

COMMERCIAL

INSTALLATION GUIDE

By Lamo

TABLE OF CONTENTS

Layout plan	2
Checking the material	3
Checking the subfloors	
Preparing the carpet	4
Installation methods	
Carpet gripper method	5
Full adhesion method	
Seaming	6
General	
Preparation	
Seaming methods	
Tolerances	7
General	8

Considering the large number of installation methods and other factors involved in fitting carpet in contract areas, this installation guide is only intended to provide guidelines. No liability can be accepted for loss or damage caused by the incorrect installation of Lano's qualities.

Country specific carpet installation regulation:

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Please remember follow the regulations and instructions of auxiliary material suppliers (adhesives, fastenings, etc.) properly.

- The installation of the carpet can only be carried out once the building is watertight, meaning after the outside walls, windows, doors and roof are completed and an appropriate stable temperature can be achieved - all construction work is completed before starting the fitting of the carpet.
- All carpet should be stored in a secure, clean, warm, dry and well-ventilated environment. It is important to ensure that, when handling or moving carpet, the rolls are packed for protection and that the appropriate equipment or the correct number of people is available.

LAYOUT PLAN

We advise to make a preliminary layout plan of the room. Measurements should never be taken from a plan without verification on site. It is the responsibility of the carpet fitter to submit a correct section plan that takes the below mentioned information into account.

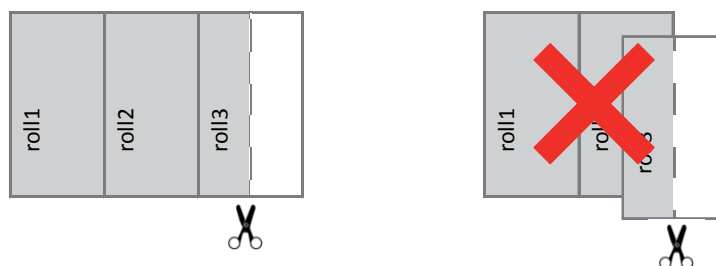
The detailed layout plan states dimensions, the laying direction and the different carpet strips, taking into account any design/pattern report.

When patterned carpet with a large, dominant, geometric or panelled motif is installed, it is recommended that, wherever possible, the major motif is centred within an area or doorway. Patterns should be held in permanent register throughout interconnected areas, including halls, landing, etc. If the pattern has a natural direction, it should relate to the major viewpoint, doorway or entrance to an area.

The repeat length of the pattern is on the technical data sheet or on the product folder. Larger design require more carpet; designs with a high degree of linearity (e.g. stripes) are not recommended as they can be a challenge to install and a slight design shift nearly always remains visible. Anyhow, a small pattern shift should be taken into account. The shift can occur after production or as a result of shrinkage due to changing atmospheric conditions and can mostly be corrected when fitting. The size of the area, the size and type of the pattern, the colour and the quality of the fitting will define to which extend the pattern shift will remain visible after installation. Installation of patterned carpet normally requires more time and expertise and the quality of the pattern match relies to a very large extend on the installer's skills and capabilities.

Remember that you must provide sufficient carpet taking into account pattern repeat length & width, seams and other cutting losses. Please consider that the quoted dimensions are subject to both tolerance and ambient condition variations. Dimensions may be accurate when the material is leaving the factory but changes in atmospheric conditions during transport or storage prior to fitting may affect the dimensions.

With piece dyed qualities one should make sure that the sections of carpet be laid continuously along the outer edges of the carpet breadth, i.e. that no fitting sections have to be cut out of the centre of the width for fitting against the outer edges of full section widths.



Limit the number of seams as much as possible. We recommend that you avoid seams in places with a lot of traffic (doorways, entrances, etc) and if you cannot avoid it, we recommend seams in the same direction as the walking direction and not perpendicular to it.

CHECKING THE MATERIAL

Upon delivery, the carpet rolls must be checked for possible damage caused during transport. Any damage must be declared on the delivery note.

Although your order has passed the high standards of our quality control, we advise you to inspect the carpet (colour, design/pattern, dimensions, quantity, quality, etc) before fitting. It is important to report defects before cutting or fitting the carpet. Visible defects can not be accepted after the carpet has been cut or fitted. For woven carpets, imperfections can occur due to the use of (partly) natural materials. This does not concern production defects.

CHECKING THE SUBFLOORS

A good inspection of the subfloor is indispensable. The quality of the subfloor has a great influence on the end result of the carpet fitting.

