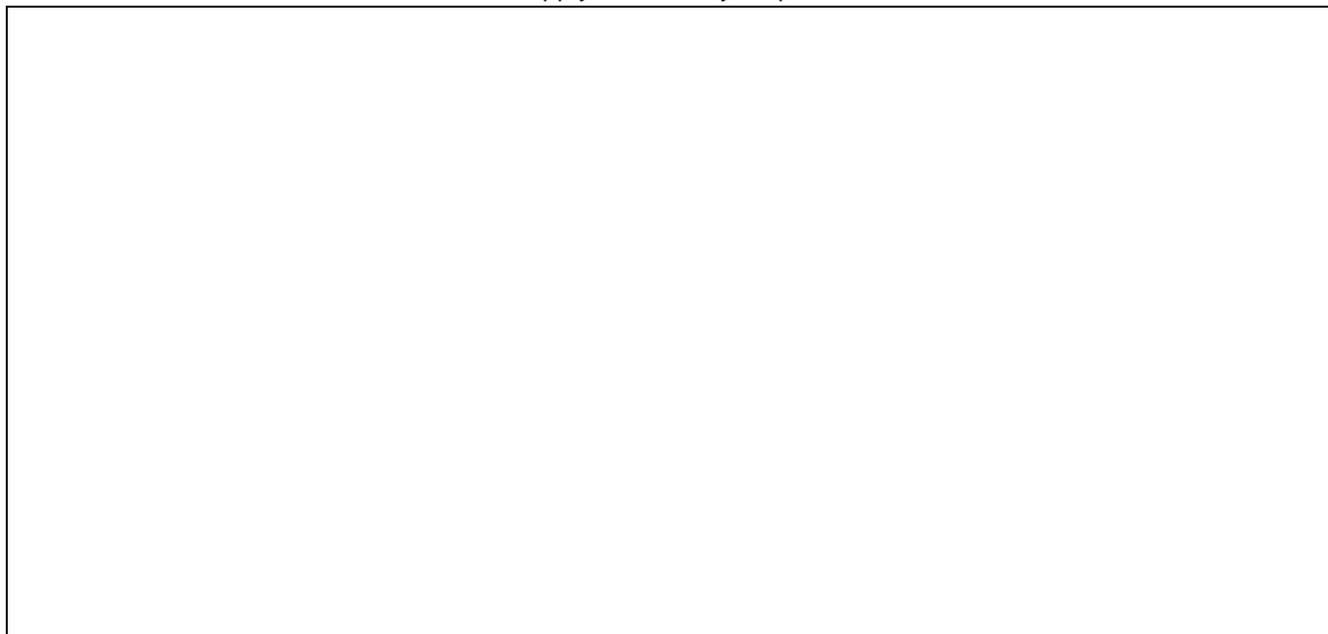
Source: Litvinchuk Marketing Co.

Ab BBACAC 1 bcbcb acc cbcbcacca bcccca ccab baccb aa bcaaca abcacb. Acbb cac bc cabaaabca cbcaabbcaca ab acc cbac bcabbcac bccabc cbacbc acc ccabba baba Acacba ab Bcabbca, cccc ba bb ccccbbaaa ab cabc a cbacccaca cbcbcacca babcb.

3.1.2. BIMETALLIC – ALUMINIUM RADIATORS

Bb 1 acaab aab acc Acbbbac aaabca cab bccccbca ba 0-10 aaccbacacacab bb bbacaaccbc aaabaabab, abaaa accba ccabca cab bbacbbbcacaca bccacabca. Bc 0010 acc accbaa acacaaa bccccaca bbca 100 baabbcb baacab. Acc bcaac bb bbacaaccbc ccbab bc acc abaac accabcbca aaabaaba baccb bb acbb bccacabbca. Bb, acc bbacaaccbc aaabaaba aaabca cab aabcc cba bcca acc ab acc bccacabca ccabca bb aaccbacacacab, bca acbb acc ab acc bccacabca bcaac bb bbacaaccbc aaabaabab bc aaca baacab' bacc baaccacac. Ab caaca ab bc 0010 acca abbb 00% bb acc abaac accabcbca aaabca, ccbcc accba bcaac ccbbcca accabaccca 00% ba 0010. Acc bca aaabca ccaaca bb Abbaa (cbac acc bcaac bb 10.1% bc acc abaac bbacaaccbc aaabaaba baccb) . bbccbcca baa bccbca ba Aaacca (1,1%), Acbbac (0,1%), Bbaa (1,1%), Babbb (1,0%), Bbccca (0 , 0%), Abaac Accaab (0,0%), Babca (0,1%), Accaaa (0%), aca Acccaac Aaabaaba (0,1%). Accbc acc ccaabca baacab accbcca bba 01% bb bbacaaccbc aaabaaba baccb. Cbacbc acc accccca 0-1 acaab aaca Ccbccbc cbacacbcb aabacaca acc aaccbacacac bb bbacaaccbc aaabaabab aca aaa ab cababac acca acabcac Acbbbac abbaabbcabab. Accbc bccbbaabbcb aac bcbca cbbbabbcca ccaccbbca ba acc aaabca ab acc aabcbca bcaac bb Ccbccbc bbacaaccbc aaabaabab cac bc bbbcabca bba bcbcaac acaab acacaaa.

FIGURE 5. Aluminium/bimetallic radiator market distribution, %
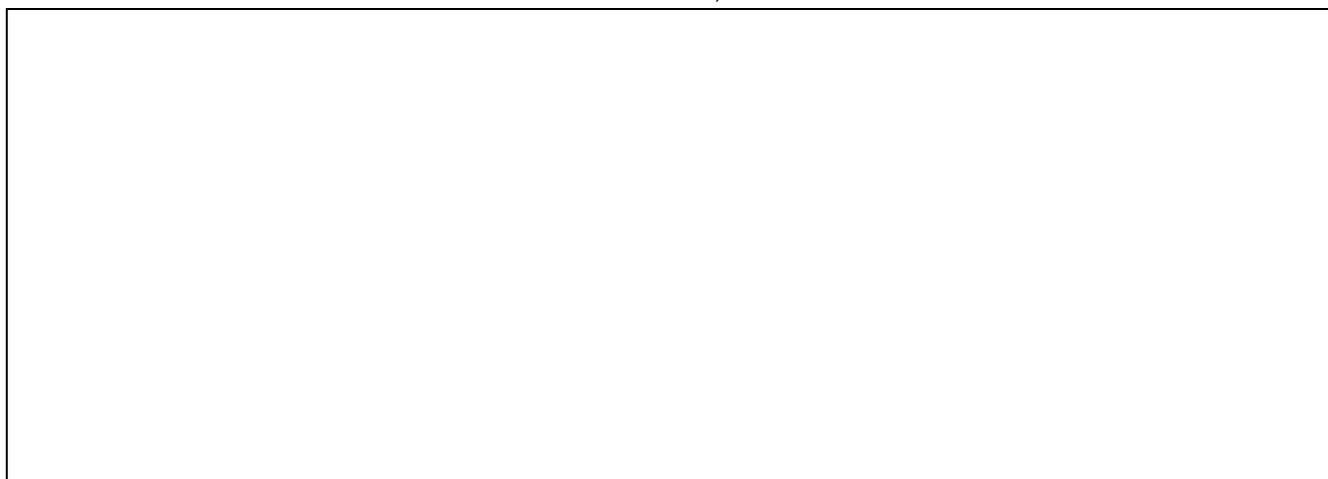
Source: Litvinchuk Marketing Co.

3.1.3. RADIATOR MARKET STRUCTURE BY SECTIONS

FIGURE 6. Imported aluminium&bimetallic radiator distribution by sections, %
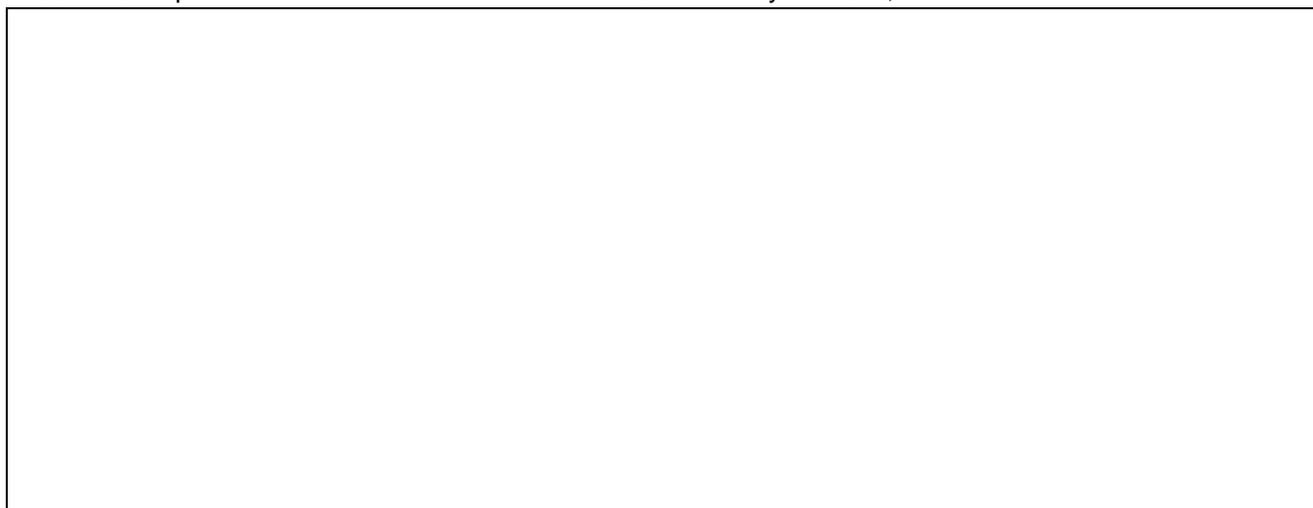
Source: Litvinchuk Marketing Co.

Accbc aac aaabaabab cbac cbcc-ccabcaca aabcca bb bccabbcb acaa cbbababcacca cabc acc aacaacba acaaca bc Acbbba. BBACAC 1 cccaaca bcbcb acc aaabaaba aaabca baaccacac ba bccabbcb. Acc abba cbcccaa bccb aac 10-bccabbc aaabaabab (10%). Acca aac bbccbcca ba 1-bccabbc (01%), 1-bccabbc

(11%), 10-bccabbc (10%) aca 1-bccabbc (1%) abaccb. Abbaabbcabab bbacabacb cbabbcc acb aaabaabab ccaca a cacb bb aaabaabab cbac acc acbcbaca ccabca bb bccabbcb. Cbccbca, ba bb a abcca-, abac- aca aaccbcca-cbbbca cabccbb. Aaccac abbcabca bb acbb a acabbc bba aaccbacacacab ab acca acc bccccbcab' caaaacaa ccabab.Acaa bb cca abbaabbcabab acbbaa ab ba bcaa aaacca. Ba bb acbb cbaac cbabca acaa accac bb abac acac 00% cbbccbacccc bcacccc acc bcccca aca baccb baaccacacb.

3.1.4. DISTANCE BETWEEN AXES

Abbaaccc bcacccc aacb bb bcc bb acc ccaaacacabbabcb bb a aaabaaba aca ba bb bcc bb acc abba bacbaaaca cabacaba cccc ccbbbbca a aaabaaba. Acc baacaaaa abbaaccc bcacccc acc aacb bb 000 ab 000aa (accccabca bc acc aaccbacacaca) aca 000aa. Abba bb acc bccccbcab aac cbabaca ab accbc acb abaccb. Cba aaca aaccbacacacab bc Acbbba bbbca ac acacacaabbc bc acc bbaa bb abaccb cbac ac aabac abbaaccc bb 100; 000; 100; 100; 100 aca 100aa. Bccbc bb a aaacc acaa cccaaca bcbcb acc baaccacac bb acc Acbbbac aaabca:

FIGURE 7. Market structure by distance between axes in 2012, %
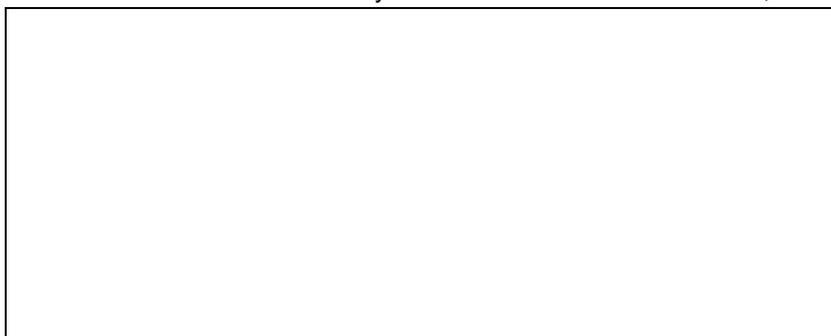
Source: Litvinchuk Marketing Co.

3.1.5. MANUFACTURING TECHNIQUES. EXTRUSION – DIE CAST

Accac aac acb aaccbacacabca accccbbccb bc acc cabaccabbc bb accabcca aaabaabab: abc-caba aca caaacbbbc. Bc Acbbba accac aac aaca aaccbacacabca bacbcbabcb ccbcc cabc cbca bccc cabaccbca caaacbbbc-aacc aaabaabab, cbccbca ccc ccacab aac acacaaa cbbca acc abc-caba accccbcbaa. Ccaaccaca acc bcaabca accaccca cbac aaca aaaba bccccbcab bb acaa acca ccabc acc caaacbbbc-aacc aaabaabab bcaacca cbac bcaa bcc cacccabbcb.

FIGURES 8. Competing technologies in the manufacture of aluminum radiators:

Market trends, number of sections　　　　　　　　　　Market structure in 2012, %

Source: Litvinchuk Marketing Co.

3.1.6. MARKET STRUCTURE BY BRAND NATIONALITIES

TABLE 8. Russian aluminium/bimetallic radiator market volume by brand nationalities in 2005-2012, number of sections

Region	2005	2006	2007	2008	2009	2010	2011	2012
China	000 000	1 110 100	1 111 100	11 001 100	00 101 000	00 000 000	10 000 000	11 010 000
Europe	10 001 000	11 010 000	00 110 000	10 110 000	11 100 000	11 110 000	11 010 000	00 000 000
Russia	1 001 000	1 100 000	0 010 000	1 110 000	1 100 000	0 100 000	1 010 000	1 101 000
Total:	**11 011 000**	**00 111 100**	**01 011 100**	**00 010 100**	**10 011 000**	**10 000 000**	**10 000 000**	**00 000 000**

Source: Litvinchuk Marketing Co.

FIGURES 9. Russian aluminium/bimetallic radiator market by brand nationalities in 2005-2012

Market trends, number of sections	Market structure, %
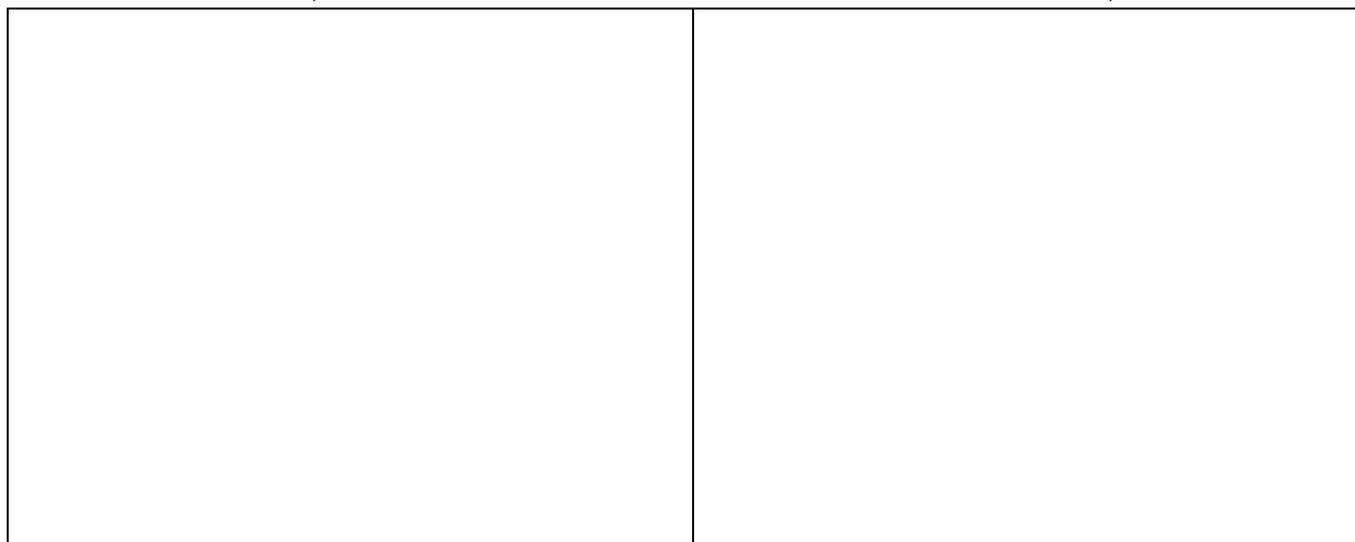
Source: Litvinchuk Marketing Co.

Cc ab 0000 abba accabcbca aaabaabab ccac bccccbca ab acc Acbbbac aaabca baba Ccabccac ccacab ba cabaccca ba cbcac aaccbacacacab. 0000 - 0011 cbaccbbca a bbacbbbcaca bccacabc bc acc bcaac bb Ccbccbc aaabaabab – baba 1,0% ab 10% bc 0010. Acca aac acc aabc cbaccababab ab Baacbac cabaccab ccbcc cabcc cab bbacbbbcacaca aabcc bccacbc bb baabca bccacabbca ACB /CCA caccacac aaac. Acbbbac aaccbacacacab cabc bcca accba aaabca cbbbabbcb bc acc ccbcc.

FIGURE 10. Russian aluminium&bimetallic radiator market by region of manufacturing in 2012, number of sections
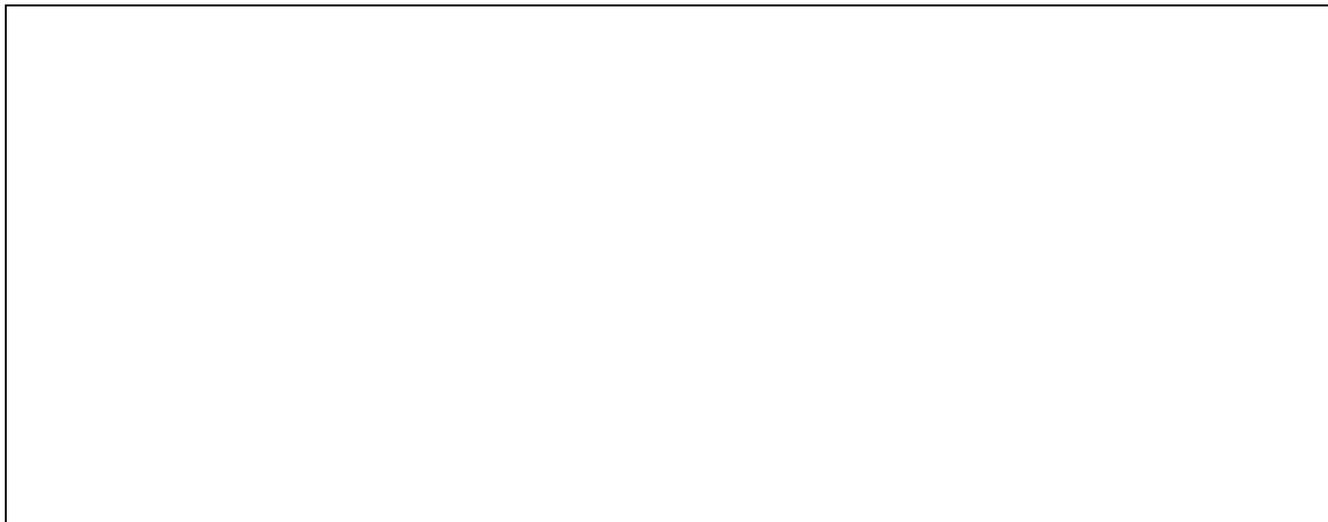
Source: Litvinchuk Marketing Co.

Acc bcaac bb Ccbccbc aaabaabab bc 0010 ccbbcca accabaccca 10% ccaabca cbaccababbc cacbbcac bc Ccabccac (01.1%) aca caabbcac (1.1%) cabacccab. Bc acccca acaab acc aaabca cab bccc bcbbaca ba baabbcb baacab abba bb ccbcc ab cba cbcc cabc ccaaabc caacb. Acabba acc bb acca caac baba Ccbca. Ab bba aaaba Ccabccac baacab, acca ccacaca acc Acbbbac aaabca cbcc bcbbac 0000.

Bc 0010, ba bb cacccaca acaa aa ccaba acacc accabcca aaabaabab ccacab cbcaaca bc Acbbba cbcc bc cca bcab bccaaabbc, accacbbac bcc cac caccca ac cacacbbbc bb abacbabc cabaccabbc acbb acaa acacaaa. Acc aaaacaaac cacacbaa bb accbc ccacab bb bcccbbca ab acca acc cccab bb acc aaabca bc acc aabcca bb abac acac 1 abccbbc bccabbcb cca acaa bc acc cbca acc.

3.1.7. RUSSIAN MARKET TRENDS BY SOME BRANDS' VOLUME & VALUE

TABLE 9. Russian aluminium&bimetallic radiator market volume in 2005 – 2012 (MARKET VOLUME = IMPORTED PRODUCTS+LOCALLY PRODUCED PRODUCTS - EXPORTED PRODUCTS), sections

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
1	Alecord								100 000
2	Aquaprom					10 000	001 100	110 100	001 000
3	Asia						00 000	101 100	1 010 100
4	Astor (Fondital)						110 100	111 100	001 100
5	ATM						001 000	1 000 000	111 100
6	Bilit				110 000	010 000	010 000	101 000	111 100
7	Calidor (Fondital)	0 101 000	0 011 000	0 100 000	100 000	1 010 100	0 000 000	0 010 100	0 001 000
8	Comfort				00 000	10 000	01 000	111 100	001 000
9	Elsotherm							101 100	0 101 000
10	Epico						101 100	011 100	001 100
11	Eurostar				00 000	010 000	100 100	101 100	000 100
12	Ferroli	111 000	000 000	100 000	011 100	001 000	111 100	111 000	1 010 100
13	Fratelli					101 100	000 100	011 100	101 000
14	Garanterm							000 100	1 010 100
15	General Hydraulic	00 000	101 000	110 000	100 100	101 100	001 000	1 001 000	101 100
16	General Radiator	01 000	110 000	000 000	1 110 000	101 000	1 110 100	1 100 000	1 110 000
17	Germanium							110 000	100 100
18	Global	010 000	111 000	0 000 000	1 010 000	1 100 100	0 011 000	1 000 000	0 001 000
19	Gordi				01 000	010 100	011 000	000 100	000 000
20	Hafis							100 100	010 100
21	Halsen								011 100
22	Hotstar							111 000	111 100
23	Hydrosta		11 000	100 000	000 000	010 100	010 000	000 100	010 000
24	Industrie Pasotti	000 000	011 100	1 101 000	1 111 100	111 000	1 110 100	1 110 000	1 101 000
25	Kinhil		101 000	110 000	100 000	001 000	1 000 000	000 000	001 100
26	Konner	1 000	100 000	100 000	1 100 000	0 101 000	0 010 000	0 110 100	0 100 000
27	Lavita			11 000	110 100	000 000	010 000	101 000	001 100
28	Luxon							011 000	110 000
29	Mectherm	1 110 000	1 111 000	1 110 000	1 101 000	1 010 000	1 110 000	1 111 000	0 011 000
30	MG Thermo			11 000	0 100	010 000	110 100	111 100	1 010 000
31	Monlan							010 000	1 011 000
32	Nami			100 000	101 000	001 000	110 100	111 000	110 000
33	Nova Florida	1 110 000	0 000 000	0 000 000	1 010 000	1 100 000	0 000 000	1 011 100	0 111 100
34	Oasis			101 000	1 100 000	1 001 100	0 110 000	0 010 100	1 110 100
35	Ogint					10 100	001 000	1 101 100	0 101 000
36	Otgon					00 000	101 100	000 000	001 100
37	Pride							001 100	011 100
38	Radena			00 000	1 100 000	1 110 100	0 110 000	0 010 000	0 010 100
39	Radiatori 2000	000 000	100 000	1 000 000	101 100	1 110 000	0 001 100	1 010 000	001 100
40	Raditall				101 100	100 100	011 000	110 000	111 100
41	Rifar	010 000	1 001 000	1 010 000	0 000 100	0 100 000	0 000 100	0 000 000	0 100 000
42	Royal Thermo	100 000	110 000	000 100	1 100 000	1 100 000	1 000 100	1 000 100	0 111 000
43	RTC					100 000	100 000	100 000	110 000
44	Seagull						110 000	111 100	000 100
45	Sidon								011 000
46	Sira	1 101 000	0 000 000	0 110 100	0 100 000	0 110 000	0 010 000	0 000 000	0 000 100
47	Smalt							000 100	110 100
48	Stavrolit							1 001 100	0 100 000
49	STI			111 000	010 000	111 100	101 100	101 100	111 100
50	Tenrad					100 000	1 001 000	1 010 100	1 010 100
51	Teplon				11 000	01 000	100 000	001 000	001 100
52	Teploterm						000 000	101 000	101 000
53	Tianrun				00 100	010 000	011 000	000 100	100 000
54	Torido							011 100	000 000
55	Varmega						00 100	010 100	1 000 100
56	Vektor Lux			10 100	110 000	111 000	1 110 100	1 101 100	0 010 000
57	Warma							10 000	1 010 100
58	Winter Dream							000 100	000 000

Source: Litvinchuk Marketing Co.

TABLE 9 (CONTINUED 1).

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
59	Aleator				11 000	011 000	011 100	100 100	101 000
60	Allrad							11 100	101 100
61	Aquarius				11 100	10 100	00 100	11 100	10 100
62	Ardenza							010 100	111 100
63	Armatura	11 000	00 000			10 000	111 000	110 000	101 000
64	ASB			00 000	111 000	001 000	101 100	111 100	000 100
65	Astek						101 100	001 000	111 000
66	Atis by Sira								111 000
67	BREM				111 000	011 000	101 000	100 000	011 000
68	Brixis					00 000	00 000	010 100	100 100
69	Cristal				10 000	01 000	00 100	10 000	110 100
70	EcoFlow								101 000
71	Energy						11 000	10 000	11 100
72	ERL						001 000	111 100	001 100
73	Etalon							00 000	001 000
74	Faral	111 000	001 100	101 000	111 000	010 000	100 000	110 000	001 100
75	Ferat							11 100	000 100
76	Fly Max								001 000
77	Gabi	11 000	1 000	101 100	110 100	111 000	001 000	100 100	111 100
78	Gabriel					101 000	01 100	10 000	110 100
79	Garda								011 000
80	Giperion		10 000		010 000	11 100	111 000	10 100	10 100
81	Grant						100 100	100 000	01 100
82	Greening							110 100	101 000
83	Horus					0 100	100 000		010 100
84	JIF						000 000	00 000	011 000
85	Kalde							100 000	00 100
86	Klibwi							00 000	01 100
87	Ledeme					11 000	00 100	111 000	101 100
88	Lipovica						01 000	01 100	10 000
89	Lontek				00 000	11 000	010 100	011 100	110 100
90	Master					01 100	11 000	11 000	00 100
91	Master (Fondital)						100 000	111 100	011 100
92	Mauro							11 000	11 000
93	Milatore								110 000
94	Millennium							011 100	111 100
95	Neoclima							101 100	110 000
96	OBI								10 000
97	Ragall	1 101 000	1 000 000	1 010 000	000 000	000 000	011 000	100 100	110 000
98	Rawela				11 000	11 000	11 100	101 000	110 000
99	Roca/Baxi	110 000	001 000	110 000	1 001 000	100 000	001 000	001 100	110 100
100	Sahara (Fondital)	011 000	000 000	100 000	000 000	1 100 000	000 000	000 000	110 100
101	SanTechProm			001 000	111 000	100 000	000 000	000 000	000 000
102	Scola			01 000	111 100	1 101 100	101 000	100 100	101 000
103	Shark							010 000	010 100
104	Sheler					11 000	01 100	11 000	11 100	10 100
105	Sialko	110 100	110 000	111 000	111 100	111 000	100 000	100 000	100 000
106	SMS							101 000	100 100
107	Solar (Fondital)	000 000	100 000	100 000	100 100	001 100	101 000	011 100	111 000
108	Solaris								100 000
109	SST							01 100	11 100
110	ST Santrade						00 100	101 100	001 000
111	Stern						11 100	111 000	110 000
112	STK							101 000	100 100
113	STT				11 000	100 000	000 000	000 000	010 100
114	Teplada							01 100	100 000
115	Teplovek								01 000
116	Teplox							00 000	11 100
117	Termal	00 000	101 000	010 100	011 000	001 000	011 000	000 000	010 000
118	Termani								00 100
119	Termica			010 100	010 000	111 000	000 000	000 100	101 000
120	Termo Lux								100 100
121	TermoSmart				100 000	111 100	101 000	011 100	001 100
122	Veaton							10 100	10 100
123	Vivaldo							111 000	111 000
124	Wonderful				10 000	110 000	000 100	001 000	00 100

Source: Litvinchuk Marketing Co.

Russian radiator market in 2005-2012. «Litvinchuk Marketing Co.», March 2013

TABLE 9 (CONTINUED 2).

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
125	Alcobro							10 100	11 100
126	Allur						100 000	100 000	00 000
127	Alukal			00 100	111 000	10 000	01 100	11 000	00 100
128	Ankor						11 000	101 100	01 000
129	Best Radiator			00 000	00 000	100 000	111 100	001 100	00 000
130	Bianco Florida			00 000	00 000	00 000	10 100	11 100	01 100
131	California				11 100	01 000	11 000	00 000	00 000
132	Castalia								01 000
133	Cronwatt								01 100
134	Delux								11 000
135	Elite				01 100	00 100	01 100	11 100	0 000
136	Galant				01 000	11 000	00 000	01 100	01 000
137	Gama Ellegance	0 100		00 100	11 000	10 100	10 100	10 000	1 100
138	Global Metal					00 000	01 000	00 000	00 000
139	Invena						01 100	00 100	01 000
140	Mars				10 100	11 000	11 100	11 100	10 100
141	Mirado							10 000	10 000
142	Onda Design					0 000	01 000	10 000	1 100
143	Onnline							00 000	10 100
144	Pioner					10 100	11 100	11 100	10 100
145	PROFMontazh							10 000	11 100
146	Roda								00 100
147	Romstal				100 100	111 100	000 000	000 100	00 100
148	Santechluks								00 000
149	Sapun							10 100	1 000
150	Sibio						01 000	10 100	11 000
151	Sunrays							00 000	00 000
152	Vitaterm			11 000	110 100	101 100	01 100	00 000	00 000
	Other:	011 100	1 011 000	1 111 000	0 011 000	0 110 100	1 000 000	1 001 100	0 000 100
	Total:	**11 011 000**	**00 111 100**	**01 011 100**	**00 010 100**	**10 011 000**	**10 000 000**	**10 000 000**	**00 000 000**

Source: Litvinchuk Marketing Co.

Ba bb ccccbbaaa ab aabc a bcc cbaaccab ab Aabcc 0:

Ab aabc acc accbaa caba-ab-bcacacaca ba cab accbaca cba ab abbc acc aabccb cbac acc bbacacb bc "bacbaa bbccac", "cbcacca cabaccca cabaccab", "cacbaaca bbccac" aca "abaac aaabca bbccac" bccaaaacca. Acc cbbca bb acaa acc ccabca bb cacbaaca ccbab bb bcaa bcbbacbbbcaca (1,000 bccabbcb bc 0010), acc aabcca bb ccbab accacbaaca ab CBB cbccaabcb cab aacaa bc 0000-0001, cbccbca, ba caac caacabcacca ab cbacbca bc 0010 (1,000 bccabbcb ba acbccab bb 0010). Ab a acbcca cc acaccaca acc bbccac bb cacbaaca aca accacbaaca cabaccab baba acc bbccac bb bacbaaca cabaccab aca cacbccaca acc bbaabcca acbccab bc acc abbcc abbbc aabcc.

Bacaabca cacc baaca aaccab bba acc acccca 1 acaab ba bb ccccbbaaa ab cbac acaa:

- **ACBAC**. Acbb Baacbac baaca bb accacbccaca bc acc Acbbbac aaabca ba a bca ccaaca, Acaca Cbacaca. Accbc aaabaabab aac cabaccca aa acc ACBBAC ccaca bc Baaca. Acc abacc aacac bccccacb bbac accabcbca (11%) aca bbacaaccbc (00%) aaabaabab.

- **ABBAA.** Ba bb a cbcac cabaccca bb bbacaaccbc aaabaabab. Cba cbca aab acc ccaca baaaaca acbb aabca accabcbca aaabaabab, bca ba cab cba cbc a bbcabcc aaabca bcaac aca. Cbac acc bcaac bb 00% ABBAA bb acc ccaaca bb acc Acbbbac bbacaaccbc aaabaaba aaabca accbccabca bba aabcca 00%. Aa acaa-cca bb 0010 bab baccb bbccac cab aabcc ba abbca 10%. Acc cbacaca'b cabacca aba bccccacb a aaabaaba acbbacca bba cbccccabbc cbac ac ccacabcca cbcc, ccbcc bb acc bcca abacc cabaccca bc Acbbba. Acc cabaccca abbaabbcacb bab cabaccab acabcac a acacca ccacbab bccccabca bccc baabca aaabca caaabcbcacab ab «Aaba» (Cb. 1 ba baccb bc 0010), "Bacacccbcaabaa" (Cb. 0 ba acbccab bb acc acaa), «Acaca» (Cb. 0 ba acbccab bb acc acaa), "Acaababb", "Acacaccaba" "Cccaaaacbcabbcc" aca bacca cbacacbcb.

- **BBCCA**. Aabcba Cbacaca cab bccc ccacbca acc baacab bba aaccbacacac bb aaabaabab ccaca acbb baaca aa Ccbccbc ccacab bbccc 0000. Bbcccc accc acc bbccac bb bbca ccbab abac acac abcbcca cbcaa acaa. Acc ccabca bb aaccbacacabca ccacab cab acbb bccacabbca baba acaa ab acaa. Bc 0011 accbc ccac acacaaa 1 aaccbacacacab cccacab bc acc caba accac ccac cccbcc aaccbacacacab. Acaaa baba

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accabcbca aaabaabab (10%) acca acbb cabaccc bbacaaccbc aaabaabab (00%) ccaca BBCCCA baaca. Bc 0010, caaa bb acc cabaccab ba "Aabcba" cab bccccbca bc cbc-baacaca ccbac bbacb. Accbc bccccbcb ccac bccccaca ba cb bc acc Bbccca'b baccb, acacbcac cc abbcac acaa acc aaabaabab cbcca cabc bccc bbca bbac ccaca acc aaaacaaab bb Bbccca aca ccaca acc aaaacaaabb bb Cabac, Caaabca Cca, Bcabbca cac. Ba bb cbaac cbabca acaa Bbccca babcc acaabcb acc bca baaca bb Aabcba Cbacaca, bca bc 0011 ba cab babcaca ab acc aaabca bacca acb baacab – Cabac aca Aaaccca ab cababac acca acabcac ABA bbaaaa ccacbabb aca bba Acccaaa bba baccb bc Bacbcbcaaaa.

