

GENERAL INSTALLATION GUIDELINES MODULEO[®] LAYRED[®] HERRINGBONE



THE WAY YOU LIVE INSPIRES US TO CREATE

Storage & transport

Boxes should be stored and transported on a flat surface in neat stacks - always store the boxes flat and never put them upright/on-end. Do not store the boxes in very cold (less than 0°C) or very warm (more than +35°C) or damp places.

Prior to installation

Visual inspection

Please ensure the product is inspected and checked for damage, defect or variation prior to installation in adequate light conditions. Check that the colours correspond to those ordered, the quantities are correct and there is no visible damage to the boxes. Check the Moduleo® LayRed®Herringbone panels during installation for any visible defects. Do not install any panels that display any imperfections. We recommend that you always use materials from a single production batch for each installation, as we cannot guarantee a shade match between different batches. Be aware that some designs have a natural variation within them. We also recommend that the product is mixed or shuffled between different boxes.

For defects that are visible prior to installation, Moduleo® will never assume responsibility for the uplift & relay costs. Installation implies acceptance.

Suitability

- Moduleo® LayRed®Herringbone can be laid on concrete, cementitious screed, anhydrite (calcium sulphate), timber, plywood, particleboard and ceramic tiles, raised access floors, that is reasonably flat and smooth or have been suitably prepared (see Floor Preparation).
- Moduleo® LayRed®Herringbone can be used with traditional water-based underfloor heating and cooling systems. See separate section on underfloor heating. The subfloor surface temperature must never exceed 27°C.
- Moduleo® LayRed®Herringbone is only suitable for indoor installation.

- Seasonal temperature conditions: Moduleo® LayRed®Herringbone can be used in most situations, such as temperature-controlled conservatories and holiday homes. Keep the temperature between 6°C (min.) and 35°C (max.). Where temperatures are outside of this range, installation may still be possible, see note at the end of this document (*).
- Special care must be taken to avoid hot-spots or isolated areas of prolonged exposure to direct sunlight through unprotected glass, in front of a wood burner, other direct heat source, etc.. It is recommended that the floorcovering is shaded from direct sunlight and otherwise protected from any direct heat source that increases the temperature in a localised area.
- The Moduleo® LayRed®Herringbone joints are water resistant (not 100% waterproof) after installation. Following the installation instructions carefully makes the floor fit for use in bathrooms, kitchens, laundry rooms and entrance areas. For reasons of slip resistance, the panels are not recommended for use in wet areas, e.g. pool areas or surrounds, saunas and rooms with build-in drains like showers. Frequent ingress of water under the floor may induce bacteria and/or mould growth.

Composition, construction and quality of the subfloor

Knowledge of the composition and construction of the subfloor or base provides valuable information that allows you to correctly check the acceptable humidity, flatness, compressive and tensile strength of the subfloor. In addition, it tells you what type of floor preparation, levelling/smoothing compound, and possible moisture barrier you may need during the installation process. When there is ambiguity or doubt about the quality or composition of your subfloor, check your local installation standards and/or seek advice from your floor preparation, levelling compound manufacturer/supplier.

National regulations & standards

- Site and installation conditions must always comply with the relevant national regulations and installation standards.
- In case the national standard or regulation conflicts with the manufacturer's recommendation, the most stringent of the two prevails.

Subfloor preparation

Irregularities in the subfloor

Good preparation is essential for a trouble-free installation. It is vital for an excellent Moduleo® LayRed®Herringbone finish. The appearance of Moduleo® LayRed®Herringbone will only be as good as the quality of the base over which it is installed. Although Moduleo® LayRed®Herringbone is intended for renovation of not perfectly even subfloors, some larger irregularities, steps, sudden level variations in the subfloor may show through the finished floor and/or create vertical movements which introduce potential undesired noises. They must be suitably prepared before installation.

The subfloor must be hard, structurally sound, relatively flat, clean and permanently dry, as well as being free from steps or defects and fit for the purpose intended. When required, scrape off and remove old adhesive residues and loose or de-bonded levelling compound. Make sure the subfloor is free from chemical substances and other contamination.