The subfloor must be dry, clean, completely flat, evenly absorbent and sufficiently stable. We advise to remove existing linoleum or vinyl floors for an optimal result. Dry and clean, namely free from dust, grease and oil, free from solvents or old coatings or residues of glue or other products, in order not to jeopardise the adhesion of any glue and to prevent mildew under floor covering.

Stable and level, in order not to compromise the decorative appearance of the new carpet, because a very small imperfection that you can hardly see, can be very visible and disturbing after the installation.

Any large cracks must be repaired with repair material and levelling might be required for major level disparities or irreparable damage to the subfloor. Any small protruding tips can easily be chiselled off with a stripping knife.

In case of a heavily absorbent or dusty subfloor, it is recommended to treat the surface with a compound. Allow the compound to dry completely before continuing the fitting.

Experience tells us that the use of liquid adhesive removers to remove adhesive residues from the subfloor, can have an adverse effect on new adhesive or new floorcovering. The use of liquid adhesive removers void all applicable warranties.

We stress that the subfloor must comply with the International Standards.

Always check the damp level of the subfloor, it is important that the surface is completely dry. There are 2 ways to measure:

1. the standard CM-measurement: damp content should not exceed <3%
2. the protimeter measurement method: damp content should not exceed <5%

The ventilation of the subfloor is to be checked and 5 cm² per m² of floor surface is sufficient.

PREPARING THE CARPET

Prior to installation, it is important to unpack and roll out the carpet in advance in the room where it will be installed. It is important to check the production details on the rolls to be certain that rolls from the same production batch are applied in the same room.

A second factor that requires attention is the direction of the carpet piles. In the ideal circumstances, the pile direction should preferably be towards the entrance. The colours of the carpet then appear darker and fuller and this creates the best visual effect. In certain cases, other factors such as major viewpoint, incidental light, durability and economic use of material need to be taken into consideration. If multiple strips are required, you should absolutely make sure that the pile direction of the different strips is identical. If not, this creates unwanted colour effects. Wherever possible, the carpet should be fitted at right-angles in relation to the windows which will minimise the visibility of seams.

Wherever possible, the direction of fitting should be the same over the entire floor of the premises.

An adjustment of 24 to 48 hours to the ambient temperature (advise: 18°C) and humidity level will prevent the carpet from shrinking or stretching after the installation, which can cause unwanted and irreversible side effects. The carpet should be rolled out flat in an area with a minimum room temperature of 18°C, a minimum floor temperature between 15°C and 18°C and a relative humidity between 50 and 65% RH to allow acclimatization and recovery from any residual tension introduced by handling. Adequate security should be ensured.

During and after installation, the general room temperature should remain between 18° and 27°C and the humidity level less than 75% (measured by the hygrometer) since considerable changes in humidity levels may affect the carpet quality and, if applicable, the drying of the adhesives, primer, etc. If possible, protect the subfloor and the carpet from direct sunlight during and also 48 hours after the installation, especially in very hot climates.

Temporary heating equipment can increase the humidity to a far higher level as would be expected to be prevalent in use. Fitting carpet in these circumstances is a major cause of eventual dimensional stability problems and should be avoided.

If floor heating is present, the system has to be turned off at least 24 hours prior to treatment of the carpet to assure that the floor heating is cooled down. After placement, please wait 48 hours before turning on the system again. Also, the underfloor heating must have been in operation for at least 10 days before the carpet is laid to ensure that any residual moisture has completely evaporated. In order to prevent problems, it seems that the temperature at the underside of the floorcovering should never exceed 27°C.

INSTALLATION METHODS

Although there are different techniques for fitting carpet, they all have the purpose to secure the carpet and ensure that it is laid flat and at an even tension. A correct tension ensures that the carpet will not be displaced by the movement of people or objects causing rippling. Lano Carpets does not accept any claims for shrinkage of the carpet unless it has been installed/secured in an appropriate manner or for carpet installed in areas subject to excessive moisture.

The selection of the carpet installation method depends on the installation itself, the carpet construction and the preference of the customer.

Carpet construction		Carpet gripper	Full adhesion	Full adhesion with carpet underlay
Woven	Axminster	✓	✓	✓
	Wilton	✓	✓	✓
Tufted	Secondary backed		✓	✓
	Foam backed		✓	

Whether or not to fit the carpet over an underlay for a more luxurious installation is the decision of the project owner. An underlay also has a positive effect on wear and durability and it will improve underfoot comfort and acoustical properties. Our tufted qualities can be adhered to a good subfloor without any problem.

