Stretch-in Installations

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As the first step, please refer to the site conditions, storage and handling manual.

stretch-in installations

NOTE: Prior to beginning a stretch-in installation, the installer must be familiar with the information presented in the Introduction.

This section contains information on proper preparatory and installation techniques for installing Action Backed carpet via the stretch-in method. These instructions are for the qualified professional installer. Carefully read all instructions prior to beginning the installation, and ensure all proper tools and materials are readily available.

This section is structured as follows:

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A. Preparatory Information for Stretch-in Installations

FLOOR PREPARATION

a. Fill all floor cracks or gaps over ¼" wide with a latex base underlayment.

b. Fill and level all low or shallow places with a latex base underlayment.

c. Level all high spots or ridges to prevent excessive carpet wear.

d. Sweep the area clean.

e. Floor temperature must be a minimum of 65ºF and not to exceed 95ºF and relative humidity a maximum of 65% for at least 48 hours prior to installation. Additionally, these conditions should be constantly maintained both during and after installation.

TACKLESS STRIP AND CARPET MOLDINGS

Carpet installed over a separate cushion will use a tackless strip of water-resistant plywood with two rows of rust-resistant angular pins. The pins must be of sufficient length to penetrate through the carpet backing, but not so long as to be seen from the surface or to be a safety hazard. The thickness of the tackless strip will be the minimum suitable for the thickness of the cushion specified; yet, under no circumstances will the dimensions of the tackless strip be less than ¼ inch thick and 1 inch wide. For large areas subjected to heavy traffic, or when any dimension exceeds 30', use a tackless strip with three rows of pins. (Architectural Strip) Install the tackless strip using one of the following methods:

a. Pre-nail for wood or concrete floors.

b. Adhere with a quality adhesive as recommended by the tackless strip manufacturer.

c. Drill and pin by driving square aluminum pins into round holes to form a permanent anchor on an approximately 6-inch center.

Securely fasten the carpet to the tackless strip so that all the pins have penetrated the carpet backing and will hold the carpet stretch. Secure all raw cut edges behind the tackless strip so that no frayed ends or edges show.

Carpet moldings must be specified prior to installation. All carpet moldings will be anchored using the same methods described for installing tackless strips. Carpet moldings used to finish carpet edges in doorways, etc., must be marked on shop drawings and approved by the owner's representative prior to installation.

SEPARATE CUSHION SPECIFICATIONS

Cushions specified for use with Prime Flors commercial carpet are to be high density, low profile, with a scrim, fabric or film cover. This cover provides a slip surface so that the cushion will remain in place as the carpet is shifted during installation. This cover also provides sufficient reinforcement to stop the staples from pulling through the cushion. Generally speaking, a carpet cushion which has some "give", yet is still firm, is preferable. A cushion with excessive vertical flexing can produce a loose or wrinkled carpet, split seams, delamination of the secondary backing, foot and leg fatigue and accelerated wear.

Minimum recommended criteria for satisfactory carpet cushion performance in commercial installations for Class I, Moderate Traffic; Class II, Heavy Traffic; and Class III, Extra Heavy Traffic are as follows:

FIBER	CUSHION TYPE
1. Synthetic Fiber	Wt. 36 oz.; Th. .35" - 5% min.; D 8.0 pcf
2. Resinated Recycled Textile Fiber	Wt. 38 oz.; Th. .375" - 5% min.; D 8.0 pcf

RUBBER	CUSHION TYPE
1. Flat Sponge	Wt. 62 oz.; Th. .150" - CR@25%=4.0 psi min; D 26 pcf
2. Textured Flat Sponge	Wt. 80 oz.; Th. .250" - CR@25%=1.75 psi min; D 26 pcf
3. Reinforced Rubber	Wt. 54 oz.; Th. .200"- CR@25%=2.0 psi min; D 22 pcf

POLYURETHANE	CUSHION TYPE:
1. Grafted Prime	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; CLD 25% 130 lb.
2. Densified Prime	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; Polyurethane; CLD 65% 7.0 psi
3. Bonded	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; CLD 65% 36.2 psi; Particle size ½" max. Polyester foam content 50% max.
4. Mechanically	D 19 pcf; Th. .183"; Frothed Polyurethane; CFD 65% 30.5 psi

Prime Flors will not honor any claims relating to seam splitting, edge raveling, buckling, delamination or accelerated wear for separate cushion installations not complying with the cushion specifications depicted in this manual.