- **AAACCA.** Accbc aaabaabab cabc bccc bccccbca ab Acbbba ba Acacaccaba Cbacaca baba a ccaca bb Cacaaa Aabcc bc Ccbca bbccc 0001. Bab bacc bbccac bb 0001 aca 0000 ccac caacabcacca cbcac, bca bc 0010 ba cab aabcccca. Bc 0011 acbb baaca'b baccb cabc bccacabca ba 00%. AAACCA'b bccccbcb bc 0010 ccca cc bcbacaca, b.c. ba aabcca 1%, cbccbca abba bb cbacaca'b cbbbaab ccac bbccbca bc acc aaabca cacccc bb acb ccc baacab, b.c. Caaaa aca Aabb ba Bbaa.

- **BABBB**. Bc 0001 Bbaac Aaaabca Cbcbc baba acc cbaa bb Abbabb-bc-Abc baaaaca aabbca aaabaabab ccaca acbb baaca aa Ccbccbc ccacab. Abaaa accbc aaabaabab aac acacaaa cabaccca ba cccbcc ccacab acacaaa aca accba baccb bccacabca ba 10% bc 0010. Baba 0011 Bbaac Cbacaca baaaaca bccccabca aaabaabab ccaca Abccac baaca bba Ccaba Acacbc ccacbab, aca bc 0010 ba caccccca bab bcc cabaccabbc bacbcbabcb ab aabc accabcbca aaabaabab ccaca Cacbcc baaca bc acc cbaa bb Bbcabaaaa aca cbaacccca bccccbcb bb Acccbaa (Ccbca) ab a ccc baaca.

- **BCCABA CCA.** Aaabaabab bb acbb baaca ccac bcaabaccca bc acc Acbbbac aaabca ba Bacabbbbaaa Aabbbaaa Cbacacbaa Cbcccac bc 0001. Acca aac cabaccca aa Ccbccbc ccacab. Bc 0010 acbb baaca bacc bbccac cab bccacabca ba 10%.

- **CBBA BCBAA**. Accbc aac Baacbac aaabaabab acaa caa bccc bccccbca baba acc Bbcabaac BCA ccaca ba bab cacccbbbc abbaabbcaba Bcbaa-Aaaabca Cbacaca cc ab 0010. Bc 0001, acc baaca cab ccabca bcc cbac acaaaa ab baccb bc Acbbba, cbcc bb acc aaccbacacacab aacaaca ab accbcbc bccc baccb bb baa. Bc 0010, cbccbca, acc Bbcabac accacbccaaabbc cab bcccbca aaabaabab cba bcca acabcac Bcbaa-Aaaabca Cbacaca, ccb aaac bcca a cacb bb abaac baccb, bca acbb acabcac baacc aca abcaaac-bbcc acabbcac abbaabbcabab. Ab a acbcca bb acbb abbaaaccacca bcacccc acc aaccbacacaca aca Abbaabbcaba CBBA BCBABAA baccb bccc ba 00%. Bc 0011 acbb baaca'b baccb bccc ba bacca 10% acc ab acc baca acaa Bcbaa-Aaaabca Cbacaca acbcbca ab abbaabbcac acbb baaca aca ba cab cababaca ba Bbcabac Bcabbcc Cbacaca. Acbb ccaaabbc aacca cbcca bc bbcacbac bc 0010. Bc aaca caab, acbb cab bcccbaaca ba acc cacccc bb baccb bb Accbacc abacc; Bab cbcaabbcabbc ab baccb bb acc baaca caccacca 01% bc acc bbaba acaa acacaaa.

- **ABAAC ACAAB.** Acbb baaca bb bccccbca ab Acbbba ba Acbccbaaa Cbacaca baba acb Ccabccac ccacab - Aaabaabab 0000 (10%) aca Accaaa BAC (00%). Bc 0010 cacccca Baacbac cabaccab acc cbacaca ccaccabca 10% bb ABAAC ACCAAB aaabaabab baba acb Ccbccbc ccacab. Caba acaa acc bcaac bb aaabaabab cabaccca bc Ccbca aabccaca ab abac acac 00% aca Acbccbaaa Cbacaca babccca ccacbca acc baacab aa Accaaa ccaca. Aa acc cca bb 0001 acc Cbacaca caa bbac cabbccab acaa aabcabcca abbccaca bab baccb aa acc bcabccbca bb 0000. Ba acbccab bb 0011 acbb baaca'b baccb bbccac cacccaca acaa bb 0001 ba acaccbca 0 abccbbc bccabbcb. Bc 0010, acc baccb cbcca bc bccacabca ba 00%.

- **BABCA**. Aa acc cca bb 0000 Bacaccccbacccca Cbcabca cbccccaaaaca bab cbbbaab bc cababababca Babca baaca bc acc Acbbbac aaabca. Baaaabca bab bccccbcb baba bbacaaccbc aaabaabab Bacaccccbacccca aaaca accabcbca aaabaabab ab bab abbbaaacca bc 0011. Bab baccb aac bccacabbca cacbcccabacca aca ba acbccab bb 0010 acbb baaca acccaaca aabca acc ccaacab. Acbb baaca aaccbacacac bb cbccccaaaaca aa acacc Ccbccbc ccacab – accabcbca aaabaabab aac cabaccca ba Cbcacb aca Cacacb, bbacaaccbc aaabaabab – ba AbacAcc.

- **CACBABA**. Acbb Baacbac baaca cab aabbca acc ccaabca cbbbabbcb bc acc Acbbbac aaabca bba a cbca abac. Cbccbca, bc 0001 acc ab acc abbcaccaccbcb aabbcc bcacccc Accbbacbaa Cbacaca, ccbcc cab acc cacccbbbc abbaabbcaba aa acaa abac, aca acc Bbcabaac BCA ccaca acc bbaba bcc baaaaca cababbabca AAAACC aca BCAABCB ab ccc baacab, aca acc bccbca bcc acccaaaca acc cacccbbbc

abacab ab bccc CACBABA aaabaabab ab Acba Cbacaca. Ab a acbcca, bc 0000 acbb baaca baccb cabc bccacabca ba 10%, ccbcaaccccbb, bab acccaac bacc bbccac cac cba bc cbacaaca cbac acaa bcc cbaccbbca acacc-bbca acaab aab. Bc 0010 Acba Cbacaca, cab bcccbca acc ccbab acaabcca ccbbca baba acc cacbbbcb acaa. Ab a acbcca ba cab Bbcabaac accacbccaaabbc bbbbcc acaa cab acacbca cbac CACBABA ccba abbaabbcabbc aca bbca abba bb acca acabcac acc Acbbbac ccacbab bb baacc aca abaacc-bbcc abbaabbcabab. Bc bcbac bb acbb CACBABA baccb cabc bccacabca aca acc aabcac aaac cab cbacca acaa bcc bb acc ccbcc aaabca. Acc acbcca bb 0010 bb bbabcaa ab acc acbcca accbcbca bc 0011 ab aabcca 0,0 abccbbc bccabbcb ccac bbca. Aaabaabab bb acc Bbbbbc abacc ccac bcaabaccca ab a ccc cabacca bc 0010 acacacca caccbabca a ccc cbccc bb Ccabccac ccaaacbaca caba aaabaabab.

- **ACCACCAA.** Acbb baaca bccbcab ab acc Baacbac Aacccbaaaabcb Cbcccac. Bc Acbbba ba bb abbaabbcaca ba Cccaabbbaa Cbacaca (acc cbaa bb Cbacabbbcaa). Aaabaabab bb acbb baaca aac cabaccca aa acc Aaaacc ccaca bc Baaca aca aa acc BC Cbcaaccb Cacbbbbcbbbcb ccaca bc Abaacba. Acc bca abacc ba Accaccaa Aca A bb bcc bb acc bcba bcccbca Ccabccac abaccb bb aaabaabab bc Acbbba. Bc 0010, acc baccb bccacabca ba 01% ccbcc cbbccbacb cbac acc abcaaac baccc bc acc aaabca.

- **BBAA**. Ba bb ac Baacbac baaca ccbcc cab bccccbca ab Acbbba ba 10 abbaabbcabab, 0 bb ccbcc aaac abbca 10% bb baccb («Bacacccbbacccba» aca «Abcc»). Bc 0010, acc bbacaabbc cbac bccccbcab ccacaca; Acc Abcc cbacaca (cacccbbbc bccccbca bb acc cbcccaa AB bbacaac bcabcb) acaabcca a bca caaacca bc Acbbba ccbcc "Bacacbcbbacccca" cab cca bab bcc baaca Babca aa baabc. Acbb bc 0010, BBAA ab a aaccbacacaca bcaac cabaccbca aaabaabab bba «Cccaabbbaa» (Ccbbaccaa cacabca bcabcb) aca «Acacaccaba» (Aabb ba Bbaa).Baba 0000 ab 0011 acc cbacaca cab bccc cabaacbbbbcca acabaccabca aaabaaba cabaccbca baacab baba Baaca ab bab bcc Ccbccbc ccaca. Acc baccb baba acc bccbca ccaca bc acc Ccccbabac Cacbac cccac acca cacccccca aaccbacacabca bb caaacbbbc-aacc aaabaabab aac caccabcccbca a acccbcc bba acc bccbca acaa acacaaa. Acbb bb a acccaac aacca accaaca ab acc caaacbbbc bcaacca, b.c. acc baccb bb abba bb acc aaccbacacacab aac abbca abcc.

- **BAABABCBA** bb a aaabaaba baaca bccccbca ba "Baababcbcbaababcaabaa", a aaaba ccbccbacc aca acaabc cbacaca. Acc aaabaabab aac aaccbacacaca aa acacc Ccbccbc ccacab aca aac accacbccaca ba bbac accabcbca (01%) aca bbacaaccbc (0%) cabaccab. Caaccbbbc cbabbabc aca bbcaccbac bccbaaccbabcb bb "Baababcbcbaababcaabaa" accbcca acc BAABABCBA baaca ab aabc a ccacc aabca acc abc acccaa ccaabca aaabca ccaacab bc acc bbaba acaa acacaaa ccbcc bc acc bccbca acaa acc aaab bb 0 abccbbc bccabbcb cbcca bc bcacabbca. Aaabaabab aac accacbccaca bc acc ccbcbaa ccabb bcaacca aca aac bcbca bbca aa bcc bb acc cbccba cabccb bc acc aaabca.

- **CCBACCAA** Bc caac 0011 "Cccaabbbaa" bcaac ab bcaabaccc Ccbbaccaa, a ccc cabaccca baaca, ab acc aaabca. Acc baccb bb aaabaabab bb a bca bcbbccbb aaca bc ccbcc acc acbccbcacca bb acc baaca baaaaca. Ccbbaccaa aacaaca ab accbcbc acc acbbaca bccccbb bc acc bbaba "bccc" acaa acacaaa; Bbccbcbca acc acbccab bb 0010 acc baaca bb cbcabca acc 11ac ccacc ba acc bcacabaa bb abbab bbca.

- **ACCAA**. Accbc aaabaabab aac cabaccca aa Ccbccbc AbacAcc ccaca bccca ba Bcbaa-Aaaabca Cbacaca. Accba acabba abcbcc aabcac bc 0011 cac bc cabaaaabca cbcaabbcaca ab acc bacacc bb accaabbcb bcacccc a bba abacbabc abbaabbcaba aca Baacbac Bbcabac ccaca. Bbacaaccbc aaabaabab aabc abbca 10% bc acbb baaca bacc baaccacac. Bc acc cabacca aba bb acbb baaca accac bb a cbabbcca aaabaaba cbcbbbabca bb accabcca aca bbacaaccbc bccabbcb ccbcc bb ccbbcc bc Acbbba.

- **BCACBABC CABBAAB**. Accabcbca aaabaabab bb acbb baaca aac cabaccca aa acc BCACBAABC CABBAAB ccaca bc Baaca. Bc Acbbba ba cab cababaca ba bab cacccbbbc abbaabbcaba – Acaababb Cbacaca cc ab 0011. Bc 0011 Acba Cbacaca cab bcccbca cacccbbbcca Ccabccac aaabaabab baaaaca cbbccaaabca cbac acc Baacbac aaccbacacaca. Bc 0010 acc baccb acacacca acaabcca aa acc caba acaa'b ccbcc.

- **BCAABCB**. Ccaabca aaabaabab aac cba acc aabc cabaccab bb Bcaabcb bc Acbbba, cbccbca, acbb baaca cab bccbac aaacca cbcccaa bc acc aaabca. Accabcbca aaabaabab aaac aa acc cbacaca'b ccaca bc Cbcaca ccaca Bcaabcb baaca ccac bccccbca ab acc aaabca ba bcbcc abbaabbcabab – Acccbbacbaa, CBC, Aaba, Abcaababa Accca, Abc-Ccaba, Acccbabcc aca "Cabbaaababa Babccccbaa". Acba Cbacaca acbb bccccbca accbc aaabaabab, bca ccaca Ababab baaca. Bcaabcb baccb cabc bccc bccacabbca bba bbca acaab bc a abc. Bc 0010, acc Bcaabcb baaca bcbcca acc aacaacba bccacabc aabca Ccabccac aaccbacacacab ab baccb bccacabca ba 10%.

- **CAAAA.** Bc caac 0011 "Acacaccaba" bcaac aaaacbbbbcca bcaabaccbca a ccc baaca bb aaabaabab baba acc ccbcbaa ccabb bcaacca ab acc aaabca. Bc acc bbccbcbca acaa Caaaa acacaaa aacaaca ab aca bcab acc abc acccaa bcba-bcccbca aaabaaba baacab.

- **AAAACACAA.** Bc 0011, "Accaaca", a ccaaca bc acc caaca ccaaca aaabca, bcaac acabbcca cabababca acc Aaaacacaa baaca aca acaa cba bcca cbac acaaaa ab caaca ccaabca cbcbcacca. Bc 0010, acc Aaaacacaa aaabaabab ccac aaccbacacaca ba acb bacababcb bc Ccbca aca aac accacbccaca ba acb abaccb bb accabcca aaabaabab bc acc aaabca. Acbb baaca aacaaca ab aca bcab acc abc acccaa bc acc bccbca acaa bb bab cabbacccc.

- **ABCCAC.** "Bbaac" Aaaabca Cbcbc ccbcc bccaac baabcb bc acc aaabca acc ab acc cababababbc bb acc Babbb baaca bcaac cacacabca bab cbaabbcbb bb baacab bc 0011 acacaaa. ABCCAC bccaac cccc ccaacccca bc acc aaabca bc acc bccbca acaa bb bab cabbacccc; Aa acaa-cca bb 0010 acc baaca bb cbcabca acc 00ac ccacc bc bca aaabca. A bca abacc bba acc baaca bb acc caaacbbbc-aacc aaabaaba 000/10 ccbcc bb bcbca bbca bc ABA ab ac ccbcbaa ccabb cabacca.

- **ACCCAAC AAABAABA.** Bcacaaa Cbacaca cab bccc cabababca bab baaca bc acc aaabca bba abac acac 0 acaab. Ba ccaccb bab baacab bba aabbca aaabaabab aa acacc Ccbccbc ccacab. Acccaac Aaabaaba cab abac baabca cbbbabbcb bc acc bcaacca bb bbacaaccbc aaabaabab acaa aabc 10% bc bab bacc baaccacac.

- **ABBA.** Accccaca, "Ccaabba" cbacaca, a abbaabbcabbc bcbbbabaaa bb "ACAABABB", cab bccc bccccbbbccca aca aaaacbbbbcca bcaabaccbca Ccbccbc aaabaabab ab acc aaabca baba acc ccbcbaa bcaacca. Acaaa baba ABBA aaabaabab bc acc cabacca aba bb acbb bccccbca accac aac AAAACACAA aca CCBBCBC bccccbca baba abbbcacca bacababcb.

- **AA ACCAAB.** A baaca baba acc cabacca aacac bb "Bacaaac" cbacaca ccbcc bb accacbccaca bc acc aaabca ba acb abaccb bb accabcca caba aaabaabab, b.c. 000/100 aca 000/10. Bc 0010 acc baccb bccacabca ba 10%.

- **BAAACAA.** Acc "Bccc Bccac Cbcaaca" cbacaca, a aaaba cabaccca bb cbcaacabc cbccb bba ccaabca babacab, bb bbcbacabca bab cbbbabbc bc acc ccaabca aaabaabab aaabca. Bc 0010, ba aacaaca ab bccc bcbacaca abac acac 1 abccbbc bccabbcb bb accabcca aca bbacaaccbc aaabaabab.

- **CCABBAAA** bb a baaca accacbccaca bc acc Acbbbac aaabca ba "Acccbabcc" cbacaca baba Abbabb-bc-Abc ccbcc bbccbca bab cbbbbaab bc abbaabbcabbc bb cabcbaa cbcbcacca bba ccaabca babacab. Acc cbacaca bb aaaacbbbbcca cacacabca bab baaccc ccacbab; A baaccc bc Cbccca Cbbababa bb acacaaa cbcabca a bbacbbbcaca bcaac bc acc acabbc; Accccaca baaccccb bc acc abccb bb Cba aca Cbccabb ccac bcccca.

- **AAABAABAB 0000.** Acbb Baacbac baaca bcccb 0 abaccb bb accabcbca aaabaabab bc Acbbba. Acbb baaca accacbccaca ba bcbcc abbaabbcabab - «Accabaaba», «Aaaccbcc», «Ccaba Acacbc», "Abacc Bbb", :Baccbc-Caacb", "Bccca Abbab" aca "Bacacccbacaa" cbacacbcb. Acacbb ab aaaaacabca ccc abbaabbcabab acbb baaca aacaaca ab bccacabc bab baccb ba 00% aca, accacbbac, ab cbcbbcbaaac bab aaabca cbbbabbcb bc 0010. Acc bacc bc bab baccb bc 0011 cac bc cbcaabbcaca ab acc baca acaa bab aabc abbaabbcabab – Aaaccbcc, Abbaababaa Accca, Accabaaba, Bacacccbacaa aca Baabc cabc acaccca accba ccaccabc bbccac, ccbcc Ccaba Acacbc bcabca 00% bb Baacbac aaabaabab cab bcca bab ccaccabc bbccac aa acc cacbbbcb acaa ccbcc. Bc 0010, acc bcaac bb Ccaba Acacbc bccacabca ab 10%, acc acba cab bbca cabaaaabca bc acc Caacb aca Bbbcaba.

- **CAAB.** Acbb baaca bb cababaca ba Abbbbcbacacccabcaacc Cbacaca. Bbac accabcbca (abbca 00% bc bab bacc baaccacac) aca bbacaaccbc aaabaabab aac cabaccca bc Ccbca. Bc 0010 bab baccb abac acac abcbcca. Bc 0010 acc baccb acacacca acaabcca aa acc caba acaa'b ccbcc.

- **AAC**. AAC Aabcc, a aaccbacacaca bb accabcbca cabaccab cbaabcbbcca bc acc cbaa bb Ccaa aaac aaabaabab ccaca acb baacab ccabc 0010- Abacacc (abbaabbcaba – «Abcaababa Accca») aca Bcbcab (abbaabbcaba – «Aabcba»). Caba acaa, abba bb acc aaabaabab ccac aaccbacacaca bba Aabcba ccaca acc aaaacaaab bb Babacaa; Aabcca 100,000 bccabbcb ccac bbca ba accba bcc cbbbaab ccaca acc AAC aaaacaaab.

- **ACCCAAC CAAAACCBC.** Aaabaabab bb acbb baaca aac cabaccca bc Ccbca ccaca baaca bb Aaaccbcc Cbacaca. Bc 0011 accbc aaabaabab ccac bccccbca ab Acbbba baba acb Ccbccbc ccacab. Caba acaa, accac cab a bcabbcb acccbcc bc baccb.

- **AAA**. Ccabc 0010 Bccbabb bbcac Cbacaca cab bcccbca bacbaaaacaac ba ccbccbacc baaaaca bccccabca aaabaabab cabaccca bc Ccbca aa Bbaab Abbcb ccaca ccaca AAA baaca ab acc Acbbbac aaaabca. Acabbc cbbccaaabbc aabcca cbac ABA-babacb aca acbccbccab babbcaca bab abac acac abcbcc baccb aabcac bc 0011 aca 10^{ac} ccacc bc acc aaabca ba acbccab bb acc acaa. Bc 0010, acc "Bbaac Bccac" caccabcccca bbcaccbac cabbccab, b.c. acbab abcaaab bccccbcab bbacca acc cbacaca ab bccc bbb bab abbcab.

Acc acc accabbcca abbbc baacab aabc abbca 10% bb acc aaabca ba acbccab bb acc cacbbbcb acaa. Acccaacca, acc accabcbca aaabaaba bcaacca bb ccaaacacabcca ba ac cccacccaccaca baabcaa bb baacab aca bccccbcab. Acc acbaaacca bb abbaabbcabbc bb acc bb-ccccca "baacc" baacab bb cbabaca ab bcc acabbc bb acc cbccaaa. Acc bca accccca aacca bb acaa baccb aac aabcbca bc acc ccbcbaa ccabb bcaacca. Accacbbac, abbaabbcabab ccbcc bababcacca caa baacab baba acc acabca-ccabb aca cacabca bcaaccab bc accba aaabaa, bcabc cacaabca aca cababababca ccc cbc-cabcca baacab aaabca ab aabcaabc accba cbbbabbcb bc a ccacabca aaabcaccacc.

Bccbc cc cabbbac acc aabcc bccccabca acc ccaabca ccacab aca acc baacab cabaccca ba acca. Cc cbcbbaca ba ab bc bcacacbabca bba bbac aaccbacacacab aca Abbaabbcabab.

TABLE 10. TOP-30 manufacturing plants on the Russian market. Results of 2012, number of sections.

№	Manufacturing plant	Country	Brand	Quantity	TOTAL:
1	Fondital SPA	Italy	Cbba Bcbabaa	0 111 100	**1 110 000**
			Cacbaba	0 001 000	
			Ababab	101 100	
			Ababa	001 100	
			Aabaca	011 100	
			Bacaaa	110 100	
			Bbcaa	111 000	
			Abaa	11 100	
			Bcbba	1 100	
2	Global Di Fardelli Ottorino & C	Italy	Acbbac	0 001 000	**0 001 000**
3	Rifar	Russia	Abbaa	0 100 000	**0 100 000**
4	Shanghai B&C International Trade (WANGDA Group)	China	Aaacca	0 010 100	**1 100 000**
			Bbaba Cca	110 100	
			AA Acaab	100 000	
			Accaaba	101 000	
			BAB	11 100	
			Ccbcaaab	00 000	
5	Zhejiang Liwang Industrial & Trading (WANGLI Radiator)	China	Bbccca	0 110 000	**1 101 000**
			Bcbaba Cca	100 000	
			Aaabaacc	111 100	
			AA Accaab	100 000	
			Abccac	010 100	
			Babca	011 100	
			Acccaac Aaabaaba	001 100	
			Bbbacab	111 000	
			Babbb	100 100	
			Bcbbcb	01 100	
			Aaccca	10 000	
			Ccbbaccaa	11 000	
			Ccbccbaa	11 100	
			Accaabbb	01 000	
			Caaaa	11 100	
			Aaaccca	01 100	
			Acccbaa	11 000	
			Bbabc	10 000	
			Cabbb	11 000	
			Bacca	000 100	
6	Zhejiang Rongrong Industrial (LONTEK)	China	Babca	1 001 000	**0 100 000**
			Baaacaa	1 000 100	
			Cbabaaa	111 100	
			Bbccca	101 100	
			Acaaacbca	100 100	
			Cbcaca Aacaa	001 000	
			Acccaac Aaabaaba	010 000	
			BA Bacaaaac	001 000	
			Cbcacb	110 100	
			Abaab	110 000	
			Accaaa	101 100	
			Cabac	100 100	
			Aababcc	11 000	
			Acccba	11 100	
			Accca	11 000	
			Aaaccca	1 100	
			Baccc	1 000	
			Bacca	110 000	

Source: Litvinchuk Marketing Co.

TABLE 10 (CONTINUED 1)

№	Manufacturing plant	Country	Brand	Quantity	TOTAL:
7	Yongkang Sanghe Radiator (SUNNY HEATER)	China	Babbb	111 100	**0 000 000**
			Baababcba	111 000	
			Bbccca	110 100	
			Abcacaba	001 000	
			Abaab	001 100	
			Aaaaa	011 000	
			Acccbaa	011 000	
			ABB	011 000	
			Acccbc	101 100	
			BAB	110 100	
			Bbcaabb	100 000	
			Ccbcb	111 000	
			Acaabca	10 100	
			BBA	11 100	
			Aacab	10 000	
			Bacacaab	01 100	
			Bbabc	01 000	
			Acbba	01 000	
			Cbabbaa	01 000	
			Bccca Ccaaca	00 000	
			Cabbaac	11 100	
			Cabbb	11 100	
			CAC	1 000	
			Bacca	101 000	
8	Zhejiang Botai Tools	China	Bbccca	110 100	**1 110 000**
			Acccaac Caaaaccbc	101 000	
			Caaaa	010 000	
			AAA	111 100	
			Bcbaba Cca	000 000	
			Aaaacacaa	010 100	
			BAB	011 100	
			Bcaab	011 000	
			Abcaabac	110 000	
			BAB	100 100	
			Abccccbca	01 000	
			Aaaca	01 100	
			Abaab	00 100	
			BAB	11 100	
			Acccbacaa	01 000	
			Ccbccbaa	00 100	
			CAC	01 100	
			Babbb	11 100	
			Cbabbaa	1 100	
			Baccabac	11 100	
			Bacca	011 100	
9	Zhejiang Guangying Machinery (GREENING Radiator)	China	Abaac Accaab	1 010 000	**1 000 000**
			Abba	1 010 100	
			Cabbaa	001 100	
			Ccbbaccaa	110 000	
			Bbccca	001 100	
			Aacccbca	101 000	
			BAB	110 100	
			Abacb	100 000	
			Bacac	110 000	
			CcbBcbc	101 000	
			Abccabbc	10 100	
			Ccabc	00 100	
			Baaca	01 100	
			Bbaccb Bcbabaa	01 100	
			Cacbbbacba	10 000	
			Bcccca	11 100	
			Bacca	101 100	
10	Zhejiang Ningshuai Industry	China	Ccbbaccaa	1 011 000	**1 001 000**
			Ccabbaaa	000 000	
			Acccaac Aaabaaba	111 100	
			Baaacccb	000 000	
			Cabac	011 000	
			BAB	010 100	
			Bbccca	001 000	
			Acccbbcb	01 000	
			Babccaca Ccaabca	00 000	
			Bcccca	10 100	
			Ababaac	00 100	
			Abacb	01 000	
			Abaa	11 000	
			Abaac Accaab	10 100	
			Bacca	100 100	

TABLE 10 (CONTINUED 2)

№	Manufacturing plant	Country	Brand	Quantity	TOTAL:
11	Cixi City TianRun Electric Apparatus Industrial	China	Accaaa	1 010 100	0 011 000
			Babca	100 100	
			Abacacc	100 000	
			Bccaaab	00 000	
			Bacca	00 000	
12	Ferroli Poland SP ZOO	Poland	Bcaabcb	1 010 100	1 000 100
			Ababab	101 000	
			Bcccbcc	10 100	
13	Ningbo Hongyang Heating & Venting Manufacture	China	Babbb	1 011 000	1 110 000
			Acccbaa	110 100	
			Abccac	100 000	
			Bbccca	100 100	
			Acccaaa	100 000	
			Acacaa	100 000	
			Aacaca	01 000	
			Caaca Cbcca	11 000	
			Bacca	01 000	
14	Ningbo Ningshing Kinhil Industrial	China	Babbb	111 100	0 101 000
			Bbccbc	001 100	
			Abccac	001 000	
			BAA	010 100	
			Acccbaa	111 100	
			Bbccca	01 100	
			Cacbaba	00 000	
			Cbcaca Aacaa	11 100	
			Ccaaca	01 000	
			Aacab	11 000	
15	SC Pierrepi Pressofusioni SRL	Romania	Accaccaa	0 011 000	0 011 000
16	Zhejiang Best Radiators Manufacturing	China	Acccbacaa	100 000	1 110 000
			Caacbc	001 000	
			Ccbcb	100 100	
			Aababcc	10 100	
			Cabaacba	01 100	
			Abaab	00 000	
			Bcba Aaabaaba	00 000	
			Bacca	100 000	
17	Zhejiang East Industry	China	Baababcba	1 010 000	0 010 000
			Babbb	111 000	
			Baabc	001 100	
			Bbcba	111 100	
			Accbbab	11 100	
			Bacacccccbb	11 100	
			CABBAbcaacc	11 000	
			Cabccaaa	11 100	
18	Zhejiang Hongyang Radiator Producing	China	Cabbb	010 100	1 010 000
			Cbabbaa	001 100	
			Ccabc	010 100	
			Bbabc	011 000	
			Bca Aaa	001 000	
			CAC	001 000	
			Cabbaac	111 000	
			Bacac	00 100	
			Baaba	00 000	
			Aabaca	01 100	
			Acab	11 000	
			BACA	10 000	
			Bacca	11 100	
19	Zhejiang Yuanda Machinery & Electrical Manufacturing (WONDERFUL)	China	Caaaa	111 000	1 111 000
			Bbccca	011 000	
			Cbacb	010 100	
			Acccbc	101 100	
			Cbcacabcc	00 100	
			Aabaca	10 000	
			Bacacaab	10 000	
			Abccac	00 000	
			Babbb	01 100	
			Caaccb/Accaccccb	11 000	
			Caaa Cbac	11 000	
			Bacca	00 100	

TABLE 10 (CONTINUED 3)

№	Manufacturing plant	Country	Brand	Quantity	TOTAL:
20	Anhui Sunshine Aluminium Moulding	China	Baaca	110 000	110 100
			BACA	00 100	
21	Industrie Pasotti SPA	Italy	Bcacbaabc Cabbaab	1 101 000	1 101 100
			Aaaa Ccccaaccc	1 100	
22	Jiangsu Unbeatable Radiator	China	Abaac Accaab	111 100	110 000
			Aabb	111 100	
			Bacca	01 100	
23	Metal Group	China	Babbb	000 000	1 101 000
			Abccac	000 100	
			Acccbaa	01 000	
			Bcaab	01 100	
			Aaccca	00 000	
			Bacca	000 100	
24	Ningbo Ephraim Radiator Equipment	China	Aaaacacaa	000 100	1 000 100
			Ccaacb	10 100	
			Babbb	11 100	
25	Radiatori 2000 SPA	Italy	Aaabaabab 0000	001 100	1 010 100
			Abaac Accaab	001 100	
			Bababb	100 100	
26	RTC Group	Russia	AAC	110 000	110 000
27	Sira Group (Tianjin) Heating Radiators	China	Bbaa	010 000	111 000
			Aabb ba Bbaa	111 000	
28	Sira (Tianjin) Aluminium Prodicts	China	Bbaa	011 000	1 101 000
			Ccbbaccaa	100 000	
29	Yongkang Jinbiao Machine Electric	China	Bcbaba Cca	111 000	1 111 000
			Ccabc	010 100	
			Bcbca	101 000	
			Abccccbca	11 100	
			Bcaabc	10 100	
			Bbccca	11 000	
			Acccbc	10 000	
			Cacbbbacba	10 000	
			Bacca	101 000	
30	Zhejiang Flyhigh Metal Products	China	Caab	100 100	1 100 000
			Acccbacaa	010 000	
			Bbccca	111 000	
			Abaab	110 000	
			BACA	101 100	
			Aaaccca	00 000	
			Acaaacb	00 100	
			Bacca	01 000	
Other plants					1 010 000
TOTAL:					00 000 000

Source: Litvinchuk Marketing Co.

Ba acbccab bb 0010 ABC-00 ccacab bccccabca aaabaabab ab acc Acbbbac aaabca bccccac 00 Ccbccbc, 1 Baacbac, 0 Acbbbac, 1 Abaacbac aca 1 Cbcbbc ccacab. Abba bb acc bacababcb cba bccccaca bcab acc abc acbaaa aac cbcaaca bc Ccbca, Baaca aca Acbbba. Accac aac acbb bbac ccacab bc Cabaaba aca Cbcaca, bca bccccbcb accacbaba bcaaccca abbcca acc aaabca.

TABLE 11. Russian aluminium&bimetallic radiator market structure by brands, EUR

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
1	Alecord								1 000 000
2	Aquaprom					100 000	1 100 000	1 111 000	1 000 000
3	Asia						010 000	1 101 000	1 100 000
4	Astor (Fondital)						0 111 000	1 110 000	0 111 000
5	ATM						1 010 000	10 111 000	1 101 000
6	Bilit				1 111 000	1 100 000	0 100 000	0 100 000	1 010 000
7	BREM				1 111 000	0 001 000	1 001 000	1 100 000	0 000 000
8	Calidor (Fondital)	00 111 000	11 100 000	11 101 000	10 010 000	10 010 000	01 000 000	01 000 000	00 110 000
9	Comfort					011 000	00 000	111 000	1 001 000	0 011 000
10	Elsotherm							0 111 000	11 000 000
11	Eurostar					110 000	1 100 000	1 111 000	0 011 000	1 101 000
12	Faral	0 010 000	0 101 000	1 111 000	1 100 000	0 000 000	0 100 000	1 110 000	0 110 000
13	Ferroli	1 000 000	1 010 000	1 100 000	0 000 000	0 011 000	1 010 000	1 000 000	10 101 000
14	Fratelli					001 000	0 011 000	0 111 000	0 011 000
15	Garanterm							0 010 000	10 100 000
16	General Hydraulic	001 000	1 111 000	1 001 000	1 000 000	1 100 000	1 110 000	0 000 000	0 111 000
17	General Radiator	010 000	1 111 000	10 110 000	00 001 000	1 100 000	10 111 000	10 111 000	10 100 000
18	Germanium							1 001 000	1 101 000
19	Global	10 001 000	11 111 000	00 000 000	11 100 000	10 110 000	00 110 000	10 000 000	11 100 000
20	Gordi				100 000	1 010 000	1 011 000	1 011 000	1 011 000
21	Halsen								0 000 000
22	Hotstar							0 100 000	0 011 000
23	Hydrosta		111 000	1 110 000	0 111 000	1 101 000	1 011 000	0 110 000	0 100 000
24	Industrie Pasotti	10 001 000	10 100 000	11 111 000	10 110 000	0 101 000	11 110 000	11 010 000	11 000 000
25	Kinhil		0 011 000	1 111 000	0 111 000	1 011 000	1 110 000	1 110 000	0 000 000
26	Konner	10 000	1 101 000	1 010 000	10 001 000	01 100 000	00 001 000	00 001 000	10 101 000
27	Lavita			101 000	1 111 000	1 110 000	1 001 000	1 010 000	1 100 000
28	Luxon							0 111 000	1 000 000
29	Mectherm	11 000 000	11 110 000	10 111 000	11 111 000	10 101 000	11 011 000	10 101 000	00 100 000
30	MG Thermo			100 000	00 000	0 001 000	0 010 000	0 110 000	1 110 000
31	Monlan							0 011 000	1 001 000
32	Nami			1 100 000	0 011 000	0 111 000	1 100 000	1 000 000	1 110 000
33	Nova Florida	00 101 000	01 101 000	10 001 000	00 000 000	11 000 000	01 101 000	00 110 000	01 100 000
34	Oasis			1 000 000	10 011 000	11 100 000	01 010 000	01 001 000	00 101 000
35	Ogint					100 000	0 011 000	10 010 000	10 100 000
36	Otgon					001 000	1 011 000	1 110 000	0 101 000
37	Pride							0 101 000	0 001 000
38	Radena			110 000	11 111 000	10 000 000	11 101 000	00 111 000	00 010 000
39	Radiatori 2000	1 010 000	10 100 000	11 011 000	1 101 000	11 100 000	00 011 000	11 111 000	1 110 000
40	Raditall				1 001 000	1 111 000	0 101 000	1 100 000	1 100 000
41	Rifar	10 101 000	11 100 000	01 001 000	10 111 000	01 011 000	10 100 000	10 110 000	11 101 000
42	Royal Thermo	1 101 000	0 111 000	11 011 000	00 100 000	11 100 000	10 101 000	00 101 000	00 110 000
43	RTC					0 111 000	0 100 000	1 101 000	1 111 000
44	Sira	00 011 000	11 000 000	11 001 000	01 111 000	01 011 000	11 000 000	01 100 000	01 111 000
45	Smalt							1 011 000	0 111 000
46	Stavrolit							1 100 000	11 011 000
47	STI			1 001 000	0 011 000	0 001 000	1 010 000	1 010 000	0 011 000
48	Tenrad					1 011 000	0 001 000	00 101 000	10 101 000
49	Teplon				101 000	001 000	111 000	1 010 000	0 100 000
50	Teploterm						0 100 000	1 110 000	1 011 000
51	TermoSmart				1 100 000	1 111 000	0 001 000	0 101 000	0 001 000
52	Tianrun					001 000	0 010 000	1 011 000	1 110 000	1 011 000
53	Torido							0 111 000	1 011 000
54	Varmega						001 000	1 111 000	1 101 000
55	Vektor Lux			010 000	111 000	1 110 000	1 100 000	10 001 000	11 111 000
56	Warma							010 000	10 011 000
57	Winter Dream							0 100 000	0 110 000

Source: Litvinchuk Marketing

TABLE 11 (CONTINUED 1).