1. Carpet gripper method

Cases in which the carpet gripper method may be selected:

- patterned carpet: the pattern can be matched more easily
- on floors that are unsuitable for the full adhesion method
- corrective measures may be easier to perform
- the removal costs are usually less than those for a removal of an adhered installation

Cases in which the carpet gripper method should not be selected:

- heavy rolling traffic areas
- on ramps and inclines

The carpet is anchored in place by grippers. A gripper is a perforated strip with small angle pins projecting and is fixed to the subfloor. It is essential that the grippers are firmly fixed to the floor, so that they do not lift during the commercial life of the carpet. Grippers should be installed leaving a space between the gripper and the wall of just slightly less than the thickness of the carpet. The gripper type and the way to fix it to the subfloor depend on the type of subfloor and the carpet quality & finishing. It is recommended that the gripper manufacturer's instructions are followed.

When using the carpet gripper method, the carpet should always be fitted under tension. In smaller areas a suitable tension can be achieved by the use of a knee kicker but it should be noted that the main purpose of a knee kicker is to position the carpet, not tension it. In larger areas stretching should be achieved by the use of a power stretcher and in very large areas, we recommend the use of a double-headed power stretcher to ensure that the tension is maintained throughout the fitting process.

The amount of stretch required to ensure that the carpet does not lift after some time depends on many factors, such as the density of the carpet construction, the temperature and humidity in the room, the type and quality of the underlay, ...

2. Full adhesion method

Cases in which the full adhesion method may be selected:

- rolling traffic and ramp areas
- seams are more durable and low risk on seam peaking
- no restrictions to area size
- intricate border and inlay possibilities

When using the full adhesion method with a patterned carpet, consideration must be given to the pattern match and to ensure the best possible matching, the carpet should be laid and pre-matched before cutting.

The choice of adhesive depends on the type of carpet being installed and the type of base. Seams should be made in accordance with the adhesive manufacturer's instructions.

The recommendations of the adhesive manufacturer should be taken into account and followed precisely. Allowing the correct open time is vital, as laying carpets that contain natural fibres into wet adhesives may cause them to shrink.

Using a carpet underlay

It is recommended that the underlay be completely glued to the subfloor and laid at 90° to the length of the carpet to ensure that seams will not coincide with any possible seams in the surface material.

Before using a full adhesion system with carpet underlay, consideration should be given to the fact that some designs may be difficult to correctly align due to the possibility of underlay movement during stretching.

The carpet should be left for 24 hours before normal traffic and/or installation of furniture is permitted. Early trafficking of a floor covering will normally have an adverse effect on the adhesive bond as it develops. Severe point loading such as that caused by castors, high heels, etc have to be strictly avoided during curing. Protect the carpet until the adhesive has set.

SEAMING

1. General

It is important that, when two or more pieces of carpet are joined together, the seams are:

- limited to the minimum
- straight and flat
- strong enough not to break under traffic
- strong enough to withstand stretching where this is required by the method of installation
- tightly butted with no trapped pile between the edges
- placed away from areas subject to heavy or twisted wear, doorways, lift entrances, areas of narrow access, ...
- along rather than across traffic
- not susceptible to incidence light

2. Preparation

The most important point in making a good seam is the preparation of the two edges that are to be joined. Specialist tools and methods are available specifically for trimming carpet.

It is always recommended that a test seam between two pieces of scrap material be made to ensure that a suitable bond can be made.

For woven carpets, all seams should be sealed to prevent edge fray and general deterioration of the seams. Where selvedges are removed or cross seams must be made, these must be sealed with a proprietary edge sealer.

Axminster & other woven carpet

Selvedges should be removed. If the selvedges are to be removed, before cutting the join, it is necessary to apply a coating of an edge sealer along the line or the cut to prevent fraying. Where a longitudinal cut is needed, cut between the rows of chain warp, making sure that only the backing is cut, not the pile yarn; for a cross join, cut between the weft shots and then seal with an edge sealer.

Tufted Carpet

There are several methods to prepare the edge, depending on the carpet construction and the type of secondary backing.

Secondary backing can sometime have a slight delamination at the carpet edge and a bead of sealing cement should be applied between the primary and secondary backing to help prevent fraying along the seams. This must be applied before seaming is carried out.

3. Seaming methods

There are many different tools and methods for seaming carpet. Disregarding the method, the end result should be the same and the preparation is most important.

Cutting the seams

Woven Carpets

The sections of the rolls should be installed edge to edge (Selvedges have been cut, see chapter on preparation).

Tufted Carpets

Tufted carpets have to be laid seam to seam. Lay out the first roll and install the second roll with an overlap of minimum 5cm and cut in the middle of the overlap. Certainly for carpet with a design or pattern, it is crucial to start the pattern matching in the middle of the roll and move the carpet until you find the best possible match. When the carpet has been cut, put the carpet in place and check carefully before gluing.

