



CARPET INSTALLATION GUIDE

CREATIVE DESIGN, FLAWLESS EXECUTION





Installation of DESSO® carpet

A carpet's life will be governed by many factors, starting with the selection process that must take both aesthetic and performance considerations into account. However, the installation process is of critical importance for an optimal performance of carpet.

The following installation procedures are guidance for a proper installation of Desso carpet, and should be followed at all times.

Preparations

Site conditions

The following conditions inside the vessel are critical for proper installation:

1. The temperature of the floor must be between 59°F/ 15°C and 65°F/ 20°C. The temperature of the room must be 59°F/ 15°C at minimum.
2. With the standard CM-measurement, the damp content of a concrete slab should never exceed 3%. Using the alternative protimeter measurement method, the damp content should not exceed 5%. The humidity in the room should stay below 60%.
3. The alkalinity or pH in a concrete slab should be between 5 and 9 for a direct-glue installation. Should pH be outside this range, stop and do not proceed with the installation. Remedial action will be necessary.
4. Newly poured concrete floors generally take 90-120 days to cure. Please take into account that a concrete subfloor must be dry, clean, flat, solid and free from grease. A suspended cement-bonded subfloor demands a good isolation layer as well. Gypcrete or substrates with excessive dust must be cleaned, and then primed with a latex primer.
5. In cold and damp seasons the carpet must be allowed to acclimatize for at least 24 hours in the surroundings in which it is to be laid, before the fitting is commenced.

Trimming the selvedge edge

In most cases, you will have to trim the selvedge edge on one side or both. If this is the case, make sure you seal the edge properly with a latex seam sealer. When you place both breadths together, you should not exceed 1/8" or 0.3cm with no face yarns, or unsightly seams will ensue.

Proper tools

- dead man
- power stretcher
- mini-stretcher
- stay nails
- dry lines (masonry line)

General guidelines

Fitting patterned carpet requires a great deal more attention and time than plain carpet. A good section plan that takes correct matching and pattern repeat length into account is an essential component of fitting patterned carpet.

Pattern shifting (run out)

Slight pattern shifting should always be taken into account. Pattern shifts can not only occur during the production process, but also as a result of shrinkage under changing atmospheric conditions (e.g. during transport). Any pattern shift, however small, will have to be corrected when fitting. The extent to which any pattern shift is visible in practice is greatly dependent on the size of the area, the pattern and the color, and the corrections required when fitting.

Pattern shift between pieces from the same production

A pattern shift may occur within one production. For a pattern repeat length between $\geq 0''/ 0\text{cm}$ and $< 4''/ 10\text{cm}$, the maximum deviation is 2% of the pattern repeat. For pattern repeat length between $\geq 4''/ 10\text{cm}$ and $< 40''/ 100\text{cm}$, the maximum deviation is 1% of the pattern repeat. For the maximum deviation for any pattern repeat length above $40''/ 100\text{cm}$, please contact your local sales representative.

Bowing

Z-bowing is defined as the deviation from squareness. The edges of the strip sections do not lie in one line. In this case a maximum deviation of $1.2''/ 3\text{cm}$ over a $400\text{cm}/ 13' 1.5''$ width is permitted. S-bowing is defined as the bowing in relation to a straight line on the strip section. A maximum deviation of $1.2''/ 3\text{cm}$ over a $400\text{cm}/ 13' 1.5''$ width is also applicable in this case.

Stretch-in

Stretching with the carpet gripper method is the oldest used installation technique, but grippers have improved a lot. This method has advantages to other fitting techniques, like:

- better walking comfort
- improved thermal and acoustic isolation
- removal and replacement can easily be done
- lifetime of the floor covering can be enhanced by using an underlay
- certain preparations for leveling the subfloor can usually be omitted

