

Precast Concrete Stair Landing Connections

RVK Telescopic Connectors

Primarily intended to support precast stairs and landings off core walls. An elegant and efficient alternative to traditional RSAs or corbels. The contractor's choice owing to popular bolt ejection method. The RVK is perfect for landings which are screeded to level, or which have other floor coverings.

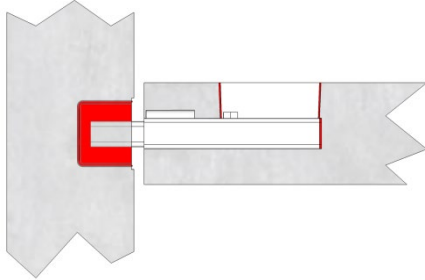
RVK connectors offer key benefits over RSA or corbel connection methods, such as:

- Inherent robustness compliance and fire resistance
- Clean architectural lines and increased usable headspace
- More environmentally sustainable
- Significantly improved health and safety
- Demonstrable cost and time efficiencies*

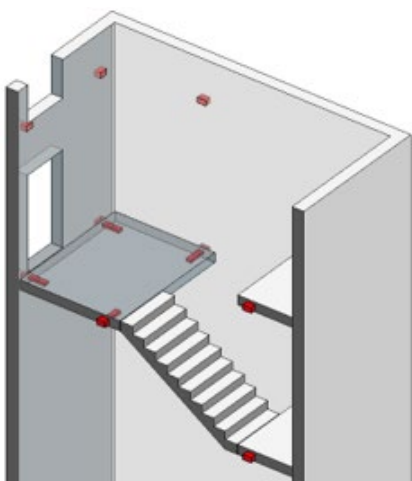
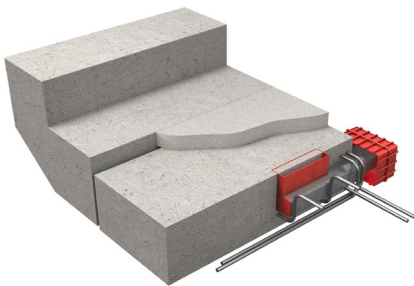
*A **study** found that using telescopic connectors instead of RSAs reduced direct costs by 44% and man hours by 80%.

Product range

RVK Telescopic Connectors



Application

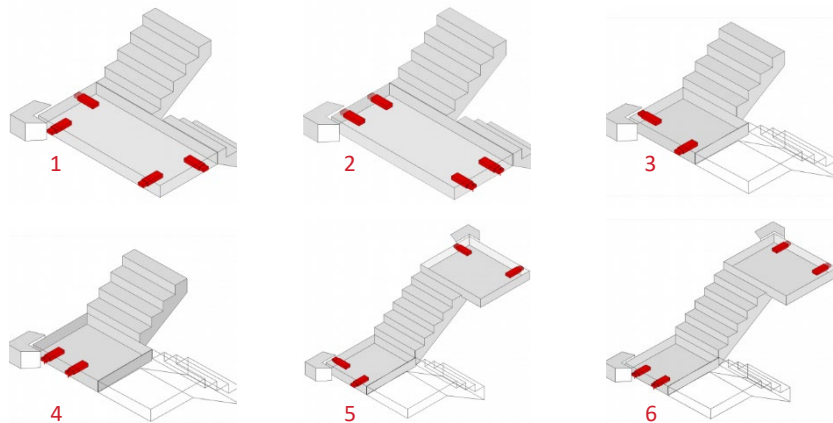


Robustness

UK regulations require that all precast floor and stair elements are anchored to the main structure to provide robustness in the event of an incident. Traditional dowels or similar connections into walls result in more work and additional costs on site. With appropriate positioning of RVK telescopic connectors, anchorage is inherent. Where layout allows, robustness requirements are met with no additional measures or expenditure.

Stair landing applications

Different configurations according to precast element shape and loadings are possible. **Technical enquiry forms** are available to download:



- 1 Landing with connectors on three sides
- 2 Landing with connectors at both ends
- 3 Integral flight and landing with connectors on side and end
- 4 Integral flight and landing with connectors on end
- 5 Integral flight and two landings with connectors on sides and ends
- 6 Integral flight and two landings with connectors at both ends

For other stair landing applications, please contact us for free technical and practical advice on product selection and installation.

