

INSTALLATION GUIDE

DRISTUD REPEL

FIRE RETARDANT, VAPOUR PERMEABLE, WATER RESISTANT, FLEXIBLE AIR BARRIER

DriStud Repel is a reinforced flexible wall underlay that allows work to continue on the inside of the building (for up to 90 days from commencement of installation) without waiting for the cladding to be completed. This is provided that DriStud Repel has been installed in accordance with this installation guide and a DriStud Repel Installation checklist has been completed. Internal Moisture testing must also be conducted and moisture levels must comply and be below the requirements of Table 4, NZS3602:2017 before commencing any interior work.

DriStud Repel is a green, quattro-laminate synthetic membrane that consists of water repellent polyefin non woven, engineering plastics reinforcement mesh, breathable film, engineering plastics non woven. It is thick, durable and strong with high weather resistant and water repellent performances, whilst providing superb high vapour permeance, allowing water vapour to diffuse out efficiently.

GENERAL INFORMATION

This installation guide must be read in conjunction with DriStud Repel CodeMark certification and warranty.

INSTALLATION BASED ON METHOD OF USE

If you are using DriStud to enable work to continue on the interior, before the cladding is on, the installation methods below must be strictly followed and [checklist](#) is completed.

If you are using DriStud Repel without the need to enable work to continue on the interior, refer to [DriStud Wall Wrap](#) installation guide.

KEY FEATURES

- CodeMark™ Certified
- Fire Retardant (FR Index: 1)
- UV Exposure: 90 Days
- Can be direct fixed to timber and steel-framing
- Can be used where cladding is installed over a cavity system
- Can be used for residential and commercial buildings
- Thick and strong



WIND ZONES

DriStud Repel has been assessed as suitable for wind zones up to and including 'Extra High', as defined in NZS 3604:2011. To satisfy NZBC E2/AS1 in Extra High wind zones, DriStud Repel MUST be installed over a Table 23 compliant rigid wall underlay, if used behind external wall claddings. Different wind zones will require different fixing centres, please refer to the fixing centre chart to [Table 1: Fixing Chart](#).

WHO CAN INSTALL

The work should be undertaken or supervised by a Licensed Building Practitioner (LBP) or alternatively, the installer shall have the suitable skills when installing DriStud REPEL as part of an external water management system.

SAFETY

The installer of DriStud Repel shall take all precautions to reduce work hazards. The installer of DriStud Repel is required to comply fully with Health & Safety in Employment Act 2002. Appropriate clothing, safety footwear and hand and face protection must be used in all cases. Safety scaffold and barriers must comply with the requirements of the Health and Safety in Employment Act and NZBC, F5 (Construction and demolition hazards).

STORAGE & HANDLING

- Take extra care during loading, unloading and transporting of DriStud Repel to prevent pre-installation damage.
- Store DriStud Repel rolls out of direct sunlight, on end and under a cover, in a clean and dry area.

WARRANTY

Please refer to DriSpace website, www.DriSpace.co.nz for more information on the warranty conditions.

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DRISPACE SYSTEM COMPONENTS:

DRISPACE SUPPLIED COMPONENTS

WALL WRAP:

- REPEL 2.74m Wide x 18.3m Long (50m²)

WINDOW FLASHING TAPE:

- CWFT007525 | Cool Window Flashing 75mm x 25.0m
- CWFT015025 | Cool Window Flashing Tape 150mm x 25.0m
- CWFT020025 | Cool Window Flashing Tape 200mm x 25.0m

WINDOW CORNERS:

- PPBYUTEFLEX8010 - ProctorPassive YouByute Flexi Tape

CAVITY BATTEN:

- VB20 - VB20 Ventilation & Drainage Batten (carton of 50/90LM: 1.8m Lengths)

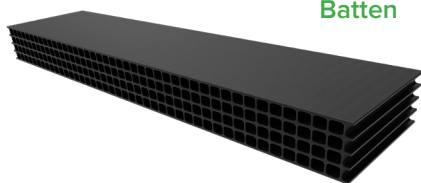


DriStud Cool Window
Flashing Tape

ProctorPassive YouByute Flexi Tape



VB20 - Ventilation & Drainage
Batten



SYSTEM COMPONENTS SUPPLIED BY OTHERS

FIXINGS:

- Stinger Cap Nail Gun CN100
- Stinger Cap Nails or Self Drilling Fasteners 25mm
- Trade Seals (recommend Marshall's Trade Seals)

WINDOW CORNERS:

- Plastic Corner Mould (OPTIONAL)

CONCEALED FLASHING BARRIER:

- DPC (150mm & 200mm)

APPROVED SEALANTS BY OTHERS

- Gorilla MS Sealant
- Gorilla Plumbers Silicone
- Gorilla 940FC
- Gorilla Blackjack Bituminous Sealant
- Soudaseal 240FC
- Soudaseal Firestop MS
- Gorilla Fix All Flexi

APPROVED EXPANDING FOAMS SUPPLIED BY OTHERS

- Gorilla PRO Expanding Foam
- Gorilla FLEXI Expanding Foam
- Gorilla Fire Rated Expanding Foam

Trade-Seal - Recommend
Marshall's Trade-Seals



Stinger Cap Nails or Self
Drilling Fasteners



Stinger Cap Nail Gun CN100



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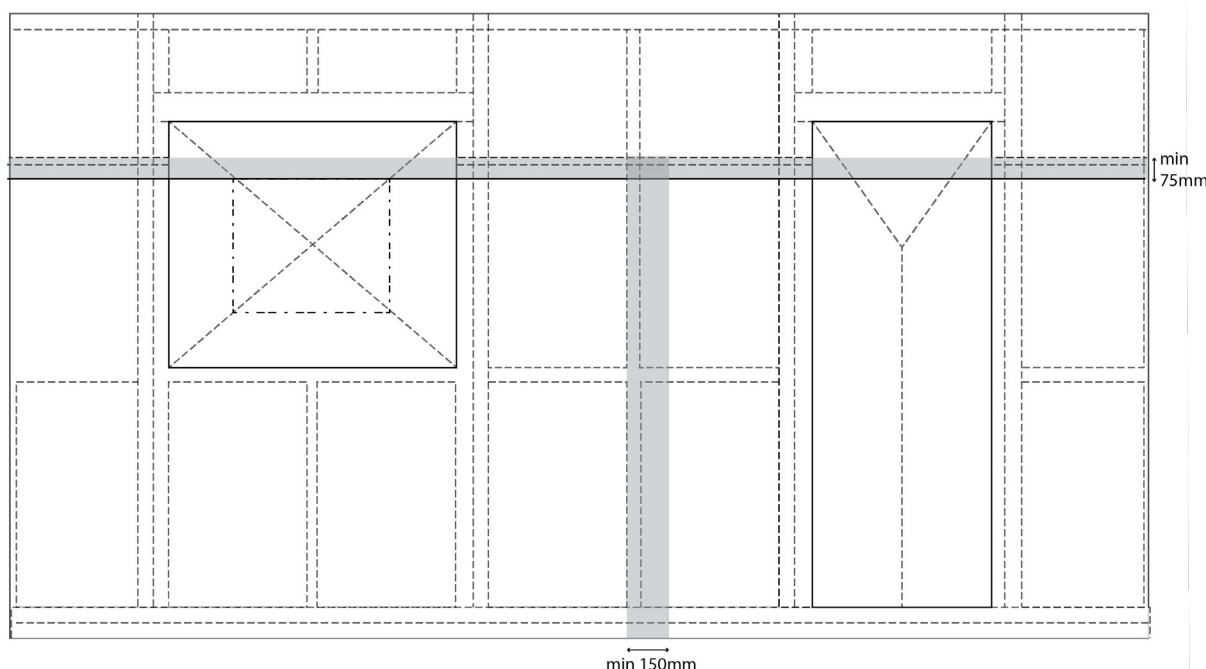
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WALL UNDERLAY INSTALLATION

- DriStud Repel is recommended to install horizontally with the printed side facing out. However, it can be installed vertically where required.
- Run the wrap along the top face, level with the top plate. The wrap must be leveled and pulled taut so that the wrap does not belly into the cavity.
- Ensure the wrap extends a minimum of 50mm below the bottom plate or bearer. Fix in accordance with the building consent or Table 1.
- Run the wrap over all openings and leave openings covered until windows and doors are ready to be installed.
- **MAKE UP PIECES:**
If shorter lengths of REPEL are required, cut REPEL into desired width using a hand saw (use of an electric saw, risks melting the edge of the underlay together).
For applications wider than the roll: e.g. as measured from the underside of soffit lining to 30mm minimum under the lowest edge of the nog line where the top edge of the Repel below is fixed off. This will ensure a 75mm minimum overlap can be achieved. Ensure the bottom edge is low enough to return under the head of all openings to the inside edge of wall framing.
- To satisfy NZBC E2/AS1 in Extra High wind zones, DriStud Repel **MUST** be installed over a Table 23 compliant rigid wall underlay, if used behind external wall claddings.

