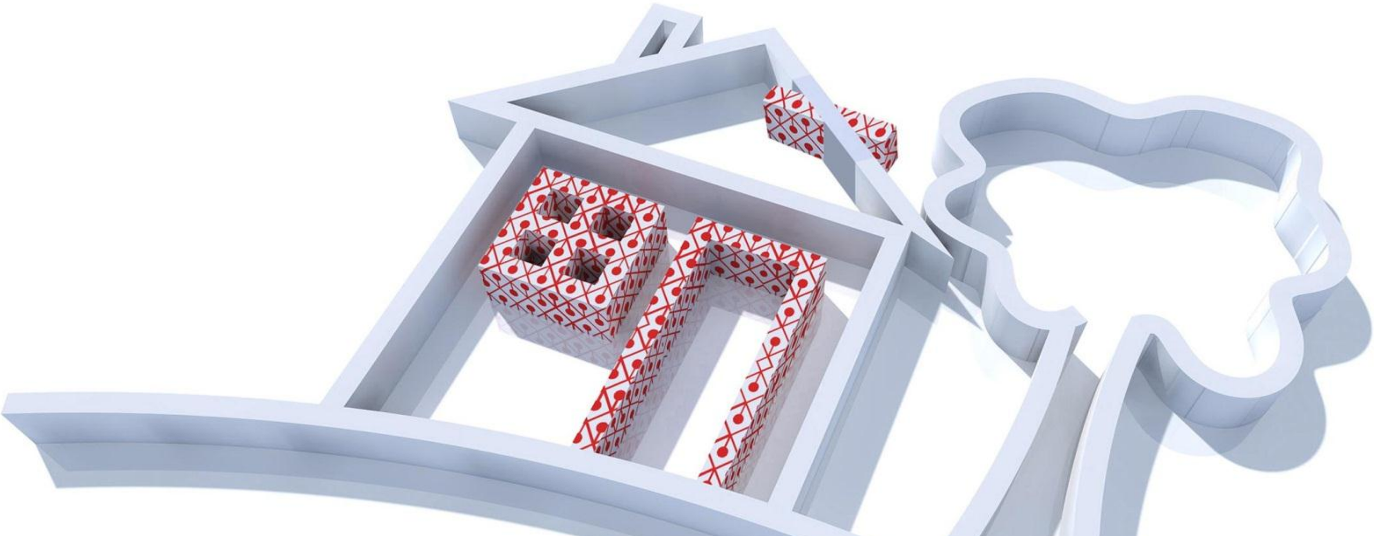
Polska

DOORS & WINDOWS



We open the world to you

Polish Windows and Doors Industry Catalogue

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Introduction

The presented report titled *Polish Windows and Doors Industry Catalogue,* is one of the activities undertaken within the framework of the Industry Promotion Programme relating to Joinery

Industry Promotion Programmes are the projects of the Ministry of Economy supported by the European Union. One of the fifteen industries distinguished by the Ministry of Economy is joinery, presented in this catalogue.

In the first part of this document you will be able to learn about the general economic situation in Poland. The most important macroeconomic indicators will be discussed and analyzed. The next chapter of the directory describes the joinery industry, i.e. the volume of production of windows and doors in Poland, the market structure of joinery as well as the value and destinations of exports. The final third part of the report is devoted to the companies that are involved in the project.

The aim of the Industry Promotion Programme is to familiarize domestic and foreign companies with high quality services of the Polish joinery (windows and doors) sector, with the particular attention paid to the production of professional joinery elements in Poland.

The objectives of the project have been gathered in two components. The first one, called Component A, includes all the activities in which the accessing entities can participate. These include national and international trade fairs and exhibition events, economic missions and trainings.

Component B includes all events aiming at promoting Polish joinery. These include, among other things, study visits of journalists, industry seminars on foreign markets and, for example, information stands at trade fairs abroad.

The activities under the two components were entrusted by the Ministry of Economy to the consortium Polish Doors and Windows (Polskie Drzwi i Okna), consisting of three active entities: Eltar (the consortium leader), the Union of Polish Windows and Doors (Związek Polskie Okna i Drzwi) and ASM - Centre for Research and Market Analysis Sp. z o.o. (ASM - Centrum Badań i Analiz Rynku Sp. z o.o.)

We trust that the *Polish Windows and Doors Industry Catalogue* will be an interesting reading for you. We also believe that its content will provide you with comprehensive information on the Polish windows and doors industry.

I. Macroeconomic situation of Poland

1. The basic determinants of development of windows and doors market.

The situation on the Polish window joinery market depends on many factors including general economic conditions, therefore, at the beginning, it is necessary to conduct a thorough analysis of the major determinants of its development. The main indicator is the current and projected changes in GDP, which directly influence the income of the population, the investing capabilities of business: manufacturing and trading companies, which in turn translates into purchases of building materials, namely for renovation, modernization and expansion as well as new investments. Speaking of the sale of joinery, it can be assumed that it is directly dependent on private demand, on the developers' investments as well as public procurement and export, which seems to be an opportunity for the development of window frames manufacturers operating in Poland in the coming years.

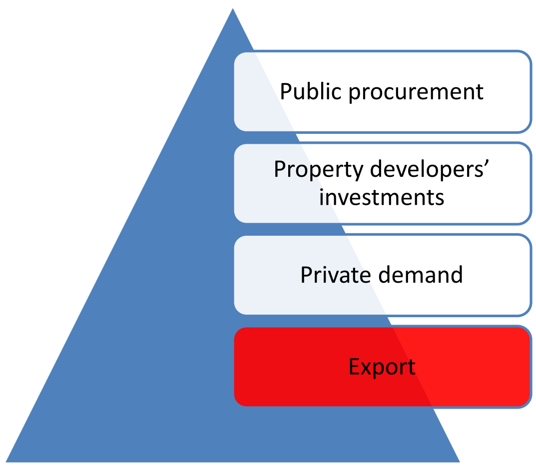
The group of private investors include those who build their houses, renovate or modernize their flats. Much greater potential is generated by the second of these groups, that is, those who renovate, because it is estimated that about 58% of the total demand in Poland is the determined by the replacement of windows (on the assumption that 30% of window joinery is exported), while 12% of all windows manufactured in Poland goes to new buildings. An average investor purchases windows and doors twice in a lifetime, therefore such customer is one of the most demanding customers in terms of quality of products supplied.

Another group, which directly affects the window and door market are property developers, i.e. companies involved in the construction and sale of houses and flats. The developers are involved in the construction of non-residential buildings on a smaller scale (shopping malls, offices, hotels, warehouses, etc.). In this case, the strategy of the property developer shall be determined by the choice of the type of doors and windows. For example, more expensive apartments equipped with doors with increased resistance to burglary and insulating windows are sold by the developers, whose target group are customers of higher economic status.

Public orders seem to be most specific, as window and door frames ordered to satisfy such needs must perform public functions under certain functional and operational standards. In this case, the choice of windows and doors depends on the budget of public institution. Replacing doors and windows in such entities often depends on the government's financial support.

The last variable that affects demand for doors and windows is export. Putting together the opinions of people in the construction industry who are directly related to the window and door industry, we conclude that in their unanimous opinion, this is the most competitive and perspective industry of the Polish economy. Optimistic prospects depend, *inter alia*, on the fact that there is an ongoing trend for replacing windows and doors with tighter ones in Europe. It should also be noted that the brand and reputation of high quality Polish windows is getting stronger, which has a positive effect on export plans of Polish manufacturers of doors and windows.

Determinants of the growth of joinery sector



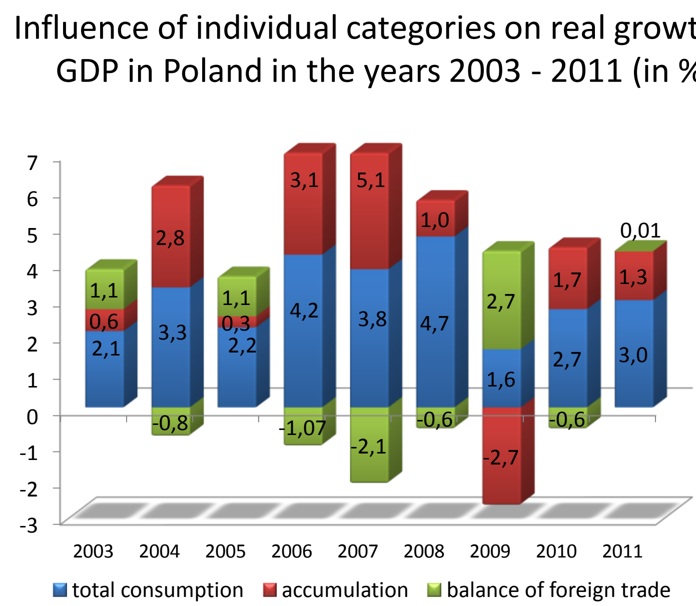
Source: ASM study

Fig.1

2. Macroeconomic situation of Poland

The situation in the joinery is a derivative of the condition of the construction industry and the whole economy. In order to assess the development prospects of joinery sector it is necessary to assess the economic situation and macroeconomic factors significant to its growth.

The period between 2010-2011 was a period of gradual recovery of the Polish economic potential after the slowdown in 2009. During this period, the results of the Polish economy were very good compared to other EU countries, placing Poland among European leaders. In 2011 Poland's gross domestic product grew by 4.3% and was the result of growth in investments by 8.7% and private consumption by 3.1%. The main driver of growth was domestic demand. The continued strong revival of foreign trade must also be noticed, the contribution of net exports was + 0.7 percentage point. According to the preliminary estimates of the Central Statistical Office in Poland, the GDP growth in the first quarter of 2012 amounted to 3.5%, being one of the highest in Europe.



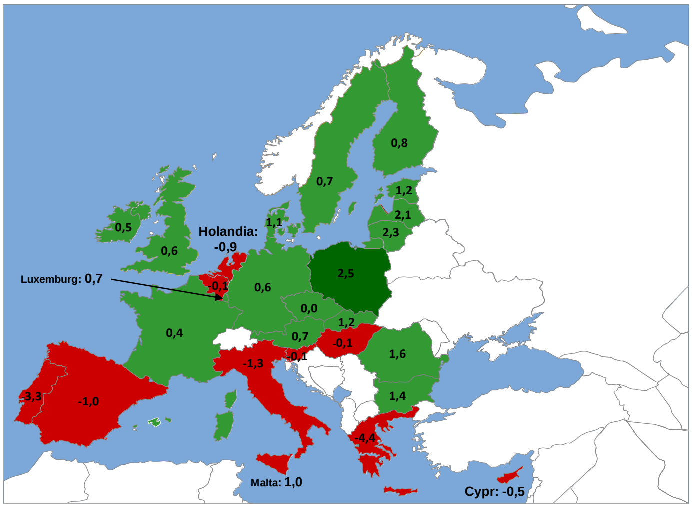
Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 2

Estimating the Poland's export potential we should also analyze the condition of individual economies in the coming years. According to the forecasts of GDP prepared by the European Commission, Poland is supposed to record the best economic growth (2.5% y/y) throughout 2012 compared to all 28 EU states. Comparing the forecasts of the end of 2011, with this year's predictions it can be seen that only three countries have not experienced a downward in GDP. The European Commission decided to keep the Poland's projected economic growth in 2012 at the same level of 2.5% and 0.6% in the UK, while raised Slovakia's GDP forecast to 1.2% - from the last year estimates of 1.1%. In other cases, it was decided to reduce the current forecast. Moderate recession as predicted by analysts and a slight increase in the second half of the year indicate that the GDP in the European Union in 2012 should be the same as in the preceding year.

European Commission forecasts for the EU in 2012 -
GDP (%, y / y)

EU: 0,0
Euro zone: -0,3



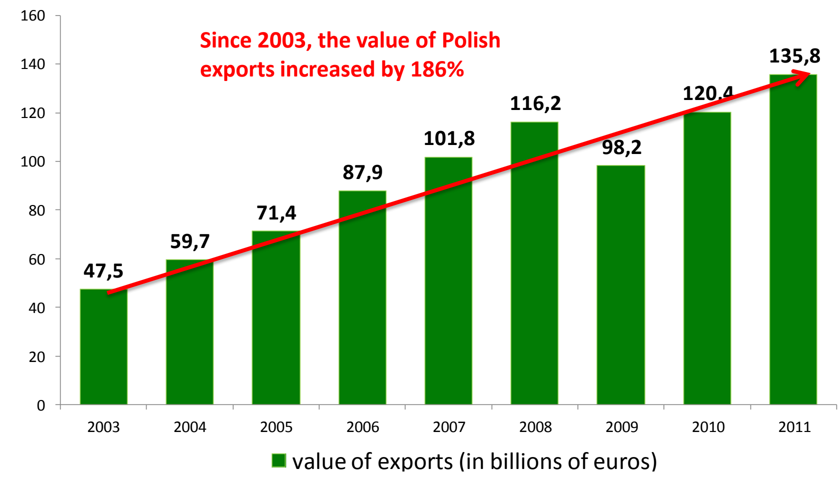
Source: European Economic Forecast – February 2012.

Fig. 3

3. Export

Export is definitely one of the most important factors that may have a significant impact on the future of the Polish economy. Considering the time horizon since 2003 it can be seen that, apart from a period of economic crisis, which in 2009 negatively influenced the export data, value of the goods exported by Polish entities is characterized by a clear upward trend. In 2011, exports amounted to EUR 135.8 billion, reflecting an increase by 12.8% (i.e. by approximately EUR 15.4 billion) comparing to previous year. The relatively high growth of exports in 2011 was primarily the result of high growth in exports to developing countries and less developed countries. While the growth rate of exports to the euro zone was only 9.3%, i.e. 3.5 percentage point lower than average, the increase in exports to emerging markets and less developed countries reached 18.3%.

The value of Polish exports in the years 2003 - 2011
[in billion EUR and %]



Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 4

4. Construction market

Construction industry is the flywheel of the economy and strongly stimulates its growth, it is the factor which determines the trends in other sectors, including the joinery sector.

According to the results of the Polish economy in recent years, it seems that construction is the **fastest growing** industry in the country. The growth dynamics of this sector in 2011 was close to 12%, with 4.3% GDP growth level.

