

Architectural Facade Systems
CEME Division

Dri-Design

Maintenance guidelines



Dri-Design: Introduction to the system

Dri-Design is an aluminium cassette based system dedicated for buildings with minimal as well as sophisticated facade design. The system combines quick and simple installation with durability and high technical performance. Thanks to different cassette shapes available (Flat, Shadow, Tapered) a 3D facade can be achieved. All Dri-Design cassettes are A2-s1,d0, EN13501-1 compliant.

System Highlights:

- High quality aesthetic options - very wide range of colours, finishes, sizes and cassette shapes.
- No sealants or gaskets.
- Minimum number of components - fixing points located only along the top edge of the cassettes.
- Significantly faster installation compared to similar facade systems.
- Low cost of facade maintenance and upkeep.
- Dri-Design cassettes can be installed to the Karrier panel (as a direct fix or via aluminium omega or Z profiles) or to the substructure (as part of ventilated facade).



Cassettes technical specs:

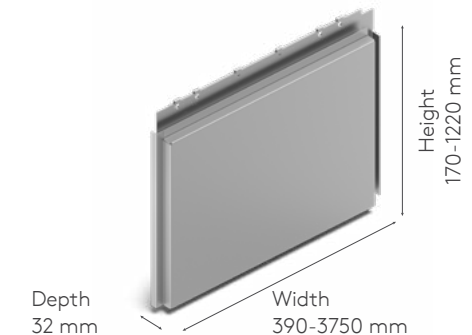
- Minimal / maximal face width: 390 – 3750 mm
- Minimal / maximal face height: 170 – 1220 mm (face width to be determined from wind load)
- Depth of cassette: 32 – 100 mm according to the type of cassette
- Aluminium thickness: 2 mm
- Width of vertical joint: 16 mm
- Width of horizontal joint: 14 mm
- Finish types: polyester powder coated (PPC), anodised, mill

Casette types

Dri-Design cassettes are available in different variants:

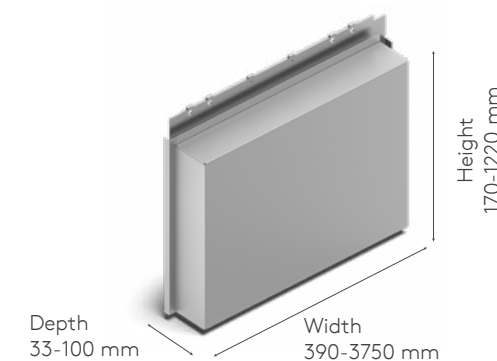
Dri-Design Flat:

- Dri-Design Flat can be easily interchanged with the other Dri-Design cassettes, Shadow and Tapered.
- Dri-Design Flat cassettes can be also perforated.



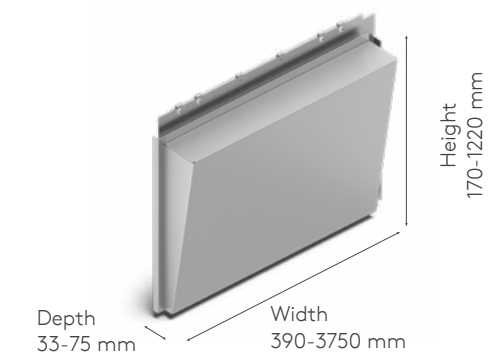
Dri-Design Shadow:

- Dri-Design Shadow cassettes allow you to add depth and character to any architectural design.
- Each cassette can be designed with varying depth to the face of the facade, creating rich textures or dynamic patterns on the building facade.
- Dri-Design Shadow cassettes can be also perforated.



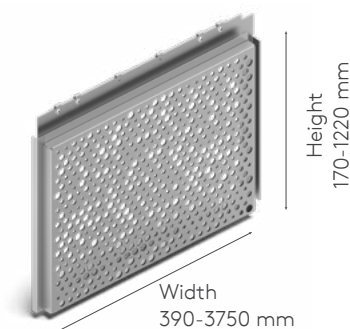
Dri-Design Tapered:

- Dri-Design Tapered cassettes can be made with different slope angles depending on the depth of the cassettes.
- Freedom to design each specific cassette gives you an unlimited capacity to create a dynamic, one-of-a-kind surface on nearly any facade, without the need to modify the substrate or weather barrier.
- Dri-Design Tapered cassettes can be also perforated.



