

EXTERIOR DOORS

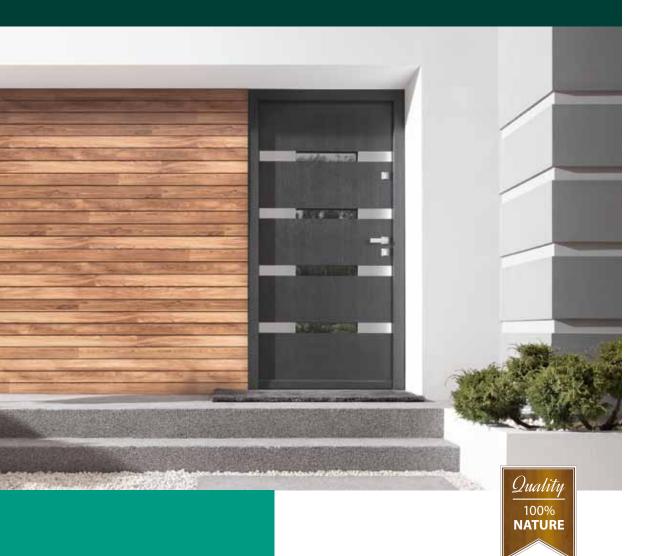






Eco Technology

Eco POLAR PASSIVE Eco POLAR Eco NORD



QUALITY CONFIRMED BY AN EXPERT

Doors, in accordance with their purpose, constitute both a boundary and a passage. They can be closed or open. There is no third option – it's simple. And in that uncomplicated situation lies the beauty.

Tracing the history of doors, with a rich diversity of their forms appearing throughout the ages can be most intriguing. Fully aware of this are contemporary designers, who seek inspirations in the past to please the various tastes of their clients. Hence the variety and wealth of offers which unfortunately can be often described as a triumph of form over content.

If we made an assumption that doors are an image of two entwining spheres, the internal and the external, we would be close to the notion of Walter Gropius, creator of Bauhaus that an object should be visually attractive as well as functional. That is not far from the views of F.L. Wright who was convinced that an object should be in composition and become one with its surroundings. That brings us very near to Corbusier or Mies van der Rohe, who became the spiritual father of minimalism and brutalism. His famous aphorism "less is more" comes to mind when looking at doors created? by the Design Department at Porta KMI Poland. They seem to follow the extraordinary masters' main assumptions. Their doors are refined in their visual simplicity and almost renaissance harmony. They represent beauty, elegance and strength, which is a rather significant factor when it comes to designing the boundary of our home which is supposed to make us feel safe. They function as if they were a synthesis of the main principles of life.

The construction of the exterior door is in agreement with L.H. Sullivan's rule, that the form is an outcome of function and it also makes these doors blend with the building, its interior and all of its surroundings.

Today's world is struggling with numerous problems, not only of the political and social kind, but also those in the energy sector. The energy expenses constantly get higher which often leads to complicated economic situations, which no longer concern state governments but also the common citizen. Saving energy is no longer an ecological trend – it has become a demand. A demand which, in turn, has converted into norm. Fully aware of this are door creators at Porta KMI Poland. The answer to these ecological and energetic requirements is passive house, a solution that is getting more and more popular. This new type of home construction originating in Germany was conceived by a German physicist Wolfgang Feist. It has been later developed and popularised by the Passive House Institute in Darmstadt.

Porta KMI Poland has prepared an offer tailored to the most challenging passive house norms, which are represented in our ECO doors range. Unlike the standard construction doors, they possess the quality of the heat retardant factor of $Ud = 0.7 \ [W/m^2K]$ in models from the PORTA Eco POLAR PASSIVE. Additionally, the ECO range doors are equipped with the innovatively designed "warm thresholds". This novelty threshold innovation is based on using materials with elevated heat retardant properties. To reinforce the exposed parts of the threshold, a profiled stainless steel sheet is used. Furthermore it is free from any type of a thermal bridge. A large part of the energetic effectiveness of the door comes from applying adequate isolating materials in door construction. Equally important is the sealing of the doors edges and application of appropriate glazing with thermal insulation. However, only the proper installation ensures a significant elevation of thermal insulation and achievement of vapour tightness. This stage is exceptionally important to the passive house design, in which the ventilation system is combined with the heat retrieval system, which recaptures all the warm air emitted by the building.

