



Factory installed weathering system for precast concrete façades

Product Description

The Xpell System consists of a series of gaskets and blades which slide into channels embedded in the concrete panels in factory. The system forms a robust, practical weathering system for precast concrete panels including hung, tilt and shear panels. Xpell integrates weathering E2 and seismic movement B1 requirements in one system.

Purpose and use

Suitable for use as the joint weathering system in precast concrete facades – hung, tilt and shear panel. It eliminates the need for scaffolding during construction and is suitable for buildings of all importance levels and is particularly suitable for projects with access challenges.

Design, construction and installation

The channel is embedded into the panels by the precast manufacturer in factory. The gaskets can be fitted in factory or on site. Finishing is completed on site. The system must be installed by suitably qualified and approved installers following Xpell installation instructions. Technical and design assistance is available on request. Documentation is available at www.xpell.co.nz.

Requirements

Minimum 150mm thick, 40MPa concrete panels using non-reactive aggregates and cement with alkali <0.6%. Ensure >30mm separation between reinforcing and embedded channel.

Conditions

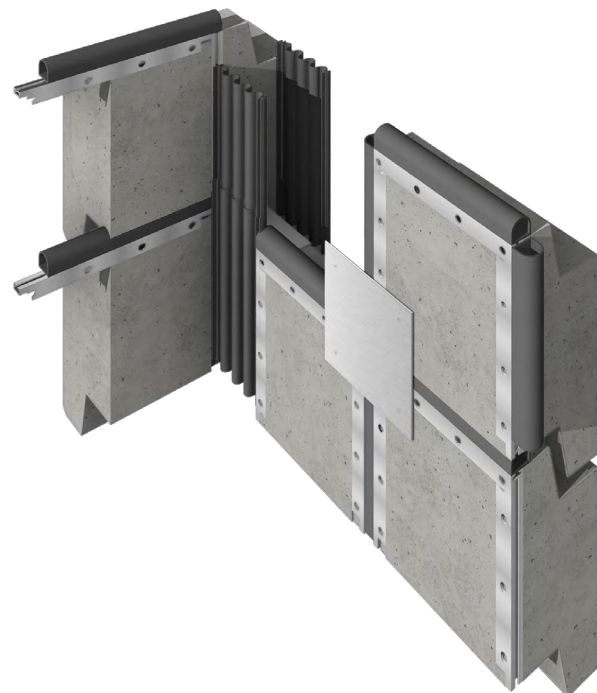
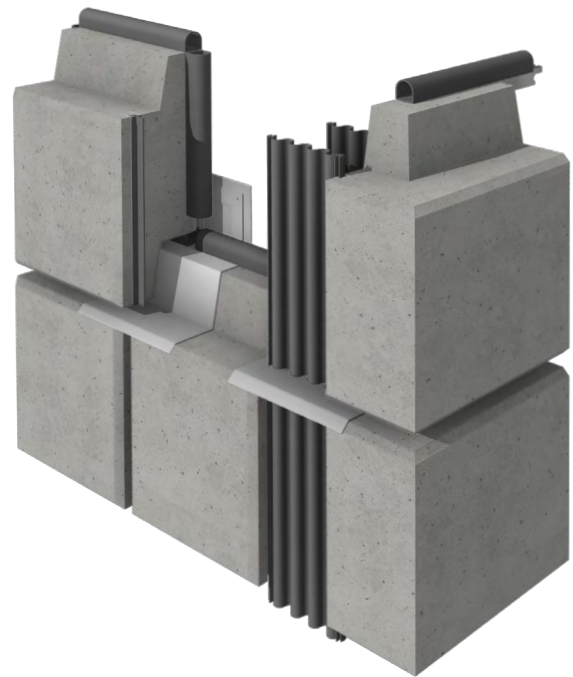
Ensure this PTS is current and read in conjunction with the latest information available from www.xpell.co.nz.

Warranty

Product warranty is 2 years. Project specific warranty is 15 years. Draft warranties are available on request.

Product support

Contact [w xpell.co.nz](http://www.xpell.co.nz) [e info@xpell.co.nz](mailto:info@xpell.co.nz) [p +64 274 394 747](tel:+64274394747)



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NZBC Clauses	Means of Compliance	Reference documents / evidence of compliance
B1 - Structure B1.3.1, B1.3.2, B1.3.3(a, c, e, f, h, j, i, m, q), B1.3.4	Limited structural requirement for the joint system as the only loads are wind & some movement forces The insert is limited to ~ 3.6m lengths with differential movement being controlled by embedment into the concrete panel.	Testing to 750Pa continuous load TVP material has a history of use as gasket baffles and 'P' seals fitted in existing precast panel jointing systems in New Zealand and internationally
B2 - Durability B2.3.1(b), B2.3.2	The NZBC calls for a minimum of 15 years durability for façade elements of this type. The Xpell system meets these requirements assuming regular washing and annual inspection as part of normal maintenance Rear elements are expected to last the life of the building. Front seals >25 years. Aluminium extrusions (6063-T5) and Santoprene (TPV) gaskets have a long successful history of use in New Zealand. The aluminium insert will experience some surface discoloration and etching during casting but once cured, no further deterioration is expected based on using non-reactive aggregates and cement with an alkali level of below 0.6%. There is the option to powder coat the aluminium insert to further limit interaction with concrete.	History of use in NZ and internationally
C3 - Fire B2.3.1(b), C3.6	TVP / Santoprene gaskets and blades will not propagate fire. The small relative size of the gaskets and blades means fire will not spread at speed. The Xpell system works alongside traditional firestopping solutions (by others).	>30 year history of use in NZ and internationally in façade systems Refer TVP / Santoprene Product Data sheet. Refer generic product attributes 6063-T5 aluminium.
E2 - External Moisture E2.3.2	The joint shapes are based on well-established first principles for this type of construction joint using the pressure equalising (PE) concept of an outer weather seal with a drained & vented cavity. The inner air seal is designed to stay dry. The system is designated to drain joints at each level and vertical panel joint. Standard gap 20mm +/- 10mm. Standard seismic gap 100mm.	Best practice design principals Wintest testing on the test unit demonstrated compliance to a water test pressure of 750Pa. Testing to AAMA 502 Testing to AAMA 501 Simulated gusting to AS/NZS4284
F2 - Hazardous Building Materials F2.3.1	The system contains no hazardous building materials	Refer datasheets
F4 - Safety from Falling	The system enhances safety by design principles during construction by eliminating scaffold requirements and solving dangerous access issues.	Refer installation instructions
F5 - Construction and Demolition Hazards	There are no construction or demolition hazards. The system provides enhanced weather protection during construction resulting in a drier, safer site	Refer installation instructions

STATEMENT OF COMPLIANCE The Xpell factory installed weathering system for precast concrete façades is compliant with the New Zealand Building Code and is suitable for use as described in this document when supplied and installed in accordance with Xpell approved details.

Xpell Systems Ltd 26 February 2025



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