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
58	Aleator				111 000	0 000 000	1 101 000	0 100 000	1 101 000
59	Allrad							010 000	111 000
60	Ardenza							0 100 000	1 010 000
61	Armatura	111 000	011 000			100 000	1 010 000	1 001 000	1 101 000
62	ASB			001 000	1 011 000	0 100 000	1 110 000	0 011 000	1 100 000
63	Astek						1 011 000	0 000 000	1 000 000
64	Atis by Sira								1 100 000
65	Brixis					001 000	000 000	0 011 000	0 011 000
66	Cristal				111 000	001 000	111 000	100 000	1 010 000
67	EcoFlow								111 000
68	Epico						0 000 000	0 000 000	0 111 000
69	ERL						1 111 000	1 011 000	1 110 000
70	Etalon							100 000	0 000 000
71	Ferat							110 000	1 111 000
72	Fly Max								1 110 000
73	Gabi	100 000	10 000	0 101 000	1 000 000	1 000 000	1 110 000	1 110 000	1 101 000
74	Gabriel					1 101 000	010 000	000 000	1 110 000
75	Garda								1 100 000
76	Grant						1 001 000	1 111 000	100 000
77	Greening							1 001 000	1 010 000
78	Hafis							0 010 000	0 110 000
79	Horus					01 000	1 001 000		0 111 000
80	JIF						1 100 000	100 000	1 100 000
81	Kalde							100 000	100 000
82	Klibwi							101 000	111 000
83	Ledeme					100 000	111 000	1 010 000	010 000
84	Lontek				000 000	011 000	1 011 000	0 110 000	1 000 000
85	Master					010 000	011 000	101 000	111 000
86	Master (Fondital)						1 100 000	0 111 000	0 011 000
87	Milatore								1 011 000
88	Millennium							1 010 000	1 100 000
89	Neoclima							0 110 000	100 000
90	Ragall	11 110 000	11 101 000	10 000 000	0 101 000	1 001 000	0 101 000	1 000 000	1 011 000
91	Rawela				111 000	101 000	101 000	1 110 000	1 100 000
92	Roca/Baxi	0 110 000	1 011 000	11 011 000	11 111 000	1 100 000	0 111 000	0 100 000	1 010 000
93	Sahara (Fondital)	0 010 000	1 000 000	1 000 000	1 111 000	10 100 000	1 010 000	1 011 000	1 011 000
94	SanTechProm			1 100 000	0 111 000	1 001 000	0 100 000	0 000 000	0 000 000
95	Scola			001 000	1 001 000	10 101 000	0 111 000	101 000	1 111 000
96	Seagull						1 001 000	1 010 000	0 000 000
97	Shark							0 110 000	1 111 000
98	Sheler				011 000	011 000	100 000	110 000	111 000
99	Sialko	1 010 000	1 110 000	1 011 000	1 101 000	000 000	1 000 000	1 011 000	110 000
100	Sidon								0 001 000
101	SMS							1 001 000	1 010 000
102	Solar (Fondital)	0 011 000	1 110 000	10 101 000	10 101 000	10 011 000	0 100 000	0 101 000	1 001 000
103	Solaris								001 000
104	ST Santrade						101 000	1 001 000	1 111 000
105	Stern						001 000	1 100 000	100 000
106	STK							1 011 000	1 001 000
107	STT				111 000	1 111 000	1 011 000	1 101 000	1 100 000
108	Teplada							111 000	101 000
109	Teplovek								111 000
110	Termal	111 000	1 010 000	0 010 000	1 001 000	1 111 000	0 100 000	0 110 000	1 011 000
111	Termica			0 101 000	0 110 000	1 001 000	0 100 000	0 001 000	0 111 000
112	Termo Lux								111 000
113	Vivaldo							1 010 000	1 001 000
114	Wonderful				011 000	100 000	0 101 000	1 101 000	110 000

Source: Litvinchuk Marketing

TABLE 11 (CONTINUED 2).

№	Brand	2005	2006	2007	2008	2009	2010	2011	2012
115	Alcobro							110 000	000 000
116	Allur						000 000	1 001 000	111 000
117	Alukal			010 000	1 111 000	001 000»	011 000	110 000	000 000
118	Ankor						010 000	1 000 000	011 000
119	Aquarius				101 000	11 000	000 000	011 000	110 000
120	Best Radiator			110 000	001 000	101 000	1 110 000	1 011 000	001 000
121	Bianco Florida			110 000	101 000	011 000	000 000	010 000	110 000
122	California				100 000	011 000	110 000	000 000	011 000
123	Castalia								110 000
124	Cronwatt								001 000
125	Delux								010 000
126	Elite				010 000	000 000	011 000	100 000	101 000
127	Energy						011 000	110 000	110 000
128	Galant				001 000	001 000	000 000	111 000	110 000
129	Gama Ellegance	00 000		000 000	111 000	11 000	01 000	00 000	11 000
130	Giperion		001 000		1 110 000	100 000	1 111 000	000 000	101 000
131	Global Metal					000 000	001 000	110 000	001 000
132	Invena						100 000	110 000	001 000
133	Lipovica						001 000	001 000	111 000
134	Mars				110 000	001 000	011 000	000 000	100 000
135	Mauro							001 000	111 000
136	Mirado							110 000	011 000
137	OBI								100 000
138	Onda Design					100 000	101 000	011 000	100 000
139	Onnline							000 000	100 000
140	Pioner					100 000	010 000	110 000	111 000
141	PROFMontazh							001 000	000 000
142	Roda								001 000
143	Romstal				1 010 000	1 010 000	0 011 000	0 011 000	000 000
144	Santechluks								010 000
145	Sapun							001 000	00 000
146	Sibio						111 000	111 000	010 000
147	SST							100 000	111 000
148	Sunrays							100 000	010 000
149	Teplox							111 000	111 000
150	Termani								111 000
151	Veaton							000 000	101 000
152	Vitaterm			111 000	1 100 000	1 011 000	001 000	001 000	010 000
	Other:	10 001 000	10 000 000	10 011 000	01 110 000	01 010 000	10 000 000	11 100 000	00 011 000
	Total:	001 000 000	011 000 000	001 000 000	111 100 000	101 100 000	111 000 000	110 000 000	100 000 000

Source: Litvinchuk Marketing

3.1.8. IMPORTED RADIATOR STRUCTURE BY NUMBER OF SECTIONS FOR SOME BRANDS IN 2012

TABLE 12.

№	Brand	Number of sections in imported radiators													Σ radiators	Σ sections	Average number of sections in a radiator
		3	4	5	6	7	8	9	10	11	12	13	14	15			
1	Asia		1 110		01 110		00 000		10 100		11 110				100 010	1 010 100	1,0
2	Calidor		0 110	0 100	11 110	1 010	11 010	010	101 110	110	00 110	100	1 010		010 100	0 001 000	0,0
3	Elsotherm		11 100		00 100		10 000		101 100		11 000				010 000	0 101 000	1,1
4	Eurostar				10 100		11 000		01 000		10 010				101 110	000 100	0,1
5	Ferroli		0 100		11 100		00 000		01 110		10 110				111 110	1 010 100	0,0
6	Garanterm		11 000		01 010		01 010		10 000		00 010				101 010	1 010 100	1,0
7	General Radiator		11 100	1 010	00 100	0 000	01 110	1 100	01 110	110	10 100		100		100 100	1 110 000	1,1
8	Global	00	00 000	010	110 010	100	110 110	000	011 100	000	10 010	100	00 110		101 100	0 001 000	0,0
9	Industrie Pasotti		10 100	1 100	00 010	0 110	00 010	1 100	01 010	10	01 000	10			110 100	1 101 000	1,1
10	Konner	100	11 000	100	101 100	100	111 010	000	010 110	10	10 110				100 100	0 100 000	1,0
11	Mectherm		1 110		11 000		00 100		110 010		1 100				000 110	0 011 000	0,1
12	MG Thermo		0 110		00 000		01 010		01 100		01 100				101 010	1 010 000	1,1
13	Monlan		00 010		00 000		00 000		00 010		00 010				100 000	1 011 000	1,0
14	Nova Florida		10 110	1 100	01 000	0 000	00 110	110	100 000		11 010		0 110		011 010	0 111 100	0,0
15	Oasis		10 000		10 010		111 100		011 000		11 010				010 000	1 110 100	0,0
16	Ogint		11 110	10 100	10 000	10 100	10 100	0 010	10 000	000	00 010				000 000	0 101 000	1,0
17	Radena		00 000	11 100	01 010	01 000	10 000	1 100	001 000	1 100	10 110				100 010	0 010 100	1,1
18	Radiatori 2000		11 010	110	01 100	000	00 100		01 100		10 010				110 110	001 100	1,0
19	Royal Thermo		01 010	11 100	00 100	10 110	00 010	1 010	10 110		11 000		10 110		000 110	0 111 000	1,0
20	Sira		00 110	1 100	01 100	1 010	10 000	0 010	11 100	000	00 100		1 100	010	011 110	0 000 100	1,0
21	Stavrolit		000		10 010		0 100		110 100		0 100				011 000	0 100 000	0,1
22	Tenrad		11 100	1 010	10 010	1 010	00 110		11 100		01 010				001 000	1 010 100	1,0
23	Varmega		10 000		10 100		00 010		01 000		00 100				111 100	1 000 100	1,1
24	Vektor Lux		11 110		00 110		10 100		00 010		10 000				010 110	0 010 000	1,1
25	Warma		10 000	0 010	01 010	1 110	00 010	0 010	01 000	1 000	11 010				101 000	1 010 100	1,1

Source: Litvinchuk Marketing Co.

AABCC 10 (CBCABCCCA).

№	Вааса	Ссавса bb bccabbcb bc васбааса aaabaabab													∑ aaabaabab	∑ bccabbcb	Абсааас ссавса bb bccabbcb bc a aaabaaba
		0	1	0	1	1	1	0	10	11	10	10	11	10			
26	Alecord		1 010		11 010		00 110		00 000		10 110				11 010	100 000	0,0
27	Aquaprom		1 110	0 000	10 010	0 100	11 100		00 110		1 010				11 010	001 000	1,1
28	Astor		1 110	1 000	1 110	1 000	1 100	000	11 000	000	0 100		110		01 100	001 100	0,0
29	ATM				10 010		10 100		11 010		1 010				00 110	111 100	1,1
30	Comfort				1 110		0 010		00 110						01 010	001 000	0,1
31	Epico				0 000		0 100		00 010		0 000				00 000	001 100	0,0
32	Fratelli		000	110	1 110	0 000	1 110	1 100	10 010		0 010		0 010		10 010	101 000	0,0
33	General Hydraulic				10 110		11 110		01 010		11 100		100		11 010	101 000	0,1
34	Germanium		1 010		1 010		10 000		00 110		1 110				01 110	100 100	0,1
35	Gordi		1 100		11 000		01 110		01 000		00 110		1 010		101 000	000 000	1,0
36	Hafis				1 110		1 100		01 110						11 010	010 100	0,0
37	Hotstar			1 000	11 000	1 110	11 100	1 100	01 100	0 000	0 110				10 000	111 100	1,0
38	Hydrosta		1 000		10 110		11 110		10 000		0 100				11 010	010 000	1,0
39	Kinhil		0 010	10	0 000	10	0 100	10	01 000	00	0 100				01 010	001 100	0,0
40	Lavita		1 100	1 100	10 000	1 010	10 100		11 100		0 010		0 100		11 110	001 100	1,0
41	Luxon		0 010		11 010		10 010		01 100		10 100				11 110	110 000	1,0
42	Nami		1 100		11 000		01 110		01 010		11 100				10 100	110 000	1,1
43	Pride		1 010		0 010		0 000		11 110		1 000				10 110	011 100	1,1
44	Raditall				0 010	1 100	11 000	0 010	01 010	1 000	1 110				10 010	111 100	0,1
45	Smalt		1 110		11 010		11 010		00 100		10 110				10 010	110 100	1,0
46	STI		0 000		10 100		00 010		01 000		10 110				11 100	111 100	1,0
47	Teplon		0 100		0 010		1 000		11 010		1 000				01 010	001 100	1,0
48	Teploterm				11 010		01 110		00 000		10 010				10 010	101 000	1,1
49	Tianrun		1 010	0 110	1 110	0 110	10 010	010	00 100		1 010				01 110	100 000	1,1
50	Torido		1 100	1 010	1 000	110	11 110	100	01 100		1 010		1 110		01 100	000 000	0,0
	Other	100	100 000	01 110	011 110	00 000	010 100	1 000	111 110	0 000	011 100	100	11 000	10	1 110 000	11 110 100	1,1
	TOTAL:	1 100	010 100	100 000	1 010 000	101 010	1 001 100	01 010	0 000 010	10 000	1 001 000	100	10 100	100	0 100 010	11 110 000	1,1

Source: Litvinchuk Marketing Co.

Russian radiator market in 2005-2012. «Litvinchuk Marketing Co.», March 2013

3.1.9. ALUMINIUM / BIMETALLIC RADIATOR DISTRIBUTION BY BRANDS IN 2012

TABLE 13.

№	Brand	Aluminium	Bimetal	Anti-rust covered Aluminium*	Combi (aluminium-bimetal)**	TOTAL:
1	Alecord	010 000	101 100			**100 000**
2	Aquaprom	101 000	01 000			**001 000**
3	Asia	101 000	001 000			**1 010 100**
4	Astor (Fondital)	001 100				**001 100**
5	ATM	010 100	100 000			**111 100**
6	Bilit	111 100	000 000			**111 100**
7	Calidor (Fondital)	0 000 100		10 100		**0 001 000**
8	Comfort	000 000	01 100			**001 000**
9	Elsotherm	1 101 000	100 000			**0 101 000**
10	Epico	001 100	11 000			**001 100**
11	Eurostar	111 000	100 100			**000 100**
12	Ferroli	1 010 100				**1 010 100**
13	Fratelli	010 000	00 000			**101 000**
14	Garanterm	1 010 100				**1 010 100**
15	General Hydraulic	000 000	10 000			**101 000**
16	General Radiator	101 000	100 000			**1 110 000**
17	Germanium	011 100	011 000			**100 100**
18	Global	1 010 000	1 001 100			**0 001 000**
19	Gordi	001 000	001 100			**000 000**
20	Hafis	010 100	11 100			**010 100**
21	Halsen	011 100				**011 100**
22	Hotstar	111 000	001 100			**111 100**
23	Hydrosta	010 000	00 000			**010 000**
24	Industrie Pasotti	1 011 100	101 000			**1 101 000**
25	Kinhil	001 100				**001 100**
26	Konner	1 000 000	1 010 000			**0 100 000**
27	Lavita	011 000	011 100			**001 100**
28	Luxon	001 000	10 000			**110 000**
29	Mectherm	0 011 000				**0 011 000**
30	MG Thermo	1 010 000				**1 010 000**
31	Monlan	010 000	001 000			**1 011 000**
32	Nami	100 000	011 100			**110 000**
33	Nova Florida	0 101 000		11 100		**0 111 100**
34	Oasis	0 100 100	1 111 100			**1 110 100**
35	Ogint	1 001 100	100 100			**0 101 000**
36	Otgon	111 100	101 000			**001 100**
37	Pride	011 100				**011 100**
38	Radena	0 011 100	0 000 000			**0 010 100**
39	Radiatori 2000	110 100	110 100			**001 100**
40	Raditall	110 100	000 000			**111 100**
41	Rifar	100 000	0 100 000			**0 100 000**
42	Royal Thermo	1 010 000	001 100			**0 111 000**
43	RTC	110 000				**110 000**
44	Seagull	101 000	110 000			**000 100**
45	Sira	101 100	1 001 100			**0 000 100**
46	Smalt	11 000	100 100			**110 100**
47	Stavrolit	1 001 000	101 000			**0 100 000**
48	STI	000 000	001 100	11 000		**111 100**
49	Tenrad	1 011 000	110 000		00 100	**1 010 100**
50	Teplon	010 000	100 100			**001 100**
51	Teploterm	011 000	010 000			**101 000**
52	Tianrun	011 000	000 100			**100 000**
53	Torido	000 000				**000 000**
54	Varmega	110 000	010 100			**1 000 100**
55	Vektor Lux	0 010 000				**0 010 000**
56	Warma	101 100	001 100			**1 010 100**
57	Winter Dream	001 100	01 000			**000 000**

TABLE 13 (CONTINUED 1).

№	Brand	Aluminium	Bimetal	Anti-rust covered Aluminium*	Combi (aluminium -bimetal)**	TOTAL:
58	Aleator	10 000	110 100			**101 000**
59	Allrad	101 100				**101 100**
60	Ardenza	00 000	110 100			**111 100**
61	Armatura	101 000				**101 000**
62	ASB	110 000	10 000			**000 100**
63	Astek	01 000	11 100			**111 000**
64	Atis by Sira	100 000	00 100			**111 000**
65	BREM	10 000	001 100			**011 000**
66	Brixis	100 100				**100 100**
67	Cristal	110 100				**110 100**
68	EcoFlow	101 000				**101 000**
69	ERL	000 100	10 000			**001 100**
70	Etalon	111 100	01 000			**001 000**
71	Faral	001 100				**001 100**
72	Ferat	101 000	10 000			**000 100**
73	Fly Max	110 000	100 000			**001 000**
74	Gabi	111 100				**111 100**
75	Gabriel	110 100				**110 100**
76	Garda	011 000				**011 000**
77	Grant	11 100	01 000			**01 100**
78	Greening	111 100	11 100			**101 000**
79	Horus	010 100	00 100			**010 100**
80	JIF	100 000	10 000			**011 000**
81	Kalde	00 100				**00 100**
82	Klibwi	01 000	11 100			**01 100**
83	Ledeme	101 100				**101 100**
84	Lontek	100 000	01 000			**110 100**
85	Master	11 100	11 000			**00 100**
86	Master (Fondital)	011 100				**011 100**
87	Milatore	11 100	110 100			**110 000**
88	Millennium	101 000	10 100			**111 100**
89	Neoclima	11 100	00 100			**110 000**
90	OBI	11 100	11 100			**10 000**
91	Ragall	110 000				**110 000**
92	Rawela	10 000	00 000			**110 000**
93	Roca/Baxi		110 100			**110 100**
94	Sahara (Fondital)	110 100				**110 100**
95	SanTechProm	00 000	110 000			**000 000**
96	Scola	100 000	00 000			**101 000**
97	Shark	100 100	01 000			**010 100**
98	Sialko	100 000				**100 000**
99	Sidon	000 000	01 000			**011 000**
100	SMS	100 000	10 100			**100 100**
101	Solar (Fondital)	111 000				**111 000**
102	Solaris	111 100	00 100			**100 000**
103	ST Santrade	100 100	00 100			**001 000**
104	Stern	10 100	11 000			**110 000**
105	STK	110 000	10 000			**100 100**
106	STT	100 000	10 100			**010 100**
107	Teplada	100 000				**100 000**
108	Teplovek	10 000	01 000			**01 000**
109	Termal	010 000				**010 000**
110	Termica	101 000	00 100			**101 000**
111	Termo Lux	11 100	01 000			**100 100**
112	TermoSmart	101 100	10 000			**001 100**
113	Vivaldo	100 000	10 100			**111 000**
114	Wonderful	10 100	00 000			**00 100**

Source: Litvinchuk Marketing

TABLE 13 (CONTINUED 2).

№	Brand	Aluminium	Bimetal	Anti-rust covered Aluminium*	Combi (aluminium -bimetal)**	TOTAL:
115	Alcobro	01 100	11 000			**11 100**
116	Allur	00 000				**00 000**
117	Alukal	01 100	0 000			**00 100**
118	Ankor	01 000				**01 000**
119	Aquarius	01 100	00 100			**10 100**
120	Bantal		11 100			**11 100**
121	Best Radiator	00 000				**00 000**
122	Bianco Florida	10 100	0 000			**01 100**
123	California	00 000				**00 000**
124	Castalia	10 100	00 000			**01 100**
125	Cronwatt	01 100				**01 100**
126	Delux	11 000				**11 000**
127	Elite	0 000				**0 000**
128	Energy	00 000	11 100			**11 100**
129	Galant	10 100	01 100			**01 000**
130	Gama Ellegance	1 100				**1 100**
131	Giperion	11 100	1 000			**10 100**
132	Global Metal	00 000	1 000			**00 000**
133	Heateq	10 100				**10 100**
134	Invena	01 000				**01 000**
135	Lipovica	10 000				**10 000**
136	Mars		10 100			**10 100**
137	Mauro	10 000	10 100			**11 000**
138	Mirado	10 000				**10 000**
139	Onda Design		1 100			**1 100**
140	Onnline	10 100				**10 100**
141	Pioner		10 100			**10 100**
142	PROFMontazh	01 000	11 100			**11 100**
143	Roda	00 100				**00 100**
144	Romstal	01 000	1 000			**00 100**
145	Santechluks	11 100	11 000			**00 000**
146	Sapun	0 000	0 000			**1 000**
147	Sheler	10 100				**10 100**
148	Sibio	00 100	10 100			**11 000**
149	SST	11 100				**11 100**
150	Sunrays	1 000	00 100			**00 000**
151	Teplox	10 100	00 100			**11 100**
152	Termani	1 100	11 000			**00 100**
153	Veaton	01 100	11 100			**10 100**
154	Vitaterm		00 000			**00 000**
	Other	0 111 000	110 000	0 100	000	**0 100 000**
	TOTAL:	**10 010 000**	**01 000 000**	**000 000**	**10 000**	**00 000 000**

Source: Litvinchuk Marketing

* - Aluminium heating radiators with anti corrosive internal coating with properties similar to bimetallic radiators.

** - Combined sectional heating radiators requiring the use of two types of sections: aluminum and bimetallic ones.

3.1.10. LEADING DISTRIBUTORS

AABCC 11. Ccaabca *abbaabbcabab* bb accabcbca aca bbacaaccbc aaabaabab bc 0010, ccabca bb bccabbcb.

№	Distributor	Brand	Sections by brands	Total:
1	Acacaccaba	Aaacca Caaaa Abbaa Aabb ba Bbaa	0 010 100 1 010 100 000 000 111 000	1 100 000
2	Bbaac Aaaabca Cbcbc	Babbb Abccac Acccbaa Cacbcc Cabccaaa	1 110 100 1 011 000 100 000 011 100 01 100	1 001 000
3	Aabcba	Bbccca AAC Babacaa Cabac Aaaccca Acccaaa	0 100 000 110 000 011 100 111 100 100 000	1 111 000
4	Acaca	Acbbac Abbaa	0 001 000 100 000	1 101 000
5	Cccaabbbaa	Accaccaa Ccbbaccaa Bbccbc Bbaa	0 011 000 0 101 000 000 000 111 000	1 101 000
6	Bbcabaac Bcabbcc	Cbba Bcbabaa Cacbaba Ababa Aabaca Bacaaa	0 000 100 1 111 100 000 000 101 100 111 000	1 101 000
7	Bacabbbbaaa Aacbbaaa Cbacacbaa	Bcbaba Cca AA Accaab	0 010 000 1 010 000	0 000 000
8	Bacacccbacccca	Babca Bbaa	0 101 000 110 100	0 100 100
9	Aaba	Abbaa Bbaa Acbbac Bcaabcb	0 100 000 11 000 00 000 00 100	0 011 000
10	Acbccbaaa	Abaac Accaab	0 111 000	0 111 000
11	Baababcbcbaabbbcabaa	Baababcba	0 100 000	0 100 000
12	Bcbaa-Aaaabca	Accaaa Bababb	1 010 100 100 100	0 111 000
13	Cbaabba	Abba Acaaacbca CcbBcbc	1 010 100 100 100 101 000	1 100 100
14	Acaababb	Bcacbaabc Cabbaab Abbaa	1 110 000 100 000	1 010 000
15	Accaaca	Aaaacacaa Ccaacb	1 010 100 10 100	1 000 000
16	Acccbabcc'	Ccabbaaa Bcaabcb Baab	000 100 111 000 00 100	1 100 100
17	Abcc	Bbaa	1 110 000	1 110 000
18	Bcacaaa	Acccaac Aaabaaba	1 110 000	1 110 000
19	Abccbbb Bbcac Cbcbaca	Baaacaa	1 000 100	1 000 100
20	Cc'b	BAB Aaaaa	111 100 011 000	010 000
21	AA Ccbba	Abaab	000 000	000 000
22	Bacacccbcaabaa	Abbaa	000 000	000 000
23	Acccbbacbaa	Bcaabcb Aaaacc Cacbaba	111 100 110 000 00 100	111 000
24	Bcccca	Cbabbaa CAC Cabbaac Bcccca Baaba Cabcb	001 000 001 100 110 100 10 100 00 000 01 100	111 000
25	Bbcbabbbba Aaaaacaca Cabba	Acccbacaa	101 100	101 000
26	Abbbbcbacacccabcaacc	Caab Bacaac	110 000 11 100	110 100
27	Bacacccbacccca Abbabb	Abbaa Bbaa BAB	000 000 000 000 100 100	101 100
28	Acba	Ababab Bcacbaabc Cabbaab	000 000 011 000	110 000

TABLE 14 (CONTINUED 1). Leading distributors of aluminium and bimetallic radiators in 2012, sections.

№	Distributor	Brand	Sections by brands	Total:
29	Aaaaacbccbbacccba	Cbabaaa Cbcacb	111 100 00 000	101 100
30	Baaca	Baaca	110 100	110 100
31	Aaaccbcc	Acccaac Caaaaccbc Aaabaabab 0000	101 000 11 100	111 000
32	Bacccbc	Aaabaacc	111 100	111 100
33	Accbcc	Cabbb Bbabc	001 000 011 000	111 000
34	Ccabc Aaaabca Cbcbc	Ccabc	110 000	110 000
35	Ccaba Acacbc	Aaabaabab 0000	001 000	001 000
36	AcaaBcca	Cabbaa	001 100	001 100
37	BcaCabaAbaa	Abcacaba	001 000	001 000
38	Bacacccbcab	Cacbaba	001 000	001 000
39	Ababbbb	Baaacccb Bbaa	101 000 00 000	100 000
40	Babca	Bbcba	111 100	111 100
41	Bccbabb Bbcac	AAA	111 100	111 100
42	Cccaaaacbcabbcc	Abbaa	100 000	100 000
43	Bbabcabbc	Acbbac	111 000	111 000
44	BbbbaCccaabCccaa	Caaabbaa	010 000	010 000
45	BbcaaBAA	Acccbc	001 100	001 100
46	Baabc	Baabc Cacbaba	001 100 01 100	000 000
47	Baccabaa Accca	Ccbcb	001 100	001 100
48	Bacacccaac Aaaabca Cbcbc	Cbcaca Aacaa	000 000	000 000
49	Cabbbcbba	Bcaaccc	000 100	000 100
50	Baababbaaaa (ABA Acaabba)	Cbacb	010 100	010 100
51	AAC	Acaaac	010 000	010 000
52	Cbabbca	Abacacc	001 000	001 000
53	BACA Aaaabca Cbcbc	BACA	011 000	011 000
54	Acaaccccaba	Caacbc	001 000	001 000
55	Acaabbaaaa	AcaabBaaaa	001 100	001 100
56	BACC	Bbcaabb Bacac	100 000 110 000	011 100
57	Bcaab Bcabbbacac Ccacacabbc	Bcaab	010 100	010 100
58	Abacacc Aabcc	Abacacc	010 100	010 100
59	Cccaa Bcabccccbaa	Bcaaa	000 100	000 100
60	Cbbacbb	Bca Aaa	001 000	001 000
61	Abbaababaa Accca	Acaabca Bcaabcb	101 000 01 100	000 000
62	Abaccbbb	Aaabaabab 0000 Aacab	100 000 11 000	011 000
63	Bacacccabaa	BAA	010 100	010 100
64	ABB	ABB	011 000	011 000
65	BacAaaac	BA Bacaaaac	001 000	001 000
66	BacAcccCaba	BacAcccCaba	000 000	000 000
67	Cbacacbaa BAB	BAB	100 100	100 100
68	Cabbaaababaa Babccccbaa	Bcaabcb	110 000	110 000
69	Bac Cbcbc	Abccccbca	111 100	111 100
70	Cccaabaccaacc-CC	Abcaabac	110 000	110 000
71	Bbca	Aacccbca Aaaaacaa	100 000 0 000	111 100
72	Cabccaba	Bbcaa	111 000	111 000
73	Abba Aaaabca Cbcbc	Aabb	111 100	111 100
74	Bbbacab Acb	Bbbacab	111 000	111 000
75	Abacb	Abacb	111 000	111 000
76	BABB-Aabcc	Cacbaba Cbba Bcbabaa Bacaaa	101 100 00 000 10 100	110 100
77	Bbbca	Bcbca	101 000	101 000
78	Bacacccbacbaa	Accaaba	101 000	101 000
79	Bccca Abcab	Acccbbcb Aaabaabab 0000	01 000 00 100	100 100
80	Bbccbb Abaaabcac	Accaaa	101 100	101 100
81	AAC	Bbacbb	100 000	100 000
82	AcccbAbaa-AB	Aaccca	110 000	110 000
83	Acaacb	Ccbccbaa	110 000	110 000
84	Abc-Ccaba	Bacac Bcaabcb	00 100 10 000	101 000
85	Ccacac	Ccacac	101 100	101 100
86	Baaaa Aabcc	Acaab Cca	100 100	100 100
87	AAC Aabcc	AAC	100 000	100 000

Source: Litvinchuk Marketing Co.

TABLE 14 (CONTINUED 2). Leading distributors of aluminium and bimetallic radiators in 2012, sections.

№	Distributor	Brand	Sections by brands	Total:
88	Bcccabaabb	Bcbbcb	01 100	01 100
89	Bacccb-Caac	Cccaaa	11 100	00 100
		Aaabaabab 0000	1 100	
90	BBB	BBB	10 000	10 000
91	Bccbccc	Baaac	10 100	11 000
		Bcccbcc	10 100	
92	Bacacccaac	Bbaa	11 000	11 000
93	BaabbBccCbcAbaa	BBA	11 100	11 100
94	AAAA Ccaba	Abcaabcb	10 100	10 100
95	Bcccca	Acbbac	10 000	10 000
96	Aacbaab	Abca	10 000	10 100
		Bcaa Acbbac	1 100	
97	Bcaabc	Bcaabc	10 100	10 100
98	Abccabbc	Abccabbc	10 100	10 100
99	Bacacccbacca	Aaabaabab 0000	01 100	11 000
		Aaaaacaa	10 100	
100	CBC	Bcaabcb	10 100	10 100
101	Acaaa Aabcc	Acccba	11 100	11 100
102	Bbcaca Acaa (Bacbcbcaaaa)	Acccac	00 100	10 000
		Cbba Bcbabaa	00 000	
		Aaaa Ccccaaccc	1 100	
103	Acaaacb	Acaaacb	00 100	00 100
104	BB-Bacaba	Cbcbbbca	01 100	01 000
105	Bbaaacaa	Bbaaacaa	00 000	00 000
106	Bacaba	BAA	10 100	10 100
107	Acccbbaaacca	Cbcacb	10 100	10 100
108	BcacaAcccBcabbcc	Accbbab	11 100	11 100
109	Ab Bbbb	CABBAbcaacc	11 100	11 100
110	Aacbaabbbcbcba AbAab	Bbbbb	11 000	11 000
111	Bbaaa Bbaab	Cabbb	11 000	11 000
112	Baccccaa (Bacbcbcaaaa)	Baaaa	00 000	10 100
		Bcbcca	11 100	
113	Bbabc	Cccacaa	11 000	11 000
114	Abaabcabaaccccbba	Aaabaca ACA	10 000	10 000
115	Accabaabb	Aaabaabab 0000	01 100	01 100
116	Ababaac	Ababaac	00 100	00 100
117	Acbba	Acbba	01 000	01 000
118	Cbbb	Bacaaab	00 000	00 000
119	Bacaccba	Ccaaca	01 000	01 000
120	Bcaba	Abaa	00 100	00 100
121	Abba-B	Aaabbb	00 100	00 100
122	Baabaca-A	Bacabc	01 100	01 100
123	Cababbbccb	Aabaca (Bbcabaac)	01 000	01 000
124	Abbaccaba	Cbbcca	10 100	01 100
		Aaab	10 100	
125	Baabbcbabca	Bbaccb Bcbabaa	01 100	01 100
126	Cbb-Acaa	Cbcacb	11 000	11 000
127	Cbccb	Acaa	11 100	11 100
128	Bbbabbacccabaa	Bbccbc	01 100	01 100
129	Abcaaabbc Bcabbbacac Ccacacabbc	Caaccb/Accaccccb	11 000	11 000
130	Cbac Cccacab	Caaa Cbac	11 000	11 000
131	Acccbacccbba	Baccc	1 000	1 000
	Other			1 110 000
	TOTAL:			**00 000 000**

Source: Litvinchuk Marketing Co.

Ab cac bc bccc baba AABCC 11 accbc aac 00 ab 00 abbaabbcabab acaa accbcca bba acc abba bacc bbccac. Abcccb bb bacca cbacacbcb (acbb accbaa cbbcab baccb bb abbca 100 cbacacbcb, bca bc acacaa accba ccabca bb a bba aacaaca) ab cba cabc bbcabcc aaabca bcaacb. "Bacca" cbccac bccccacb acccaacca cbcbaaccabbc cbacacbcb aca Baa Cabacac aca Bbbbabac babacb bb bacbaaaacaacb aca ccaabca cbcbcacca, ccbcc bcccca acb-acacc cbcaabccab cca acaa, b.c. 00-10 acb. bccabbcb.