Product features

- Sliding inner tube is deployed by a bolt mechanism, accessible via PVC hopper at landing surface
- Supplied 'black' as standard (also available galvanised on request)
- Cost-effective, rugged solution, typically for screeded landings
- Grade S355 (minimum) steel is used for its high stress capacity
- Available in 4 variants to satisfy all common application conditions

Fire resistance

Grouting around the connector (in the airgap between the landing and wall) provides equivalent cover as concrete, therefore 40mm grout cover will give 2 hours fire resistance.

Use in combination with
**REDiBOX® Concrete Wall
 Permanent Recess Former**

REDiBOX PRF-STD (standard version)
 Provides generous tolerance for installation of stair landings.
 Eliminates traditional digging-out of polystyrene or timber.



- Use with
- RVK 101
 - RVK 60P

REDiBOX PRF-PIN (pinned version)
 Has an integral reinforced pocket (pin supplied) for tying landings to walls so robustness requirements can be met where only 2 walls available.



- Use with
- RVK 101-30
 - RVK 101-30-E20

About Invisible Connections

We are the specialists in hidden structural connections for precast and in situ construction. Our range of telescopic connectors are purpose-designed to overcome the challenges of traditional construction and have multiple applications. We are also the manufacturers of FERBOX® bespoke reinforcement continuity strip.

All our products meet industry demands for improved safety, construction efficiency and cost competitiveness.

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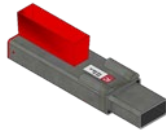
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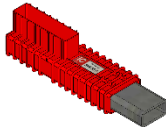
RVK Telescopic Connectors

RVK product range



RVK 101 (100kN, Bolt Operated, Popular For Screeded Landings)

Popular and default choice for most stair landing applications. Connector capacity up to 80kN in a 200mm thick (min.) landing, increasing to 100kN in a 265mm thick landing. Use in conjunction with REDiBOX PRF-STD.



RVK 60P (60kN, Bolt Operated, Popular For Screeded Landings, HDPE Outer)

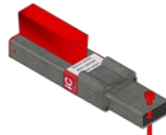
Slim design enables thinner landings and stair thicknesses ≥ 120 mm (full capacity 170mm). Recycled HDPE outer. Sustainable, economical and lightweight connector for light loads up to 60kN. Use in conjunction with REDiBOX PRF-STD.



RVK 101-30 (100kN/30kN, Bolt Operated, Popular For Screeded Landings, Pinned Anchorage)

Robustness requirements achieved where only 2 walls off landing are available for connection. Pinned connector provides axial capacity ≤ 30 kN.

Use in conjunction with REDiBOX PRF-PIN.



RVK 101-30-E20 (100kN/30kN, Bolt Operated, Popular For Screeded Landings, Pinned Anchorage, Increased Airgaps)

Spans large air gap between landing and wall, whilst maintaining secure embedment (in wall). Longer inner tube section suitable where design requires a large air gap ≤ 40 mm between landing and wall. Capacity ≤ 60 kN.

Use in conjunction with REDiBOX PRF-PIN.

Capacity

Standard capacity is up to 100kN, limited to 80kN in a 200mm thick slab. These are ultimate capacities. Connectors may be used in pairs where there is a higher load requirement. All telescopic connectors incorporate integral bearing blocks for correct seating of local reinforcement to avoid localised crushing or cracking.

REDiBOX Permanent Recess Formers

All RVK telescopic connectors are designed to work in conjunction with a REDiBOX permanent recess former - a 'left in' component used to create recesses in precast or in situ walls to flexibly accommodate the RVK sliding inner section.

Resources

Up to date product information is available in the [Resources](#) section of invisibleconnections.co.uk, including [case studies](#), [videos](#), [published articles](#), [technical literature](#) and [drawings](#). You can also download our [brochure](#) or [cost comparison study](#).

Standards

Design is in accordance with the following standards:

Eurocode 2: Design of concrete structures Part 1-1 General rules and rules for buildings

Eurocode 3: Design of steel structures Part 1-1 General rules and rules for buildings

Eurocode 3: Design of steel structures Part 1-8 Design of joints

All RVK products are covered by appropriate [European Technical Assessment](#) (ETA).

For technical and practical advice call

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