STRETCHING CONSIDERATIONS

Action Backed Carpet requires 1.0% to 1.5% (1 to 1 ½ inches) of stretch per 10 feet of carpet in both the length and width. Stretch-in installations will be accomplished by using power stretchers and other devices as necessary to properly stretch the carpet.

B. Installation Procedures

PRIOR TO INSTALLATION

Before actual installation begins, check the following list to ensure compliance with every detail:

a. Carpet transported to the job site in rolls free of any wrinkles or creases. DO NOT BUNDLE! Bundling will cause creases and wrinkles which may prove difficult to remove during installation. If loose bundling or bending is absolutely necessary to transport the carpet to the installation site, unroll the carpet as soon as it is delivered.

b. Floors properly prepared.

c. Building and carpet preconditioned for 48 hours prior to installation at a constant temperature and relative humidity between 65º to 95ºF and maximum of 65% relative humidity.

d. Shop drawing/plan prepared for the area to be carpeted.

e. Plan checked against the available roll lengths and dye lot numbers to keep cross seaming to a minimum. If using more that one dye lot, plan the exact seam location where the dye lot change will occur to minimize possible shade differences. This transition point must be recorded on the shop drawing.

f. Plan seam locations so that no perpendicular seams will occur at doorways or entries. All doorway seams should be centered directly under the door.

g. Seams should run with the flow of traffic. The only exception occurs when windows allow incoming daylight to highlight seams from the side. In this situation, run the seams into the daylight to reduce the visibility of the seam.

h. All seams trimmed.

i. Pile running in the same direction.

j. All necessary installation equipment available.

k. Enough manpower available to professionally complete the installation.

TACKLESS STRIP AND SEPARATE CUSHION INSTALLATION

· Tackless Strip: Fasten the tackless strip to the floor, leaving a gully or tuck-in space equivalent to about 2/3 of the carpet thickness but not to exceed ⅜ inch. A commercial-rated tackless strip three rows of pins must be used when dimensions exceed 30 feet or in areas designated for Extra Heavy Commercial Traffic.

· Separate Cushion: Install cushion in the longest possible lengths using the minimum number of sections. If a foam or sponge cushion is used, all seams must be taped using a minimum 2-inch wide industrial tape. Paper tape is not recommended. A slight stretch must be applied to the cushion to flatten and free it from bubbles and wrinkles. Cushion seams are to be positioned so the carpet seams will not fall directly on them. The cushion is to be trimmed flush to the inside edge of the tackless strip. For wood subfloor, the cushion must be stapled; random staple through

the tape so as not to leave a depressed strip along the seam. On concrete floors, the cushion must be securely adhered to the subfloor with a good quality cushion cement to prevent shifting and buckling.

RECOMMENDED SEAMING MATERIALS

· Seam Adhesives

- Carpet Seam Sealer
- Orcon Fast Lock Applicator
- Roberts 0502 Latex Carpet Seam Adhesive

SEAM PREPARATION

All required seam edges must be treated with seam sealer and joined using hot melt tape. Seams should have a breaking strength of not less than 100 pounds, and all seam tape should have a minimum width of 3 inches and be of good quality. When stretched, some carpet constructions tend to promote seam peaking; such peaking tendencies can often be minimized by using a 6-inch wide seam tape. Prior to the seaming operation, all seam edges must be sealed with carpet seam adhesive to prevent edge delamination and loss of face yarn. Seams should lie flat and should not pucker. Matched seams will be straight and patterns will be acceptably matched.

Recommended seaming methods in order of priority are the hot melt method, the Sinch KoolGlide seaming system www.koolglide.com latex / tape method and hand sewn. The hot melt tape seaming method is detailed in a later paragraph.

SEAM TRIMMING (Read all instructions below prior to beginning seam trimming.)

Cut the desired lengths of carpet and position them side-by-side ensuring uniformity of pile lay. If the carpet is patterned, allow for pattern match. Trim into the body of the carpet far enough from the factory edges to obtain full-face weight and good lamination of the backing system. This distance will vary from a minimum of 1 to 2 inches on straight row constructions to as much as 6 inches on some graphic constructions.

On all seams, length or cross, treat both edges with Carpet Seam Sealer before joining. This step must be followed

and is not optional. Apply seam sealer at the base of the pile where the face yarn enters the primary backing. Press the adhesive into the seam edge with your thumb, ensuring that there is no build-up of excess sealer.