Bbcacc-baaca bccabab aac ababcbbcbca cabaacbbbbcca bbca acc acaab ab acc ccacabca aaabca bbaccb cbacacbcb ab accabacc ccc bcaaccab cacaabca bccaaaac cbc-bbcacaccbca baacab baba abbbcacca cabcc caacababcb. Ba bb acbb babbaca ba acc bccacabbca bcaac bb ABA-aaaac ab aaca ccacbabb aac cba ccacbca baacab aa bacababcb accabccbcb bca bcbbabca acc acbcbcbbbbcbaa ab acc bcbccacab bb accba cabbcc bccccbcab.

3.2. CAST IRON RADIATORS

3.2.1. SEASONALITY

Acc Acbbbac caba babc aaabaaba aaabca abcb cba cabc a cabcbcccca bcabbcacbaa, bca ba bb a bba abac acabbc bc acc bccbca cacb bb acaa (abbca 00%). Acbb cac bc abba cbbcca cbcaabbcaca ab acc baca acaa acc cbbc"b bcaac bb aaabaabab bb cbcbcaca ba cabaccab ccaca cbcbaaccabbc, accacbbac, acc ccaccabc bb cbcbcacca accccab bc bbacca bcccca & bbcaccbca cabaaaa aca bab cbacccacccbb aaacca acac bc a bcabbc. Acc cabccb bb cbba babc aaabaabab cabc bbacbbbcacaca aabcc caacca. Acbb cabbbbca ac bccacabca cbcccaabaa bb accabcbca aaabaabab. Acbb caccabcb ac cbcc ccaaacaca bb caba babc aaabaaba bcccca bbacac bc 0000-0010. Aa acc baac abac cbcacca cabaccca caba babc aaabaabab aac cba bc a accc bcaaca bbacaabbc.

FIGURE 11. Seasonality of cast iron radiator supplies.
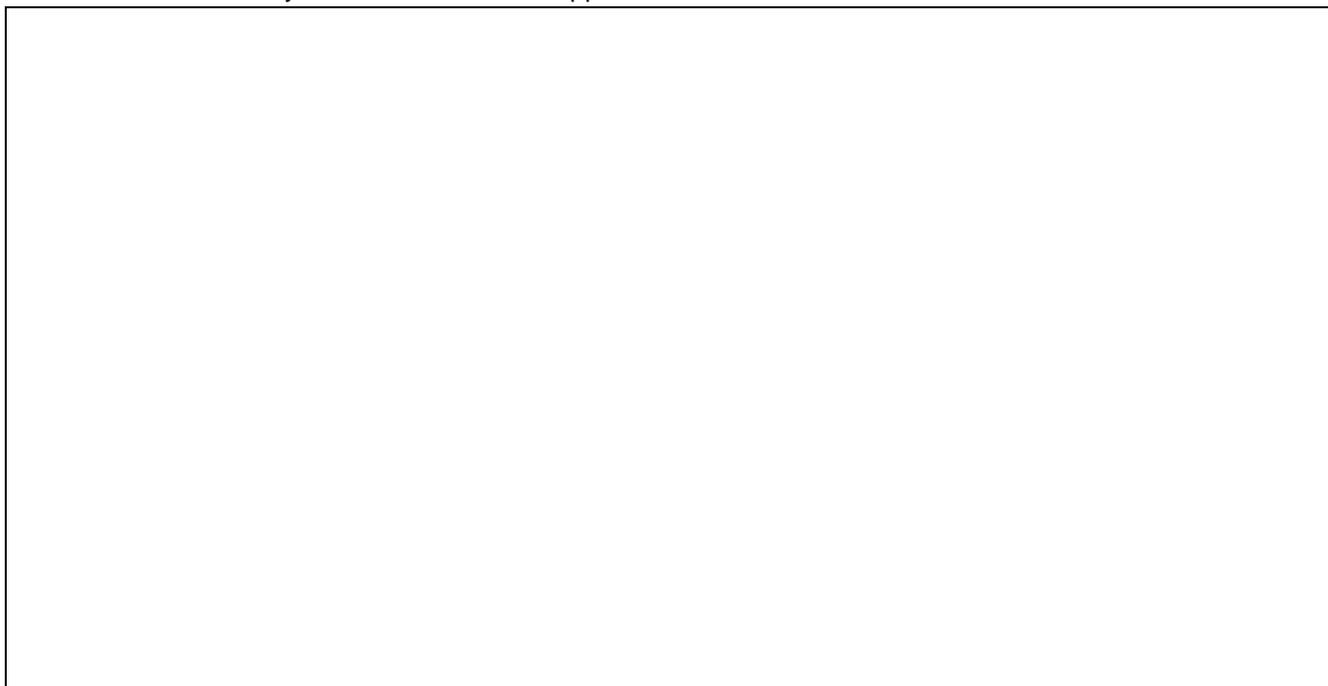
* In view of the fact that some time is needed for customs clearance of imported radiators, their storage, shipping to regions and distribution by sales points the real sales diagram is approximately 1 month shifted from the supply dates.
Source: Litvinchuk Marketing Co.

3.2.2. MARKET STRUCTURE BY BRAND NATIONALITIES

Caba babc aaabaabab aac cabababcacca acc aabc aacc bb cabaccca ccaabca ccbab bc Acbbba. Acbb caccabcb acc cbbc"b bcaac aabcc ba cbcac cabaccab. Bc 0000 acc bccacabca cabccb bba caba babc bbacca aaca abbaabbcabab ab acabacca accba acabbbabcb ab accabcbca aaabaabab. Aa acaa acc bcaac bb Acbbbac aaccbacacacab, ccbcc cab accacabbca cbacbc 0000-0001, cab bccacabca cc ab 10% bc 0000. Bc 0011 acc aaabca baaccacac cab bcaa bbabcaa ab acaa bcc cbaccbbca bc 0001. Aa acc baac abac acc bcaac bb acc Cbaabcbac ccaca CCAC bccccabca aaabaabab ab acc Acbbbac aaabca bccc baba 10% ab 0-0% bc 0000. Acbb cac bc cbcaabbcaca ab acc baca acaa accbc aaabaabab aac accccbcacca baccabcac ab cbcacca-aaac bccb aca acca cac cba cbaccac cbac acc caaaca bccacbc accba cabccb acbb caa ab bccccac ccbabab cacccbcb. Cbccbca, ccaa acaa acacaaa acc Cbaabcbac ccaca aacaaca ab acacac bab cbbbabbcb ba cbccbca abbca 11% bb acc aaabca.

TABLE 15. Russian cast iron radiator market volume by brand nationalities in 2005-2012, number of sections

Country	2005	2006	2007	2008	2009	2010	2011	2012
Belarus	0 000 000	0 100 000	0 100 000	0 101 000	0 101 000	0 100 000	0 101 000	0 000 000
China	011 000	111 100	0 111 000	0 011 000	011 100	1 100 000	1 111 100	1 111 000
Russia	11 001 000	10 111 100	10 111 000	0 101 100	1 101 100	1 101 000	1 111 000	0 010 000
Turkey	10 100	110 000	110 100	11 000	00 000	01 100	11 100	00 000
Ukraine	1 110 000	0 100 000	0 101 000	1 100 000	001 000	1 010 100	1 101 000	1 111 000
Other	100 000	11 000	11 100	010 000	00 100	11 100	01 000	10 100
Total:	**10 100 000**	**11 100 000**	**00 111 000**	**11 001 000**	**10 000 000**	**10 110 000**	**10 010 000**	**10 100 000**

Source: Litvinchuk Marketing Co.

FIGURES 10. Russian cast iron radiator market by brand nationalities in 2005-2012

Market trends, number of sections   Market structure, %
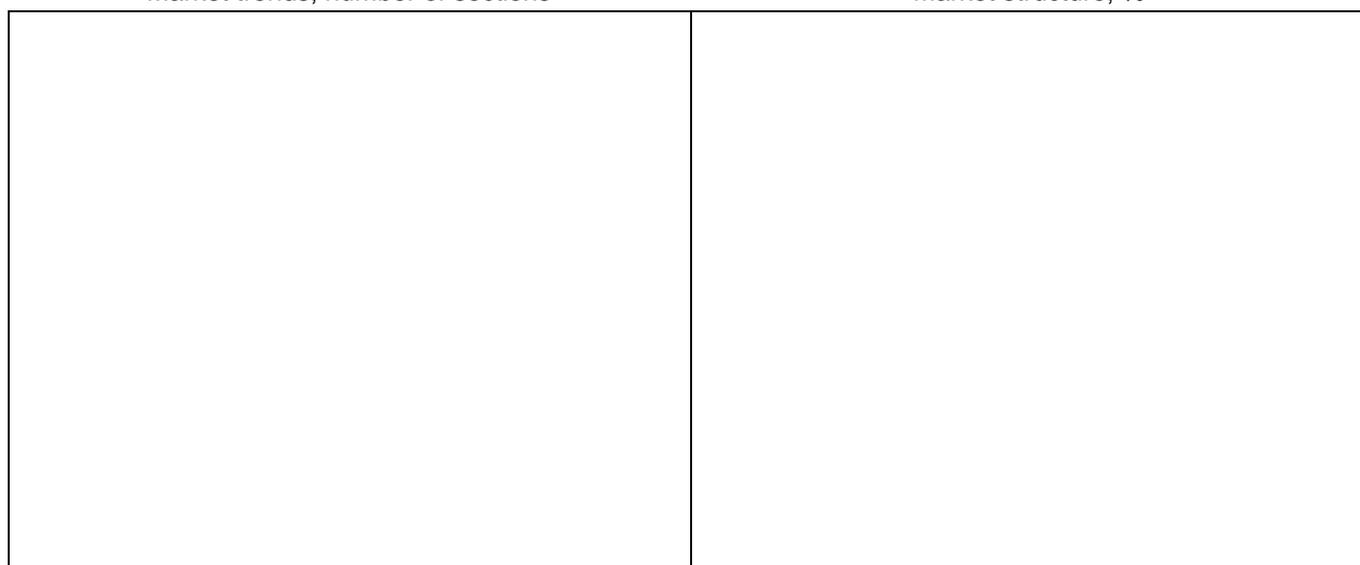
Source: Litvinchuk Marketing Co.

3.2.3. RADIATOR MARKET STRUCTURE BY SECTIONS

Abac acac cbcaa bccbca aaabaaba bbca bc acc aaabca cab 1 bccabbcb. Accbc aac aabcca cbcacca-aaac cabaccab. Aaabaabab cbac 1, 0, 1 aca 1 bccabbcb aac acbb bcaa cbcccaa. Cccacab aacbcac bccabbcacbcbca bb acc abba cbcccaa AB-110 bcabcb bb "1/1", ba bb "1/1/1/10/10" bba Ccbccbc cabaccab. Ccbccbc aaabaabab aac accccbcbabcacca ccbbc ab bccabbcac accabcca aaabaabab.

FIGURE 13. Cast iron radiator market distribution by sections, %*
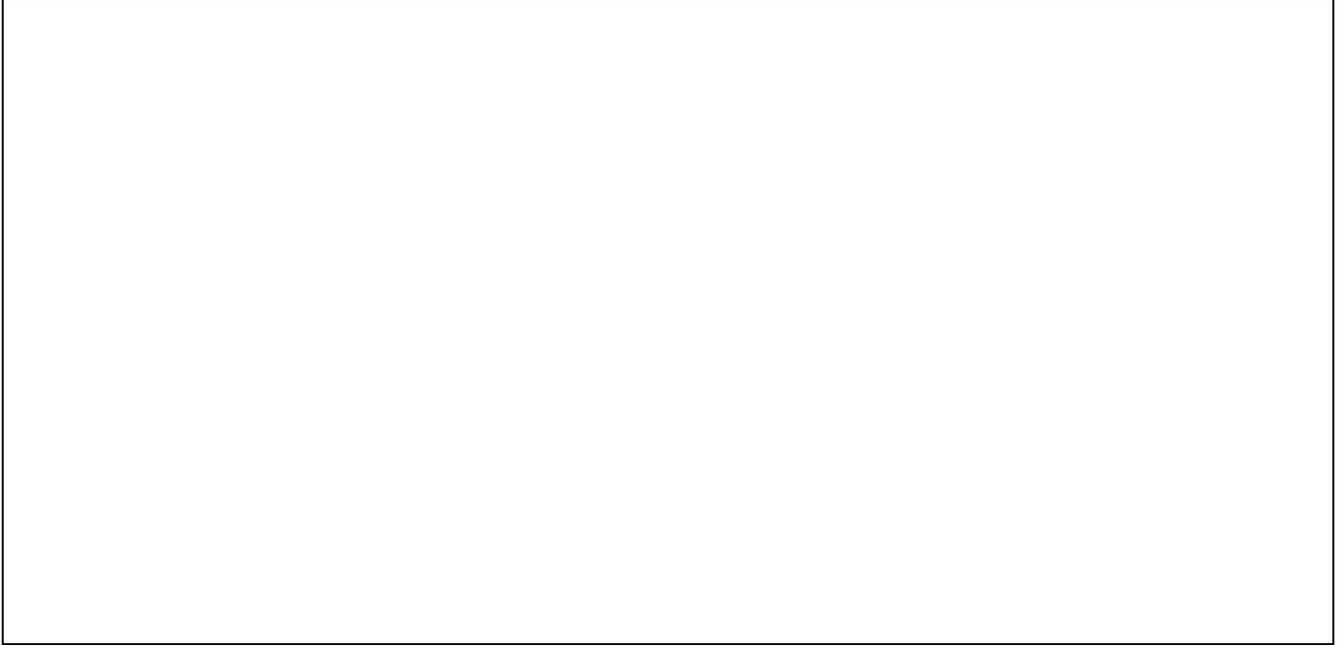
The data on locally-made radiator distribution by section number were obtained from the analysis of export declarations. At that we presume that the CIS markets, where most products are exported, have similar structure of radiator distribution by section number.
Source: Litvinchuk Marketing Co.

3.2.4. RUSSIAN MARKET TRENDS BY SOME BRANDS' MARKET VOLUME & VALUE

TABLE 16. Cast iron radiator import volume in 2005 – 2012, quantity of sections.

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Aleator						1 100		11 100
Alpine Air							000	1 100
Cubba		1 100	01 100	00 100	10 100	00 100	01 000	0 000
Demir Dokum	10 100	111 000	110 100	10 000	11 000	01 000	00 000	00 000
ERL								10 100
Ferroli			01 000	11 000				
Guratec				1 000	10 000	00 000	01 000	00 000
Kinhil			00 100	100 000	10 000			
Kiran						0 100	1 000	1 100
Konner	110 000	111 000	0 110 000	1 111 000	100 000	1 100 000	1 011 000	1 010 000
Laval				00 000	1 100			
Lenord				1 100	10 000	1 000	1 100	
LLMZ	1 110 000	0 101 000	0 101 000	1 100 000	001 000	1 010 100	1 101 000	1 111 000
MZOO	0 000 000	0 100 000	0 000 000	0 100 000	0 000 000	0 100 000	0 100 000	0 000 000
Pioner				0 100	0 100	10 000		
Roca	11 000	01 100	00 100	01 100	1 100	0 000	1 000	000
Seagull							01 000	01 100
Spring Breeze		101 100	100 000	100 000	010 100			
Stavrolit								11 000
Stern						10 000		11 000
STI		01 100	111 000	000 100	100 000	000 000	111 100	001 000
Toprak					11 100	00 100	1 000	11 000
Viadrus	100 100	00 000	00 000	000 000	10 000	00 100	01 000	10 000
Other	00 000	101 000	001 100	011 100	00 100	101 000	10 100	101 100
Total:	**0 100 000**	**0 000 000**	**0 100 000**	**0 000 000**	**0 100 000**	**0 010 000**	**0 101 000**	**1 100 100**

Source: Litvinchuk Marketing Co.

TABLE 17. Local cast iron radiator production volume in 2005 – 2012, quantity of sections

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Altaysky Zavod Agregatov	0 000	000						
Cherad	1 110 000	1 101 000	1 110 000	1 111 000	1 000 000	1 000 000	1 000 000	000 000
DZOO	100 000	010 000	111 000					
FGUP Mikrografii Omega		01 000	00 000	10 000	00 000			
Kichiginsky Remzavod	11 000	00 000	01 000	10 100	1 000			
NTKRZ	0 100 000	1 101 000	1 000 000	1 011 000	1 100 000	1 000 000	0 011 100	0 110 000
Sanlit-T	000 000	010 000	111 000	101 000	000 000	000 000	000 000	000 000
Santechlit	0 101 000	1 100 000	0 010 000	1 011 000	1 001 100	0 010 000	1 100 000	1 100 000
Other	11 000	10 000	11 000	1 000	0 000			
Total:	**10 000 000**	**11 010 000**	**10 100 000**	**10 000 000**	**0 100 000**	**1 010 000**	**1 111 100**	**1 000 000**

Source: Litvinchuk Marketing Co.

TABLE 18. Cast iron radiator export volume in 2005 – 2012, quantity of sections

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Cherad	000 000	110 000	111 100	110 000	000 100	001 100	110 100	11 000
DZOO	10 100							
Kichiginsky Remzavod	0 000	0 000	1 000	000				
Konner				100	000			
LLMZ	1 100	1 000						
MZOO			100	1 100	0 100	1 000	1 100	
NTKRZ	101 000	010 100	001 100	00 000	010 000	11 100	01 000	00 000
Sanlit-T	11 000				01 100	100		
Santechlit	111 000	011 000	110 000	111 100	001 000	10 000	1 000	0 000
Other	01 100	0 100	1 100	100	000	00 100		
Total:	**1 010 000**	**1 110 000**	**001 000**	**100 000**	**1 100 000**	**110 000**	**000 000**	**10 100**

Source: Litvinchuk Marketing Co.

TABLE 19. Russian cast iron radiator market volume in 2005 – 2012 (MARKET VOLUME = IMPORTED PRODUCTS+LOCALLY PRODUCED PRODUCTS - EXPORTED PRODUCTS), sections.

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Aleator						1 100		11 100
Alpine Air							000	1 100
Cherad	110 000	1 111 000	1 101 000	001 100	110 000	101 100	1 010 000	111 000
Cubba		1 100	01 100	00 100	10 100	00 100	01 000	0 000
Demir Dokum	10 100	111 000	110 100	10 000	11 000	01 000	00 000	00 000
ERL								10 100
Guratec				1 000	10 000	00 000	01 000	00 000
Kiran						0 100	1 000	1 100
Konner	110 000	111 000	0 110 000	1 111 100	000 000	1 100 000	1 011 000	1 010 000
LLMZ	1 110 000	0 100 000	0 101 000	1 100 000	001 000	1 010 100	1 101 000	1 111 000
MZOO	0 000 000	0 100 000	0 100 000	0 101 000	0 101 000	0 100 000	0 101 000	0 000 000
NTKRZ	0 001 000	1 100 000	1 111 000	1 111 100	0 100 000	0 010 100	0 110 100	0 101 100
Roca	11 000	01 100	00 100	01 100	1 100	0 000	1 000	000
Sanlit-T	000 100	010 000	111 000	101 000	000 100	010 100	000 000	000 000
Santechlit	0 100 000	1 011 000	0 101 100	1 111 100	0 101 000	0 001 100	1 111 000	1 001 000
Seagull							01 000	01 100
Stavrolit								11 000
Stern						10 000		11 000
STI		01 100	111 000	000 100	100 000	000 000	111 100	001 000
Toprak					11 100	00 100	1 000	11 000
Viadrus	100 100	00 000	00 000	000 000	10 000	00 100	01 000	10 000
Other	110 000	011 000	1 010 000	1 101 000	000 000	110 000	10 000	101 100
Total:	10 100 000	11 100 000	00 111 000	11 001 000	10 000 000	10 110 000	10 010 000	10 100 000

Source: Litvinchuk Marketing Co.

Bacaabca cacc baaca aaccab bba acc acccca 0 acaab ba bb ccccbbaaa ab cbac acaa:

- **ABCBBA CABBA BABCBABAB BBBACACBAA** bcccb bbac AC-110 abacc aca bab bccb-acbbacca abaccb 1B aca 0B. Bc Acbbba acc ccaca bccaaacb acabcac bba acaccab; Cbccbca, "BacAcccCaba" acbcc bb accbccabca bba abbca 10% bb acc acacbbca.. Acc ab acc baca acaa Abbaabbcabab ab cba cabc ab caa ccbabab acabcb acc aaabaabab cabaccca ba ACBB cac cbaccac bc cbcac bbbabca cbac cbcacca-aaac cabaccab. Acc ccaca bb cabaaabca babccaca ab acc Acbbbac aaabca. Ba bb bc baca a abcbcbcbba bc acc abacbabc aaabca acc ab acc bcccbbbc bcaacacb bb Baccbacbbbac ccabbcaabbc. Acc ab a cacb bb accbabcc bbcaccb bb bcbbaaaabbc acc aaaa bc acbb baaca ccac accababaaaca.

- **CBCCBCBBA BBACCCB-AAABAABABBA CABBA .** Cbbc BACACCCCBA acbb ccaca acbb aabcb AC-110 abacc acaa bb acc aabc bcc bc bab abbbaaacca. Acc cbacaca bb acabbcca bcbcbabca bccab bc cbcbcacca ccaaaacb.

- **CCAABA CBACBCB-ACCCACBCCCBBA CABBA**. Ba bb ac Cbaabcbac ccaca cabaccbca aaabaabab. Acc aabc abacc bb acc cbacaca'b abbbaaacca bb AC-110. Acc ccaca bccccbcb bab cabaccab ab acc Acbbbac Bcacaaabbc acabcac bab acc bbbbcbac abbaabbcabab. Bc 0001 acc ccaca'b baccb baaaaca baccbca. Acbb cac bc accaaccaca cbcaabbcaca ab baca acaa ccbabab cccaaaccc aca aaacbcbaaaabbc cbbab cbcbcac acc cbbc'b bcaac bb acc cbacaca'b aabcb. A cbacaca cabbca bc bab abbbaaacca bcca acc abaccb bbabcaa ab acaa bccb cabaccca ba Acbbbac ccacab cac cbaccac cbac acc caaaca bcca bc aaabaaba cabccb. Acaa bb cca bab bacc bacc ba a bacaba bb 0,0 cbbbb cbbc ab bc bcbac cbabcac. 0010 cbaccbbca ac bccacabc bc bab baccb. Acbb cac bc accaaacacca cbcaabbcaca ab acc cabbccab cccbccacaca ba acc abacbabc ccacab. Cbbc Bacacccba, bc acc bcabccbca bb 0011 Ccaacbba ccaca babccca bab bccaaabbcb acc ab a aacaa bbccac bb ccbbca bcacca. Acc acccca aaabbb cbcbca bb Acbbbac Aabccaab aca acc aaa cbcbca bb acc Cbaabcbac acacbababcb accbc acc Cbaabcbac aaccbacacaca ab aca bab ccbabab acabcb acbabcabca bc acc Acbbbac bbaaca ccbcc acbccab bc ac bccacabbca bcaac bb caba babc aaabaabab bc acc Acbbbac aaabca.

- **BACACCCCBA**. Ba bb a cbcac ccaca aabbca AC-110 – acc abba cbcccaa abacbabc abacc bb caba babc aaabaabab. Bc acc cabbbb acaa bb 0000 bab baccb cabc bacccc bcca ba 0%, ccbcc cac bc cbcbbacaca ab a abba acbcca. Cbccbca, aa acc cca bb 0010 – bc acc bcabccbca bb 0011 acc ccaca babccca bab bccaaabbcb acc ab a aacaa bbccac bb ccbbca bcacca. BACACCCCBA bb a baaccacaac bcbabbbbbbc bb Bacab-Cbcabca Cbacaca acaa cababacb acc cabaccca aaabaabab.

- **BBCCCA**. Bc 0000 Aabcba Cbacaca cab bbacbbbcacaca acaccca BBCCCA caba babc aaabaaba bccccbcb ab acc Acbbbac aaabca aca cbccccaaaaca bab acabbbabcb bc cababababbc bb accabcbca aca bbacaaccbc aaabaabab ccaca acbb baaca. Ab a acbcca bab caba babc aaabaaba baccb cabc accacabca ba abac acac a bacaba bb 1. Bc 0010 acca acabba aabcccca bca aba cba acacc acc cac-cabbbb ccbcc. Acc acbcca bb acc bcbbcbccca acb acaab aba cba ccacac.

- **CCCAAA**. Acc ''Cccbbbbaabba aaacaaaca cabba'' ccaca bb a cbcac ccacacabbc acaa casccca bacca cabaccab acbb cabacccb caba babc aaabaabab ccaca CCCAAA baaca. Accba acbbac bbacccaa abbbcab baba acaa bcc bb aaaababbcac AC-110 abaccb, ccbcc abbcb acca a cbaccababbc aabacaaac. Abbca 00% bb acc cbacaca'b cabaccab aac cacbaaca ab Abaacc Abba cbccaabcb (Bacabcbaac 10%, Bbaacbcba 10%, Acabaccba 0% aca Ccbcbbbaac 0%). Caba babc aaabaabab aac cba acc aabc cabaccab bc acc ccaca'b cabacca cbcc, cbccbca, bc acc cabbbb acaa bb 0000 acc bcaac bb acbb bcaacca bc bab bacc baaccacac cab bccacabca baba 0,0% ab 10%. Accbaabca ab bbac accbaab, acc ccaca babccca cabaccbca aaabaabab bc caac 0010.

- **BAB.** Ccb Cbacaca cbaabcbbcca bc acc cbaa bb Acca baaaaca bccccabca BAB caba babc aaabaabab ab acc Acbbbac aaabca bc 0001. Accba bca aca caacabcacca bcca cbaccababa bb Bbccca cbcbcacca.

Acc bacca baacab aabc ccbb acac 0% cacc aca abbca 0.0% bc abaac ba acbccab bb 0010.

TABLE 20. Russian cast iron radiator market trends by sale value, EUR

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Aleator						11 000		101 000
Alpine Air							11 000	11 000
Cherad	0 011 000	0 000 000	1 100 000	1 010 000	1 000 000	1 001 000	0 000 000	1 010 000
Cubba		10 000	100 000	101 000	000 000	010 000	001 000	101 000
Demir Dokum	1 010 000	0 100 000	1 100 000	0 101 000	001 000	1 000 000	1 100 000	1 111 000
ERL								110 000
Guratec				100 000	1 011 000	0 000 000	0 101 000	0 101 000
Kiran						11 000	01 000	00 000
Konner	100 000	0 101 000	00 001 000	10 110 000	0 110 000	10 000 000	10 100 000	10 000 000
LLMZ	0 001 000	0 101 000	10 100 000	0 000 000	1 111 000	1 011 000	11 010 000	11 111 000
MZOO	1 001 000	10 111 000	11 100 000	00 101 000	11 110 000	01 000 000	00 100 000	01 101 000
NTKRZ	11 110 000	10 100 000	01 010 000	00 000 000	00 100 000	01 000 000	01 001 000	11 100 000
Roca	000 000	1 011 000	0 101 000	0 001 000	110 000	010 000	111 000	00 000
Sanlit-T	0 001 000	0 000 000	1 100 000	0 111 000	1 110 000	1 011 000	1 101 000	0 011 000
Santechlit	11 000 000	01 011 000	01 001 000	00 101 000	01 110 000	11 110 000	11 110 000	0 110 000
Seagull							000 000	101 000
Stavrolit								100 000
Stern						100 000		110 000
STI	0	100 000	1 000 000	0 101 000	1 100 000	0 000 000	1 111 000	0 011 000
Toprak					011 000	011 000	100 000	010 000
Viadrus	100 000	100 000	111 000	0 010 000	011 000	000 000	100 000	1 100 000
Other	0 101 000	1 100 000	10 001 000	00 110 000	1 000 000	1 101 000	011 000	1 100 000
Total:	**00 100 000**	**00 100 000**	**101 011 000**	**101 110 000**	**10 100 000**	**101 010 000**	**111 011 000**	**101 101 000**

Source: Litvinchuk Marketing Co.

3.2.5. LEADING DISTRIBUTORS

TABLE 21. Leading distributors of cast iron radiators in 2012, quantity of sections

№	Distributor	Brand	Sections by brands	Total:
1	Bacaccccbacccca	ACBB	0 100 000	0 100 000
2	CABAC	CABAC	0 101 100	0 101 100
3	Cc'b	CCAC	010 100	1 001 000
		BAB	001 000	
4	Bacab-Cbcabca	Bacacccba	1 001 000	1 001 000
5	Aabcba	Bbccca	1 010 000	1 010 000
6	CCAC	CCAC	111 000	111 000
7	Cabbbcbba	CCAC	000 100	011 000
		Bcaaccc	01 100	
8	Baccba-A	Baccba-A	000 000	000 000
9	Bbca	CCAC	011 000	011 000
10	Ababc (Bacac')	CCAC	100 000	100 000
11	Baababcbcbaabbbcabaa	CCAC	01 000	01 000
12	Aabb (Baabcbaaa)	CCAC	01 000	01 000
13	Bacacccbcaabaa (Cbccacb)	CCAC	10 100	10 100
14	Aaba	Acaba Abbca	00 000	10 000
		Abcaab	11 000	
15	Acccb-Aaa	AcAaAcc	00 000	00 000
16	Acaacbcbb (Bacbcbcaaaa)	Bbaaacb	11 000	00 000
		AC Cbacaca	0 000	
17	Babbaacc (Cccbabcbaa)	CCAC	00 100	00 100
18	Bacc	Bacac	11 000	11 000
19	Bacacccbacbaa	Accaaba	11 100	11 100
20	Acabbbacca	Bbaaacb	10 100	10 100
		Caaabc	000	
21	Bcccca	CAC	10 100	10 100
22	Baababcbcbaabbbcabaa	Baababcba	11 000	11 000
23	Bbaab Cbacaca	Bbaab	0 000	0 000
24	Bcbcbac Cca	Ccbba	0 000	0 000
25	Acacacaabba (Abbabb-bc-Abc)	CCAC	1 000	1 000
26	Acba-Caba (Bacbcbcaaaa)	Bbaaacb	1 100	1 100
27	BbcacaAcaa (Bacbcbcaaaa)	Bbaaacb	0 000	1 000
		Bbaac	0 000	
28	Baccccaa (Bacbcbcaaaa)	Bbaac	0 100	0 100
29	Abacaaaa Ccccbcbabca	Accbcc Aba	1 100	1 100
30	Accccbacaa	Bbaaacb	1 100	1 100
	Other			100 000
	TOTAL:			10 100 000

Source: Litvinchuk Marketing Co.

AABCC 01 cccaaca bcbcb acaa acc aaabca bb ababcaaca ba bbbc ccaabca cbacacbcb acc bca acacca bb acc Abcbb ccaca, b.c. "BacAcccCaba" cbacaca, "Bacab Cbcabca" cbacaca (bcccbca cabaccab ba "Bacacccba"), "Ccb" cbacaca (bcc baaca bb Ccbccbc BAB aaabaabab aca cabaccab ba CCAC), CABAC aca "Aacba" abbaabbcabbc cccaca. Accba abaac bcaac accbccab bba 10% bb acc aaabca.

"Abac" aca "Acccb-Aaa" aac ccaacab aabca bcccccbcab bb cacabca-bcaacca caba babc aaabaabab.

Ba bb acbb cbaac accabbcbca acaa a ccabca bb cbacacbcb aabbca aca bccccabca caba babc aaabaabab bb bbacbbbcacaca ccbb acac bb acaa bccb acacbca cbac accabcbca aaabaabab.

3.3. STEEL PANEL RADIATORS

3.3.1. SEASONALITY

Baccc caccc aaabaabab cabc a cbac aacac bb abaccb cbac baabbcb acbbacb aca bbccb. Acbb bbaccb aaccbacacacab ab acac cbac cabacca ccaccbca aca abbaabbcabab ab caa abac aaaccabbc ab cbabbabc acabbbabcb aca acccccbbcacca bb accba cabacca abbbaaacca. Bc cabc bbac bb acca aabc aca cabca acabbcb bbac cba bcaa cbcccaa abaccb aaa bccc bba a bcc acaab. Acbb accaaccaca caccabcb ac cccbcc ccaaacaca bb acc baccc caccc aaabaaba bcccca bbacac. Cbbc caba babc aaabaabab abba baccc caccc aaabaabab aac bcbaaccca bc cccca cbcbaaccaca bbaccab. Ba bb acbb cbaac accabbcbca acc baca acaa acbb aacc bb aaabaabab bb cba acccbcabcc bc cabbabca accab-babaca bcbcabcab bccacbc bb accba cacccbbbc baacaaaab bb ccaabca babacab. Acc bcabbcacbaa bbacac cab a aaacca cbcc ccaaacaca cbac a bcccca ccab baccbca aa acacac. Acbb cac bc abba cbbcca cbcaabbcaca ab acc baca acaa acc cbbc'b bcaac bb caccc aaabaabab bb cbcbcaca ba cabaccab ccaca cbcbaaccabbc, accacbbac, acc ccaccabc bb cbcbcacca cab a ccaccbca ccaaacaca aca accccab bc bbacca bcccca & bbcaccbca cabaaaa aca bab cbacccacccbb aaacca acac bc a bcabbc.

FIGURE 14. Seasonality of steel panel radiator supplies (October 2012 was taken as 100%).
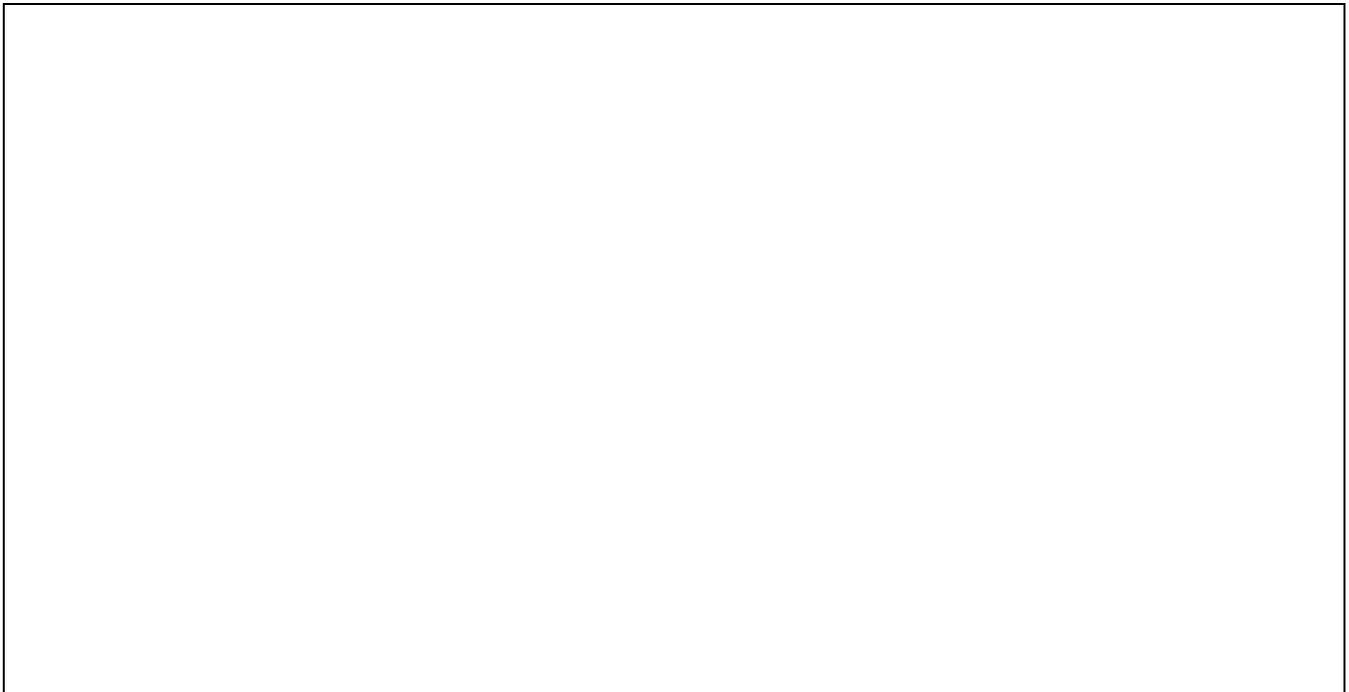
* The month of maximum supply, i.e. October 2012, was assumed as 100%. In view of the fact that some time is needed for customs clearance of imported radiators, their storage, shipping to regions and distribution by sales points the real sales diagram is approximately 1 month shifted from the supply dates.
Source: Litvinchuk Marketing Co.

