CHARACTERISTICS OF PONZIO AND ALUPROF SYSTEMS

I. PONZIO aluminum profile systems.

1. PF152 – post-and-beam construction system for manufacturing curtain walls, roofing and skylights, classified to RMG 1.0 material group. Width of posts and transoms is 52 mm. Outer easels are 51 mm wide. The system provides for solutions with steel and wooden substructure. Opportunity to use 2÷40 mm fillings. Opportunity to manufacture a 'cold' version of façade. Opportunity to use solutions for a spandrel with EI30/EI60/EI120 tightness and fire rating (insulation).

2. PF 152EI – PF152 post-and-beam fire resistant wall system. The system has been classified in fire resistance of curtain walls in full configuration. Classified in EI60 and EI30 class. The system allows for manufacturing fire curtain walls with glazed opaque inter-floor belts. EI30 or EI60 fire protection panes might be used as transparent fillings.

3. PF 152HI – post-and-beam curtain wall system with improved thermal insulation, most frequently used in energy efficient constructions. A special thermal element structure made of plastic bands covered with low emission coatings was used. The framework heat transfer coefficient for Uf profiles reaches the value from 0.6 W/m²K (using 5 tapes and for 56 mm thick filling) to 0.97 W/m²K (using 3 tapes and for 28 mm thick filling).

4. NT 152SG – post-and-beam construction system for manufacturing structural walls, classified in RMG 1.0 material group. Wall structure is based on 52 mm wide transoms, full posts and half posts. Several possibilities of glass pane assembling are used in the system: structural bonding, mechanical gripping. Opportunity to use 6, 26 and 28 mm thick filling. Opportunity to use solutions for curtain walls in full configuration, with EI60 tightness and fire rating.

5. PF 152ESG – frameless curtain walls with structural bonding – system for manufacturing light curtain walls and other spatial structures. Functioning as a load-bearing element, it uses the post-and-beam construction of PONZIO PF 152 system and its wide range of profiles. On the outside PONZIO PF 152ESG is a smooth, seamless glass wall divided by 22 mm wide vertical and horizontal lines (using weatherproof silicone) or 28 mm wide lines (using a systemic closing gasket). Opportunity to use 26 or 28 mm filling, single glazing. Two types of wall surface finish: siliconing or a custom-made masking gasket.

6. PF 152WG – a system for creating winter gardens and other spatial structures. The roofing structure might be manufactured using façade profiles, which were also used in PF152 system or based on PF152WG systemic profiles for inverted rafters. The entire system might be based on façade pillars, pillars of door and window systems as well as on PF152WG strengthened systemic pillars. A roofing rafter system allows for using standard glazing beads from door and window systems. Rafters are connected with spandrel beams in an identical way as in the case of PF152 façade system. Roofing elements are assembled using a hinge connection on the wall beam and system fittings on the eaves beam with a systemic eaves gutter. The roofing system is fully compatible with sliding and window systems available in PONZIO system.

7. PE 40 – aluminum profiles system without thermal insulation. Used in creating indoor structures: light partition walls and glazing as well as single- and double-wing clad doors. The constructional depth of the profiles is 40 mm. Available fillings: 1÷26 mm.

8. PT 50 – aluminum profiles system without thermal insulation. Its main purpose is making interior construction: vestibules, ticket box offices, displays and partition walls. It is also used for making sliding doors (automatic or manual sliding), swinging doors and smoke-tight doors. Structural depth of profiles for frames and wings is 52÷60 mm.
Available fillings: 1÷40 mm.

9. PT 52 – a system for making outdoors construction elements that require thermal insulation. Structures developed in PT 52 system are classified in RMG 2.1 material group. Depth of profiles for frames and wings is 52÷60 mm.

10. PE 52 – the system involves three-chamber profiles with a fitting groove in the standard 'Euro' version and a fitting groove used in window and balcony door PVC profiles.
Structural depth of profiles is 52 mm for frames and 60 mm for wings. Opportunity to use 10÷43 mm fillings.