Unevenness of the subfloor may not be greater than 5mm measured over a length of 2m, measured with a suitable straight edge or level. Moduleo® LayRed®Herringbone is capable of bridging small holes of up to 30mm, grout-lines, joints and cracks of up to 10mm in the subfloor.

A suitable plywood/levelling compound should be selected to ensure that no sudden irregularities show through to the surface of the finished floor. However, the selection of suitable materials, including plywood, smoothing/levelling compounds

and any ancillary products, is dependent upon the occupational use of the area and must be agreed by the supplier of the preparative materials and the flooring contractor. All floor preparation materials used must be used in accordance with the manufacturer's recommendations and in accordance with the national standards for resilient floorcoverings.

The moisture content of the subfloor

- Unheated cementitious screeds less than 2.0CM% - 75% RH (UK)
- Underfloor heated cementitious screeds less than 1.8CM% - 75% RH (UK)
- Unheated anhydrite (calcium sulphate) screeds less than 0.5CM%
- Underfloor heated anhydrite (calcium sulphate) less than 0.3CM%

Moduleo® LayRed®Herringbone is water resistant and has very good resistance to retained construction moisture, however, best practice should be followed to avoid bacteria and mould growth under the floorcovering.

Direct-to-earth concrete and stone subfloors must have an effective damp proof membrane (DPM) in accordance with the national standards for the installation of resilient floorcoverings. Follow manufacturer's detailed instructions for the installation of a surface applied DPM and the use of levelling compound. An overview of manufacturers and suppliers can be provided by Moduleo®.

The effectiveness of a liquid applied DPM heavily depends on the type of product, the way of application and the site conditions. It is the responsibility of the installer to get the correct advice from the manufacturer of the DPM and to apply it in accordance with their recommendations.



Important

Floor installation should not begin until the installer has assessed and approved the subfloor and installation conditions.

Acclimatisation

Moduleo® LayRed®Herringbone must acclimatise in the room of installation, or an equivalent area for at least 24 hours prior to installation, or until such time as the product has achieved an ambient temperature: this is a minimum temperature of 18°C and a maximum of 27°C.

Store the planks or tiles in straight piles away from heating, cooling or windows with direct intense sunlight.

Temperature condition before installation

Moduleo® LayRed®Herringbone should be installed with a room temperature of between 18°C and 27°C and a subfloor temperature of above 15°C.



Installations in areas colder than recommended will influence the installation properties of Moduleo® LayRed®Herringbone. The planks or tiles will be less flexible, cutting will be harder and small pieces difficult to cut out. The lower the temperature, the more difficult the installation and the higher the risk of damaging the click profile. Also, the risk of excessive expansion increases with decreasing installation temperature. Installation in areas warmer than recommended increases the risk for excessive shrinking/gaps between panels.

Starting installation

Temperature conditions during and after installation

A constant temperature, fluctuating no more than 5°C per day, not below the required 18°C room temperature and 15°C subfloor temperature, should be maintained 24 hours before and during installation.

Underfloor heating

Moduleo® LayRed®Herringbone can be used with traditional water-based underfloor heating systems (according to standard EN 1264 part 1 to 5). Wired electrical systems are not recommended unless the system is encased in a minimum of 9mm of suitable levelling compound. Direct contact with electrical wired heating systems must be avoided. The surface temperature must never exceed 27°C. If in doubt seek further advice. Some infrared heating panels may be suitable, however care should be taken as some of these systems can provide very sudden heat gain which is not recommended. In any circumstance the surface temperature must not exceed 27°C. If in doubt seek further advice.

After installation the underfloor heating must be gradually increased by increments of 5°C per day until it reaches the standard operating temperature conditions, with a maximum subfloor temperature of 27°C. For the suitability of the system please check the manufacturer's instructions.

Underfloor cooling

Moduleo® LayRed®Herringbone can also be installed over floor cooling systems. However, the supply temperature of the cooling water must not be reduced below the dew point temperature. Always keep the temperature of the subfloor at least 3 degrees above the dewpoint. Temperatures below this point will produce condensation and can

therefore create a humid atmosphere behind the floor covering which may encourage mould growth, etc.