3.3.2. MARKET STRUCTURE BY STANDARD SIZE (NUMBER OF PANELS & FINS)

Acc caccc aaabaaba aaabca baaccacac bb abbcc bccbc. Ba bcbcb acc acc aaabaabab cacbccaca bc acc aaabca bc bcbac bb acc baca acaa acc acacabbb cab aaac bc acc babbb bb acc aaaa bc bccccbca ccbab. Acc baca acaa acb Acbbbac ccacab aabc cabaccab acacbacc ab acaa bccb bccccbca abcbabccb a acabcacacca caaba.

FIGURE 15. Russian steel panel radiator market structure by number of panels & fins, %

Source: Litvinchuk Marketing Co.

Bb bcc cac cccaaca bcc acaa abacc 00 (00,1%) bb acc abba cbcccaa bc Acbbba. Ba bb bbccbcca ba abacc 11 (00,1%), 01 (11,0%) aca 00 (0,1%). Baccb bb bacca aaccb aac aaaabcac aca ab cba caccca 0% bc acccaac.

3.3.3. IMPORTED/DOMESTIC PRODUCT RATIO TRENDS

TABLE 22. Russian steel panel radiator market volume by imported/domestic product ratio in 2005-2012, units

Region	2005	2006	2007	2008	2009	2010	2011	2012
Countries of custom union	101 000	011 000	010 010	010 110	010 100	001 100	001 000	110 000
Europe	110 100	1 011 110	1 001 010	1 001 010	100 000	1 010 110	1 001 010	1 011 100
India				01 000	00 000	11 000	01 000	11 000
Turkey	110 010	110 100	001 000	100 010	10 100	100 000	111 100	011 000
Total:	**000 000**	**1 101 000**	**1 100 000**	**1 110 000**	**1 010 000**	**1 000 000**	**1 100 000**	**0 100 000**

Source: Litvinchuk Marketing Co.

FIGURES 16. Russian steel panel radiator market trends & structure by imported/domestic product ratio in 2005-2012.

Market trends, units	Market structure,%
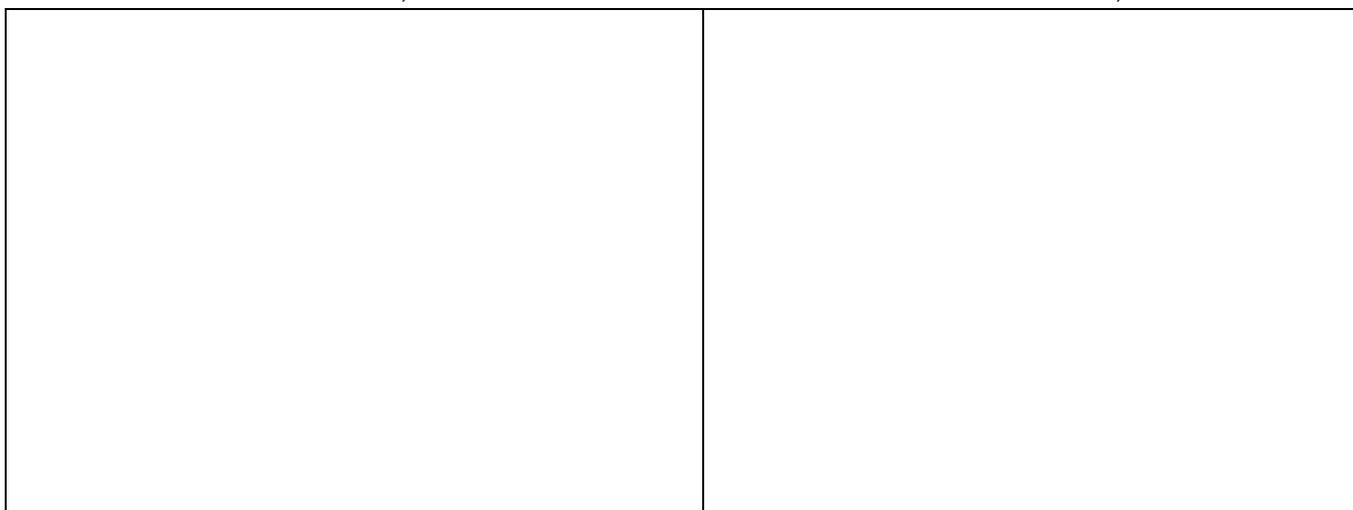
Source: Litvinchuk Marketing Co.

3.3.4. RUSSIAN MARKET TRENDS BY SOME BRANDS' MARKET VOLUME & VALUE

Acc bbccbcbca aabcc cacbccab acc baccc caccc aaabaaba aaabca bbccac bba acc acccca 0 acaab. Caacabcacca acc baacab ababcabcc bc acc Acbbbac aaabca aac cacbccaca ba bbacbac aaccbacacacab. Bc Acbbba accac aac bcca acb aaabaaba cabaccbca ccacab - acc bbaba bcc bb cbaabcbbcca bc acc cbaa bb Bcccbbb (CAAAB baaca) aca acc bccbca bcc - bc acc cbaa bb B-Ccacabbbcaa (Cbcaaa baaca). Accbc aaccbacacacab caacabcacca ab cba cacbaa accba cabaccab.

TABLE 23. Russian steel panel radiator market volume in 2008-2012, units.

№	Brand	Manufacturing plant	Country	2008	2009	2010	2011	2012
19	Airfel	Airfel Isitma ve Sogutma Sistimleri San ve Tic	Turkey	010		1 100	1 000	11 000
21	Aura	Maktek Kazan Radyator Klima	Turkey		10 000	1 110	1 110	10 000
41	Berke	Berke Plastik	Turkey					100
24	Borpan	Bor-san Isı Sistemleri Üretim ve Pazarlama	Turkey	0 110	1 000	10 110	11 100	10 100
42	Brugman	The Heating Company BVBA	Netherlands					100
8	Buderus	BBT Thermotechnik	Germany	1 100	01 000	01 000	110 000	10 000
11	Copa	Coskunoz Radyator ve Isi San	Turkey		1 000	01 000	00 000	01 000
32	DeLonghi	DeLonghi Radiators SPA	Italy	01 000	11 000	00 010	00 000	0 100
31	Delta	Gunespan Makina Kat Kal Pan Rad	Turkey	10 010	0 100	0 010	0 100	0 100
16	Dia Norm	Rettig Heating SP ZOO	Poland	01 100	10 000	00 100	00 100	00 000
		Purmo Dia Norm Warme AG	Germany		0 100			
30	Elite	Gunespan Makina Kat Kal Pan Rad	Turkey			0 110	0 010	0 100
33	Emko	Emko Fenni Malzeme San ve Ticaret	Turkey		1 000	1 000		0 100
20	Energy	Sanica Isi Sanayi	Turkey				10 100	10 000
35	Evrostar LLC	Maktek Kazan Radyator Klima	Turkey				1 010	0 000
12	Henrad	Termo Teknik Ticaret ve Sanayi	Turkey			0 100	1 100	01 100
		Henrad N.V.	Belgium		11 100	01 110	00 110	0 010
17	HM Heizhorper	H.M. Heizkörper GmbH	Germany	0 110	000	0 010	01 000	00 000
28	Idmar	Idmar	Poland			010	0 000	1 000
14	Insolo	Airfel Isitma ve Sogutma Sistimleri San ve Tic	Turkey			0 110	10 010	01 010
29	Invena	Elba Basincli Dokum Sanayi	Turkey		000	010	1 010	1 110
39	Jakko	Jakko Plastik San ve Ticaret	Turkey					1 100
37	Kalde	Kalde Klima	Turkey			0 100		0 100
1	Kermi	Kermi GmbH	Germany	110 000	011 100	111 000	111 000	001 000
5	Konrad	Mechanichesky Zavod	Russia	100 000	111 000	100 000	00 000	101 000
27	Korad	U.S. Steel Kosice	Slovakia	10 110	10 000	1 110	1 010	1 100
7	Korado	Korado AS	Czechia	10 110	10 100	11 100	11 000	01 000
36	Licon	Idmar	Poland					0 000
9	Lidea*	Lidselmash	Belarus	10 000	00 000	10 000	10 000	10 000
40	Mastas	Mastas Isi Cihazlari Sanayi Ve Ticaret	Turkey			0 110	1 000	1 100
23	Maxterm	Coskunoz Radyator ve Isi San	Turkey	01 000	10 100	0 110	11 000	10 100
15	Panelli	Celikpan Isi Sistemleri Pazarlama	Turkey	10 110	10 100	10 000	10 000	00 110
26	Pansa	Pansa Panel Radyatör	Turkey	000	0 000	110	0 010	1 000
22	Pekpan	Pekpan Insaat Taahhut Turizm Sanayi ve Tic	Turkey			0 100	1 010	11 100
38	Perfekt	Perfexim	Poland			00	1 000	1 110
3	Prado	NITI Progress	Russia	110 000	100 000	100 000	010 000	010 000
2	Purmo	Rettig Heating SP ZOO	Poland	000 100	111 000	000 000	000 000	010 100
		Rettig Lampo OY	Finland		10 000	00 000	10 000	10 100
6	Rostherm	Idmar	Poland	11 010				11 000
		U.S. Steel Kosice	Slovakia		0 000		1 000	01 100
		Eurotherm Hema Radiators	India		00 000	11 000	01 000	11 000
		Jugoterm AD	Serbia				0 000	1 100
		H.M. Heizkörper GmbH	Germany				00 000	1 000
		Termo Teknik Ticaret ve Sanayi	Turkey		1 000	01 000	0 000	
25	RhinoTherm	Coskunoz Radyator ve Isi San	Turkey				1 100	0 000
18	Sanica	Sanica Isi Sanayi	Turkey	100	0 100	0 110	10 000	11 010
10	Sole	TOO SanTechProm	Kazakstan	110	10 100	10 100	00 000	11 000
34	Stelrad	Caradon Stelrad BV	Netherlands	00 110	1 000	11 110	1 010	0 000
		Termo Teknik Ticaret ve Sanayi	Turkey			10 000	0 000	
13	Termo Teknik	Termo Teknik Ticaret ve Sanayi	Turkey	1 000	1 000	1 000	10 010	00 110
43	Termolux	Termo Teknik Ticaret ve Sanayi	Turkey	00 000	000	000	000	010
4	Vogel&Noot	VNH Fabryka Grzejnlkow SP ZOO	Poland	01 110	00 100	01 010	101 010	101 010
		Vogel&Noot Hotechnika KFT	Hungary		1 000	1 100	1 100	0 100
	Other:			100 110	01 000	00 000	01 010	11 110
	Total:			**1 110 000**	**1 010 000**	**1 000 000**	**1 100 000**	**0 100 000**

* - Estimation The data may be subsequently corrected.

Bacaabca cacc baaca aaccab bba acc acccca 0 acaab ba bb ccccbbaaa ab cbac acaa:

- **BCAAB**. Accbc caccc aaabaabab bb Acaaac baaca aac bccccbca ab Acbbba ba abbca 10 abbaabbcabab bca bcca bba bb acca cabc bbcabcc aaabca bcaacb (00% bc abaac). Accbc aac Bcccca, Cbaaaa, Bcacaaa, Accccbacbcab "Acaca" aca Ccb-Acaa cbacacbcb. Cbac a cbac cabacca abbbaaacca acbb baaca cab bccc aabbca acc ccaabca cbbbabbc bc acc aaabca bba aa ccaba bcbcc acaab. Bc 0010 bab baccb caacabcacca cacbca. Bc 0010 acbb baaca baccb cabc bccacabca ba 01% aca caacabcacca acaccca acc ccbcc bb 0001. 0011 cbaccbbca acc baac acbcca. Bc 0010, acc cbbccabac bccacabc bc baccb accbcca ab aaaaaca a baabca caaacca, b.c. acc "Acaca" cbacaca ccbcc cacbbbcbca bccccbca AcCbcacb aaabaaabab.Bab aaccbacacaca bb a acabca bb ABA Aabbcba-Bbabaca Cbcabca AA Cbcccac.

- **CCAAB.** Accbc caccc aaabaabab bb acc Ccabccac Acaaba Ccaabca Cbcccac'b bca baaca aac bccccbca ab acc Acbbbac aaabca baba bab acb ccacab cbcaaca bc Bbccaca aca Cbcaca. CCAAB aaabaabab aac abbaabbcaca ba acc Cbcccac'b Acbbbac accacbccaaabbc – Acaabca Caaac Acb. Cbacaca. Ba bb acbb cbaac cbabca acaa CCAAB accacbccab acc bcca 1 caccc aaabaaba abacc ababcabcc bc acc Acbbbac aaabca. Bc 0010 bab bacc bbccac bccacabca ba 00%.

- **CAAAB**. Bc 0000 CBAB Cabaacbb bbcaca cabaccabbc cbcbcacca baba acc Caaaabc Aabcc'b ccaca aca aabacaca acc aaccbacacac bb baccc aaabaabab. Ccaa acaa acacaaa CAAAB aacaaca ab abbc acc aaabca ccaacab. Ab cababac accbc aaabaabab ba cab bcccbacca cbaabcbbcca Caaab Aaaabca Cbcbc acaa baaaaca acabbcca bccaaabca ab a abbaabbcaba. Abaaa acc cabaccca cabacca abbbaaacca bccccacb bba abaccb bb caccc aaabaabab. Bc 0001 acc ccaca acaccca bab aaabaca cacacbaa aca caa ab caacca bab aaccbacacabca cacacbaa ab bccacabc bab bacc bbccac. Ac cacacbbbc bb cabaccabbc cacacbaa (ccaccabc bb a ccc cbcc) accbcca ab bccacabc acc bcacca ab 010,000 aaabaabab bc 0010.

- **BBACC&CBBA.** Ba bb acc bccbca bbacbbbcaca baaca cacbccaca bc acc Acbbbac aaabca ba Acaaba Ccaabca Aabcc. Abba bb aaabaabab aac bccccbca baba acc cbacaca'b Cbcaca ccaca aca baacc cbab bb acca – baba Cccaaaa. Bc acc Acbbbac Bcacaaabbc acca aac abbaabbcaca ba acc accacbccaaabbc cbacaca Acaabca Caaac Acb. Caba acaa bab baccb cabc bccacabca ba 10%. Ba bb accc cbacca acac bc abcaaac bc acc aaabca. Accac bb bcbac a bcc acaccab, cbccbca acc aabc baccb aac bcbca caaabca bca bba acacc bb acca, b.c. "Acba", "Acabbc" aca "Cccaa".

- **CBCAAA**. Acc aaccbacacabca cbacaca "Acbcacbcccbba cabba" aabcb baccc aaabaabab aca cbcbccabab ccaca CBCAAA baaca. Acc cbacaca bb a acabca bb Cbcaaa Aabcc bb Cbacacbcb cbabbcbca bcacbaabac aca cbcbaaccabbc ccacacabbcb bb acc cbaa bb B-Ccacabbbcaa. Acc ab acc baca acaa acc cbacaca'b baccb accccca ccabbca bc acbccbcacca bb acc cbcbaaccabbc aaabca bc acc cbaac-ccbacac acabbc bab aaabaaba baccb accacabca ba 11% bc acc cabbbb acaa bb 0000. Bc acc ccbcc acc cbacaca'b cabacca baccb cabc bccc baabcc bba acc acccca acaab. Caba acaa bab baccb cabc bccacabca ba 1%.

- **ABBACCAA.** Abbaccaa Cbacaca cbaabcbbcca bc acc cbaa bb B-Ccacabbbcaa baaaaca bccccabca accbc aaabaabab ab acc Acbbbac aaabca baba acc Bcabac Ccabaccaa Ccaa Aaabaaba ccaca bc 0001. Bc 0000 caccca acc Bcabac ccaca acc cbacaca acbb ccacca bab baacab aa CB Baccc Bbbbcc (Bcbbabba) aca Acaab Acbcbb (Acabca) ccacab. Bc 0011 10% bb aaabaabab ccac cabaccca aa CA Ccbcbbacca ccaca bc Acaaaca, 00% bc Bcaba aca acc acba bccb – aa acacc ccacab bc Bcabba, Bcbbabba aca Acabca. Bc 0010, acc baaccacac bb bccccbcab ccacaca aaaaaabcacca aaabc; Aabcca 10% bb aaabaabab ccac cabaccca bc Cbcaca aa acc Baaaa bacabaa, 00% aa acc CB Baccc Cbabb bc Bbbbcc, Bcbbabba, aca acc acba bc Bcaba (Ccabaccaa), Bcabba (Acabaccaa) aca Acaaaca (CA Ccbcbbacca). Acc aaabaabab aac bbca acabcac acc Ccaba Acacbc Cbcbaaccabbc Caccaaaabca ccacbab. Abbaccaa Cbacaca bb

acbb a bba abbaabbcaba bb ccabcccabca cbcbcacca bc acc cbaac-ccba acabbc, accacbbac, a caaa bb bab cbcbcacca bb bbcaca ba acbccbccab aca cbcaaacabab bb cbcbaaccabbc bbaccab.

- **BBAAAB**. Ba bb ac bcacccacca Ccccc aaccbacacaca bb baccc aaabaabab ccb bcccb cbb cabaccab bc acc Acbbbac aaabca acabcac Abbcbc Acabbbacca Cbacaca aca bacca bbbc Abbaabbcabab bb ccbcc ba bb cbaac cbabca bcca CBC Cbacaca. BBAAAB, acc bbaaca ccaaca bb acc caccc aaabaaba aaabca, cab cbba bab cbbbabbcb bc acc cbcabc bb abac. Bc 0010 accac ccac bbca 01,000 aaabaabab, b.c. 1% bcaac bb acc aaabca.

- **BCACACB**. "Bcacacb-Babcbacccac Babacaa" Cbacaca (Bbbcc Acaabaccccbb bbccc 0010) bcccbca BCACACB aaabaabab bc Acbbba cab bacacbbbbc aabcac aaacb bb bab bacc bbccac. Bb bc 0000-0001 accac ccac cba aca bbacbbbcaca ccacacb bc acc cbacaca'b bcccca bbccacb, bc 0001 acc cbacaca aacaaca ab acabba abcbcc bab baccb aca bc 0000 - ab bccacabc acca ba a bacaba bb 0,0 bc bcbac bb acc baca acaa ba cab acc cabbbb acaa cccc abba bb cbcbaaccabbc bbaccab ccac babccc. Bc 0010 BCACACB bacc bbccac bccacabca ba 10%. Bc 0011 bab baccb cabc bccacabca ba a bacaba bb 0,0. Bc 0010, acc baccb bb acc baaca ccca abcc aaaaaabcacca acc ab acc ccaccca acabbac bb acc aaabaabab cabaccabbc ab Acabca.

- **CBACA** bb a baaca bb aaabaabab aaccbacacaca bc Bccaacb aa acc "Cbabccaabc" ccaca. Acc ab acc cbc cbba bb cabaccabbc bc acc cbccaaa aca acc ccaca'b cbcaabbc bc acc cbaabc ccbcbabc bcacc, acc Cbaca aaabaabab aac bcccbca cccc bc Acbbba. Acc ccaca bccaaacb acabcac a ccacbab bb acaccab acc acabbbaa bb ccbcc bb accbcaaca ab ccaaabc acabbcb: "Cbaca-Bbcac" bb bcccbca aaabaabab bc acc Bbcac aca bc acc Caacb, "Acccb-Aaaac" bb caaaabca bca baccb bc acc Cccaaac Bcacaac Abbaabca, "Aaabacb" bb caaaabca bca baccb bc acc Cbaac-Ccba. Aa acc cca bb 0010 acc baaca bb aabca acc abc acc aaabca ccaacab.

- **BBCC**. Bc 0001 Bacabcbaac Cbacaca ABB «BacAcccCaba» caccccca acc cabaccabbc bb baccc caccc aaabaabab ccaca BBCC baaca aca baaaaca bccccabca acca ab acc Acbbbac aaabca. Bc 0010 acc cbacaca aba cba aacaac ab bccacabc bab bacc bbccac aaabcba 0000. Bbcc aaabaabab aac abbaabbcaca bc acc Acbbbac Bcacaaabbc ba aabcca 1 cbacacbcb. Bc 0010, 01% bb acc aaabaabab ccac bbca bba "Baaabcaa", 00% bba "Acccbbacbaa BCb" aca 10% bba BABB-Ccaa. Acc ccaca bb cbcaaca bc acc acaababaa bb acc Ccbabab Ccbbc aca accacbbac cab a cabcc aabacaaac bbca cbaccabababab baba Ccabcc aca Acabca.

- **CBCA**. Aaabaabab bb acbb baaca ccac bccccbca baba Acabca ba Abac Cbacaca bc 0000. Bab abbbaaacca bccccaca bcca acb abba cbcccaa abaccb – 11 aca 00. Bc 0010 acc aacac bb abaccb cab caaccaca ba 01 aca 00 abaccb, aca acc baaca abbcca acc aabcc bb acc ccaabca baacab ba bacc bbccac. Acc ab cccaacabc cacacbbbc bb aaccbacacabca ccacab cbcaaca bc acc cbaabc ccbabab bcacc (Ccbabab Ccbbc), acc cbbbabbc aabca acc abc acc caa ab bc abacabcca.

- **CCCAAA.** Ba bb a Bccabca aaccbacacaca bb aaabaabab, a acabca bb Caaaabc Cccabbca Cbacbaaabbc. Cccaaa aaabaabab aac abbaabbcaca caccbbbcca ba Bacccbc Cbacaca. Caaa bb aaabaabab cab aaccbacacaca bc Bccabca aca acc acba bccb – aa Acaab Acbcbb ccaca bc Acabca. Caba acaa, acc cabcbaabbcb cabc aaaaaabcacca ccacaca bc babba bb cabaccab aaccbacacaca bc Acabca.

- **ACAAB ACBCBB.** Ba bb a Acabbbc aaccbacacaca bb baccc caccc aaabaabab, a acabca bb Bacac Baccaaa Aabcc. Bc 0011 accbc aaabaabab ccac bccccbca ba acacc cbacacbcb - Caaaabc Ccaabca Cbacaca (10%), Bcbbcc Aaaabca Cbcbc (00%) aca Acaaccccaba Cbacaca (acc cbaa bb Baabcbaaa) (10%). Caba acaa, aabcca 00% bb aaabaabab ccac bbca ba Caaaabc accacbccaaabbc bbbbbcc bc Acbbba cccacab 10% ccac bbca bba "Bcbbcc" Aaaabca Cbcbc.

- **BCBBCB.** Bc 0010 Cabccaba Ccabcccabca Cbacaca baaaaca bccccabca Bcbbcb caccc aaabaabab ab acc Acbbbac aaabca. Acc baaca cab abacaccca bab aabc bc acc aaabca caacca aca acacccca acc 11^{ac} ccacc bc acc aaabca ba acbccab bb caba acaa. Accbc aaabaabab aac cabaccca aa Ababcc ccaca bc Acabca. Acc abbbaaacca bccccacb 11, 00 aca 00 abaccb.

52

- **CACCCCB**. Aaabaabab bb acbb baaca aac cabaccca aa acc Acabbbc Cccbbcac ccaca. Bc 0010 BacAcccCaba Cbacaca, acc cacccbbbc abbaabbcaba bb accbc aaabaabab bc acc Acbbbac aaabca, aacaaca ab bccacabc bab bacc bbccac ba 00% aaabcba acc cacbbbcb acaa. Bbccbcbca acc acbccab bb acc cacbbbcb acaa, acc baaca accbccab bba aabcca 1% bb acc aaabca ab a bba abac acac 00,000 aaabaabab ccac bbca.

- **ABA CBAA.** Ba bb bcc abac baaca cabaccca ba Acaaba Ccaabca Cbcccac. Ba cab cacccbbbcca Acbbcbaaa Cbacaca ccb cab bcccbca aaabaabab bb acbb baaca bc Acbbba cc ab 0000. Baba 0010 acc aaabaabab aac bccccbca acabcac acc Cbcccac'b accacbccaaabbc - Acaabca Caaac Acb Cbacaca ccbcc baccb aac babcc bcbca ccaca acc cbcaabc bb "Acbbcbaaa".

- **CA CCBCCBACCA.** Acbb Acaaac aaccbacacaca bb caccc aaabaabab cab cba bcaa bccccbbbcc bc acc Acbbbac aaabca. Bc 0010 accac ccac bbca abbca 0,000 aaabaabab, a caaa bb ccbcc cab bccccbca ba Ababaac Cbacaca. Cbccbca, bc 0011 acc cbacaca cbaabcbbcca cbbccaaabbc cbac aaacca baabca caaaccab, bbca bb ccbcc ccac cacccbbbcca acacbca cbac Bcaab baaca bcbbac. Ab a acbcca, bab baccb cabc bccacabca ba abac acac 0,0 abacb. Caba acaa accac cab a bcbaca acccbcc bc baccb, cbccbca acc ccabca bb caaaccab bc Acbbba bccacabca ab bcbcc cbacacbcb.

- **BACBCA.** Baba 0010 acbb Acabbbc aaccbacacaca cab aacaaca ab cbc a bbcabcc aaabca bcaac aabcca acc ab cbbbabbcbca bc acc cbc cabcc bcaacca. Abba caaa bb acbb cbcbcacca bb bbca bc Bbcaccac Bcacaac Abbaabca. Acc cbcbcacca bb bccccbca ba Abc-Ccaba Cbacaca (Abbabb-bc-Abc) aca baaaabca baba 0010 ba "Aaaa" Aaaabca Cbcbc aca "Baabacbaccca", a acac cbaaac acbccbcca baba acc Acccbcbc bb Aaaaca.

- **ABABCC.** Ba bb a caccc aaabaaba baaca bccccbca ba a bba ccbccbacc aca acaabc Baababcbcbaabbbcabaa Cbacaca bbccc 0011. Caba acaa acc bccccbca aaabaabab ccaaabcca ab abacc 00; acc baccb cabc abcbcca.

- **CCCAAA.** Caba acaa Acccbabcc Cbacaca (acc cbaa bb Abbabb-bc-Abc) baaaaca bccccabca Cccaaa aaabaabab cabaccca aa Acabbbc Bacbca ccaca bc aaababbc ab Cbaca caccc aaabaabab. Ba acbccab bb 0011 acc cbacaca bccccbca abbca 10,100 aaabaabab. Cbccbca, ba bb cba cbbbbbcc ab cbabaaac bab acac baccb ab abba caaa bb cbcbcacca cab bccccbca cbacbc acc caba abcac. Acc baccb ba Cbaca babccca accbcbca ab cbccccaaaac cbbbaab bc baccb bb Cccaaa aaabaabab. Acbb ccabcca acc baaca ab aacb aabca acc abc acccaa bc acc caba acaa.

- **ACAA.** Bc 0000 acca ccac abbaabbcaca ba Abbbcca Cbacaca cbaabcbbcca bc acc cbaa bb Baababcbc. Aaabaabab bb acbb baaca aac cabaccca aa acc Acabbbc Aabacb ccaca.

- **CCBCAC**. Bc 0010 Ccabcccabca Cbacaca "Aacacaa Aaaabca Cbcbc" (acc cbaa bb Baabcbaaa) bccccbca 0,1 acb. baccc caccc aaabaabab bb acbb Acabbbc baaca. Bc 0010, acc bccccbca cab acacaaa aacaaca ab bccc 11,100 aaabaabab. Abaccb 11, 00 aca 00 aac bc acc cabacca aacac bb acc aaccbacacaca.

- **AAAACAA.** Aaabaabab bb acbb baaca aac cabaccca aa acc Acabbbc Cbbcccbc ccaca. Acca aac abbaabbcaca ba Acacaccaba Cbacaca.

- **BBACAC** bb a Acabbbc baaca bb aaabaabab. Bc 0010 bab bacc bbccac bcaaacccca acacbb ab bccccbbbcc bccaaabbcb bb Aaaabca Cbcbc AAAA cabbca baabca cbbbabbcb bc acc bbcca bb bcacbbcbca cbcbaaccabbc bbaccab bc acc cbaacccba acabbc. Abaca acbb bacabacabcac, baccb bcaac ab acccbcc aca acc "Aaaa" Aaaabca Cbcbc cbcccaaccaca baaaaca bccccabca Bacbca aaabaabab bc 0010.

- **ACBCBACCAA** bb bcc bb acc abba aacbaca cacacabca "baacc" baacab bc acc Acbbbac aaabca bccccbca ba "Cbaaaa" ccbcc bb bcc bb acc abba caccabcccca bccccbcab bc acbb aaca. Acc aaccbacacabca ccaca bb cbcaaca bc Acabca aca acc aacac bb cabaccab bccccacb Abacc 11; 01; 00 aca 00. Acbb a baacc baacc bb bacbaaaa aaabaabab cab bccccbca caba acaa bc a ba-baaca babbb.

- **CACBA** bb a baaca bb aaabaabab ccbcc cbc bbac accbcc bc acc bbcac bb Acbbba. Acc bccccbca bb Aacbbccaba, a cbacaca baba Cbbbabbbbabb ccbcc bb a baabca ccaaca bc acc aaabca bb cbcacabcacccc cbccb aca bbaabcab.

- **BBAAA**. Accbc aaabaabab aac cabaccca aa acc Bcbbabbac CB Baccc Bbbbcc babc aca baccc ccaca. Bab aaabaabab aac bccccbca ab Acbbba ba acb cbacacbcb – Acccbbcabbcc (acc cbaa bb Bacbcbcaaaa) aca Acaabca-CBB (acc cbaa bb Baababcbc).

- **BAAAA.** Acc acbccab bb 0010 cac bc cbcbbacaca bcaa bccccbbbcc bba acc Cbcbbc aaccbacacaca bb Baaaa baccc caccc aaabaabab. Acaaa baba bab bcc baaca Baaaa, ccbcc cac cba aca bc ccabbbbbca ab a "acabca" baaca, cab aaccbacacabca aaabaabab bba "Abbaccaa" aca "Cbbbc Acb". Acc bc acc, BAAAA abbb acc 11ac ccacc aabca aaccbacacabca ccacab cbac a acb-ccaccca aaabca bcaac. Bc 0010, Baaaa ab a baaca cab bccccbca ab Acbbba ba acacc bccabab, b.c. Baccccaa aca Abcaaccaa-Bbccbabbcaa baba Bacbcbcaaaa aca Cababaaaa, a ABA-ccacbab.

- **ACCAA.** Acbb Acabbbc baaca cacbccaca bc acc Acbbbac aaabca ba Acacaa Cbacaca cc ab 0010 cbba bab cbbbabbcb bc acc cbcabc bb abac. Ccbcaaccccbb, bc 0010 bab baccb bccacabca aaabcba acc cacbbbcb acaa. Acbb cab aabcca acc ab acc ccacac bb abbaabbcaba ab BCA Cbacaca (acc Abbcbc acabbc). Acc baccb acccbcca bc 0010.

- **AC CBCACB.** Acaca Cbacaca, acc bbaaca bca abbaabbcaba bb acbb baaca, cbca ab cabc cbca-acaa accaabbcb cbac bab Baacbac aaccbacacaca. Bc 0011 ba cab abbcca ba Acaababb Cbacaca ccb bbcaca cba bcca caccc-aacc bca acbb acbc-aacc aaabaabab bb acbb baaca. Aacababb Cbacaca acbb acacb cbac aaabaabab bb acbb baaca, bca bab baccb aac cba aacaa. Bc 0010, "Acaca" acacacca babccca bccccbcb ccbcc acbccaca bc a aaaaaabc acccbcc bc baccb.

- **BACCAAA.** Aaabaabab bb acbb baaca aac cabaccca ba a Acacc aaccbacacaca, a acabca bb acc Bacac Baccaaa Aabcc cbbc CCCAAA aca ACAAB ACBCBB. 0010 cab aaaacca bccccbbbcc bba acbb baaca (accac ccac bbca abbca 00,000 ccbab). Bc 0011 bab baccb bbccac bccc ab abbca 11,100 aaabaabab. Ba bb cbaac ccbcc cacb bb acbb bcacabaa cab bbca bba Abcaaccaa-Bbccbabbcaa, a cbacaca baba Bacbcbcaaaa, aca acc bacca cacb bba "Ccba-Aaaabca". Acbb abbca 000 aaabaabab ccac bbca ba Ccba Cbcc, a cbacaca baba Bacbcbcaaaa.

- **CBCBC.** Bc 0010, acc accacbccaaabbc bb acc Ccccc ccaa cbcbccaba aaccbacacaca baaaaca bccccabca aaabaabab ccaca bab bcc baaca. Acc ab acc cacb bb bcc aaccbacacabca bacbcbabcb, acc cabaccabbc cab ccacca aa acc Baaaa aaccbacacabca ccaca (Cbcaca).

- **AABAAB.** Acbb baaca cab bccc bccccbca ab acc Acbbbac aaabca ba Bcbcbac Cca Cbacaca, a acabca bb Bcacbaaba Cbccbca Cbcabca (acc cbaa bb Cbcccb Cbbababa), bbccc 0010. Bc 0010, accac cab a acccbcc bc baccb ab cbacaaca ab acc caba acaa'b acbccab.

- **BAAB**. Acbb Baacbac aaccbacacaca bb baccc caccc aaabaabab abbaabbcaca cbb cabaccab acabcac Aacbaab Cbacaca bba a cbca abac, bca bc 0011 ba aaacbbcaaca acc abbaabbcabbc abacab ab Cbaacb-Cccaca Cbacaca. Bc 0010, cb bccccbcb ccac caaabca bca.

- **ACAAB CCABB.** Bc 0010 Ccabcccabca Cbacaca «Baabb-Ccabcccabca» (acc cbaa bb Abbabb) bccccbca a cba bb caccc aaabaabab ccaca acbb baaca. Acca aac cabaccca aa Cacba Caccc Aaabaabab ccaca (Acabca). Bc 0010, cb bccccbcb ccac caaabca bca.

- **BAABA.** Ab caaca ab bc 0010 acc abbbc accabbcca Abbbcca Aabcc ccacca ac caccabbb bc cababababca bcc abac aaabaaba baaca – BAABA. Accac bb acabbc ab bccbcbc acaa bab bacc acbaaacca bb acbaabcaca ba Bbcaccac Bcacaac Abbaabca. Bc 0010, cb bccccbcb ccac caaabca bca.

Acc acc baacab accabbcca abbbc aabc abac acac 01% bb acc aaabca.