· Length Seaming Loop Pile Constructions: If the carpet is a straight row, level or multi-level loop construction, insert a row finder or the nose end of a face cutter (with the blade retracted) between tuft rows. Run it the entire length of the carpet, separating the yarn and opening a path for the cutter. Trim into the body of the carpet far enough from the factory edges to obtain full-face weight and good lamination of the backing system. Using a loop pile cutter, trim both seam edges by cutting between the tuft rows. Cut close to the main body to obtain a tight seam by trimming with the blade close to the seam edge.

· Length Seaming Cut Pile Construction: Cut pile carpet is sheared in the final stages of manufacturing. The only support keeping the cut pile yarn in an erect position is the yarn tuft beside it. Along the factory edge, the face yarn naturally lies to the outside (no support side). To obtain a uniform pile height on both seam sides, it is always necessary to trim in further on cut piles than on level loops. Depending upon pile height, this distance will range from 1 inch to 1½ inches into the body of the carpet.

· Cross Seaming: Cross seams should be made before making the lengthwise seams. Cross seams should be kept to a minimum and placed appropriately so that they are not in heavily trafficked areas. Well made cross seams are as serviceable as well made length seams; however, because of the construction direction of the carpet pile, cross seams may be more noticeable. Ensure that the direction of the pile is the same for all pieces and lay each piece into position allowing a minimum of 2 inches overlap at the seam area and 1½ inches for trimming at walls.

If the stitch rows across the width of the carpet are reasonably straight, do the following:

a. Trim both edges to be seamed from the face using a cushion-back cutter. Trim the edge with the pile sweeping toward the seam first. Follow carefully between the stitch rows keeping the blade close to the seam edge of the carpet.

b. Then trim the adjacent edge in the same manner.

c. Lock in all face yarn by treating both edges with Carpet Seam Sealer before joining. Apply at the base of the pile, where the stitch enters the primary backing. Press the sealer into the seam edge with your thumb, ensuring that there is no build-up of excess sealer.

d. Stretch using a mini-stretcher and stay nail in place.

HOT MELT TAPE SEAMING SINCH KOOLGLIDE SEAM PROCEDURE

Installers must have prior hot melt tape or Sinch KoolGlide Seam seaming experience. If proper techniques are not used, the seam will fail. It is very important to ensure that the seaming iron is equipped with a heat shield to avoid the possibility of damaging the backing and the face yarns. The installer must use the proper seam cutting tools to obtain a precision cut edge for seaming. Do not double-cut edges for seaming. Prior to beginning the hot melt tape seaming procedures, the installer must have installed the tackless strip and the separate cushion, as well as completed seam trimming operations. Read all instructions prior to proceeding.

1. Set up seaming so all seams are made in the direction of the pile lay.

2. Stretch the carpet lengthwise at both seam edges and staytack to hold the tension. Place the thermoplastic tape so that it is centered under the seam's edges. Align and stay nail the seam edges to straighten any trueness of edge that may be present. Any buckles formed by this procedure can be stretched-out after the seam is completed.

3. On all seams, length or cross, treat both cut edges at the proper height with Carpet Seam Sealer for prevention of raveling or fraying.

4. Move the lengths of carpet into position, slightly overlapping them by 1/32 inch at the seam area. Do not hook on pins at the seam, but leave the seam area open by 6 inches on each side. On each side of the seam at one end, hook one the carpet lengths on pins for about 12 inches and stretch lengthwise to the opposite seam end to remove buckles and slackness.

   *KoolGlide seaming system differs from this point forward.

5. Center the hot melt seam tape under the carpet seam edges. Set the heat regulator on the seaming iron at the lowest possible temperature that will still give full adhesive melt. The temperature control on seaming irons is often far from precise. To eliminate temperature deviations, either determine the proper temperature setting in the shop, or test the iron on a small piece of the carpet to be installed.

6. Place the hot melt iron with heat shield attached under the carpet and on the tape. Move the iron slowly and continuously in the direction of the pile lay at approximately 2 feet per minute. To obtain a level and tight seam, adjust and position the carpet seam directly behind the iron; this procedure must be done before the hot melt adhesive begins to cool.

7. To press the carpet into the adhesive, use a 1 inch x 6 inch board approximately 18 inches long to follow the iron and flatten the seam. This board may be weighted or knelt upon as the seaming work progresses. Avoid placing any localized pressure on the seam until the seam is completely cool. A common installer mistake may occur by pressing the hot seam with the foot or dragging a toolbox over the seamed area while the face yarns are still warm, thus causing pile depression and shading. Note: For cut pile carpets do not use a spike carpet tractor as damage to the carpet pile may result.