To sum it all up it is necessary to emphasize that the Porta KMI Poland doors are a conglomeration of not only exceptional design set in tradition and building a bridge to modern styles, but also they reflect the newest technological trends ensuring the safety of the user on every level of his needs concerning this seemingly uncomplicated when it comes to its function object that is the door. There is no other way.



Doctor Witold Skrzypek Graduate of the Academy of Fine Arts in Kraków, Poland Scholarship at Ecole le Beaux- Art in Saint Etienne, Scholarship of the Secretary of Culture and the Arts

INNOVATIVE ECO TECHNOLOGY

The innovative Eco Technology by Porta is summed up by six main features, which define the high standard in external doors. It is a set of tailored values creating the highest quality.

The Eco range doors are manufactured from laminated Oak and covered in natural veneer.



The Energy Efficiency makes your heating costs drop significantly.



Innovative passive technology is currently the most energy efficient solution applied in construction.



The environment-friendly solutions used during production and everyday use.



Quality for years, 3 years of warranty.



Contemporary style, tested solutions.



The highest quality guaranteed by PORTA. Innovative technology created by specialists.

THEY HAVE TRUSTED US:



Construction Brand of the Year Award 2013



Guaranteed quality. The Eco range doors are manufactured from laminated Oak timber.



BE ECO, SAVE ENERGY

Innovative Eco Technology by PORTA is a set of the highest quality materials and advanced technology, which defines the PREMIUM class exterior doors with the factor of thermal conductance of 0,7 W/m²K.

According to the National Environmental and Water Resource Fund, the houses which consume < 40 kWh/m² of energy annually are considered to be energy saving, and houses with that factor on the level of < 15 kWh/m² are passive buildings. At the same time, standard construction houses use > 100 kWh/m² of energy in the same timespan.

For external doors in single-family housing the Ud factor cannot go over 0,8 W/m²K (I, II, III Climate class) and 0,7 W/m²K (IV, V Climate class) in the NF15 standard and 1,3 W/m²K in the NF40 standard.

The 2010/31/EU Directive of the European Parliament and Council from the 19th of May 2010 on the Energy features of the buildings, instructs the Member States to reach a situation where by the end of the year 2020 all of the newly built buildings will be objects of "almost zero-level energy loss".

ESTIMATED COSTS (in PLN) OF HEATING HOUSES WITH THE USABLE AREA OF 130 sq.m., BUILT IN DIFFERENT ENERGY STANDARDS, PRICES OF FUEL FROM THE 1st QUARTER OF 2013								
Energy Source	Coal	Pellets	Natural gas	Heating oil	Liquid gas	Electricity		
The cost of heating	0,2	0,24	0,27	0,38	0,42	0,49		
Annual cost of heating a standard construction house	3120	3744	4212	5928	6552	7644		
Annual cost of heating a NF40 house	1040	1248	1404	1976	2184	2548		
Annual cost of heating a passive house	390	468	527	741	819	956		





The advantages of being Eco can reach up to thousands of (EUR?) annually saved on heating.

Eco POLAR PASSIVE





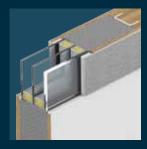
CONSTRUCTION

The board construction manufactured from Oak laminated timber.
Door leaf thickness of 80 mm.
Three seals over the perimeter of the leaf. This construction is filled with high quality expanded polystyrene.



THE LOCKTwo multi bolt locks
Anti-burglar class 4ENV.





GLAZING + BEADINGTwo-chamber glass sets
with the factor
of U=0,5 W/m²K.
The beading frame
is stainless steel.





DOOR FRAME

The door frame is manufactured from multi-layered laminated Oak The French edge by the hinges prevent the door from being unhinged.

3D HINGES



THRESHOLD

Warm threshold

Porta ThermControl*
with thermal breaks
manufactured from
selected laminated
Oak, reduces heat loss
and prevents vapour
precipitation. The
patented construction,
highest quality
components (stainless
steel) guarantee
durability and high
aesthetics for years
to come.



www.porta.com.pl/dm/ecopolarpassive.wmv





FOR PASSIVE HOMES

The door leaf surface is a unified barrier against weather conditions. The door leaf frame is made of multi-layered laminated Oak additionally reinforced with steel rails. The leaf face is protected from weather conditions by a three-layer varnishing system

This doors standard equipment includes the warm threshold **Porta ThermControl***, which is resistant to thermal bridges.

