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P.A.T.H. LAUNCH
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P.A.T.H.

PREFABRICATED
ACCESSIBLE
TECHNOLOGICAL
HOMES



P.A.T.H.
BY
S+ARCK®
WITH
RIKO

FAST, GREEN, COST-EFFICIENT: PREFABRICATION APPEARS AS AN OPTIMAL BUILDING TECHNIQUE FOR THE FUTURE.

- ▲ **Quality.** In the initial planning phase, every detail of P.A.T.H. houses is subject to careful engineering and rendering. P.A.T.H. houses are produced using the highest degree of state-of-the-art prefabrication, which makes it possible to save time and money. The production P.A.T.H. houses integrate ecological high technologies, which enables to reuse the waste that is produced during the production of the houses. This allows proposing a large range of houses, each with a high level of quality and high precision.
- ▲ **Expertise.** Then, each large component of P.A.T.H. houses, such as external and internal walls, ceiling and roof structures is prefabricated in our closed, dry, computerized and rigorously controlled production facility. There, the elements are protected against the effects of weather and can be manufactured all year round, even in the wintertime. All building components are pre-manufactured to the highest degree, including the exterior façade and frame, filled with insulation and finished with closing panels. This level of prefabrication, that Riko has developed over the last twenty years, reduces considerably the duration of the on-site assembly process compared to traditional on-site building techniques, which results in better cost-control. Janez Škrabec, CEO of Riko, explains: “for more than 20 years, we have been building the different elements of our prefabricated houses and now, those of P.A.T.H. houses, in our own production facilities. In terms of technology, we work through a very precise building process”.
- ▲ **Quickness.** After the initial infrastructure has been made and the foundations laid by our teams, the assembly of the house only takes several weeks, including the roofing. After the P.A.T.H. external structure has been erected, approximately 2 months are required to finalize the electrical and mechanical installations and to equip the house with all the finishes and fit-outs selected by the owner. Thanks to this state-of-the-art production technology, the owners can move in their new wooden house only after a construction time of just 3 months, which is a record in comparison to traditional methods of on-site construction.

IDEAL HOUSE IS NO LONGER THE PRIVILEGE OF A HAPPY FEW. EFFICIENT, OPERATIONAL, TECHNOLOGICAL: P.A.T.H. HOUSES ARE AFFORDABLE ON ALL LEVELS: QUALITY, PRICE, COMMERCIALIZATION AND DISTRIBUTION CHANNELS.

- ▲ **Profitability.** P.A.T.H. houses reconcile owners' financial constraints with their desire to live within a fully personalized environment. Each P.A.T.H. house is optimized to fit perfectly the needs and desires of each customer, as well as his budget. Our website provides the client with detailed information on each model and personalization options. The "Configurator", an innovative digital tool, allows interested consumers to see all these options online: the future owner starts by determining the most adapted house model between the 2 different models of houses: Formentera (single-storey concentric residential home, with the bedrooms around the living room) and Montfort (a single-storey or double-storey residential home opened to the outside). These 2 models are declined into dozens of different styles according to the specific needs of the owners. There is also a supplementary unit to be used as a guest room, a garage or a garden studio. Philippe Starck declares: "In 34 floor plans, I wanted to provide all families with the possibility of building their dream house, while remaining loyal to their initial expectations".

In order for P.A.T.H. to answer consumer needs and adapt to every living situation of the consumers, Philippe Starck conceived 34 different floor plans, which range in sizes 140 m² to 350 m², as well as in the number of rooms, from 1 to 8. Concerning the structure of the house, customers can choose between an all-glass outer shell, a combination of wooden walls and glass surfaces and a full wooden-made structure allowing more privacy and warmth. The type of roof is also customizable, ranging from cornice to flat or pitched roof. Since they are completely modular and flexible, the choice of options by the owners varies the prices (from 2500 to 4500 euros per square meter). Thus, P.A.T.H. houses offer several possibilities of personalization for all owners. Philippe Starck states: "The scope of possibilities is very broad. It perfectly fits my vision of what a responsible creator has to do. My basic mission in life is to create open technical solutions in order to face the most important question of the future: how is it possible to provide people with the possibility to choose? In the future, trends and fashion will die. This is the reason every people must have now the capacity to make consistent choices, taking into account their expectations and ways of life, in order to be proud of the difference they have. Above all, P.A.T.H. houses provide owner with the freedom to choose".