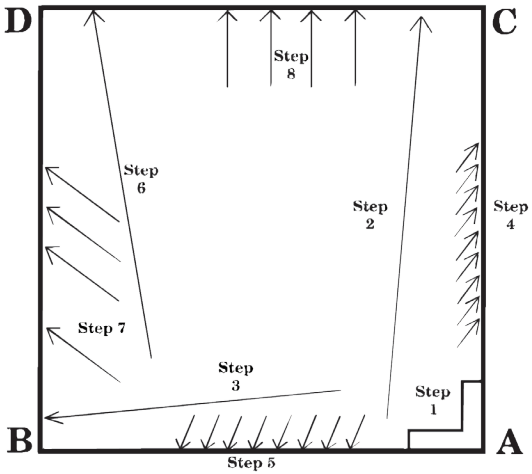
8. Trim loose yarns from the seam and remove the stay-tacks.

9. Cut, trim and seam the additional lengths needed for the installation.

· Seam Peaking: A correctly prepared hot melt tape seam will be flat and will not peak. Physics dictates that every taped seam may peak to some degree once power stretching is applied across the seam. This peaking has nothing to do with either the quality of the carpet or the quality of the installation. The use of 6-inch seaming tape or thermoplastic seam sealers will minimize seam peaking complaints. Additionally, seams on level loops are more visible than on cut pile constructions, and heavier carpets are more prone to show peaking vs. lighter weight carpets. Stretch the carpet tighter in the direction parallel to the seam. A lighter stretch across the seam will help in reducing seam peaking.

THE USE OF POWER STRETCHERS IS MANDATORY

POWER STRETCHING PROCEDURE



(Please refer to the chart above. Read all instructions below prior to power stretching.)

1. Hook 18 inches of carpet in one corner along two walls AB and AC.

2. Using a power stretcher, stretch the carpet along wall AC. Hook the carpet onto the tackless strip at the opposite wall near Corner C. Stretch uniformly. Stretch enough to achieve a firm, tight installation. This generally requires between 1 to 1½ inches of stretch for every 10 feet of carpet. Uniform stretching at proper stretch levels can be estimated by chalking a white line across the carpet at the wall to which the carpet is being stretched. Measure (or estimate) the amount the carpet rides up the wall during stretching.

3. Stretch from the original corner A along wall AB and hook onto the tackless strip along wall BD at corner B. Now the carpet has been stretched along walls AB and AC and hooked in at corners A, B and C.

4. Set in wall AC with a knee kicker at a slight angle (10° to 15°).

5. Next, set in AB in the same manner. Note: it is generally easier to stretch carpet in the filling direction, so this should be done first. This also gives a tighter installation.

6. Stretch from wall AB along wall BD and temporarily hook to wall CD at corner D.

7. Starting from corner B, power stretch from wall AC to wall BD at a 15° angle to AC and hook in. As you approach corner D, restretch and hook.

8. Power stretch carpet from wall AB to wall CD at a right angle, starting at corner C.

Be sure to power stretch all areas regardless of their size in both the width and length directions. In large areas it may be necessary to stay nail the middle of the length and stretch toward one end, and then repeat on the other half so that a uniform stretch through the whole length is achieved. Action Backed carpet must be stretched from 1 to 1.5 percent.

· If sufficient stretch is not applied, then restretching may be necessary when the temperature or humidity increases.

C. Step Areas (Stairs)

Auditoriums - Altars - Teaching Wells - Stairs

All stair nosings to receive carpet should have a minimum radius of ¾". This minimum curvature is necessary for all installation systems to prevent sharp stair edges from cutting the carpet and/or cushion and to provide full contact of the carpet back in adhesive installations.

A. Carpet Direction

1. The carpet machine direction should run the length of the stair.
2. The pile lay up the stair makes a safer stair.

B. Direct Glue Down - Stair With a Return Nosing

1. Each step is two (2) separate pieces of carpet: one piece for the tread and one piece for the riser. The carpet for the tread is measured the stair width by tread length measured from riser across tread over and under stair nosing back to riser below. The riser portion is measured the stair width by the riser height.

C. Two Adhesive Systems

System #I

Commercial Premium Carpet Adhesives as contact adhesive.

1. Trowel adhesive onto the stair, work from the top to bottom of stair. Use a ⅛" x ⅛" x ⅛" trowel". Barricade top & bottom of stair to exclude traffic.