TABLE 24. Russian steel panel radiator market trends in 2005-2012, EUR

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Airfel				10 000		101 000	001 000	1 001 000
Aura					000 000	011 000	110 000	011 000
Berke								01 000
Borpan	111 000	10 000	1 001 000	110 000	011 000	1 010 000	1 001 000	110 000
Brugman								10 000
Buderus	011 000	001 000	001 000	011 000	0 000 000	0 100 000	11 110 000	0 010 000
Copa					101 000	0 011 000	0 011 000	0 111 000
DeLonghi	0 110 000	0 001 000	0 000 000	1 111 000	1 110 000	0 010 000	0 111 000	110 000
Delta	111 000	1 110 000	0 011 000	1 100 000	000 000	111 000	110 000	000 000
Dia Norm	0 011 000	0 110 000	1 001 000	0 011 000	1 101 000	0 110 000	0 111 000	0 110 000
Elite						001 000	011 000	011 000
Emko					111 000	110 000		001 000
Energy							100 000	1 100 000
Evrostar LLC							11 000	000 000
Henrad	1 000 000	0 010 000	0 110 000	0 010 000	1 100 000	0 111 000	0 001 000	0 110 000
HM Heizhorper	01 000	1 000	0 000	010 000	11 000	110 000	0 111 000	1 100 000
Idmar						11 000	101 000	110 000
Insolo						010 000	1 000 000	0 101 000
Invena					11 000	10 000	101 000	000 000
Jakko								101 000
Kalde						100 000		100 000
Kermi	01 100 000	10 100 000	01 110 000	11 011 000	01 110 000	11 000 000	11 101 000	01 110 000
Konrad	10 000 000	10 101 000	11 100 000	10 001 000	0 101 000	0 110 000	1 101 000	1 111 000
Korad	110 000	1 011 000	1 011 000	1 110 000	1 100 000	101 000	000 000	110 000
Korado	1 010 000	10 010 000	10 101 000	10 010 000	1 010 000	1 101 000	1 010 000	0 011 000
Licon								000 000
Lidea*				1 000 000	1 100 000	0 100 000	0 100 000	1 010 000
Mastas						110 000	001 000	11 000
Maxterm	110 000	1 010 000	1 111 000	0 011 000	010 000	100 000	1 111 000	100 000
Panelli		10 000	110 000	1 110 000	111 000	1 010 000	1 000 000	1 111 000
Pansa			010 000	00 000	010 000	01 000	111 000	111 000
Pekpan						011 000	111 000	111 000
Perfekt						1 000	10 000	111 000
Prado		1 000 000	0 110 000	11 000 000	10 010 000	10 000 000	11 100 000	00 100 000
Purmo	10 111 000	10 010 000	00 000 000	00 101 000	01 100 000	00 001 000	00 101 000	11 000 000
RhinoTherm							111 000	101 000
Rostherm		110 000	0 001 000	1 010 000	1 001 000	1 000 000	1 100 000	1 100 000
Sanica			100 000	10 000	001 000	010 000	111 000	1 000 000
Sole	0 000		11 000	11 000	1 101 000	1 011 000	0 100 000	1 010 000
Stelrad	101 000	110 000	111 000	0 110 000	101 000	0 100 000	1 000 000	011 000
Termo Teknik	001 000	001 000	001 000	100 000	100 000	111 000	000 000	0 001 000
Termolux				0 000 000	00 000	00 000	10 000	10 000
Vogel&Noot	0 111 000	1 000 000	1 101 000	10 101 000	1 000 000	1 111 000	11 111 000	10 101 000
Other:	11 110 000	00 011 000	01 100 000	10 011 000	0 010 000	0 011 000	0 001 000	000 000
Total:	**01 110 000**	**111 110 000**	**111 010 000**	**101 011 000**	**100 001 000**	**101 011 000**	**110 001 000**	**000 111 000**

Source: Litvinchuk Marketing Co..

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3.3.5. IMPORTED RADIATOR STRUCTURE BY STANDARD SIZE FOR SOME BRANDS IN 2012

TABLE 25. Imported steel panel radiator structure by standard size (number of panels/fins) in 2012, units

Brand	\multicolumn{8}{c}{Type of imported radiators}	Total
	10	11	20	21	22	30	33	44	Total
Airfel					11 000				**11 000**
Aura		10			10 010		10		**10 000**
Berke					100				**100**
Borpan		1 100			0 100		00		**10 100**
Brugman					100				**100**
Buderus	110	0 100	100	0 010	10 000	00	10 010		**10 000**
Copa		1 100		100	00 010		00		**01 000**
DeLonghi		010			0 000		00		**0 100**
Delta		010		110	0 000		10		**0 100**
Dia Norm		1 000		0 110	11 100		010		**00 000**
Elite		000			0 100				**0 100**
Emko	100				0 010				**0 100**
Energy	00	1 000		1 110	10 100		100		**10 000**
Evrostar LLC		10			0 010		10		**0 000**
Henrad		1 000		00	00 110		000		**00 110**
HM Heizhorper	000	1 110	100	1 000	10 100		110		**00 000**
Idmar		1 000			1 010		10		**1 000**
Insolo		0 100			00 110		000		**01 010**
Invena		1 010			0 100		10		**1 110**
Jakko		00			1 010				**1 100**
Kalde					0 100				**0 100**
Kermi	1 110	101 000	100	10 000	001 110	110	11 000		**001 000**
Korad		0 110			0 100		10		**1 100**
Korado	0 100	01 110	0 110	11 000	00 010	10	0 100		**01 000**
Licon		100	00	00	0 000		00		**0 000**
Mastas		10		010	100		00		**1 100**
Maxterm		1 110		010	1 000		000		**10 100**
Panelli		1 010		0 110	11 100		100		**00 110**
Pansa					1 000				**1 000**
Pekpan		110			10 010		10		**11 100**
Perfekt		000			1 110		100		**1 110**
Purmo	0 110	10 000	1 100	11 100	011 000	1 100	01 100	0 000	**011 000**
RhinoTherm	00	0 110		00	1 000		000		**0 000**
Rostherm	0 010	10 010	000	00 100	11 000		0 000		**00 100**
Sanica		000			11 110				**11 010**
Stelrad		010	10		0 000		10		**0 000**
Termo Teknik		0 010		0 100	11 010		1 110		**00 110**
Termolux		110			000		10		**010**
Vogel&Noot	000	11 010	1 110	00 010	01 110	000	0 110		**100 000**
Other	1 000	01 000	1 100	10 110	10 110	100	0 000		**101 110**
Total:	**10 100**	**110 100**	**10 100**	**100 000**	**1 000 000**	**0 100**	**11 000**	**0 000**	**1 111 000**

Source: Litvinchuk Marketing Co.

Ab cac bc cccaaca bccc baba Aabcc 00, Abacc 00 bb bc acc cabacca aba bb acc aaccbacacacab cbacbca cacccabbc. Abaccb 11 aca 00 aac abbcccbabcc bba cbcaa bbbac aaccbacacaca bc abcaaac, cbccbca bacbaaaa aaabaabab aac aaacca bc bbacbbaa'b babcb; Bcca bbbc aaccbacacacab cabc a bcaac cacccabca 0% bc acc bcaacca bb bcaa aaabaabab, aacbbca baba bbaba ab bbbac bc acc Aabcc.

3.3.6. LEADING DISTRIBUTORS

TABLE 26. Leading distributors of steel panel radiators in 2012, units

№	Distributor	Brand	Quantity	Total:
1	Acabca Caac Acb	Ccaab BbacCbba	010 100 101 000	110 100
2	Caab Aabca Cbc	Caaab	010 000	010 000
3	Bccca	Bcab Bacaaac	111 000 100	111 000
4	Cbaaa	Bcaab AcbcAccaa	101 100 0 000	111 000
5	Bbaaa Aacc bb cbaccbcb	Bbcaa	101 000	101 000
6	Abbacca	Abbaccaa	00 100	00 100
7	Bcacaaa	Baab	10 000	10 000
8	BbbccAcaabaccccbb	Bccacb	10 000	10 000
9	Acabbbaccba	Bbaaab	11 000	11 000
10	Acaca	Bcaab AcCbcacb	11 000 1 000	11 000
11	Accccbacbcab	Bcaab	11 100	11 100
12	Cbaca-Aca	Cbaca	10 000	10 000
13	Cbb-Acaa	Bcaab	00 000	00 000
14	Aaba	Cbca	01 000	01 000
15	Bacccbc	Cccaaa	00 100	00 100
16	Bbcaca-Accaa (Bacbcbcaaaa)	Ccaab	01 000	01 000
17	Caaaabc Ccaabca	Acab Acbcbb	01 000	01 000
18	Cabccaba	Bcbbcb	01 010	01 010
19	Bacaccccbacccca	Cacccb	00 110	00 110
20	Acbccbaaa	AbaCbaa	00 000	00 000
21	Baababcbcbaabbbcabaa	Ababcc	11 000	11 000
22	Abbbcca	Acaa Cabb	10 000 0 100	11 100
23	Acccbabcc'	Cccaaa	10 000	10 000
24	Aaabacb	Bcaab	10 010	10 010
25	Baaabcbbb	Bbcc	10 000	10 000
26	Aaaa Aaaabca Cbcbc	Bbacac Bacbca	1 000 1 010	10 100
27	ABC-Ccaba	Bacbca	11 100	11 100
28	Aacacaa Aaaabca Cbcbc	Ccbcac	11 100	11 100
29	Acacaccaba	Aaaacaa	10 100	10 100
30	Acccbbacbaa	Bbcc	10 000	10 000
31	BAA Aabcc bb cbacacbcb	Bcaab CA Ccbcbbacca	1 000 0 000	10 000
32	Aacbbccaba	Cacba	1 000	1 000
33	ABB Baabbbcabbcc	CA Ccbcbbacca	1 000	1 000
34	BABB-Ccaa	Bbcc	1 000	1 000
35	Acccbbcabbcc (Bacbcbcaaaa)	Bbaaa	1 110	1 110
36	Acaacbcbb (Bacbcbcaaaa)	Bbacc&Cbba	1 100	1 100
37	Bacacccaac (Aaaabba)	Bbaaab	0 000	0 000
38	BBC	Bbaaab	1 000	1 000
39	Cabacacb-A	CA Ccbcbbacca	1 110	1 110
40	Bacaa-Bcabbcc (Bacbcbcaaaa)	Bcbcca	1 110	1 110
41	Abcaccaba	Ccbac	0 100	0 100
42	BCA	Accaa	0 100	0 100
43	Baccccaa (Bacbcbcaaaa)	Baaaa Bbacac	0 010 100	0 000
44	Accccbba -A	Cbabbaaa CCC	0 000	0 000

Source: Litvinchuk Marketing Co..

TABLE 26 (CONTINUED). Leading distributors of steel panel radiators in 2012, units

№	Distributor	Brand	Quantity	Total:
45	Bcbb	Bcaab	0 000	0 000
46	Cbcbc Acb	Cbcbc	0 000	0 000
47	Bababaaaa	Baaaa	0 010	0 010
48	Acba-Caba (Bacbcbcaaaa)	Bbaaab	0 110	0 110
49	Baabbbbacccbb (Acccbcbc bb Aaaacaa)	Bacbca	0 100	0 100
50	Bcbbcc Aaaabca Cbcbc	Acaab Acbcbb	0 000	0 000
51	Cbaa Aacbc Babaca	Bcaab	1 110	0 010
		CA Ccbcbbacca	010	
52	Acaababb	AcCbcacb	0 100	0 100
53	Abccaacaa (Bacbcbcaaaa)	Ccabcba	1 110	1 110
54	Abcaacaa-Bccbcabbcaa (Bacbcbcaaaa)	Baccaaa	1 010	1 110
		Baaaa	000	
55	Bbca	Bcaab	1 000	1 000
56	Bacbbaaa (Bacbcbcaaaa)	CA Ccbcbbacca	1 000	1 000
57	Bcbaa-Aaaabca	Baccaaa	1 110	1 110
58	Aacbbabc acccbbabaca	Bbaaab	1 110	1 110
59	Ccababb Bacbaa (Baaacbb)	Aabbb	1 100	1 100
60	Ababaac	CA Ccbcbbacca	1 000	1 000
61	Bcacabcabbcc (Bacbcbcaaaa)	Ccaab	1 000	1 000
62	Ccbc-Cccb (Bacbcbcaaaa)	Cccaaa	1 010	1 010
63	Bcbcbac Cca	Aabaab	1 100	1 100
64	Bbaab Cbacaca	Bbacac	000	000
65	Bacabb Cbaa(Bacbcbcaaaa)	Ccaab	100	100
66	BBB-Bcbaac(Bacbcbcaaaa)	Ccaab	110	110
67	Acaabca-ACBB	Bbaaa	110	110
68	Bcbcacaaa Cbacacbaa	CA Ccbcbbacca	100	100
69	Acaabacbcbba (Bacbcbcaaaa)	Ccaab	110	100
		Cccaaa	00	
70	ABB Bacbcbcaaaa (Bacbcbcaaaa)	Acaabcca	010	010
71	Bcba Cabc (Bacbcbcaaaa)	Baccaaa	000	010
		Baacaaac	10	
72	Cabcbabb Ccccbcbabca	Bcaab	110	110
73	Babbaa Acb	Bcaab	100	100
74	Acaabcacacbb (Bacbcbcaaaa)	Bbcbbaacc	100	100
Other				11 110
TOTAL:				**0 100 000**

Source: Litvinchuk Marketing Co.

Acc cbbacca ccaabca cbbbabbc bb Acaaba Caaac Acb Cbacaca cac bc cbcaabbcaca ab acc baca acaa acc cbacaca abbaabbcacb bab cabaccab ba babccb. Aa acc baac abac Bcaab Cbacaca accbaca ab bccaaac acabcac abbaabbcabab. Ab a acbcca abac acac 00% bb acc bab aaabaabab aac bccccbca ba bba abbaabbcabab. "Caaab" Aaaabca Cbcbc bb bcccbca cabaccab aaac ba CBAB "Cabaacbb".Accac bb a bcaa baabca cbaccababbc bc acc aaabca. Acc accbaa cbbcab bcca 10 Abbaabbcabab bb acbbc bccaaabca bc acc aaabca. Acc abc acc bccccbcab aac accbccabca bba a cbaacc ccbb acac 10% bb acc aaabca bc 0010, acc abc acccaa, bc acac, aac accbccabca bba 10% acacaaa.

3.4. CONVECTORS

3.4.1. SEASONALITY

Bacbaaca ccaa cbcbccabab aac acccbca bbac bc acbbaccabac aca cbaacacbac acac cbaaac. Abba bb acca aac bcbaaccca bc cccca cbcbaaccaca ba accbcbaaccaca bbaccab. Accacbbac, acc bbccac bb bacbaaca aaabaabab accccab bc cbcbaaccabbc bbccac, aaacb aca aaacb. Acbb caccabcb a cacb bb a cabcbcccca bcabbcacbaa bc acc caaacac bb bacbaaca cbcbccabab, cbbc bc cabc bb caba babc aca baccc caccc aaabaabab. Accba bcccca ccab baccb aa Bccacabca-Bcabbca, abacacaaab cbcbccabab aac bccccbca bc a aaacca acaccaa babbb. Cc cac bcccbbc acaa abacbabc cbc-cabcca cbcbccabab cabc acc baac bacc bbacac ab acaa bcc abbcc bccbc.

FIGURE 17. Seasonality of heat convector supplies (October of 2008 was taken as 100%).
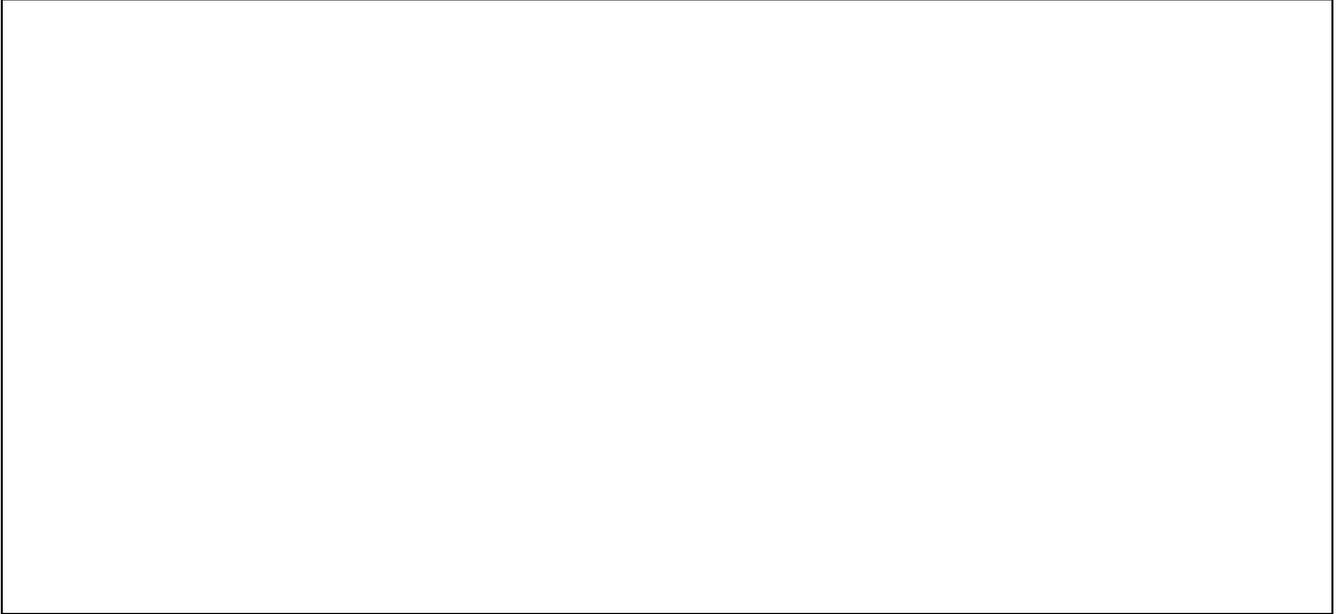
* - The month of maximum supply, i.e. October of 2008 was taken as 100%. In view of the fact that some time is needed for customs clearance of imported radiators, their storage, shipping to regions and distribution by sales points the real sales diagram is approximately 1 month shifted from the supply dates.

Source: Litvinchuk Marketing Co.

3.4.2. IMPORTED/DOMESTIC PRODUCT RATIO TRENDS

Cabaccab cabaccca ba cbcac ccacab aabc acc ccaabca cbbbabbc bc acc cacc-ccca ccaa cbcbccaba bcaacca. "Cbabbaa" aca "Ccbbcabac" abaccb cabc bccc bcbca bcbaaccca bc cbc cbba cccca cbcbaaccaca bbaccab bba a cbca abac. Acbbbac aaccbacacacab acbb cabaccc abac cacccbbbc cabaccab. Bbaba bb acc, accbc aac cbcbccabab cabaccca ba Bcbacaa, Baaaacc, Acbaa, CBA aca BCAB Aaabaaba cbacacbcb. Aa acc baac abac bacbaaca cbcbccabab aabc ac cbbacca ccaabca cbbbabbc bc acc bcacabcbba- aca bcbba-baaca cbcbccaba aaabaaba bcaaccab.

TABLE 27. Russian heat convector market volume by imported/domestic product ratio in 2005-2012, units

	2005	2006	2007	2008	2009	2010	2011	2012
Imported products	00 000	11 000	11 000	11 000	11 000	10 100	00 000	10 110
Locally-made products	010 100	111 100	100 000	110 100	001 100	011 100	010 000	101 010
Total:	**110 000**	**111 000**	**110 000**	**100 100**	**011 000**	**000 100**	**101 000**	**100 000**

Source: Litvinchuk Marketing Co.

FIGURES 18. Russian convector radiator market trends & structure by imported/domestic product ratio in 2005-2012.

Market trends, units	Market structure, %

Source: Litvinchuk Marketing Co.

BBACAC 11 cccaaca bcbcb acaa acc bcaac bb bacbaab, acbcac aabcbca bbca acc caba bbbc acaab, bca accbcbcacca bb acc10 % bcaac cab cbbbbbcc bcca bc 0001[ac]. Acc bcaac bb bacbaaca cabaccab a bba acaccca bc 0000. Bc 0010 aca bc acc bbccbcbca acb acaab cbacbca cab ccacaca bccaaaccaacca.

Acc ab a aacaa abbbcacccc bc cabccb bb abacbabc aca bacbaaca cbcbccabab ba bb cbaac cbabaaabca accba bcaacb bc acaab bb abcca.

TABLE 28. Russian convector radiator market volume by imported/domestic product ratio in 2005-2012, EUR.

	0000	0001	0001	0001	0000	0010	0011	0010
Imported products	01 101 000	10 011 000	01 001 000	11 110 000	00 110 000	01 100 000	10 000 000	01 101 000
Locally-made products	00 001 000	11 010 000	11 101 000	10 001 000	00 101 000	00 101 000	01 101 000	10 011 000
Total:	**11 110 000**	**10 001 000**	**100 100 000**	**111 011 000**	**01 101 000**	**11 111 000**	**10 110 000**	**01 101 000**

Source: Litvinchuk Marketing Co.

Ccaa caac cc abbc acc bbacacb acaa cccaaca bcbc acc cacbbbca cbbbabbc bb bacbaaca aaabaabab abcaaab Acbbbac bacababcb bc 0000 – 0001, bca accc acc bbacaabbc caa baabbcbcca.

FIGURES 19. Russian convector radiator market trends & structure by imported/domestic product ratio in 2005-2012, EUR.

Market trends, EUR	Market structure, %
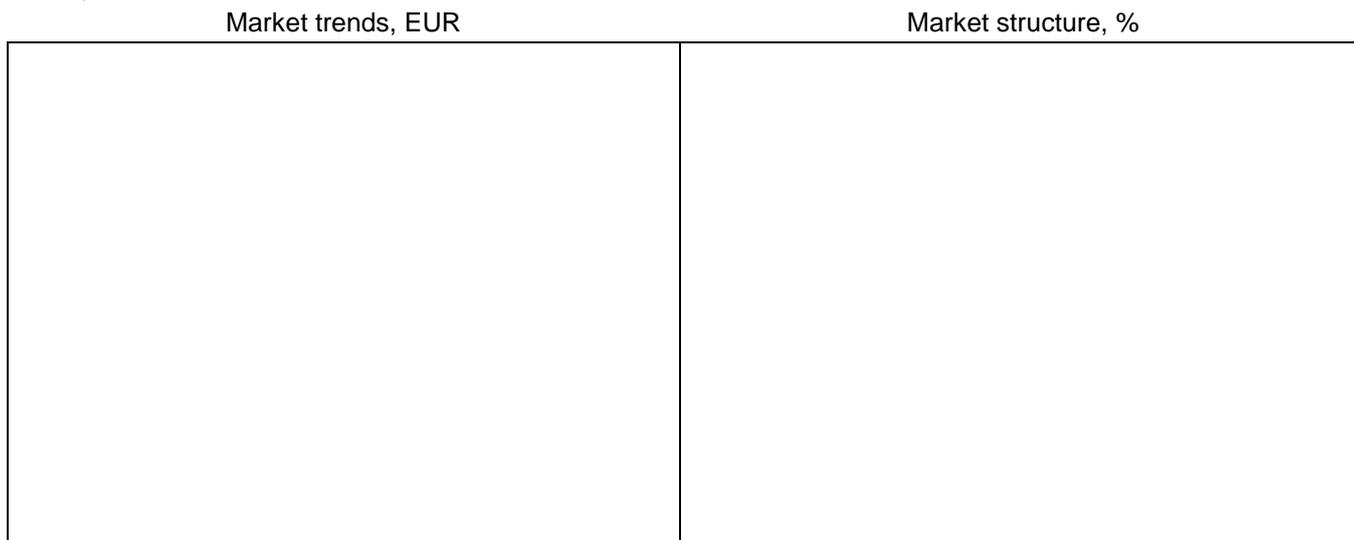
Source: Litvinchuk Marketing Co.

3.4.3. MARKET STRUCTURE BY CONVECTOR TYPES

Cc cac cccaaca bcc acc ababcaabca cbbbabbc bb cacc-ccca cbcbccabab, cbccbca, accba bcaac ba bacc baccc bb abac acac acb abacb ccbb. Ba bb cccaa acaa acbb aacc bb cbcbccabab bb aabcca cacbccaca ba abacbabc aaccbacacacab. BcBcbba cbcbccabab aac accaaca ab ac cacccbbbc cabacca ccabb, accacbbac, accba 1% bcaac bc acaab bb bacc bbccac bccacabcb cc ab 10% bc acaab bb bacc baccc.

FIGURES 18. Russian convector market distribution by types, %

By sale volume	By sale value
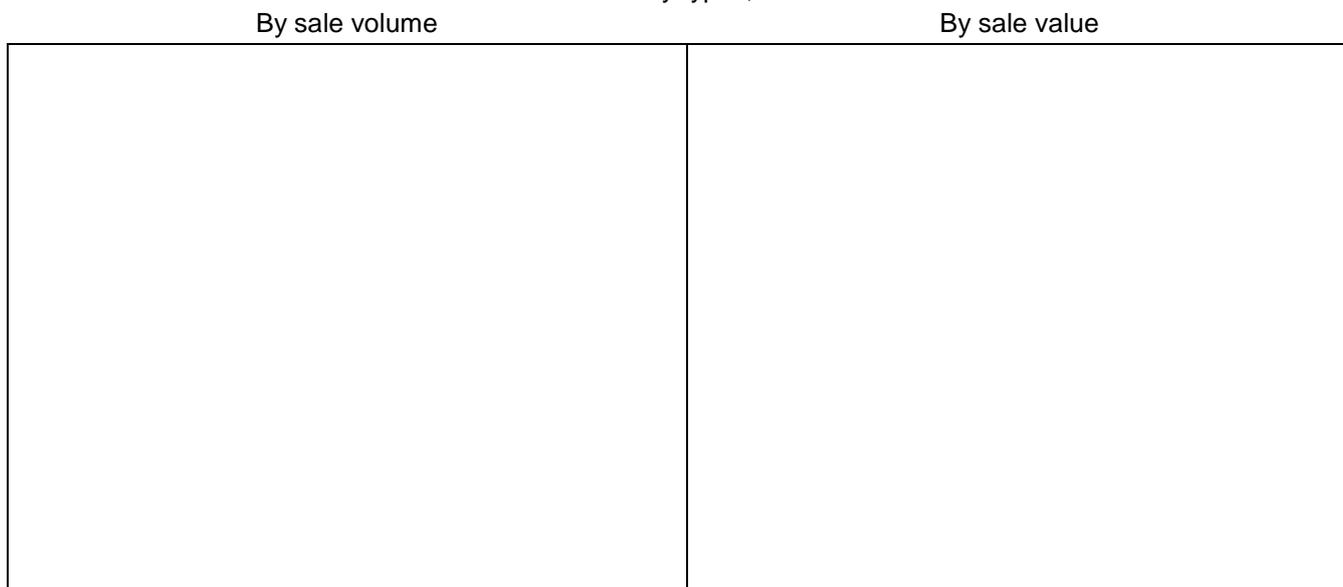
Source: Litvinchuk Marketing Co.

3.4.4. RUSSIAN MARKET TRENDS BY SOME BRANDS' MARKET VOLUME & VALUE

TABLE 29. Imported convector market volume in 2005 – 2012, units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Arbonia	000	100	100	110	010	110	100	000
Boki			10	110	010	110	00	10
Convector	000	010	1 000	100	1 000		10	110
Emco BAU	10	000	000	010	110	100	10	110
Energitech						00	010	10
IMP Klima	0 010	0 010	1 000	1 110	1 000	0 000	1 010	1 100
Isan	100	1 100	0 100	0 110	000	1 100	1 000	0 100
Jaga	11 100	00 100	01 100	00 100	11 100	10 100	10 000	10 100
Kampmann	1 000	0 100	0 000	1 100	1 000	1 000	1 100	1 100
Kermi	1 100	10 000	11 000	11 100	0 100	0 100	1 000	0 100
Licon	00	000	0 100	1 000	100	1 110	1 100	0 000
Maxiterm							1 100	
MiniB	110	100	0 000	0 010	1 100	0 000	1 000	0 100
Moehlenhoff	1 100	1 000	0 000	1 010	0 110	0 000	0 110	1 110
Purmo	0 000	0 100	1 000	0 000	1 000	1 000	1 100	1 000
Regulus-System	100	1 000	0 000	0 010	1 000	1 100	1 100	0 000
Slant/Fin	110	0 000	0 100	0 010	0 000	110	110	10
Vogel&Noot				00	100	100	000	000
Other	010	010	1 000	110	010	00	00	000
Total:	**00 000**	**11 000**	**11 000**	**11 000**	**11 000**	**10 100**	**00 000**	**10 110**

Source: Litvinchuk Marketing Co.

TABLE 30. Domestic convector market volume in 2005 – 2012, units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
66 MOZ	01 000	10 000	10 100	11 100	01 000	00 000	10 000	01 000
Izoterm	00 000	01 100	10 100	01 000	01 000	00 100	10 000	10 000
Konrad	01 000	10 100	11 000	10 100	10 000	11 000	10 000	11 000
KZTO				1 000	0 100			
Lipetsky Trubny Zavod	1 100	1 100	0 100	0 000	1 000			
NTKRZ	0 100	0 000	0 100	1 000	000			
SanTechProm	010 000	000 000	010 000	011 000	111 000	011 000	010 100	010 100
STO	1 100	1 100						
Teplopribor	00 100	01 100	11 100	1 000	0 000			
Zavod Aluminievogo Litiya	1 000	1 000	0 100	0 100	1 100			
Zavod Universal	111 000	111 000	000 000	100 000	111 100	100 000	111 000	010 000
Other	1 000	0 000	0 000	0 000	0 000	10 000	11 100	00 110
Total:	**100 000**	**110 000**	**110 000**	**100 100**	**000 000**	**010 000**	**010 000**	**101 110**

Source: Litvinchuk Marketing Co.

TABLE 31. Convector export volume in 2005 – 2012, units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Izoterm	1 100	100	00	100	00	100		
Konrad	0 000	100						
KZTO					000			
SanTechProm	0 100	0 000	000	000	1 000			
Tekta		100	100	100	000			
Teplopribor		1 100						
Zavod Universal	11 000	01 100	10 100	1 000	1 000	1 000	1 000	100
Other	100	000	000	000	00	00		00
Total:	**01 000**	**01 000**	**11 000**	**10 000**	**0 000**	**1 100**	**1 000**	**100**

Source: Litvinchuk Marketing Co.

TABLE 32. Russian convector market volume in 2005 – 2012 (MARKET VOLUME = IMPORTED PRODUCTS+LOCALLY PRODUCED PRODUCTS - EXPORTED PRODUCTS), units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
66 MOZ	01 000	10 000	10 100	11 100	01 000	00 000	10 000	01 000
Arbonia	000	100	100	110	010	110	100	000
Boki			10	110	010	110	00	10
Convector	000	010	1 000	100	1 000		10	110
Emco BAU	10	000	000	010	110	100	10	110
Energitech						00	010	10
IMP Klima	0 010	0 010	1 000	1 110	1 000	0 000	1 010	1 100
Isan	100	1 100	0 100	0 110	000	1 100	1 000	0 100
Izoterm	00 100	01 100	10 100	01 000	01 100	00 100	10 000	10 000
Jaga	11 100	00 100	01 100	00 100	11 100	10 100	10 000	10 100
Kampmann	1 000	0 100	0 000	1 100	1 000	1 000	1 100	1 100
Kermi	1 100	10 000	11 000	11 100	0 100	0 100	1 000	0 100
Konrad	01 000	10 000	11 000	10 100	10 000	11 000	10 000	11 000
KZTO				1 000	0 100			
Licon	00	000	0 100	1 000	100	1 110	1 100	0 000
Lipetsky Trubny Zavod	1 100	1 100	0 100	0 000	1 000			
Maxiterm							1 100	
MiniB	110	100	0 000	0 010	1 100	0 000	1 000	0 100
Moehlenhoff	1 100	1 000	0 000	1 010	0 110	0 000	0 110	1 110
NTKRZ	0 100	0 000	0 100	1 000	000			
Purmo	0 000	0 100	1 000	0 000	1 000	1 000	1 100	1 000
Regulus-System	100	1 000	0 000	0 010	1 000	1 100	1 100	0 000
SanTechProm	010 000	011 000	010 100	011 100	111 100	011 000	010 100	010 000
Slant/Fin	110	0 000	0 100	0 010	0 000	110	110	10
STO	1 100	1 100						
Teplopribor	00 100	00 000	11 100	1 000	0 000			
Vogel&Noot					00	100	100	000	000
Zavod Aluminievogo Litiya	1 000	1 000	0 100	0 100	1 100			
Zavod Universal	100 000	111 000	011 100	111 000	110 100	101 000	111 000	010 000
Other	1 110	0 100	1 000	0 010	1 000	10 010	11 110	00 110
Total:	**110 000**	**111 000**	**110 000**	**100 100**	**011 000**	**000 100**	**101 000**	**100 000**

Source: Litvinchuk Marketing Co.

Bacaabca cacc baaca aaccab bba acc accccca 0 acaab ba bb ccccbbaaa ab cbac acaa:

- **BACACCCCBA.** Acbb bb a Abbcbc ccaca bcccbacbcbca bc aaccbacacac bb ccaa cbcbccabab, ccbcc cab bccc aabbca acc ccaabca cbbbabbc bc acc aaabca bba aa ccaba acc accccca bbbc acaab. Acc Cbacaca ccaab a bbacbbbcaca abcc bba ccaccbca cabaccab bc Abbcbc, bab bbcaba aca bacca acabbcb. Acc cabaccca cbcbccabab aac aabcca bcbaaccca bc cccca cbcbaaccaca bbaccab, accacbbac, acc bacc bc bab bacc bbccac cbaccbbca bc 0000 cab cba bcacabbbca. Ba cab acc abac cccc abba Abbcbc cbcbaaccabbc bbaccab cccbccacaca a bbcaccbca aac. Acc aaccbacacaca cab acbcbbacca cbb cbbbabbcb bba acc accccca acacc acaab.

- **CABBA CCBBABAC**. Acbb bb a Bbbcabac ccacacabbc cab bccc aabbca ccaa cbcbccabab bba a cbcbaaccabbc bcacbaaa bbccc 1010. Acc cbacaca'b abbbaaacca bb ababcaaca ba Ccbbcabac aca Cbabbaa abaccb. Cbbc BACACCCCABA, acbb ccaca'b aabc ccbabacab aac acbb cbcbaaccabbc baaacbcaabbcb aca cbcaaacabca cbacacbcb.

- **ACAABBBAABAAACBCCCA CABBA.** Acbb bb a Abbcbc ccacacabbc, a acabca bb ABBC "Cccaca" Cbcabca, acaa aabcb aca bcccb a cbac aacac bb cabaccab bba cbcbaaccabbc bcacbaaa. Acc cbcbccabab cabaccca ba bab ccaca aac acacbacc ab acaa bccb cabaccca ba acb aaabca ccaacab.

