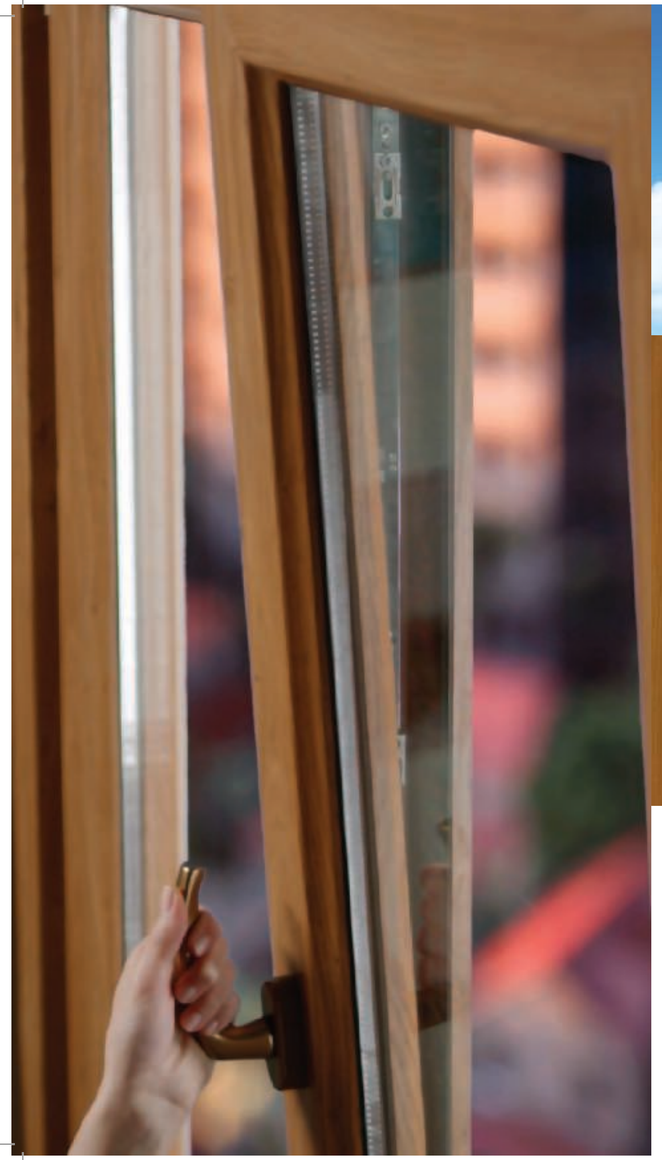


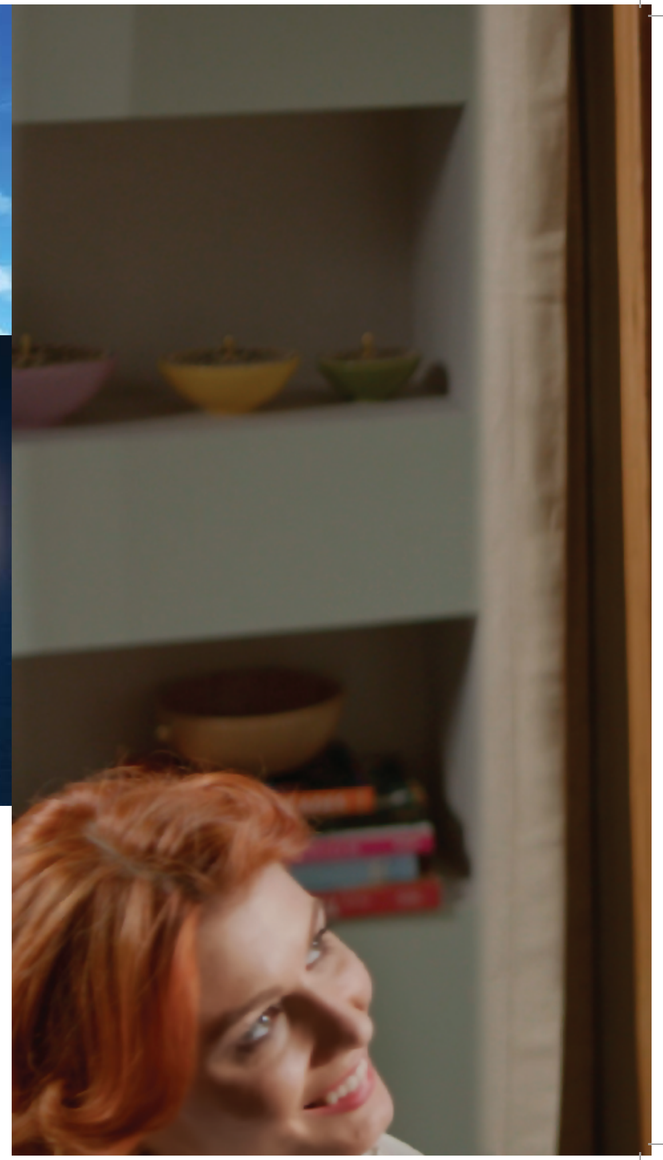

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FIRAT

## S75 POWER WINDOW AND DOOR SYSTEM

AN ERA OF HIGH PERFORMANCE

### S75 POWER

The construction technology keeps creating solutions in order to increase the comfort in the living spaces, at the regions exposed to harsh climatic conditions. Both the geography we live, as well as the elevation we are located are exposed to the high wind loads, that's why they are very important for our living comfort. We prefer non-problematic systems having the best performance, high insulation, durable and requiring less maintenance. Power 75 was developed in the way that strength and performance would follow you for years. Firatpen S75 Power line, the symbol of power and aesthetics in PVC window and door systems, was designed for the high rising elite projects which require high wind load resistance, and it is the ideal system which can easily solve the architectural details even in the hardest conditions and meet the requirements of all the specifications with the high performance values. A new high performance era has started with Power 75 line which interprets new life comfort with a different understanding of insulation.


### SYSTEM PROPERTIES

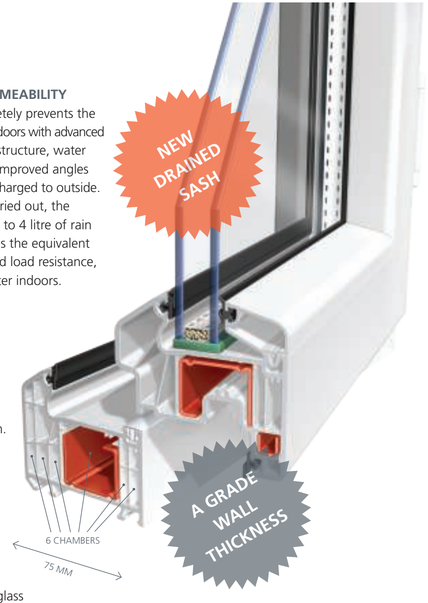
S75 Power system has been developed for superior performances with A class wall thickness, 6 chambered design and 75 mm profile width. It easily solves all the architectural details with its detailed and auxiliary profiles. It offers 21 different laminated color options, for your decorative taste inside and outside of the buildings. Water permeability to the indoors is completely prevented even in the hardest downpours by the help of water discharge channel sets which are specially designed for the system.

### WIND LOAD RESISTANCE

Profile thickness, external measurements, number of chambers and glass systems which might be used, was carried out for the harshest climatic conditions during the S75 Power series development. Wall thickness was determined to be class A in order to meet the required inertia values and reinforcement steel's chamber measurements were developed for the harshest conditions. S75 Power System successfully passed the 3.000 Pa (245 km/h) safety test with its high resistance values and easily entered into C3 class in the wind load resistance classification.

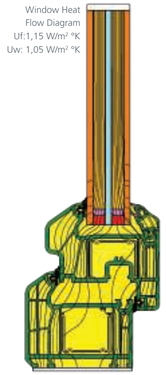