THE DOORS SPECIAL FEATURES

The door possesses anti-burglary safety measures thanks to using

- The multi-bolt class 4ENV locks
- The French edge which protects the door from being unhinged
- The anti-burglar glazing Class P4

The doors are equipped with a **triple-seal system on the perimeter**, which guarantees excellent resistance against weather conditions- wind, water and temperature.

With the help of the **3D hinges** you can ensure proper space between the leaf and the frame, both horizontally and vertically.

The version that opens inwards is equipped with a drip-stop to eliminate the flooding of the threshold during rainfalls accumulated with strong winds.

The French edge is a solution based on the specifically designed rebate (another word for "edge") on the length of the leaf and frame causing them to fit exactly, protecting against trials of unhinging the door leaf, even after the hinges have been cut off which is extremely important for the doors that open outwards.

The door has a factor of heat penetration of $Ud = 0.72 [W/m^2K]$ for the reference doors. The detailed parameters can be found in a table on page 21.







MODEL 1









size "90", "100"

EXTRA-CHARGES

- A set with a single transom
- A set with two transoms

Transom measurements—See page 21.

 ${\small * Trademark \, registered \, .}$



Eco POLAR PASSIVE

The possibilities and examples of standard and contract solutions.





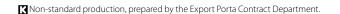
FULL
colour: Oak 5
fittings: plain handle
door handle: CORTES with "knob" grip



FULL + TRANSOM colour: Oak 5 fittings: plain handle Door handle: CORTES with "knob" grip



MODEL 3 + TRANSOMS colour: Anthracite fittings: plain handle Door handle: CORTES with "knob" grip





MODEL 3
colour: Anthracite
fittings: plain handle
Door handle: CORTES with "knob" grip















ACCESSORIES / See page 19 >
TABLE OF MEASUREMENTS / See page 21 >
AVAILABLE Colours / See page 23 >



MODEL 1
colour: RAL 6001
fittings: CORTES handles
with a standard grip



MODEL 4 + TRANSOMS colour: Tabacco fittings: CORTES handles with a standard grip

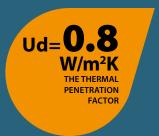


MODEL 2
colour: RAL 3000
fittings: CORTES handles
with a standard grip



MODEL 5 colour: Oak 4 fittings: CORTES handles with a standard grip

Eco POLAR





CONSTRUCTION

The doors board construction and its frame are made of laminated Oak. It is covered with natural veneer. The door leaf thickness is 68 mm. Two seals on the perimeter of the leaf. Filled with high quality expanded polystyrene.



THE LOCK
Two multi bolt locks,
Anti-burglar class 4ENV.





GLAZING + BEADING Two-chamber glass sets with the factor of

U=0,5 W/m²K. The beading frame is stainless steel.





DOOR FRAME

The door frame is manufactured from multi-layered laminated Oak.
The French edge by the hinges prevent the door from being unhinged.

3D HINGES



THRESHOLD

The Warm

Porta ThermControl*

threshold with thermal breaks manufactured from selected laminated Oak, reduces heat loss and prevents vapour precipitation. The patented construction, highest quality components (stainless steel) guarantee durability and high aesthetics for years to come.







THE ECO POLAR PASSIVE DOOF
MEET THE REQUIREMENTS
OF STANDARD NF15 (FULL MODEL
AND NF40 (GLAZED MODELS)



BE ECO, SAVE ENERGY

The door leaf surface is a unified barrier against weather conditions. The door leaf frame is made of multi-layered laminated Oak additionally reinforced with steel rails. The leaf face is protected from weather conditions by a three-layer varnishing system

This doors standard equipment includes the warm threshold **Porta ThermControl***, which is resistant to thermal bridges.

THE DOORS SPECIAL FEATURES

The door possesses anti-burglary safety measures thanks to using

- The multi-bolt class 4ENV locks
- The French edge which protects the door from being unhinged
- The anti-burglar glazing Class P4

The doors are equipped with a **triple-seal system on the perimeter**, which guarantees excellent resistance against weather conditions- wind, water and temperature.

With the help of the **3D hinges** you can ensure proper space between the leaf and the frame, both horizontally and vertically.

