



Window replacement in Milan

Improved energy efficiency for three apartment blocks.

The tax allowance known as the "Superbonus 110" permitted the extensive refurbishment of the "Tre Case", the "Three Houses", as the Milanese call the three-part building complex built in 1980. The refurbishment of some 800 windows along with the roller shutters and roller shutter boxes significantly optimised energy usage: the PVC in the frame core and the high-quality glass mean that the new windows offer outstanding insulation. The houses were also upgraded aesthetically, with the owners permitted to choose different types of frame materials, shapes and handles via a questionnaire.

Thanks to Finstral's innovative installation method, the replacement operation was quick, smooth and straightforward. The wooden frames of the old windows were not integrated into the masonry and could therefore be completely removed. The new frames were then simply mounted and screwed onto the existing metal frames, after which the sash was fitted.

Type of building Multiple-family dwelling

Construction 2022

Project Window replacement

Planning Cusati Mauro

Country Italy
Region Milan
Locality Fizzonasco
Photographer Meraner & Hauser



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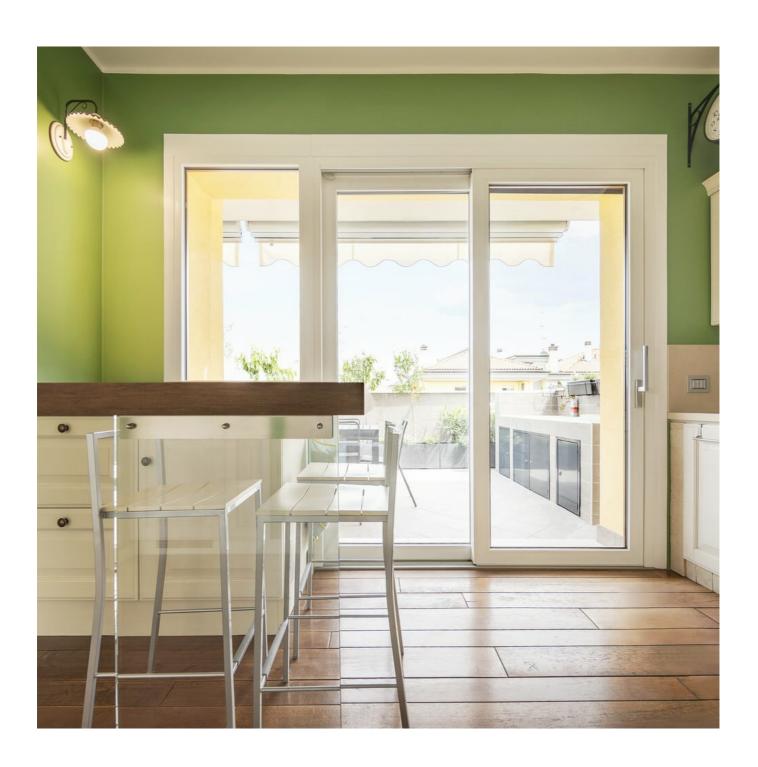




















Products used

 $\mathbf{U}_{\mathbf{w}}$ - Heat transmittance coefficient of window element

 $\mathbf{R}_{\mathbf{w}}$ - Sound insulation properties of a window

npd - No performance determined



FIN-Project Nova-line Plus 78/95

aluminium-wood

 $\begin{array}{ll} U_W \text{ 1-sash 2-/3-glazing:} & - \text{ / 0,77 W/m}^2 \text{K} \\ U_W \text{ 2-sash 2-/3-glazing:} & - \text{ / 0,91 W/m}^2 \text{K} \end{array}$

 $R_{\rm W}$ Standard: 33 (-1;-4) db $R_{\rm W}$ Best value: 43 (-2;-6) db



FIN-Window Nova-line 77+8

aluminium-PVC

 $\begin{array}{ll} U_W \text{ 1-sash 2-/3-glazing:} & 1,2 \text{ / 0,78 W/m}^2 \text{K} \\ U_W \text{ 2-sash 2-/3-glazing:} & 1,2 \text{ / 0,89 W/m}^2 \text{K} \end{array}$

 $R_{\rm W}$ Standard: 36 (-2;-5) db $R_{\rm W}$ Best value: 45 (-1;-3) db



FIN-Window Classic-line 77

PVC-PVC

 $U_{\rm W}$ 1-sash 2-/3-glazing: 1,2 / 0,75 W/m²K $U_{\rm W}$ 2-sash 2-/3-glazing: 1,2 / 0,85 W/m²K

 R_{W} Standard: 32 (-2;-6) db R_{W} Best value: 45 (-1;-3) db

Product data sheets and more information at www.finstral.com/range