- ▲ **Eco-technology.** P.A.T.H. houses are the second generation of ecological houses and involve cutting-edge ecological solutions. Guillaume Boutte, CEO of IRTS and expert and fully integrated photovoltaic installations, declares: "with P.A.T.H., we wanted to enhance coherence and synergy between architecture and technics. The objective of our project was to integrate the energetic system in the core of the building process". It is not an architectural demonstration but a real application of an ecological philosophy: thanks to a high eco-technology integrated into the process of conception and fabrication, P.A.T.H. houses are, above all, passive houses, serving the people who live in them.

A low consumption. Beyond the economic advantages provided by industrial prefabrication, P.A.T.H. houses integrate high ecological solution allowing their owners to reduce their daily energy consumption, in comparison with a classical construction. Indeed, our houses are BEPOS (Positive Energy Buildings) and produce more energy than they consume. This type of fabrication is the future of building; in France for instance, the 2020 Thermal Regulation will demand that all new buildings be positive energy buildings. As in the case of the prototype in Montfort, P.A.T.H. houses were first conceived to reduce energy consumption, thanks to a stronger isolation to limit thermal loss. For instance, glass facades are made of triple glazed window of 63 mm thickness, reinforced with Argon and Krypton. The wooden facade's structure and thickness depends on the climate of the region where the house is built and the energy needs of each customer. Several isolating materials are possible to use (cellulose, stone wool, glass fiber), with a thickness varying from 200 to 300 mm. This way, when the energy consumption of a standard house varies from 150 to 230-kwh/square meter today, the Montfort prototype only consumes a third of his energy, which is 44,3 kwh/square meter. In a traditional house, the needs to heat and air conditioning stand for 50% of the total energy consumption. In the P.A.T.H. houses, the excellent thermal isolation systems and other eco-technological equipment allow to reduce these levels of fossil energy down to only 17% of the total energy.

An innovative and performing solar installation. More over, in order to be a Positive Energy Building, P.A.T.H. houses need to locally produce more energy than they consume. This is the reason why we offer homeowners the possibility to add high eco-technological elements, which produce energy by themselves: solar panels, wind turbines discreetly installed on the roof, rainwater-harvesting systems etc. For example, solar energy, should it be voltaic (electricity) or thermal (hot water), is an energy source that is perfectly suited for positive energy houses and buildings. In the prototype in Montfort. Philippe Starck chose to trust two innovative French companies, DualSun and IRFITS, who were in charge of realizing a 2 in 1 solar installation, perfectly integrating the architecture into the house. IRFITS has conceived EASY ROOF, a famous universal system to integrate photovoltaic, thermal and hybrid modules that was specially thought for architects and BEPOS houses constructors. EASY ROOF is a 100% recyclable and is made for the two modules of DualSun to perfectly integrate into the architecture. The hybrid solar panel DualSun integrates into the roof and provides electricity and hot water for housing. It produces 2 to 4 times more energy than a traditional solar panel. The prototype in Montfort is equipped with 58 EASYROOF frames, among them 36 DualSun panels and 22 standard photovoltaic panels, producing 11,8MWh of electricity per year. With this equipment, the house is not consuming but producing energy. Indeed, the 36 DualSun panel answer the house's needs in hot water and heating. The heating system is set in low temperatures, and perfectly adaptable to DualSun modules. The panels produce enough energy to cover 70% of the hot water needs and the system is coupled with a gas boiler that can be used as a complement when the weather is not sunny. True to his philosophy of elegance of the minimum, Philippe Starck has designed a cornice to be integrated into the roof in order to make this system invisible to the eye.