### WATER AND AIR IMPERMEABILITY

S75 Power system completely prevents the rainwater permeability to indoors with advanced water discharge channel structure, water flow route and sets with improved angles so that water is easily discharged to outside. As a result of the tests carried out, the window which is exposed to 4 litre of rain water per minute, which is the equivalent of 600 Pa (110 km/h) wind load resistance, did not permeate any water indoors.




### HEAT INSULATION

Thermal conductivity was considered among the most important criteria for highest level of performance while the S75 Power systems design. Glass units up to 40 mm could be applied by the help of the system's specific glazing bead profiles. The system gives high insulation values with profile design, number of chambers and the opportunity of using glass units up to 40 mm. It is possible to reach the values of Uf: 1,15 W/m²K - Uw : 1,05 W/m²K with S75 Power system. (Not: The calculation has been made in accordance with the EN ISO 10077-2 Standard in the measurements of 1,23 x 1,43 m and using Ug: 0,6 W/m²K glass.) S75 Power is a good investment being an aesthetical and useful construction element as well as providing a high insulation which pays off itself in a short time.




### SOUND INSULATION

One of the most important comfort criteria is the sound insulation in the places where comfort and quality should be at the highest level. The noise in the external environment tires us and affects our sleep pattern even if we do not realize it. S75 Power system was designed by considering the acoustic performance criteria and high acoustic insulation up to 38 dB reached in the areas such as airports, railroad, highways where noise levels are high, especially with the use of glass units with high acoustic properties. Power 75 series aims to create a comfortable living space by isolating it completely from the external environment.

## COLOUR AND DESIGN CHART

WALL THICKNESS
**A GRADE**

PROFILE WIDTH
**75 mm**

NUMBER OF CHAMBERS
**6 pcs**

SOUND INSULATION
**38 db**

AIR PERMEABILITY
**CLASS 4**

WATER IMPERMEABILITY
**CLASS 9A**

PROFILE HEAT INSULATION
**1,15 W/m² °K**

WINDOW HEAT INSULATION
**1,05 W/m² °K**

WIND LOAD RESISTANCE
**CLASS C3**

The calculations were made by using a glass unit with a thermal conductivity coefficient of **0,6 W/m² °K** for a window with dimensions of **1,23x1,43 m** in accordance with the standard **TS EN ISO 10077-2**.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## S75 POWER SERIES PROFILES