Dri-Design Perforated:

- By varying the size, density and position of the perforations, Dri-Design Perforated cassettes allow for free play of light and shadow and allow any drawings or images to be reproduced on the facade.
- Perforations allow air circulation in places where it is required.
- Perforations in cassettes are available as an additional paid service. Can be added to Dri-Design Flat, Tapered or Shadow cassettes.



Maintenance guidelines for aluminium Dri-Design cassettes

Introduction

Aluminium has a natural beauty and lustre. Its surface can be treated in various ways to produce different effects, while in the hands of the skilled architect it lends itself to some excellent effects and variations and contrasts with other materials.

For this reason and because aluminium is so well proven in service, it is now by far the most common material for exterior work such as windows, doors, curtain walls and shop fronts.

The surface finish of aluminium can be spoiled by improper care and the purpose of this booklet is to summarise the methods of maintaining aluminium after proper erection on site. Usually, this care is no more than periodic cleaning, on a similar basis to which the glass in the windows is cleaned, and it is often merely lack of appreciation of this factor which can spoil the effects so proudly established in the first place.

Anodising and coating / painting substantially enhances appearance and renders the surface more resistant to various forms of attack and facilitates cleaning and maintenance.

Our aim here is to highlight the cleaning aspect since it applies to so many users of architectural aluminium products.

Grime which causes deterioration cannot be prevented from settling on exposed surfaces. If cleaned reasonably frequently then the mildest methods of washing will produce satisfactory results. There are many ways to clean aluminium, from using plain water to harsh abrasives. The type of cleaning that should be used is governed by the finish, degree of soiling, and the size, shape and location of the surface to be cleaned. The mildest method possible should be used, particularly for aluminium which has been anodised.

The following cleaning materials and procedures are listed in ascending order of harshness. The mildest treatment should be tried on a small area and if not satisfactory only then should the next be examined:

- Plain water;
- Mild soap or detergent;
- Solvent cleaning, e.g. kerosene, turpentine, white spirit;
- Non-etching chemical cleaner;
- Wax-base polish cleaner;
- Abrasive wax;
- Abrasive cleaner.

Mill & Brush Finish Aluminium Sheets

It is generally accepted that the build-up of dirt and grime on Aluminium Surfaces is inevitable, but if cleaned regularly then only the mildest methods of cleaning will be required to maintain a satisfactory appearance. As a basic guide and depending on the level of dirt and grime use the following:

- Water;
- A mild detergent diluted with water;
- A proprietary Cleaner (see appendix).

Where possible use a lint free cloth, this will prevent any “fluff” or bits being left on the aluminium surface. Do not leave pools of water / cleaner on the surface. After applying any cleaner wash down the aluminium / product thoroughly and dry with a dry cloth. Again, use lint free if possible. Leaving bits on the surface of the aluminium will attract dirt, grime and prevent streakiness. When cleaning extrusions ensure that you clean away any build-up of cleaner and grime from corners / angles or folds in the material.

If using a proprietary cleaner always follow the suppliers / manufacturer’s instructions. Remembering the more abrasive the cleaner the more likely you are of marking the aluminium surface.

The aluminium oxide that forms on the surface of aluminium is a self-protecting surface, and although aesthetically displeasing it is protecting the aluminium. removal of it will allow more of it to form.

Cleaning frequency is not easily determined; this will depend on the application, location of product, accessibility and whether aesthetic appearance is important. How frequently you clean will require some self-judgement, but where there is no evidence of severe build up or obvious discoloration of the surface every 6 months should maintain aluminium in its original finish. Should the product / material be placed in close proximity to the sea, or highly polluted areas – man made or not, this frequency may need to be increased.

To improve the longevity of surface finish quality you may want to consider anodised sheet or extrusion, which gives a more aesthetically pleasing finish and additional protection.

Anodised aluminium sheets and extrusions

Anodised finish provides both improved aesthetic appearance and protection of the sheet and extrusion.

However, grime and dirt is still likely to build up on surfaces and in angles and corners.

There is no maintenance-free surface coating for aluminium used within the building industry. Therefore, continued maintenance of anodised sheet and extrusion is critical in enhancing the lifetime of the coating.

Consider the atmospheric conditions; they will impact on the amount of build-up on the surface finish. The same materials used to clean Mill & Brushed Finish Aluminium can be used on the anodised surface.

Because however anodised finish is generally used for aesthetic reasons, cleaning should be done so that it is not detrimental to the overall finish. The frequency of cleaning is again determined by the application, location of product and accessibility. It is recommended that external applications should be cleaned at least every 6 months to maintain surface aesthetics.