An elegant and intelligent wind turbine energy. Wind turbine energy is free and clean: it is available in the nature, without being subject to market changes or extraction or transportation costs, and it contributes to a significant reduction of carbon dioxide. P.A.T.H. house can be equipped with mini-wind turbines created by Philippe Starck and developed by the company Pramac. As the youngest generation of vertical wind turbines « Darrieus », these mini-wind turbines are available in 2 models (450 Watt and 1000 Watt) and integrate an innovative design. Discreet and perfectly silent, they function regardless of the wind direction and are perfectly adapted to individual houses and urban areas. The Pramac wind turbines can also be used in touristic areas, commercial buildings, administrative centers where they can reduce the costs of energy consumption and environmental impact. They represent an intelligent way of converting wind energy into electricity and compel with daily energy needs.

A high performing heating furniture SPEETA, a new start-up of the IRFTS group was born with the will to conceive a global renewable energy offer. With the P.A.T.H. house SPEETA presents the first concept of high performance heating furniture, SPEETBOX, which is able to answer the needs of low energy buildings and is compatible with the RT 2012. These stoves are a true innovation. Today, the energy efficiency of a basic chimney is very limited (about 15%). A SPEETA stove gives an efficiency of 79%, thanks to its electronic monitoring and its ventilation system, which blows warm air. It provides a heating period of up to 3 days, which makes it possible to avoid heat peaks, while consuming far less energy. Personalization is at the center of SPEETBOX, in order for each homeowner to conceive the house according to his or her ideas. It is unique because SPEETBOX and its models are fully customizable: material, color, handle, feet, storage options etc. Set on a stove, complementary modules gravitate around it in order to bring additional functions and endless possibilities: heat accumulation, wood storage, relaxing (music, aromatherapy etc.) Thus, SPEETA stoves illustrate perfectly what P.A.T.H. houses provide above all: the freedom to choose.

- ▲ **Assistance.** We have not only been working on the quality, technology and environmental responsibility of P.A.T.H. houses, but also on the quality customer service. This is the reason why we can guarantee a detailed and continuous monitoring provided by a member of our team at each stage of the house building-process, thanks to a whole network of official local distributors who crucial intermediate link between the client and us. This network has already extended to most European countries (France, UK, Germany, Spain, Italy,) and is growing further. Our objective is to provide our clients with a real local support, with distributors providing services within a 35 km range. Thanks to the distributors, we are able to take over the entire building process in order to deliver turnkey homes in record time: expertise and guidance to the customer with regards to technical details of the house and its available options, procedures to obtain all the necessary construction permits and conditions, construction site supervision and supply, from the foundations to the house finalization, after-sales service etc. Janez Škrabec, CEO of Riko, explains: “we work with several partners, who will ensure the delivery of the products within the deadlines. They will help the consumers to obtain their building permits as well as various ecological subsidies”.

A STATE-OF-THE-ART PREFABRICATION PROCESS, A SMART DESIGN, ENVIRONMENTALLY FRIENDLY BUILDING MATERIALS, INTEGRATED RENEWABLE SOURCES OF ENERGY USING: P.A.T.H. HOUSES INTEGRATE THE LATEST TECHNOLOGY TO SERVE OUR CLIENTS AND THE ENVIRONMENT.