Growth dynamics by sectors of the economy

	2004	2005	2006	2007	2008	2009	2010	2011
Gross domestic product including:	**105.3**	**103.6**	**106.2**	**106.8**	**105.1**	**101.6**	**103.9**	**104.3**
Manufacturing	110.9	103.5	109.9	110.0	106.0	101.3	109.4	106.3
Construction industry	**101.1**	**106.6**	**112.5**	**109.4**	**105.8**	**111.6**	**106.4**	**111.8**
Trade; Repair of motor vehicles	103.9	104.1	104.7	104.7	106.4	104.3	102.6	104.6
Transportation and storage	103.0	108.6	109.9	104.2	98.5	95.6	106.5	105.1

Source: ASM based on GUS (Central Statistical Office of Poland)

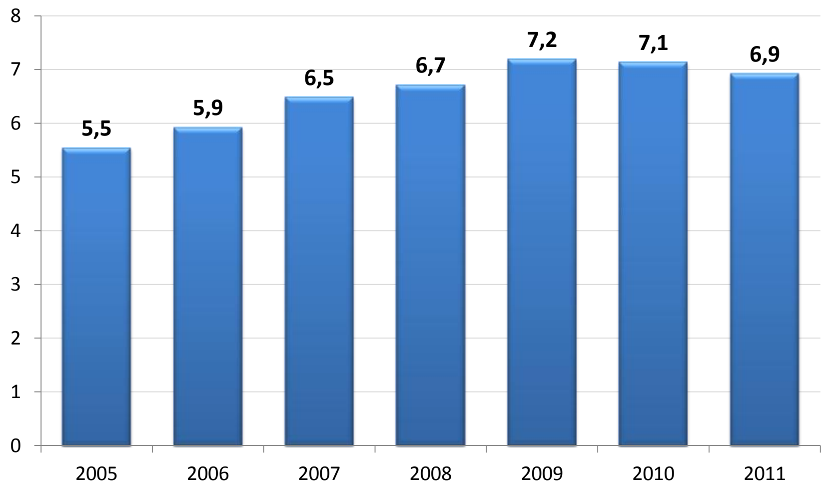
Table 1

The growing importance of construction industry in GDP creation

Despite the fact that the development of the construction industry has been the fastest since several years, its share in the GDP does not exceed 10%. However, its global share is characterized by an upward trend. In 2005, it amounted to 5.5%, while in 2009 it was already 7.2%. According to the optimal prognostic variant, the share of the construction sector in the national economy shall stabilize at a level of 6.5% in the coming years.

A relatively small share of construction in GDP generation, however, is not synonymous with the industry's low coefficient of materiality. In construction we are dealing with so-called multiplier effect. This phenomenon of a feedback character means that 100 people employed directly in the construction industry create at least 200 additional jobs (and also initiate the production) in other sectors.

The share of the construction sector in the Polish economy
(gross added value in the construction sector as a % of GDP)



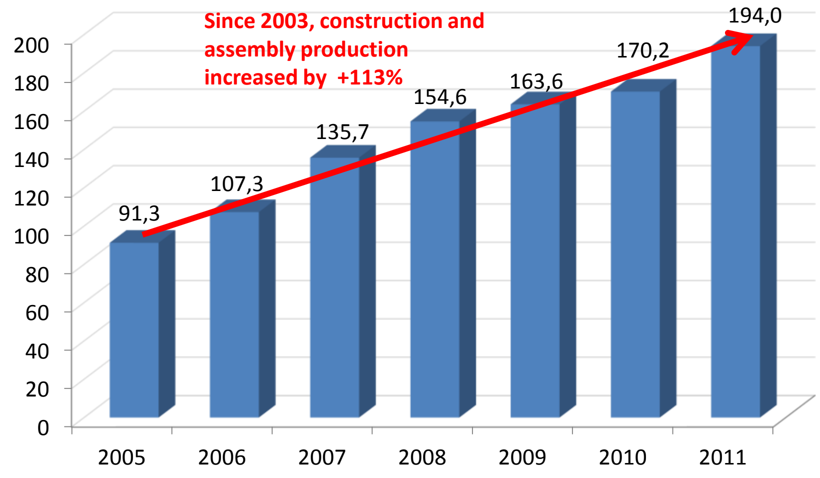
Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 5

Construction and assembly production

One way of measuring the size of the construction sector is the analysis of the rate of construction and assembly production. Comparing the data from the last few years you can see a clear upward trend regarding the value of domestic construction and assembly production. In the period from 2005 to 2011, the value of construction work increased by 113%. It is worth noting that the construction industry is a very important area of the economy, linked with many of its branches, therefore the sensitivity of the sector to economic fluctuations is also large.

Construction and assembly production realized on Polish territory (in billion PLN)



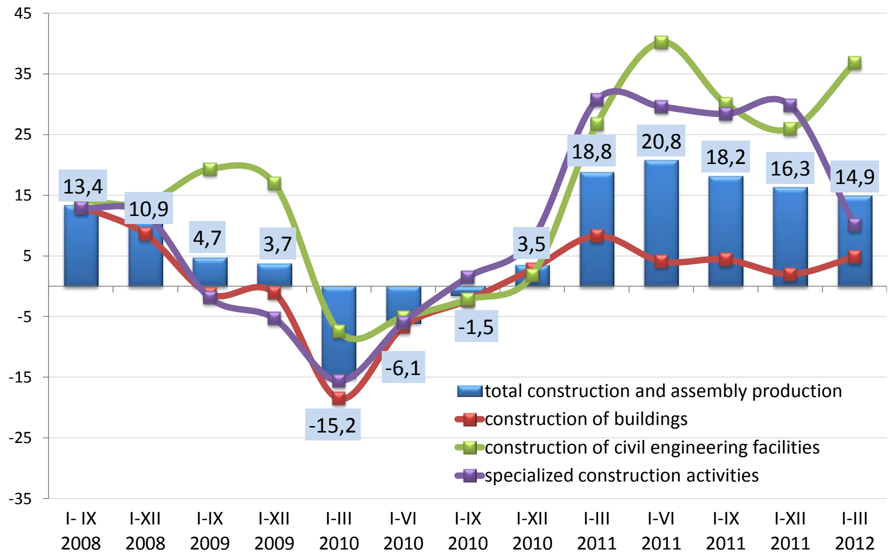
Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 6

The entire 2011 was characterized by record dynamics of construction and assembly production. During 2011, enterprises employing more than 9 persons recorded the growth of 16.3% compared to 12.0% in the total population. In the first quarter of 2012, the domestic construction and assembly production[1] was 14.9% higher compared to the same period last year. This high growth was mainly due to the intensification of work carried out in preparation for EURO 2012 and continuation of previous years' investments. Over the first three months of 2012, compared to the same period of the previous year, there was an increase in all construction industry sectors: the construction of buildings grew up by 4.8%, the construction of civil engineering facilities by 36.8%, and specialized construction work - by 10.1 %.

[1] In fixed prices, in construction companies employing more than 9 persons.

Dynamics (in fixed prices) of construction and assembly production *
broken down by type of work performed (in %)



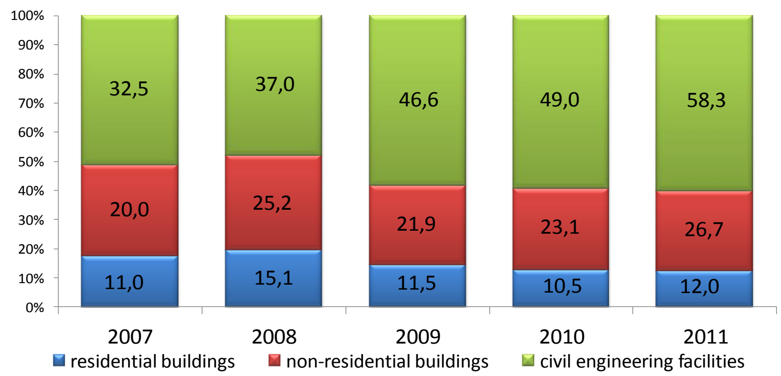
Source: ASM based on GUS (Central Statistical Office of Poland)

* for companies with more than 9 employees

Fig. 7

Civil engineering has the largest share in the structure of the construction and assembly production. This is a result of extremely high increase in production of this type of work in recent years, especially in road projects. According to the GDDKiA data, in 2011 in Poland record expenditures were incurred on investments related to the construction and modernization of the road network (PLN 26.4 billion).

Structure of construction and assembly production
in Poland, by type of buildings [%]



Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 8

Against the background of the European Union, Polish construction sector looks very attractive, recording the average increase of 8.2% in construction output over the last 4 years, while there was a decline of 5.1% across the EU. Economic crisis was the reason for such low results in individual countries and consequently - significant downturn in the markets. The Polish economy, unlike in other countries, rather quickly rebuilt the potential of the building sector and in 2011 achieved a growth of 16.3% (y/y).

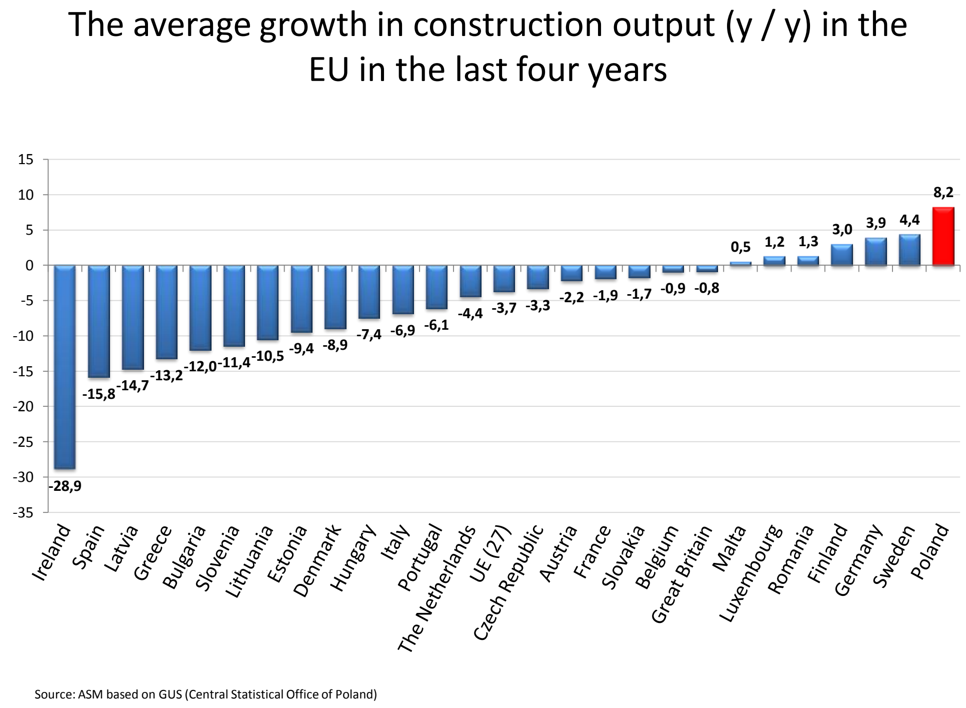


Fig. 9

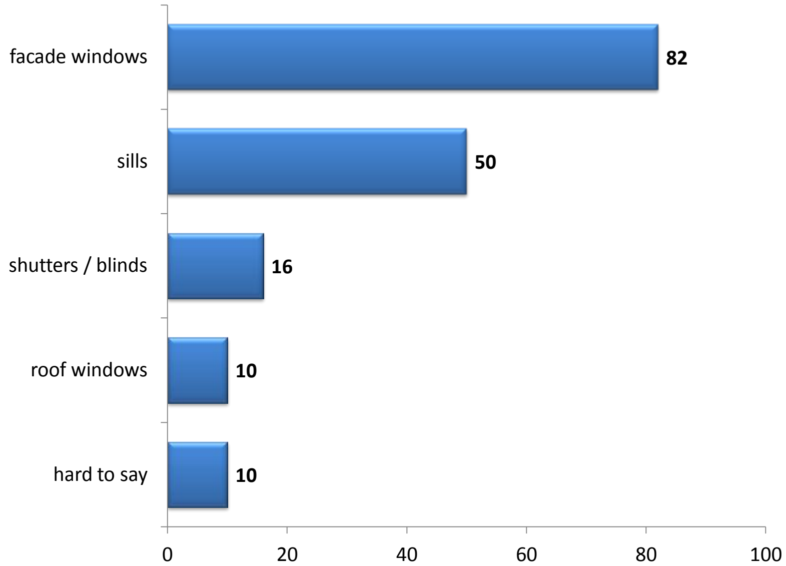
5. Housing

The most important group of customers in terms of demand for joinery components is housing. It is estimated that about 60% of the windows manufactured in Poland goes to that sector. In this case, the demand generated by replacing the existing joinery products must be distinguished from new installations in newly built apartments.

The demand generated by replacing the existing joinery products

Looking at the renovation activity of Poles in respect of window joinery (4.2% of representatives of households expressed their will to replace windows as part of renovation) you can see that the vast majority of them - 82% of households - plan to replace currently installed facade windows in the years 2012-2013. This means that over the next two years, new windows will have to be installed in nearly 500 thousand apartments. Taking into account the respondents' answers as to the number of windows that the investors plan to buy, it can be assumed that approximately 5 windows would be replaced in one apartment. Putting these two pieces of information together, it can be expected that during the years 2012-2013, the demand will amount to ca. 2.5 million units[2] - in the case of replacement of existing facade windows reported by individual investors who live in single-family houses or apartments.

Type of planned work related to the replacement of windows (in %)



Source: ASM on the basis of the report "Housing Renovation Plans of Poles"

Fig. 10

According to the survey on the Poles' renovation activity in 2012-2013, 6.5% of households plan the renovation / replacement of doors. The more detailed analysis of the scope of work shows that the replacement of interior doors is expected to constitute the majority - approximately 60.3%. This means that in the period 2012-2013, about 600 thousand households shall declare their interests in buying interior doors. Comparing this value with the average number of doors that investors intend to replace in one apartment, we can estimate that the demand for the interior doors declared by the Polish investors who are planning renovation in 2012-2013, will amount to 2.1 million units. When it comes

[2] A survey conducted on a sample of 1 200 households in Poland

to exterior doors, adopting similar calculation methodology, it is expected that renovations in housing may generate a demand for about 0.6 million units.