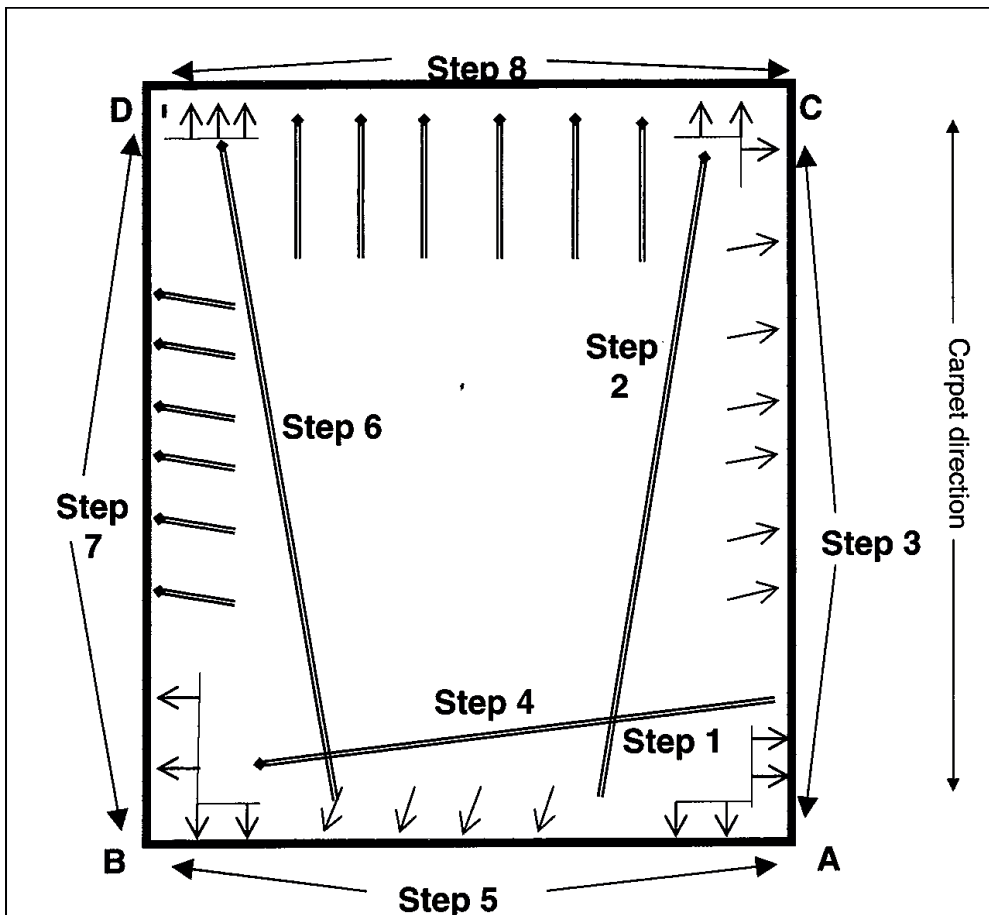
However, the stretching technique is more time consuming than gluing, due to the preparation required.

The first step is to dry-lay the area to be carpeted. When using multiple breadths, install the largest pattern first using control lines to keep the patterns square to the area. Install the first breadth, and then install the second. Make the seam and continue in this fashion.

Place a piece of carpet between the tailpiece and wall to prevent damage to the wall. Stretch the carpet following the examples and sequences provided below.

The wall to which the carpet is attached before stretching, has to be chosen in function of the highest tension to be used lengthwise. Begin stretching the carpet from a corner and secure. Now use the power stretcher to stretch the carpet fully. Position the tailpiece in the corner in which you started and stretch the carpet towards the opposite corner.

Use strong profiled edging trims on areas where the carpet ends and a different floor surface begins. A profiled edging trim will help prevent damage and unraveled edges.



Stretch-in using seam tape

We recommend on stretch-in to use a low profile seam tape. As you are making the seam, use a flat roller to make sure the thermo-plastic from the seam tape is penetrating the back of the carpet to make a stable seam. Use a latex seam seal to seal the edges of the seam after trimming the selvedge edge.

Stretch-in using a star-tractor

When using a star-tractor, ensure that the heat from the iron and tractor are set to the correct temperature to avoid re-crimp of the yarns. The use of a star-tractor is not recommended by Desso.



Direct glue

After the carpet has been dry laid and acclimated, use control lines every other pattern. Using a knee-kicker, align the patterns as close as possible to the control line. This allows you to visually know how you will need to move the carpet prior to spreading any adhesive.

Open up half the first breadth and half the second breadth. Glue the area by using a 1/8" x 1/8" x 1/8" or 0.3 x 0.3 x 0.3cm U-notch trowel. Lay the breadths back in. Setup control lines and by using a power stretcher and/or mini stretcher, align the patterns to the control lines. You may have to use stay nails to hold in place until the adhesive sets up.

Seams

Seams should be sealed on the direct glue down using a solvent-base sealer. Apply a 1/8 bead of seam sealer to the base of the edge at the first seam. Roll the second seam into the first. This will seal both edges to keep from fraying or unraveling.

Double stick

Before commencing the installation, always read the instructions supplied with the adhesive with respect to site conditions (temperature and humidity), the type of adhesive spreader required, the correct type of adhesive and the quantity to be used.