2. Trowel Premium Carpet Adhesive onto back of carpet.

3. Allow adhesive on stair and carpet to dry until it does not transfer when touched. This may require up to 8 hours or more.

4. Install stair working from bottom to top. First install the carpet cut for the tread. Using a carpet seam roller, ensure that the carpet is fully contacted, especially on the under side of the nosing return.

5. Place the carpet cut for the first riser into the adhesive of the first riser under the previously installed stair tread. Roll riser section.

6. (a) Install second step tread. (b) Install second step riser.

7. Complete stair working from bottom to top of stair.

System #II

Premium Carpet Adhesive In Conjunction With Contact Adhesive

1. Cut carpet tread and riser per B #1.

2. Apply nonflammable contact adhesive to stair nosing so that 2 inches of adhesive is on the step portion with a

continuous application back under the stair nosing return to the riser below. Next apply the contact adhesive to the adjoining bonding area of the carpet back on the precut tread carpet. Allow adhesive to dry. There is enough contact adhesive if the adhesive area on both surfaces have a glossy finish when dry.

3. Apply Premium Carpet Adhesive to the balance of the tread with a trowel that will supply enough adhesive for the required full and complete coverage of the carpet back. Trowel floor adhesive onto riser portion of stair after adhesive has dried until it does not transfer when touched. This may require 8 hours or more. Install the tread portion first. Then install the riser portion. Thoroughly roll the tread and riser.

4. Complete the stair installing from the bottom of stair to top.

* *NOTE: If the stair is not enclosed, bind or serge any open sides of the stair prior to installation.*

D. Direct Glue Down Waterfall Stair

1. Each step is one piece of carpet. The stair is installed from the bottom to top.
2. Each step is cut stair width by length of step as measured from the stair riser over tread, nosing, and riser to tread below.
3. Bind or serge any open stair sides.
4. Install stair using either of the two previously described adhesive systems section C and D.

E. Separate Cushion Stretch-In

· Cushion

1. Carpet folded under one side, both sides, or cut net determines cushion width. Cut cushion 1½" short at each folded side.
2. Cut cushion ¼" short of wall if carpet is to be cut net to wall.
3. Install cushion net to tackless strip on tread and riser.

· Tackless Strip

1. The tackless strip length is determined by carpet edge finish. Cut tackless strip into lengths the same width of the carpet cushion.
2. Tackless strip is securely anchored on both the tread and riser portion of the stair.
3. The tackless strip is installed on the riser with the pins pointed toward the tread.
4. The tackless strip is installed on the tread with the pins pointed toward the riser.
5. The gully between the leading edges of the tackless strip in the stair crotch should be slightly less than double the carpet thickness.
6. The stair width and/or the carpet construction may require tackless strip installation at one or both sides of the stair tread.

· Carpet Installation

1. Run the carpet machine direction the length of the stair; with pile laying down the risers.
2. Turn under any carpet edges to be folded.
3. Unroll the carpet onto the stair.
4. Align the carpet along the stair length working from the bottom to the top.
5. Secure the carpet to the bottom riser at the floor line via tackless strip or tacking.
6. Using a knee kicker, stretch the first step carpet into the first crotch. Stretch first to the stair center, and finally toward each side.

7. Drive the carpet into the crotch of the stair using a stair tool and rubber mallet.

8. The folded edges may require a tack into the crotch.

9. Complete the stair working from the bottom to the top.

· Stretching Via Stair Stretcher

1. Secure the carpet into the crotch at the top of the stair.

2. Stretching from the top riser center, stretch the carpet with the stair stretcher over the stair nosing and hook into the crotch below.

3. Stretch and hook the right and left sides of the step.

4. Using a stair tool and mallet, drive the carpet into the stair crotch.

5. Complete the stair working from the top to the bottom.

D. Protection of the Installation

Traffic over adhesive installation should be restricted for a minimum of 24 hours.

Protect the installation with a non-staining reinforced building paper. Plastic sheeting should not be placed over any carpet installation. Any vapor barrier material may trap moisture, retard adhesive cure, and promote mold and mildew growth.

It is highly recommended that plastic films utilizing adhesives should not be used. Adhesive residue may transfer to the carpet surface resulting in rapid soiling. Check with the manufacturer of these protective films for warranty information regarding adhesive transfer and removal.

Anytime heavy items are to be rolled over the carpet, protect the installation using sheets of plywood or hardboard in these areas.