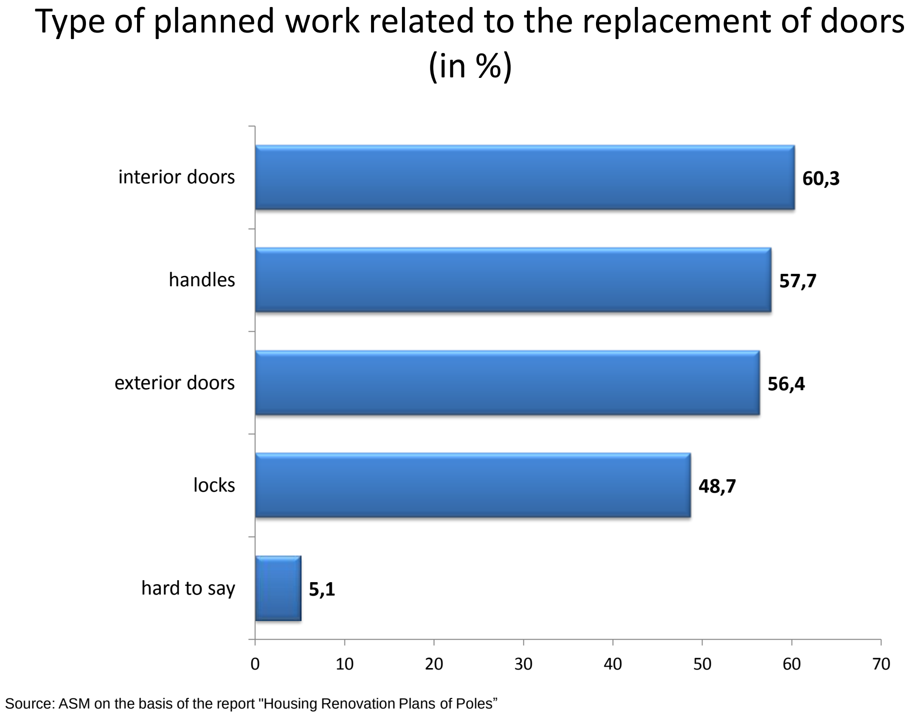


Fig. 11

The demand generated by new housing sector

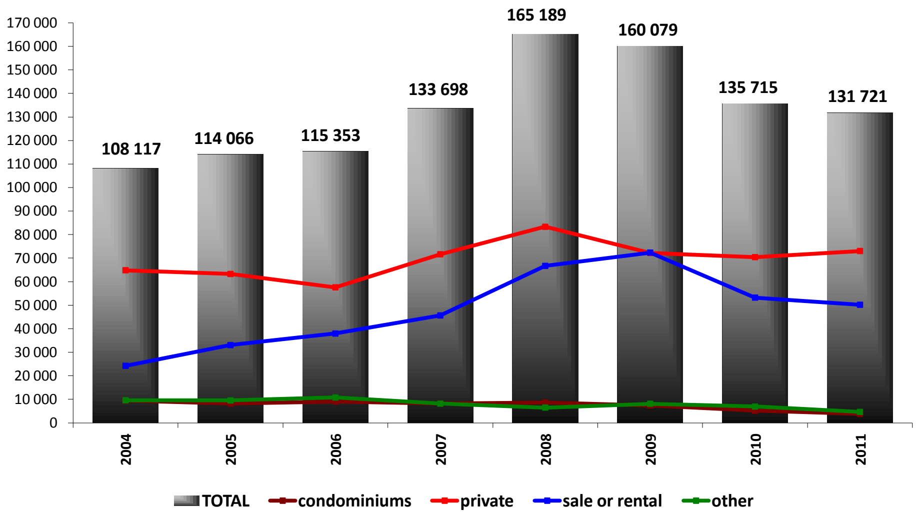
Another group of buyers are customers who assemble windows in newly-built houses. Taking into account the results of the Polish housing market of 2011 and analyzing designs of detached houses and flats, it can be estimated that in 2011, about 1.2 million facade windows were sold to satisfy the demand of the new housing sector. In addition, analyzing the structure of investors, it is worth noting that three out of four windows went to homes built by individual investors, and about 20% - to the houses built by the property developers. It is therefore recommended to take a closer look at the current and anticipated situation on the housing market in Poland.

Apartments / flats delivered

Analyzing the housing market in Poland in recent years, we can observe a noticeable seasonality. Investors deliver most apartments / flats in the fourth quarter and the least in the second quarter, which trend applies to all types of housing.

The situation in the housing sector in 2011 proved to be similar to that of the previous year. In the last 12 months approximately 131.1 thousand apartments / flats were completed, which is 3.0% less compared to 2010. The positive dynamics was recorded within the group of individual investors who introduced 3.7% more apartments / flats to the market than in the previous year (73 thousand apartments / flats). In respect of other forms of construction there was a slight decline in the quantity. The 2011 results were significantly affected by end of the year results. Traditionally, in the last months of the year there was accumulation of the number of delivered apartments / flats, but December 2011 was exceptional. Compared to December 2010, there was a 24.5% growth, and what is significant, the property developers delivered nearly 40.0% more apartments / flats.

Apartments / flats delivered in Poland in the years 2004-2011



Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 12

Apartments / flats - construction commenced

The number of apartments / flats per quarter, the construction of which started a few years ago, we can see that the majority of construction projects was commenced in the second quarter. In most cases it is due to the weather conditions in Poland, the period of spring is optimal to begin construction work. In particular, the individual investors pay attention to the date of commencement of work at the construction site.

Taking into account the number of projects commenced in subsequent years, it can be seen that after the critical 2009, the situation in the housing market was slowly recovering. In the period from January to December 2011 we can observe an increase of 5.2% in the number of the commenced projects, compared to the same period of 2010. The largest share of this growth is represented by individual investors whose share in the structure of commenced housing investments amounts to 55.8%. However, we should also pay attention to the number of apartments for sale or rental, because these are the investments with the fastest growth rate. Considering the number of apartments / flats, construction of which began on the Polish territory, it turns out that the increase is observed in 10 provinces of the country. The largest of them are located in the Silesia province (+18.1%), the Warmian-Mazurian province (+16.4%), the Opole province (+16.4%), and in the Kuyavian-Pomeranian province (+14.8%).

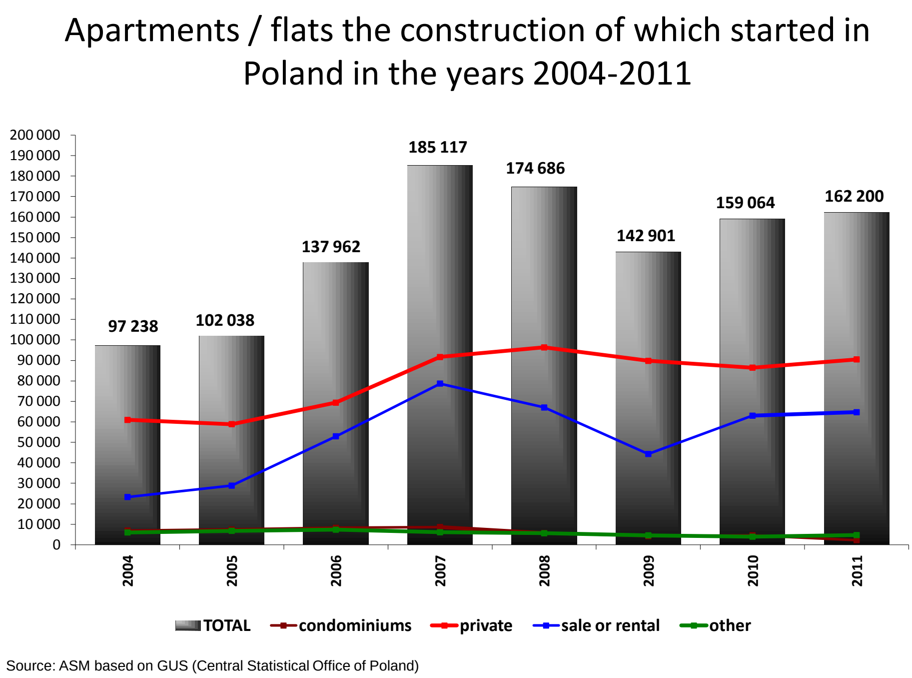
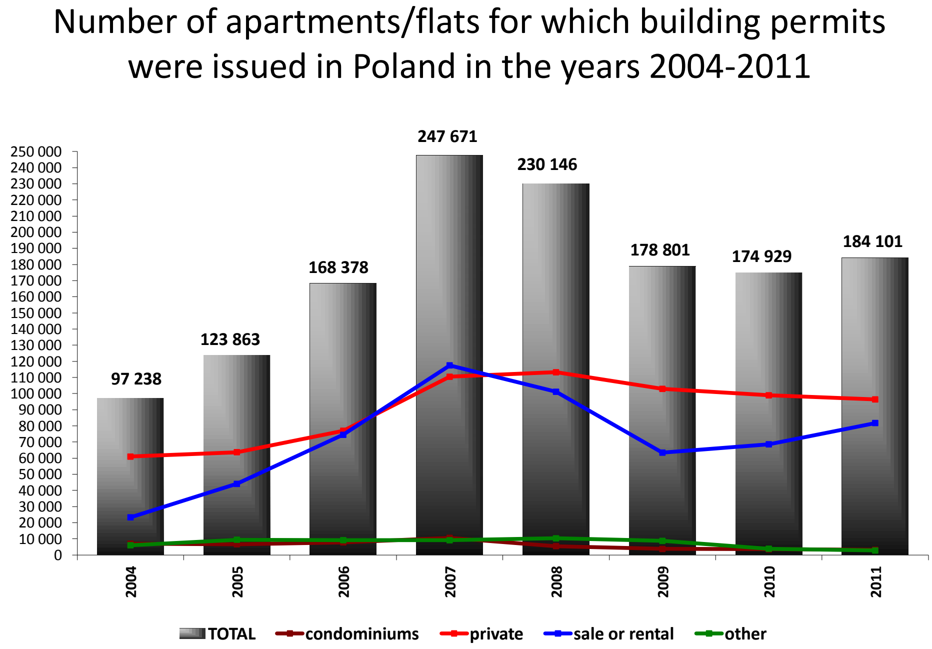


Fig. 13

Permits for construction of apartments / flats

Quarterly analysis of the last few years in respect of the number of permits issued shows that the majority of permits was issued to investors in the third quarters of the year. This indicates that the investors apply for permits in advance, before winter, in order to be able - during that period - to prepare for the construction, which is likely to begin in spring. This trend applies to both individual investors and property developers.

Total number of permits for the construction of apartments / flats issued in 2011 increased by 5.2% compared to 2010. The largest share in this increase belongs to individual investors who, in 2011 obtained over 96 thousand permits, which in the general structure constitutes 52.4%. Lower number of permits constituting 44.4% of the total number of permits are projects intended for sale or rent. Analyzing the 2010 and 2011, we can see that a significant increase in the number of permits (+19.2%) relates only to the construction of this type.



Source: ASM based on GUS (Central Statistical Office of Poland)

Fig. 14

6. Non-residential buildings sector

Significantly lower demand for windows in comparison to the housing market is generated by non-residential buildings. The share of the property belonging to this category in the overall structure of the windows market is approximately 10%.

Non-residential buildings sector

In 2011, 20,968 non-residential buildings were delivered with a total area of 12,494.3 thousand sq. m. Cubic capacity of these buildings was 80,013.4 thousand cubic meters. Comparing the year 2011 and 2010 it should be noted that:

- Total number of buildings has increased by 2.6%
- The total cubature has increased by 7.6%,
- The average size of non-residential building has increased by 4.9% compared to 2010 and amounted to 3,815.9 cubic meters.

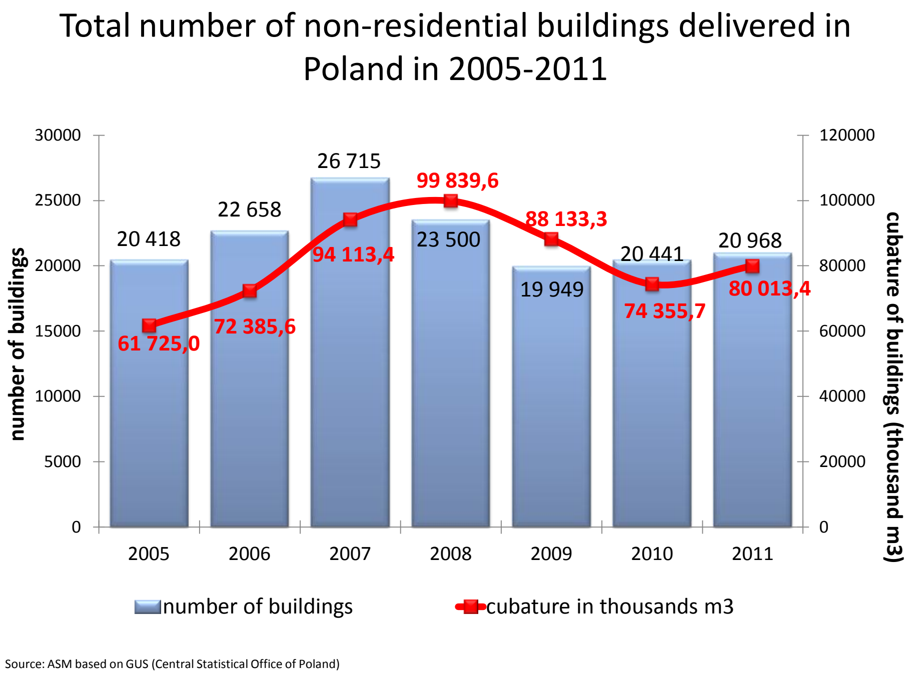


Fig. 15

In the case of non-residential buildings, joinery products are most often used in office buildings, commercial-service facilities, hotels and tourists accommodation buildings. These are the types of constructions that generate the greatest demand for windows and doors.

In 2011, the majority of buildings, that is 6,795 was delivered in the category of transport and communication. Please note that this type of projects recorded a 5.7% increase compared to the same period last year. In 2011, a similar number of buildings within the category of commercial-service buildings and industrial and warehouse buildings was completed (3,439 and 3,051 - respectively). At the same time, the two categories of buildings recorded the year-to-year decrease in the number of delivered buildings. Within the non-residential category the office buildings, hotels and tourists accommodation buildings account for the lowest number of buildings delivered.