- ▲ **Engineering.** P.A.T.H. houses are the brainchild of engineers more than that of architects. They were inspired by the experience and technological challenges shared by Philippe Starck and Riko over the last decades. In order to develop P.A.T.H., Riko has capitalized on 20 years of experience in the prefabricated sector and selected dozens of engineers and experts highly qualified in the sustainable housing sector. The foundations of the house, like wooden walls, ceilings and steel frameworks, are designed with hsbCAD, a software of CAD/CAM (Computer-aided design/Computer-aided manufacturing), specialized in wooden work and depending from AutoCAD® Architecture in order to design in the house's foundations in 3D. The hsbCAD software then allows designing very precisely every detail of the house, according to the future house owner. As soon as the conception phase is completed, we transfer the data to our digital machine, which are the fastest and the most flexible on the market (Weinmann WBS 120, Hundegger K2i, etc.).
- ▲ **Exigency.** Thanks to their technical characteristics, P.A.T.H. houses are the most complete solution on the prefabricated-housing market. Riko's expertise has been playing a major role in the technological conception of P.A.T.H. Beyond this state-of-the-art engineering, every detail is considered in advance, such as the switches, which are prefabricated and drilled with the highest degree of precision. Since the beginning of the conception process, P.A.T.H. project has been thought to be a holistic solution, an equation. Nine principles of building a house have been steering us in this direction: environmental and social responsibility, carbon neutral, high energy efficiency, affordable quality design, affordable high living standards, state-of-the-art technology house, customized prefabricated house, save time and money, complete assistance. No other operator on the market fulfills all these criteria and items simultaneously, for such a right price.
- ▲ **Responsibility.** The process and materials used to build P.A.T.H. houses are environmentally friendly. For instance, wooden-made structures and insulation materials deriving from wood fibers or cellulose received the Forest Management certification, awarded by the Forest Stewardship Council (FSC), an independent and non-profit organization that promotes a responsible management of the world's forests. Moreover, the manufacturing of the large wooden panel elements is less polluting than classical on-site construction: shorter construction time, lower embodied energy thanks to the carbon sink effect of the forest (about 25% less), lower consumption of water and energy both during fabrication and on-site assembly, lower amounts of solid waste (about 40% less), lower global warming potential than a concrete built house...

ADAPTABLE, CUSTOMIZABLE, SUSTAINABLE: P.A.T.H. HOUSES DEPLOY THEIR FULL RANGE OF SKILLS IN SUPPORT OF CUSTOMERS, FROM THE SETUP OF THE PROJECT TO THE HOUSE FINISHES, IN ORDER TO FIT PERFECTLY THEIR NEEDS, DESIRES AND SPECIFIC EXPECTATIONS.

- ▲ **Adaptability.** P.A.T.H. houses are the only prefabricated housing solutions to let owners play a preponderant role during the creation and building processes. We wanted to make the design of P.A.T.H. houses as flexible as possible, so that they can perfectly fit to every kinds of cultural and architectural environments. Janez Škrabec declares: “we consider that P.A.T.H as a universal project and we developed models, which can be implemented under different environmental and climatic conditions and within both urban and rural contexts”. The wide range of personalization possibilities makes P.A.T.H. houses fully adjustable to take into account local norms and specific land’s characteristics.
- ▲ **Personalization.** With P.A.T.H., future owners are given the opportunity to emphasize their choices at each stage of the house building, from the initial structure to the last material and finishes. This flexibility is at the core of the valorization of human freedom advocated by Philippe Starck, who explains: “With P.A.T.H., we wanted to reach out to the largest possible public. This is the reason why I decided not to make any architectural gesture here. I didn’t want to impose anything to anyone. The architectural possibilities are very broad and flexible. For instance, the Montfort features a cornice. But other kinds of roofs are also available, single or double-pitched. The cornice-roof achieves a large number of benefits for customers. In fact, over and above the architectural tour de force, the cornice is intended to hide the whole energy producing system, which is a real factory”. The owner can choose between lots of façade and roof types, heating systems, finishes on the interior walls and ceilings... all selected by Philippe Starck, whose expertise and experience guarantee optimal proposals. Moreover, we propose different kinds of lighting systems and tiles in kitchens and bathrooms. These options provide almost countless mixing and matching possibilities, so that each owner can create his own fully customized house, according to his needs, desires and specific expectations.
- ▲ **Sustainability.** Contrary to the preconceptions or unfounded speculation on prefabrication, P.A.T.H. houses are designed for durability. Philippe Starck defends the notion of « providing the community with the best product, in terms of quality, technology and durability”. “We gave priority to the idea of creating a style that would still be acceptable and appreciated in 50, 100 or even 200 years”. It was much more than style that influenced the development of the concept, rather it was our vision and imagination of what a new route, a new way of apprehending individual housing should be. Thus, we invented a turnkey living solution, which would be built with the right materials, made in irreproachable quality, produced with the best process that technology has to offer and sold at the right price. Philippe Starck concludes: “with Riko, we got to the point of the matter, with the intelligence of the minimum, in order to achieve this equation between quality and right price”.

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