11. PT 60 – a three-chamber system for making outdoors construction elements requiring thermal insulation: vestibules, displays, windows and balcony doors.
It allows to develop structures classified in RMG 2.1 material group. Structural depth of profiles is 60÷68 mm for wings and 60 mm for frames. Opportunity to use 8÷48 mm fillings.

12. PE 60 – a three-chamber window system. Its structure is similar to PT 60 system with a 'Euro groove'. The system allows for fittings for pitched, arched, circular, tilt&turn and tilt&slide windows as well as improved, 2nd class anti-burglar windows. Structural depth of profiles is 60÷68 mm for wings and 60 mm for frames.

13. PE 68 – a three-chamber, thermally insulated system for making outdoors construction elements, classified in RMG 2.1 material group. The system involves 24 mm profiled thermal separators. It also uses a sliding separator compensating stress caused by temperature difference between the outside and inside element of the complex profile, which protects the wing from losing surface flatness. Structural depth of profiles for frames and wings is 68÷76 mm. Opportunity to use 16÷56 mm fillings.

14. PE 78 – the system involves four-chamber structure profiles with a fitting groove in the standard 'Euro' version. It is used in windows and doors with particularly high thermal insulation requirements. Structural depth of profiles is 78 mm for frames and 86 mm for wings. The four-chamber structure and additional strengthening elements allow the system to make large-dimension structures. Opportunity to use 23÷61 mm fillings. Window wings are integrated on the outside.

15. PE 78EI – a three-chamber structure system for making indoor or outdoor firewalls. The system allows for using single- and double-wing doors. Structural depth of profiles for frames and wings is 78 mm. 8÷42 mm fillings are used.

16. PW 85Wood, PW 93Wood – aluminum-wood thermally insulated systems for making outdoors construction elements. The systems are classified in RMG 2.1 material group on account of their thermal insulating power. Structural depth of profiles for frames and wings is 62÷85 mm (PW 85Wood) and 70÷93 mm (PW 93Wood). The systems combine the merits of aluminum and wood. PONZIO 93Wood uses tropical timber covers with high weather resistance.

17. Sliding 600, Sliding 600tt EVO – system with no thermal insulation for making indoors construction elements, mostly for various types of sliding windows and doors (Sliding 600) and for outdoors construction with necessary thermal insulation (Sliding 600tt EVO). The offer also includes two- and three-track frames for a greater number of wings in one frame. Structural depth of profiles for frames and wings is 31÷96 mm (Sliding 600). For Sliding 600tt EVO system, structural depth of profiles for wings is 46 mm, for two-track frames – 73/95 and for three-track frames – 131,5/153,5 mm.

18. Sliding 900TT – a thermally insulated system for outdoors construction, mostly for various types of sliding windows and doors. One-, two- and three-track frames. The constructional depth of the profiles is 90÷142 mm. Opportunity to use 4÷26 mm fillings.

19. Sliding 1200TT – a thermally insulated system for making outdoors lift&slide construction elements. The constructional depth of the profiles is 50 mm in case of wings and window bars, 120 mm in case of two-track frames and 184 mm for three-track frames. The system allows for making 2-, 3- and 4-track large dimension structures up to 250 kg in weight. Opportunity to develop structures with a low threshold.

20. Sliding 1600TT, Sliding 1600TT HI – lift&slide systems for making outdoors construction elements. High resistance of the profiles allows for making large dimension structures, even 6-winged ones. The constructional depth of the profiles is 67 mm for wings, 160 mm for two-track frames and 247 mm for 3-track frames. Opportunity to use up to 51 mm fillings. The purpose of Sliding 1600TT HI system is making structures meeting particularly high requirements as regards thermal insulation.

21. Fire-rated door with a face plate – a solution for the most demanding customers used in PONZIO PE 68 and PONZIO PE 78 N systems. The solution allows for a smooth surface of a door wing. After the filling is bonded, the wing is integrated with the frame. A wide range of panel patterns is available.

II. ALUPROF SA aluminum profile systems

1. MB-TT50 – façade system. Opportunity to make 'transom-transom' type of structures. The posts and transoms are 50 mm wide. Depth of profiles: posts - 65÷245 mm, transoms - 64÷244 mm. Opportunity to use 24÷64 mm fillings.