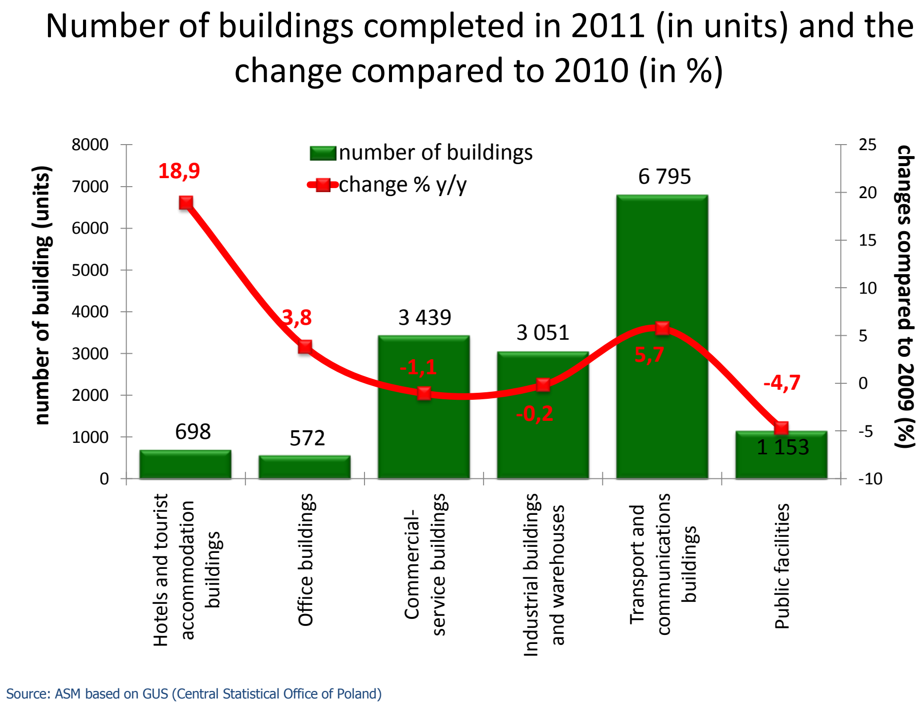
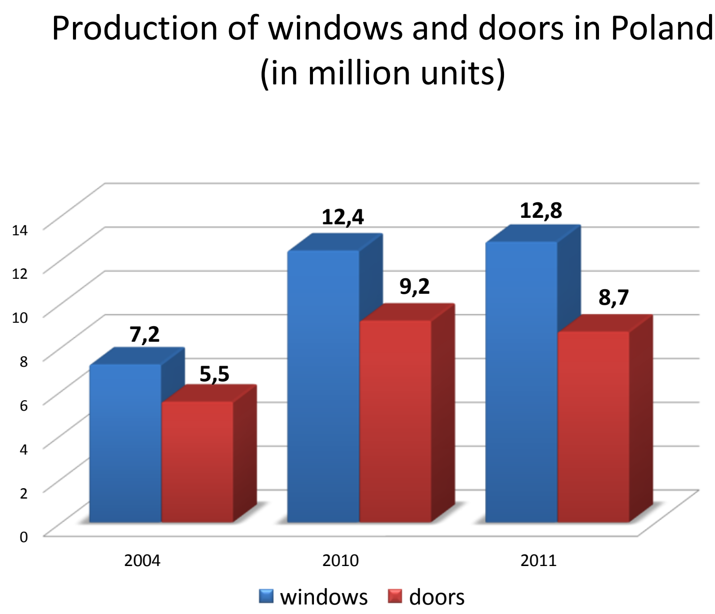


Fig. 16

II. Situation in the Polish joinery industry

1. General characteristics of the joinery industry in Poland

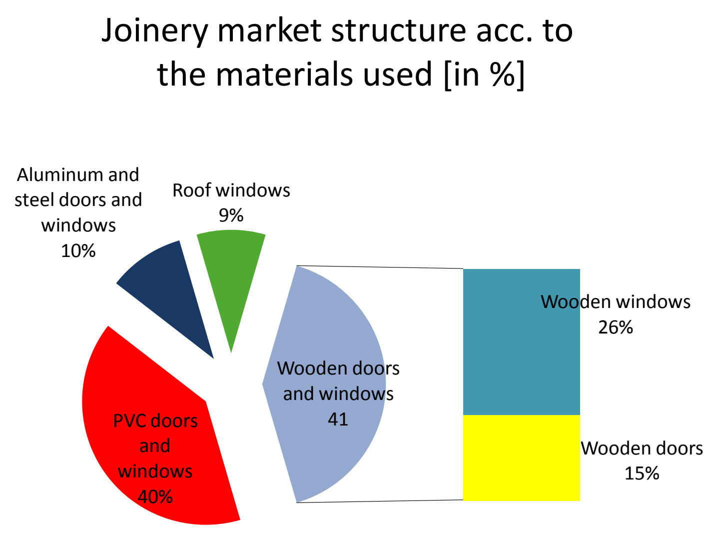
Currently, there are about 2.5 thousand manufacturers of windows and doors on the Polish market. Many of them are big well-known companies operating not only in the domestic but also on the international market, as well as a small carpentry workshops satisfying the demand of local customers. The sector is therefore highly fragmented. In 2011, five largest companies had a share of about 20% of the windows market in Poland, while half of the value of the market belongs to about 35 companies. There are companies with very modern machines among them, which enhances their competitiveness in the foreign markets. Polish companies use some of the best technologies and solutions for the production of windows, at the same time offering prices, which are attractive for foreign buyers. This puts them at the forefront of joinery manufacturers in Europe, and in some cases, such as for example the roof windows - also in the world. It is estimated that the current annual production of windows and doors in Poland amounts to about 21 million units, with nearly 13 million windows in this number, of which 74% are plastic windows, 24% - wooden windows, and the remaining part (2%) - aluminium and steel windows.



Source: ASM study

Fig. 17

Considering the joinery market structure in terms of the materials used, it can be observed that the share of wooden joinery in the Polish market is consistently decreasing, while the proportion of doors and windows made of PVC is increasing. A relatively low price, and a significant improvement in quality as a result of new manufacturing technologies undoubtedly contribute to the popularity of these products. It is worth noting that the expected decrease in the woodwork products is not associated with a reduction in the production volume of those products, but is primarily due to stabilization of the volume of production of these products associated with the rapid increase in the production volume of the whole joinery sector. The share of the wooden doors and windows is about 41% (of which 26% are the windows, and 15% - the doors). The PVC joinery products represent almost the same percentage. The share of doors and windows made of aluminium and steel in terms of production is much smaller (about 10%), and roof windows - 9%.



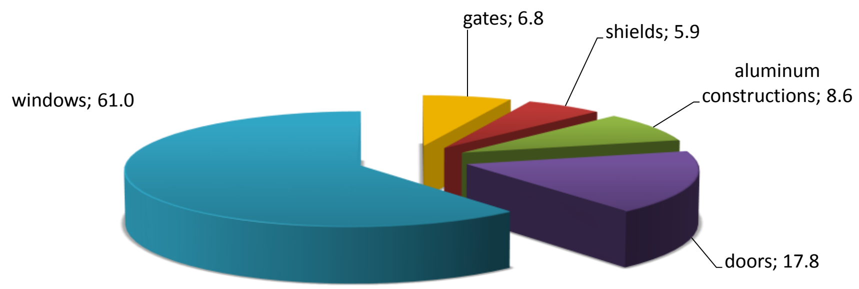
Source: ASM study

Fig. 18

The value of the sales in the Polish joinery market is estimated at PLN 12.9 billion in total. Analyzing time series data one can clearly see the increasing value of the market before 2007, at a rate exceeding 10% per year and the collapse in the years 2008-2009. This was a result of the economic downturn in the construction sector, which adversely affected the demand for joinery products, and - as a consequence - it resulted in reduced production. Windows have the largest share of the overall sales market - as much as 61%, followed by doors with 17.8% sales share. The share of other product groups included in the joinery, i.e. gates, aluminium structures or shields is much smaller.

Analyzing revenues obtained from windows and doors manufactured in Poland, we can see that the manufacturers of roof windows, i.e. Velux and Fakro are the major companies. These are the companies that compete with each other not only in the domestic market but also internationally. When it comes to the facade windows market, the leader is the company Drutex, which produces mainly plastic vertical windows, but has also PVC doors as well as wooden and aluminium joinery products in its offer. However, Oknaoplast and Dobroplast compete with each other for the second place in the category of facade windows. The above-mentioned companies can be described as Europe's leading manufacturers of joinery today. Other manufacturers' revenues from the sale of windows in 2011 did not exceed PLN 200 million.

Joinery market structure
acc. to the volume of sales

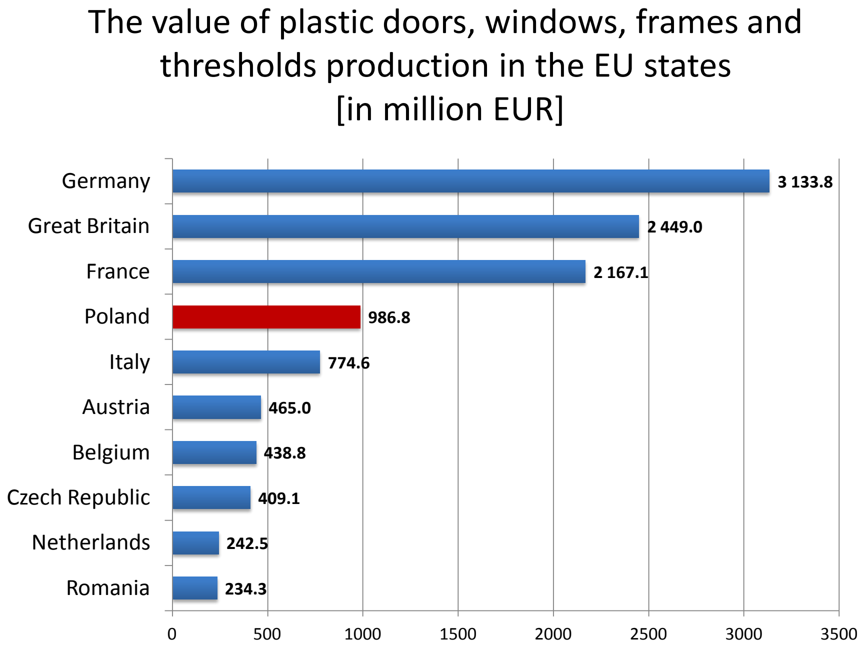


Source: ASM study based on the Oknonet data

Fig. 19

2. Poland against the background of the European Union states in terms of production of joinery

Poland is one of the leading manufacturers of windows in Europe, and in some cases also in the world (for example roof windows), despite the fact that the overall size of the construction market is not the greatest - in comparison with other countries. The high position of Poland in terms of production is due to the fact that it is a leader in export of wooden and PVC windows in the European Union. Analyzing the value of the most popular PVC windows and doors, it turns out that Polish producers take the fourth place. According to data from the end of 2011, the value of production of doors, windows and the frames thereof and plastic door thresholds amounted to 986.8 million EUR. The greatest part of this amount came from the production and sale of PVC windows. This means that in 2011, about 7.1 million pieces of plastic windows were manufactured in the Polish factories.

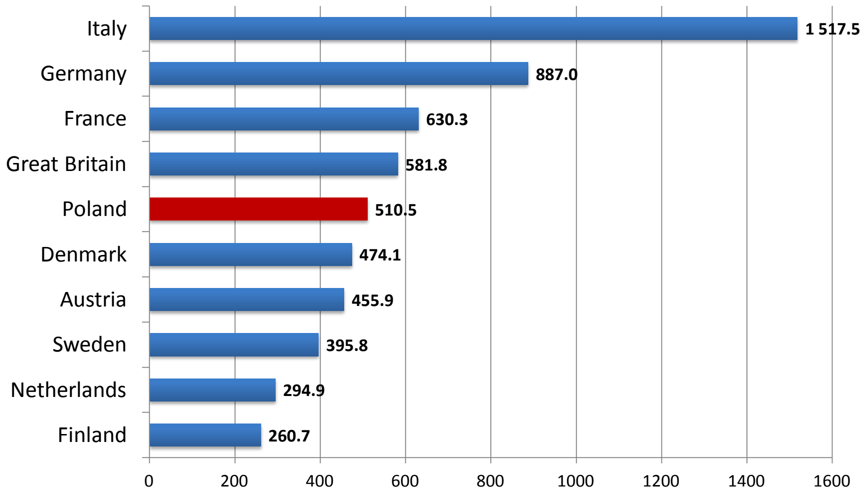


Source: ASM study based on the data of Eurostat and Eksport Helpdesk

Fig. 20

Poland is also at the forefront when it comes to the production of wooden windows, with four countries ahead of us. It should be noted that, taking into account the value of the production of wooden windows and frames, the countries with far greater economic potential as Austria, Sweden, and the Netherlands take further places than Poland. In 2011, the value of wooden windows and frames production in Poland amounted to 510.5 million EUR. Converting the value to quantities, it turns out that the number of windows made of wood, not including the roof windows, is close to 3 million units.

The value of wooden windows and frames production in the EU states [in million EUR]



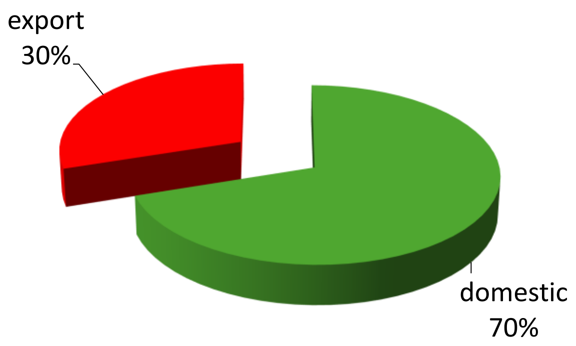
Source: ASM study based on the data of Eurostat and Eksport Helpdesk

Fig. 21

3. The size and structure of Polish joinery export

Poland is a major exporter of wood joinery. We owe the export success to such companies as Fakro, Drutex, Oknoplast or Dobroplast. These four major players now sell, respectively: 70%, 60%, 50%, 60% of their manufactured products to foreign markets, and the activities planned for the coming years are expected to lead to an increase in the proportion up to 80% of production - in some cases. These figures clearly show the dependence of the Polish manufacturers of joinery from the foreign markets. Currently, it is estimated that 30% of the Polish joinery is exported to foreign markets. Windows make up the most of it; according to the estimates, in 2011 nearly 4 million Polish windows were sent abroad. The main export product of the Polish joinery are PVC windows, which make up nearly three-quarters of the overall window export structure.