Required Expansion Gap

Moduleo® LayRed®Herringbone is a “floating” floor. The panels should not be glued together or fixed to the subfloor.

Moduleo® LayRed®Herringbone has more ability to move heavy furniture than traditional flexible LVT click floors, however Moduleo® LayRed®Herringbone has limitations: very heavy objects or furniture can prevent the floor from floating and moving freely. For example, do not put very heavy kitchen elements, wood stoves or any other very heavy element which prevents free movement directly on the floor but leave an expansion gap around the element as if it were a wall (see below).

A 0,75mm expansion gap, per linear meter of Moduleo® LayRed®Herringbone is required in any direction and must be incorporated at the perimeter of the room/area in “standard rooms and conditions”, see note at the end of this document (*). Room size without expansion profiles: wall to wall length maximum 16m.

2 m	➔	1 mm
3 m	➔	1.5 mm
4 m	➔	2 mm
5 m	➔	2.5 mm
8 m	➔	4 mm
10 m	➔	5 mm

A 1,5mm per linear meter expansion joint in any direction must be incorporated at the perimeter of the room/area in extreme rooms and conditions, see below and note at the end of this document (*). Room size without expansion profiles: wall to wall length maximum 8m.

2 m	➔	3 mm
3 m	➔	4.5 mm
4 m	➔	6 mm
5 m	➔	7.5 mm
8 m	➔	12 mm
10 m	➔	15 mm

Standard rooms and conditions are areas with temperatures between 6 and 35°C, e.g. no direct sunlight through glass in sun facing rooms (unless the glass has a very effective built-in heat-shield). Extreme rooms and conditions are areas with potential surface temperatures between 0 and 60°C, such as conservatories, non-occupied holiday homes, etc.

Special care must be taken to avoid hot-spots or isolated areas of prolonged exposure to direct sunlight through unprotected glass, in front of a wood burner, other direct heat source, etc. these will not fall under the definition of ambient room temperature, variation or condition. It is recommended that the floorcovering is shaded from direct sunlight and otherwise protected from any direct heat source that increases the temperature in a localised area.

When installing in an “extreme room”, in accordance with the above definition, where the temperature during installation is above 25°C, and the product has been acclimatised, it is recommended to take the expansion gap of the “standard room” to avoid too large a shrinkage gap in colder temperatures.

For a more extensive definition of standard rooms and conditions we refer to the note at the end of this document (*).

If existing skirtings are present, and you do not wish to remove them, it is possible to trim off the lower part of the skirting with a specialist trimming tool, existing on the market. E.g. Bepo multipurpose trimming saw.

Alternatively, the use of Xtrafloor® Fit-Over Paintable Skirting board or a suitable Scotia Trim is recommended.

For smart solutions to cover the expansion gaps, see 'Finishing Your Floor'

Installation methods

As Moduleo® LayRed®Herringbone comes with an integrated underlay, it is simple: just install it looselaid on the subfloor! Moduleo® LayRed®Herringbone is a floating floor and should never be adhered to the subfloor.

For alternative installation methods, not included in this overview, always seek technical advice from Moduleo®.

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Recommended underlay

Because Moduleo® LayRed®Herringbone comes with an integrated underlay already, a separate underlay is not required before installing the Moduleo® LayRed®Herringbone panels.

Installation step by step

Recommended tools

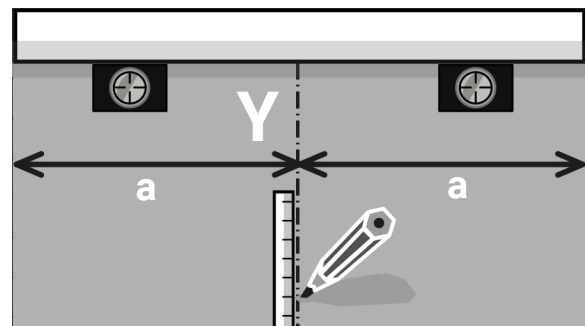
- Tape Measure
- Pencil
- Chalk line/laser line to ensure the installation starts/remains straight
- Set Square
- Tapping block
- Heavy-Duty Utility Knife
- Nylon- or rubber hammer
- Spacers for maintaining the expansion gap along the wall and to ensure a straight installation
- Optionally, fine tooth jigsaw for intricate cutting, a hole-saw or step-drill for circular cuts and/or a suitable flooring guillotine