FLASHINGS

- Apron flashings, change of pitch or inter-story flashings. The Repel length should extend beyond the flashing by 150mm at each end. Secure with Stinger cap nails or screws.
- Tape all laps with Cool Window Flashing Tape. Ensuring a 50mm minimum overlap to the Repel above the flashing upstand.
- Stop the overlap of the Repel to the flashing upstand up high enough so that DriStud Cool tape can be used to secure the bottom edge of Repel to the flashing. Ensure the bottom edge of the tape is not visible below the intended level of the finished cladding.
- Recommend a 20-30mm minimum overlap of tape to the flashing upstand.



LAPS

- Horizontal and vertical laps must be taped.
- Horizontal laps should be overlapped no less than 75mm and over framing where possible. Where horizontal laps are required, the upper sheet must overlap the bottom one to allow for moisture run off. Vertical joints must always be over framing or other solid backing with a minimum of 150mm lap.

BEFORE CONDUCTING ANY INTERIOR WORK

- *Where DriStud Repel is used as a temporary weather protection, all laps must be taped off with minimum 75mm DriStud Cool Window Flashing Tape. Ensure the tape is centred on the edge of the overlap and all joints have been sealed completely by applying pressure use a plastic scraper. The roof cladding, soffit linings and windows must also have been installed and air sealed before proceeding with any work on the interior.*

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FIXING

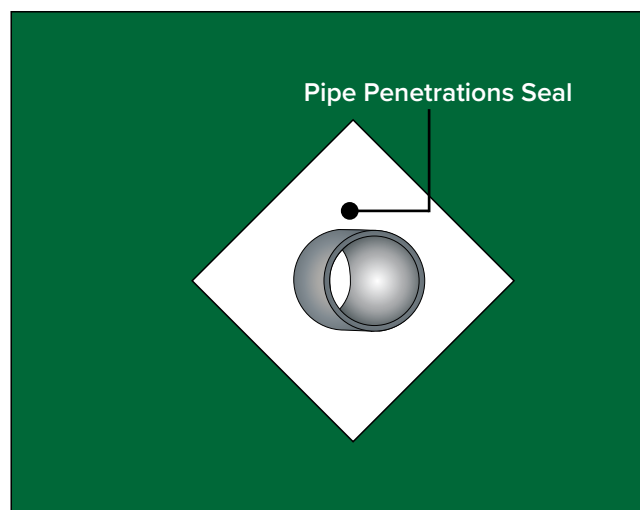
- The Stinger Cap Nail Gun CN100 and 25mm Cap Nails are suitable for timber. Refer to [Table 1 for building consent for fixing details](#).
- For lightweight steel framing use Stinger Caps with self-drilling fastenings. Refer to table 1 or building consent for fixing details.
- Use polypropylene tape at 300mm centres when studs are at spacings greater than 450mm centres. Polypropylene tape should be fixed horizontally and drawn taut to restrain the Repel from bulging into the drained cavity.
Not required if dwangs/nogs are at 450mm maximum centres or with cladding types with cavities deeper than 20mm.

PENETRATIONS

- Use penetration seal for pipe penetrations (we recommend Marshall's Trade-Seals*). Select the appropriate sized penetration seal and ensure the surface the seal is being adhered to is clean and dry. Ensure good adhesion by applying pressure with a plastic scraper/squeegee.
**Trade-Seal is to be placed in a diamond shape to ensure effective water run-off.*

TEARS

- Regularly check DriStud Repel to ensure there is no damage, tears, holes and gaps and repair areas immediately.
- If torn or punctured, cover over the damaged area with additional Repel with a minimum of 150mm overlap to the surrounding area. Tape the wrap using DriStud Cool Window Flashing Tape. You can tape small tears or rips by using DriStud Cool Window Flashing Tape or ProctorPassive YouByute Sealing Tape.