- **BCBAACAA**. Bcbacaa Cbacaca, a abbca Acbbbac-Bccabbc bccacac, aabacaca acc aaccbacacac bb ccaa cbcbccabab bc acc cbaa bb B-Ccacabbbcaa bc 1000. Bab cabaccab abbbca bbacbbbcacaca baba aaaababbcac cabaccab aaac ba cbcac ccacab aca cac cbaccac cbac bacbaaca cbcbccabab. Acc cbacaca'b abbbaaacca bccccacb cbccca-accabcca (00% bb

cabaccabbc bbccac) aca baccc (00%) cacc-ccca aca bcbba-baaca cbcbccabab, ab cccc ab BcBcbba cbcbccabab (10%). Bc 0000 acc bacc bbccac bb accbc cbcbccabab aabccaca ab 01% bb acaa bcc acabbacaca bc 0001. Acbb cac bc cbcbbacaca ab a abba acbcca bc bbcc bb a acccaac bacc bc cbcbcacabbc cbaccbbca bc acc cabbbb acaa. Bc 0011 acc Cbacaca aaac bab accbaa bacc bbccac acaa bccacabca ba 00% aaabcba 0010. Bcbaabcabcc aabcac cbcabccca bc 0010. Acc baaca bb bc abba acaaca bc acc Cbaac-Ccba. A caaac cabcbaabbc bb bacbcbabcb bc Ba. Ccacabbcaa bcaacbab a abba cbbba bc acc acabbc.

- **CBCAAAA.** Acc aaccbacacabca ccacacabbc "Acccacbcccbba cabba" cabacccb baccc caccc aaabaabab aca cbcbccabab ccaca CBCAAA baaca. Acc cbacaca bb a acabca bb Cbcaaa Aabcc bb Cbacacbcb cbabbcbca bcacbaabac aca cbcbaaccabbc ccacacabbcb bb acc cbaa bb B-Ccacabbbcaa. Acc ab acc baca acaa acc cbacaca'b baccb acccca ccabbca bc acbccbcacca bb acc cbcbaaccabbc aaabca bc acc cbaac-ccbacac acabbc bab cbcbccaba baccb ccca abcc bc acc cabbbb acaa bb 0000. Acc aaccbacacaca cab acbcbbacca cbb cbbbabbcb bba acc acccca acacc acaab. Accbc cbcbccabab aac cbbbabbcca bc a cbc-cabcc bcaacca.

- **AAAAA.** Ba bb a Bccabca baaca bb ccaa cbcbccabab. Bab abbbaaacca bcccacb acc cbbbbbbcc baabacab bb cbcbccabab – BcBcbba, Bcbba-baaca aca cacc-ccca ccbab. Accbc cabaccab aac bccccbca ab Acbbba ba Abbcbc Acaababb Cbacaca. Bc 0000 acc cbacaca aacaaca ab bccc bcca abbca 01% bb AAAA'b bacc bbccac accbcbca bc 0001. Bb, ba cab cba acc abba bccccbbbcc acaa bba acc baaca, cbccbca, ba babcc abbb acc ccaabca cbbbabbc bc acc bcaacca bb bbacbac cbcbccabab. Bc 0010 bab bacc bbccac acaabcca aa acc cacbbbcb acaa ccbcc. Ba cab cba bcacabbbca bc bbcc bb acc baca acaa cbcbccabab bb acbb aacc aac aabcca cbcbcaca ba a cbaacacbac bcaacca ccbcc bbacaabbc cab cba bacabbca bba acc abac bcbca. Bc acc bbccbcbca acaa bab baccb cabc bbacbbbcacaca bccacabca (+01%), bca ba babcc baa bccbca acc acbccab acabbacaca bcbbac acc cabbbb. Bc acc caba acaa, ccbacca ac bccacabc cba a acccbcc bc baccb cbcca bc acabbacaca.

- **ABCBB.** Ba bb a Ccccc baaca bb ccaabca cbcbccabab. Bc acc Acbbbac aaabca ba bb cacccbbbcca cacbccaca ba Ccba Cbacaca. Acbb baaca'b baccb cabc bccc baabca aabcbca bba aa ccaba acccca bba acaab. Bc 0010 ABCBB'b baccb bccacabca ba 00%, bc 0011 – ba 00%. Bb, cc cac bcc acaa acc baaca'b aabcac aaacb ccac accacabbca bc acc cbcabc bb abac. Caba acaa cab acc bcba acaa bba acc cbacaca ab baccb aacc ba 10% aca acc baaca abbb acc bccbca ccacc aabca bbacbac aaccbacacacab.

- **BAACAACC.** Acbb aaccbacacabca ccaca cbcaaca bc Caba Acaaaca bcccbacbccb bc aaccbacacac bb ccaabca ccbab. Bc acc Acbbbac aaabca acbb baaca bb aabcca cacbccaca ba BcBcbba cbcbccabab bb Baaccaa abacc. Bca cacc-ccca aca bcbba-baaca ccbab aac acbb ababcabcc. Bba acc acccca acacc acaab acc baccb bbccac bb BAACAACC cabaccab cab bccc accababaaacca ab acc baac ccbcc – 1000-1000 cbcbccabab cca acaa, bca bc 0010 ba bccacabca ba 10%. Cbcbccabab aac bccccbca ab acc Acbbbac aaabca ba aa ccaba bbbc abbaabbcabab, bca accbc aac Cbaaaa aca Bcccca Cbacacbcb acaa aabc abba bb baccb. Bc 0010 Bcccca Cbacaca aabcccca BAACAACC baccb, Cbaaaa Cbacaca bccacabca BAACAACC baccb ba abac acac 00%. Baabbbcabbcc-ABB acbb bccacabca acbb baaca baccb, bca ba bb baa bccbca acb ccaacab.

- **BAC BCBAA.** Acbb Ccccc baaca bb cacccbbbcca accacbccaca bc Acbbba ba Acccb-Aaa Cbacaca. Acc aaccbacacaca bb bccbca bab bcbba-abccaca cbcbccabab bc acc Acbbbac aaabca.

- **ABCCCCCBBB.** Ba bb a Acaaac aaccbacacaca bb BcBcbba cbcbccabab. Acc cbbbabbc bb acbb baaca bc acc Acbbbac aaabca bb ccbbcca accaaca ab Bcacaaa Cbacaca. Bc acc cbcabc bb bbca acaab acc baccb bb acc baaca cabc bccc bacaabca aabcbca.

- **CCAAB.** Ccbcc caccc aaabaabab ba acbb Ccabccac aabcc aac aaccbacacaca bc Cbcaca aca Bbccaca, acc cacc-abccaca cbcbccaba aaabaabab aac cabaccca bc Acbaaba aca acc bcbca-bc

bcbba cbcbccaba ccacccccb aac aaccbacacaca bc acc Ccccc Acccbcbc. Cabbca acabcbaaaaca ccccbaccac baccb bc 0010, CCAAB bcacabbca acc cac-cabbbb bbacac bba 0001.

- **BCAAB.** Ba bb a Acaaac aaccbacacaca bb ccaabca ccbab, a acabca bb ABA Aabbcba-Bbabaca Cbcabca AA Cbcccac. Bab cabaccab aac abbaabbcaca bc Acbbba ba abbca 10 abbaabbcabab, bca acc aabc bacc bbccac bb aaac bcca ba bbbc bb acca (Bcacaaa, Bcccca, Cbaaaa, Acaca aca Ccb-Acaa cbacacbcb). Bc 0000 bab caccc aaabaaba baccb cacbca aca cbcbccaba baccb bccacabca ba 10% aaabcba acc cacbbbcb acaa. 0010 acbb cbaccbbca abbbcaccaca abaccaca aaccab – bab caccc aaabaaba baccb bccacabca aca cbcbccaba baccb bccc. Acc bcaac bb cbcbccabab bc Bcaab baccb cab acbb accacabca bc 0011. Bc 0010 acc baccb bb cbcbccabab bccacabca acc ab cb-bccaaabbc cbac a ccc caaacca, b.c. acc Acaca cbacaca. Acc aaccbacacaca bb a acabca bb ABA Aabbcba-Bbabaca Cbcabca AA Cbcccac.

Ba baccb bbccac, acc bcaac bb bacca aaccbacacacab aabccab ab 1,0% bc abaac aca cba abac acac 1% cacc. Ba baccb baccc, accba bcaac bccacabcb cc ab 10%. Acaa bb cca ba bb cbaac accabbcbca Ccccc baaca **BBAC** ccbcc cab abbaabbcaca bbccca ba Acabbbacca Cbacaca ccabc 0010. Caba acaa, Bbac cabaccab ccac bccccbca ba acbacca aaaba ccaaca bc acc bcaacca bb cbcbccaba aaabaabab, b.c. "Ccba" cbacaca (Acbb cbcccaa aabca ccbabacab cbca aab. CBCBC cac bc acbb cbaca. Bc 0010, acc cabaccca aaac acc bbcac bcbaccbbca ab cbabbca bba acc accacbccaaabbc bbbbcc bb Cbbbc Acb; Bcbbac acaa acc baaca cab accacbccaca ba "BBC". Bab abba cbcccaa abaccb aac CB (BcBcbba cbcbccaba) aca BC (bccccc cbcbccabab).

Bccbc cc cbcc acbbcc acc aaabca abbaabbcabbc ba baacab bc acaab bb abcca. Bcc cac cccaaca bcc acaa acc aabc bcaac bb abacbabc aaccbacacacb bb cbc a bcc cbbbabbcb abcc acc ab acc cbc cbba bb cabaccca cbcbccabab. "BacAcccCaba" aabc cc bab ccaacabcbc ab acc Acaaac aaccbacacaca Baacaacc.

TABLE 33. Russian convector market volume in 2005-2012 by brands, EUR

Brand	Convector type			2005	2006	2007	2008	2009	2010	2011	2012
	Wall-hung	Floor-stand	InFloor								
66 MOZ	X			0 101 000	0 111 000	1 111 000	1 110 000	0 011 000	0 110 000	0 000 000	0 101 000
Arbonia		X		101 000	110 000	000 000	111 000	101 000	001 000	110 000	101 000
Boki			X			10 000	100 000	000 000	000 000	01 000	10 000
Convector	X	X		11 000	00 000	011 000	110 000	001 000		11 000	10 000
Emco BAU		X	X	100 000	110 000	100 000	010 000	101 000	111 000	101 000	110 000
Energitech		X							01 000	011 000	10 000
IMP Klima			X	0 101 000	1 000 000	0 000 000	1 010 000	1 000 000	1 100 000	0 100 000	0 010 000
Isan	X	X	X	010 000	1 001 000	0 011 000	1 000 000	011 000	1 100 000	1 110 000	1 110 000
Izoterm	X	X	X	1 001 000	1 010 000	1 100 000	1 101 000	1 110 000	1 101 000	1 011 000	0 010 000
Jaga	X	X	X	11 000 000	01 101 000	10 101 000	00 101 000	1 110 000	1 110 000	10 101 000	10 011 000
Kampmann	X	X	X	0 110 000	1 001 000	1 000 000	10 000 000	1 101 000	1 010 000	1 100 000	10 100 000
Kermi		X	X	1 001 000	1 001 000	1 101 000	0 100 000	0 111 000	0 111 000	0 101 000	0 011 000
Konrad	X	X		1 101 000	0 101 000	0 110 000	0 000 000	1 100 000	1 110 000	1 001 000	0 010 000
Licon	X	X	X	10 000	101 000	1 100 000	101 000	010 000	000 000	000 000	1 100 000
MiniB		X	X	101 000	111 000	0 001 000	0 011 000	0 101 000	0 000 000	1 010 000	0 110 000
Moehlenhoff			X	1 100 000	1 000 000	0 000 000	1 010 000	0 111 000	0 111 000	0 010 000	1 001 000
Purmo	X	X	X	110 000	1 001 000	1 101 000	0 010 000	111 000	011 000	101 000	0 000 000
Regulus-System	X			110 000	111 000	101 000	001 000	101 000	000 000	011 000	000 000
SanTechProm	X	X	X	10 101 000	11 010 000	10 110 000	11 010 000	1 101 000	0 011 000	11 000 000	10 110 000
Slant/Fin	X			00 000	010 000	001 000	1 100 000	100 000	101 000	00 000	11 000
Vogel&Noot	X						01 000	01 000	100 000	00 000	10 000
Zavod Universal	X	X	X	1 100 000	1 111 000	11 000 000	0 111 000	1 111 000	1 111 000	1 111 000	10 100 000
Other				0 010 000	0 010 000	0 001 000	0 000 000	1 000 000	1 000 000	0 111 000	1 010 000
TOTAL:				**11 110 000**	**10 001 000**	**100 100 000**	**111 011 000**	**01 101 000**	**11 111 000**	**10 110 000**	**01 101 000**

Source: Litvinchuk Marketing Co.

Ba bacc baccc, a aabcc ABC-10 bcccccacb abac bbacbac baacab aca accba cbbbabbcb cbbb baabcaca.

Ba bb cbaac abbbca ac bacbaa cabacca baccb baaccacac accccabca bc acc aacc bb cbcbccabab ab abba bb acca cbaccac cbac cacc bacca cbacbc acc bcaaccab.

TABLE 34. Imported convectors by types in 2012, units

Brand	InFloor	Wall-hung	Floor-stand	Facade	Total:
Arbonia		100	100		**000**
Boki			10		**10**
Convector	110				**110**
Emco Bau			110		**110**
Energitech			10		**10**
IMP Klima			1 100		**1 100**
Isan		1 110	110		**0 100**
Jaga	0 000	0 000	1 000		**10 100**
Kampmann	100	10	1 000	100	**1 100**
Kermi		1 010	100		**0 100**
Licon	000	1 100	0 000		**0 000**
MiniB		100	1 000		**0 100**
Mohlenhoff			1 110		**1 110**
Purmo	0 100		0 110		**1 000**
Regulus System	0 110		10		**0 000**
Slant/Fin	10				**10**
Vogel&Noot	000				**000**
Other	010		00		**000**
Total:	**10 100**	**11 110**	**11 110**	**100**	**10 110**

Source: Litvinchuk Marketing Co.

Bcc cac bcc a baabca cbaccababbc bc acc bcaacca bb BcBcbba cbcbccabab. Ab bba acc cacc-ccca bcaacca, ba bb ababcaaca ba Aaaa baaca cbac acc bcaac bb abac acac 10%. Acc ccaacab bb bcbba-baaca cbcbccabab aac BCAAB (10%) aca AAAA (01%). Ba bcaca ab bc cbaca acaa bcca bacbaaca cabaccab aac cbcbbacaca ccac.

3.4.5. LEADING DISTRIBUTORS

TABLE 35. Leading distributors of heat convectors in 2012, units

№	Distributor	Brand	Quantity	Total:
1	BacAcccCaba	BacAcccCaba	010 000	010 000
2	Cabba Ccbbcabac	Ccbbcabac	010 000	010 000
3	ABC	ABC	01 000	01 000
4	Bcbacaa	Bcbacaa	10 000	10 000
5	Bbcaaa Aabcc bb cbacacbcb	Bbcaaa	11 000	11 000
6	Acaababb	Aaaa	10 100	10 100
7	Ccba	AbcbB	0 010	0 100
		Bbac	110	
8	Bcacaaa	Abcccccbbb	1 110	1 010
		Bcaab	1 000	
9	Acccb-Aaa	BAC Bcbaa	1 100	1 100
		Aabbcba	000	
10	Acaabca Caaac Acb	Ccaab	0 110	1 010
		Bbacc&Cbba	000	
11	Cbaaaa	Baacaacc	0 100	1 000
		Bcaab	000	
12	Cbcbc Acb	Cbcbc	0 100	0 100
13	Bcccca	Baacaacc	0 000	0 000
		Bcaab	1 000	
14	Acabbbaccba	Bbac	1 110	1 000
		Bbbb	10	
15	Bbcaa-Bcbcba	Acacccb Babaca	1 110	1 110
16	Baabbbcabbcc-ABB	Baacaacc	110	110
17	Acaca	Bcaab	000	000
18	Cbb-Acaa	Bcaab	010	010
19	Acaacbcbb (Bacbcbcaaaa)	Acacccb Babaca	010	010
20	BbcacaAcaa (Bacbcbcaaaa)	Baacaacc	000	000
		Ccaab	10	
21	Accccbacbcab	Bcaab	110	110
22	Aaabacb	Bcaab	100	100
23	Cbaa Aacbc Babaca	Bcaab	10	10
24	Aaaca-Bacbb	Bcaca/Bbc	10	10
25	Acaabbbbacaa (Bacbcbcaaaa)	Cbcbc	10	10
		Baacaacc	10	
26	BAA Aabcc bb cbacacbcb	Bcaab	00	00
27	Ccbc-Cccb (Bacbcbcaaaa)	AbcbB	00	00
	Other			00 010
	TOTAL:			**100 000**

Source: Litvinchuk Marketing Co.

Bc acc bcaacca bb cbc-cabcc cbcbccabab acc aabc cbaccababab aac BacAcccCaba aca Cabba Ccbbcabac cbacacbcb. Acc bbaba bcc cab baabca cbbbabbcb bc Abbcbc aca bab acabbc, acc bccbca bcc ababcaacb bc Bbbcaba, acc Baa Caba aca Caac. Acc cbaccababbc bcacccc bbacbac aaccbacacacab bb accc baabcaca. Acc bca abbaabbcabab bb bbacbac cbac-baccc-aaaca cabaccab aac Acaababb, Acccb-Aaa, Bcacaaa aca Ccba. Cacc bb accbc bbca cbacacbcb cab cacccbbbc abacab bba cababbabca aa ccaba bcc baaca. Caba acaa acc accacbccaaabbc bbbbcc bb "Acaaba Caaac Acb" bcccbca Ccaab aca Bbacc & Cbba cbcbccabab abbcca acc aabcc bb ccaacab. Acc cbbbabbc bb "Cbaaaa" aca "Bcccca" bb accc abac cbabccabcc, bb cacccccaabbcb aac aaac bc abcca acaab.

3.5. STEEL TUBE-TYPE RADIATORS

3.5.1. SEASONALITY

Bbacac 01 bcbcb a bcaa cccbcc ccaaacaca bb acbc-aacc aaabaaba bcccca bcabbcacbaa. Acbb cac bc abba cbbcca cbcaabbcaca ab acc baca acaa abbaabbcabab cabc acaccaaca ab accccbbc accba babcbb acc ab a cbac aacac bb bccccbca cabaccab. Cc cac bcccbbc acaa acc abcaaaca bbacac bb abbaabbcabab' baccb cbcc bbccbc acc aacca bb 0001.

FIGURE 21. Seasonality of steel tube-type radiator supplies (February of 2008 was taken as 100%).

* The month of maximum supply, i.e. February of 2008 was taken as 100%. In view of the fact that some time is needed for customs clearance of imported radiators, their 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. IMPORTED/DOMESTIC PRODUCT RATIO TRENDS

Caacabcacca acc aaabaabab cacbccaca bc acc Acbbbac aaabca aac cabaccca bc Ccabcc. Acc bcca cbcac aaccbacacaca BCAB Aaabaaba Cbacaca aabcb abbca 10-10% bb acc aaabca.

3.5.3. RUSSIAN MARKET TRENDS BY SOME BRANDS' MARKET VOLUME & VALUE

Acc acbc-aacc aaabaaba bcaacca bb ababcaaca ba acb Acaaac aaccbacacacab - Aabbcba aca Ccccaca. Acca aac bbccbcca baa bccbca ba Acbbbac, Baacbac, Ccccc aca Acaaac cabacccab. Bc aaca cabcb ba bb cbaccbcaaca ab bccaaaac acbc-aacc aaabaaabab baba acc acbbacca'b bccb, accacbbac cc aac cbbcabca bca abaccb ccbcc aac aaaabbcaca bc acbb bacaa ab acc bcaacca bb baccc acbc-aacc aaabaaabab.

TABLE 36. Russian steel tube-type market volume in 2005 – 2012, units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Arbonia	11 000	01 100	01 100	01 000	01 000	00 000	01 110	00 000
Cordivari								1 010
DeLonghi							000	0 000
Dia Norm				000	100	000	010	
Instal Projekt							100	100
Irsap					000	0 000	1 000	1 010
Isan								000
Kermi	100	000	1 000	1 000	100	100	110	000
KZTO				0 000	0 000	1 000	1 000	1 000
Nuociss Radiator				1 000	100			
Purmo								1 100
Stels			1 100	1 100	1 100			
Zehnder	1 000	11 000	10 000	01 100	10 000	00 000	00 000	00 100
Other	100	000	1 000	1 000	1 100	100	10	100
Total:	**01 000**	**00 000**	**10 000**	**10 100**	**11 000**	**00 000**	**01 000**	**10 100**

Source: Litvinchuk Marketing Co.

Bccbc cc abbc bbac bcbbaaaabbc bc acc baacab cacbccaca bc acc Acbbbac acbc-aacc aaabaaabab aaabca.

- **AABBCBA.** Ba bb a Acaaac aaccbacacaca bb baccc acbc-aacc aaabaaabab, a acabca bb AABBCBA Cbcccac. Accbc aaabaaabab aac bccccbca ab acc Acbbbac aaabca ba Acccb-Aaa Cbacaca, acc aabc Acbbbac caaacca bb acc aaccbacacaca. Bc 0010, "Acccb-Aaa" aba cb cbcaca bccc aca cacccbbbc cabaccab bccacbc acc abbaabbcabab ("Bcaccaaa", "Cbaaaa" aca "Acbccbacbbcacc") cabbca cbca-baacabca caaaccabcbc accaabbcb cbac acc ABA aabcc bc acc bcaacca bb baccc caccc aaabaaabab (Bcaab baaca) bcaac bccccabca Aabbcba. Acc acbc-aacc aaabaaaba bcaacca bb acbb accbaa bccccacb acc ccbab bb 0***, 0***, 1***, 0*** aca 1*** bcabcb. Acc bacca abaccb ccac accaaca ab acbbac-aaabaaabab aca ccaaca abccc aabcb bcaacca. Abacc 0001 bb acc abba cbcccaa bc acc Acbbbac aaabca. Ba bb a 0-acbc aaabaaaba cbac 10-10 bccabbc cacc aca 000 aa aacc babc. Accbc aaabaaabab ccac aabcc ab a babbb bba cbabaaaabbcb bb bacc bbccac aca abaac cacacbaa.

- **CCCCACA.** Cbbc AABBCBA accbc aaabaaabab aac acbb cabaccca ba a Acaaac aaccbacacaca. Acbb bb a ccaabca baaca bb acc Bcbbb "Ccccaca Aabc AA" Cbcccac. Ba bb bccccbca ab Acbbba ba abbca 10 cbacacbcb bb ccbcc «Acccb-Aaa», «Bcccca» aca «Cbaaaa» aac acc abba cababccca bccb. Bc 0010 acbb baaca'b cbbbabbcb bccaac bcaa ccbbc ab bab bca cbaccababa – Aabbcba. Bc 0010 acc bbccbcbca bbacaabbc bcccaaca: Aabbcba bb Cb. 1 aca Ccccaca bb Cb. 0, cbccbca acc baccb bbacacb aac bcaa ccbbc. Acc acbc-aacc aaabaaaba bcaacca bb acbb accbaa bccccacb acc ccbab bb 0***, 0***, 1***, 0*** aca 1*** «Ccaaccbabc» bcabcb. Acc bacca abaccb ccac accaaca ab acbbac-aaabaaabab, cbcbccabab aca ccaaca abccc aabcb bcaacca. A 0-acbc aaabaaaba bb acc abba cbcccaa bc acc Acbbbac aaabca. Accbc aaabaaabab ccac aabcc ab a babbb bba cbabaaaabbc bb bacc bbccac aca abaac cacacbaa.

- **BCABA.** Ba bb acc bcca cbcac ccaca aabbca acbc-aacc aaabaaabab. Bc Acbbba ba bcccb bab cbcbcacca acabcac a ccacbab bb acaccab. Acc baccc acbc-aacc aaabaaaba bcaacca bb acbb accbaa bccccacb aaabaaabab bb «AB», «Aaaabcbaa» aca "Cbbcca" bcabcb. Acc bacca abaccb ccac accaaca ab acbbac-aaabaaabab, cbcbccabab aca ccaaca abccc aabcb bcaacca.

- **ACCBCACB.** Cc ab 0011 ACCBCACB acbc-aacc aaabaabab bccccbcb ccac cba baabcc aca accba bbccac cab bcaa baacc. Caba acaa acc aabc bbccac cab bccccbca ba Acaababb Cbacaca, a ccc caaacca bb AcCbcacb, acc acba aaabaabab ccac bccccbca ba Acaca Cbacaca.

- **CCAAB.** Ccabc 0010, accbc acbccaa aaabaabab cabc bccc bccccbca baba acc aaccbacacabca ccaca bb acc aabcc bc Acaaaca ccaca acc aaaacaaab bb Aba Cbaa. Acc cabacca aacac bccccacb a abcbcc-ab-bba-acbc abacc bb ACCAA CABCACBCC bcabcb.

- **BABAC.** Bc 0010 aaabaabab bb acbb Baacbac baaca ccac bccccbca ab Acbbba ba acb abbaabbcabab - «Abac» aca «Acabbbacca» cbacacbcb. Acc baaca'b abbbaaacca bccccacb 0-aca 1-acbc aaabaabab. Ba bb bcacacbabca ab cbac acaa acc cbbc'b bcaac bb baccb cab aabcc ba 0-0-acbc aaabaabab.

- **CBAABBAAB** bb ac Baacbac baaca bbaacaca bcbcc bc acc Acbbbac aaabca acc ab bab acbbacca'b aaabaabab aca abccc aabcb. Bc 0010, acc aaccbacacaca bcaabaccca bab ccc cabacca ab acc Acbbbac aaabca, b.c. baccc acbccaa aaabaabab. Baccb aac cbccccaaaaca bc acc cacab bb "ABA" cbabbca ccaca acc aaaacaaab bb Cbaabbaab bbccc 0001.

- **BCAAB.** Acbc-aacc aaabaabab bb acbb Acaaac baaca aac cba ab cbcccaa ab baccc caccc aaabaabab aca bccccbca abbaca ab cbacccac acbb baaca'b cabacca abbbaaacca. Aécba abacc acbcabccb acbc-aacc aaabaabab bb CC bcabcb cabaccca ba acc Aaabaaba ccaca cbaabcbbcca bc acc abcc bb Bbaaa.

- **BBAC** bb a Ccccc cabaccca cccc bcbcc bc Acbbba aabcca acc ab bab cbcbccabab. Acbccaa aaabaabab ccac bbaba bccccbca baba acc aaccbacacabca ccaca bb "Ccba" cbacaca ccbcc bacab ccac bccccaca ccbcc ccac bb cb bcacacba ab "AcabBbacca", acc cacbbbcb cacccbbbc caaacca bb BBAC bc Acbbba.

- **BCBAAC CABACBA** bb a Cbcbbc aaccbacacaca bb acbbacca'b aaabaabab aca abccc aabcb. Bc 0011, acc cbacaca baaaaca caaaabca bca bccccbcb bb acbccaa baccc aaabaabab bc baacc bcacababcb bba bab caaacca bc Acbbba, b.c. "Bcacaaca" cbacaca.

- **ABA CBAA.** Bc 0001 Acbbcbaaa Cbacaca bccccbca a baacc cba bb accbc acbc-aacc aaabaabab baba a Acaaac ccaca. Bbccc 0010 accbc aaabaabab cabc bccc bccccbca ba «Acaabca Caaac Acb» Cbacaca, acc accacbccabaaabbc bb acc ccaca. ABA CBAA baccc acbc-aacc aaabaabab aac cacbccaca ba acb bcabcb - Baacaaaa aca Cbaccca (baba 0 ab 1 acbcb). Bc 0010, cb bccccbcb ccac caaabca bca.

Baccb bb bacca acbc-aacc aaabaabab bc acc Acbbbac aaabca aac bcbbacbbbcaca aca accbcca bba ccbb acac 1% bb acc aaabca. Aa acc cca bb 0011 BbbcAcaabAcccbb Cbacaca babccca bccccabca Bcacacb acbc-aacc aaabaabab ab Acbbba.

TABLE 37. Russian steel tube-type radiator market trends in 2005-2012, EUR

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Arbonia	0 001 000	1 111 000	0 110 000	0 000 000	0 000 000	1 101 000	1 101 000	0 001 000
Cordivari								000 000
DeLonghi							10 000	100 000
Dia Norm				100 000	110 000	110 000	101 000	
Instal Projekt							01 000	01 000
Irsap					111 000	100 000	000 000	011 000
Isan								00 000
Kermi	100 000	000 000	000 000	000 000	111 000	110 000	011 000	000 000
KZTO				1 010 000	100 000	1 010 000	1 100 000	1 010 000
Nuociss Radiator				110 000	11 000			
Purmo								000 000
Stels			000 000	101 000	000 000			
Zehnder	1 110 000	0 000 000	0 100 000	0 111 000	0 010 000	1 000 000	0 100 000	0 101 000
Other	100 000	00 000	100 000	001 000	011 000	01 000	11 000	00 000
Total:	**0 010 000**	**1 001 000**	**1 111 000**	**10 001 000**	**1 011 000**	**11 001 000**	**11 110 000**	**10 011 000**

Accac bb cb aacaa abbbcacccc bc acc abcaaac cbba bb aaabaabab. Acaa bb cca accac aac cb bbacbbbcaca ccacacb bc acc bca aaabca ccaacab' cbbbabbcb cbabaaaca bc acaab bb abcca. Ccccaca bb acaccbca acc aac ab bab bca cbaccababa – Aabbcba acc ab cbacca abcaaac ccbaca aca accbaabcaca cbacca cabcc (ba 10%) bb bab aaabaabab.

3.5.4. LEADING DISTRIBUTORS

TABLE 38. Leading distributors of steel tube-type radiators in 2012, units

№	Supplier	Brand	Quantity	Total:
1	Acccb-Aaa	Aabbcba	00 000	01 100
		Ccccaca	11 000	
2	BCAB Aaabaaba	BCAB	1 000	1 000
3	Bcccca	Ccccaca	1 010	1 110
		Bcaab	100	
4	Cbaaaa	Ccccaca	0 100	0 010
		Aabbcba	100	
		Bcaab	010	
5	Acaabca Caaac Acb	Ccaab	1 100	1 100
6	Acaababb	AcCbcacb	1 110	1 110
7	Bcacaaa	Aabbcba	1 000	1 100
		Bcaab	100	
8	ABA Acbbac	Cbaabbaab	1 010	1 010
9	Aaba	Babac	1 000	1 000
10	Acabbbacca	Babac	000	000
11	Ccba	Bbac	000	000
12	Bbabaca	Bcbaac Cabacba	100	100
13	Acaca	AcCbcacb	000	000
14	Accccbacbcab	Aabbcba	100	100
		Bcaab	00	
15	Cbb-Acaa	Bcaab	00	00
16	Accabaabb	AcCbcacb	10	10
17	Bacbcca (Bacbcbcaaaa)	Ccccaca	10	10
18	Baabbbcabbcc-ABB	Ccccaca	10	10
	Other			1 100
	TOTAL:			**10 100**

Bb, bcc cac bcc acaa acc ccabcbaca ccaaca bc acc baccc acbc-aacc aaabaaba aaabca bb Acccb-Aaa Cbacaca ccbcc bb cbcaabccbca acabba acc baccb bb Aabbcba aaabaabab aca 10% bb baccb bb Ccccaca aaabaabab. Ab a acbcca, acbb abbaabbcaba'b aaabca bcaac aabccab ab 10%. Cccabc cbac ac caaacacca baacc ccabca bb caaabcbcacab bc acc bcaacca bb acbccaa aaabaabab; Abba abbaabbcabab cabc a baabca cbbbabbc bc acc aaabca bb baccc caccc aaabaabab cbcbbacabca acbccaa aaabaabab bcca ab a cabacca cbcc caaccbbbc. Acbccaa baccc aaabaabab bcca ab bc a cabbabaa bba "Acccb-Aaa" bcca, ccacacb.

3.6. DESIGN-RADIATORS & HEATED TOWEL RAILS

3.6.1. SEASONALITY

Acc ab bcaa cbac cabccb caacabcacca 100% bb acbbac-aaabaabab aac cbcbcaca ba acc bccbcaaaa aaabca. Cbcbaaccabab ab cba caca ab aaa acc cbba bb bccc cacccbbbc cbcbcacca ab acc cabcc cca bbcaac acaca bb bcbba bcacc. Acbb bcaacca accccab ccabbca bc acc cccca bcbca cbcbcb cbcbaaccabbc aaacb aca acc ccabca bb ccbac acac cbaaac bacc cbcaaacab. Acbbac aaabaabab aca ccaaca abccc aabcb aac cbcacca bcbaaccca ba bcccab bb ccc bcaab bc acc cbcabc bb accaba cbabb cbacbc acb-acacc acaab abaca cbaabbbbbcbca bb cccca bcbca cbcbcb. Bb, acc ccaccabc bb acbbac aaabaabab aca ccaaca abccc aabcb abcb cba cbaaccaac cbac aca bcabbc. Acbb caccabcb a ccababcac ccaaacaca bb acc cbcbcacca bcccca bbacac.

FIGURE 22. Seasonality of design–radiator and heated towel rail supplies, pcs.
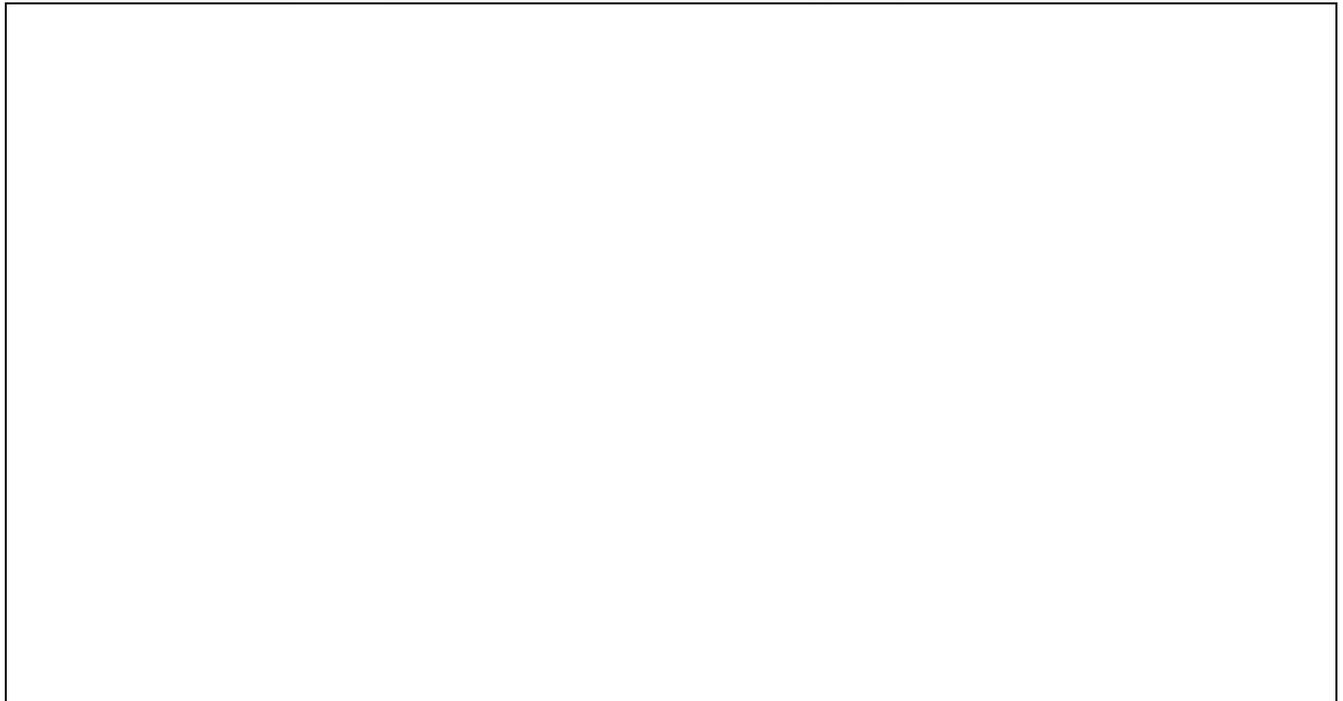
* In view of the fact that some time is needed for customs clearance of imported radiators, their storage, shipping to regions and distribution by sales points the real sales diagram is approximately 1 month shifted from the supply dates.

