Hyload DPC System Guidance Document

INTRODUCTION

This document is intended to be read alongside the individual IKO Hyload product datasheets to provide additional guidance in relation to;

- Specification,
- System components,
- Site storage,
- Construction,
- Cleaning

SPECIFICATION

NBS Clauses can be made available for Common Arrangement Work Sections:

F30 – Accessories/Sundry Items for Brick/Block/Stone Walling

All construction detailing and specification should conform to UK Building Regulations, relevant Codes of Practice and British Standards. It is recommended that reference is made to the relevant parts of:

BS 8215:1991
Code of Practice for design and installation of damp-proof courses in masonry construction.

BS 8000-3:2001
Workmanship on building sites. Code of Practice for masonry.

BS EN 1996-1-1:2005+A1:2012 Eurocode 6
Design of masonry structures – Part 1-1: General rules for reinforced and unreinforced masonry structures.

PD 6697:2019
Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2.

Where required by building warranty providers i.e. NHBC, LABC, etc. installers and those undertaking specifications should seek guidance from Technical Standards as issued by the provider in addition to the above.

If required, please consult with IKO Technical Services.

SYSTEM COMPONENTS

IKO have a range of essential system components, specifically tailored to facilitate the multiple uses of the IKO Hyload DPC systems.

The following image represents the most common system components available as part of that range:



IKO Hyload DPC Jointing Tape



A 100mm x 10m double-sided self-adhesive tape, protected on both sides by silicone release paper. Used for bonding overlaps in both IKO Hyload Polymeric DPC, and Bitumen Polymer DPC materials. It is also used to adhere these IKO Hyload DPCs to IKO Hyload Pre-formed Cloak Units. Before use, ensure that surfaces to be bonded are clean and dry.

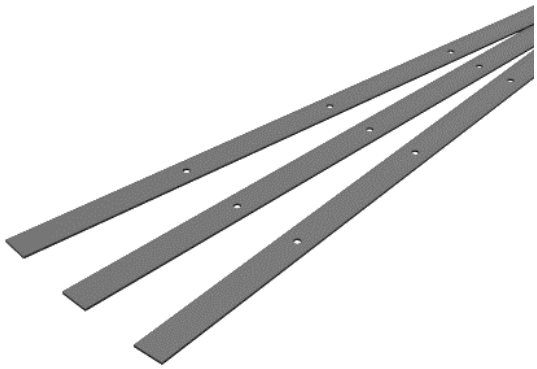
For vertical DPC applications, IKO Hyload DPC Jointing Tape is used alongside IKO Hyload Fixing Strips and correctly specified Hyload Fixing Pins to provide a permanent mechanical fixing. Common building materials such as block, concrete and metal need priming using IKOpro SA Bitumen Primer prior to application of the tape.

IKO Hyload DPC Mastic



A thick synthetic rubber mastic adhesive with gap filling properties up to 6mm. Supplied in 2.5L tins or 400ml cartridges, IKO Hyload DPC Mastic is suitable for bonding surface-fixed IKO Hyload high performance DPC cavity trays and preformed cloak units to a wide range of common building materials such as block, concrete or metal.

IKO Hyload DPC Fixing Strips



29mm wide x 2mm thick x 2m long corrosion resistant rigid plastic strips that are pre-drilled at set 150mm centres to facilitate mechanical fixings. Used alongside IKO Hyload Fixing Pins for Masonry or Insulation to provide surface fixing solutions in DPC cavity tray formations. The 2m strips are suppled in packs of 40 strips thus covering 80 linear meters and require 277 mechanical fixings for full installation.

IKO Hyload Fixing Pins

IKO Hyload DPC Fixing Pin bodies are made from moulded nylon and are corrosion resistant. There are two variations offered to facilitate application to a variety of substrates.

- **IKO Hyload DPC Fixing Pins for Masonry**



For use with IKO Hyload DPC Fixing Strips. IKO Hyload DPC Fixing Pins for Masonry are used for surface fixing IKO Hyload DPC systems to any solid internal substrates such as brick, stone, and concrete. Drill a clearance hole 6mm diameter by 45mm deep into substrate and fully insert the 40mm long fixing plug. The central 3.8mm diameter pin is then hammered into place so that the barbed portion of the fixing plug splays out into the substrate giving a secure grip and high pull-out resistance.