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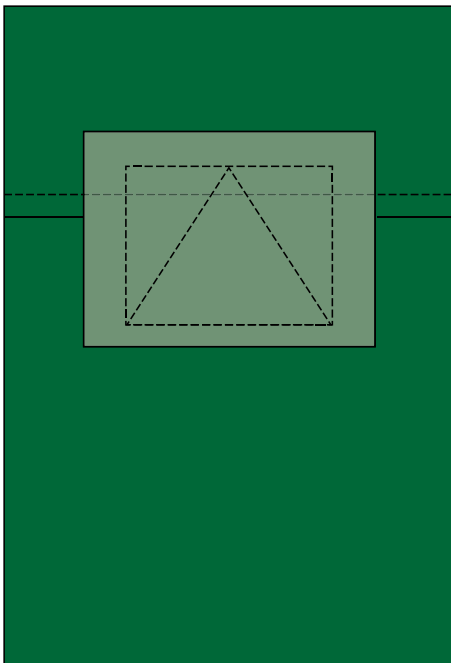
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APPROVED METHODS FOR DEALING WITH CORNERS AND OPENINGS

- **GOOD:** DriStud Cool Window Flashing Tape may be used as 'butterfly strips' if you have very good confidence in your experienced installers. This method relies heavily on their care to ensure they seal over all cuts made to the Cool Tape at corners. It is recommended that the installation when using this method, is checked over to ensure weathertightness, prior to installing any windows or doors. More care is needed with this method, to ensure that the tape does not get ruptured when installing over windows or doors.
- **BETTER:** For a more robust method of protecting tape in corners of openings, use proprietary plastic corner moulds (supplied by others). This method would be recommended when the installers are less experienced, and if needing a more economical solution that the 'Best' method outlined next.
- **BEST - MOST RECOMMENDED:** YouByute Flexi Tape is the best option to achieve the highest airtightness and weathertightness performances. This method must be used where the wind zones according to NZS3604 are deemed to be "Very High" or "Extra High" (or where specific design is required).
As this is the best and our preferred method, it is the only option outlined in this installation guide.

DETAIL 1



INSTALLATION AROUND DOORS AND WINDOWS

- The installer shall treat all wall openings (windows, electrical metres, etc) by cutting and folding the DriStud Repel as per the Wanz guide to window installation (E2/AS1 Amendment 10.) All other penetrations to be sealed as per E2/AS1.
- Cover all the openings with DriStud Repel until the windows and doors are ready for installation. Ensure that the framing is dry and free from debris before applying the DriStud Repel. (Refer to Detail 1).
- Cut the DriStud Repel and dress into all sides of the openings. Cut DriStud Repel from the corners at a maximum of 45 degrees to the sill. A lower angle will require less DriStud Cool tape to cover the exposed timber. Fold the flaps tightly into the opening and secure to the framing on all sides. Staples may be used to fix the wrap to the inside of the window frame. Trim off excess underlay after fixing. (Refer to Detail 2).
- All exposed wall framing in the openings must be protected by the DriStud Repel and DriStud Cool Window Flashing Tape. The substrate must be clean, dry and free from dust or any other contaminants to ensure the best possible adhesion.
- For corners, we strongly recommend YouByute Flexi tape is used at the sill and lintel corners to protect the corners of door or window framing. Installing YouByute Flexi on corners provides greater airtightness than achievable using moulded corners.

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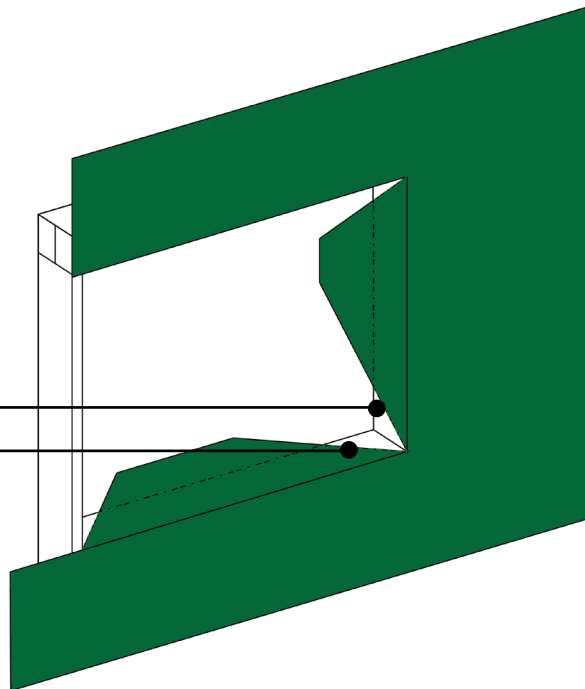
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DETAIL 2: INSTALLATION AROUND DOORS & WINDOWS

