

Exterior Roller Shutter with Internal Winding

Background and objective

Created in 1923 to build and manage low-rent buildings for the middle classes, the RIVP's vocation today is to manage and build social housing on behalf of the City of Paris, whose housing policy it supports. RIVP is the leading local semi-public company in France and the second largest social landlord in Paris with 60,000 housing units located mainly in Paris and its suburbs.

Quality is at the heart of our construction, management and maintenance activities. This quality of service is the key to the sustainability of our activities and tenant satisfaction, and is demonstrated by the 83% tenant satisfaction rate, which is above the standards of the profession.

In addition to its activity in the field of housing, RIVP is one of Europe's leaders in the management and running of incubators and business hotels for young innovative companies: nearly 400 startups have set up their premises in our buildings, in many sectors of activity (new technologies, video games, sport, digital, animation, health and biotechnologies, etc.).

The innovation strategy is in support of the company's strategy:

- Accompanying fragile audiences
- Moving towards carbon neutrality
- Developing an offer accessible to all that meets the challenges of the Greater Paris region
- To manage teams with quality and fairness and to develop the business lines in order to face the changes in society.

As part of the adaptation to climate change, the improvement of summer comfort and resilience to heat waves, RIVP is looking for a shading system for summer comfort that is installed inside the dwelling without reducing the glazed surface of the joinery. On facades where it is not possible to install blackout boxes outdoors due to architectural constraints (the buildings are classified or in a classified area), current solutions aim to install a box in the frame that significantly reduces the glazed surface. The objective is to have a solution that allows the installation of an external blackout with an internal box that does not reduce the natural lighting of the dwelling.

Features:

- Exterior concealment, interior installation
- Exterior roller shutter with interior winding
- Installation without reducing the glass surface
- Installation in an occupied environment (nuisance for the tenants when installing as reliably as possible)
- Easy maintenance and durability of the equipment over time

Examples of the possible solutions

Below are examples of solutions already considered by the company. This information is given as examples and should not restrict the scope of the solutions considered by the solvers:

- Joinery of the door or window type equipped with a roller shutter accessible from the inside, with for example:
 - An upper reservation for the reception of a roller shutter
 - Sleeper extended by an upper frame, high crosspiece
 - Associated roller shutter box on the inner side
 - Window frame or the like
 - Casements
 - Can be operated to open the window

Technical Constraints

- External occlusion (like conventional shutters)
 - No fabric, for maintenance reasons
- Indoor installation
- Sash reduction as small as possible (max. 5 cm)
- Installation in an occupied environment (maximum installation time of half a day)
- Easier maintenance (frequency of maintenance or maintenance cost). Having access to the mechanics without any work)

Economic Constraints

Same order of magnitude of price as classic solution.

Reward

Necessary conditions	Outdoor occlusion, Indoor installation
	Installation in a maximum of half a day per dwelling or one day for dwellings with a lot of woodwork
	Max. maintenance frequency: once every two years

The reward will be a maximum of 5k€ and will depend on the criteria of reduction of the glass surface and the additional cost compared to current solutions.

		Additional cost compared to current solutions		
		< 5 %	5% - 10%	> 10%
Reduction of the glass surface (measured in reduced height of the window)	< 3 cm	5k€	3k€	0
	3 cm – 5 cm	3k€	2k€	0
	> 5 cm	0	0	0