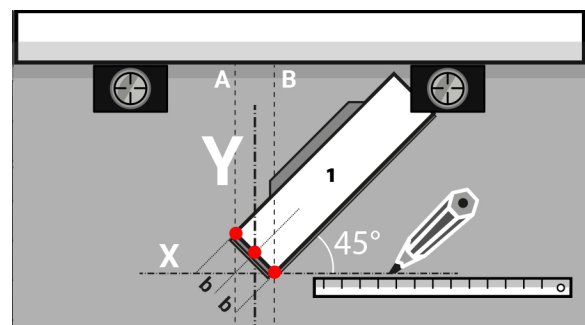
Before starting, carefully measure the length and the width of the room to plan a precise layout to achieve a balanced appearance of the floor. This is very important when installing herringbone. This will ensure also you won't end up with the last row being too narrow.

As opposed to many other herringbone click planks, the Moduleo® LayRed® Herringbone planks do not come in "A" and "B" planks, but in a universal plank equipped with the patented Unizip profile. No need to sort the planks out and to make separate piles.

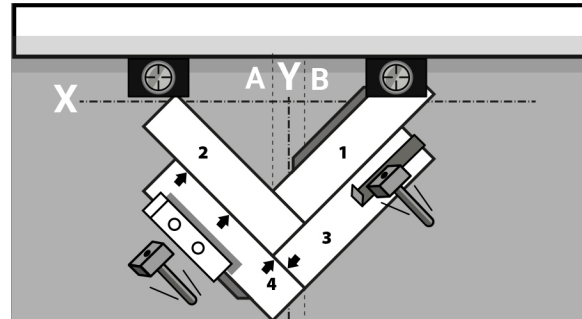
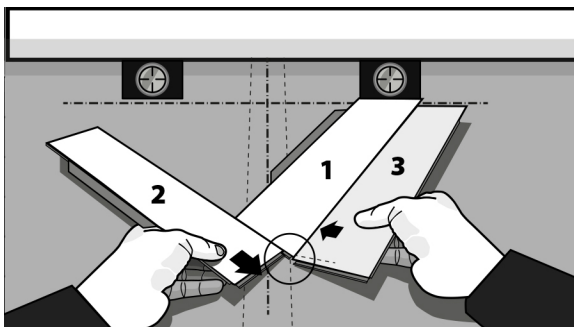
- A herringbone design should typically be started from a central axis. Use a chalk line or straight edge to mark the centre of your room, creating the 'y' line.



- Place your first plank (1) at an angle of 45°. Draw parallel to the "Y" line, extra "A" and "B" lines to mark the corners. Also draw an extra reference line "X" as shown in the diagram.

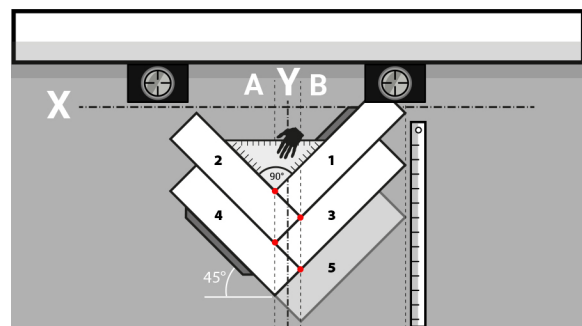
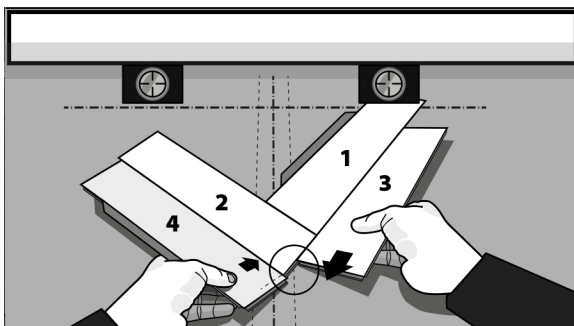