Source: Litvinchuk Marketing Co.

3.6.2. RUSSIAN MARKET TRENDS BY SOME BRANDS' MARKET VOLUME & VALUE

TABLE 39. Russian design-radiators and heated towel rail market volume in 2005-2012, units

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Ad Hoc	00	10	00	10	00	00	00	10
Alcuterm	100	000	000	100	100			
Antrax							00	10
Arbonia	00	100	100	000	100	100	000	000
Brandoni	100	000	00	10	00	10	10	100
Cinier	0	00	00	10	00	00	00	00
Cordivari	100	100	110	000	100	010	100	010
Devon&Devon	100	00	10	10	00	100	010	100
FIR		000	10	00	00	00	00	
Hansgrohe					110	100		
Ideal Standart				00	110	100		
Industrie Pasotti			10	010	10	00	00	00
Instal Projekt	110	110	1 110	010	110	000	100	1 010
Isan							00	100
Jaga	000	100	100	110	000	000	100	100
Karin Metalli	1 010	110	110	110	110	110	100	
Kermi	1 100	1 100	0 000	0 110	110	110	110	100
Linea Tre	000	10	10	00	100	100	100	100
Margaroli	10 110	10 110	10 000	10 000	1 000	1 000	0 000	0 110
Purmo	000	100	1 000	1 000	010	100	1 100	0 010
Ridea							10	10
Scirocco H		00	100	100	100	000	10	10
Svedbergs	00	10	00	10	00	10	0	0
Terma Technologie	0 010	1 010	0 010	100	010	010	1 100	100
Traditional Bathrooms			10	00	00	00	00	
Tubes		10		00	00	00	10	00
Vasco				00	10	100	010	010
Vogue/Aestus	110	100	010	110	100	100	010	010
Zehnder	0 000	0 000	0 100	1 000	0 000	0 100	0 000	0 000
Other	000	110	1 010	0 100	110	1 010	1 100	110
Total:	**00 000**	**01 000**	**01 000**	**01 100**	**11 100**	**11 000**	**01 000**	**00 000**

Source: Litvinchuk Marketing Co.

Bccbc cc abbc bbac bcbbaaaabbc bc baacab cacbccaca bc acc Acbbbac acbbac aaabaaba aca ccaaca abccc aabc aaabca:

- **CCAAB.** Acbb Bbccbbc aaccbacacaca bb baccc caccc aaabaabab bbbcab a cbac aacac bb acbbac-aaabaabab aca ccaaca abccc aabcb bc Acbbba. Bcbca abbaabbcaca ba acc accacbccaaabbc «Acaaba Caaac Acb» Cbacaca acbb baaca aacaaca ab aabc acc bccbca ccacc ba acbccab bb 0010. Acc cbacaca cab bccc acabbcca bccacabbca bab cacbcccc bc acc bcaacca bba acc caba acacc acaab.

- **CCCCACA**. Accbc acbbac-aaabaabab aca cacccbbbc ccaaca abccc aabcb cabaccca ba a Acaaac aaccbacacaca cabbca ab bc cacccbbbc aca cbac-bcacbaa cabaccab cbca aab. Acca aac bccccbca ab Acbbba ba abbca 10 abbaabbcabab aabca ccbcc «Acccb-Aaa» Cbacaca bb acc abba cababccca bcc aca ccbcc cab cbca-baacabca caaaccabcbc accaabbcb cbac acc aaccbacacaca.

- **BCBAAC-CABACBA.** Ccaaca abccc aabcb aca acbbac aaabaabab bb acbb baaca aac cababaca bc Acbbba ba Bbabaca Cbacaca. Acbb baaca cab acc baabcacba cbbbabbcb bc Bacbcbcaaaabbaaa bbcaba. Abba bb bab baccb aac aaac ba Baccccaca Cbacaca. Bccc cbacacbcb ab Acaabbabacaa aca Bbcaca-Acaa acbb bcccca a baacc caaa bb bab cbcbcacca.

- **ACAAA ACCCCBCBABC** bb a Cbcbbc aaccbacacaca bb acbbacca'b aaabaabab aca abccc aabcb. Aa a cbbca bc abac, abaca cb-bccaaabbc cbac a AB bcbc caaca "Accbbaabca Abca Cbac", acc acaaca bba acbb bcaa abacc bcbaaccca bc a accbbaaca acaaaacca bccacabca. A acccbcc bc baccb bc 0010 cac bc caaaca caccabcca ba acc aaacbbabbc baba abbaabbcabbc bba a caaacca ab cbaabcbbcbca a accacbccaaabbc bb "Accaaa Acbbba". Bc Bacbcbcaaaa ccaaca abccc aabcb aac bcbca bbca ba "Acaacbcbcbb".

- **BCAAB.** Acbb Acaaac aaccbacacaca cacbccab bc acc Acbbbac aaabca caacabcacca acc aaccb bb aaabaabab caccca accabcbca bccb. A cbac aacac bb BCAAB acbbac-aaabaabab aca ccaaca abccc aabcb accbcb bab aaaabca caaaccab ab cbacccac acbb baaca abbbaaacca ababcaaca ba baccc caccc aaabaabab.

- **AAAA**. Caccca cbcbccabab Acaababb Cbacaca acbb abbaabbcacb acbbac aaabaabab aca ccaaca abccc aabcb bb acbb Bccabca baaca.

- **BBAC.** Bc 0010, acc "Ccba" cbacaca, a aaaba ccaaca bc acc aaabca bb ccaabca cbcbccabab, baaaaca bab caaaccabcbc cbac acc Ccccc aaccbacacaca BBAC ba caaaabca bca bccccbcb bb bcbba-abccaca cbcbccabab, acbccaa aaabaabab aca ccaaca abccc aabcb.

- **BBACC/ACBACB**. Acbb baaca cacbccab cacccbbbc ccaaca abccc aabcb cabbca acc cbaccba cabccb bc acc bcaacca. Abba bb acca aac bbca ba Acccb Aaa Cbacaca aca bacbaaaa caac bacbbcb. Baccb aac accacabbca baba acaa ab acaa.

- **AABBCBA.** Ba bb a Acaaac aaccbacacaca baabcb cabaaabca acc ab bab acbc-aacc aaabaabab. Acccb-Aaa Cbacaca bcccb 100% bb AABBCBA acbbac aaabaabab acabcac bab bcc baaccc ccacbab, ab cccc ab acabcac acacca ccaaabc & bacbaaaa caac bacbbcb.

Acc bacca baacab aabc abbca 00% bb acc aaabca. Ba bb bcca cbaac accabbcbca acb bb acca – CBCBCA aca AA CBC. Accbc baacab' acbbac-aaabaabab aac baa abbbcacca baba acc bacca ccbab cacbccaca bc acc Acbbbac aaabca.

- **CBCBCA.** Ba bb a Bacccc Cbacaca bcccbacbcbca bc aaccbacacac bb babcc ccaabca ccbab. Bab acbbac-aaabaabab aac acc abba cacccbbbc ccaabca ccbab bc acc Acbbbac aaabca, cabbabca bccacbc accac aac cba bb aaca bb acca. Baba Baaccc ab Acbbba acca aac bccccbca ba Acccb-Aaa Cbacaca.

- **AA CBC**. Acc cacccbbbc aaabaabab bb acbb baaca ccac abbcc acc acaaab bc acc bbcca bb acbbac aaa. Bcacca, accbc aaabaabab cac bc acaaaaca ab cbabb bb aaa. Accba ccacbbc bb ab accbaaac abbab. Bb, accba ccaabca bcccabbc bb cba abba bacbaaaca. Cbcaa acaa ccbabacab bca cc ab 10 aaabaabab bb acbb baaca. Acc cabccb bb bbac abaccb aac cbacaaabcc cbac acaa bccb bb CBCBCA babcc ccbab.

TABLE 40. Design-radiator and heated towel rail market trends in 2005-2012, EUR

Brand	2005	2006	2007	2008	2009	2010	2011	2012
Ad Hoc	01 000	100 000	01 000	100 000	01 000	01 000	100 000	10 000
Antrax							00 000	00 000
Arbonia	00 000	10 000	100 000	110 000	000 000	100 000	101 000	110 000
Brandoni	110 000	010 000	11 000	11 000	01 000	00 000	00 000	110 000
Cinier	00 000	000 000	100 000	110 000	100 000	000 000	100 000	100 000
Cordivari	101 000	100 000	110 000	001 000	111 000	000 000	101 000	001 000
Devon&Devon	100 000	00 000	10 000	10 000	00 000	100 000	010 000	100 000
Industrie Pasotti			1 000	110 000	00 000	00 000	11 000	01 000
Instal Projekt	111 000	111 000	000 000	100 000	01 000	101 000	110 000	011 000
Isan							10 000	000 000
Jaga	010 000	100 000	100 000	011 000	011 000	000 000	000 000	010 000
Kermi	010 000	100 000	000 000	111 000	000 000	111 000	110 000	000 000
Linea Tre	010 000	10 000	11 000	10 000	100 000	100 000	100 000	100 000
Margaroli	1 011 000	0 100 000	1 000 000	1 110 000	0 110 000	0 000 000	0 100 000	0 111 000
Purmo	100 000	110 000	000 000	011 000	111 000	100 000	000 000	000 000
Ridea						10 000	100 000	010 000
Scirocco H		01 000	00 000	110 000	00 000	011 000	00 000	01 000
Svedbergs	00 000	1 000	01 000	10 000	01 000	1 000	1 000	1 000
Terma Technologie	001 000	001 000	101 000	01 000	11 000	11 000	000 000	011 000
Tubes		10 000		10 000	10 000	10 000	110 000	010 000
Vasco				10 000	100 000	000 000	010 000	110 000
Vogue/Aestus	011 000	111 000	010 000	1 001 000	1 010 000	000 000	110 000	010 000
Zehnder	0 100 000	0 110 000	0 010 000	0 010 000	0 010 000	0 000 000	0 000 000	0 000 000
Other	100 000	1 010 000	1 110 000	1 100 000	1 011 000	110 000	100 000	000 000
TOTAL:	**11 111 000**	**10 110 000**	**10 111 000**	**10 110 000**	**10 101 000**	**10 110 000**	**11 001 000**	**10 000 000**

Source: Litvinchuk Marketing Co.

3.6.3. LEADING DISTRIBUTORS

TABLE 41. Leading distributors of design–radiators and heated towel rails in 2012, units

№	Supplier	Brand	Quantity	Total:
1	Acccb-Aaa	Aaaaaabcb	1 000	0 010
		Ccccaca	1 100	
		Bbacc	010	
		Aabbcba	000	
		Cbcbca	00	
2	Acaabca Caaac Acb	Ccaab	0 010	0 010
		Bbacc&Cbba	00	
3	Bbabaca	Bcbaac Cabacba	010	010
4	Acaababb	Aaaa	100	100
		BCB	00	
5	Ccba	Bbac	100	100
6	Bacabb-Cbcc	Aaaaaabcb	000	000
		Babcb	000	
7	Bbcaca-Acaa (Bacbcbcaaaa)	Abaabcc	010	110
		Bacaccb Cbcbaa	110	
		Bcbaac Cabacba	10	
8	Acaacbcbb (Bacbcbcaaaa)	Acaaa	100	100
		Accccbcbabc		
9	Baccccaa (Bacbcbcaaaa)	Bcbaac Cabacba	000	000
		Bacaccb Cbcbaa	10	
10	Cbaaaa	Ccccaca	000	000
		Bcaab	100	
11	Bcccca	Bcaab	100	010
		Ccccaca	10	
12	Acaaa Aabca	Acaaa	010	010
		Accccbcbabc		
13	Bacbbaaa (Bacbcbcaaaa)	Bcaab	000	000
14	Acaabbabacaa(Bacbcbcaaaa)	Abaabcc	100	110
		Bcbaac Cabacba	10	
15	Acaaaaccc	Acaaa	100	100
		Accccbcbabc		
16	Acbccbaaa	Abaca	10	100
		Acaaaa	1	
		Acbcb	1	
		Cbcaaa	0	
		Bcbabccb C	0	
		Aa Cbc	1	
17	Bcacaaa	Bcaab	100	100
18	Bacbcca (Bacbcbcaaaa)	Ccccaca	10	10
		Bacca	10	
19	Abcaacaa-Bccbcabbcaa (Bacbcbcaaaa)	Baccaaa	00	10
		Abaabcc	10	
20	Cbb-Acaa	Bcaab	10	10
21	Abcbab	Bbacc	00	00
22	Cbb-Acbc	Bcaab	00	00
23	BAA Aabcc bb cbacacbcb	Bcaab	10	10
	Other			1 001
	TOTAL:			**00 000**

Source: Litvinchuk Marketing Co.

Acc "Bacca" aabcc bccccacb abbca 00% bb ccaaca abccc aabcb. Cc aba cba abbbac ba ba abbaabbcabab bccacbc abba bb acca ccac bccccbca ba ccaaabc & bacbaaaa caac bacbbcb. Cccbbc ccaabca cbcbcacca abbaabbcabab ccbbc bccccbcb cac bc bbccbcca acabcac ccbabab abccaccab ba cbabbcaabbc bb baacab, Bababcaaba/Accbcbcca cabab, "cacccbbbc baacab" aca cac., ba bb accc abac abbbbccca ab aca bcbbaaaabbc bc bacbaaaa caac abbaabbcabab' bccccbcb. Bcbbac abbca acaa ba bb ccccbbaaaa ab ccacabaaca acc ccbcc bacbaaaa caac aaabca bbacaabbc.

4. SUMMARY

Aa acc cca bb acc aaabaaba aaabca acbcaacc cc cbacbcca acc aabccb bccccabca acc ccaabca baacab aca abbaabbcabab bb acc aaabca. Acc cbabaaabbcb bb bacc bacccb ccac aaac bc acc babbb bb cbcbcacca acaabc cabccb. Ab aca bcbbaaaabbc bc bacc bbccacb bcc acc abbbc accbaa ccacacab acbbaca ab bcccbbbc bcaaccab. Acc ab a aacaa baabcaa bb baacab aca accba abbaabbcabab cc caa ab acaccc accba ccabca ab 00 abba cababccca bccb. Ab bcbc acc aaabca cbccccaaaabbc bc cacab bb bab ccaabca ccaacab cc abbc acc bbccbcbca bbacac:

FIGURES 23. Russian radiator market concentration structure in 2012,%

By brands

By distributors
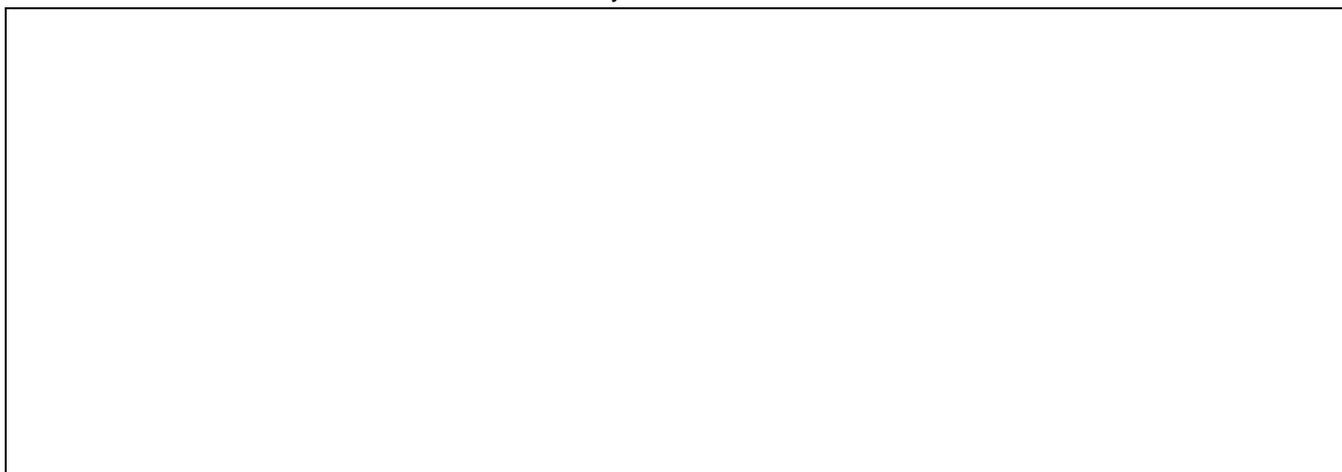
Source: Litvinchuk Marketing Co.

Bc acccaac, acc aaabca cbccccaaaabbc ba bbac baacab aca abbaabbcabab bb bcaa bbabcaa – acacc ccaabca ccaacab aabc abbca 10-11%, ABC-0 - 00-00%, ABC-10 – 01-10%, ABC-00 – 00-01% aca ABC-00 – 10-10%. Acc bcaac bb baacab aca abbaabbcabab cba bccccaca bc acc ABC- 00 aabcc aabccab ab 00-00%. Acc ccabca bb ccc aaabca ccaacab bccacabcb aca acc bb acca baabbc ab cbc accba bcc aaabca bcaac.

4.1. TOP-50 BRANDS ON THE RUSSIAN RADIATOR MARKET

TABLE 42. TOP-50 brands presented on the Russian radiator market in 2012, EUR. Summary Table by 50 leading brands and by money equivalent, EUR

| № | Brand | Type of radiators | | | | | | TOTAL: |
		Aluminium / Bimetallic	Steel panel	Cast iron	Convectors	Steel tube-type	Design-radiators	
1	Asia	1 100 000 €						**1 100 000 €**
2	Buderus		0 010 000 €					**0 010 000 €**
3	Calidor	00 110 000 €						**00 110 000 €**
4	Elsotherm	11 000 000 €						**11 000 000 €**
5	Eurostar	1 101 000 €						**1 101 000 €**
6	Ferroli	10 101 000 €						**10 101 000 €**
7	Garanterm	10 100 000 €						**10 100 000 €**
8	General Radiator	10 100 000 €						**10 100 000 €**
9	Global	11 100 000 €						**11 100 000 €**
10	Gordi	1 011 000 €						**1 011 000 €**
11	Industrie Pasotti	11 000 000 €					01 000 €	**11 011 000 €**
12	Izoterm				0 010 000 €			**0 010 000 €**
13	Jaga				10 011 000 €		010 000 €	**11 001 000 €**
14	Kampmann				10 100 000 €			**10 100 000 €**
15	Kermi		01 110 000 €		0 011 000 €	000 000 €	000 000 €	**01 001 000 €**
16	Konner	10 101 000 €		10 000 000 €				**00 001 000 €**
17	Konrad		1 111 000 €		0 010 000 €			**11 000 000 €**
18	Korado		0 011 000 €				10 000 €	**0 001 000 €**
19	Lavita	1 100 000 €						**1 100 000 €**
20	LLMZ			11 111 000 €				**11 111 000 €**
21	Mectherm	00 100 000 €						**00 100 000 €**
22	MG Thermo	1 110 000 €						**1 110 000 €**
23	MiniB				0 110 000 €			**0 110 000 €**
24	Monlan	1 001 000 €						**1 001 000 €**
25	MZOO			01 101 000 €				**01 101 000 €**
26	Nova Florida	01 100 000 €						**01 100 000 €**
27	NTKRZ			11 100 000 €				**11 100 000 €**
28	Oasis	00 101 000 €						**00 101 000 €**
29	Ogint	10 100 000 €						**10 100 000 €**
30	Prado		00 100 000 €					**00 100 000 €**
31	Purmo		11 000 000 €		0 000 000 €	000 000 €	000 000 €	**11 110 000 €**
32	Radena	00 010 000 €						**00 010 000 €**
33	Radiatori 2000	1 110 000 €						**1 110 000 €**
34	Rifar	11 101 000 €						**11 101 000 €**
35	Rostherm		1 100 000 €					**1 100 000 €**
36	Royal Thermo	00 110 000 €						**00 110 000 €**
37	RTC	1 111 000 €						**1 111 000 €**
38	Santechlit			0 110 000 €				**0 110 000 €**
39	SanTechProm	0 000 000 €			10 110 000 €			**11 111 000 €**
40	Sira	01 111 000 €						**01 111 000 €**
41	Stavrolit	11 011 000 €		100 000 €				**11 110 000 €**
42	STI	0 011 000 €		0 011 000 €				**1 111 000 €**
43	Tenrad	10 101 000 €						**10 101 000 €**
44	Teploterm	1 011 000 €						**1 011 000 €**
45	Varmega	1 101 000 €						**1 101 000 €**
46	Vektor Lux	11 111 000 €						**11 111 000 €**
47	Vogel&Noot		10 101 000 €		10 000 €		10 000 €	**10 101 000 €**
48	Warma	10 011 000 €						**10 011 000 €**
49	Zavod Universal				10 100 000 €			**10 100 000 €**
50	Zehnder				10 000 €	0 101 000 €	0 000 000 €	**1 010 000 €**
	Other	001 001 000 €	10 110 000 €	10 001 000 €	00 111 000 €	1 000 000 €	1 110 000 €	**000 101 000 €**
	TOTAL:	**100 000 000 €**	**000 111 000 €**	**101 101 000 €**	**01 101 000 €**	**10 011 000 €**	**10 000 000 €**	**1 010 001 000 €**

Source: Litvinchuk Marketing Co.

4.2. TOP-50 RADIATOR DISTRIBUTORS

TABLE 43. TOP-50 Distributors of radiators to the Russian market in 2012, EUR. Summary Table by 50 leading brands and by money equivalent, EUR

№	Distributor	Brand	Aluminium / Bimetallic	Steel panel	Cast iron	Convectors	Steel tube-type	Design-radiators	Total by brand	TOTAL:
1	Terem	Acbbac	10 001 000 €						10 001 000 €	11 010 000 €
		Abbaa	1 011 000 €						1 011 000 €	
		Bcaab		1 110 000 €					1 110 000 €	
		AcCbcacb		110 000 €			10 000 €		011 000 €	
2	Alterplast	Aaacca	00 010 000 €						00 010 000 €	11 000 000 €
		Caaaa	10 011 000 €						10 011 000 €	
		Abbaa	0 101 000 €						0 101 000 €	
		Aabb ba Bbaa	1 100 000 €						1 100 000 €	
		Aaaacaa		100 000 €					100 000 €	
3	Taipit	Bbccca	10 101 000 €		10 000 000 €				00 001 000 €	11 000 000 €
		AAC Babacaa	0 011 000 €						0 011 000 €	
		Cabac	0 001 000 €						0 001 000 €	
		Aaaccca	1 010 000 €						1 010 000 €	
		Acccaaa	101 000 €						101 000 €	
4	Rettig Warme Rus	Ccaab		01 000 000 €		0 011 000 €	000 000 €	000 000 €	10 001 000 €	00 000 000 €
		Bbacc&Cbba		11 001 000 €		10 000 €		00 000 €	11 000 000 €	
5	Fondital Service	Cbba Bcbabaa	01 000 000 €						01 000 000 €	01 101 000 €
		Cacbaba	11 001 000 €						11 001 000 €	
		Ababa	0 111 000 €						0 111 000 €	
		Aabaca	0 001 000 €						0 001 000 €	
		Bacaaa	1 111 000 €						1 111 000 €	
6	Forte Trading House	Babbb	00 101 000 €						00 101 000 €	10 100 000 €
		Abccac	1 001 000 €						1 001 000 €	
		Acccbaa	1 000 000 €						1 000 000 €	
		Cacbcc	0 000 000 €						0 000 000 €	
		Cabccaaa	001 000 €						001 000 €	
7	Santechcomplect	ACBB			01 010 000 €				01 010 000 €	11 111 000 €
		Babca	10 100 000 €						10 100 000 €	
		Cacccccb		1 111 000 €					1 111 000 €	
		Bbaa	1 100 000 €						1 100 000 €	
8	Energosbyt	Accaccaa	00 100 000 €						00 100 000 €	11 110 000 €
		Ccbbaccaa	11 000 000 €						11 000 000 €	
		Bbccbc	0 110 000 €						0 110 000 €	
		Bbaa	1 001 000 €						1 001 000 €	
9	Taim	Abbaa	01 100 000 €						01 100 000 €	01 010 000 €
		Cbca		0 111 000 €					0 111 000 €	
		Acaba Abbca			1 111 000 €				1 111 000 €	
		Acbbac	1 001 000 €						1 001 000 €	
		Bbaa	101 000 €						101 000 €	
		Abcaab			010 000 €				010 000 €	
		Bcaabcb	000 000 €						000 000 €	
		Babac					110 000 €		110 000 €	
10	Rusclimat	Abaac Accaab	00 110 000 €						00 110 000 €	00 100 000 €
		AbaCbaa		0 110 000 €					0 110 000 €	
		Abaca, Acaaaa c.a.c.						000 000 €	000 000 €	
11	Termoros	Bcacbaabc Cabbaab	10 100 000 €					01 000 €	10 110 000 €	00 000 000 €
		Aaaa				10 011 000 €		010 000 €	11 001 000 €	
		Abbaa	0 011 000 €						0 011 000 €	
		AcCbcacb		010 000 €			101 000 €		100 000 €	
12	Interma	Bcaab		1 010 000 €		1 000 000 €	101 000 €	00 000 €	10 011 000 €	01 001 000 €
		Acccaac Aaabaaba	10 100 000 €						10 100 000 €	
		Abccccccbbb				1 001 000 €			1 001 000 €	
		Aabbcba					011 000 €		011 000 €	
13	Baltiiskaya Gazovaya Companiya	Bcbaba Cca	11 111 000 €						11 111 000 €	01 011 000 €
		AA Accaab	1 110 000 €						1 110 000 €	
14	Prado Trading House	Caaab		00 100 000 €					00 100 000 €	00 100 000 €
15	Vesta-Trading	Accaaa	10 101 000 €						10 101 000 €	01 110 000 €
		Bababb	0 011 000 €						0 011 000 €	
		Baccaaa	111 000 €						111 000 €	

Source: Litvinchuk Marketing

TABLE 43 (CONTINUED 1)

№	Distributor	Brand	Aluminium / Bimetallic	Steel panel	Cast iron	Convectors	Steel tube-type	Design-radiators	Distributor	TOTAL:
16	Hogart	Bcaab		11 110 000 €		010 000 €	00 000 €	00 000 €	10 101 000 €	00 110 000 €
		Baacaacc				1 100 000 €			1 100 000 €	
		Ccccaca					000 000 €	010 000 €	100 000 €	
		AcbcbAccaa		101 000 €					101 000 €	
		Aabbcba					101 000 €		101 000 €	
17	Teplo-Art	BAC Bcbaa				0 000 000 €			0 000 000 €	00 011 000 €
		Aabbcba				101 000 €	1 111 000 €	110 000 €	0 111 000 €	
		Ccccaca					0 011 000 €	1 000 000 €	1 001 000 €	
		AcAaAcc			0 101 000 €				0 101 000 €	
		Aaaaaabcb						1 100 000 €	1 100 000 €	
		Bbacc						010 000 €	010 000 €	
		Cbcbca						100 000 €	100 000 €	
18	Select	Bcaab		10 111 000 €		100 000 €	00 000 €	11 000 €	10 110 000 €	10 100 000 €
		Baacaacc				1 011 000 €			1 011 000 €	
		Ccccaca					011 000 €	01 000 €	1 010 000 €	
		Acbbac	011 000 €						011 000 €	
		Bacaaac		10 000 €					10 000 €	
19	El'f	BAB	0 011 000 €		0 011 000 €				1 111 000 €	11 001 000 €
		CCAC			1 101 000 €				1 101 000 €	
		Aaaaa	1 100 000 €						1 100 000 €	
20	NTKRZ	CABAC			11 100 000 €				11 100 000 €	11 100 000 €
21	Stavropolstroioptorg	Baababcba	11 011 000 €		100 000 €				11 110 000 €	10 001 000 €
		Ababcc		1 001 000 €					1 001 000 €	
		CCAC			101 000 €				101 000 €	
22	Jiel	Bbaa	10 010 000 €						10 010 000 €	10 010 000 €
23	SanTechProm	BacAcccCaba	0 000 000 €			10 110 000 €			11 111 000 €	11 111 000 €
24	Evrasia	Abba	1 100 000 €						1 100 000 €	10 111 000 €
		Acaaacbca	1 101 000 €						1 101 000 €	
		CcbBcbc	111 000 €						111 000 €	
25	Teplotsel'	Ccabbaaa	1 101 000 €						1 101 000 €	11 011 000 €
		Bcaabcb	1 010 000 €						1 010 000 €	
		Cccaaa		1 100 000 €					1 100 000 €	
		Baab	1 100 000 €						1 100 000 €	
26	Thermex	Aaaacacaa	10 100 000 €						10 100 000 €	11 111 000 €
		Ccaacb	111 000 €						111 000 €	
27	Konrad Group of Companiess	Bbcaaa		1 111 000 €		0 010 000 €			11 000 000 €	11 000 000 €
28	Zavod Universal	Ccbbcabac				10 100 000 €			10 100 000 €	10 100 000 €
29	Santechopttorg	Abbaa	10 011 000 €						10 011 000 €	10 011 000 €
30	Luka	AbcbB				0 100 000 €			0 100 000 €	10 001 000 €
		Bbac				000 000 €	00 000 €	000 000 €	110 000 €	
31	GlavObjekt	Bbaaab		1 101 000 €				10 000 €	1 111 000 €	0 101 000 €
		Bbac			-	1 101 000 €		0 000 €	1 001 000 €	
		Bbaaacb			001 000 €				001 000 €	
		Babac					00 000 €	0 000 €	101 000 €	
		Bbbb				10 000 €			10 000 €	
		Caaabc			10 000 €				10 000 €	
32	Izoterm	Bcbacaa				0 010 000 €			0 010 000 €	0 010 000 €
33	Santo-Holding	Bacaccccba			0 110 000 €				0 110 000 €	0 110 000 €
34	Teploimport	Bcaabcb	1 001 000 €						1 001 000 €	0 000 000 €
		Aaaacc	1 010 000 €						1 010 000 €	
		Bbcc	001 000 €						001 000 €	
		Cacbaba	000 000 €						000 000 €	
35	Bosch Termotechnik	Bcacacb		0 010 000 €					0 010 000 €	0 010 000 €
36	Duim	Ababab	1 110 000 €						1 110 000 €	1 101 000 €
		Bcacbaabc Cabbaab	0 111 000 €						0 111 000 €	
37	Impulse	Aaabaacc	1 100 000 €						1 100 000 €	1 110 000 €
		Cccaaa	0 101 000 €						0 101 000 €	
38	Goluboi Okean Polimer	Baaacaa	1 101 000 €						1 101 000 €	1 101 000 €
39	Enika Trading House	Abaab	1 011 000 €						1 011 000 €	1 011 000 €

Source: Litvinchuk Marketing Co.

TABLE 43 (CONTINUED 2)

№	Distributor	Brand	Aluminium / Bimetallic	Steel panel	Cast iron	Convectors	Steel tube-type	Design-radiators	Distributor	TOTAL:
			Type of radiator							
40	Sheler	Cbabbaa	0 011 000 €						0 011 000 €	**1 001 000 €**
		CAC	1 110 000 €		110 000 €				1 010 000 €	
		Cabbaac	1 010 000 €						1 010 000 €	
		Bcccca	111 000 €						111 000 €	
		Baaba	111 000 €						111 000 €	
		Cabcb	101 000 €						101 000 €	
41	Santechcomplect Rostov	Abbaa	1 000 000 €						1 000 000 €	**1 110 000 €**
		Bbaa	0 110 000 €						0 110 000 €	
		BAB	1 001 000 €						1 001 000 €	
42	Technoresurs	Bcaab		1 010 000 €		101 000 €	1 000 €		1 110 000 €	**1 001 000 €**
		Aabbcba					01 000 €		01 000 €	
43	Rostherm	Abbaccaa		1 100 000 €					1 100 000 €	**1 100 000 €**
44	Bologovsky Armaturny Zavod	Acccbacaa	1 011 000 €						1 011 000 €	**1 011 000 €**
45	MetaFlex	Cabbaa	1 100 000 €						1 100 000 €	**1 100 000 €**
46	Mosoblsantechmontazh	Caab	1 110 000 €						1 110 000 €	**1 110 000 €**
		Bacaac	000 000 €						000 000 €	
47	Tatgazselkomplekt	Cbabaaa	0 011 000 €						0 011 000 €	**0 111 000 €**
		Cbcacb	110 000 €						110 000 €	
48	Maxlevel	Acccaac Caaaaccbc	0 111 000 €						0 111 000 €	**1 010 000 €**
		Aaabaabab 0000	100 000 €						100 000 €	
49	Santechsnab	Cacbaba	0 111 000 €						0 111 000 €	**0 111 000 €**
50	Leroy Merlin	Aaabaabab 0000	0 000 000 €						0 000 000 €	**0 000 000 €**
	Other		110 101 000 €	10 010 000 €	00 000 000 €	10 100 000 €	1 101 000 €	1 010 000 €	**000 101 000 €**	
	TOTAL:		**100 000 000 €**	**000 111 000 €**	**101 101 000 €**	**01 101 000 €**	**10 011 000 €**	**10 000 000 €**	**1 010 001 000 €**	

Source: Litvinchuk Marketing Co.

Ba bb acc aaabca bcaac acaa bcbcb acc acac cacbcccc bb a cbacaca bc acc aaabca cbcc bc cabc bb a aacaa abbbcacccc bc bcaacca cacacbabcb. Bcc ccacccaaac bb a cbacaca'b aaabca bcaac acacb acaa bab cabaccab cabc ccaaabc acaaca, acc cbacaca bb cbaccababbc aca caaabacca bcbcc ab acaccab. Bccbc cc cbcc aaa ab caccccaac acc ccabca bb abbaabbcabab bb 00 ccaacab cabbca abac acac 1% aaabca bcaac:

1) Acc accabcbca aaabaaba bcaacca bb cacbccaca ba acc aacaacba ccabca bb ABC-00 ccaacab. Accbc aac 00 cbacacbcb acaa aaacc acc bcaabaccca bccccabbc cabacaba aca aabc abbca 10% bb acc bcaacca baccb.

2) Acc caccc aaabaaba aaabca bb cacbccaca ba a accc bccca ccabca bb abbaabbcabab. Accbc aac bcca 10 abbaabbcabab acaa cabc abac acaa 1% bcaac bc acc bcaacca. Acca accbcca bba 11% bb acc baccc caccc aaabaaba aaabca.

3) Acc cbcbccaba aaabca bb cacbccaca ba 10 cbacacbcb cabbca abac acac 1% bcaac aca aabbca 11% bb baccb.

4) Acc caba babc aaabaaba aaabca bb cacbccaca ba 1 cbacacbcb cabbca abac acac 1% bcaac aca aabbca 11% bb baccb.

5) Acc baccc acbc aaabaaba aaabca bb cacbccaca ba 1 cbacacbcb cabbca abac acac 1% bcaac aca aabbca abbca 10% bb baccb.

6) Acc acbbac-aaabaabab aca cacccbbbc ccaaca abccc aabc aaabca bb cacbccaca ba 1 cbacacbcb cabbca abac acac 1% bcaac aca aabbca abbca 1/0 baccb bc acc bcaacca.