For internal applications it may be good practice to clean aluminium surfaces at the same time / frequency windows are cleaned. This would allow just water to be used, rather than waiting and having to use a more intense cleaning method.

Should the product / material be placed in close proximity to the sea, or highly polluted areas – man made or not, this frequency may need to be increased.



Painted and coated aluminium sheet and extrusion

Like anodised material, painted and coated aluminium sheet and extrusion will need to be cleaned and maintained to ensure continued aesthetic quality.

Painted and coated aluminium is likely to be a different colour to base aluminium so scratches will reveal the original colour of the product. When cleaning; follow the guidelines shown above with particular emphasis on using less abrasive proprietary cleaners.

Where possible cleaning materials should be a neutral detergent with a PH from 5 to 8.

If abrasives are used then the appearance of the aluminium finish may be altered. If there is a grain in the finish then cleaning should always be with the grain.

To maintain the original finish, for example gloss, polishing may be required. Where a reduction in gloss is observed then an approved renovating cream may be applied using a non-abrasive cloth. T-Cut or a similar automotive paint restorer may be used provided that is not too abrasive.

Frequency of cleaning / maintenance, again dependent on a variety of previously mentioned factors but if access is possible then every 6 months should maintain surface quality. Should the product / material be placed in close proximity to the sea, or highly polluted areas – man made or not, this frequency may need to be increased.

Fabricated aluminium panels and products

As the fabricated items have been manufactured using the materials / finished mentioned above, the cleaning routines listed above apply here.

It is recommended that consistency is applied across all the panels and products being cleaned do not use one method on some and another on the rest.

If there is a grain in the finish always clean with the grain and use the least abrasive cleaning agent you can get away with.

For installed external applications, the recommended periodical cleaning frequency is 6 months. Should the product / material be placed in close proximity to the sea, or highly polluted areas – man made or not, this frequency may need to be increased. Aggressive stains may appear as a result of a lack of cleaning and this will accelerate degradation through corrosion. Although most coatings come with a specified guarantee, regular thorough cleaning and maintenance will prolong the life of the product and maintain visual appearance.

It is generally recommended that you do not use strong solvents that contain – chlorinated hydrocarbons; esters; ketones or abrasive cleaners / polishes fabricated stainless steel products.

Like aluminium the attractive and hygienic surface appearance of fabricated stainless steel products cannot be regarded as completely maintenance free. All grades and finishes of stainless steel may stain, discolour or attain an adhering layer of grime in normal use.

Build-up of grime and dirt will give the same results as discussed with aluminium, so the general guidelines discussed above should be applied to stainless steel. Listed below is a set of cleaning guidelines / recommendations, please note they are only meant as a guide.

- Routine cleaning: all finishes soap or mild detergent and water. Sponge rinse with clean water (preferably warm), wipe dry if necessary. Follow polish lines.
- Finger prints: all finishes soap and warm water, or a proprietary cleaner. Rinse with clean water and wipe dry.
- Follow polish lines.
- Stubborn stains and discolouration: mild cleaning solutions off the shelf or a proprietary cleaner. Use rag, sponge or soft fibre brush. Rinse with clean water and wipe dry. Follow polish lines.
- Oil and grease marks: proprietary cleaners – normally solvent based. Rinse with clean water and wipe dry. Follow polish lines.
- Scratches on polished finish, slight scratches: use impregnated nylon pads. Do not use ordinary steel wool –iron particles can become embedded and cause further problems. Stainless steel and “scotch brite” scouring pads are satisfactory for deeper scratches.

Precautions when using solvents – do not use in confined spaces, where appropriate gloves and do not smoke. If possibility of splashing wear eye protection. This applies to use on either stainless steel or aluminium.

Frequency of cleaning / maintenance, again dependent on a variety of previously mentioned factors but if access is possible then every 6 months should maintain surface quality. Internal applications can be cleaned more frequently using the milder cleaning agents.

Coated stainless steel will provide the same levels of protection as that provided to aluminium. Follow the same guidelines shown for aluminium. Again coating warranties should provide confidence in the maintenance of surface aesthetics but regular cleaning will enhance / prolong the quality and life of the product.

General coating information

Painted and coated products may have been supplied with Syntha Pulvin or Interpon Approval and Anodised products coated to BS 3987 standard. If you require more detailed information on their cleaning and maintenance recommendations, contact Syntha Pulvin or Interpon direct. But the cleaning and maintenance information supplied within this booklet should help maintain the surface quality of the product supplied to you.