2. MB-SR50N, MB-SR50N HI+ – a façade system for making light, suspended and filling curtain walls, as well as roofing, skylights and other spatial structures. MB-SR50N HI+ boasts improved thermal insulation due to special insulators. Profiles are 50 mm wide, profiles of posts are 50÷325 mm deep and transoms are 5÷189.5 mm deep. 24÷56 mm fillings are used. The façade allows for assembling tilt&turn, turn, tilt windows, ones with a hidden wing, pivot windows, hinged windows, hinged and ejected windows, integrated windows, roof windows, windows opening inwards and invisible from the outside.

3. MB-SR50N EFEKT – semi-structural façade. The load-bearing structure is based on MB-SR50N post-and-beam system. Vertical and horizontal slits between the panes are filled with special silicone binding material, which gives a smooth and seamless appearance of one glass pane. Fillings from 24 to 56 mm. Allowed glass pane weight is 450 kg.

4. MB-SR50N IW – post-and-beam curtain walls with a hidden integrated window. The system is structurally linked to MB-SR50N façade. 85÷125 mm wide posts, 89.5÷129.5 mm wide transoms. 50 mm or 46 mm masking profiles are used, or 20 mm wide weather resistant silicone filling. 28÷36 mm thick filling is provided for the windows.

5. MB-RW – roof windows. Windows in this system are made for assembly in roofs assembled with post-and-beam systems of MB-SR50N and MB-TT50 groups, with 3˚ to 75˚ slope angle. The maximum dimensions of windows in the rafter/purlin axes up to 2.5 m, weight up to 200 kg.

6. MB-SR50EI, MB-SR50N EI – post-and-beam systems for making light curtain firewalls in classes: EI15, EI30, EI45, EI60. The solutions are based on mullion and transom profiles for basic ALUPROF façade systems. 15÷52 mm thick fillings are provided for. 42÷52 mm fillings in roofs.

7. MB-SR60N – glazed roofing system (multi-hipped roofs, ribbon shaped skylights, domes combined with vertical walls). Opportunity to combine adjacent plots in the range of 0˚ to 20˚.

8. MG-SG50 – a system for making structural walls giving an impression of a completely glazed surface. Fillings are at a 16 mm distance from each other, the visible width of profiles from the inside is only 85 mm. The

system matches the MB-SR50 profiles system (they might be installed next to each other). The panes are bonded to the frames using special structural silicone.

9. MB-SG50 SEMI – semi-structural curtain walls. The system provides for sealing each filling element in the place of junction with the load-bearing structure using gaskets with EPDM. The profiles have a double gutter system for channeling drip from the chambers between the fillings as well as from transoms and mullions.

10. MB-WG60 – system for building winter gardens, also orangeries, verandas etc. The basic load-bearing profiles, so-called rafters are shaped in the form of an inverted T finished with a 20 mm radius arc on the outside of a building. The rafters are connected with the purlin profiles and hinge profiles leant on the eaves beam and the wall beam in a cascade way. The roof slope angle is 7˚÷45˚ from the horizontal. The glazing range is 24÷36 mm.

11. MB-45 – a system for making indoors construction elements without thermal insulation: partition walls, windows, doors, vestibules, displays, boxes etc. The constructional depth of the profiles is 45 mm (frame) and 54 mm (wing) and for the doors, respectively, 45 mm and 45 mm.

12. MB-45 OFFICE – a system for making indoors partitions. Tempered glass might be the load-bearing element of the structure. The system allows for making permanent walls as well as all-glass turned and swinging door wings.
Structural depth of the profiles is 45 mm.

13. MB-EXPO – glass partition walls for making indoors partitions with all-glass doors. Tempered glass assembled in clamp profiles is the load-bearing element of the structure. The maximum height of the structure is 4 m, the maximum width of a door wing is 1.4 m. Two groups of profiles, 36 mm and 100 mm high (from the floor level) are used to assemble the panes. The structural depth of the profiles is 33 mm (for 36 mm profiles) and 35 mm (for 100 mm profiles).