- Place your first plank (1). Use another plank (3) and attach it to the first by inserting it into the groove at an angle of $\pm 20^\circ$. Do not fold it down. Use plank (3) as a guide to install plank (2). Let plank (3) extend past plank (1) with $\pm 5\text{mm}$ at the bottom. Now insert plank (2) into the short side of plank (1) and slide it till it is stopped by plank (3). Now fold down plank (2).



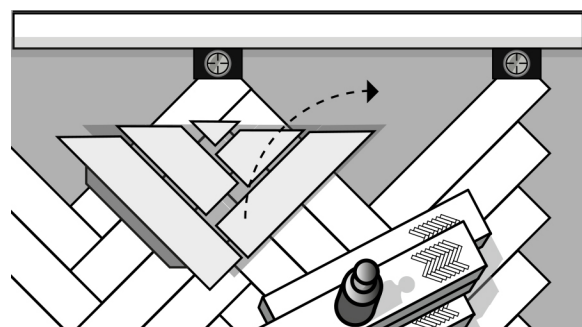
- Work your way down. Do not forget to tap gently to perfectly engage the joint. Use a straight edge or additional reference line to ensure that the rows remain straight! Repeat this line with new rows.

- Now repeat the same method with plank (3) and (4). Plank (4) now serves as a stopper for plank (3). Fold down plank (3). Continue this process until you finish the center rows

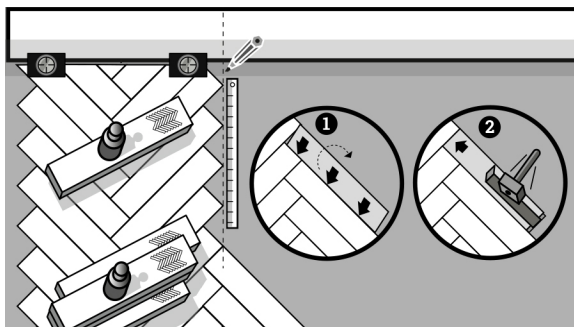


Having placed multiple planks in the centre row. Fill the open triangle close to the wall. Use the spacers to maintain the correct expansion gap between the wall and the floor. It is recommended to place some unopened boxes (or other type of weight) to keep the already installed section in place.

- Make sure that the joint is closed tightly. Use hammer and tapping block to gently tap and ensure the locking mechanism is correctly engaged.



Now work your way up the pattern as shown.
(1) Connect the long end first by lifting at +/-20°
(2) Now gently tap the short end of the plank with a tapping block and a hammer.
(3) Both ends are closed now. However it's wise to check, just to be sure, that during the manipulation no small gaps have formed.

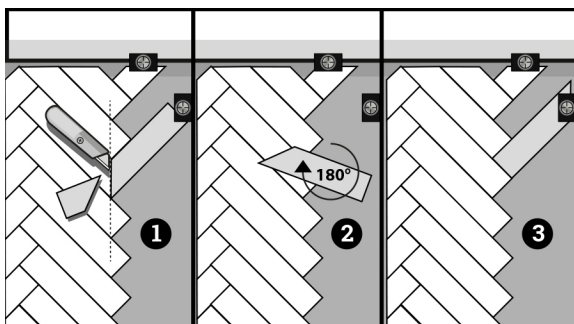


After installing the whole floor, the spacers must be removed so that the floor can expand and contract freely.

Doorjambes and heating pipes also need to be individually fitted, maintaining a movement gap. First cut the panel to the right length, then place the panel next to the object and draw the correct fitting. Next, cut the panel to size. Doorjambes can also be sawn (undercut) to size if necessary, the Moduleo® LayRed®Herringbone can them be neatly installed underneath.