An exhaustive list of cleaning products would be difficult to produce, but please find below a list of potential products and suppliers. This information is provided without any prejudice and should be treated as guidance only.

Henkel produces the following products aimed at helping to clean and protect aluminium surfaces:

- P3 - RIMOL 768; Neutral cleaner for anodised / painted aluminium;
- TURCO 1495; Polish – removing corrosion / dirt on anodised aluminium;
- TURCO ALBRITE EXTRA; Acid cleaner – removing corrosion / dirt on anodised / painted aluminium. (Does not attack glass);
- TURCO GUARD; Transparent and permanent protection coating for metals (UV resistant);
- Full Technical Data Sheets are available from Henkel.

There are also many suppliers across the UK who can provide products and advice, they include:

- Chemi-com ICS Ltd UK;
- www.deltacleaning.co.uk;
- www.TotalCleaningSupplies.co.uk;
- Chemiclean Products Birmingham, West Midlands, UK;
- www.kitchenporter.co.uk;

- A & M Cleaning Supplies Watford, UK;
 - www.besacleaning.co.uk;
 - Bridge Chemicals & Cleaning Supplies Stoke-On-Trent, UK;
 - Buck Hickman InOne Coventry, UK;
 - Capital Cleaning (Kent) Ltd Kent, UK;
 - Chemetall P.L.C. Milton Keynes, UK;
 - Edge Performance Aldershot, Hampshire UK;
 - UK Everyday Essentials Nordirland (NI) Carrickfergus, Co. Antrim, UK;
 - Gramos Applied Ltd Smethwick, West Midlands, UK ;
 - Nielsen Chemicals Swadlincote, Derbyshire, UK;
 - Pressure Cleaning Equipment & Repair Ltd Redhill, UK;
 - Vizio Ltd Ashbourne, Derbyshire, UK;
 - Wirral Fospray Ltd Deeside, Flintshire, UK.
- Also the nationwide Hardware Companies such as Viking, B&Q and Wickes which will also stock cleaners suitable for aluminium.
- Alternatively use Kelly search to find a suitable supplier using the following search queries:
- Aluminium cleaning products, non acidic;
 - Cleaning chemicals, biodegradable, aluminium;
 - Cleaning chemicals, biodegradable, anodized aluminium;
 - Cleaning chemicals, biodegradable, coloured aluminium.



Contact Details

Poland

Kingspan
ul. Przemysłowa 20
27-300 Lipsko
Poland

T: +48 48 378 34 31
E: info@kingspanfasady.pl
www.kingspan.pl

Germany

Kingspan
Am Schornacker 2
46485 Wesel
Germany

T: +49 281 95 250-0
E: info@kingspan.de
www.kingspan.de

Czech Republic

Kingspan
Vážní 465
500 03 Hradec Králové
Czech Republic

T: +420 495 866 111
E: info@kingspan.cz
www.kingspan.cz

Baltic States

Kingspan
Neries kr. 16
LT-48402 Kaunas
Lithuania

T: +370 617 56870
E: facades.baltics@kingspan.com
www.kingspan.lt

Hungary

Kingspan
Horka dűlő 1.
H-2367 Újhartyán
Hungary

T: +36 (30) 690 3026
E: info@kingspan.hu
www.kingspan.hu

Austria

Kingspan
Kohlmarkt 8-10
1010 Wien
Austria

T: +431 22746 1018
E: info@kingspan.at
www.kingspan.at

Switzerland

Kingspan
Teufenerstr. 25
9000 St.Gallen
Switzerland

T: +41 71 440 21 91
E: info@kingspan.ch
www.kingspan.ch

Romania

Kingspan
Str. Grigore Mora nr.22
sect.1, Bucharest, 11887
Romania

T: +21-231-50-89
E: info@kingspan.ro
www.kingspan.ro



For the latest and most comprehensive product details, please always refer to the latest information by scanning the QR code or clicking this [link](#).

The information provided in this publication is accurate as of its date of publication and represents our commitment to quality and transparency. However, Kingspan Insulated Panels reserve the right to modify product specifications without prior notice to reflect advancements or improvements. For applications not explicitly covered within this publication, consultation with our Technical Advisory Service is strongly advised to ensure the product meets your specific requirements. Customer are responsible for verifying the product's suitability for their particular needs and for ensuring compliance with all applicable laws and regulations. We reserve the right to update this publication, and any other informational materials, at our discretion and without notice. For the latest information, please visit: www.kingspan.com.