ALL EXPOSED WALL FRAMING IN THE OPENINGS MUST BE PROTECTED BY THE DRISTUD REPEL AND DRISTUD COOL WINDOW FLASHING TAPE

CUT DRISTUD REPEL FROM THE CORNERS AT A MAXIMUM OF 45 DEGREES TO THE SILL



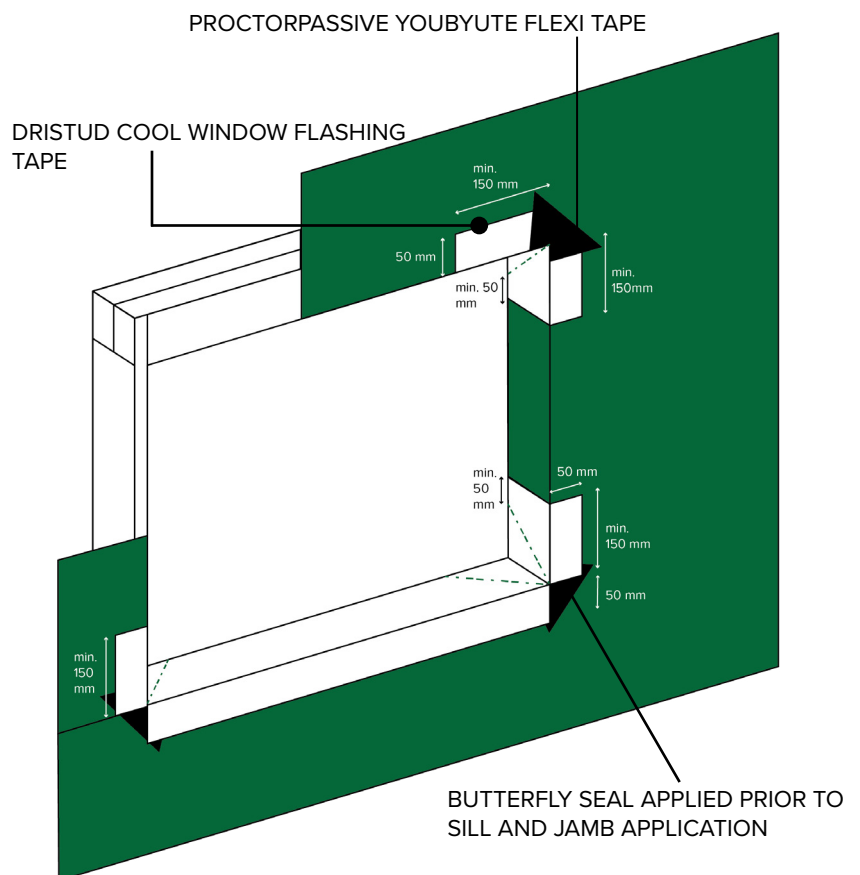
STEP 1: UPPER CORNERS

- Cut a min 300mm length of Cool Tape to cover the exposed framing and overlap the Repel with a minimum 50mm (for 90mm framing, 150mm wide tape is ideal) and apply to the upper corners, ensuring the tape runs along the interior edges.
- Make a cut at the corner to allow the tape to split and form a corner piece.
- Apply the corner piece, starting at the corner edge and use a squeegee, spread outwards to remove any air pockets.
- Cut a minimum length of YouByute Flexi tape that equals framing depth plus 60mm to form a corner piece. (ie 140mm + 60mm = 200mm length).