The version that opens inwards is equipped with a drip-stop to eliminate the flooding of the threshold during rainfalls accumulated with strong winds.

The French edge is a solution based on the specifically designed rebate (another word for "edge") on the length of the leaf and frame causing them to fit exactly, protecting against trials of unhinging the door leaf, even after the hinges have been cut off which is extremely important for the doors that open outwards.

The door has a factor of heat penetration of $Ud = 0.82 [W/m^2K]$ for the reference doors. The detailed parameters can be found in a table on page 21.





EXTRA-CHARGES

- A set with a single transom
- A set with two transoms

Transom measurements—See page 21.

* Trademark registered .



Eco POLAR

The possibilities and examples of standard and contract solutions.





FULL colour: Oak 6 fittings: curved handle, GLOBER handle with "knob" grip



MODEL 1 colour: Oak 3 fittings: CORTES handle with "knob" grip



MODEL 2 + FULL TRANSOM colour: Oak 5 fittings: CORTES handle with standard grip

Non-standard production prepared by the Porta Export Contract Department.

















- ACCESSORIES / See page 19 >
- TABLE OF MEASUREMENTS / See page 21 >
 - AVAILABLE Colours / See page 23 >



MODEL 1 + TRANSOMS colour: Oak 3 fittings: CORTES handle with standard grip



MODEL 2 colour: Oak 3 fittings: CORTES handle with standard grip



MODEL 4 colour: RAL 5008 fittings: CORTES handle with standard grip



MODEL 5 + TRANSOM colour: RAL 6001 fittings: CORTES handle with standard grip



Eco NORD





CONSTRUCTION

The doors frame-board construction and are made of laminated Oak. It is covered with natural veneer. The door leaf thickness is 68 mm. Two seals on the perimeter of the leaf. Filled with high quality expanded polystyrene.



THE LOCKTwo multi bolt locks,
Anti-burglar class 4ENV.





GLAZING + BEADING
Glass set with
a warm beading.
The beading frame
is stainless steel.





DOOR FRAME

The door frame is manufactured from multi-layered laminated Oak
The French edge by the hinges prevent the door from being unhinged.

3D HINGES



THRESHOLD

The Warm

Porta ThermControl*

threshold with thermal breaks manufactured from selected laminated Oak, reduces heat loss and prevents vapour precipitation. The patented construction, highest quality components (stainless steel) guarantee durability and high aesthetics for years to come.









BE ECO, SAVE ENERGY

The door leaf surface is a unified barrier against weather conditions. The door leaf frame is made of multi-layered laminated Oak additionally reinforced with steel rails. The leaf face is protected from weather conditions by a three-layer varnishing system

This doors standard equipment includes the warm threshold **Porta ThermControl** which is resistant to thermal bridges.

THE DOORS SPECIAL FEATURES

The door possesses anti-burglary safety measures thanks to using

- The multi-bolt class 4ENV locks
- The French edge which protects the door from being unhinged
- The anti-burglar glazing Class P4

The doors are equipped with a **triple-seal system on the perimeter**, which guarantees excellent resistance against weather conditions- wind, water and temperature.

With the help of the **3D hinges** you can ensure proper space between the leaf and the frame, both horizontally and vertically.

The version that opens inwards is equipped with a drip-stop to eliminate the flooding of the threshold during rainfalls accumulated with strong winds.

The French edge is a solution based on the specifically designed rebate (another word for "edge") on the length of the leaf and frame causing them to fit exactly, protecting against trials of unhinging the door leaf, even after the hinges have been cut off which is extremely important for the doors that open outwards.

The door has a factor of heat penetration of Ud =1,1 [W/m²K] for the reference doors. The detailed parameters can be found in a table on page 21.





EXTRA-CHARGES

- A set with a single transom
- A set with two transoms

Transom measurements—See page 21.

* Trademark registered



Eco NORD

The possibilities and examples of standard and contract solutions.





FULL colour: Nero fittings: GLOBER handle with standard grip



FULL + TRANSOMS colour: Nero fittings: GLOBER handle with standard grip



colour: RAL 1019 fittings: GLOBER handle with "knob" grip

Non-standard production, prepared by the Porta Export Contract Department.