For smart solutions to cover the expansion gaps, see 'Finishing your floor'

- Place your planks in the last row in the position as you were to continue a normal row. Now turn one plank 180° and place the corner against the wall minus the distance of the spacer. You now can draw the cutting line and cut off the surplus.
- Turn back the plank 180° and install it. Repeat this with each individual plank.
- Once finished, remove the spacers. Your floor can now expand and contract freely.



Finishing your floor

Xtrafloor® offers a range of smart flooring solutions to your finishing needs. The offer combines unique functionality with style: a hardwearing solution that ensures smooth transitions at all times.

How to finish your floor at a wall

Xtrafloor® standard skirting in matching designs

- The identical connection for your Moduleo® LayRed®Herringbone floor
- Water-resistant
- Wear-resistant
- Perfect water-resistant corner solution as the HDF carrier does not come into contact with cleaning water



Xtrafloor® end profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look



Xtrafloor® paintable skirtings: style by choice

- Unique water-resistant material
- Colour coordinate your pre-primed skirting boards with the walls
- Use our renovation skirting to cover existing skirting boards

How to cover the expansion gap within the floor surface, for runs longer than 16m (8m in extreme rooms and conditions).

Xtrafloor® T-profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look
- Durable and easy solution to cover the gap between 2 adjacent floors at the same level



For specific installation instructions on Xtrafloor® see www.moduleo.com

How to connect your floor with higher or lower level floor surfaces

Xtrafloor® Adapter profile

- Sleek aluminium profile on a strong aluminium base for a minimalistic design that lends a smart and modern look
- Connect the floor with lower floor surfaces, with a height difference up to 6mm
- Also suitable to make the transition between 2 different types of floorcovering (e.g. Carpet)

Maintaining your floor

Appropriate maintenance procedures will help to preserve the appearance and will extend the life of a Moduleo® LayRed®Herringbone floor. The frequency of maintenance will depend on the amount and type of traffic, degree of soiling, the floor colour and type.

Below we will give a short summary of the 5 key points to effective maintenance.

For full maintenance instructions and recommended products we refer you to www.moduleo.com.



1. Preventative measures

- Keeping dirt off the floor is easier and less expensive than removing it.
- Proper entrance walk-off material is able to remove large amounts of dry soil as well as absorb water or oil-based moisture.



- Use furniture caps or other protection under heavy items or appliances to prevent indentation.
- Avoid rubber or latex backed mats, furniture feet and the like as the rubber or latex may leave permanent stains.
- Almost all flooring will vary in colour over time when exposed to UV light. Avoid this by using curtains or sunscreens when the sun is very bright.
- Mechanical damage of the floorcovering, caused by heavy overloading or sliding of furniture/items and permanent stains caused by rubber/latex are not covered by the product warranty.

2. Vacuuming

Regular vacuuming is the most important part of a successful maintenance program to remove all grit, debris and other solid particles. Vacuuming is far more effective for this type of soiling than wet mopping, which normally moves soiling from one place to another, rather than removing it.

- Prevention also means making the right choice of floorcovering and design/colour for the right area, e.g. avoid too dark or too light colours for high traffic areas near the entrance of a commercial building.
- Protect against scratching from furniture feet by using wide, free-moving, castors, glides, rollers or pads, e.g. www.scratchnomore.nl. NOTE : felt protection pads can pick up dirt and grit and subsequently cause scratching or further damage to the floorcovering.



3. Spill and spot cleaning

Spills and spots are inevitable, but they don't have to be permanent. Remove a spill quickly and there is less chance of permanent staining. First try to blot the spill with a dry cloth/kitchen towel, then use water. Only use detergents/cleaning products when the above is not sufficient to remove the spill/stain. Use neutral pH detergents, e.g. from the product range of www.james.eu.

For heavier cleaning, e.g. to remove oil/grease/surface dirt in kitchen area/entrance ways, wet mopping with detergent may be required, e.g. products from www.james.eu. In this instance always use the so called "two bucket" method, which is one bucket with water and detergent and one bucket with clean water for rinsing.