Sales directions of Polish joinery [in %]

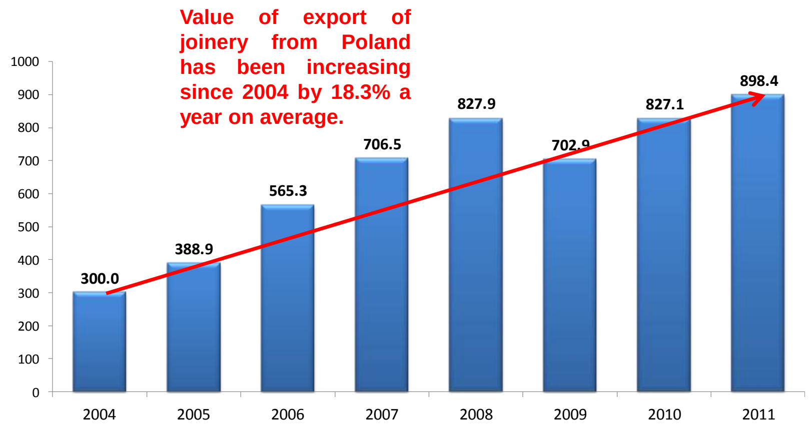


Source: ASM study

Fig. 22

The value of Polish joinery export is consistently increasing each year. Analysing the time horizon from 2004 to 2011, it can be seen that despite the decline in the value that was recorded in 2009, the high average annual growth rate was kept. The value of goods exported from the analyzed group on average increases by 18.3% every year. In 2011, Polish companies exported windows and doors worth of around 900 million EUR. This means that about 3.5 billion Polish windows were exported. It should also be noted that the supply potential is much greater. It is estimated that current production capacity in Polish enterprises are used in 70-80%. This means that Poland is able to deliver much larger number of windows and doors to the market a in a short time, without the need to invest in new machinery. As a result, Polish manufacturers of windows are able to send over 6 million units of the product to the foreign customers.

Value of export of Polish joinery
in the years 2004-2011 (in million EUR)

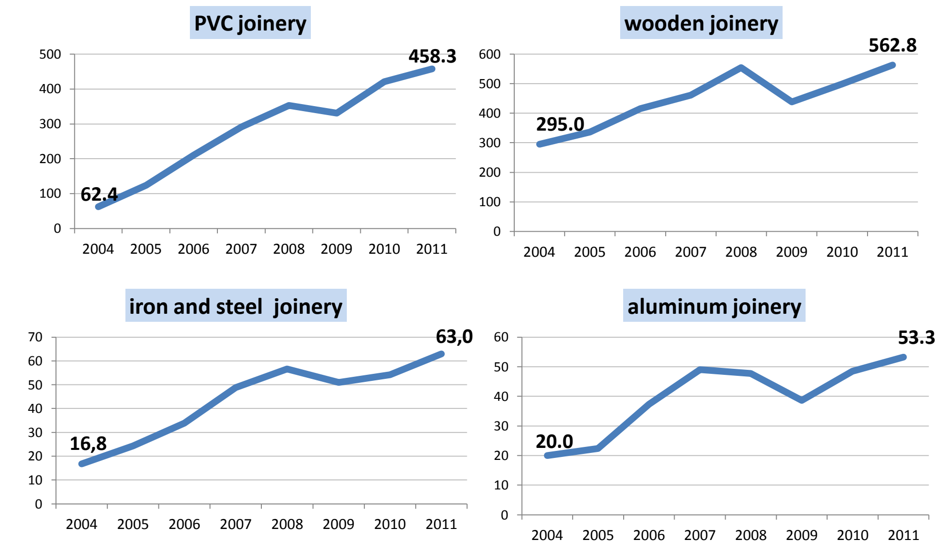


Source: ASM based on GUS (Central Statistical Office of Poland) and Eurostat

Fig. 23

We can observe the positive dynamics of the value of exported goods in the joinery industry in each separate product groups with regard to the materials from which they are made, i.e. wood, PVC, steel, iron and aluminium. Export of PVC joinery, which is the most popular in Poland and throughout Europe, increases at the greatest rate. The value of overseas sales of plastic windows and doors had increased more than 7 times over the last seven years and in 2011 it is estimated at 458 million EUR. The overseas sales of aluminium joinery is increasing at the comparable rate, however, it should be noted that this is a much less significant part in the overall structure of joinery products export. Given the current data on the wooden joinery we can talk about twofold increase in export compared to the level of 2004. As it was expected by the Polish producers of joinery, there will be an increase in value of export of the Polish market windows and doors also in subsequent years. Joinery market in Poland is saturated, which, combined with a very severe competition, forces Polish companies to conquer new markets.

The value of export of Polish joinery acc. to the materials used in the years 2004-2011 [in million EUR]



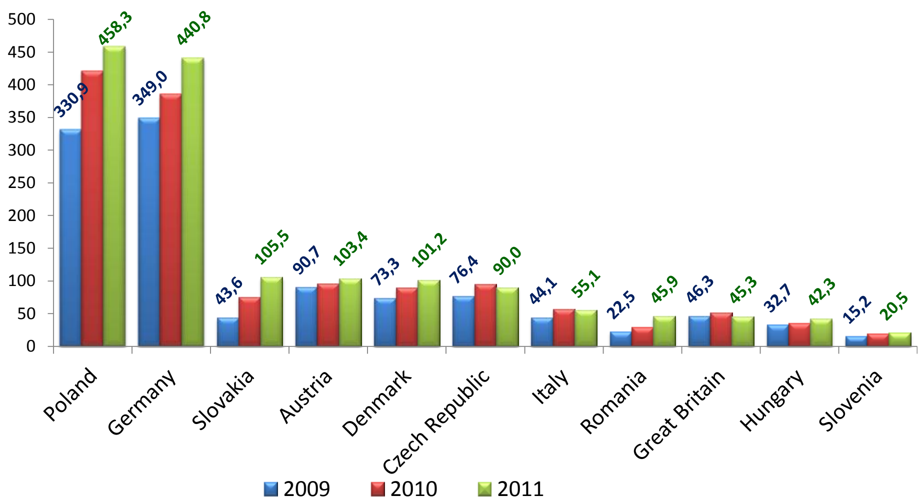
Source: ASM study based on the data of Eurostat and Eksport Helpdesk

Fig. 24

4. Export of Polish joinery against the background of the European Union states

Comparing the statistics from individual countries, it appears that Poland is largest exporter of PVC and wooden windows in Europe. In 2009, the first place among the EU countries in terms of the value of exported plastic doors, windows, frames and thresholds, was still held by Germany. However, thanks to the dynamic growth of this sector of economy presented in the first part of the study and the hard work Polish enterprises, Poland became the largest exporter as soon as in 2010 and 2011. Comparing the data of individual countries, it appears that the proportion in the structure of export of other countries is much lower. For example, the value of export in 2011 of Slovakia - winning the third place, is 4.5 times lower than the value of goods exported by Polish entrepreneurs. Analyzing the year-to-year dynamics in the value of export of PVC doors and windows, it appears that Poland is also a leader. This means that the dynamic development of this construction industry in the coming years could lead to a situation, in which Poland will become a leader, both in Europe and worldwide. Drutex from Bytów makes a perfect example of popularity of Polish PVC windows - their windows have been installed in Hilton New York Hotel.

The largest exporters of plastic doors, windows, frames
and thresholds in the EU [in million EUR]

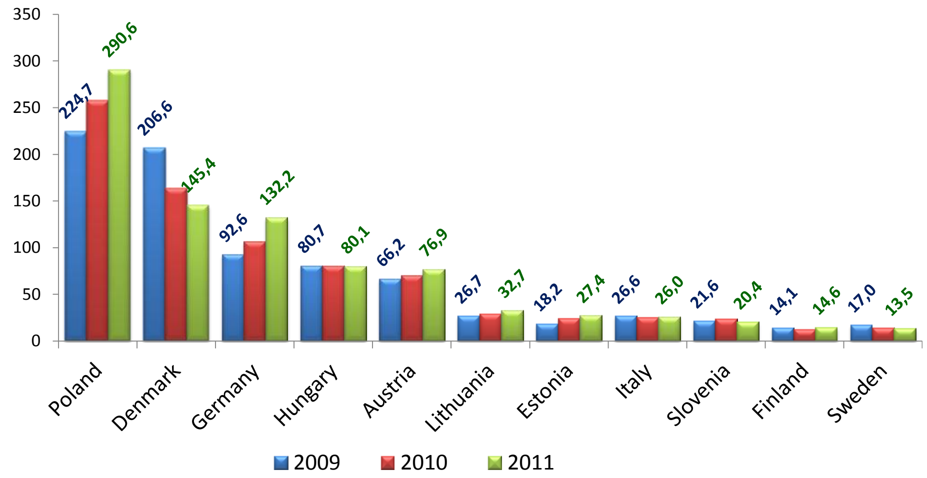


Source: ASM study based on the data of Eurostat and Eksport Helpdesk

Fig. 25

The wooden windows and frames is yet another group of joinery products, in which Poland is a leader in the international arena. It turns out that Polish producers of wooden windows are second to none in terms of export value in Europe. Interestingly, with the steady growth recorded by Polish exporters from year to year and noticeable decline in the value of export in the case of Denmark (the second in order), Poland becomes a leader also in this area. One of the main export areas for the Polish woodwork is Scandinavia. According to the estimates by Global Industry Analysts, the share of plastic windows does not exceed 25% of the total window market in the Scandinavian countries.

The largest exporters of wooden windows and frames
in the EU [in million EUR]

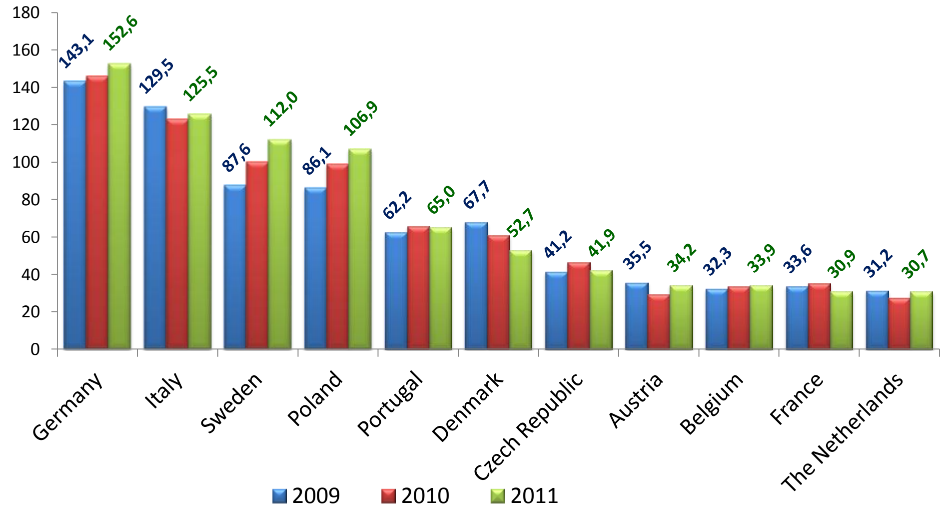


Source: ASM study based on the data of Eurostat and Eksport Helpdesk

Fig. 26

Taking into account the export of wooden doors, frames and thresholds, the position of Poland is not so strong as in the cases described above, however, it is also ranked among the top leading suppliers. Analyzing the data on the value of export among the EU states, we can see that Germany takes the first place. Export of wooden doors from that country in 2011 amounted to 152.6 million EUR. Poland - the fourth in the ranking of exporters, reached the value of export of around 106.9 million in the same time. Among the top leaders in terms of export of wooden doors, frames and thresholds - apart from these two countries - we should include Italy, where the value of export has been decreasing in recent years, and Sweden, where the development is similar to that observed in Polish conditions.

The largest exporters of wooden doors, frames and thresholds in the EU [in million EUR]

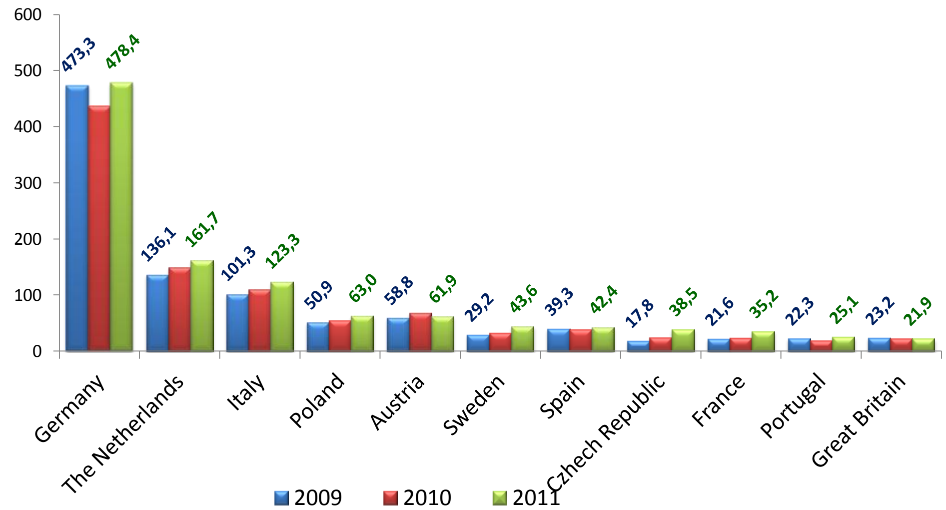


Source: ASM based on Eurostat data and the Export Helpdesk

Fig. 27

Polish windows and doors made of iron, steel and aluminium are less important in the European scale. In the case of the value of export of these goods, Poland is pretty much behind such countries as Germany, Italy, and the Netherlands.