MODEL 3

colour: RAL 1019

fittings: GLOBER handle
with "knob" grip















- ACCESSORIES / See page 19 > TABLE OF MEASUREMENTS / See page 21 >
 - AVAILABLE Colours / See page 23 >



MODEL 1
colour: RAL 7034
fittings: CORTES handle
with "knob" grip



MODEL 2 colour: Oak 1 fittings: CORTES handle with standard grip



MODEL 4 + TRANSOMS colour: Oak 2 fittings: CORTES handle with standard grip



model 5
colour: RAL 3000
fittings: CORTES handle
with standard grip

THE **Porta Synergy***TRANSOM **CONSTRUCTION SYSTEM**

In case of installation of transoms, a side edge of the transom in connection with the upper beam and the threshold becomes a part of the door frame. This innovative method of combining transoms enabled us to get rid of any thermal bridges and made the installation process much easier.

THE THRESHOLD

The warm

Porta ThermControl*

threshold with thermal breaks manufactured from selected laminated Oak, reduces heat loss and prevents vapour precipitation. The patented construction, highest quality components (stainless steel) guarantee durability and high aesthetics for years to come.









THE FRAME **OF THE TRANSOM**

The seal on the frame-leaf connection over the whole perimeter guarantees full resistance of the system to weather conditions: wind, water and temperature.

3D HINGES

3D

TRANSOM EXAMPLES

The side of the transom is determined looking at the side with visible hinges



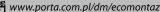






CAUTION! To ensure that all the utility properties of the external Eco door are maintained, proper operation is recommended:

- 1. The external door should be secured against direct sunlight or rainfall exposure by installing them in niches in the wall or using a roofing over the door in cases of single-surface walls. The canopy should extend over the whole area of the operating door
- and ensure protection during summertime noon sunlight.
- **2.** The distance to the nearest heater should be at least 150cm. It is recommended to leave the vestibule unheated.
- **3.** The installation is performed on ready floors in prepared wall openings after all masonry wetworks are done and the plaster wall on the walls has dried out.





www.porta.com.pl/dm/ecomontaz.wmv

ACCESSORIES

Class "B" anti-theft cylinder inserts



TYPES OF CYLINDER INSERTS

model	fittings	doors opened outwards	doors opened inwards		
Eco POLAR PASSIVE	CORTES, GLOBER	50*/50	50/45*		
Eco POLAR, Eco NORD	CORTES, GLOBER	35*/55	40/50*		

The \ast shows the side of the knob in the insert.

colour: silver matt

with standard grip

colour: silver matt

HINGE COVERS



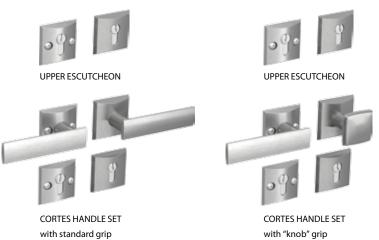
colour: silver matt (a set per single hinge)

HANDLE BARS

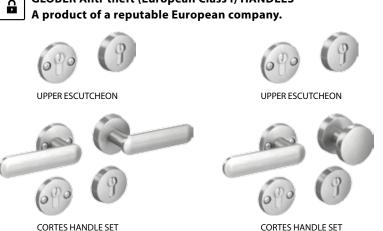
The straight and curved handle bars cannot be applied to the Eco NORD range. Installation measurements: www.porta.com.pl/dm/uchwytyeco.pdf



CORTES Anti-theft (European Class I) HANDLES A product of a reputable European company.









with "knob" grip

colour: silver matt

colour: silver matt

WARM Porta SaveEnergy* SYSTEM INSTALLATION

The Porta SaveEnergy* installation does a great job eliminating thermal bridges, securing the thermal insulation of the building from water and frost penetration. Additionally it provides the proper ventilation, which is really helpful when the differences in temperatures create moisture which is best kept out of the building. The resources used for warm installation have to meet the requirements of the so-called three-layer installation. Internal layer – vapour-tight, internal thermal insulating layer, external vapour-releasing layer. The whole thing works according to the rule – keep the inside tighter than the outside. The warm Porta SaveEnergy

installation system should be performed by a qualified and certified Installation Group.





TECHNICAL INFORMATION

Presented dimensions in PN standard.