STEP 2: SILLS

- On the lower two corners of the window and door, apply a strip of 80mm ProctorPassive YouByute Flexi Tape (known as a butterfly seal) at a 45° angle, sealing the corner junction.
- Install DriStud Cool Window Flashing Tape over the bottom sill by having the flashing tape fit into the inner edge with the outside edge extending up the jambs on the trimmer studs, to cover the exposed timber and overlap the Repel with a minimum 50mm.
- Press the tape firmly into the corner over the butterfly seal before slitting the tape at each corner to fold around onto the frame face.
- Ensure the tape is securely adhered to the underlay on all surfaces and fits tightly into each corner by using the plastic scraper.

STEP 1 & 2: UPPER CORNERS & SILLS



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STEP 3: DOOR THRESHOLDS

- Where the Repel returns in the opening, trim it to stop at the base of trimmer stud, but ensure that it still runs down and overlaps the bottom plate by 50mm on the exterior face of the wall.
- Ensure the door threshold is clean.
- Cut a minimum 300mm length of Cool Tape to cover the exposed framing at the base of the trimmer stud. Overlap the Repel dressed into the opening by a minimum of 150mm up from the corner of the door threshold. Run down tight into the corner of threshold ensuring of 50mm min on the outer edge is overhanging and able to be turned down onto the Repel on the outside face. Make a cut at the corner to allow the tape to split and form a corner piece and run a minimum of 150mm out along the floor surface in the door threshold.

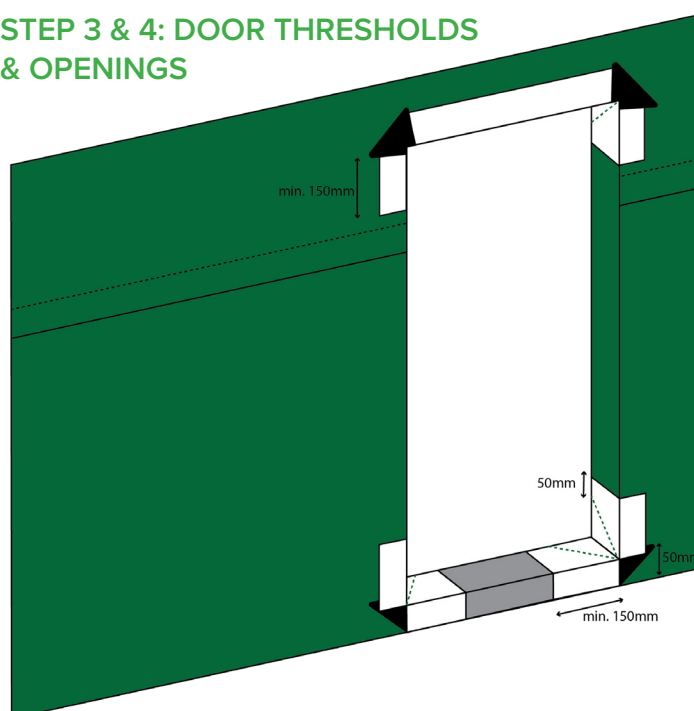
STEP 4: AROUND THE OPENINGS (following window install)

- To seal above the head flashing, tape the head flashing using Cool window flashing tape and overlap the Repel by min 50mm.
- Tape all laps with DriStud Cool Window Flashing Tape.
- Ensure tape is firmly pressed down using a roller or scraper (pressure sensitive tape).