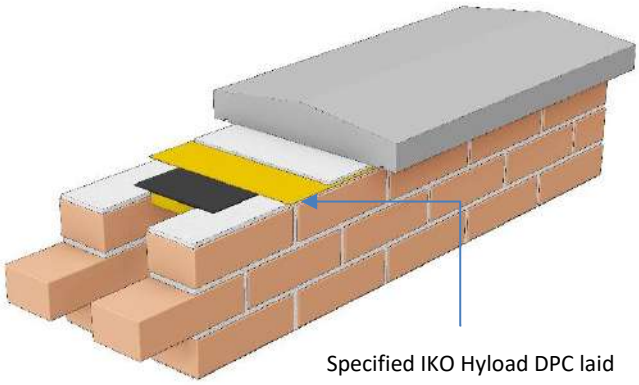
- **IKO Hyload DPC Fixing Pins for Insulation**



For use with IKO Hyload DPC Fixing Strips. Hyload DPC Fixing Pins for Insulation are used for surface fixing IKO Hyload DPC Systems to rigid insulation of composite inner skins. Using a tool such as a bradawl, a pilot hole should be formed prior to inserting the push fit pin. The fir tree portion securely locates into the rigid insulation.

Other products available include:

IKO Hyload Copeclose



Specified IKO Hyload DPC laid over Copeclose between two fresh beds of mortar

A tough flexible cavity closure unit consisting of a 3mm semi rigid support board bonded to a section of 17mm thick polyethylene foam insulation, which locates the unit into the cavity. This product is employed directly beneath horizontal DPCs occurring under coping stones and pervious capping sections over cavity wall construction to provide support and prevent sagging of the DPC material. This product is made to order to suit cavity widths ranging between 50mm and 140mm, supplied in 1m lengths with a minimum order quantity of 40lm, and supplied in 40lm increments.

IKO Hyload Pre-formed Cloak Units

Covering all aspects of detailing from stop ends to complex and awkward interface detailing, pre-formed cloak units reduce on-site detailing work to a rapid position and fix operation, whilst providing consistent quality of work throughout.

Ultrasonic welding technology allows the semi-rigid polymeric cloak material to be formed into a vast number of profiles and shapes and there are a number of cloaks unit profiles with standard sizes available to procure through builder merchants; should these be required with bespoke dimensions this too is a service we offer. Contact IKO Technical Services.

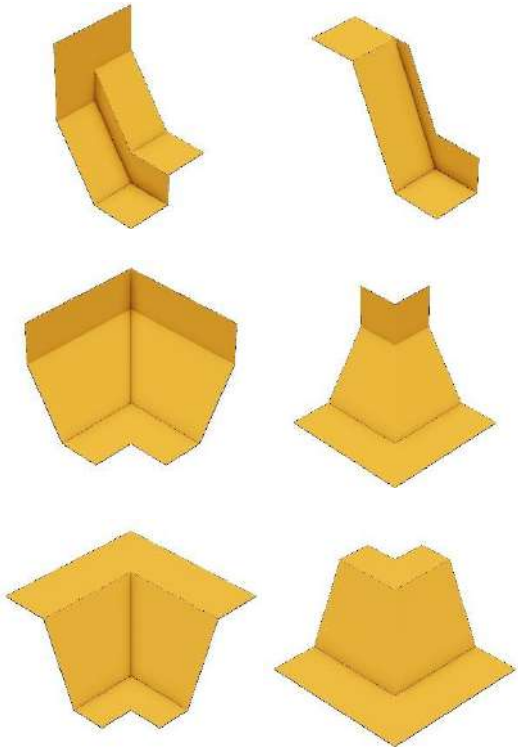


Figure 1 – Example selection of standard Hyload Pre-formed Cloak Units

Bespoke cloak unit profiles can also be fabricated to site specific requirements from received clear, annotated, and non-ambiguous 3D drawings/ sketches, or from completed templates. Contact IKO Technical Services for more information.

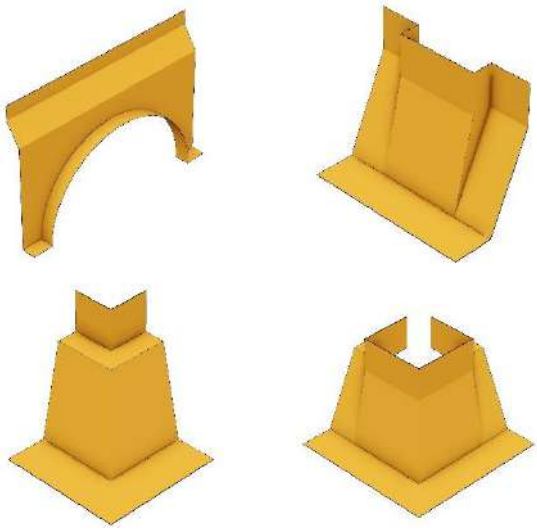


Figure 2 – Example selection of bespoke Hyload Pre-formed Cloak Units

SITE STORAGE

General

DPC material and any product ancillary to the system should be stored in the dry, under cover, and protected against damage.