NAME	SIZE	\mathbf{S}_{s}	H_s	\mathbf{D}_{s}	S _o	H _o	\mathbf{O}_{s}	o_w	$S_{_{\rm B}}$	H _B	T _{s/w}
Eco POLAR PASSIVE	90	967	2049	79	1090	2135	920	2010	1060	2116	
side transom	90+30	967	2067	79	1390	2135	920	2010	1360	2116	
two side transoms	30+90+30	967	2067	79	1690	2135	920	2010	1660	2116	
side transom	90+40	967	2067	79	1490	2135	920	2010	1460	2116	
two side transoms	40+90+40	967	2067	79	1890	2135	920	2010	1860	2116	
side transom	90+50	967	2067	79	1590	2135	920	2010	1560	2116	
two side transoms	50+90+50	967	2067	79	2090	2135	920	2010	2060	2116	110 / 110
Eco POLAR PASSIVE	100	1067	2067	79	1190	2135	1020	2010	1160	2116	±10/±10
side transom	100+30	1067	2067	79	1490	2135	1020	2010	1460	2116	
two side transoms	30+100+30	1067	2067	79	1790	2135	1020	2010	1760	2116	
side transom	100+40	1067	2067	79	1590	2135	920	2010	1560	2116	
two side transoms	40+100+40	1067	2067	79	1990	2135	920	2010	1960	2116	
side transom	100+50	1067	2067	79	1690	2135	920	2010	1660	2116	
two side transoms	50+100+50	1067	2067	79	2190	2135	920	2010	2160	2116	
Eco POLAR, Eco NORD	90	967	2067	68	1090	2135	920	2010	1060	2116	
side transom	90+30	967	2067	68	1390	2135	920	2010	1360	2116	
two side transoms	30+90+30	967	2067	68	1690	2135	920	2010	1660	2116	
side transom	90+40	967	2067	68	1490	2135	920	2010	1460	2116	
two side transoms	40+90+40	967	2067	68	1890	2135	920	2010	1860	2116	
side transom	90+50	967	2067	68	1590	2135	920	2010	1560	2116	
two side transoms	50+90+50	967	2067	68	2090	2135	920	2010	2060	2116	
Eco POLAR, Eco NORD	100	1067	2067	68	1190	2135	1020	2010	1160	2116	±10/±10
side transom	100+30	1067	2067	68	1490	2135	1020	2010	1460	2116	
two side transoms	30+100+30	1067	2067	68	1790	2135	1020	2010	1760	2116	
side transom	100+40	1067	2067	68	1590	2135	920	2010	1560	2116	
two side transoms	40+100+40	1067	2067	68	1990	2135	920	2010	1960	2116	
side transom	100+50	1067	2067	68	1690	2135	920	2010	1660	2116	
two side transoms	50+100+50	1067	2067	68	2190	2135	920	2010	2160	2116	

ADJUST THE DOOR TO YOUR INDIVIDUAL NEEDS AND MAKE? AN INQUIRY THROUGH PORTA CONTRACT, tel. +48/58 6778 147 or +48/58 6778 131

LEGEND

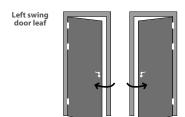
- **S**_s total leaf width, including rebates
- **H**_s total leaf height, including rebate
- **D**_s thickness of door leaf
- $\mathbf{S_{_{0}}}\ \ \text{width of wall opening ready for door frame setting}$
- Ho height of wall opening ready for door frame setting, measured from the finished floor level
- \mathbf{O}_{s} clear width of the door frame
- $\mathbf{O_w}$ clear height of the door frame
- **S**_B width of door frame, door trims excluded
- **H**_B wysokość ościeżnicy, wymiar bez listew maskujących
- ${\bf T}_{{\bf s},{\bf w}}$ permissible deviation from width/height of wall opening

NAME	MODELS	THE VALUE OF HEAT PENETRATION	TEST REPORTS	THE PN-EN 14351-1+A1 NORM TESTING
Eco POLAR PASSIVE	glazed	$U_D = 0.8 \text{ W/m}^2\text{K}$	No 043/B – 2013 – 2	Test Certificate No 043/B-2013
Eco POLAR PASSIVE	full	U _D = 0,72 W/m ² K	No 043/B - 2013 - 1	Test Certificate No 043/B-2013
Eco POLAR	glazed	U _D = 0,9 W/m ² K	No 042/B – 2013 – 2	Test Certificate No 042/B-2013
Eco POLAR	full	$U_{D} = 0.82 \text{ W/m}^{2}\text{K}$	No 042/B - 2013 - 1	Test Certificate NO 042/B-2013
Eco NORD	glazed	U _D = 1,2 W/m ² K	No 041/B - 2013 - 2	T+ C+:6:+- N ND 041/D 2012
Eco NORD	full	U _n = 1,1 W/m ² K	No 041/B - 2013 - 1	Test Certificate No NR 041/B-2013

THE SWING OF THE DOOR

The swing is determined when looking on the side with hinges.