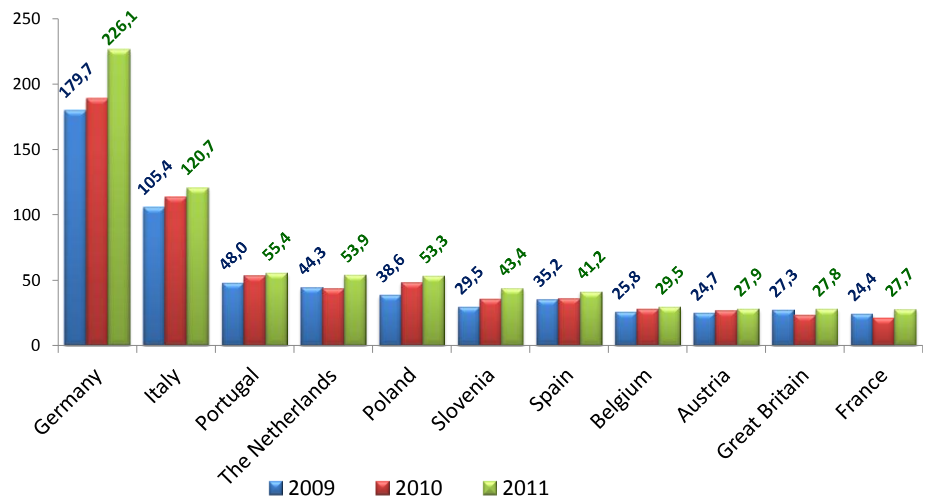
The largest exporters of doors, windows, frames and thresholds made of iron or steel [in million EUR]



Source: ASM based on Eurostat data and the Export Helpdesk

Fig. 28

The largest exporters of doors, windows, frames and thresholds made of aluminium [in million EUR]



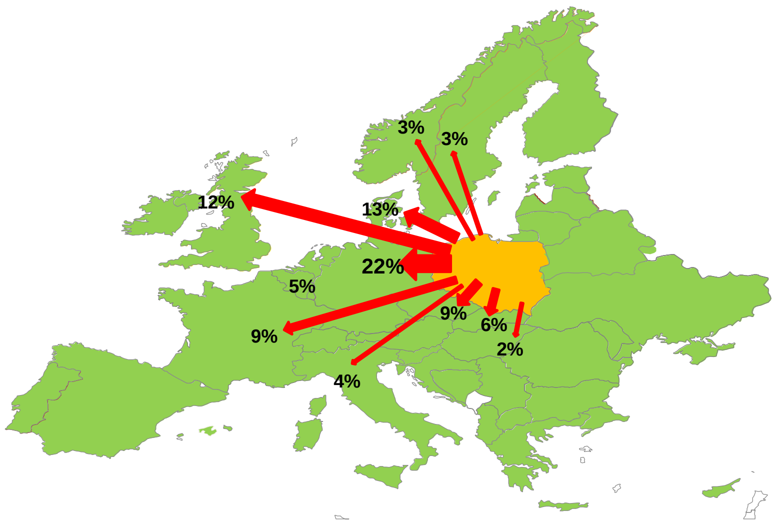
Source: ASM based on Eurostat data and the Export Helpdesk

Fig. 29

5. The main directions of export of Polish joinery

In 2011, the Polish windows and doors were sold in over 90 countries worldwide. However, the main Poland's partners in trade of joinery are the European Union countries. Their share in the export of these products in 2011 is estimated at 95%. Until recently, the joinery manufactured in Polish factories was mainly sold in such markets as Czech Republic, Germany or Slovakia, that is, in the neighbouring countries. It should be noted, however, that a clear trend towards increasing the share of Polish export to more distant markets is observed, that is, to countries such as France, Great Britain, and Denmark, as well as to South-East Europe, that is, the Russian Federation, Belarus, Ukraine, Romania, and Bulgaria.

Export of Polish joinery to the major customers in Europe



Source: ASM based on GUS (Central Statistical Office of Poland) and Eurostat

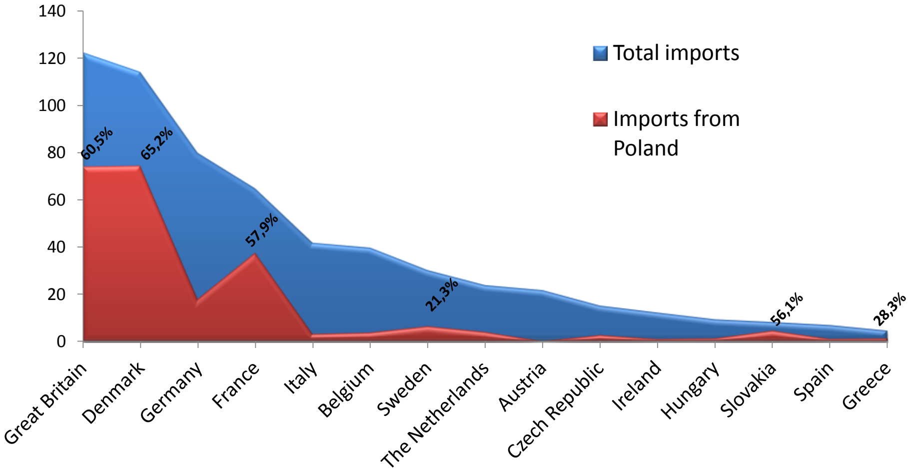
Fig. 30

Analyzing export data of the Polish producers of wood joinery you can see that the dominant directions of expansion are the United Kingdom and Denmark. The aggregate exports to these countries make up about 50% of the total value of exported wooden windows and doors. Significant interest in this type of woodwork of Polish origin can also be seen in the Nordic countries (Norway, Sweden). A slightly different directions of export are characteristic for Polish plastic joinery. In this case the predominant market is Germany, where approximately 30% of all the exported PVC products are sold. Then, in the descending order go Poland’s southern neighbours, the Czech Republic and Slovakia, which constitute 15% and 9%, respectively, of the overall structure of Polish exports of PVC joinery.

6. The share of imports of Polish joinery in the main markets in Europe

The significance Polish joinery in different countries show the statistics on the structure of imports in each country. Many countries are in a large extent dependent on the windows and doors manufactured in Poland. For example, an analysis of the imports of doors, windows, frames and thresholds made of plastic, show that nearly one third of imports to the potentially largest market in Europe, namely Germany, comes from the Polish factories. It turns out that markets most dependent on the Polish products are markets of Latvia and Lithuania (respectively: 79.6% and 82.6% of imports of joinery comes from Poland). It should be stressed however, that in terms of potential demand, these markets are much less absorbent than previously mentioned German market. The import from Poland is also considerable in the overall structure of imports in Czech Republic and Slovakia, where Polish producers are most active. On the other hand, attention should also be paid to other countries with great potential, where the share of imports from Poland is still low. The largest markets are: France (9.2% of the imports of Polish windows and doors made of PVC), Austria (5.8% of the imports of Polish windows and doors made of PVC), and Italy (17.8%). Low share of imports of PVC joinery produced in Polish factories indicates that there are still opportunities for joinery manufacturers to increase the proportion of their foreign sales.

Import of wooden windows and frames from Poland by major customers [by the value in %]

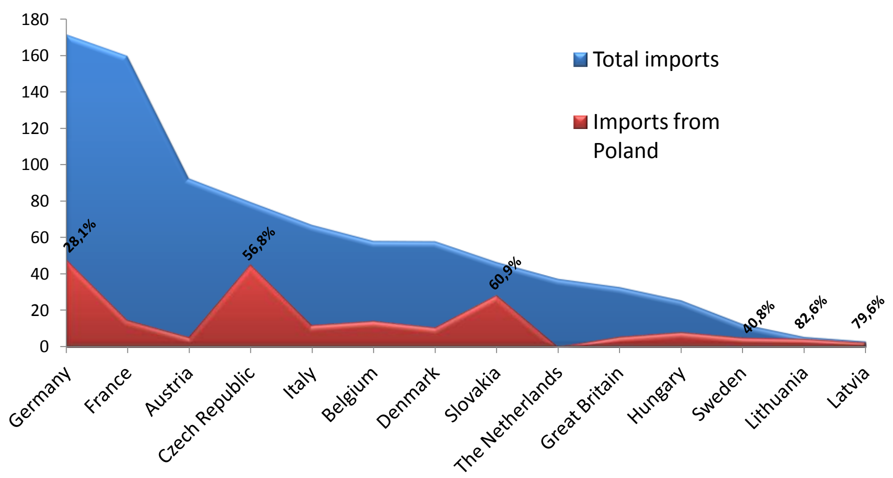


Source: ASM based on Eurostat data and the Export Helpdesk

Fig. 31

When diagnosing imports by major customers of wooden windows and frames from Poland the situation is different. It turns out that in this case, except for Germany, Poland is present in the markets where potential demand is the greatest. Taking into account the two most absorbent markets, namely the Great Britain and Denmark, it can be seen that the Polish goods account for over 60% of overall import. A significant amount of Polish wooden joinery also goes to France and Slovakia (respectively: 57.9% and 56.1%). In this case, Germany and Italy have high-potential markets where Polish producers are still not too active.

Import of plastic doors, windows, frames and thresholds from Poland by major customers [by the value in %]



Source: ASM based on Eurostat data and the Export Helpdesk

Fig.32

7. Prospects for the development of joinery market in Poland

As emphasized by the Polish producers of joinery, the industry may significantly increase its share not through the increased domestic sales, but the growth in exports. This is why Poland has become one of the most considerable joinery manufacturers in Europe. It becomes evident on the market that Poland has the best technologies and solutions. This, combined with attractive prices for foreign customers puts Poland in a favourable position also in the coming years. Low cost of labour is still a major advantage, which enhances competitiveness of the Polish products on foreign markets. It can be assumed that in the coming years the Polish manufacturers of windows and doors will even strengthen their international position.

Speaking about the prospects for the development of joinery industry, we have to mention the sale of energy-efficient windows and doors, supported in many countries by the governments' programmes. Over the past few years, energy-efficient windows have grown in importance, and according to the forecasts, the share of these products should increase in the coming years, mainly due to the already mentioned programmes to support energy-efficient construction projects. Speaking of great potential of energy efficiency, we can cite the example of Germany, which is about to spend about EUR 50 billion worth of subsidies for insulation and replacement of windows in buildings, over the next two years. Keeping this information in mind and considering the conditions in Poland, it turns out that Polish producers of windows are well prepared to compete in the European market in terms of technical guidelines for energy efficiency. Dozens of them have already obtained international certificates confirming the high energy efficiency of their products. Many others are currently in the process of certification.

INDEX OF GRAPHS

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Polska

DOORS & WINDOWS

INFORMATION
ON THE COMPANIES PARTICIPATING IN THE PROGRAM

INNOVATIVE ECONOMY

NATIONAL COHESION STRATEGY

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

Project co-financed by the European Union from the European Regional Development Fund

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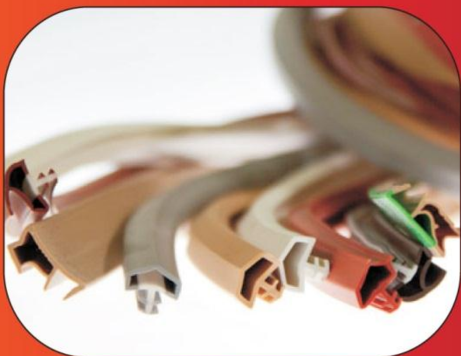
INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

Innovative insulation



INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

Project co-financed by the European Union from the European Regional Development Fund

AIB offers system solutions in insulation of all kinds of windows and doors, starting from gaskets, joints and insulating profiles, insulating tapes, as well as profiles from rigid and foamed polyvinyl chloride (industrial and decorative). We specialize in the production of TPE, PVC and butyl.

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DISPLAYS • CONSERVATORIES

Framex has been found in 1991 and since then has been a family-run business specialising in the production of PVC and aluminium joinery. For over these 20 years we have sold over 200,000 windows and thus we became the leading joinery manufacturer in the region of Western Pomerania. Our recipe for success is the combination of tradition and state-of-the-art technology which guarantees our customers a profitable purchase of reliable products.

ENERGY EFFICIENT WINDOWS

www.framex.pl

PASSIVE STANDARD

U_f = 0,92 W/m²K

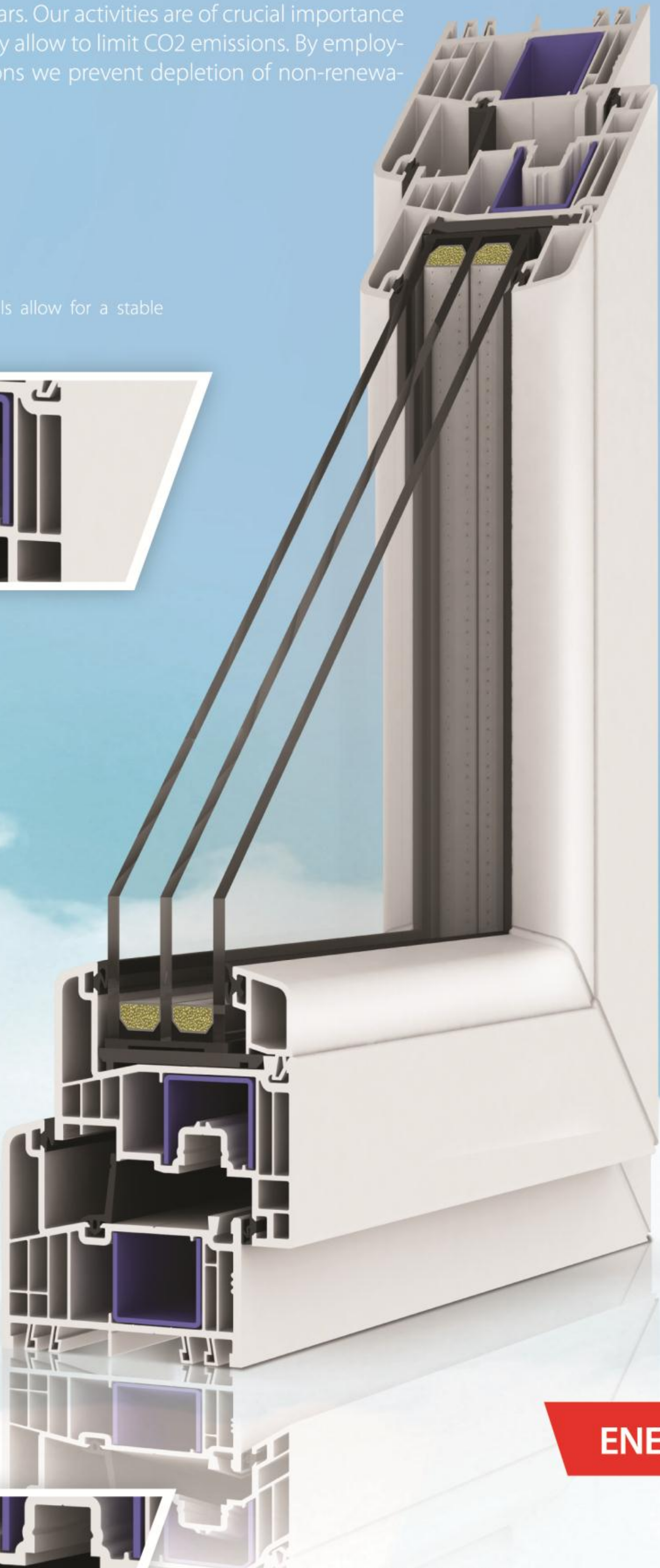
NEW!