DPC rolls should be stored on their ends on a flat and stable surface and stacking above 1m high should be avoided.

Materials should be kept away from direct sources of heat.

Check all labels on adhesives for any storage recommendations, and for any hazards relating to that specific product.

Check before use

All materials should be checked to ensure that they conform to the project specification prior to removal from the main storage area.

Store enough rolls of DPC and any adhesive tapes for the next day's use in a warm place prior to use. This will ensure the desired performance is achieved i.e. good flexibility and tape adhesion.

Immediately prior to work

Storage of the product at the place of work should be no less satisfactory than that experienced within the main storage areas to prevent damage immediately before use i.e. flat, dry, clean and free from contaminants.

When being used around the work area, rolls should not be stacked irrespective of their size.

In periods of inclement weather, DPC materials and any components should be returned to the conditions of the main storage area as soon as practicable.

CONSTRUCTION

Application

IKO Hyload DPCs, when correctly specified and installed provide satisfactory horizontal, vertical, or stepped damp proof coursing solutions and are also suitable for the on-site creation of cavity trays within masonry and non-masonry cavity wall constructions.

Linear damp proof course

IKO Hyload DPCs are suitable for inclusion into solid single, and double skin masonry walls to prevent the migration of moisture through porous construction by use of separate horizontal DPC within each constituent masonry leaf.

When installing linear DPC, it is essential that:

- The DPC material is laid in continuous lengths as far as practicable. Instances where the DPC must be lapped, installation must achieve 100mm overlap as a minimum with overlaps at angles i.e. corners, etc. achieving the full width of the receiving masonry leaf.

- The DPC width is equal to that of the masonry leaf into which it is being installed.

- The DPC must be sandwiched between full even beds of wet mortar, receiving a further course of masonry units on mortar on the DPC. The weight of these immediate courses helps to develop good adhesion between the masonry units, the mortar and the DPC (Figure 3):

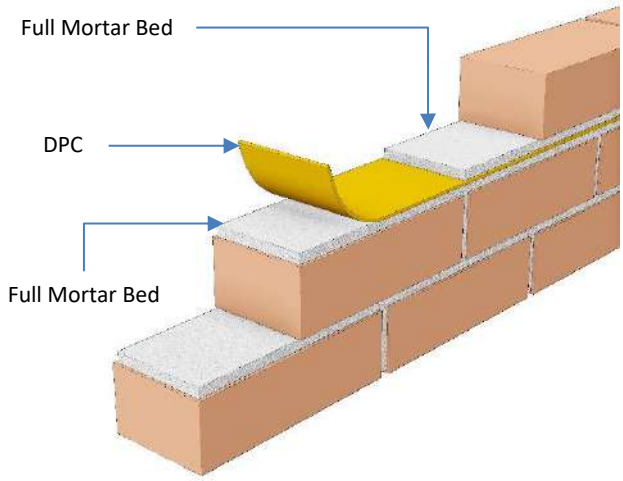


Figure 3 – IKO Hyload DPC bedding

- The edge of the DPC remains visible through the completed mortar joint inclusive of pointing, finishes, etc. to a position which leaves it at least flush with the outer surface of the wall.

- Underneath coping stones or units that create an overhang to the wall surface below, the edge of the DPC should project no less than 5mm beyond the face of the wall surface (Figure 4):

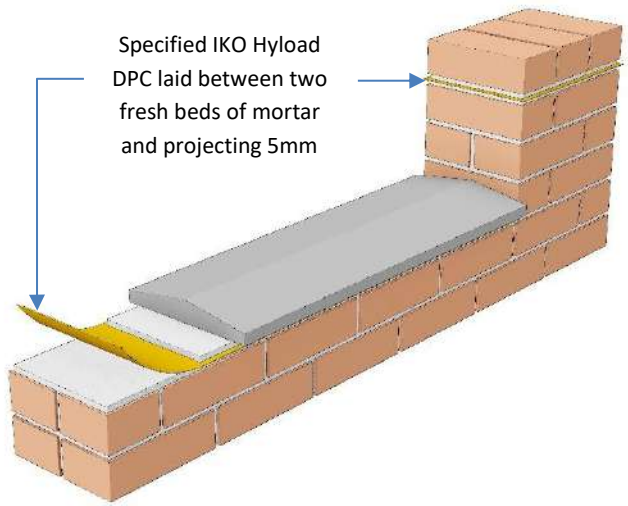


Figure 4 – Coping Stones and Brick-on-Edge Detailing

- Suitable DPC for minimal loading situations in line with BS8215:1991 under coping stones on cavity walls should be supported across any cavity using an appropriate support board like IKO Hyload Copeclose, with all overlaps set at 100 mm and fully sealed as appropriate to the DPC Type being used:

Bitumen Polymer – IKO Hyload DPC Jointing Tape
Sanded Bitumen – IKOpro HP Roofing Felt Adhesive

- In the construction of cavity walls where there are separate DPCs within each masonry leaf, the edge of the DPC must not project into the cavity as this can provide a place for debris to lodge and create a potential for moisture to bridge the cavity.