Right swing door leaf

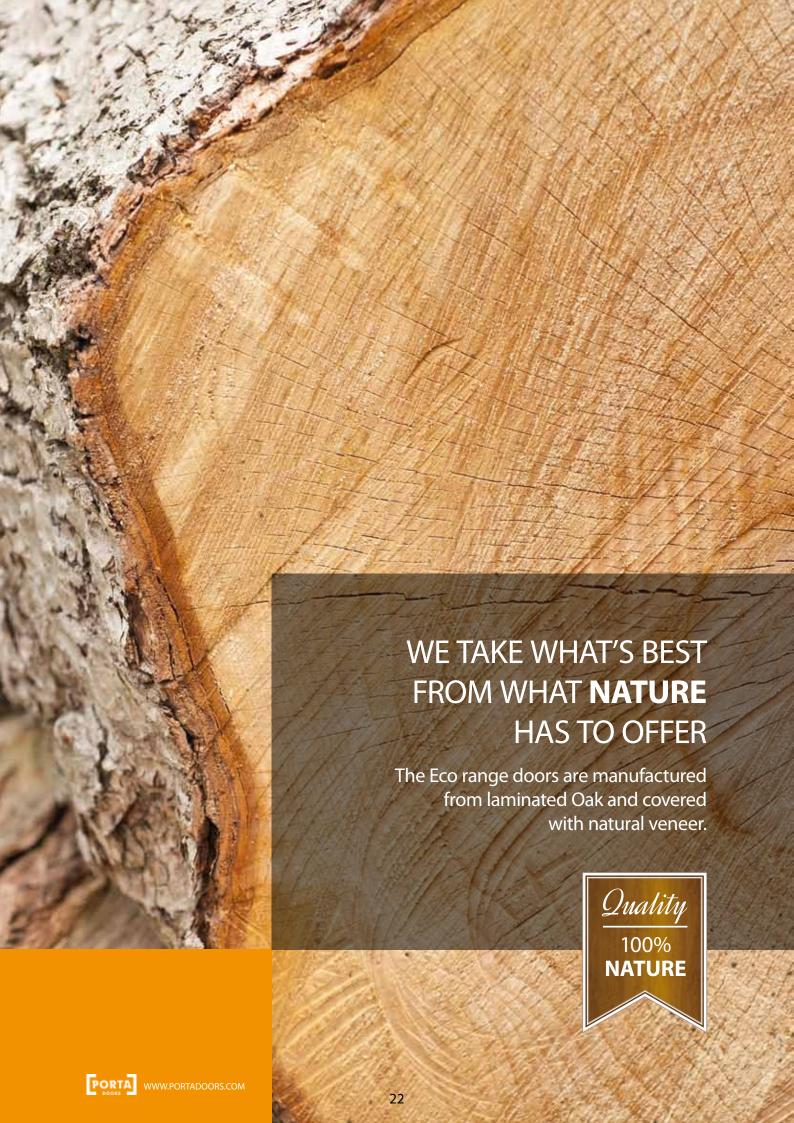


VEARS VEARS WARRANT STANDARD

The product is covered with a 24 month warranty period.

Using Authorised Installation Teams will extend the warranty for the purchased goods by additional **12 month**s).





AVAILABLE COLOURS THE 2014 TRENDS



Due to the unique character of the natural veneers and used varnishing technology there is a possibility of differences in colouring and natural veneer structure.

This product folder is not an offer according to the Polish Civil Code and cannot be applied to the case of special customer sales regulations. Porta KMI Poland Sp z o. o. S.K.A. reserves the right to change the technical parameters, equipment, prices, conditions of extended warranty periods and product specification. The information contained in this folder is up-to-date with the current technology used.

CAUTION! Due to the print technology used, the colour of the shown product may differ from the original.



www.portadoors.com | info@porta.com.pl



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