THE SECRET TO SUCCESS LIES IN DETAILS

FRAMEX invests in new technologies. We have been offering energy efficient windows for 12 years. Our activities are of crucial importance for the environment, as they allow to limit CO2 emissions. By employing energy efficient solutions we prevent depletion of non-renewable resources.

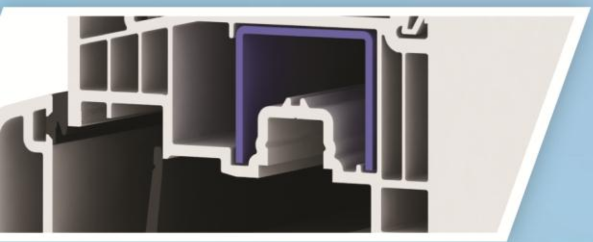
PERFECT THERMAL INSULATION

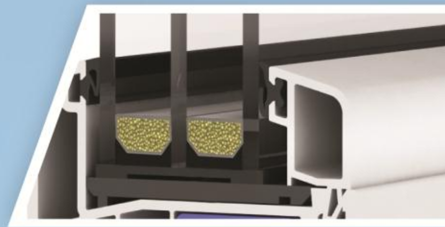
precisely designed construction details allow to reach a stunning heat transfer coefficient of U_f = 0,92W/m²K.



DURABLE FIXING

Recesses in a fitting groove walls allow for a stable clamping of a lock latch.



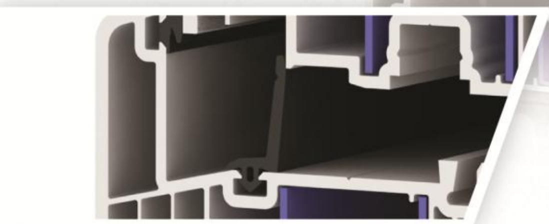


Suited for triple glazing

Narrow frames and sashes allow for large area glazing

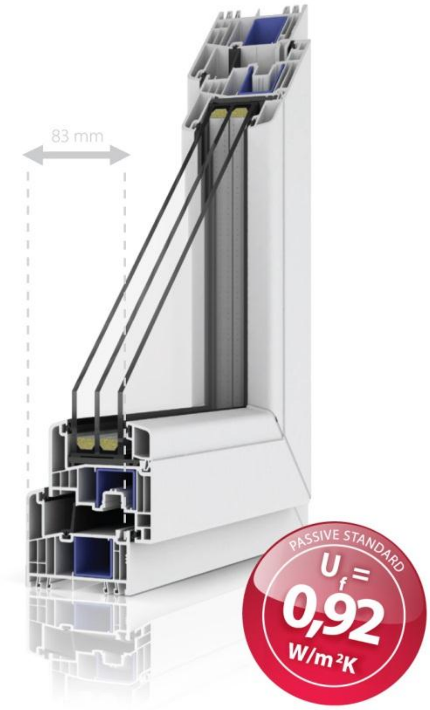
Thermal spacer under the frame increases the thermal insulation of a window.

ENERGY EFFICIENT WINDOWS



INSULATED HINGE GROOVE, BETTER ACOUSTIC INSULATION

Additional third seal protects the fitting against moisture ingress and assures a better operation, particularly in low temperatures. It also provides an efficient acoustic barrier for noise typical for cities and busy streets.

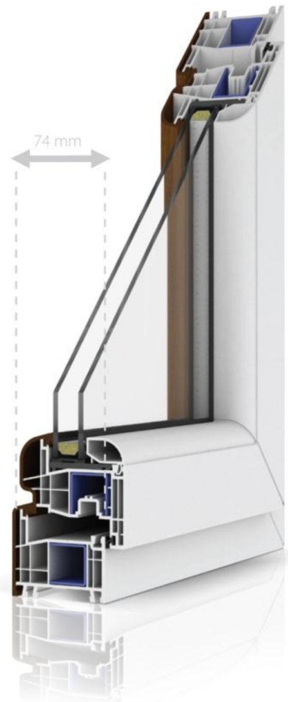


JUMBO WINDOWS

The newest version of JUMBO window panels, fitted with precisely designed construction details, reach a stunning heat transfer coefficient of Uf = 0.92W/m²K. Six chambers inside the frame and the sash combined with an eye-catching shape is a perfect selection for passive housing. Triple flexible sealing is best suited for even the most demanding climatic conditions. All elements of JUMBO panels are equally important – a thermal spacer assures an even more tight connection with a wall.

ACRYCOLOR WINDOWS

Acrycolor panels are unique. This is the only solution for monochrome window panels featuring an additional layer of acrylic glass – the most durable plastic material. This forms an extremely durable surface the microscopic view of which, unlike in case of other window panels, shows no deformations or porosity even after 10 years, which allows for easy cleaning. Acrylcolor is resistant to flaking and chipping; the surface is perfectly smooth and has an elegant, satin-like appearance. Acrylcolor is an alternative solution for aluminium profiles – its advantages are better colour durability, possibility to remove scratches and far higher thermal insulation factor.



SOFT WINDOWS

Semi flush window sash with rounded profile smoothing the faying surface between a frame and a sash. This solution optically increases a window surface which will surely satisfy the needs of even the most demanding customers.

CLASS A

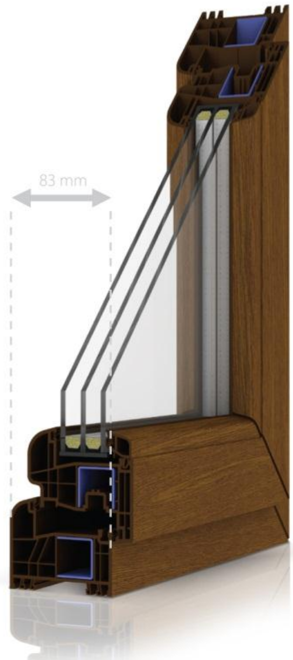
External walls have the thickness of 2.8 mm, or – in case of Class B – 2.5–2.7 mm.

RENOVATION FRAME

The renovation frames are particularly popular in Italy. These frames are intended for window replacement. The retrofit frames are fitted with two different lengths of lips.

GO WINDOWS

The top quality of these six chamber window profiles with WinkHaus fittings is the result of their 74 mm width – 20% more than our competition offers. All these advantages make these profiles outrun the competitors.



PLUS WINDOWS

A combination of the best heat transfer coefficient and an affordable price. Thanks to triple glazing, these windows, combined with the energy efficient construction techniques, will lower the heating costs by half.

WINDOW PANEL COLOURS
(exemplary colours)

STANDARD COLOURS

Golden Oak

Hazel

Mahogany

NON-STANDARD COLOURS

English Walnut

Winchester

Siena Rosso

ACCESSORIES

WINKHAUS ACTIVPILOT FITTINGS

The function of a window is determined by its fitting hidden between a frame and a sash. The versatile locking system comprises octagonal bolts and can work with both standard and burglar-proof latches. The window adjustment is very easy. ActivPilot fittings can be easily provided with additional features.

GLASS PANES

Although the standard is a single 1.1 W/m^{2}K glass panel, the JUMBO has been specifically designed for triple glazing. The optimal solution for energy efficient windows is to use double glazing with the heat transfer coefficient of 0.6 W/m^{2}K and a swisspacer bar matched with the colour of joinery.

TERRACE DOORS

PSK

Tilt-and-slide doors - duoPort SK offers the possibility to utilise all popular types of sliding doors. Rollers are fitted with a protection against overload an incorrect door handle position. PSK doors are characterised with an exceptionally smooth operation and durable locking bolts for increased safety.

HST

Lift-and-slide doors - HST system is perfect for large glazed balcony doors. The leaf can have the width of up to 3 meters, and special fittings and reinforcements allow these large doors to slide with minimum effort. Such solution allows for easy communication between the interior and exterior. Although HST doors feature low profile threshold, thermal bridges have been eliminated.

DOORS

EXTERIOR DOORS

Framex manufactures entrance doors adjustable in three planes. These doors are fitted with massive profiles for increased stiffness, as well as thermal and acoustic insulation. Doors can have classic or modern appearance. Our rich offer comprises 300 various designs and over 20 colours. Various combinations of glass panes and fillings assure an affordable price.

ALUMINIUM JOINERY

CONSERVATORIES

Conservatories are the best way to keep summer in your house – all year round! They are exotic places where you can always relax surrounded by greenery, no matter the weather. Thus you get an extra room the microclimate of which introduces a comfortable, relaxing atmosphere. We can use a specialised design software and an advanced equipment to make even the most complicated ideas real.

DOORS

Doors designed specifically for public utility buildings are stiff yet elegant. FRAMEX manufactures both interior and exterior doors with different thermal insulation parameters. The thickness varies from 50 mm in case of "cold" interior doors to 60 mm or even 78 mm in case of doors with the best heat transfer coefficient.

WINDOWS

Our offer is always suited to the inquiry. We specifically recommend 68 mm window panels with aerogel and Trocellen foam filling. This state-of-the-art aluminium window panels technology allows to achieve a heat transfer coefficient insulation similar to that of PVC, which has not been possible – until now. A reference window panel fitted with a Ug = 0.5 glass pane has the heat transfer coefficient of 0.97 W/m2K.

FRAMEX

Our premises is located near the German border and the Baltic Sea which makes us a first choice supplier not only for German, Swedish and other Scandinavian markets, but also, thanks to a good road connections, for the Central European countries.

Framex

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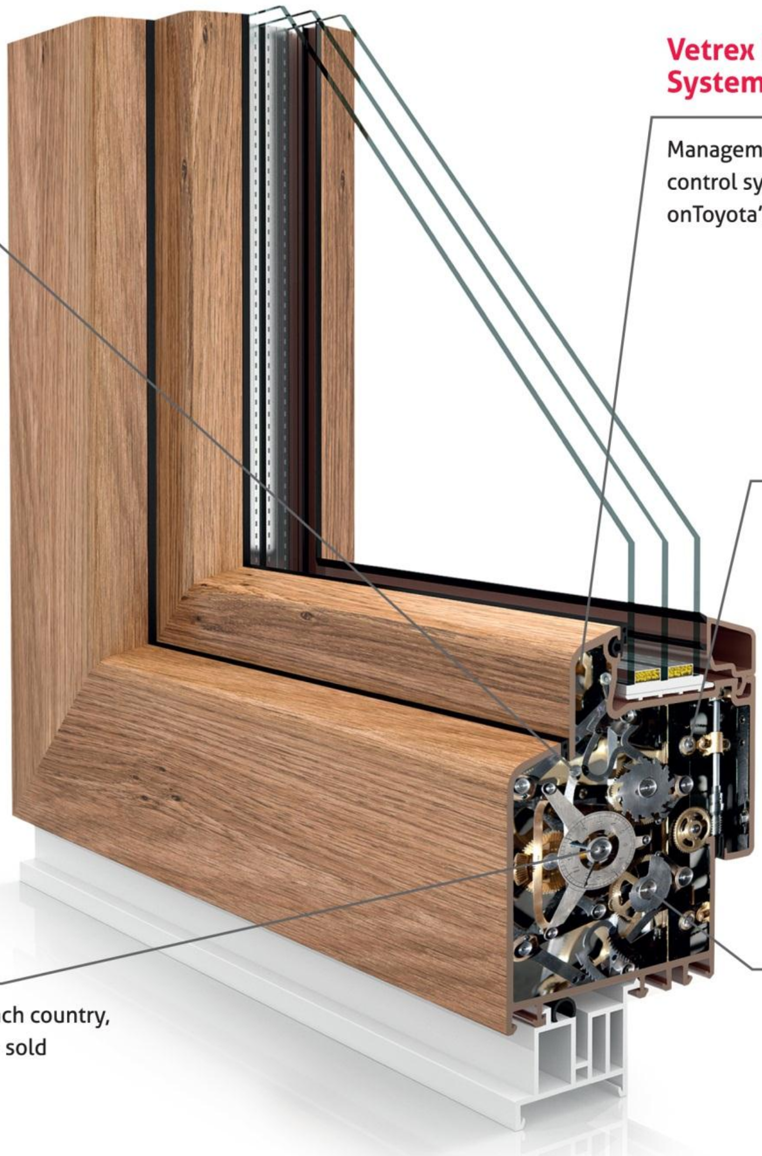
Product quality

Certificates issued by the German Institute ift Rosenheim confirm excellent quality

Vetrex Production System

Management and quality control system based onToyota's solutions



Order monitoring system

Constant online access to the status of individual orders from a showroom level

Service in all Europe

Service guarantee in each country, where our products are sold

Quoting software

Opportunityto design and to immediately price solutions

Vetrex strives for perfection by maintaining the highest standards in every area of its activity. Our company's mantra sounds "competence". This makes the co-operation with us be distinguished by precision like a Swiss watch. From high quality products to advanced production management system, form service in all Europe to online order status monitoring system – the reliable and perfect Vetrex organisation supported by modern technological solutions guarantees our customer the greatest comfort of co-operation and the sense of the total control over their companies. Thanks to that, they can focus on their own progress and plan for their own business future.

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Top quality materials and modern design solutions ensure maximum functionality and safety.

A wide range of colours, designs and structures allows to match the garage door to joinery, roofing, facade and other building elements, to achieve the colour harmony.