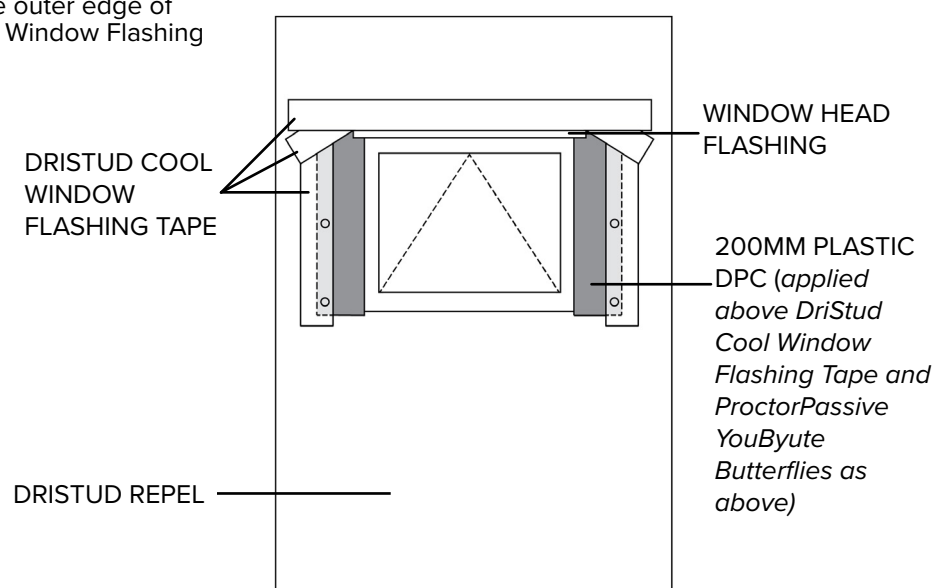
STEP 5: REQUIREMENTS FOR VERY AND EXTRA HIGH WIND ZONES

- Cut DPC (width to suit cladding) to fit hard up beneath the head flashing and to finish just below window flange at sill.
- Ensure the inside edge of the DPC is fit tightly into the back of the window flange. Fix DPC at top and bottom of out edge into the outer framing with Stinger Cap fasteners and ensure spacings of any other intermediate cap fasteners are located to no interfere with fixings that may be required for cladding once installed later. Tape the outer edge of DPC with 150mm Cool Window Flashing Tape.

STEP 3 & 4: DOOR THRESHOLDS & OPENINGS



STEP 5: DPC AROUND THE OPENINGS



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JOINERY INSTALLATION

(Waterproofing around the windows)

- Each manufacturer has their own installation guides to make weathertight and waterproofing around the windows. Please follow the window manufacturers instructions for waterproofing around the windows

Please Note: It is beyond the scope of DriSpace to specify how the windows are sealed because each manufacturer has their own installation and mounting techniques.

ALTERNATIVELY:

If there is no recommendations from the window manufacturer, the follow methods is recommended:

WINDOW AND DOOR JOINERY:

- Install window and door joinery with head flashings and air seals. We recommend using Plascourse DPC by DLM Wallace up the side of the window jambs and under the head flashing.
Only for VH and EH wind zones as weather deflectors until cladding is complete.
- Where plastic DPC is installed around joinery as secondary water proofing such as for brick veneer work, fasten the DPC to the outer framing over the wrap using Stinger Cap Nails.
- To seal above the head flashing, we recommend installing DriStud Cool Window Flashing Tape over the head flashing, extending past the length of the flashing by 100-150mm at each end.

CAVITY BATTENS AND OTHER CLADDING SUPPORT SYSTEMS:

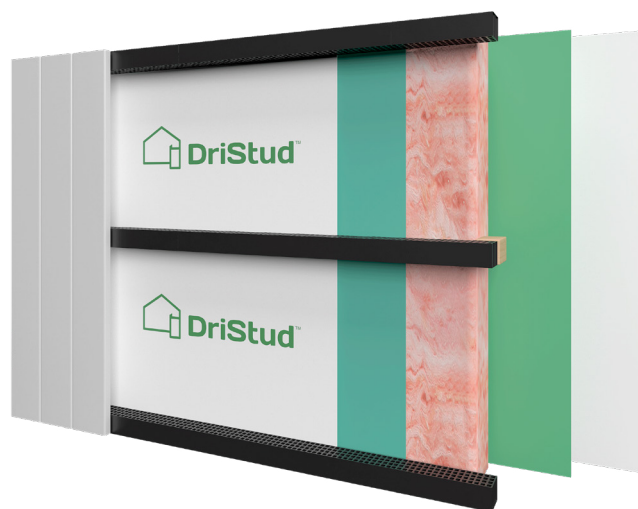
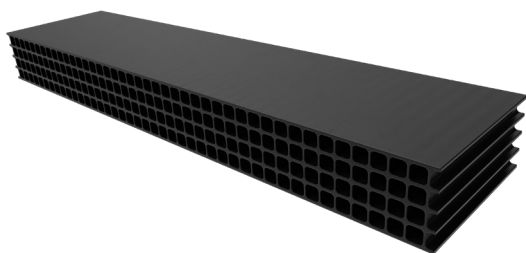
- Solid battens when required for cladding, should be installed to ensure that they finish flush and seal tight against the outer face of the DriStud Repel. This ensures there is no potential for water ingress where fixings penetrate the underlay.
- When ventilated battens are required it is recommended to use VB20 which come with a peel

and stick (self adhering) backing layer. This creates a seal to the surface of the Repel when pressure is applied and provided that they finish flush. VB20 is manufactured with 4mm vents for vermin proofing. They must be installed continuously when used horizontally. Do not install VB20 battens until ready to install cladding immediately after.

