

## Hook-and-Loop fastener – application for the technical building equipment

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The Hook-and-Loop fastener (better known for its commercial name Velcro®) is omnipresent in many fields today. Astonishingly it is far from utilizing its full potential in the construction industry although its properties could have a variety of positive effects on the industry. Commonly the building installation lines (such as electricity, water or ventilation, to name just a few) are walled-in, screwed, or glued at the construction site. Would these instead be assembled and mounted using the hook-and-loop similar fasteners, the following effects with corresponding consequences could arise. Simplified assembly processes: They would decisively accelerate the construction phase of a building and would additionally be less prone to performance-related quality deficiencies. Flexible mountings and adaptability: They would enable the building to react to short-notice planning changes as well as to adapt to a new spatial program more efficiently. Damage-free connections - both for the base-surface and for the component to be fastened to it - would enable a pure separation of different materials and thus easy re-use. The possibility of easy re-use of specific components could prolong the component's in-use phase of the lifecycle, which would contribute to sustainable usage of resources. The aim of this exploratory project was thus to develop concepts for the production of surfaces with hook-and-loop-compatible surfaces in buildings, which could serve as a base-surface for simplified mounting of building's installation lines.

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