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Umfassen einige Typen von Toren wie Segment-, Roll-, Kipp- und Schiebetore, die sich durch ihre Öffnungsart, Konstruktion sowie Flügelfüllung unterscheiden.

Aus Stoffen von höchster Qualität und unter Verwendung von modernen Konstruktionslösungen hergestellt bieten die Garagentore Maximum Funktionalität und Sicherheit an.

Eine breite Palette an Farben, Mustern und Strukturen lässt das Tor an Öffnungstischlerei, Dach, Fassade oder sonstige Bestandteile der Gebäudearchitektur anpassen, wodurch eine volle Farbharmonie erreicht wird.

PORTES DE GARAGE WIŚNIOWSKI
C’est le choix de quatre types de portes : sectionnelles, à enroulement, basculantes et battantes qui diffèrent entre elles par le type d’ouverture, la construction et le remplissage du tablier.

La réalisation à partir des matériaux de la plus haute qualité, avec la mise en œuvre de solutions modernes de construction, assure le maximum de fonctionnalité et de sécurité.

La large palette de couleurs, modèles et structures offre la possibilité d’assortir la porte aux menuiseries, au toit, à la façade ou aux autres éléments d’architecture de la maison pour parvenir à une pleine harmonie de couleurs et de formes.

www.wisniowski.eu

WIŚNIOWSKI

› RESIDENTIAL GATES AND FENCES
› TORE UND ZÄUNE PRIVATBEREICH
› PORTAILS ET CLÔTURES RESIDENTIELS

WIŚNIOWSKI RESIDENTIAL FENCING
Is a complete system of double-leaf and sliding gates, wickets, segments and posts, which are easy to match to each land plot despite of its size and landscape.

Dozens of designs allow to create a fence in any style, and match fencing elements both to traditional and modern architectural solutions.

All elements of WIŚNIOWSKI fencing system are protected against corrosion, providing a long-term durability without extra maintenance costs.

GRUNDSTÜCKSUMZÄUNUNGEN WIŚNIOWSKI
Bilden ein komplettes System, bestehend aus Schiebe- und Flügeltoren, Pforten, Segmenten und Pfosten, die jedem Grundstück, ungeachtet dessen Größe oder der Geländegestaltung angepasst werden.

Mehrere Dutzend von Mustern bilden eine umfangreiche Basis für das Entwerfen einer Umzäunung in jedem Stil sowie die Anpassung deren Bestandteile sowohl an eine traditionelle Bebauung als auch moderne Architektur.

Sämtliche Teile der Umzäunungen WIŚNIOWSKI sind mit Korrosionsschutz versehen und können so ohne zusätzliche Wartungskosten viele Jahre genutzt werden.

LES CLÔTURES RÉSIDENTIELLES WIŚNIOWSKI
C'est un système complet, composé de portails coulissants et battants, portillons, segments de clôture et poteaux que nous ajusterons à chaque parcelle, indépendamment de sa superficie ou du relief du terrain.

Plusieurs dizaines de modèles permettent de concevoir une clôture dans n'importe quel style et de l'assortir à une architecture traditionnelle ou à un style de construction plus moderne.

Tous les éléments des clôtures WIŚNIOWSKI sont protégés contre la corrosion et peuvent être utilisés pendant de nombreuses années, sans avoir à supporter des coûts supplémentaires relatifs aux travaux d'entretien.

www.wisniowski.eu

WIŚNIOWSKI

› INDUSTRIAL DOORS
› INDUSTRIETORE
› PORTES INDUSTRIELLES

WIŚNIOWSKI INDUSTRIAL DOORS
Ideally suit any facility where durability, top quality and trouble-free operation counts most.

The doors are designated for private and industrial building, including production halls, warehouses, logistics centres, showrooms, etc.

Both the doors made of insulated steel panels or glazed aluminium panels ensure stable, trouble-free and durable operation.

INDUSTRIE-TORE WIŚNIOWSKI
Sind die ideale Lösung überall da, wo Beständigkeit, hohe Qualität und Zuverlässigkeit zählen.

Die Tore sind sowohl für individuellen wie auch Industriebau unter Berücksichtigung von Produktions- und Lagerhallen, Logistik-Zentren, Ausstellungssalons u.a. bestimmt.

Ob aus Stahlpaneelen mit Wärmedämmung oder aus verglasten Alu-Paneelen behalten die Tore immer ihre stabile Konstruktion und sämtliche Merkmale, die deren zuverlässige Funktion von langer Dauer gewähren.

LES PORTES INDUSTRIELLES WIŚNIOWSKI
C'est une solution idéale partout où l'important c'est la solidité, la haute qualité et le fonctionnement sans faille.

Elles se destinent aux habitations individuelles et aux constructions industrielles, y compris aux halles de fabrication ou de stockage, aux centres logistiques, aux salons d'exposition et autres.

Qu'elles soient faites de panneaux d'acier avec isolation thermique ou d'aluminium avec vitrages, leur construction est toujours solide et elles ont tout pour vous garantir un fonctionnement efficace pendant longtemps.

www.wisniowski.eu

WIŚNIOWSKI

› INDUSTRIAL GATES AND FENCING
› INDUSTRIETORE UND - ZÄUNE
› PORTAILS ET CLÔTURES INDUSTRIELS

WIŚNIOWSKI INDUSTRIAL FENCING
Provides the top standard protection for production halls and warehouses, car parks, playgrounds, public buildings, sports and military facilities, as well as private buildings.

All system elements, including gates, wickets, segments and welded mesh panels are protected against corrosion, and are of solid construction to provide maximum security.

Modular structure ensures easy installation and special fastening accessories prevent against unauthorized fence dismantling and entrance.

INDUSTRIE-UMZÄUNUNGEN WIŚNIOWSKI
Bieten einen höheren Standard für die Sicherung von Industrie- und Lagergeländen, Park- und Spielplätzen, gemeinnützigen Einrichtungen, Sportanlagen, Militärgeländen sowie Einzelgebäuden.

Sämtliche System-Bestandteile wie Tore, Pforten, Segmente und Gitterpaneele sind mit Korrosionsschutzschichten versehen und ihre solide Konstruktion sichert maximalen Schutz.

Die Modulbauweise sorgt für eine leichte Montage bei jeder Geländegestaltung und die Befestigung mithilfe von speziellen Einrichtungen macht Demontage von den Teilen sowie Eindringen von Unbefugten unmöglich.

CLÔTURES INDUSTRIELLES WIŚNIOWSKI
C'est le standard supérieur de protection des halles de production, de stockage, des parkings, des terrains de jeux, des lieux publics, des équipements sportifs, des terrains militaires et, également, des habitations individuelles.

Tous les éléments du système – portails, portillons, segments et panneaux treillis sont protégés par un revêtement anticorrosion et leur construction s'appuie sur une structure solide qui assure une protection maximale.

La construction modulaire permet un montage facile, alors que la fixation appropriée au moyen d'accessoires spéciaux rend impossible le démontage des éléments et l'intrusion de personnes indésirables.

www.wisniowski.eu

WIŚNIOWSKI

› FIRE JOINERY
› FEUERSCHUTZ-
› MENUISERIE COUPE-FEU

WIŚNIOWSKI FIRE-RATED JOINERY
Includes doors, walls, windows, facades and sky lights in fire-rated class to restrict the temperature and flame spread for 15, 30 and 60 minutes relatively.

All these products meet the fire protection requirements according to the building law. For this purpose, we use profile systems of relevant fire-rating and with incombustible infill.

Fire-rated doors, walls, windows, facades and sky lights are tested according to European standards to provide the best protection for their users.

BRANDSCHUTZ-TISCHLEREI WIŚNIOWSKI
Umfasst Türen, Fenster, Wände, Fassaden und Oberlichter mit Feuerbeständigkeitsklassen, die den Temperatur- und Feuerfluss entsprechend 15, 30 und 60 Minuten lang beschränken.

Sämtliche Produkte genügen den höchsten Brandschutz-Anforderungen des Baurechtes. Um diese Bedingungen zu erfüllen finden Profilsysteme mit entsprechender Feuerbeständigkeit sowie unbrennbare Füllungen bei uns Anwendung.

Unsere Türen, Wände, Fenster, Fassaden und Oberlichter mit Brandschutzeigenschaften werden gemäß den neuesten europäischen Normen getestet, wodurch wir deren Benutzern den besten Schutz bieten.

MENUISERIES COUPE-FEU WIŚNIOWSKI
Ce sont les portes, les parois, les fenêtres, les façades et les impostes dans les classes de résistance au feu, limitant la propagation de la température et du feu pendant respectivement: 15, 30 i 60 minutes.

Tous ces produits répondent aux exigences du Code de la construction en ce qui concerne la protection anti-incendie, grâce à l'emploi des systèmes de profils de résistance appropriée au feu et du remplissage non inflammable.

Les portes, les parois, les fenêtres, les façades et les impostes coupe-feu sont soumis aux tests conformément aux normes européennes, pour pouvoir assurer à leur utilisateur la protection la meilleure.

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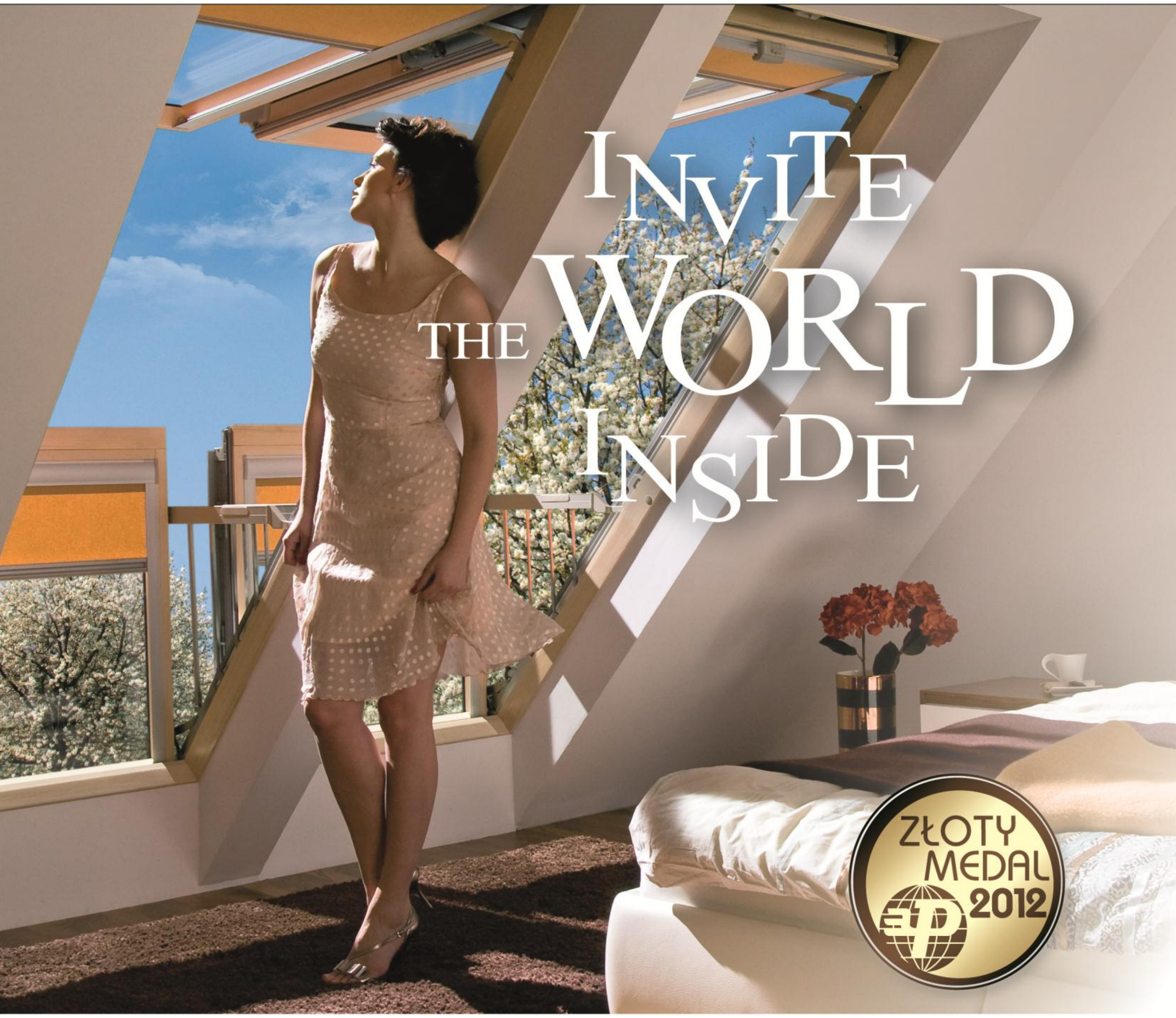

FGH-V P2 Galeria roof window
The winner of the Gold Medal of BUDMA 2012 Trade Show

↓ Integrated with lower sash, the barriers hide completely in the window structure, thus they are not exposed to dirt. No element is visible outside.

FGH-V GALERIA BALCONY WINDOW

Open your interior to the world and feel the invigorating breath. The new double-sash roof window Galeria after opening creates a balcony in the loft allowing you to experience the warmth of sunshine, fill your loft with fresh air and gain additional space.

This modern balcony window means ease of use and innovative solutions which transform the reality.

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Uw=0,7W/m²K
Whole window heat transfer coefficient calculated for reference window 1230x1480 mm
*new MS Beyond line of products with corner mitres joined at 90° to replicate the look of wooden windows
Section in the picture: Winchester XA woodgrain foil and composite warm edge spacer CHROMATECH ultra in Clay Brown finish
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energy-efficient windows

Rodline® HFL thermo

General appearance and quality determine what kind of window to choose.

New PVC window **Rodline® HFL thermo** meets these requirements.

Heat-transfer coefficient

Uw=0,75 W/m²K*

for reference window

Rodline® HFL (HolzFenster Look) - our windows stand out against the others!

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MAXimum width - 94 mm frame and 100 mm sash

MAXimum warmth - Uw 0,7 W/mK *

MAXimum multi-chamber profiles - 8 chambers **

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MAXimum safety - thanks to mushroom striker plates

MAXimum beauty - a unique design protected by law

JUST MAXTHERM

* 0,7 Wm2K per reference window with a 48 mm triple pane glass package and a thermal insert

* *– frame and sash profile

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EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

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