Installing carpet

After the carpet has been dry laid and acclimated, use control lines every other pattern. Using a knee-kicker, align the patterns as close as possible to the control line. This allows you to visually know how you will need to move the carpet prior to spreading any adhesive.

Open up half the first breadth and half the second breadth. Glue the area. Lay the breadths back in. Setup control lines by using a power stretcher and/or mini stretcher and align the patterns to the control lines. You may have to use stay nails to hold in place until the adhesive sets up.

Carpet needs to be rolled with a roller, maximum weight 35 lbs or 16kg. There should be no heavy foot or rolling traffic on the carpet for a minimum of 24 hours.



Double-stick seams

It is required to use double stick seam tape to ensure seam stability.

Installing stairs

The carpet should be installed so the pile direction is in the down-the-stair direction. This ensures the carpet will wear better because foot traffic is the same as pile direction. Never position seams across stair nosings unless installing protective nosings such as plastic or aluminum strips.

Woven-to-plan panels

Many times referred to as Electronic Jacquard or E.J., the technology of woven-to-plan panels has changed the way borders, inserts and out fields are all woven together to fit the space. Qualified installers are able to take 2 rolls of carpet and seam them together with one seam as opposed to seaming together the insert, border, outfield and end caps like a puzzle.

The installation package includes:

- Rolls labeled
- Control sheet
- Seaming diagrams
- Production diagram of each roll
- Flooded prints

Installation

Dry-lay all panels to ensure they line up. Be sure to check columns, light fixtures, soffits, and wall dividers while you are dry laying the carpet to make sure these areas are aligned. This will give you the opportunity to make adjustments prior to spreading any adhesive.

Do not glue any carpet if it does not match. If you have something that doesn't match, stop the installation and call Desso's Service Support immediately.

After installation: carpet protection

During construction works, carpet should be protected from heavy traffic and construction dust with a non-staining building material paper such as kraft paper or protective cardboard or special carpet sheeting like Easydek.

It is essential that the adhesive on the carpet is dry before protection is applied. Ensure that a minimum of 24 hours – but preferably 48 hours – drying time is taken into account and always follow the instructions provided by the manufacturer of the glue. Placing protective sheeting on the carpet before the adhesive is dry can cause capture of moisture, with pile reversal and irreparable damage as a consequence.

Pile Reversal and Shading prevention

Desso has undertaken several preventive measurements within our production facility in order to minimize the potential pile-reversal problems to an absolute minimum. However, there is no 100% cure to eliminate the risk of shading, we have tried to do as much as possible on our end to minimize the risks but it can not be excluded.

Actions / Preventive measurements that can be taken to avoid the shading effect from appearing:

- One should avoid using uni-colored carpets. Carpets that consist out of one color only have a bigger risk of showing the shading effect. On the contrary, 'busy' designs are camouflaging possible shading effects a lot more;
- One should consider to use underlay. Underlay has deck-levelling characteristics (soft) compared to a (hard) concrete or steel sub-floor. The more levelled the sub-floor is, the better the carpet will look after installation. In general underlay is recommended by DESSO to extend the Product Life Cycle;
- One should install the carpets at the very end of the project, 1-1,5 months before the ship delivery. After covering the carpets there should be no more extensive traffic on top of the covering material in order to avoid the shapes of the covering materials to be marked in the carpet. This will damage the carpet due to the continuous pressure on top of the covering material when the ship is still heavily under construction. This might cause or accumulate the shading effect or other visual defects;
- One should install the covering materials a few days after the carpet installation has been completed in order to let the moist of the adhesive vaporize. For the exact drying time please consult the technical specification of the adhesive used. An important parameter that influences the dry-time of the adhesive is the relative humidity of the air. Please pay extra attention to this point as too much moist is harmful for carpet. When there are doubts about the dry-time please consult the adhesive manufacturer at all times. Additionally, one should use covering material that is able to 'breathe' in order to let the moist of the glue and the carpet vaporize instead of sealing the surface with a 100% closed foil and/or wooden panels.

DESSO cannot be held responsible for the use of (IMO certified) adhesive that has never been tested together with the DESSO IMO certified carpets. In case of doubts about the adhesive to be used please consult DESSO for advice. When there are doubts DESSO can perform the required tests on your expenses to determine if the adhesive would be suitable. This is of big importance as DESSO can only apply the standard product guarantee when all conditions meet the required criteria.

It is not possible to assure that pile reversal / shading will not develop in any carpet.

Notes

- When using adhesive, never cut carpet that already has adhesive applied to the back. When trimmings are removed, adhesive will be removed as well from critical locations.
- When installing carpet using any of the methods described above, ensure that the pile is standing up straight and that no piles are pinched into the seam.





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