14. MB-60, MB-60HI – door and window systems for making windows, doors, vestibules, displays, spatial structures. The systems are closely related to MB-45 and MB-70 systems. Three-chamber profiles with structural depth for windows: 60 mm (frame), 69 mm (wing) and for doors: respectively, 60 mm and 60 mm. This depth guarantees an impression of one surface from the outside after closing - in case of windows and integrated surfaces of wings and frames - for doors. The system allows to manufacture large-dimension doors - 2800×3300 mm size and 1500 mm wide wings. Opportunity to use 14 mm to 50 mm panes for windows and 5 mm to 41 mm panes for doors.

15. MB-60EF, MB-60EF HI – window in MB-SR50 EFEKT façade – the aluminum window frame is clearly visible on the external surface of the all-glass façade. The external surfaces of the profiles and panes are located on one surface.

16. MB-60US, MB-60US HI – window with a hidden wing

17. MB-60 Industrial, MB-60 I industrial HI – a window system for monumental facilities. The profiles are enriched with additional decorative elements, the appearance of which resembles steel windows.

18. MB-60E, MB-60E HI – budget doors. The system guarantees good technical parameters while maintaining a low cost level and decreased duration of door production.

19. MB-60 PIVOT – a system for making windows with a vertical or horizontal rotation axis. Scopes of dimensions: for rotating windows with a horizontal rotation axis: 800 to 2000 mm height and 500 to 2400 mm width. Maximum weight: 180 kg.

20. MB-70, MB-70HI – a system of doors and windows with high thermal insulation power and three-chamber profiles. The constructional depth of the profiles is 70 mm (frame), 79 mm (wing) and for the doors respectively: 70 mm and 70 mm. The system has a low heat transfer coefficient value Uf – from 1.03W/m²K. The system involves omega-shaped, profiled thermal separators, 34 mm wide for windows and 24 mm wide for doors. Available pane sets: 23÷60 mm thick (windows) and 15÷51 mm thick (doors). The 70 system also includes: MB-70US and MB-70US HI – a window with a hidden wing, MB-70 Industrial, MB-70 Industrial HI – systems for monumental facilities with decorative elements the appearance of which resembles steel windows, MB-70SG - windows with wing profiles invisible from the outside.

21. MB-86 ST/SI, MB-86 AERO – a door and window system involving aerogel - a material with excellent thermal insulation properties. The system's merits also include high resistance of the profiles allowing to make structures with large dimensions and weight. MB-86US windows with hidden wings are also available. Profiles for making panel doors are available in the system.

22. MB-104 PASSIVE – a door and window system for passive construction, with excellent thermal and acoustic insulation properties, air- and water-tight. Structural depth of profiles for windows is 95 mm (frame) and 104 mm (wing). The profiles have a three-chamber structure. The central chamber of the profiles is filled with an aerogel filling in MB-104 Passive AERO system. Pane thickness range: window frame from 25.5 mm to 72 mm, window wing: from 34.5 mm to 81 mm. The windows have been granted certificates of PHI Darmstadt Passive House Institute.

23. MB-77HS, MB-77HS HI – lift&slide balcony doors system. The structural depth of profiles for the doors is: 77 mm (wing), 174 mm (2-track frame) and 271 mm (3-track frame). The maximum dimensions of door wings are: HS = 3.2 m, Ls = 3.3 m, maximum wing weight = 400 kg.

24. MB-SLIDE, MB-SLIDE ST – sliding door and window systems. The maximum wing dimensions: H = 2600 mm, L = 1800 mm, wing weight = up to 160 kg. Glass package thickness up to 26 mm.

25. Folding doors – the basic profiles have a three-chamber structure. Structural depth of the profiles depends on the selected system and is: from 45 mm (frame), 54 mm (wing) in case of MB-45 to, respectively, 77 mm and 86 mm for MB-86. Glazing thickness is from 4.5 mm to 67.5 mm. The maximum length of the running track, which conditions the total width of doors is 6000 mm. The maximum width of an active wing is 1230 mm, the maximum width of a folded wing is 930 mm. The maximum height of wings is 2430 mm. The maximum weight of an active wing with ROTO ALU 540i fittings is 130 kg.