4. Periodic cleaning

- Inspect and assess the appearance of the floor. Seasonality may also alter the maintenance requirements.
- Vacuum to remove all grit, debris and other solid particles.
- For light cleaning, a damp mop may be sufficient. Do not use cleaning products when not required.

- A common error is to use excess detergent, which then leaves a film on the surface. In this instance, clean the floor a few times without any detergent to remove the excess soap/detergent, this would bring you back to a standard condition. Care should be taken to dilute detergents in accordance with the manufacturers' recommendations.
- For larger (commercial) areas, a professional cleaning machine with rotating brushes and vacuum extraction can be used.



5. Deep cleaning

- Periodic cleaning is far more beneficial to the floorcovering than infrequent heavy or deep cleaning. However, seasonality can influence the amount of cleaning required.
- Remove surface dust and grit by vacuuming.



Once dust and debris free, with a spray, apply a solution of neutral pH cleaner to the section to be cleaned (or dependent upon the level of soiling, a light alkaline cleaner), carefully diluted to the manufacturer's instructions. Leave for enough time to react with and lift the soiling. Some agitation with a soft brush may be required.

Pick up the solution with a clean "microfiber" mop, using a continuous and steady side-to-side motion. When the mop head becomes loaded, it will leave residues and start to streak the floor. At this point the dirty mop head should be removed, wrung out, placed into a suitable bag and a clean mop head fitted. The cycle should then be repeated until the whole floor is completed, is clean and streak-free. Do not move dirty water from one place to another, extraction cleaning may be required.



- The dirty mop heads should then be machine washed and dried ready for reuse.
- Heavy soiling and soiling in the grain, may require a "scrubber dryer" with immediate wet vacuum extraction prior to mopping. Numatic International have a range of appropriate machines for this application. Further advice can be obtained directly from the manufacturer, their distributors or specialist floor care companies.



Important part from the warranty:

- Almost all flooring will vary in colour over time when exposed to UV light. Avoid this by using curtains or blinds when the sun is very bright. PVC also has a tendency to yellow in the dark. The combined effect can cause covered areas (under furniture, under permanently closed doors, etc.) to differ in colour compared to non-covered areas. This is a characteristic of all PVC floorcoverings and is excluded in our warranty conditions.
- Avoid rubber or latex backed mats as they may leave stains. Rubber and latex castors or protection caps under furniture must not be used (we advise the use of castors type 'W' in accordance with EN 12529).
- In case of loose lay installation, damage of the vinyl flooring caused by heavy overload, rolling loads or sliding activities is excluded in our warranty conditions.
- Do not allow cigarettes, matches and other very hot items to contact the floor as this causes permanent damage.
- Important: Cleaning or maintenance may only take place if the floor is correctly installed and there are no visible imperfections.
- Contact your representative / supplier for the complete warranty conditions.
- (*) Moduleo® considers standard rooms and conditions as:
 Minimum temperature during transport and storage: 0°C
 Minimum temperature during installation: +15°C
 Minimum temperature during use: +6°C
 Maximum temperature during transport and storage: +35°C
 Maximum temperature during installation: +27°C
 Maximum temperature during use: 35°C
 Acclimatisation period: 24h
 Room size without expansion profiles: wall to wall length maximum 16m.
 No hot spots allowed.
- Moduleo® considers extreme rooms and conditions as:
 Minimum temperature during transport and storage: 0°C
 Minimum temperature during installation: +15°C
 Minimum temperature during use: +0°C
 Maximum temperature during transport and storage: +35°C
 Maximum temperature during installation: +27°C
 Maximum temperature during use: +60°C
 Acclimatisation period: 24 hours
 Room size without expansion profiles: wall to wall length maximum 8m.
 No hot spots allowed.

- This document was issued on (see at the end of this document) and supercedes all previous versions, at the same time it is superceded as soon as a new version is published. For the latest version please always check www.moduleo.com. The original English version is always leading.
- In case of conflict between these installation instructions and the local technical standards/legislation, the most stringent of the two prevails.

IVC Group - 13/10/2022