For patterned carpet, try to avoid cutting through the motifs or designs. After all rolls are in place, check that patterns are matching (in length, diagonal, across and over multiple rolls).

Adhesion

Heat Bond Tapes

The heat bond tape consists of a hot melt thermoplastic adhesive carried on a supporting tape. Avoid using tapes narrower than 100 mm. The heat that is required to melt the adhesive is applied directly to the adhesive by means of a special iron. When the adhesive has cooled completely after the seam has been made the carpet can be stretched using either a knee kicker or a power stretcher.

As the settings of the iron vary, it is recommended to carry out a small trial to determine if the settings are correct. Beware of any possible pile distortion as a result of heat affecting the pile yarn. Too high a temperature will also make the adhesive on the tape crystallize which will cause the joints to break down. Under heating will cause incomplete melting and the adhesive will not grip the back of the carpet causing a weak seam that will break during use. The iron should always be pushed in the direction of the pile lie. Use a seam weight to keep the seam flat as it cools and as the seam weight is moved forward along the seam, brush the pile yarn up so that it will not cool in a down position. Under no circumstances should a spike roller be used.

Electro Seaming

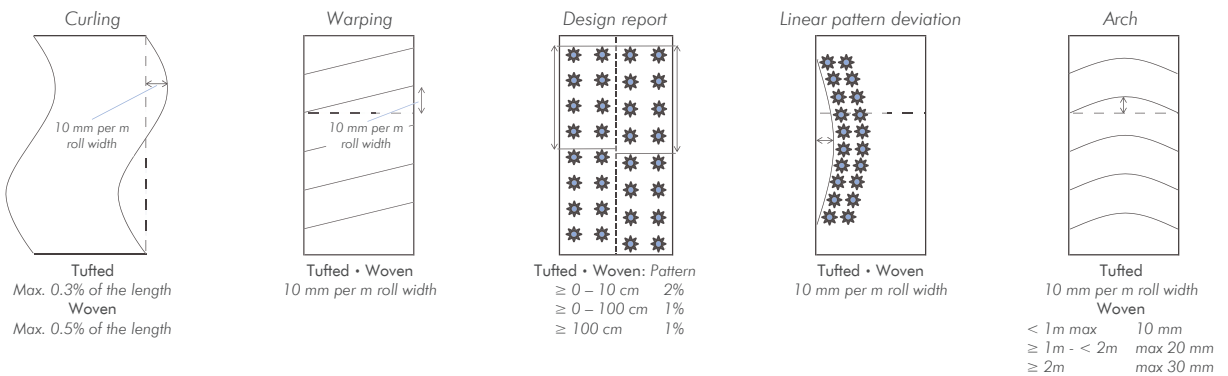
This system is similar to the heat bond tapes but the main difference is that the adhesive is coated onto an aluminium foil backing. An electrical current is passed through the tape using a special transformer and this melts the adhesive. When the power is turned off, the adhesive begins to solidify. Always seam in the direction of the pile. Please follow the manufacturer's recommendation carefully.

Full adhesion

It is essential to start in the middle of the joint and work towards each end. Fold back both carpet edges and apply adhesive noting the working time. To ensure good transference of the adhesive and good overall bond, please apply even pressure to the entire carpet with a small carpet roller.

TOLERANCES

Regardless of woven or tufted carpet, following industry standards are applicable:



It is assumed that an experienced fitter should be able to install the carpet properly in order to achieve an installation with patterns matched and straight. The carpet should be fully laid out in the area to be carpeted and checked to determine if any bowing or other issues are present before proceeding with the fitting of the carpet. If there is any doubt as to the ability of the carpet installer to fit the carpet, the work should be stopped immediately and Lano Carpets should be contacted immediately. Once the carpet has been installed, no claims for bowing, pattern repeat, linear pattern distortion, skewing or arcing will be honoured.

GENERAL

On completion of the installation work, the whole area should be carefully inspected to ensure that the carpet is totally flat and free from stains.

If the construction work continues after the floor covering has been installed, all trafficked areas must be covered to protect the carpet from damage.

Freshly unrolled carpet will sometimes, for no apparent reason, give the appearance of being banded or streaked. This effect will normally disappear with usage. All pile carpets especially plain grounds are reliable to shading, which is to show dark and light patches arising from unequal crushing of the pile surface. Shading is inherent in all pile fabrics and no claims will be accepted for complaints arising from any of these effects.

LANO

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