- Castellated battens when required for cladding, should only be fixed through solid sections of the batten and not at notches. Castellated battens must also finish flush and seal tight against the Repel underlay where fixings penetrate it.
- Any other methods of fixing a claddings support system (e.g. Brick Ties, Wall Brackets) that leaves the head of its fixings exposed at the exterior face of the Repel underlay, present a risk of moisture entry through the penetrations. It shall therefore be the responsibility of the cladding support system installer to seal these penetrations. Two methods could be considered: either apply strips of YouByute Flexi tape in locations where penetrations will be made by exposed fixings, and/or seal over the area of the penetration using a [DriSpace approved sealant](#).
- Care needs to be made to ensure that any fixings used for installing cladding and any support system required, does not hit the Stinger Cap heads below. To do so will break the required seal and the Stinger Cap fixing will need to be replaced.
- VENT Ventilation Wall Battens are suitable for use as non-structural cavity battens for use with non-structural wall cladding systems.

QUALITY CHECK:

- All joins and tears must be taped and repaired.
- Ensure full adhesion around penetrations and openings.
- DriSpace Warranty is to be included with client document package.



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TABLE 1: FIXING CHART

| Wind Zone | Stud Centres (Max.) | Fixing Spaces on Studs (Max.) | Avg. Cap fixings needed per m2* |
|------------------------|---------------------|-------------------------------|---------------------------------|
| Low/Medium | 600mm | 450mm | 9 |
| Low/Medium | 400mm | 450mm | 11 |
| High | 600mm | 300mm | 10 |
| High | 400mm | 300mm | 12 |
| Very High | 400mm | 250mm | 14 |
| Very High/Extra High** | 300mm | 300mm | 14 |

Fixings with 25mm Stinger Cap nails with plastic washer or self drilling screws.

Dwangs/nogs are not a requirement for DriStud Repel. However where they are required for internal linings or cladding and if studs are at 400mm centres or more, then Stinger Cap fixings should be used at middle and centre or every dwang/nog

Repel as per Table 1, is not able to be used with studs at 600mm centres in Very High and Extra High Wind Zones.

Perimeter fixing with cap nails/screws at 300mm centres all around.

Use polypropylene tape at 300mm centres when studs are at spacings greater than 450mm centres. Not required where dwangs or nogs are at 450mm maximum centres, Polypropylene tape should be fixed horizontally and drawn taut to restrain the Repel from bulging into the drained cavity.

** Extra High Wind Zone requires Table 23 (E2/AS1) compliant rigid wall underlay.

For Extra High Wind Zones we recommend the use of our [ProctorPassive Wraptite SA self-adhered underlay](#).

Once ready to install cladding we are happy to allow Repel to trimmed to 35mm minimum at ground level so Repel is not seen.

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CHECKLIST

BC Consent number: _____

Property address: _____

Architect/Designer: _____

Name of Builder / Installer: _____

Property owner: _____

Date Repel install commenced: _____

YES / NO : Framing installed to suit maximum spacings required for Repel based on wind zone?

YES / NO : All laps and seams have been sealed with DriStud Cool tape?

YES / NO : Any penetrations have been sealed using a DriSpace approved trade seal?

YES / NO : All fixings used to install DriStud Repel are Stinger Caps nail/washer or screw/washer and are spaced as required by Table 1 of the current DriStud Repel installation guide?

YES / NO : All window and door openings have been flashed in accordance with the DriStud Repel installation guide using only DriStud Cool tape?

YES / NO : Have all fixings used for securing the Claddings support systems resulted in a tight seal around the penetration? (Refer to note DriStud Repel installation guide)

YES / NO : Has polypropylene tape been installed where required to stop billowing into the cavity?

YES / NO : Have any areas installed with DriStud Repel been exposed to the external environment for more than 90 days?

YES / NO : Have any penetrations, tears or damage been repaired as per DriStud Repel installation instructions?

Full name of LBP Builder supervising installation: _____

Signature of LBP Builder: _____

Date of inspection: _____

Comments: _____