Cavity trays

When constructing cavity walls, bridges that create the opportunity for water to cross the cavity from the external masonry leaf to the inner leaf can occur. Typically, such instances are found above window and door openings, above ducts and horizontal cavity barriers.

In these situations, IKO Hyload DPCs can be used to create cavity trays that divert this water back to the external leaf and out through masonry via weep vents within the external leaf.

When installing cavity trays, it is essential that:

- They are created in continuous lengths, as far as practicable.

- All overlaps are 100 mm and must be fully sealed as appropriate to the DPC Type being used:

Polymeric – Hyload DPC Jointing Tape
Bitumen Polymer – Hyload DPC Jointing Tape
Sanded Bitumen – IKOpro HP Roofing Felt Adhesive

- They are fully supported at joints with either a support board or Hyload Pre-formed Cloak Units.

- When they are intermittent or cover isolated areas of detailing i.e. lintels, ducts, etc. they cover the full extent of the obstruction within the cavity, extending 150 mm beyond ends of bridged cavity positions and incorporate stop ends to create a defined termination:

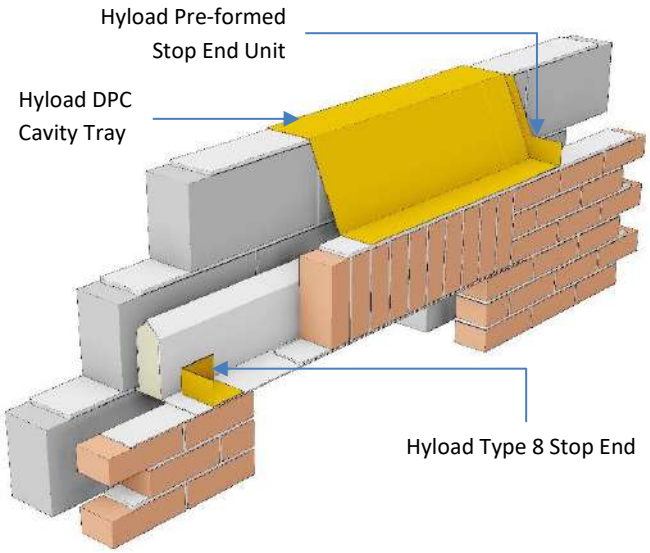


Figure 5 – Typical Hyload Cavity Tray above lintel position

- They are securely fixed to maintain their position and profile across the cavity and step up towards the inner leaf a minimum of 150mm.

- The DPC passing through the respective masonry leaves must be sandwiched between even beds of wet mortar, receiving at least one further course of masonry units on mortar on the DPC. The weight of this immediate course helps to develop good adhesion between the masonry units, the mortar and the DPC.

- On the outer face of the outer masonry leaf, the edge of the DPC must remain visible through the completed mortar joint to a position which leaves it at least flush with the outer surface of the wall.

CLEANING

During installation

During the process of installation, damp proof course materials can incur damage from careless cleaning operations.

Recommendations to prevent damage, particularly for cavity tray installations, are:

- To utilise cavity battens to prevent excessive amounts of mortar reaching the DPC.
- Remove mortar droppings before hardening occurs.
- To ensure that implements such as steel rods are not used for cleaning.

As the DPC system cannot be repaired once covered, it is strongly recommended that work is regularly inspected for damage and rectified prior to continuing works. In most instances, it is necessary to cut out the damaged sections and replace where necessary, utilising the aforementioned jointing materials and techniques.

After installation

Due to the concealed nature of DPC work, it is not necessary to conduct any special tasks for the aftercare of DPC after masonry is completed.

Any clean down operations conducted to the masonry itself should be done so in a manner which does not adversely affect the DPC material.

DISCLAIMER

Whilst every precaution is taken to ensure that the information given in this literature is correct and up to date it is not intended to form part of any contract or give rise to any collateral liability, which is hereby specifically excluded. IKO reserve the right to amend and/or withdraw this document without notice.
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